

Aloka

## SERVICE MANUAL

ECHO CAMERA

SSD - 680EX / SSD - 680STD

1 / 2

English Edition

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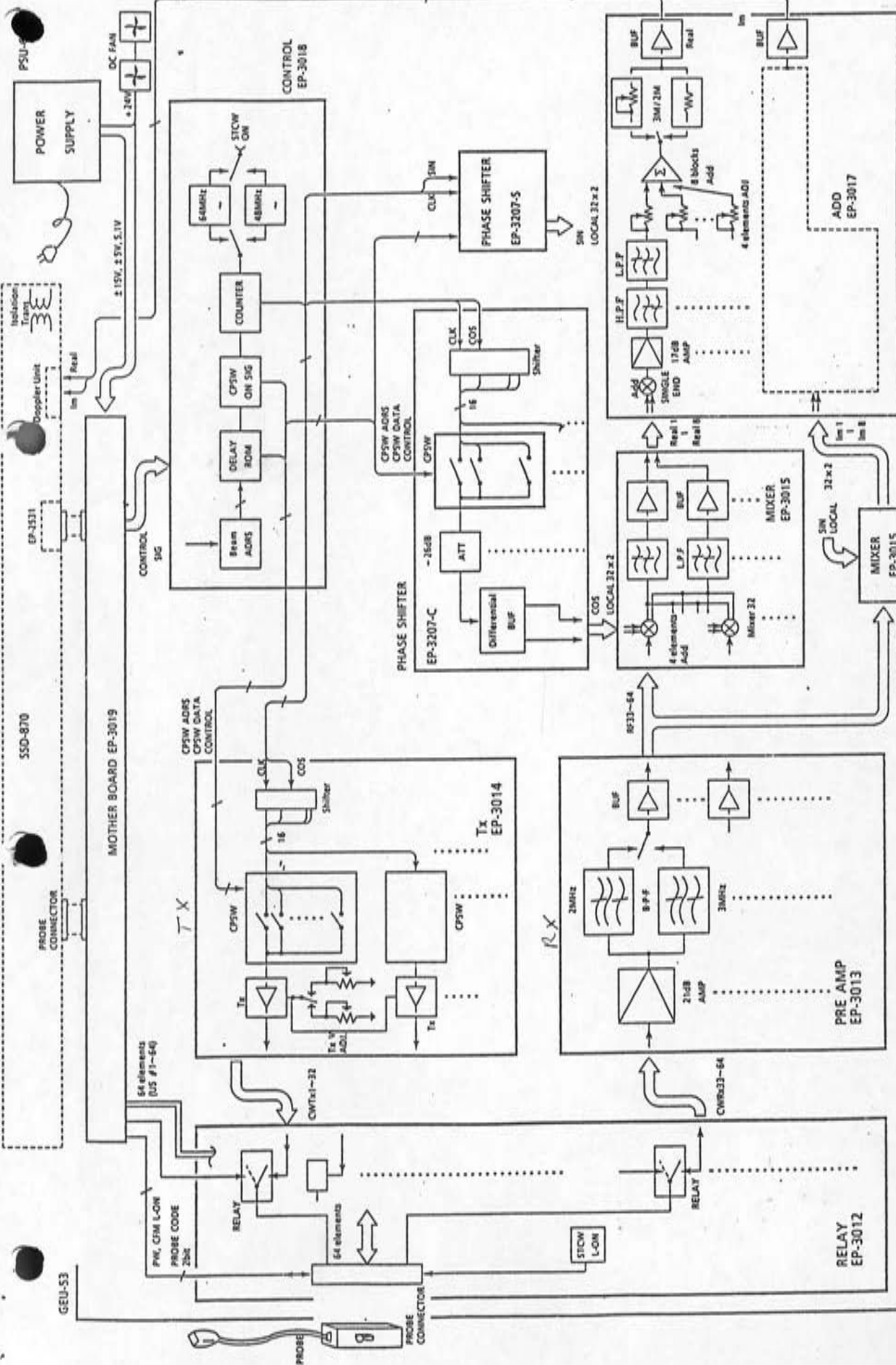
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*Richard*



1/1

MODEL 型号  
**UCW-870**

TITLE 名称  
**STEERABLE CW DOPPLER UNIT**

**Aloka**

*Hand Machine / Steerable CW  
Power 24 battery*

SSO-870

GEU-53

MOTHER BOARD EP-3019

CONTROL EP-3018

PHASE SHIFTER EP-3207-S

PHASE SHIFTER EP-3207-C

TX EP-3014

PRE AMP EP-3013

RELAY EP-3012

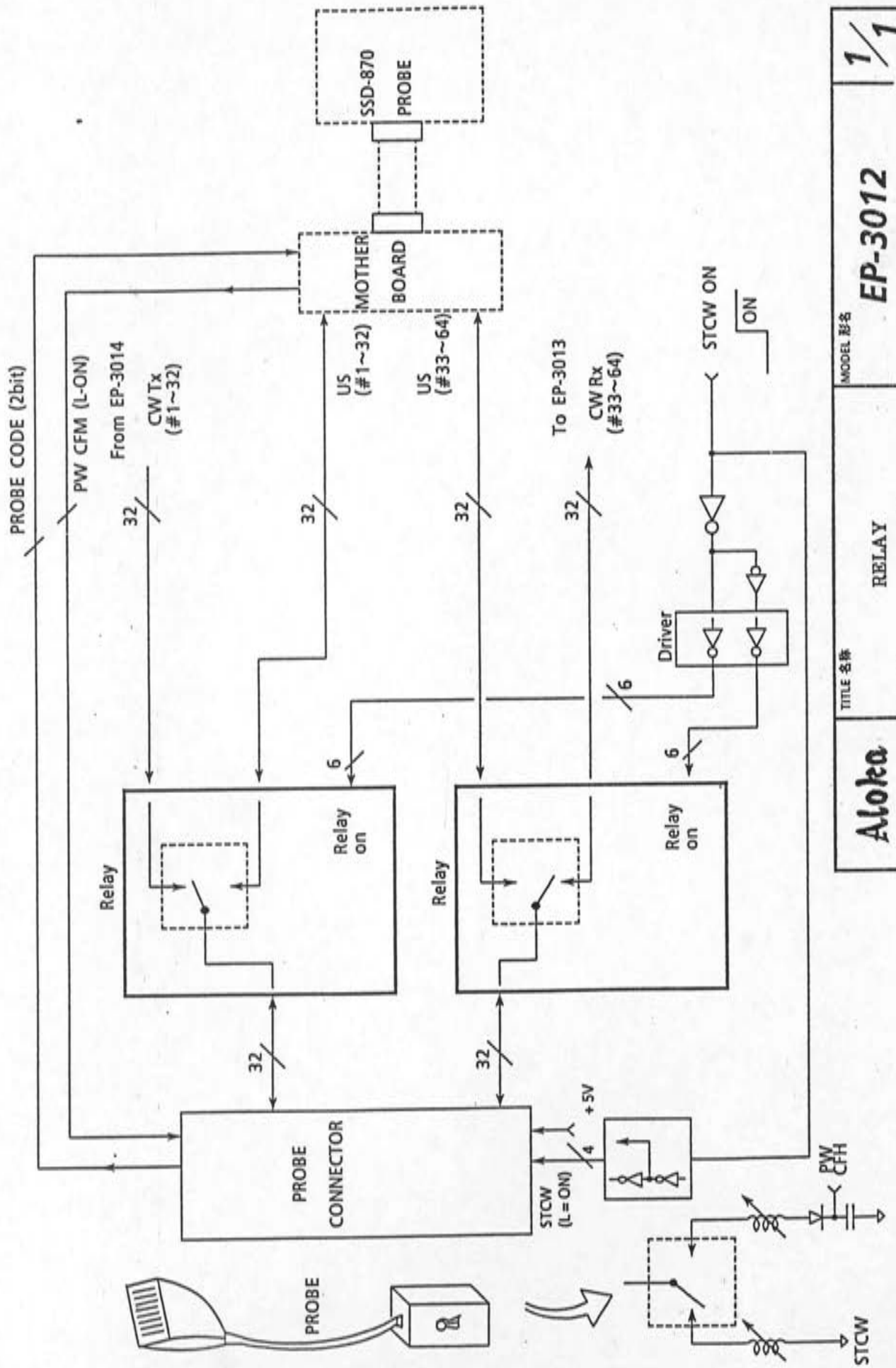
ADD EP-3017

MIXER EP-3015

MIXER EP-3015

MIXER EP-3015





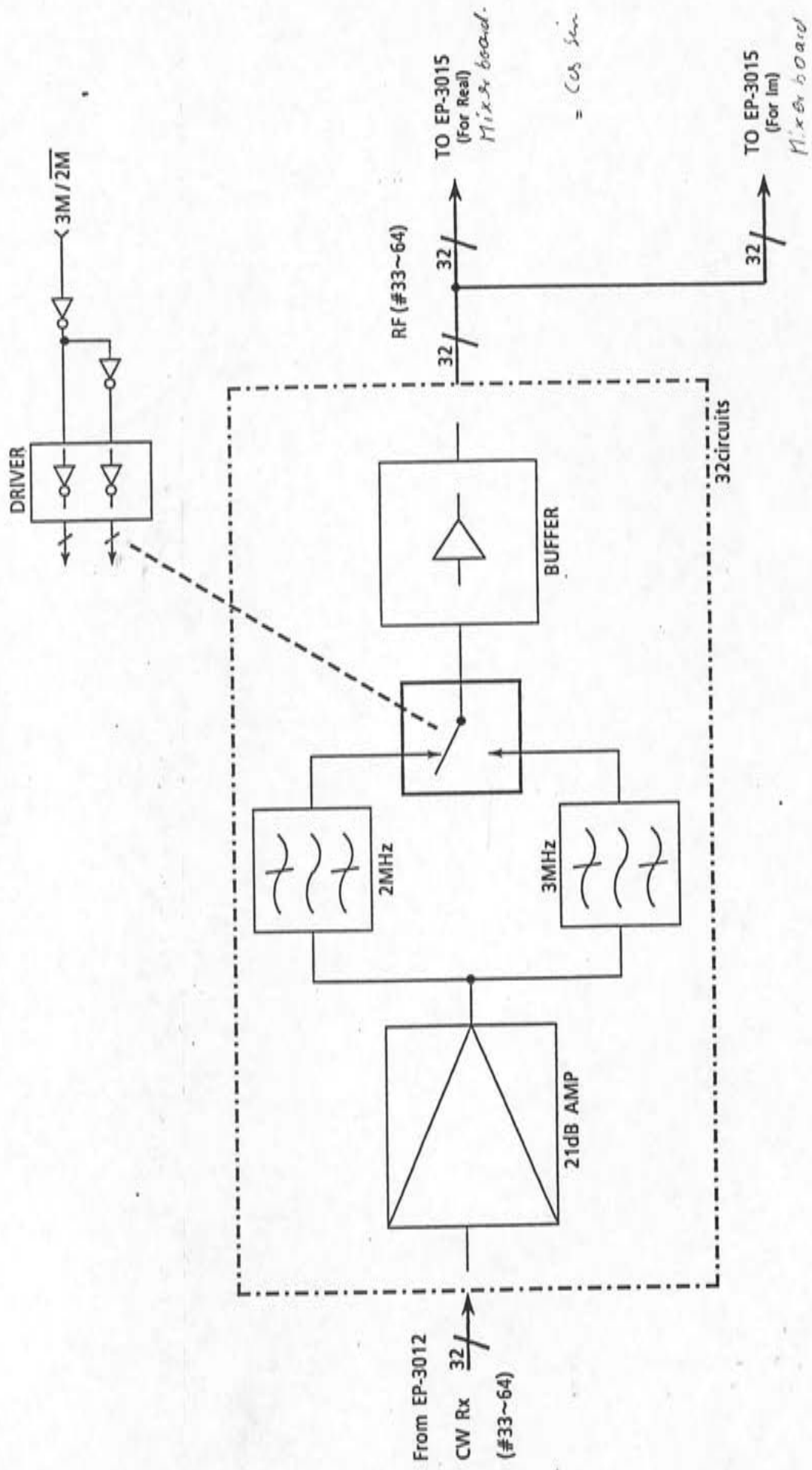
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**Aloka**

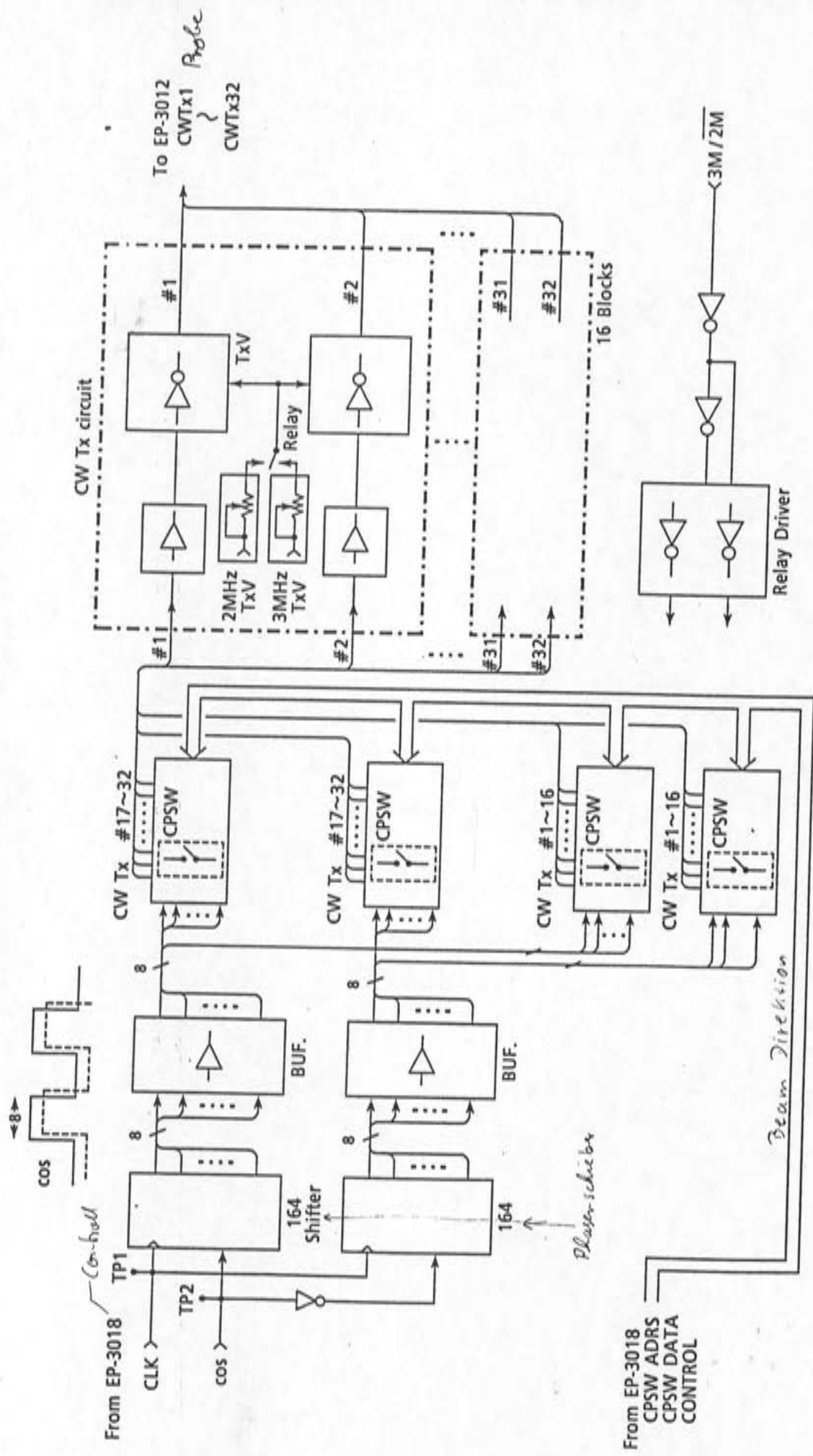
RELAY

MODEL 型号

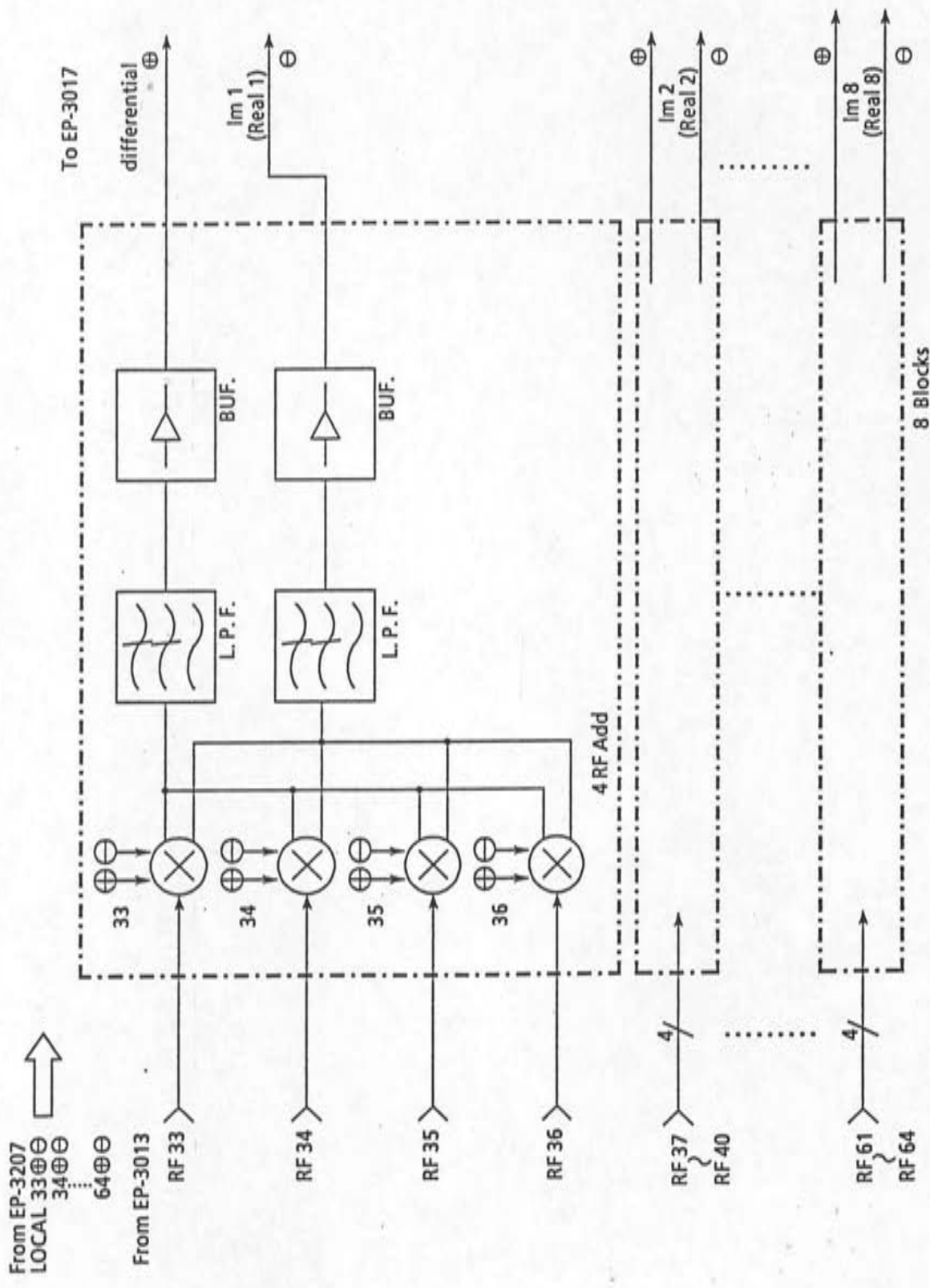
**EP-3012**



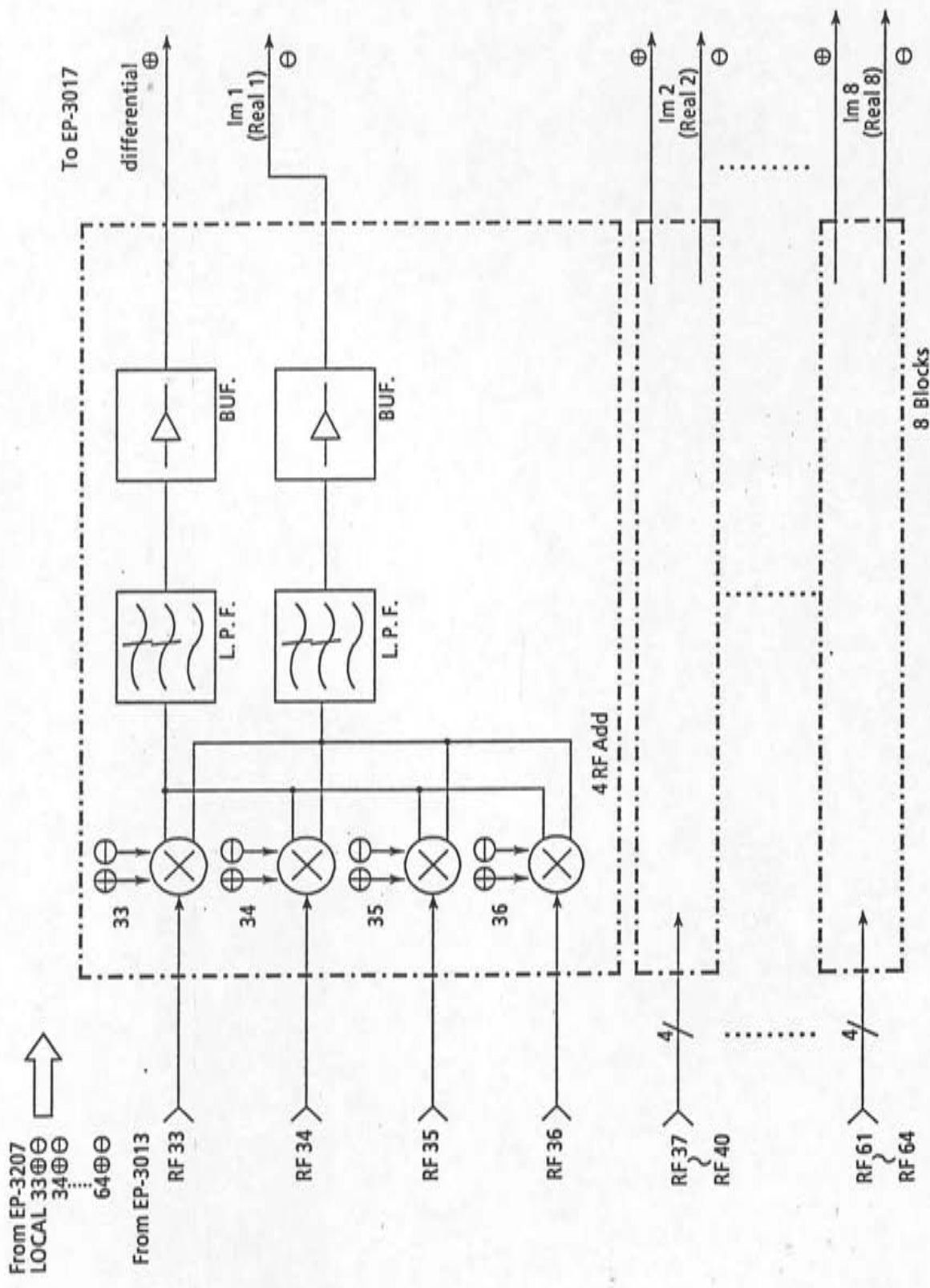
Aloka	TITLE 名称 PRE AMP	MODEL 型号 EP-3013	1/1
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Aloka		Tx	MODEL 形名 EP-3014	1/1
TITLE 名称				

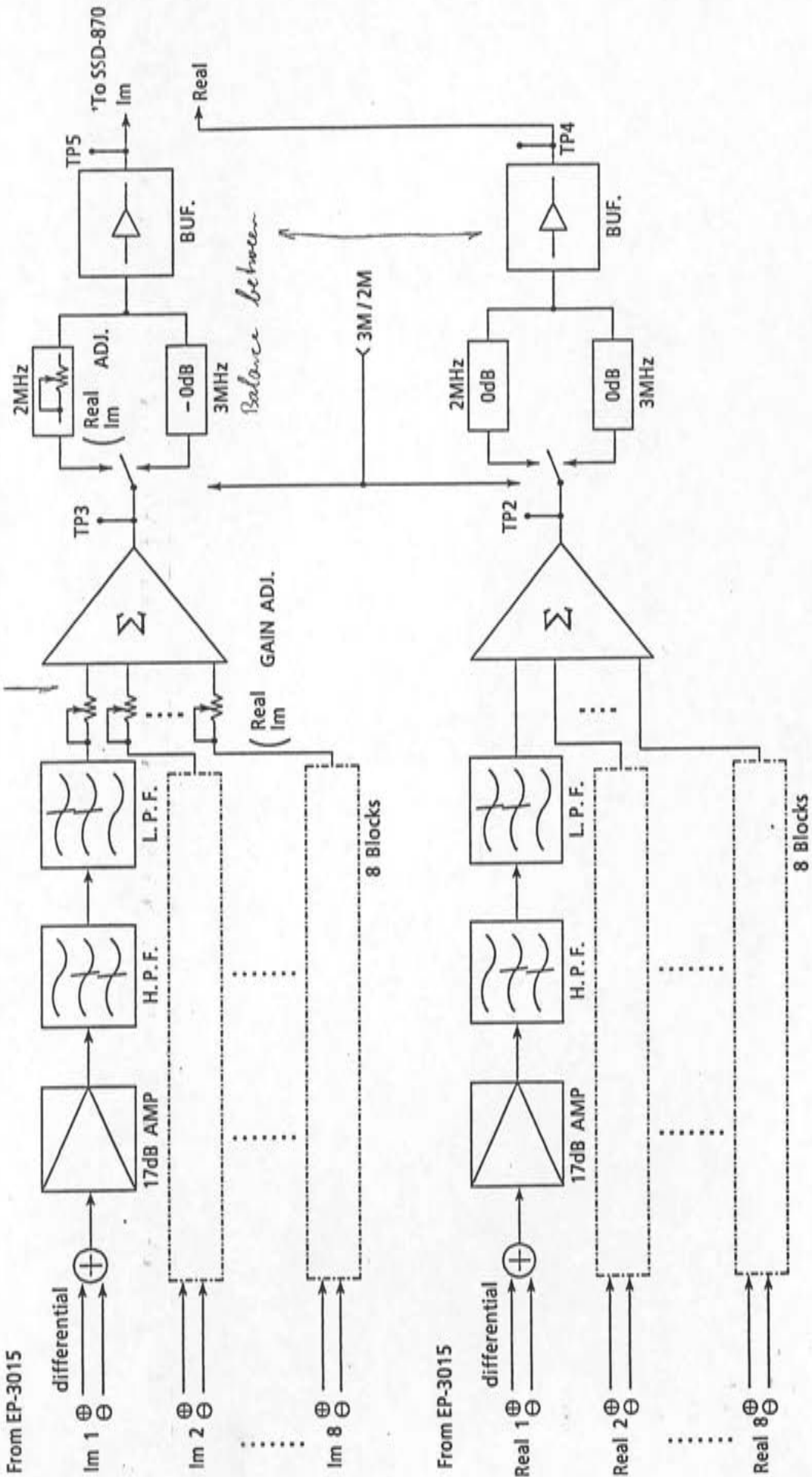


Aloka		TITLE 名称	MIXER	MODEL 型号	EP-3015	1/1
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Aloka		TITLE 名称	MIXER	MODEL 型号	EP-3015	1/1
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*Balance Between Inputs*



TITLE 名称

**Aloka**

ADD

**EP-3017**

1/1

From SSD-870  
EP-2531

3M/2M

Driver

64MHz  
48MHz

To EP-3014,  
EP-3207

TP12  
TP13  
TP14

CLK

cos

sin

Shifter

STCW ON

From SSD-870  
EP-2531

STCW ON

FRZ

FOCUS 0,1

From SSD-870  
EP-2531

Beam ADRS 0~6

vs. Hard Machine

compare  
2bit  
7bit

LATCH

COUNTER

CONTROL

5bit

COUNT

Beam ADRS

3M/2M

Another Machine

ROM

for CPSW Tx sin Rx

Beam Steering Rx-TX

Probe Structure

TP11

RST

To EP-3014,  
EP-3207

Ax0~3 (CPSW ADRS)

STROBE 1, 2 (CONTROL)

LATCH

LATCH

8bit

To EP-3014 Tx DATA (4bit)

To EP-3014 Rx DATA (4bit)

To EP-3207 CPSW DATA

PCD 1

Aloka

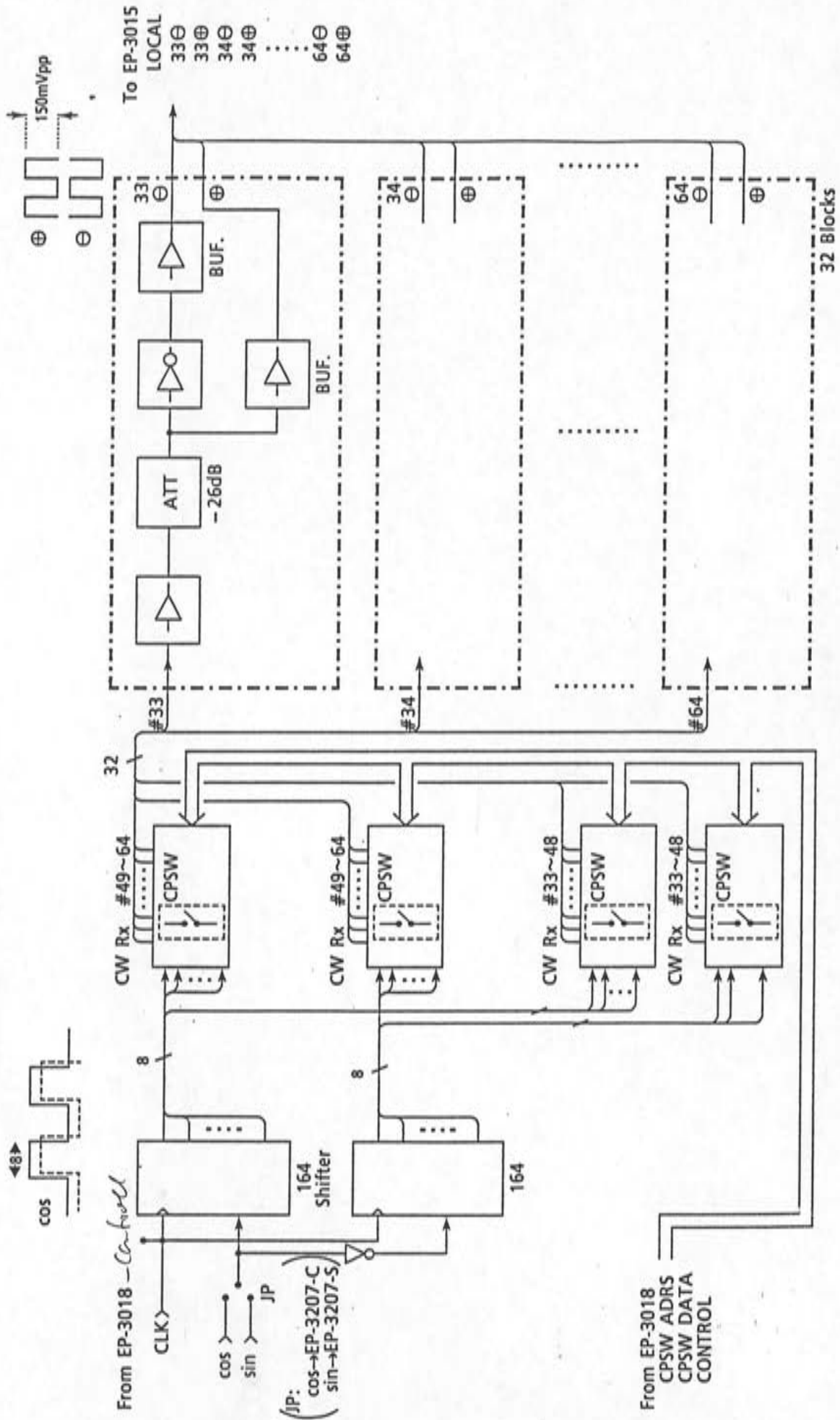
TITLE 名称

CONTROL

MODEL 型号

EP-3018

1/1



TITLE 名称	PHASE SHIFTER	MODEL 型号
Aloka	EP-3207	1/1



## 1-1 Service Manual

- 1) This service manual has been prepared for persons in charge of repair at the field.
- 2) This service manual is compiled according to the following basic principle.  
"For service, pick out a faulty PCB and replace it with a new PCB."
- 3) Make the best use of this service manual, making also reference to available technical support information such as "Technical Bulletin".

## 1-2 Contents of this Service Manual

- 1) This is the equipment in which the surface mount technology (S.M.T.) is incorporated. Some of the printed circuit board (PCB) in this equipment use the surface mount device (S.M.D.).  
  
Any trouble cause by a faulty PCB must be repaired by replacement of PCB as a unit.
- 2) As above shows at the field, the equipment is repaired by PCB replacement. Therefore this service manual does not include the circuit diagrams of PCB unit. For the function of each PCBs whose circuit diagram is not included, refer to "Section 6 PCB BLOCK DIAGRAM". However, "Cable Connection Diagram", Circuit Diagram of PCB equipped with the panel switches which are easily exchangeable at the field" and "Circuit Diagram composed of general circuit such as TV monitor and Power Supply unit" are described in "Section 7 CIRCUIT DIAGRAM".
- 3) For changes and modifications of as well as additions to specifications, if any, prompt information will be given to you by means of "Manual change information "which is to be inserted into the manual.

**Important** Always observe the manner specified for replacement, addition, or deletion of "Manual Change" to prevent missing of necessary information and keeping of erroneous information.

1-3 Construction of This Service Manual

The structure of Service Manual is as follows:

- 1) Service instructions ----- SECTION 1~12
- 2) Parts list ----- SECTION 13
- 3) Principle of operation ----- SECTION 14~16

1-4 Contents of Each Section

SECTION 1 How to Use this Service Manual

Describes the purpose of the Service Manual.

SECTION 2 Precautions

Describes general precautions and preparations for maintenance service. Be sure to follow working procedures if mentioned.

SECTION 3 Before repairing

Gives information peculiar to the equipment and care to be taken before starting repair work.

SECTION 4 Disassembling Procedure

Disassembly Procedure Illustrates the disassembly and assembly of main components. Be sure to follow working procedures if specified.

SECTION 5 System Block Diagram

Gives the convenience of grasping flow of major signals and mutual communication between units in the whole system.

SECTION 6 PCB Block Diagrams

Gives outline of individual PCBs, and block diagrams showing test points (TP).

SECTION 7 Schematics

Gives the cable connection diagram including all cables used, the circuit diagram of PCB equipped with switches, and the circuit diagram of TV monitor and Power Supply unit.

SECTION 8 Trouble Shooting

Describes precautions on actual repair work and shows the necessary tools and measuring instruments. Also, includes many hints on primary diagnosis and measures to be taken in the field.

SECTION 9 Alignment Procedure

Gives guides of adjustments of PCBs and units which some PCBs need when they are replaced.

SECTION 10 Performance Check

Describes the procedure of checking for proper operation after repair and provides the forms of check sheet.

SECTION 11 Maintenance Information

Provides technical information about maintenance service. Manual change information, the revision list of this manual, is filed in this section.

SECTION 12 History of Improvement

Describes in tabular form the history of modifications.

**SECTION 13**      **Parts List**

---

Lists the mechanical parts and electrical part which replacement possibility are considered .

**SECTION 14**      **Outline of System**

---

Describes the structure of the equipment seen in broad perspective.

**SECTION 15**      **Principle of Operation**      **(SYSTEM)**

---

Describes the principle of system operation.

**SECTION 16**      **Principle of Operation**      **(Hardware)**

---

Describes the microscopical views of structure and operation of the equipment.

## 1-5 Difference between SSD-680EX and SSD-680STD

## 1-5-1 Introduction

This SSD-680EX / SSD-680STD SERVICE MANUAL is mainly described about SSD-680EX. For the maintenance of SSD-680STD, refer to 1-5-2 and 1-5-3 to understand the difference.

## 1-5-2 Difference in specification

	SSD-680EX	SSD-680STD
Doppler function (PW Dop, CW Dop)	Standard	Option UGR-680STD
Color function	Standard	Option CFM-680STD
Viewing TV monitor	Color monitor	B/W monitor (When optional color function is added, color monitor is used.)

SSD-680STD becomes the same specification after adding optional Doppler function (UGR-680STD) and optional Color function.

## 1-5-3 Difference in model name (Difference only)

	SSD-680EX	SSD-680STD
MAIN UNIT	USI-131	USI-132
Viewing TV monitor	NTSC : IPC-1010 PAL : IPC-1010V	NTSC : IP-1230C-TH PAL : IP-1230CV-TH
Main body	PSC-118	PSC-120
Tx/Rx unit	GEU-64	GEU-65
MAIN AMP & COLOR ITF board	EP-3461* -1	EP-3461* -2 (Unnecessary parts are not mounted.)
DSC unit	UIM-325	UIM-326
COLOR D/A board	EP-2651* -4	EP-2651* -3 (Unnecessary parts are not mounted.) The below Color boards are not used. COLOR FLOW PROCESSOR EP-5100 COLOR LINE BUFFER EP-3115 COLOR POST PROCESS EP-3114 COLOR MEMORY VEL EP-2213 COLOR MEMORY VAR EP-2213-1 COLOR CINE MEMORY EP-3238 VIDEO ITF EP-3443
Doppler unit	UGR-680EX	Option Model: UGR-680STD (Components are same as UGR-680EX.)

Note 1 : The difference between GEU-64 and GEU-65 is MAIN AMP & COLOR ITF board only.

Note 2 : CFM-680STD includes Color TV monitor, EP-3461\* -1, EP-2651\* -4, and Color boards for DSC unit.



### 2-1 Precautions Against Electrical Hazards to Serviceman

When disassembling the equipment after checking it for trouble symptom, give care to the following:

- 1) Be sure to unplug the equipment before disassembly.
- 2) Be sure to turn off the main switch on the equipment when removing electrical parts such as PCBs, probe, and cable.

### 2-2 Precautions Against Mechanical Hazards to Serviceman

When disassembling the equipment, give care to the following to protect serviceman from hazards:

- 1) Keep the working environment neat.
- 2) Wear working gloves to protect your hands from getting injured by burrs on the unit and casing.
- 3) Use only proper tools suited to work being made.
- 4) Be sure to observe the specified disassembly procedure.
- 5) Take sufficient care not to damage component with undue load.

### 2-3 Precautions Against Germ Hazards to Serviceman

- 1) When it is necessary to touch the equipment, options and/or other peripheral devices at a customer who uses intracorporeal (transesophageal, transvaginal, transrectal) probes that need sterilization, take special care to protect your hands against germs, irrespective of the usage of the equipment: whether it is used in the operation room or not.
- 2) Service tools are subject to germ pollution in hospitals and, therefore, need periodical sterilization.
- 3) Be careful not to directly touch anything assumable to have germ pollution. If necessary, ask the customer for effective protection against germs.

2-4 Precautions for Keeping Electrical Safety

- 1) Be sure to ground the equipment securely.
- 2) Perfectness in grounding, screw tightening, and cover installation is essential. Negligence of it could cause a possibility of leak current from outer fitting which may lead to serious damage to a patient being diagnosed.

2-5 Precautions for Keeping Mechanical Safety

Take care to the following to prevent the equipment from being damaged or broken during disassembly and reassembly work.

- 1) Be sure to observe the specified disassembly procedure.
- 2) Take care not to damage component parts by undue load.
- 3) When reassembling the equipment, carefully check every part for loosening, distortion and creak.
- 4) Use only the specified screws and nuts. Using any other screws and/or nuts would affect not only mechanical performance, but also electrical performance of the equipment.

2-6 Precautions for Keeping Chemicals Safety

Whenever grease, oil or other chemicals is used for maintenance service, options and/or peripheral devices, be sure to clean the equipment and/or devices after service work.

2-7 Preparation to be Made at Service Center

- 1) When called by a customer on the telephone, note the following:
  - Model name of equipment
  - Serial number of equipment
  - Name of hospital
  - Telephone number
  - Name of person in charge
  - Detail of trouble symptom as far as possible
  - State of connection to optional devices



- 2) Go over the "Technical Bulletin" to see whether the complained trouble can be mended by means of regular repairing method.

2-8 Care to be Taken in the Field

- 1) Check for trouble symptoms.
- 2) Check for connection to optional devices and other peripheral devices.
- 3) Record the contents of the battery backup memory.
- 4) After working, reset the equipment according to the above mentioned contents of memory.
- 5) After completion of work, put back the peripheral devices to the original condition.

## SECTION 2 PRECAUTIONS

2) The user should read the "Safety Precautions" section of the user manual before using the device.

3) The user should read the "Safety Precautions" section of the user manual before using the device.

4) Check for visible damage.

5) Check for corrosion in electrical contacts and other electrical devices.

6) Remove the contacts of the battery before using.

7) After working with the equipment according to the above mentioned instructions of the user manual.

8) After working with the equipment according to the above mentioned instructions of the user manual.

### 3-1 Resetting the Backup Memory (RAM)

A backup feature is available to normally store the user's settings. In normal use, it will not be necessary to erase all the information so stored. It is necessary, however, to reset the backup memory with reference to the figure given below in any of the following events. This method cannot be taken when the system cannot be started up or locking up, because this resetting procedure is based on the software.

**CAUTION** This resetting the backup memory will erase the following information,

- All of the presettings, except INITIALIZE data

To set them all over again after resetting the memory, it is necessary to record the set information by the use of a printer, such as "Video Printer".

Do not use the customer's printer, meanwhile, before obtaining consent to do so.

- 1) When the software has been altered for an upgrade or for any other reasons,
- 2) When unnecessary (abnormal) character or codes is displayed in the data which have been set by user.

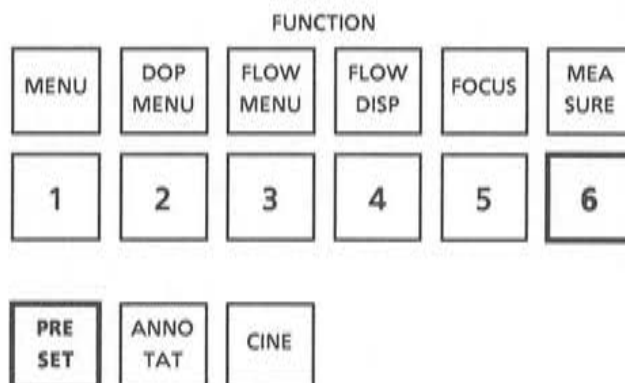
Press 

PRE SET
------------

 and 

6
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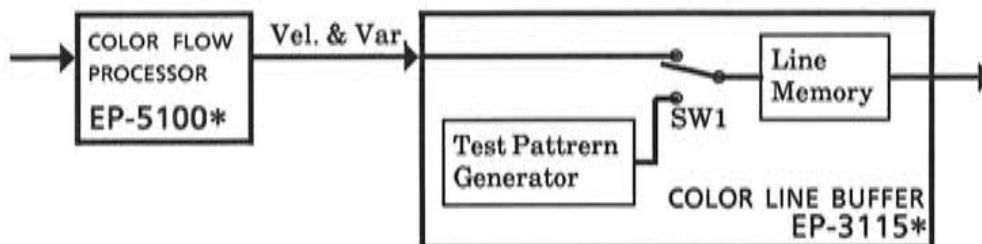
 at the same time.





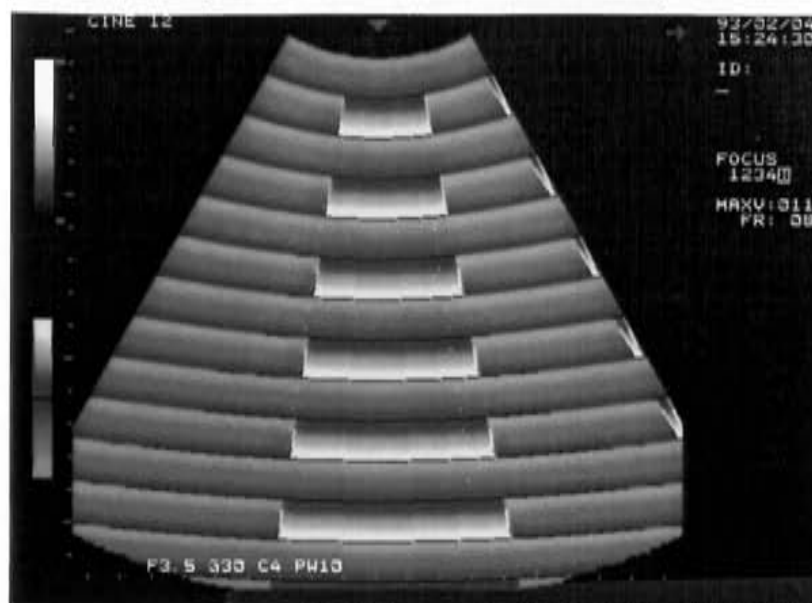
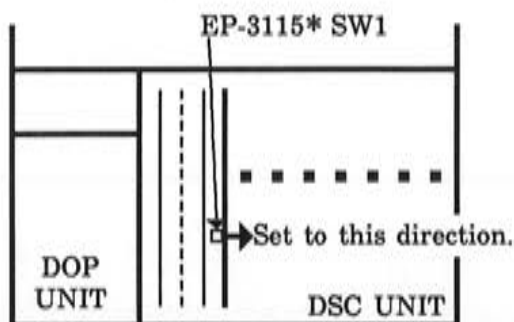
### 3-2 Display method for the Color Test Pattern

The color test pattern display feature is available on this system, and can be used for the diagnosis to find the defectiveness on the color display system.



Process 1 Set the SW1 which is equipped on EP-3115\* COLOR LINE BUFFER board in DSC unit named UIM-325, to right side as the following figure.

Process 2 Turn on the FLOW mode by the operation panel.



Condition B GAIN: MIN, STC: MIN

**CAUTION** After checking the operation with the color test pattern, reset the switch setting to the original position without fail.



3-3 Care on Handling of Surface Mount Device (SMD), and Surface Mount Technology (SMT) PCBs

It is an Aloka's policy that neither repair nor modification of PCBs used for S.M.D. is made in the field as a rule because of the following reasons:

The gaps between IC pins are very narrow

---

Fine solder chips would cause a short circuit and dirt from the hand would cause corrosion.

PCBs are fragile on impact

---

If the ROM is forced into the S.M.D. on a hard base when replacing the ROM, an undue force will apply to PCBs, causing various troubles, such as:

- Damage to PCB intermediate-layer patterns,
- Peeling of chip devices (resistor, capacitor, diode, etc.)
- Damage to a junction between electrode and internal element of chip devices,
- Peeling of patterns (especially those for mounting the parts) together with chip devices since those patterns are rather fragile compared with PCBs used before now, and
- Damage to parts on the reverse side in the case of PCBs of both-side mounting type.

In addition to the above, the S.M.D. chip would become impossible of reuse once it is removed from a PCB (because of damage due to thermal stress). So, do not try to replace the chip temporarily in the field even if a defective part can be located.

If it is necessary to touch those PCBs because of software version up or another reason, however, the matters mentioned above should be taken into careful consideration.

The artwork of PCB is also narrow

---

To prevent the secondary damage, the matters above should be taken into careful consideration.





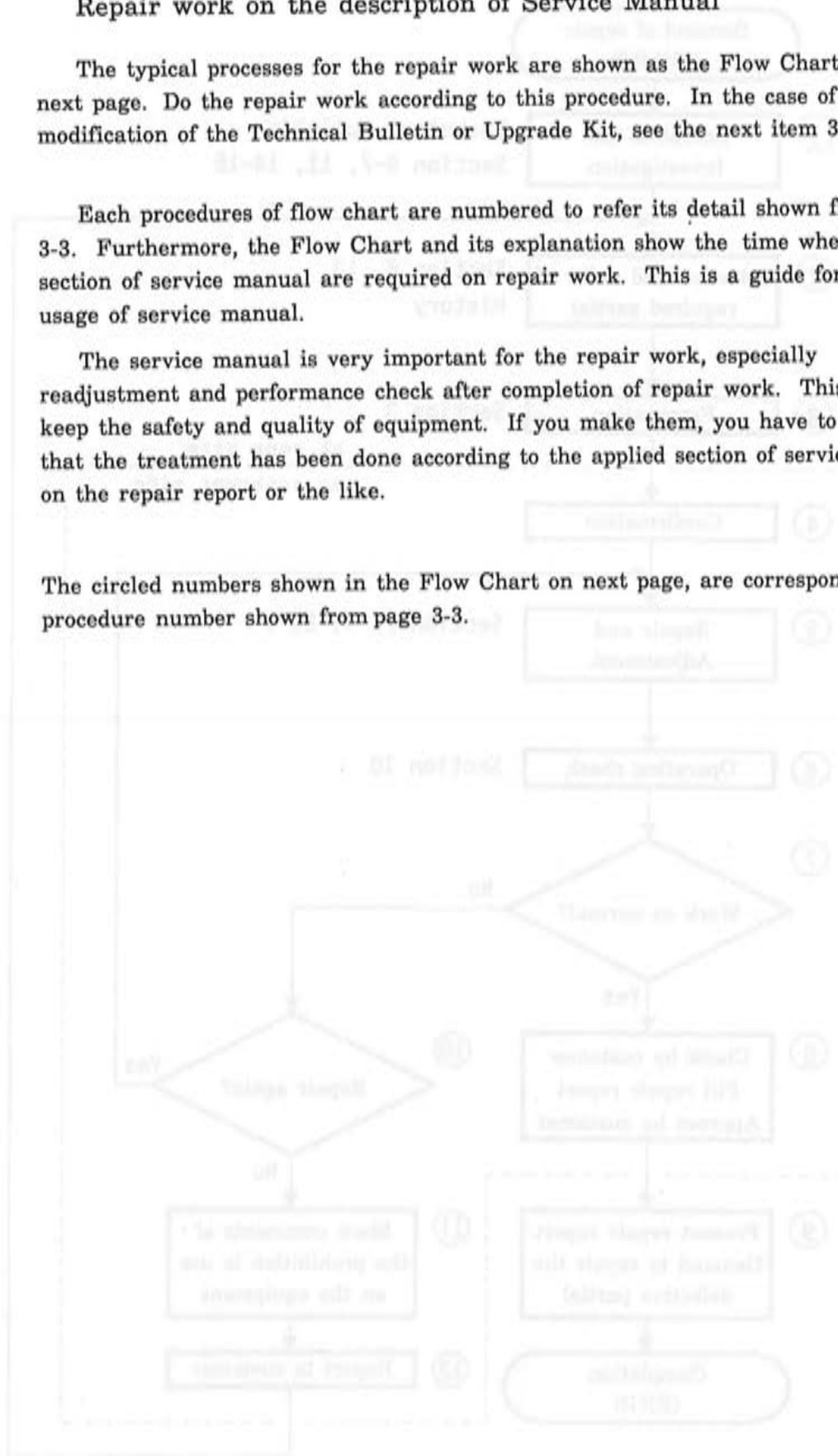
3-1 Repair work on the description of Service Manual

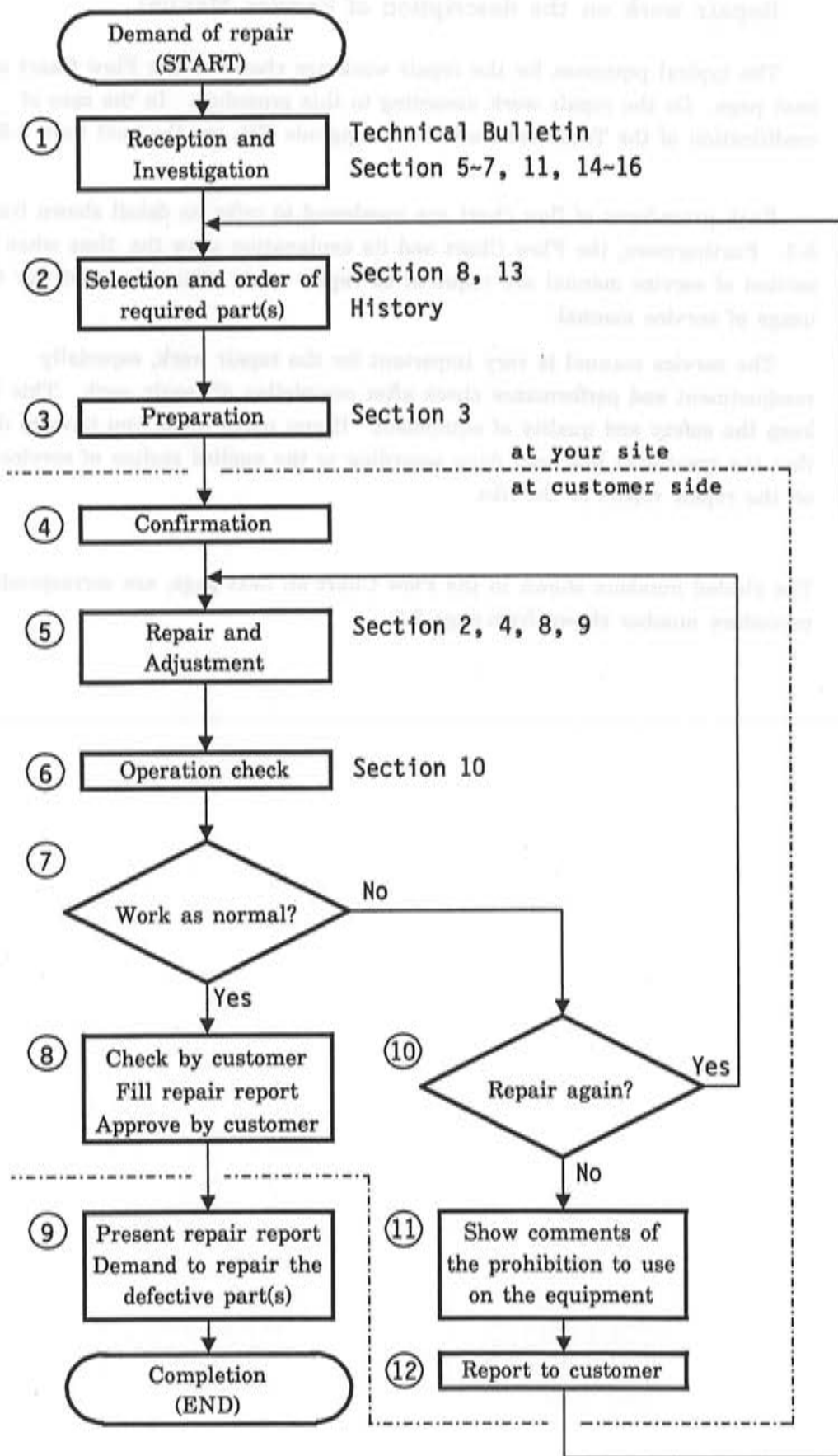
The typical processes for the repair work are shown as the Flow Chart on the next page. Do the repair work according to this procedure. In the case of modification of the Technical Bulletin or Upgrade Kit, see the next item 3-2.

Each procedures of flow chart are numbered to refer its detail shown from page 3-3. Furthermore, the Flow Chart and its explanation show the time when each section of service manual are required on repair work. This is a guide for the usage of service manual.

The service manual is very important for the repair work, especially readjustment and performance check after completion of repair work. This is to keep the safety and quality of equipment. If you make them, you have to describe that the treatment has been done according to the applied section of service manual, on the repair report or the like.

The circled numbers shown in the Flow Chart on next page, are corresponded to the procedure number shown from page 3-3.





## Procedure 1 Reception of repair and investigation

Accept the repair request from the customer or distributor. At this time, the following points have to be confirmed and checked,

- Model name/number, and serial number
- Name of customer, address, phone number, and name of person in charge
- Configuration of the connection of peripheral devices
- Software version or the like shown on the boot up display (if possible)
- Detail of phenomenon appeared on the function of equipment

Make an examination what circuit may be defective as the function of equipment based on the above information. If you need to know about the basic operation and special information for the maintenance, refer to the following sections, or ask to the *Technical Support*,

- ▶ Section 5 System Block Diagram
- ▶ Section 6 PCB Block Diagram
- ▶ Section 7 Schematics
- ▶ Section 11 Maintenance Information
- ▶ Section 14 System Outline
- ▶ Section 15 Principle of System Operation
- ▶ Section 16 Principle of Hardware Operation

The reported phenomenon may be the original problem on the equipment. Because, refer to the *Technical Bulletin* separately issued to check it whether defectiveness or not. If it has been reported as the original problem, make a work according to the *Technical Bulletin*.

## Procedure 2 Selection of required parts and order

If you find the doubtful circuit, order the necessary parts. Then check the delivery date and decide the date to visit on the consultation with the customer. For the selection and order of parts, refer to the following sections,

- ▶ Section 8 TROUBLESHOOTING
- ▶ Section 13 PARTS LIST

For the electrical parts such as PCB, check the history information on the *HISTORY* of this equipment separately issued.

### Procedure 3 Preparation of visiting the customer

Check the required tools, measuring devices and parts to be replaced before the visiting the customer. Then check the special information for the equipment reference with the following section,

- ▶ Section 3 BEFORE REPAIR

### Procedure 4 Confirmation of phenomenon

Confirm the appeared phenomenon and condition to happen it with the customer. If you don't know about the operation of equipment, refer to the *Operation Manual* attached to the equipment.

### Procedure 5 Repair and readjustment

Repair the defective circuit with the brought parts. For the repair work, read the following section carefully,

- ▶ Section 2 PRECAUTIONS

And, examine the trouble reason depending on the situation with following section,

- ▶ Section 8 TROUBLESHOOTING

The electrical or mechanical readjustment may be requested depending on the replaced parts. Because, refer to the following section after completion of repair,

- ▶ Section 9 ADJUSTMENT

### Procedure 6 Operation check

Check the system behavior to keep its condition as same as before in trouble, reference with the following section. Be sure to do according to the description because check items are depending on the portion to be treated.

- ▶ Section 10 PERFORMANCE CHECK

### Procedure 7 Judgment of the operation quality

If the result of "Procedure 6" is passed to the all standards, do the next "Procedure 8". On the other side, if not, make a judgment of "Procedure 10".

### Procedure 8 Confirm by customer, make repair report and approve

Reconfirm the solution of trouble phenomenon with the customer. Then make a repair report and obtain approval of customer.

The repair report shows not only the treatment but also the method of readjustment and operation check. If they have been done according to the service manual, the followings have to be shown,

*"Readjusted according to the Section 9 of service manual."*

*"Checked according to the Section 10 of service manual, and passed."*

### Procedure 9 Presentation of report and order to repair parts

Fill the repair report with necessary item, and present it according to the certain procedure.

If the defective parts that trouble cause included is available to use again by repair, make an order to do. If you cannot judge whether the part can be used again or not, ask to the *Technical Support*.

### Procedure 10 Judgment of possibility to repair again

As the result of judgment on "Procedure 7", if the trouble is not solved, judge the possibility to make the repair work again.

If available, return to "Procedure 5" and continue to work.

If unavailable, go to "Procedure 11".

### Procedure 11 Indication of the prohibition to use

As the result of judgment on "Procedure 10", if you judge that it is impossible to continue the repair work at this time, indicate that the equipment is still out of order, and also show the prohibition to use, on the equipment.

Procedure 12 Report to the customer

Report the reason why the trouble cannot be solved to the customer. Then consult about the plan of next repair work. And do the same way from "Procedure 2".

## 3-2 Modification work on the description of Service Manual

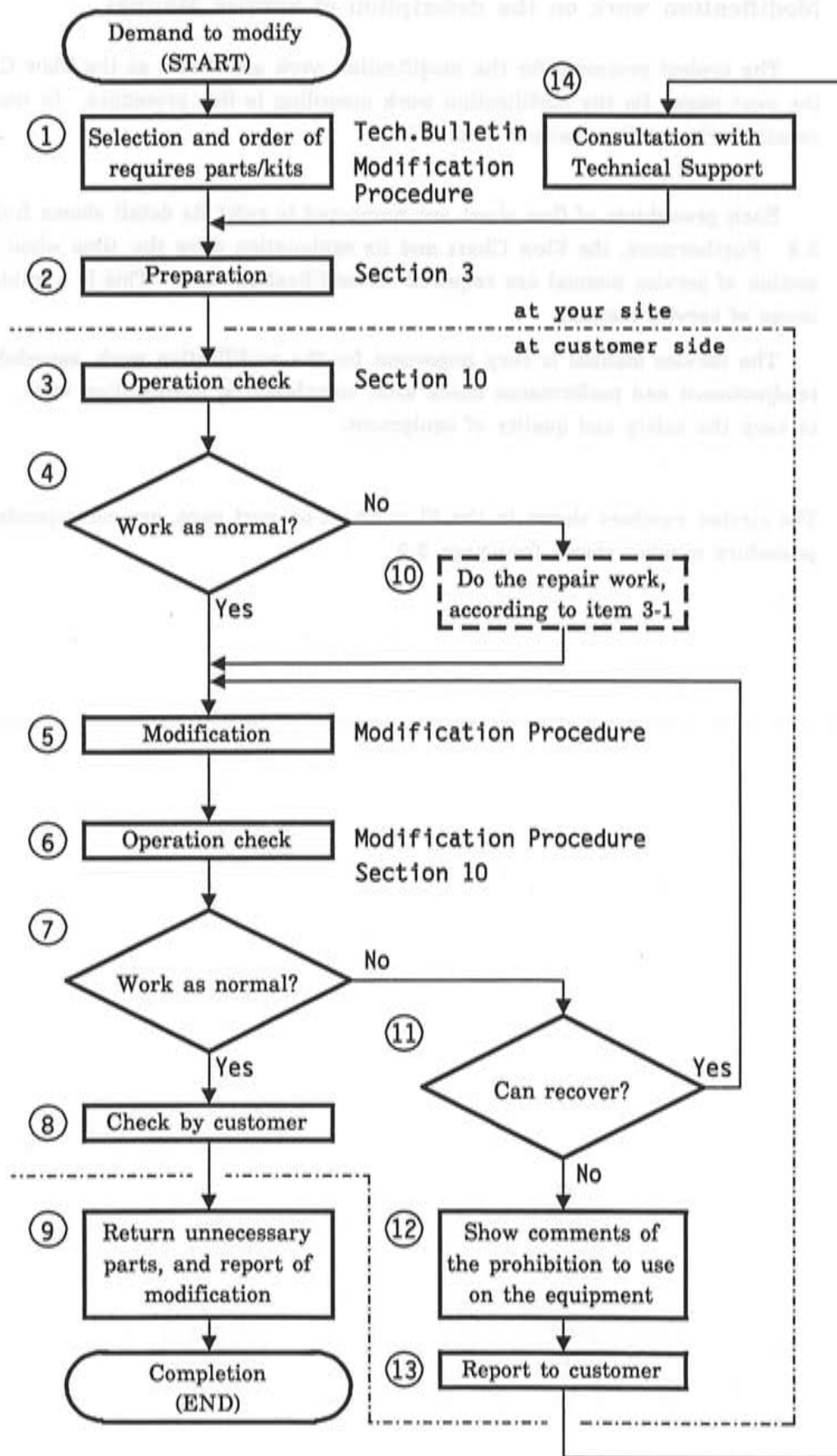
The typical processes for the modification work are shown as the Flow Chart on the next page. Do the modification work according to this procedure. In the case of repair work, see the previous item 3-1.

Each procedures of flow chart are numbered to refer its detail shown from page 3-9. Furthermore, the Flow Chart and its explanation show the time when each section of service manual are required on modification work. This is a guide for the usage of service manual.

The service manual is very important for the modification work, especially readjustment and performance check after completion of modification work. This is to keep the safety and quality of equipment.

The circled numbers shown in the Flow Chart on next page, are corresponded to the procedure number shown from page 3-9.







## Procedure 1 Selection of required parts / kits and order

Accept the modification request from the customer, distributor or person in charge of sales. At this time, the following points have to be confirmed and checked to decide the parts and kits,

- Document name that announced the modification or kit requested
- Model name/number, and serial number
- Name of customer, address, phone number, and name of person in charge
- Configuration of the connection of peripheral devices
- Software version or the like shown on the boot up display

Make an examination what parts or kits are required based on the above information. For the selection, refer to the following document separately issued, or ask to the *Technical Support*,

- ▶ *Technical Bulletin*

To confirm the detail of modification, see the *Modification Procedure* attached with applied *Technical Bulletin*.

Depending on the modification, hardware, or software, the other modification may be required. Check it with the *Technical Bulletin*.

Then, confirm the delivery date of required parts or kits, and decide the date to visit on the consultation with the customer.

## Procedure 2 Preparation of visiting the customer

Check the required tools, measuring devices and parts or kits to be used before the visiting the customer. Then check the special information for the equipment reference with the following section and document,

- ▶ Section 3 BEFORE REPAIR
- ▶ *Technical Bulletin* and/or *Modification Procedure*

## Procedure 3 Operation check before modification

On the basis of work, the modification to the defective equipment is prohibited. Because, before modification work, check the behavior of equipment whether normal or not according to following section and document,

- ▶ Section 10 PERFORMANCE CHECK
- ▶ *Operation Manual*

Procedure 4 Judgment of the operation quality

If the result of "Procedure 3" is passed to the all standards, do the next "Procedure 5". On the other side, if not, go to "Procedure 10".

Procedure 5 Modification work

Do the modification work according to the following document,

- ▶ *Modification Procedure* attached with kit or *Technical Bulletin*

Procedure 6 Operation check after modification

Check the system behavior to keep its condition as same as before the modification, reference with the following section. Be sure to do according to the description because check items are depending on the portion to be treated.

- ▶ Section 10 PERFORMANCE CHECK
- ▶ *Modification Procedure*

Procedure 7 Judgment of the operation quality

If the result of "Procedure 6" is passed to the all standards, do the next "Procedure 8". On the other side, if not, make a judgment of "Procedure 11".

Procedure 8 Confirmation by customer

Reconfirm any functions of equipment with the customer. Then, if need, introduce and explain about the new functions and specification added by this modification.

Furthermore, if need, make a report to be approved by the customer. The report shows not only the treatment but also the method of operation check. If it has been done according to the service manual, the following has to be shown,

*"Checked according to the Section 10 of service manual, and passed."*

**Procedure 9 Return of unnecessary parts and report of completion**

According to the *Technical Bulletin*, return the unnecessary replaced or unused parts as soon as possible if suggested.

And, if the report of modification is suggested on the same document, report it with the information required.

**Procedure 10 Work for the abnormal behavior of equipment**

On the result of judgment in "Procedure 4", if the equipment does not work normal, solve the problem according to item 3-1 "Repair work on the description of service manual" shown in this section.

When the problem is solved, return to "Procedure 5" of this item and continue to do the modification work.

**Procedure 11 Judgment of possibility to recover**

As the result of judgment on "Procedure 7", if the problem has been made by this modification, judge the possibility to recover it.

If available, return to "Procedure 5" and continue to work.

If unavailable, go to "Procedure 12".

**Procedure 12 Indication of the prohibition to use**

As the result of judgment on "Procedure 11", if you judge that it is impossible to recover at this time, indicate that the equipment is the out of order, and also show the prohibition to use, on the equipment.

**Procedure 13 Report to the customer**

Report to the customer that the modification has not been completed because of the problem on the modification work. Then make a schedule to fix and complete it.

### Procedure 14 Asking to the Technical Support

Report to the *Technical Support* about the happening of problem on the modification work, make an examination to solve and order the additional parts. Before the asking, check the following points,

- Name of kit, or the issue number of *Technical Bulletin* showing the modification
- Model name/number, and serial number
- Configuration of the connection of peripheral devices
- Software version or the like shown on the boot up display
- Indication of equipment such as Modification or History Label
- Detail of phenomenon appeared on the function of equipment

### 3-3 Resetting the Backup Memory (RAM)

A backup feature is available to normally store the user's settings. In normal use, it will not be necessary to erase all the information so stored. It is necessary, however, to reset the backup memory with reference to the figure given below in any of the following events. This method cannot be taken when the system cannot be started up or locking up, because this resetting procedure is based on the software.

**CAUTION** This resetting the backup memory will erase the following information,

- All of the presettings, except INITIALIZE data

To set them all over again after resetting the memory, it is necessary to record the set information by the use of a printer, such as "Video Printer".

Do not use the customer's printer, meanwhile, before obtaining consent to do so.

- 1) When the software has been altered for an upgrade or for any other reasons,
- 2) When unnecessary (abnormal) character or codes is displayed in the data which have been set by user.

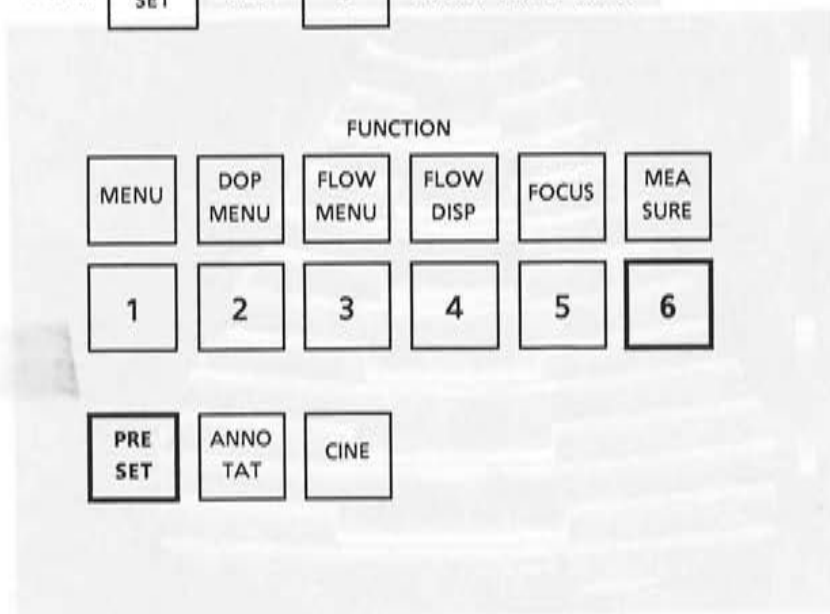
Press 

PRE SET
------------

 and 

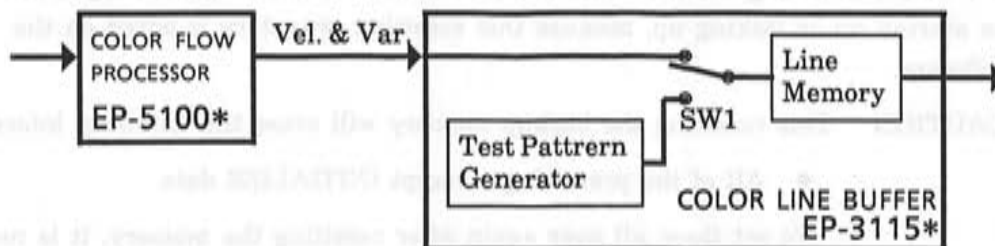
6
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 at the same time.



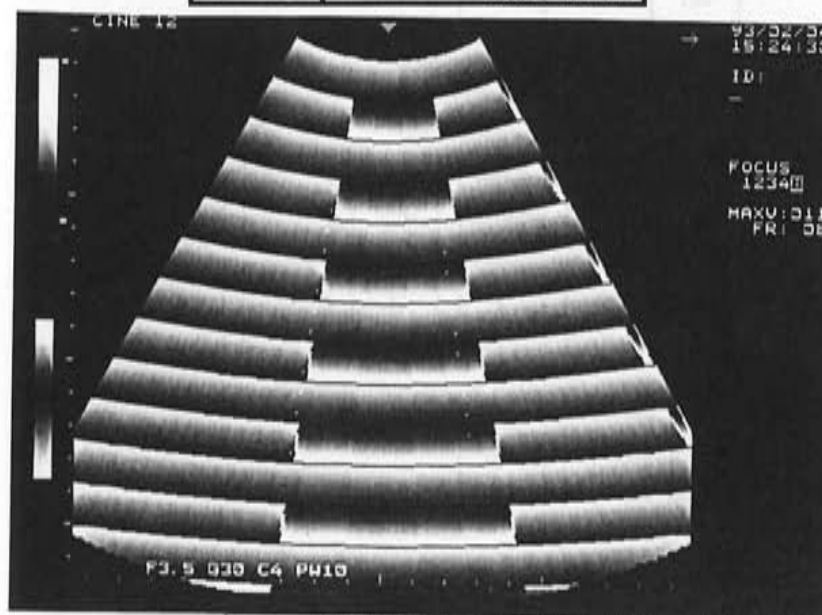
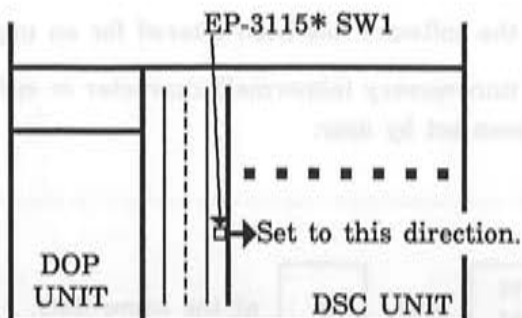
3-4 Display method for the Color Test Pattern

The color test pattern display feature is available on this system, and can be used for the diagnosis to find the defectiveness on the color display system.



Process 1 Set the SW1 which is equipped on EP-3115\* COLOR LINE BUFFER board in DSC unit named UIM-325, to right side as the following figure.

Process 2 Turn on the FLOW mode by the operation panel.



Condition B GAIN: MIN, STC: MIN

**CAUTION** After checking the operation with the color test pattern, reset the switch setting to the original position without fail.

### 3-5 Care on Handling of Surface Mount Device (SMD), and Surface Mount Technology (SMT) PCBs

It is an Aloka's policy that neither repair nor modification of PCBs used for S.M.D. is made in the field as a rule because of the following reasons:

The gaps between IC pins are very narrow.

Fine solder chips would cause a short circuit and dirt from the hand would cause corrosion.

PCBs are fragile on impact.

If the ROM is forced into the S.M.D. on a hard base when replacing the ROM, an undue force will apply to PCBs, causing various troubles, such as:

- Damage to PCB intermediate-layer patterns,
- Peeling of chip devices (resistor, capacitor, diode, etc.)
- Damage to a junction between electrode and internal element of chip devices,
- Peeling of patterns (especially those for mounting the parts) together with chip devices since those patterns are rather fragile compared with PCBs used before now, and
- Damage to parts on the reverse side in the case of PCBs of both-side mounting type.

In addition to the above, the S.M.D. chip would become impossible of reuse once it is removed from a PCB (because of damage due to thermal stress). So, do not try to replace the chip temporarily in the field even if a defective part can be located.

If it is necessary to touch those PCBs because of software version up or another reason, however, the matters mentioned above should be taken into careful consideration.

The artwork of PCB is also narrow

To prevent the secondary damage, the matters above should be taken into careful consideration.





1. Parts Identification
2. Individual Units Layout
3. Dismounting Flowchart
4. How to Remove Covers
5. How to Open Panel Escutcheon
6. How to Pull out PC Board of TX / RX Unit (GEU-64) and How to Remove Unit
7. How to Pull out PC Board of DSC Unit (UIM-325) and How to Remove Unit
8. How to Pull out PC Board of Doppler Unit (UGR-680) and How to Remove Unit
9. How to Remove Power supply Unit (PSU-S680C)
10. How to Remove PC Board
11. How to Remove Panel Frame and PC Board of Operation Panel
12. How to Remove Observation Monitor Unit (IPC-1010 /-1230)
13. How to Remove Monitor Arm (L-Ki-490 /-501)
14. How to Remove Top Cover
15. How to Remove VTR Remote Controller Rack
16. How to Remove Panel Lower Cover and Speaker Unit

# 1. Parts Identification

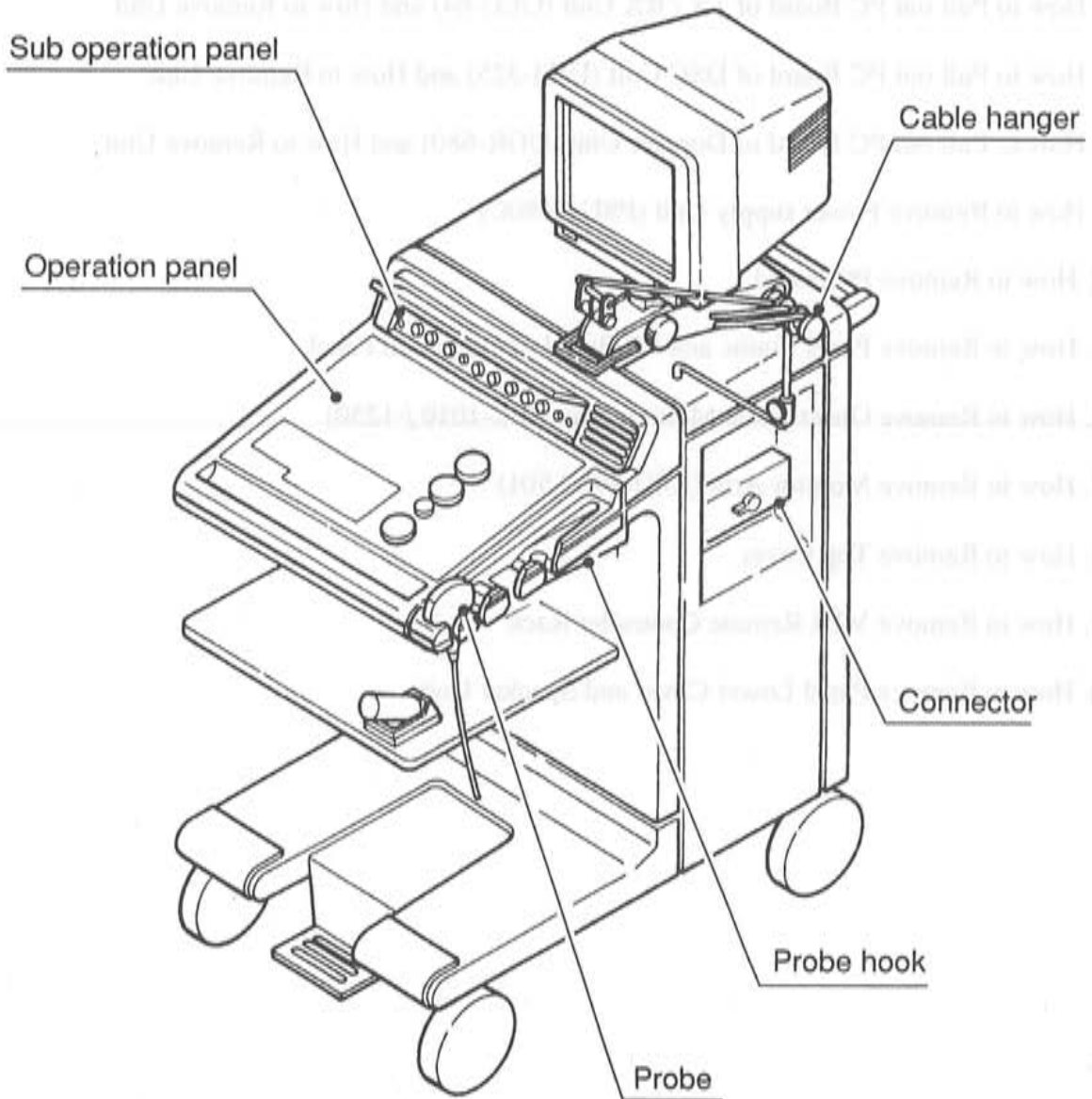


Fig. 1

## 2. Individual Units Layout

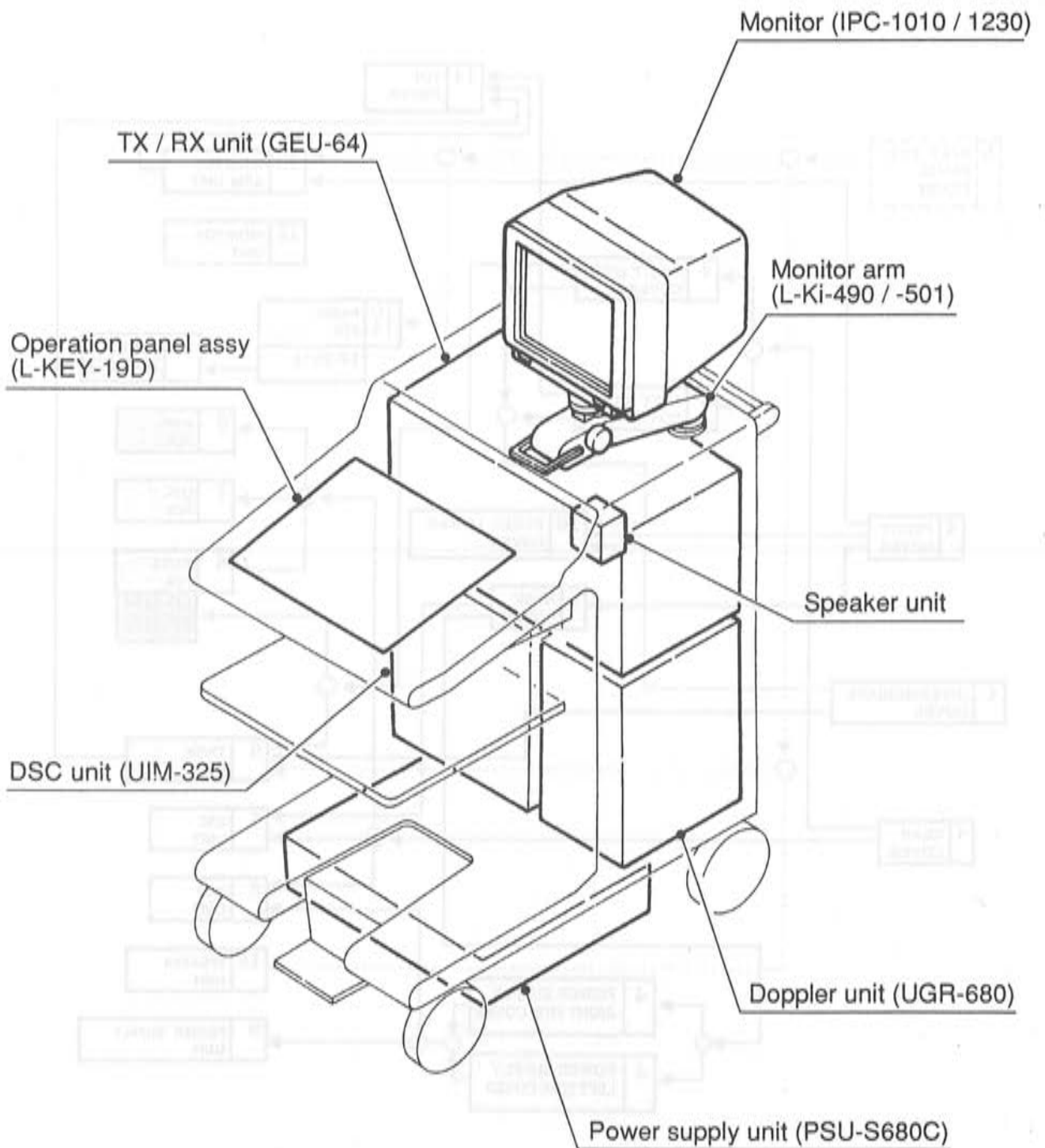
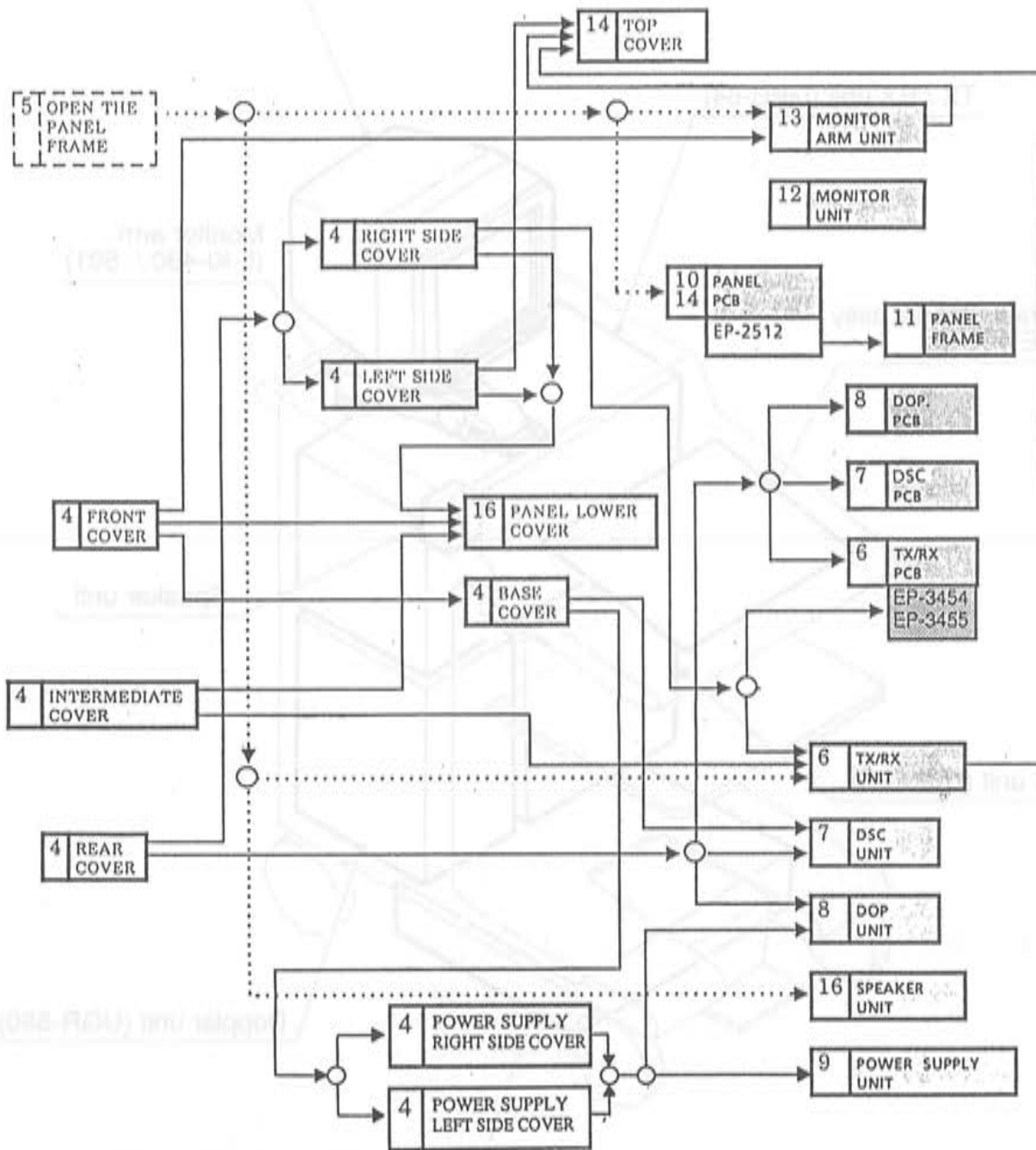


Fig. 2

### 3. Dismounting Flowchart

Industrial Unit Layout 3



## 4. How to Remove Covers

Note: See Dismounting flowchart.

Operation (6) is not required for S/N 21M10986 and up.

- (1) Remove 4 screws and remove front cover. (Applicable to the units S/N 21M08243~21M12683) (A in Fig.)
- (1)' Remove 6 screws and remove front cover. (Applicable to the units S/N 31M00876~) (A in Fig.)
- (2) Remove 2 screws to remove base cover by pulling it toward you. (B in Fig.)
- (3) Remove 2 screws and remove intermediate cover.(C in Fig.)
- (4) Remove 3 screws and remove foot rest. (D in Fig.)

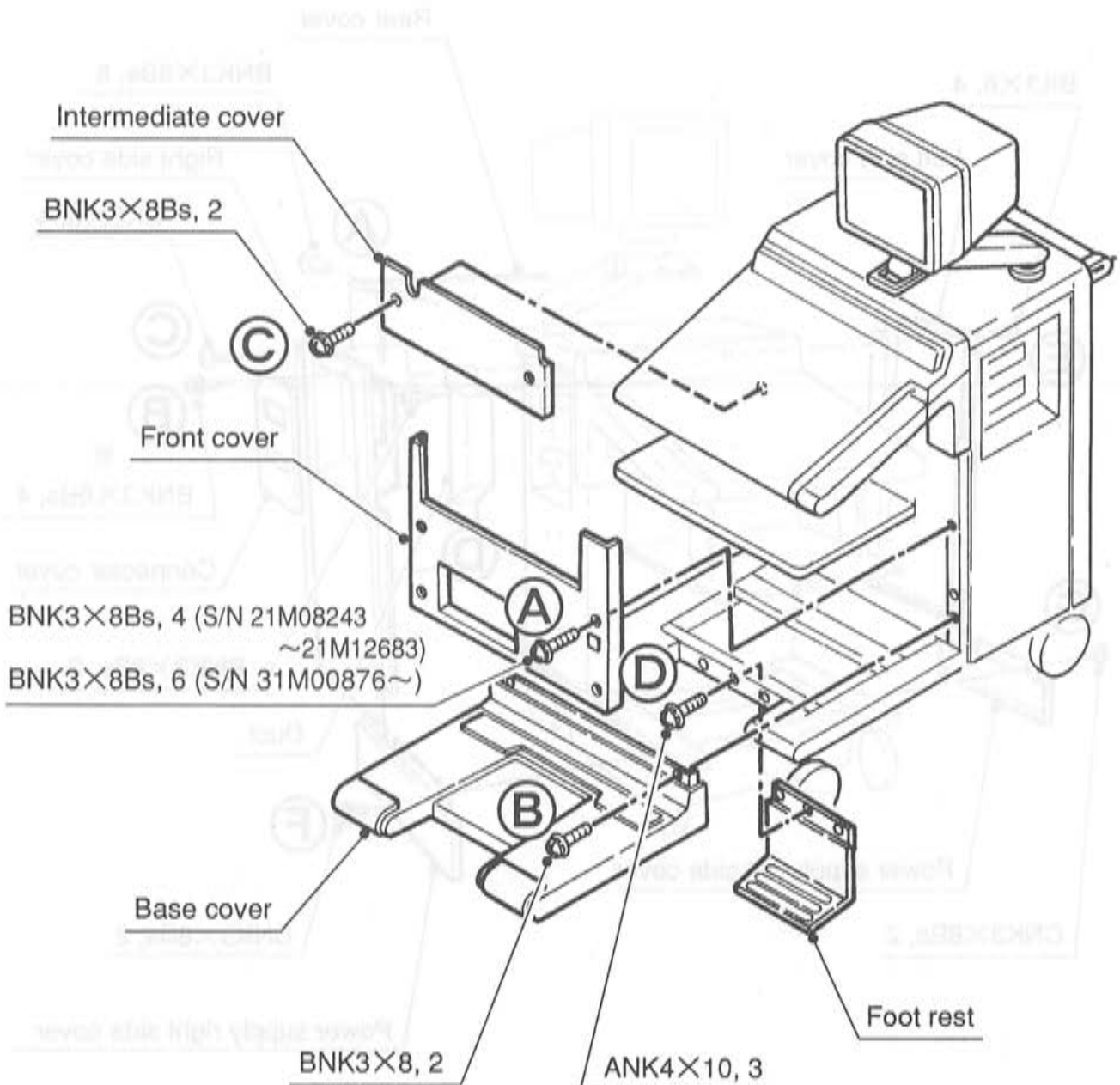
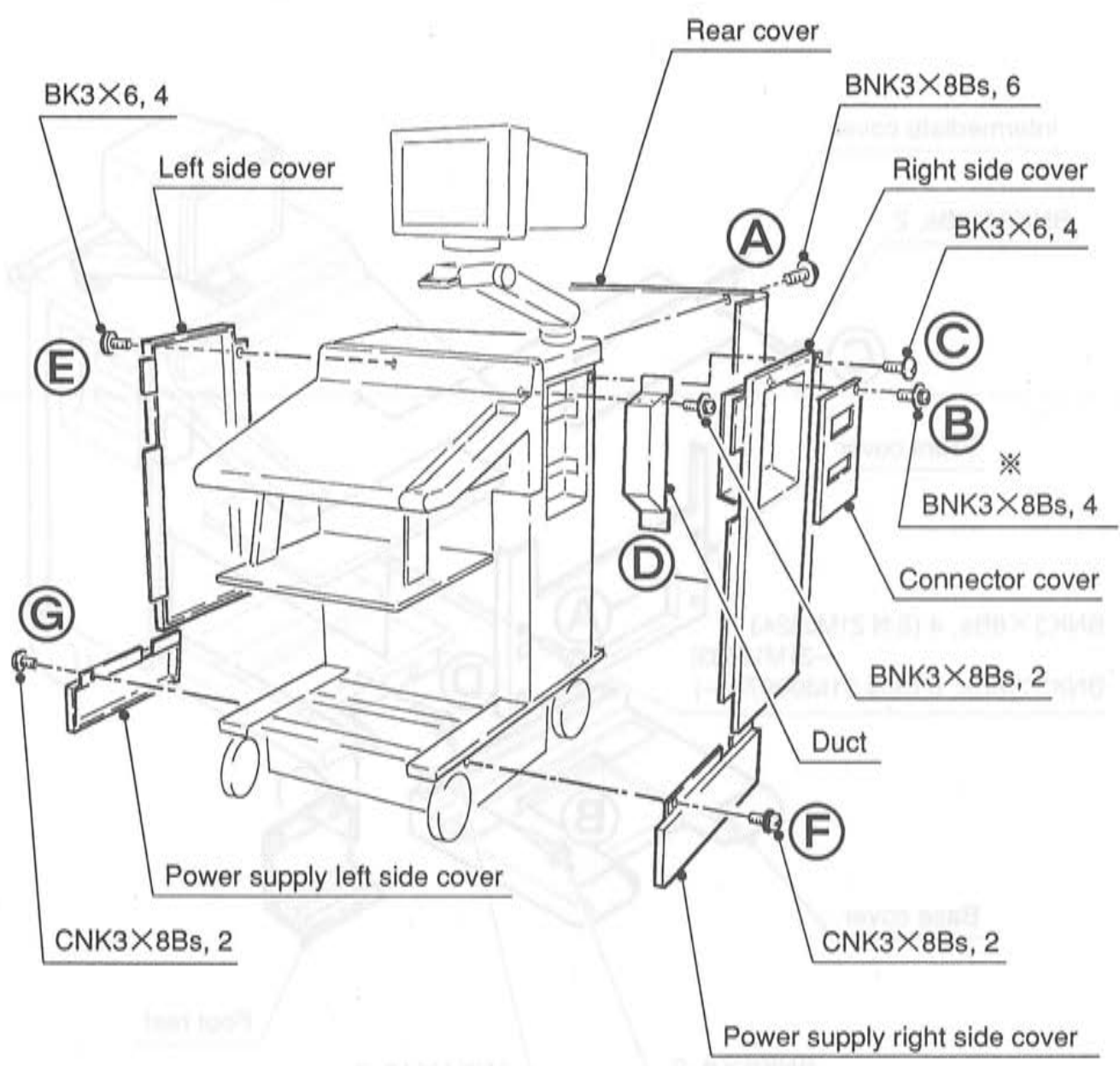


Fig. 3

- (5) Remove 6 screws and remove rear cover. (A in Fig.)
- (6) Remove 4 screws and remove connector cover. (B in Fig.)
- (7) Remove 4 screws and shift the right side cover rearward and remove it. (C in Fig.)
- (8) Remove 2 screws and remove duct. (D in Fig.)
- (9) Remove 4 screws and remove left side cover similarly as in (7). (E in Fig.)
- (10) Remove 2 screws and remove power supply right side cover. (F in Fig.)
- (11) Remove 2 screws and remove power supply left side cover. (G in Fig.)



※ Do not remove the connector cover the units subsequent to S/N 21M10986.

Fig. 4

## 5. Panel frame opening procedure

- (1) Loosen to remove three (3) screws and open the panel frame, and put the stay in the notch of the upper cover stationary plate and fix. (A in Fig.)
- (2) Loosen to remove two (2) E-ring and two (2) shaft of the blind cover, and take the cover away. (B in Fig.)

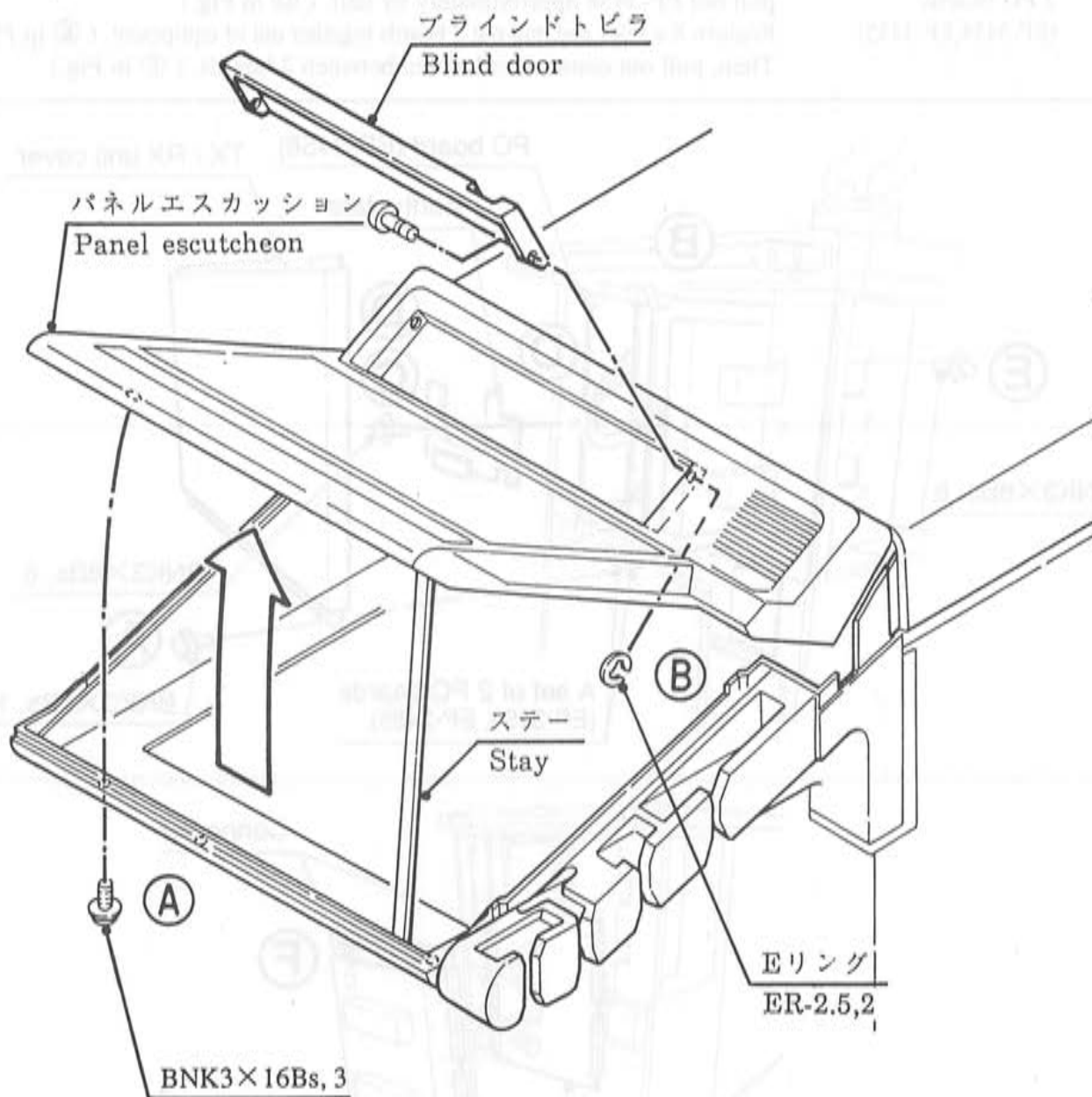


Fig.5

## 6. How to Pull out PC Board of TX / RX Unit (GEU-64) and How to Remove Unit

Note: See Dismounting flowchart.

### ● How to Pull out PC Board

(1) Remove 16 screws and remove TX / RX unit cover. (A in Fig.)

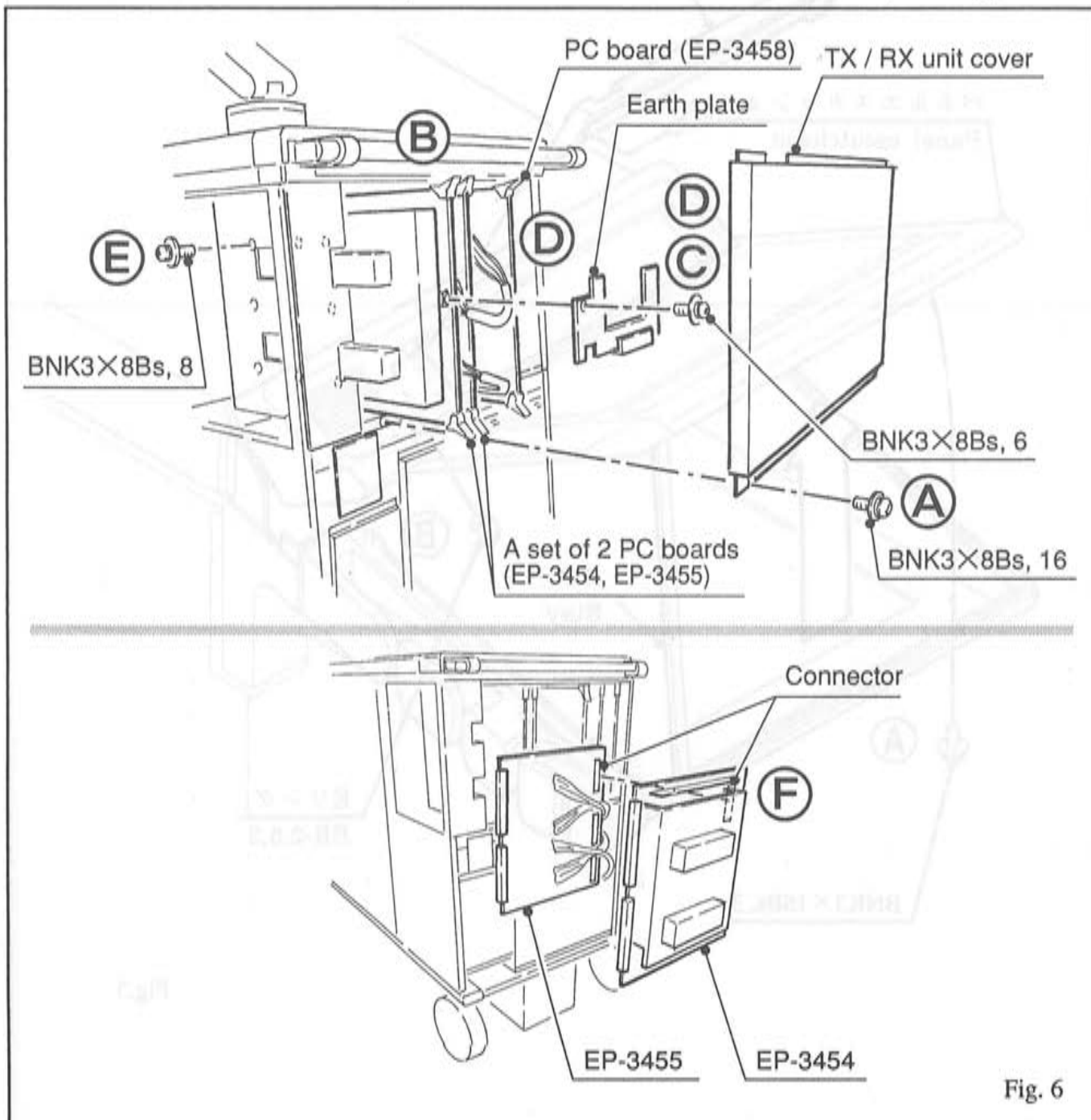
Then PC board can be taken out. (B in Fig.)

※ PC board specified below, however, shall be pulled out after completion of operations referred to below.

○ 3rd PC board thru . . . . . Remove 6 screws and remove earth plate. (C in Fig.)  
5th counted from the left

○ A set of . . . . . Remove 6 screws to remove earth plate. After that,  
2 PC boards pull out EP-3458 approximately by half. (D in Fig.)

(EP-3454, EP-3455) Remove 8 screws and pull out 2 boards together out of equipment. (E in Fig.)  
Then, pull out connectors located between 2 boards. (F in Fig.)





● How to Remove Unit

- (2) Remove 2 screws of earth plate on left side. (A in Fig.)
- (3) Remove 4 screws and remove TX /RX unit. (B in Fig.)  
(Remove all the cables connected)

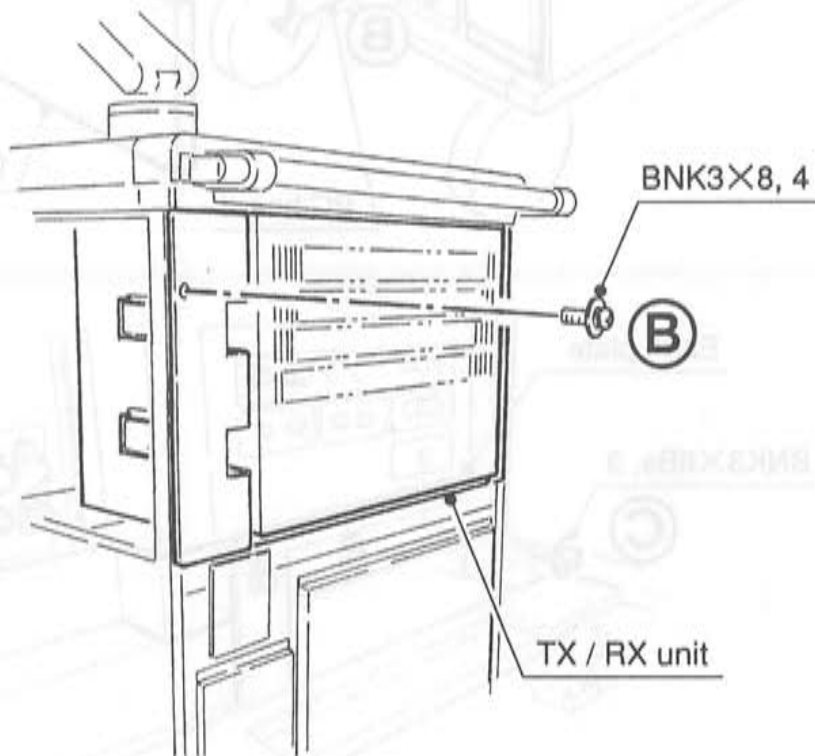
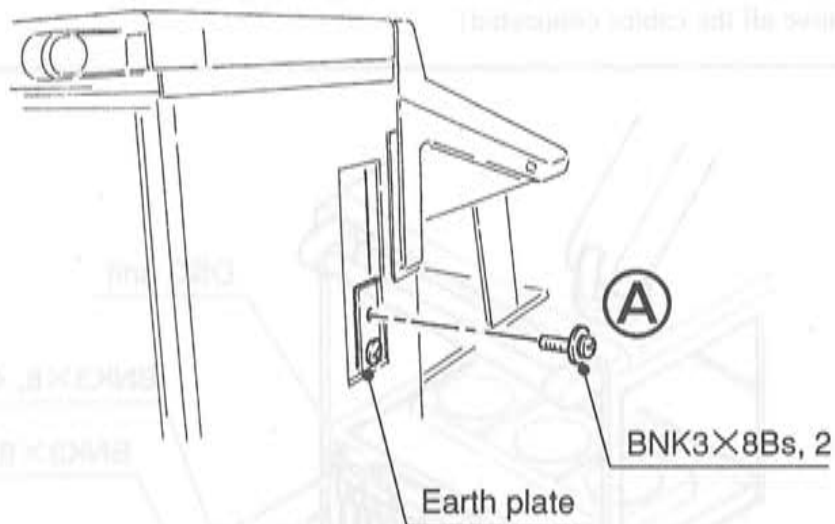


Fig. 7

## 7. How to Pull out PC Board of DSC Unit (UIM-325) and How to Remove Unit

Note: See Dismounting flowchart.

### ● How to Pull out PC Board

- (1) Remove 14 screws and remove DSC unit. (A in Fig.)  
Then PC board can be taken out. (B in Fig.)

### ● How to Remove Unit

- (2) Remove 3 screws of earth board on front side of equipment. (C in Fig.)
- (3) Remove 6 screws and remove DSC unit. (D in Fig.)  
(Remove all the cables connected)

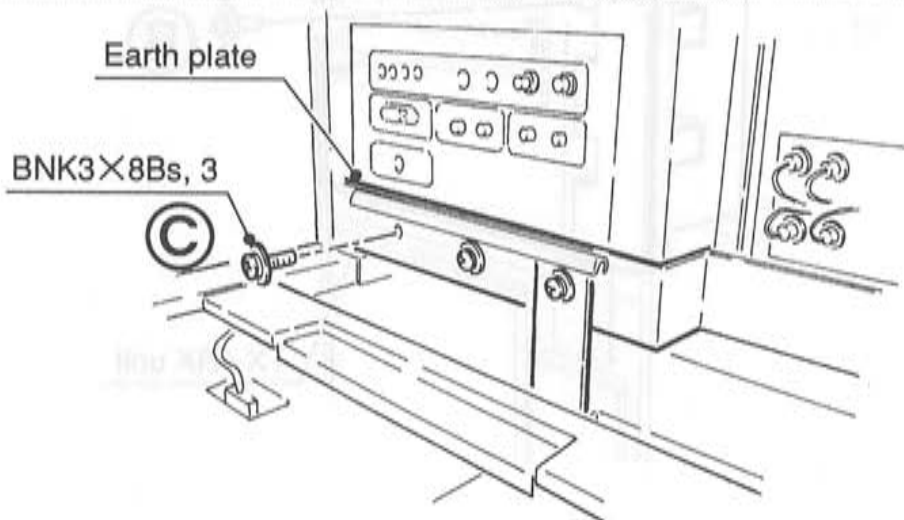
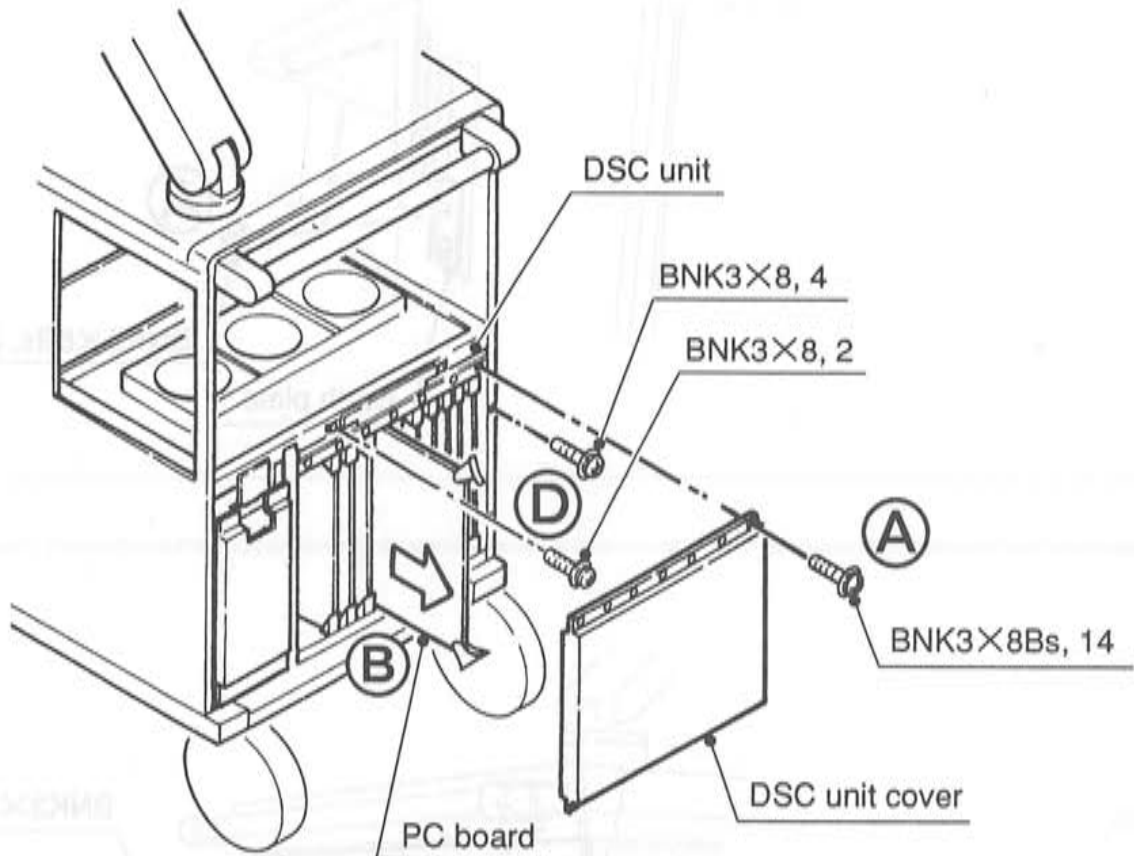


Fig. 8

## 8. How to Pull out PC Board of Doppler Unit (UGR-680) and How to Remove Unit

Note: See Dismounting flowchart.

### ● How to Pull out PC Board

- (1) Remove 4 screws and remove Doppler unit. (A in Fig.)  
Then PC board can be taken out. (B in Fig.)

### ● How to Remove Unit

- (2) Disconnect connector J512 from connector panel of power supply unit on right side. (C in Fig.)
- (3) Remove 3 screws of earth board on front side of equipment. (D in Fig.)
- (4) Remove 6 screws and remove Doppler unit with rear earth plate. (E in Fig.)  
(Remove all the cables connected)

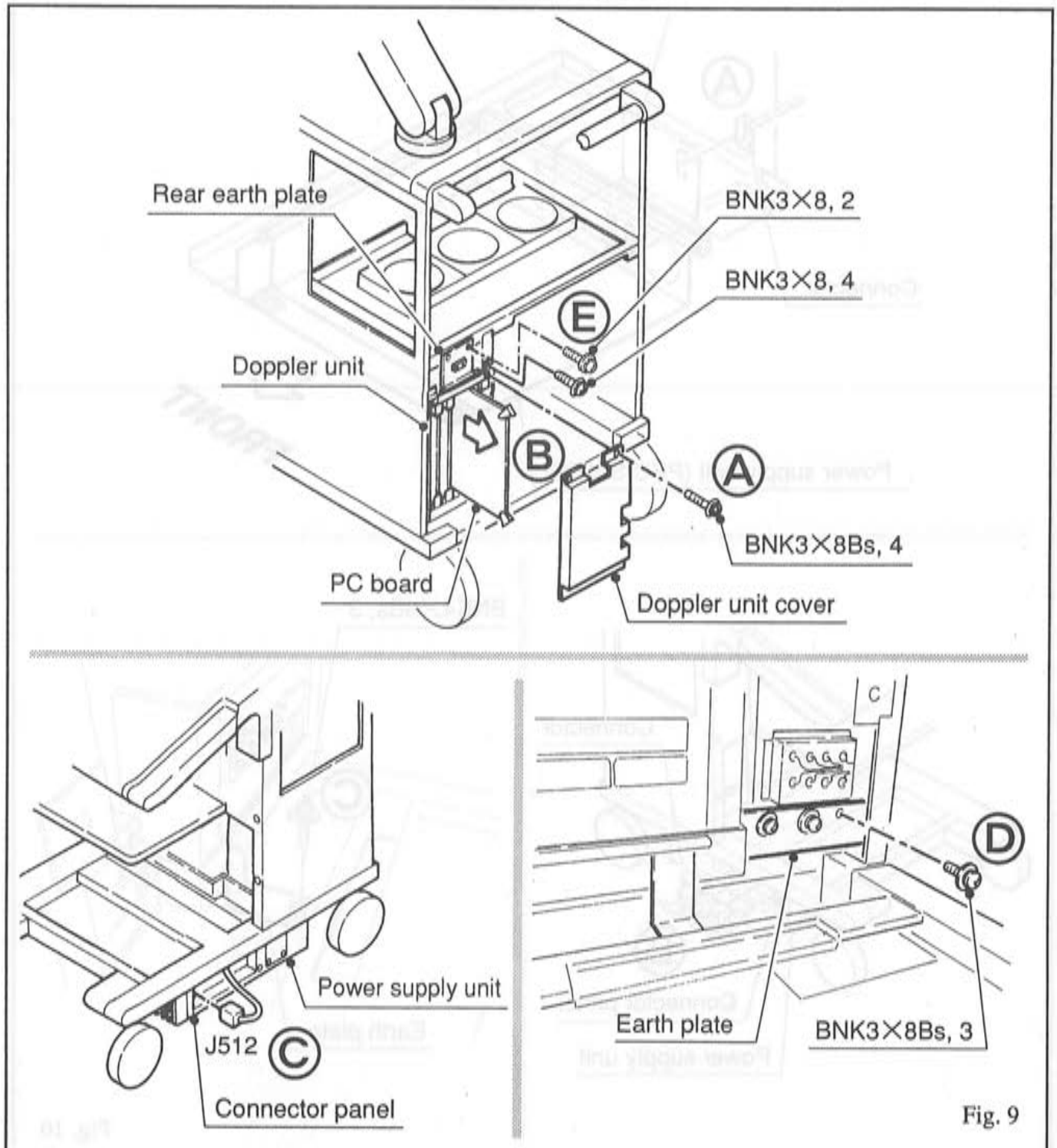


Fig. 9

## 9. How to Remove Power supply Unit (PSU-S680C)

Note : Make sure to turn off power supply of the device and lock the caster.  
And power supply unit weighs very heavily. Use utmost care to carry out operation, accordingly

- (1) When the isolation transformer is provided, remove the connector. (A in Fig.)
- (2) Remove all the cables connected to connector panel on the right side of the power supply unit (PSU-S680C). (B in Fig.)
- (3) Remove 3 screws of earth board on front side of equipment. (C in Fig.)

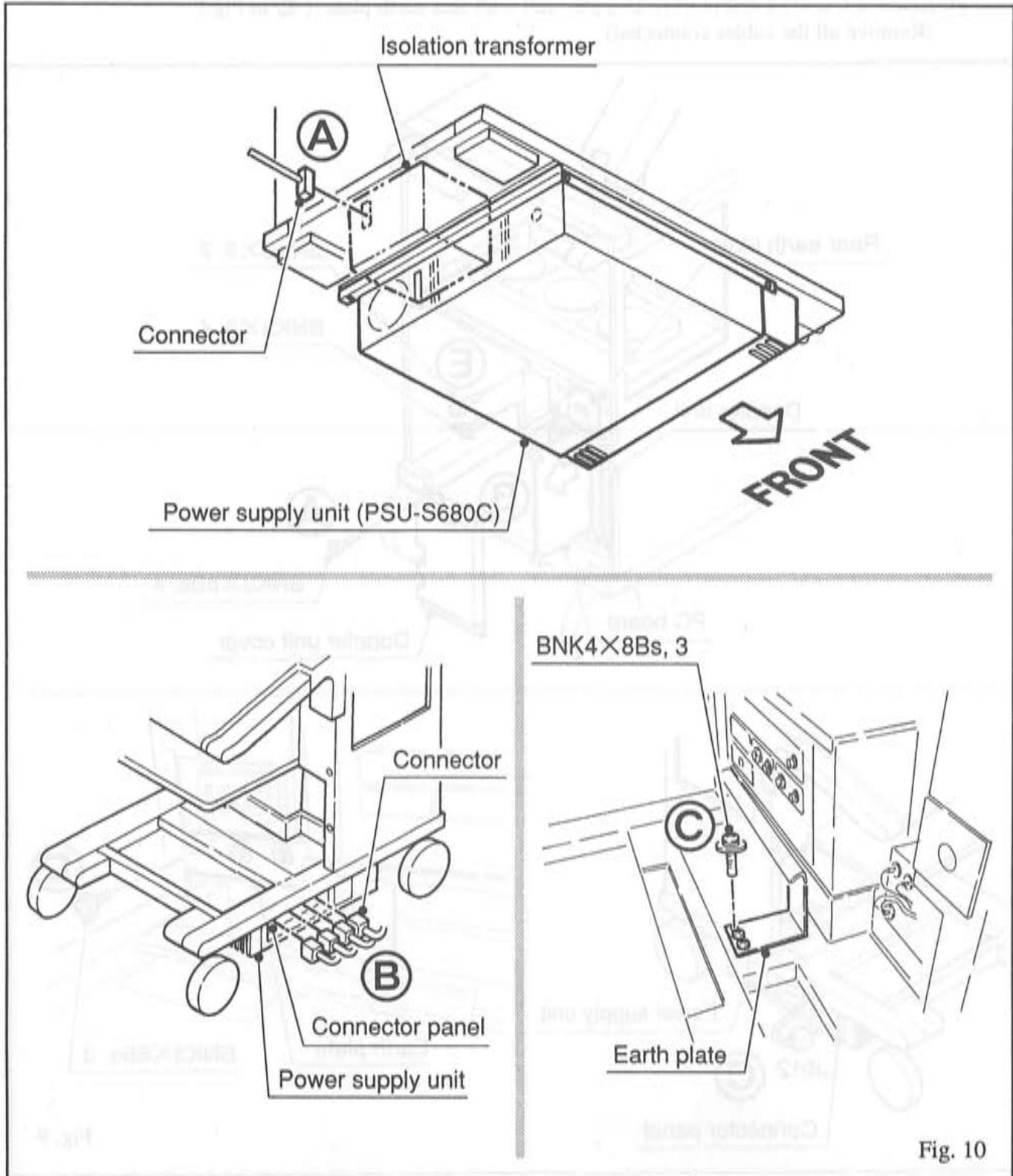
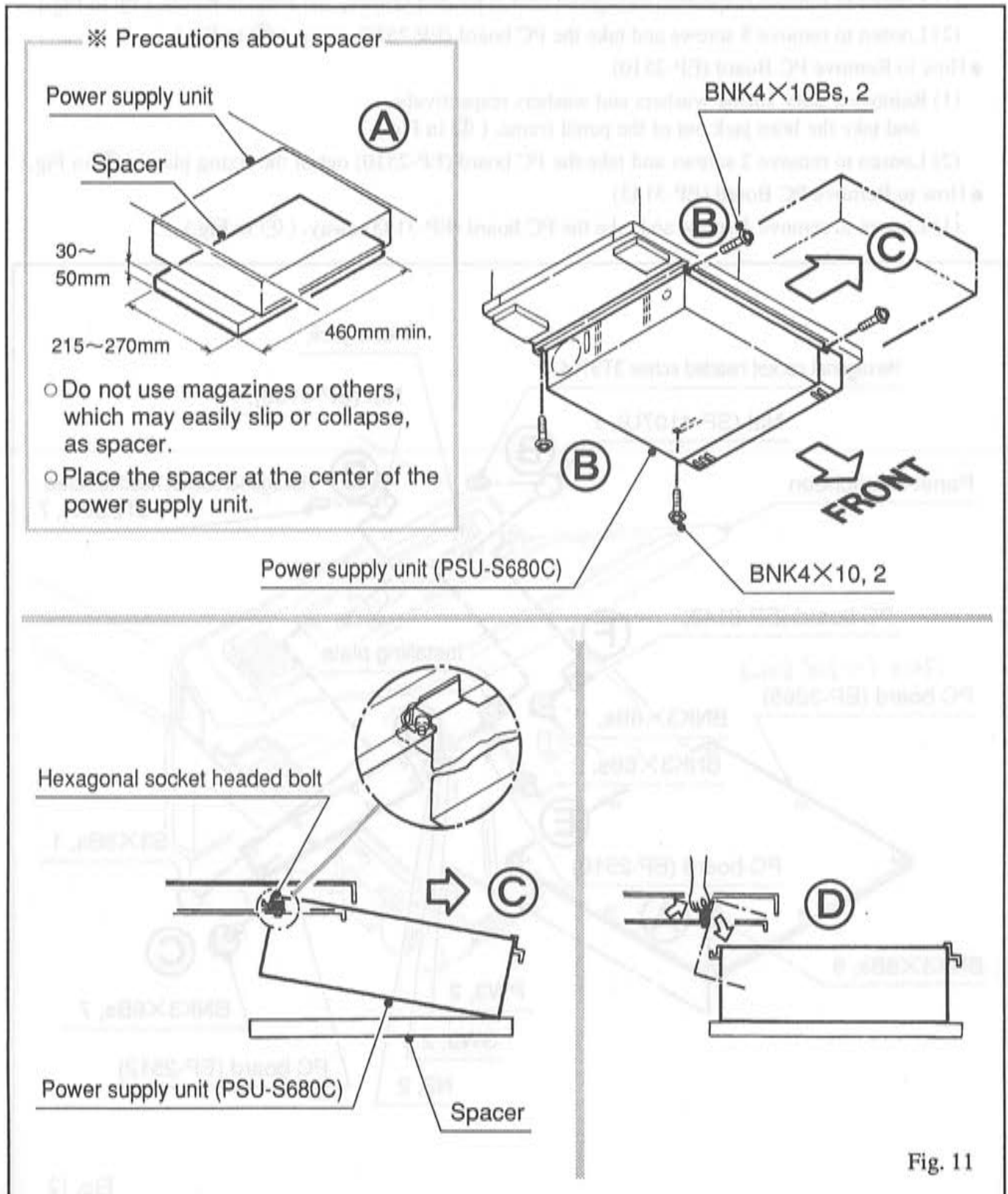


Fig. 10

- (4) Place the spacers under the power supply unit. (A in Fig.)  
(As for details of the spacer, following drawing)
- (5) Loosen to remove 2 screws under the right side face and 2 screws of the left side face respectively. (B in Fig.)
- (6) Take out the power supply unit from the left side. (C in Fig.)
- (7) As the power supply unit is struck to the hexagonal socket headed bolt as in Fig. 11 and stopped, put the hand from the upper part of the box and lift the power supply unit, and remove the unit over the hexagonal socket headed bolt. (D in Fig.)



## 10. How to Remove PC Board

Note: See Dismounting flowchart.

※ Remove all the cables connected to the PC board.

### ● How to Remove PC Board (EP-3265)

(1) Loosen to remove 9 screws and take the PC board (EP-3265) away. (A in Fig.)

### ● How to Remove PC Board (EP-2512)

(1) Loosen to remove respective hexagonal socket headed screws, and remove 8 nuts. (B in Fig.)

(2) Loosen to remove 8 screws and take the PC board (EP-2512) away. (C in Fig.)

### ● How to Remove PC Board (EP-2510)

(1) Remove 2 nuts, spring washers and washers respectively and take the horn jack out of the panel frame. (D in Fig.)

(2) Loosen to remove 2 screws and take the PC board (EP-2510) out of the fixing plate. (E in Fig.)

### ● How to Remove PC Board (EP-3143)

(1) Loosen to remove 1 screw and take the PC board (EP-3143) away. (F in Fig.)

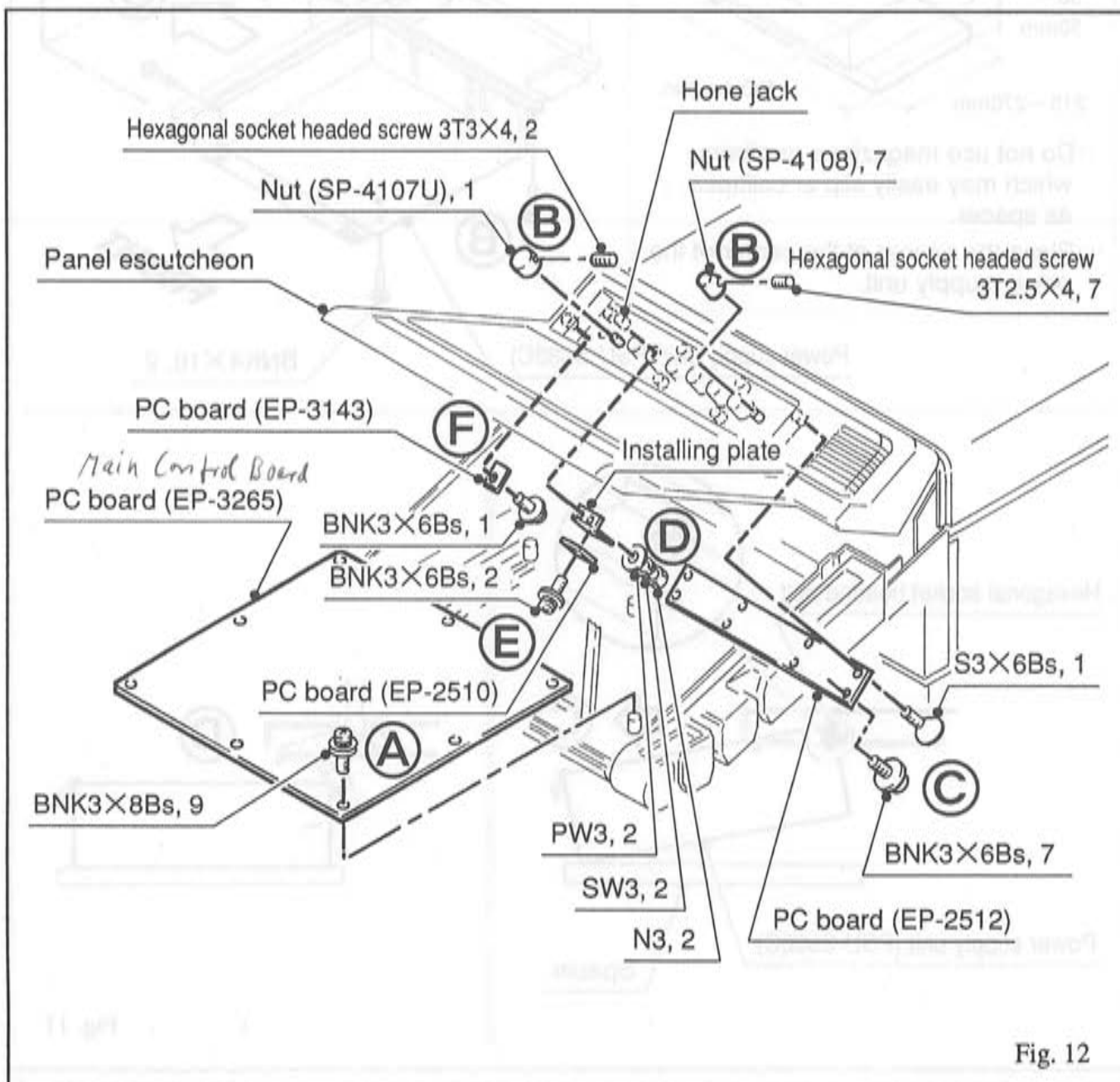


Fig. 12

## 11. How to Remove Panel frame and PC Board of Operation Panel

Note: See Dismounting flowchart.

- How to Remove Panel frame

(1) Loosen to remove five (5) screws of the panel frame and take it away. (A in Fig.)

- How to Remove PC Board (EP-2960, EP-3182)

※ EP-2960 and EP-3182 are connected by the flexible cable, then take them out together.

(1) Remove fifteen (15) nuts, and loosen to remove seventeen (17) screws of the PC boards (EP-2960, EP-3182) and take them away. (B in Fig.)  
(Remove all the cables connected)

- How to Remove Track Ball

(1) Remove four (4) nuts, spring washers and washers respectively, and take the track ball out of the operation panel. (C in Fig.)  
(Remove all the cables connected)

(2) Loosen to remove four (4) screws and take the track ball out of the installing plate. (D in Fig.)

- How to Remove Operation Panel (L-KEY-19D)

(1) Remove nine (9) nuts, spring washers and washers respectively, and take the operation panel (L-KEY-19D) away. (E in Fig.)

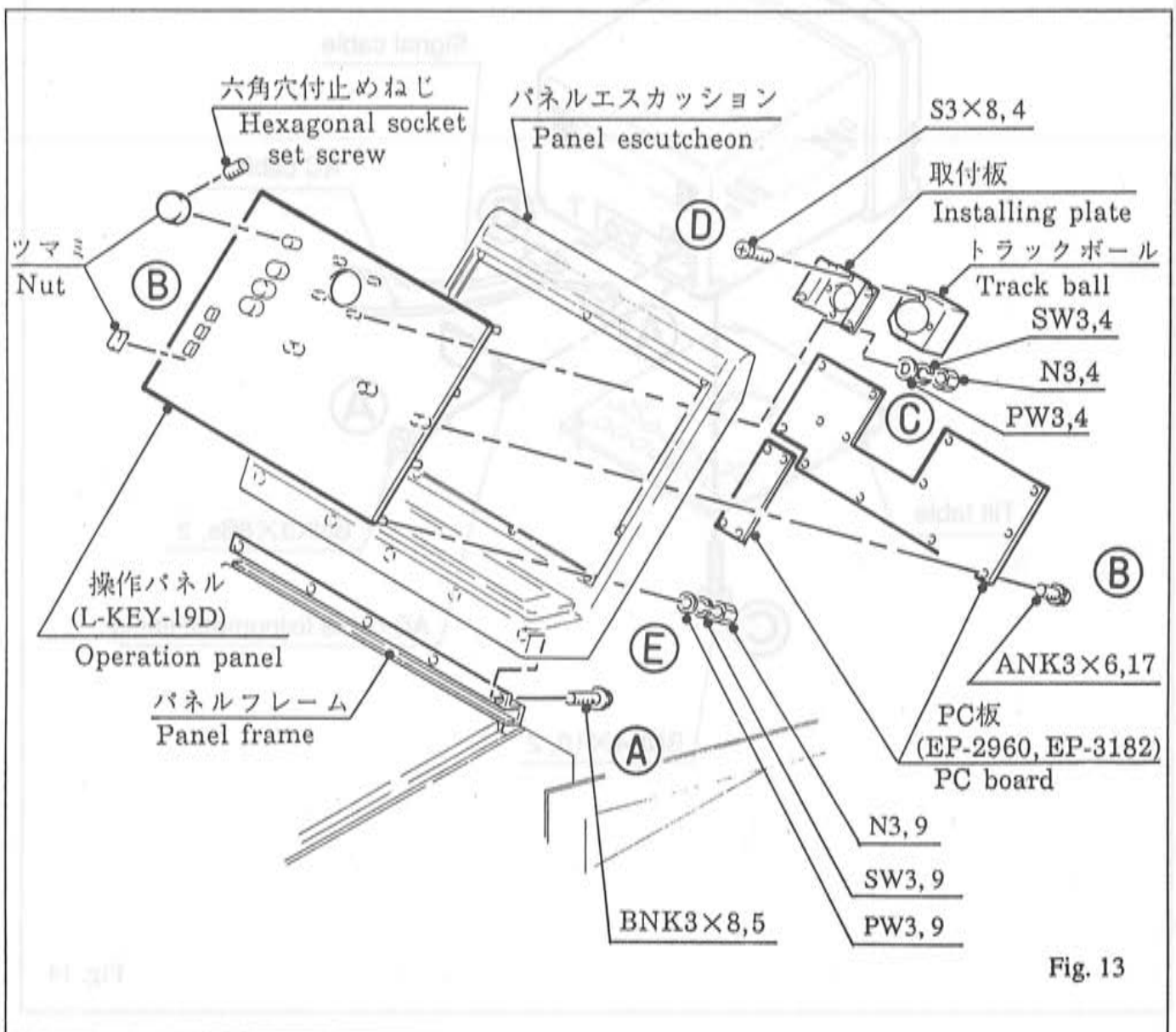


Fig. 13

## 12. How to Remove Observation Monitor Unit (IPC-1010 /-1230)

NOTE : Do not remove monitor before tightening monitor arm knob.

### ● IPC-1010

- (1) Remove 2 screws and remove AC cable fixing metal fitting.  
Then disconnect AC cable. (Ⓐ in Fig.)
- (2) Disconnect signal cable. (Ⓑ in Fig.)
- (3) Remove 2 screws and remove monitor unit from the tilt table. (Ⓒ in Fig.)

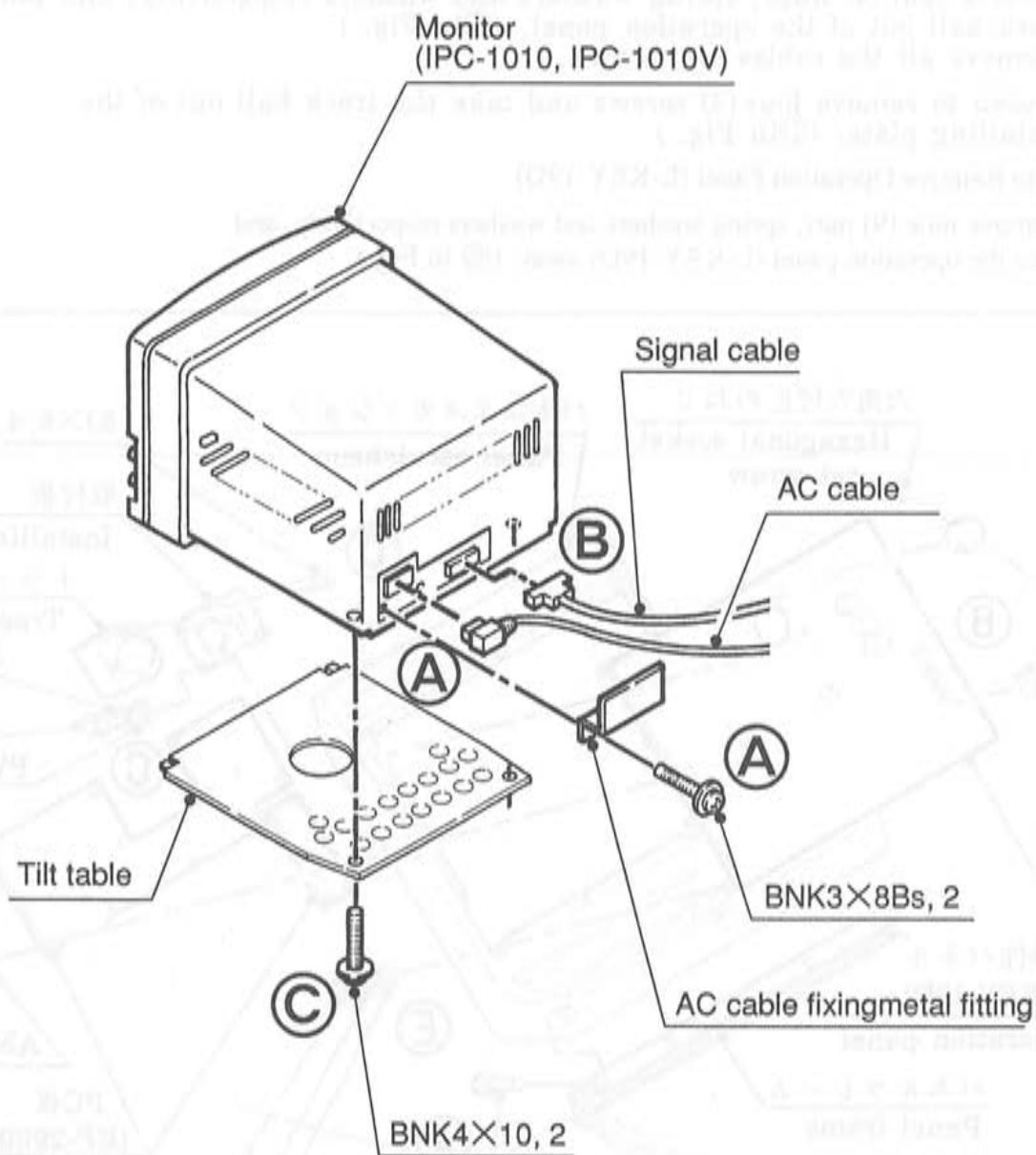


Fig. 14



● IPC-1230

- (1) Remove 2 screws and remove AC cable fixing metal fitting.  
Then disconnect AC cable. (A in Fig.)
- (2) Disconnect signal cable. (B in Fig.)
- (3) Remove 4 screws and remove monitor unit from the tilt table. (C in Fig.)

Monitor (IPC-1230)

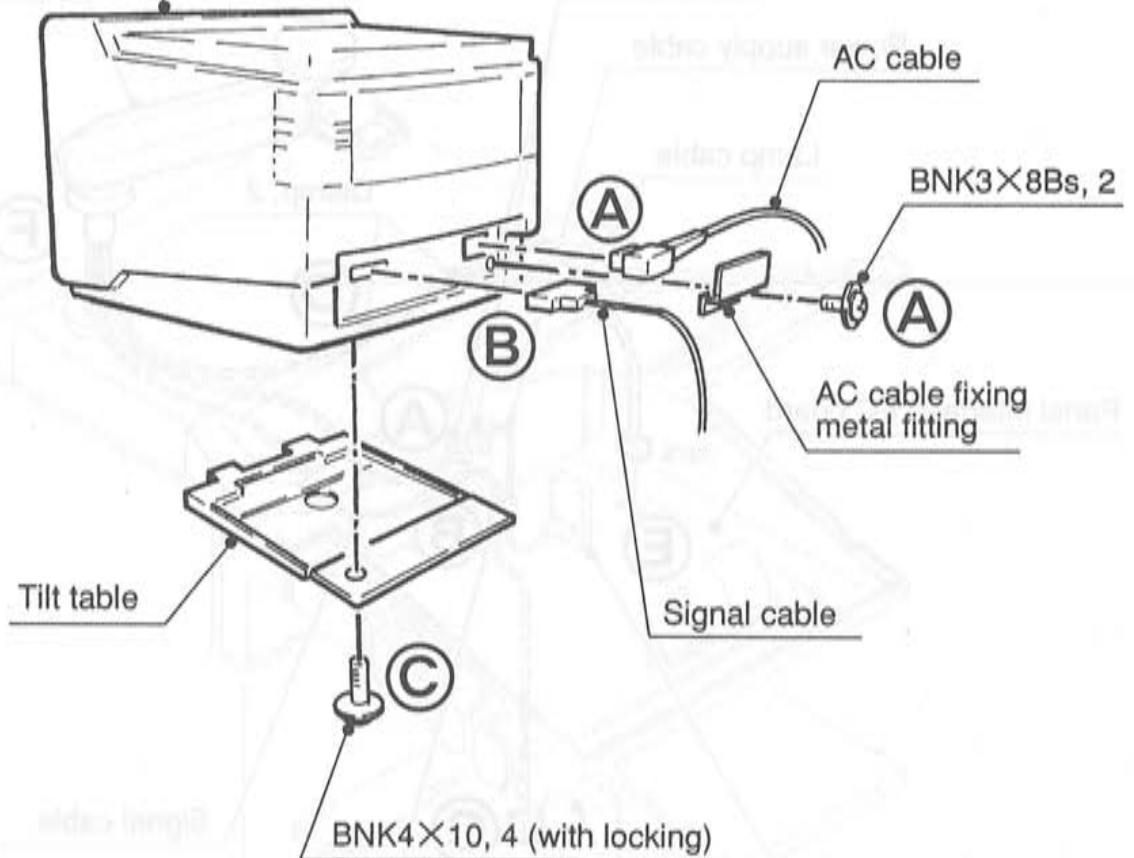


Fig. 15

### 13. How to Remove Monitor Arm (L-Ki-490 /-501)

- (1) Disconnect the relay connectors (J912, P912) of the power supply cable connected to the internal receptacle. (A in Fig.)
- (2) Remove the signal cable from clamp. (B in Fig.)
- (3) Disconnect the connector (P244) of the signal cable from the DSC unit connector panel. (C in Fig.)
- (4) Remove the lamp cable from 2 clamps on the panel escutcheon. (D in Fig.)
- (5) Disconnect the connector (J379) of the lamp cable from panel interface PC board. (E in Fig.)
- (6) Pull up the monitor arm and remove it from the body. (F in Fig.)

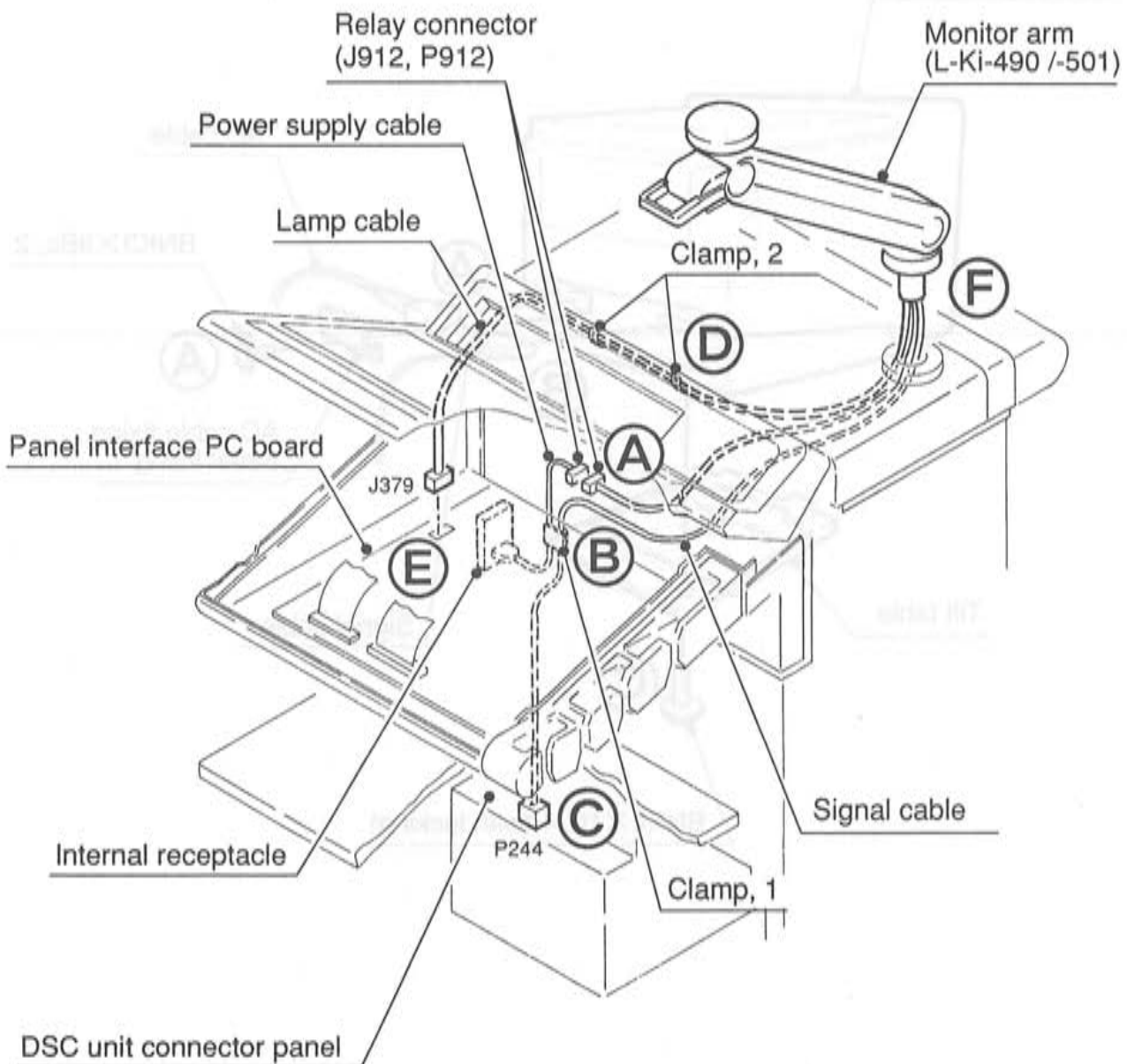


Fig. 16

## 14. How to Remove Top Cover

- (1) Remove 2 hexagonal socket headed bolts and remove the bush. ( **A** in Fig. )
- (2) Remove 4 upper hexagonal socket headed bolts and 2 lower screws, and remove the monitor pedestal. ( **B** in Fig.)
- (3) Remove 4 screws and shift the rear cover rearward and remove it. ( **C** in Fig.)

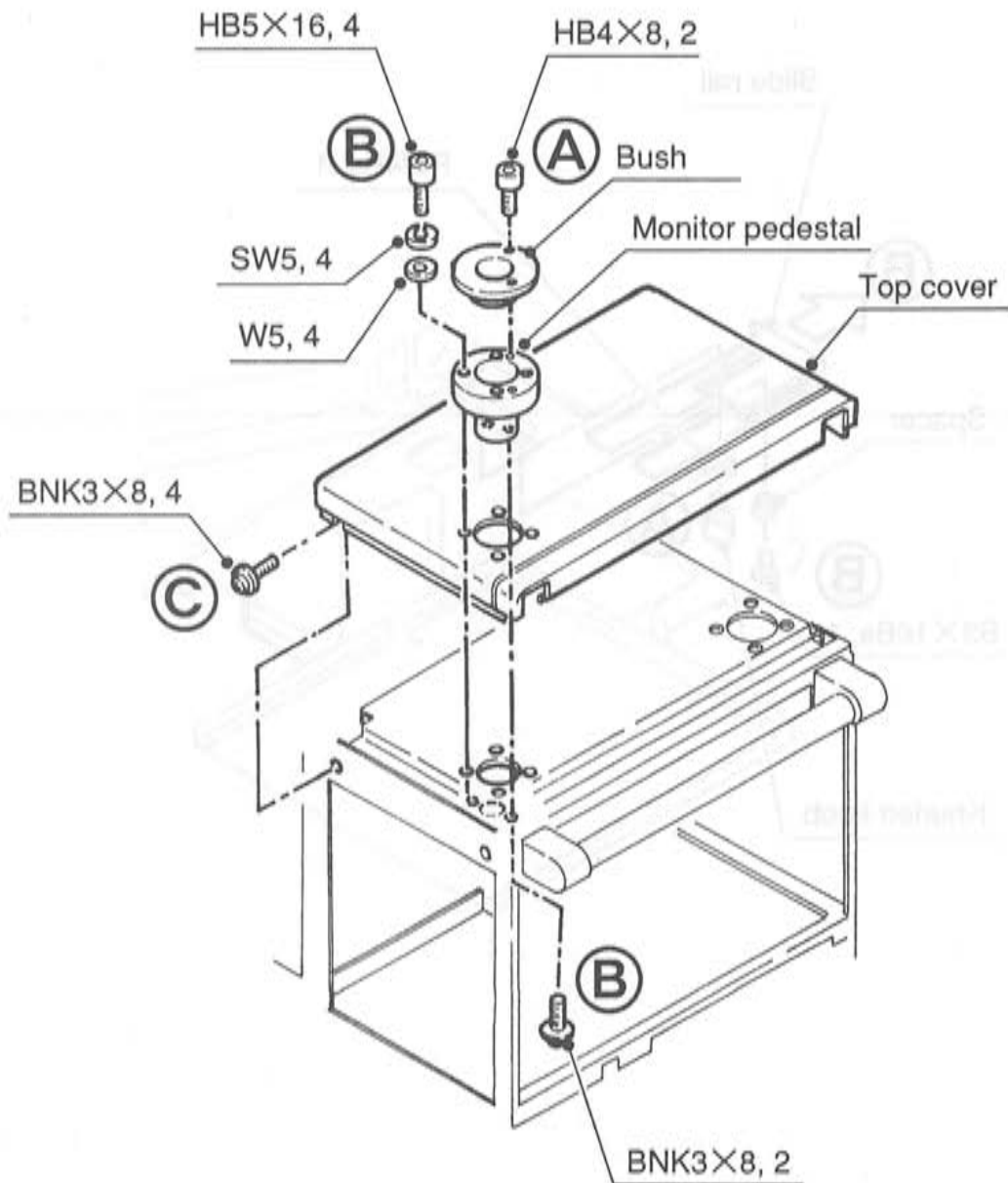


Fig. 17

## 15. How to Remove VTR Remote Controller Rack

- (1) Remove the knurled knob and 1 washer. (A in Fig.)
- (2) Remove 1 screw and remove spacer and pull the slide rail and remove it. (B in Fig.)

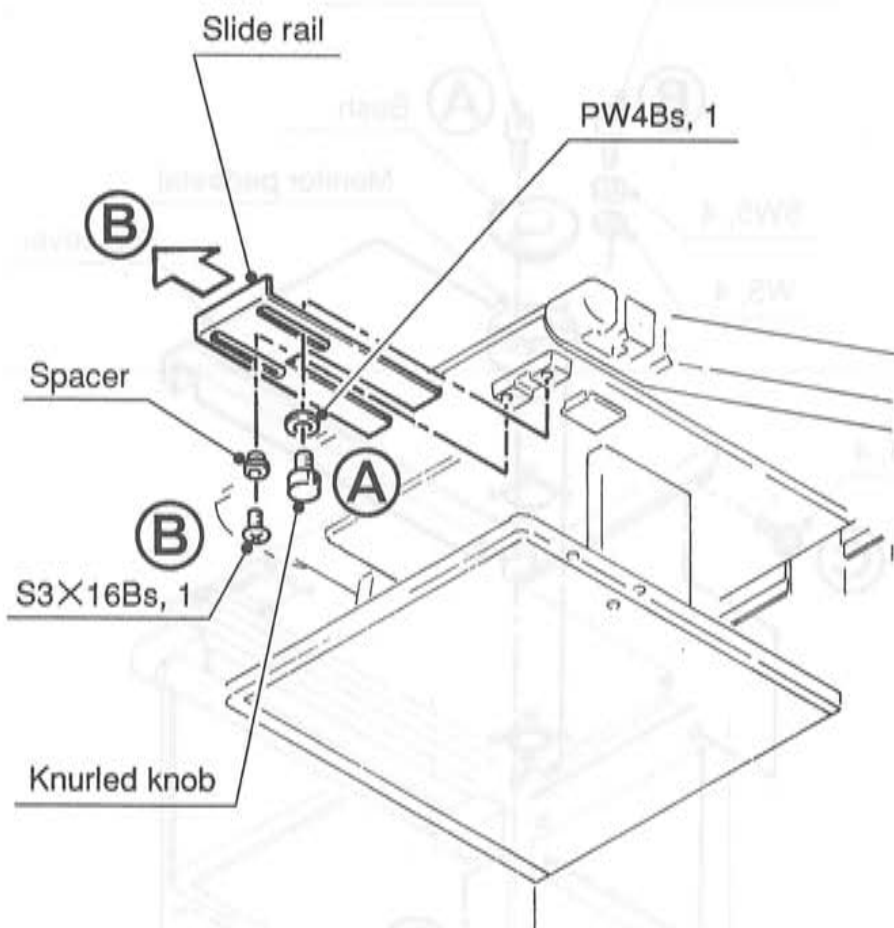


Fig. 18

## 16. How to Remove Panel Lower Cover and Speaker Unit

- (1) Remove 3 screws and remove mounting block. (A in Fig.)
- (2) Remove 2 screws and remove remote control rail. (B in Fig.)
- (3) Remove 2 screws and remove hinge. (C in Fig.)
- (4) Remove 2 screws respectively and remove 2 arms. (D in Fig.)

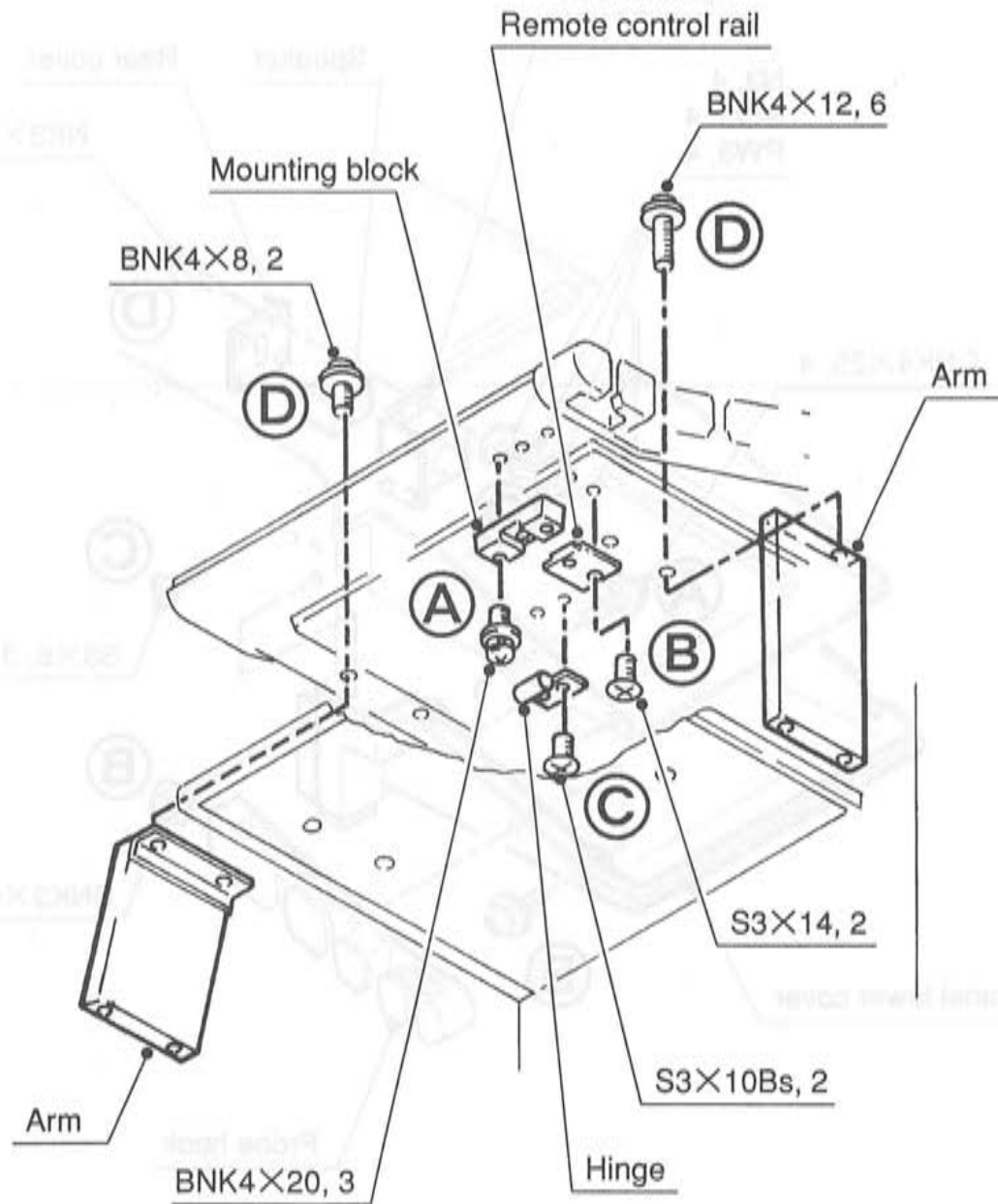


Fig. 19

(5) Remove 4 screws and remove the probe hook. (A in Fig.)

(6) Remove 8 screws and remove the panel lower cover. (B in Fig.)

● How to Remove Speaker Unit

(1) Remove 3 screws and remove speaker box from equipment. (C in Fig.)

(2) Remove 4 screws, nuts, washers, spring washer and remove rear cover of the speaker box. Then Remove speaker from speaker box. (D in Fig.)

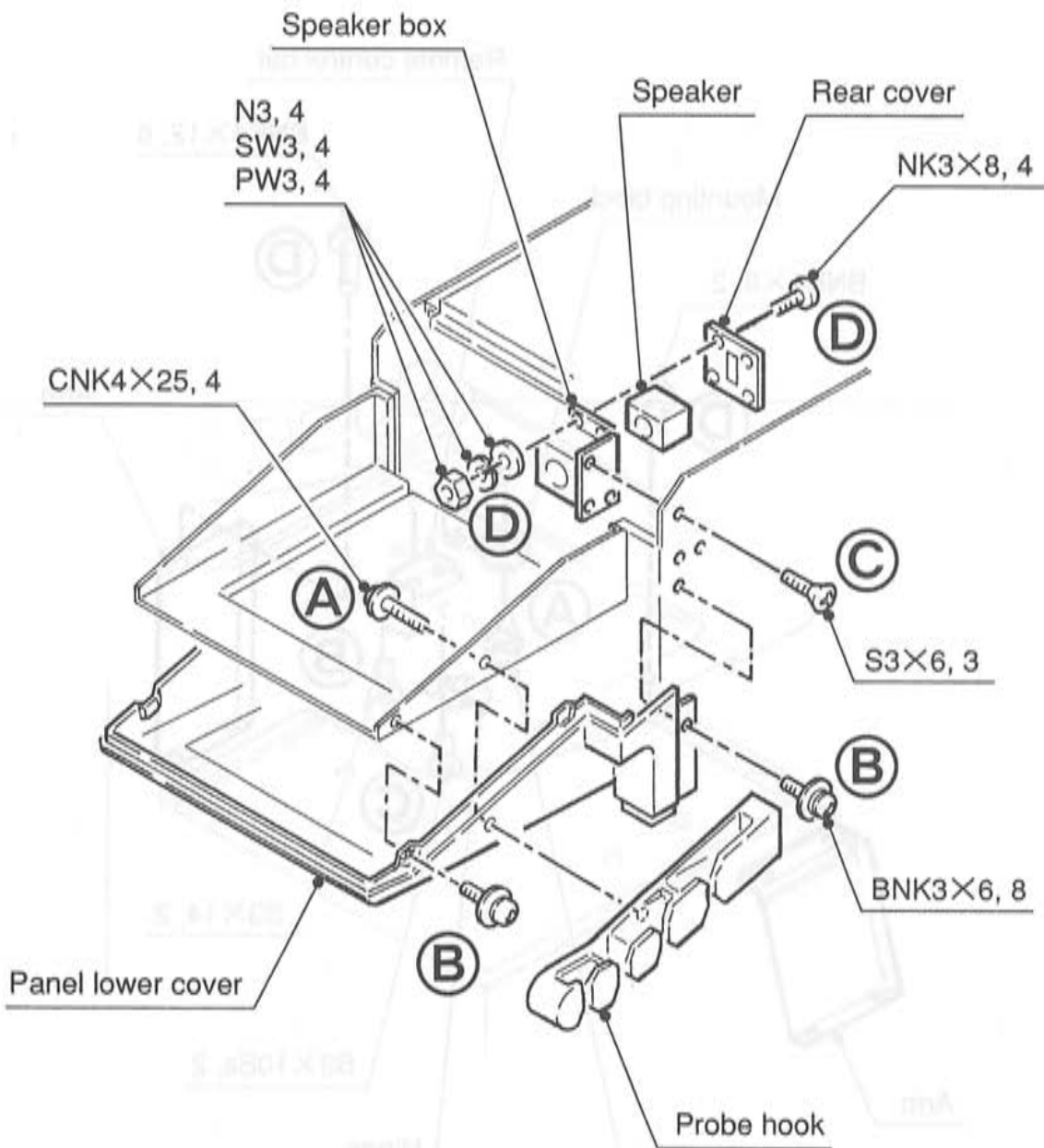
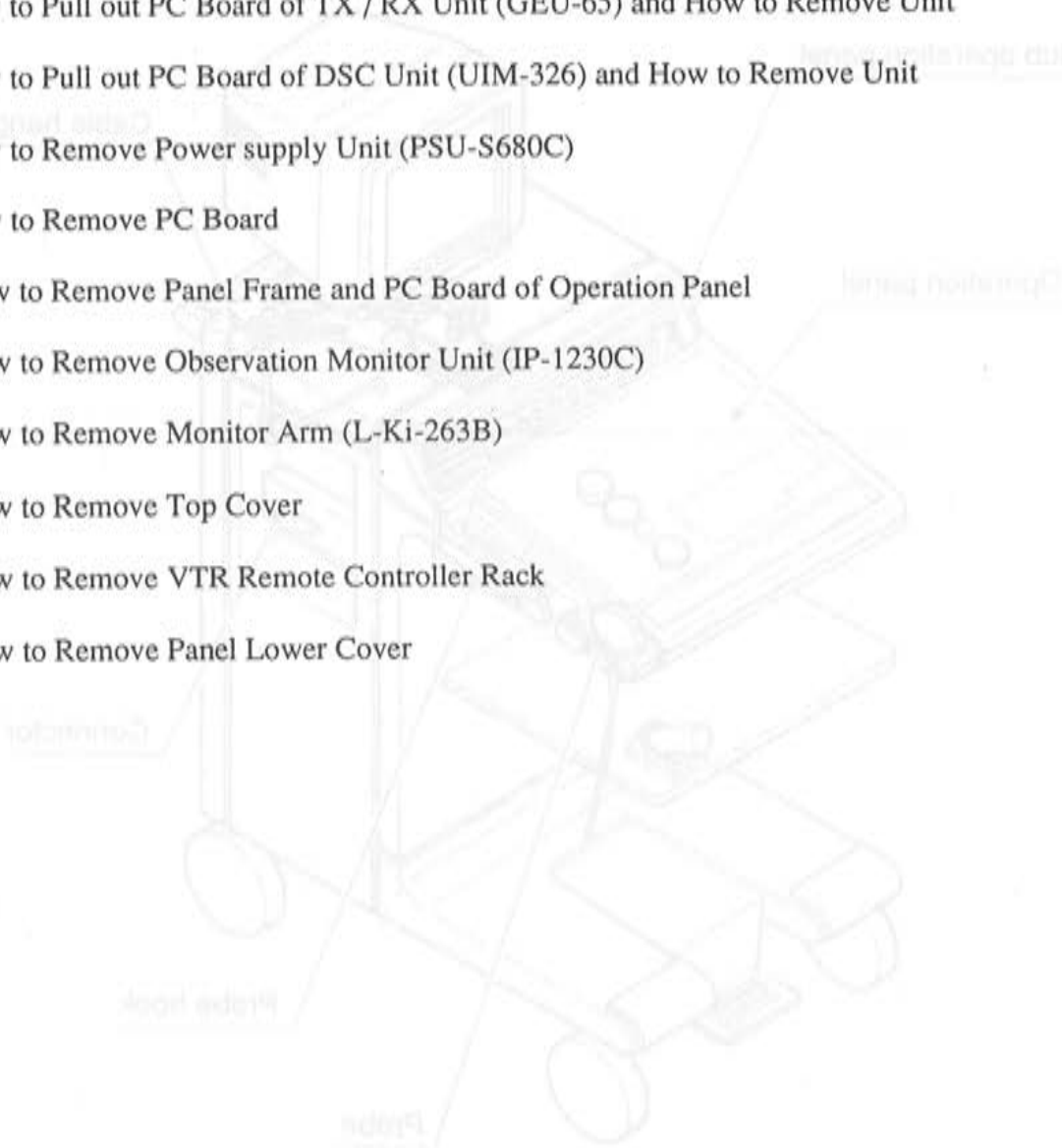


Fig. 20

1. Parts Identification
2. Individual Units Layout
3. Dismounting Flowchart
4. How to Remove Covers
5. How to Open Panel Escutcheon
6. How to Pull out PC Board of TX / RX Unit (GEU-65) and How to Remove Unit
7. How to Pull out PC Board of DSC Unit (UIM-326) and How to Remove Unit
8. How to Remove Power supply Unit (PSU-S680C)
9. How to Remove PC Board
10. How to Remove Panel Frame and PC Board of Operation Panel
11. How to Remove Observation Monitor Unit (IP-1230C)
12. How to Remove Monitor Arm (L-Ki-263B)
13. How to Remove Top Cover
14. How to Remove VTR Remote Controller Rack
15. How to Remove Panel Lower Cover



# 1. Parts Identification

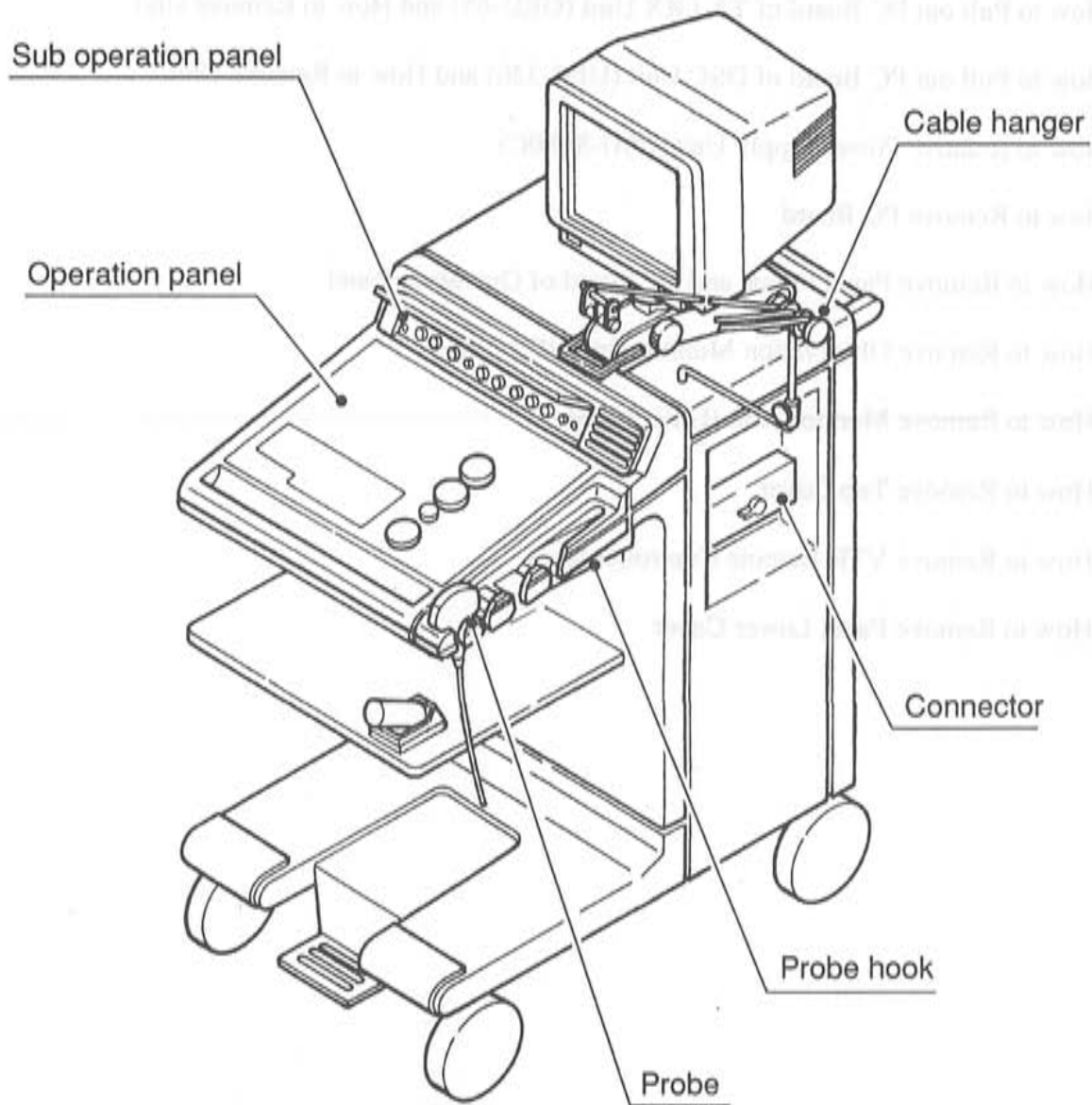


Fig. 1



## 2. Individual Units Layout

Networking Flowchart

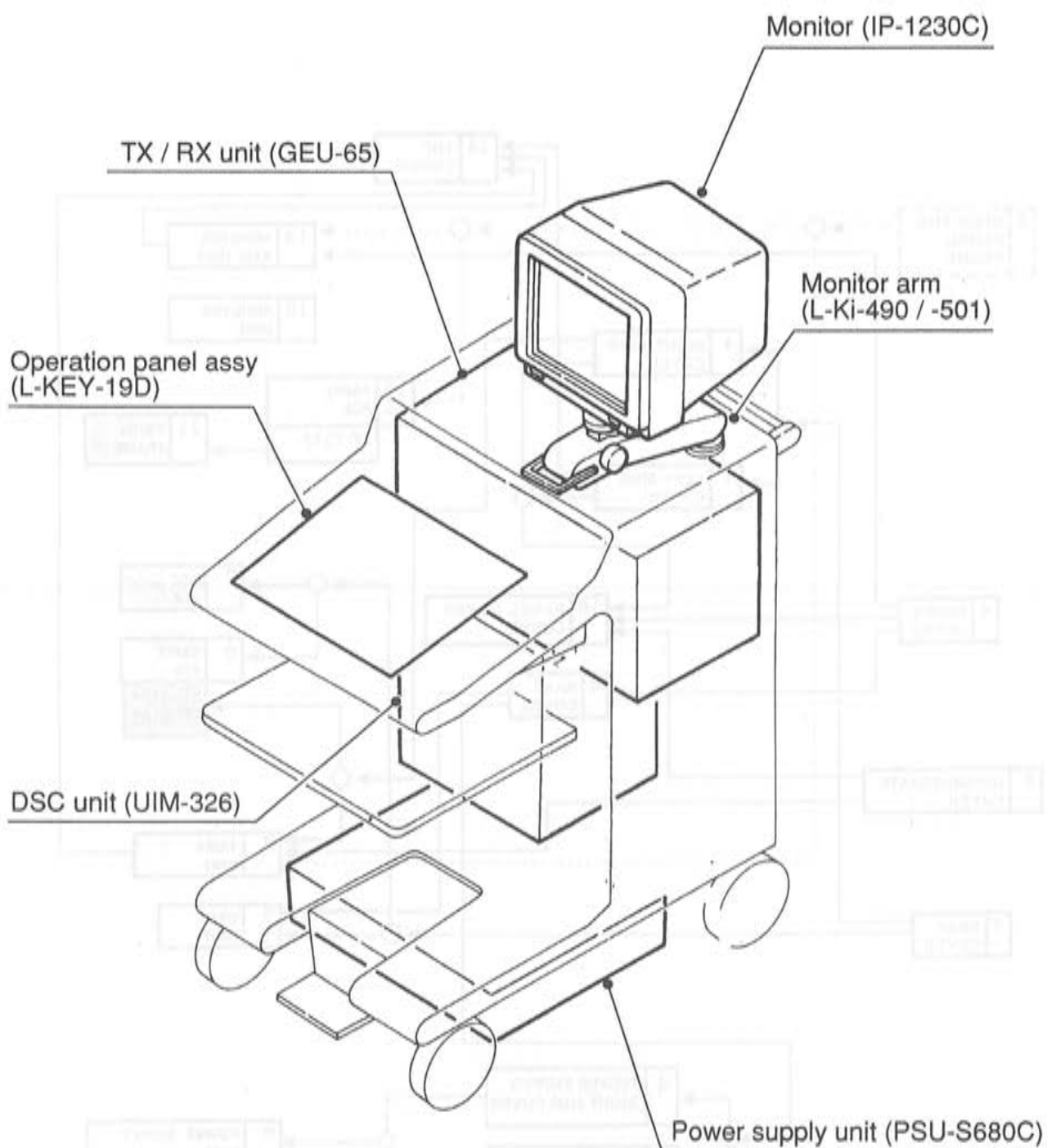
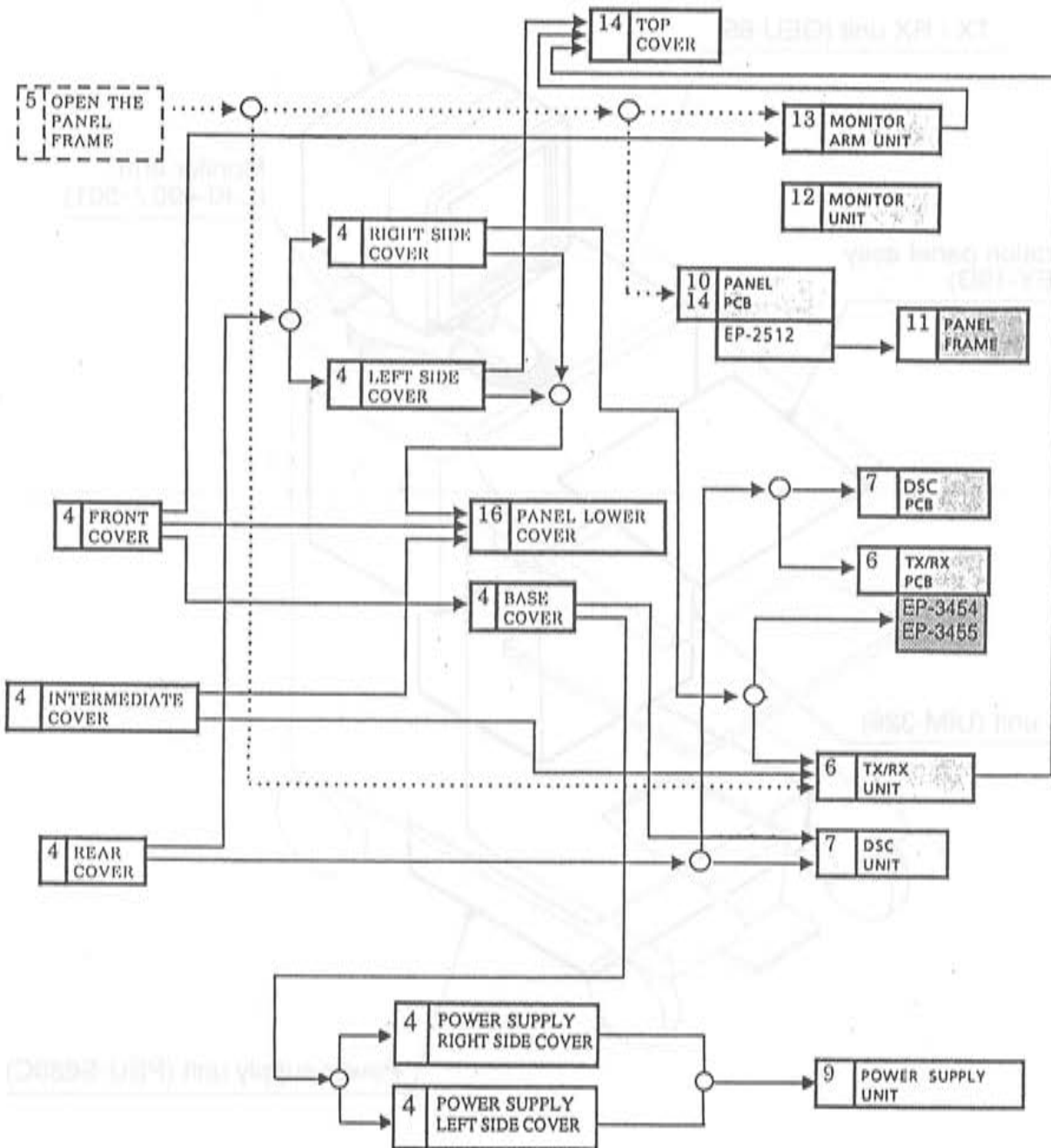


Fig. 2

### 3. Dismounting Flowchart

Individual Unit Layout



## 4. How to Remove Covers

Note: See Dismounting flowchart.

Operation (6) is not required for S/N 21M08252 and up.

- (1) Remove 4 screws and remove front cover. (Applicable to the units S/N 21M08243~21M08262) (A in Fig.)
- (1)' Remove 6 screws and remove front cover. (Applicable to the units S/N 31M01326~) (A in Fig.)
- (2) Remove 2 screws to remove base cover by pulling it toward you. (B in Fig.)
- (3) Remove 2 screws and remove intermediate cover.(C in Fig.)
- (4) Remove 3 screws and remove foot rest. (D in Fig.)

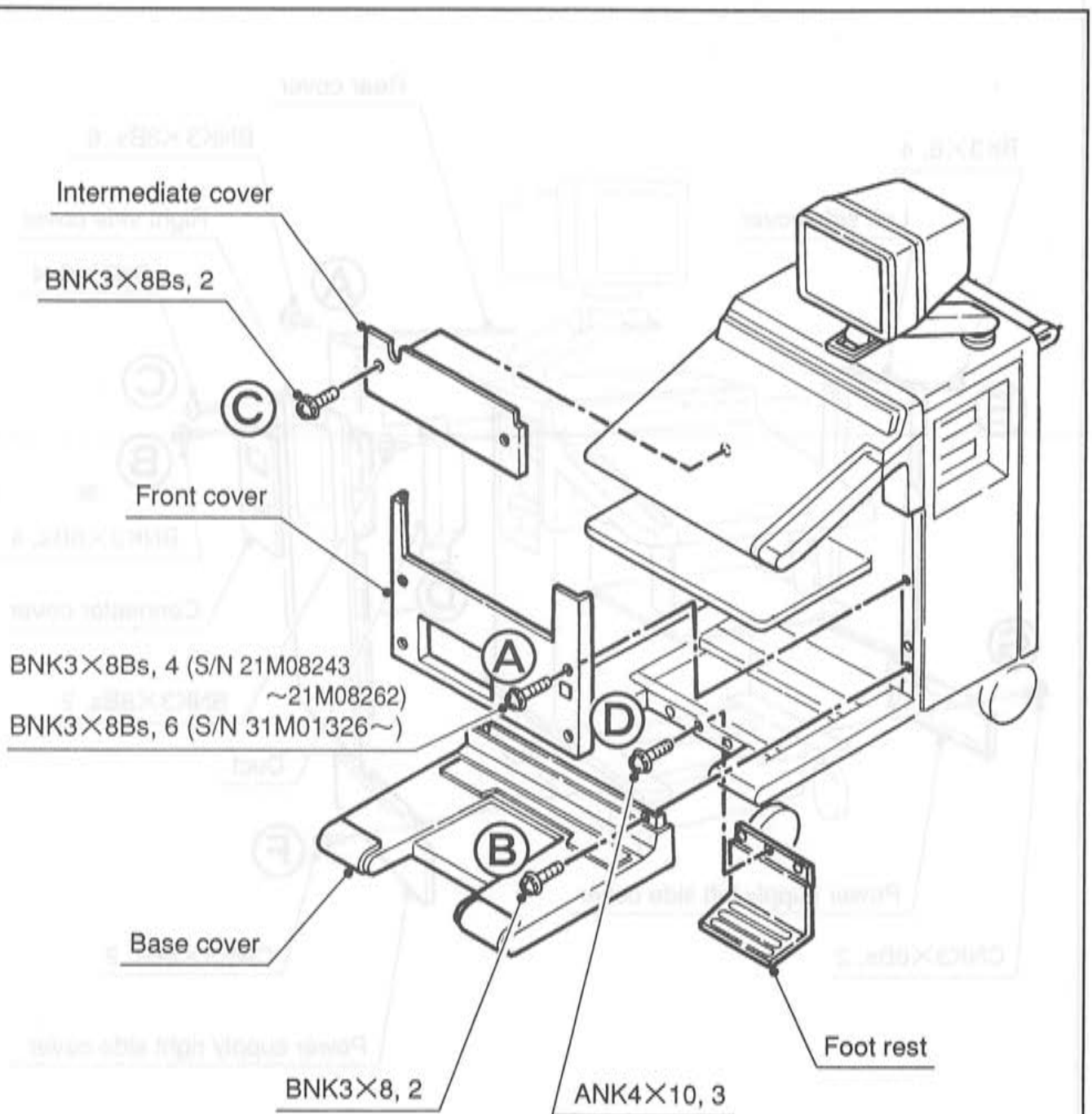
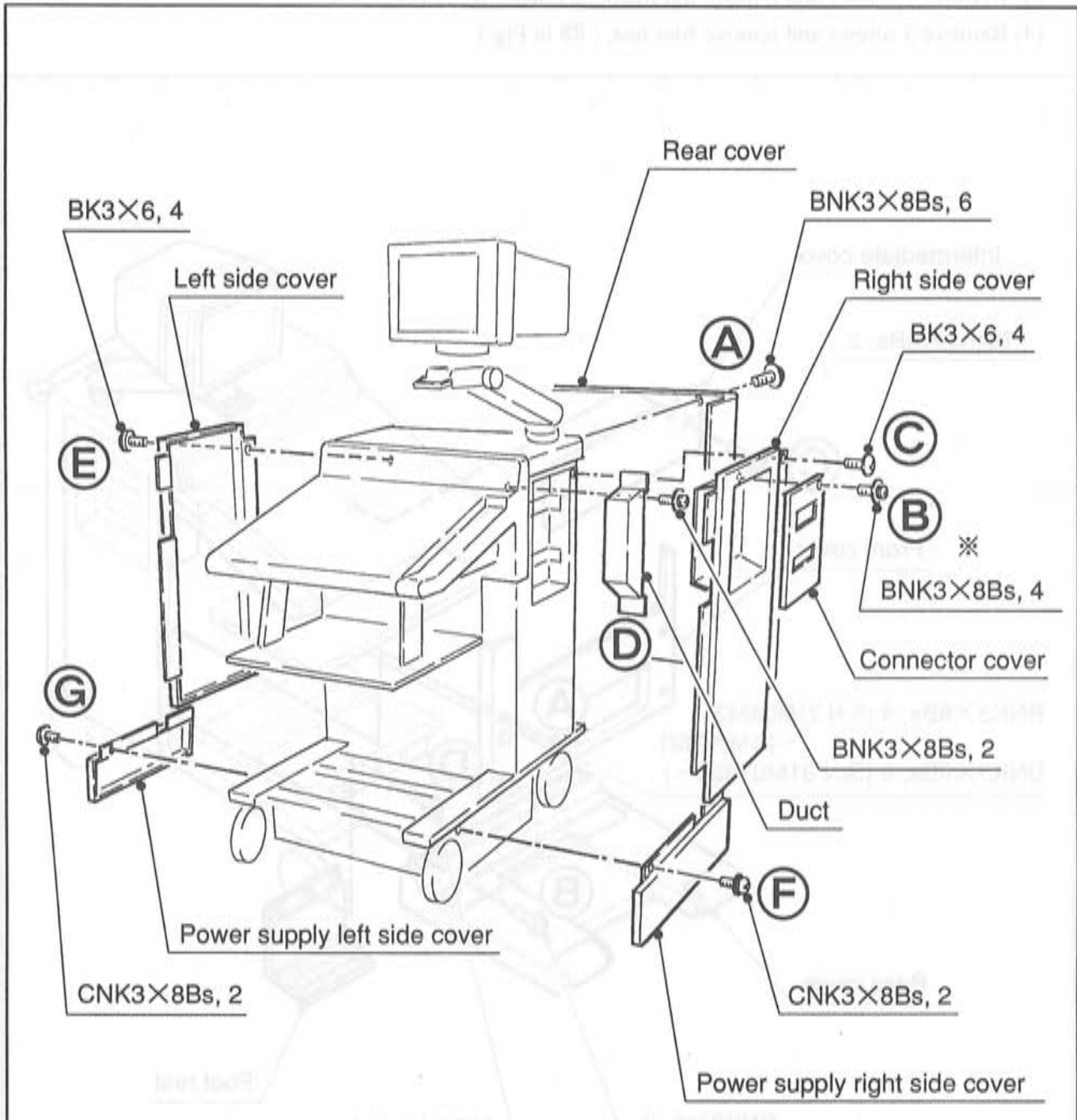


Fig. 3

- (5) Remove 6 screws and remove rear cover. (A in Fig.)
- (6) Remove 4 screws and remove connector cover. (B in Fig.)
- (7) Remove 4 screws and shift the right side cover rearward and remove it. (C in Fig.)
- (8) Remove 2 screws and remove duct. (D in Fig.)
- (9) Remove 4 screws and remove left side cover similarly as in (7). (E in Fig.)
- (10) Remove 2 screws and remove power supply right side cover. (F in Fig.)
- (11) Remove 2 screws and remove power supply left side cover. (G in Fig.)



※ Do not remove the connector cover the units subsequent to S/N 21M08252.

Fig. 4

## 5. Panel frame opening procedure

- (1) Loosen to remove three (3) screws and open the panel frame, and put the stay in the notch of the upper cover stationary plate and fix. (Ⓐ in Fig.)
- (2) Loosen to remove two (2) E-ring and two (2) shaft of the blind cover, and take the cover away. (Ⓑ in Fig.)

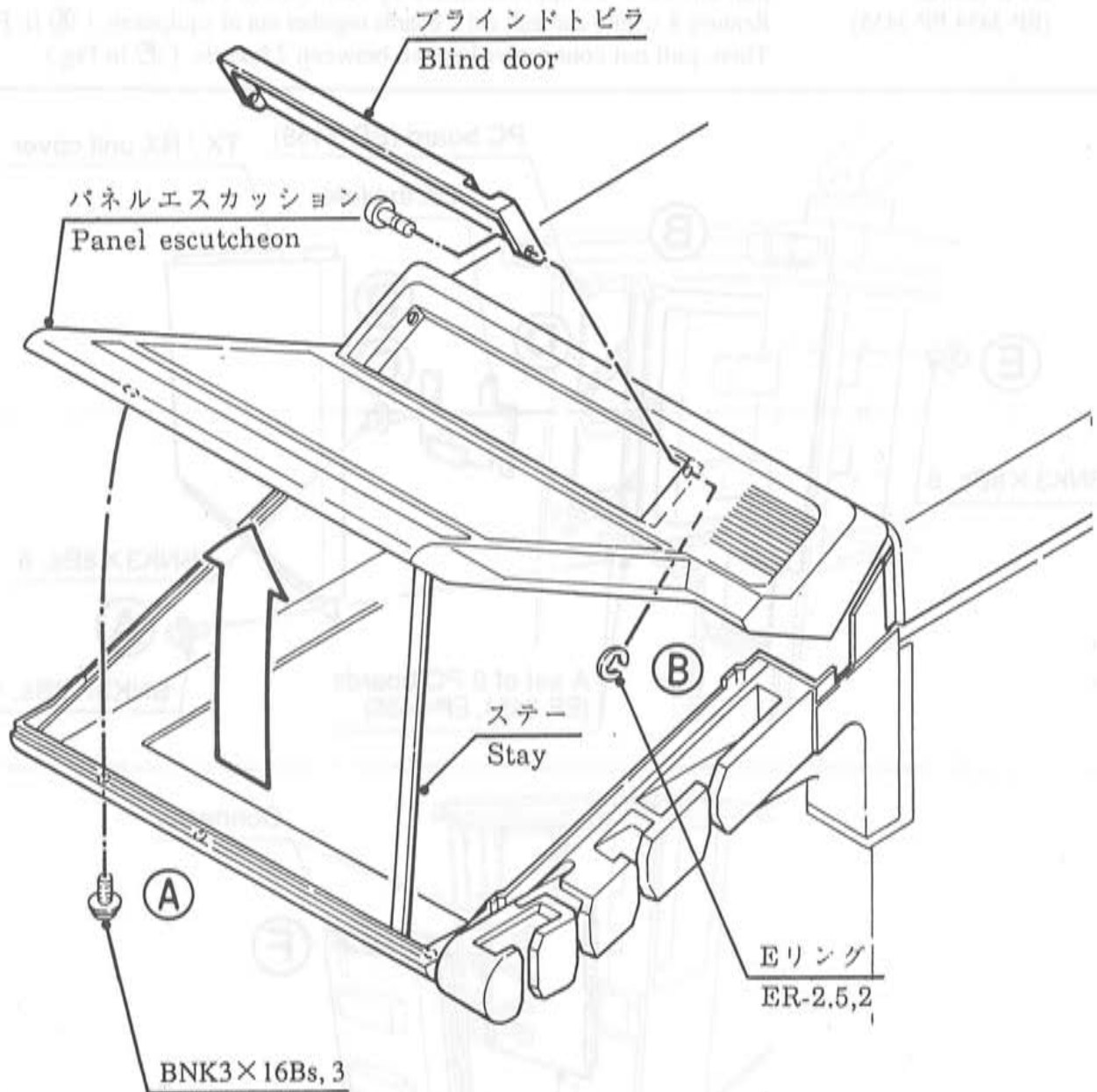


Fig.5

## 6. How to Pull out PC Board of TX / RX Unit (GEU-65) and How to Remove Unit

Note: See Dismounting flowchart.

### ● How to Pull out PC Board

(1) Remove 16 screws and remove TX / RX unit cover. (A in Fig.)

Then PC board can be taken out. (B in Fig.)

※ PC board specified below, however, shall be pulled out after completion of operations referred to below.

○ 3rd PC board thru . . . Remove 6 screws and remove earth plate. (C in Fig.)  
5th counted from the left

○ A set of . . . . . Remove 6 screws to remove earth plate. After that,  
2 PC boards pull out EP-3458 approximately by half. (D in Fig.)  
Remove 8 screws and pull out 2 boards together out of equipment. (E in Fig.)  
Then, pull out connectors located between 2 boards. (F in Fig.)

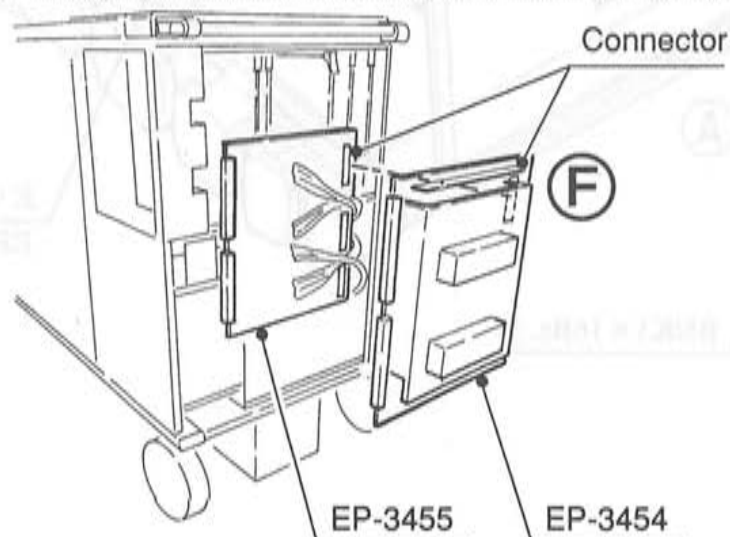
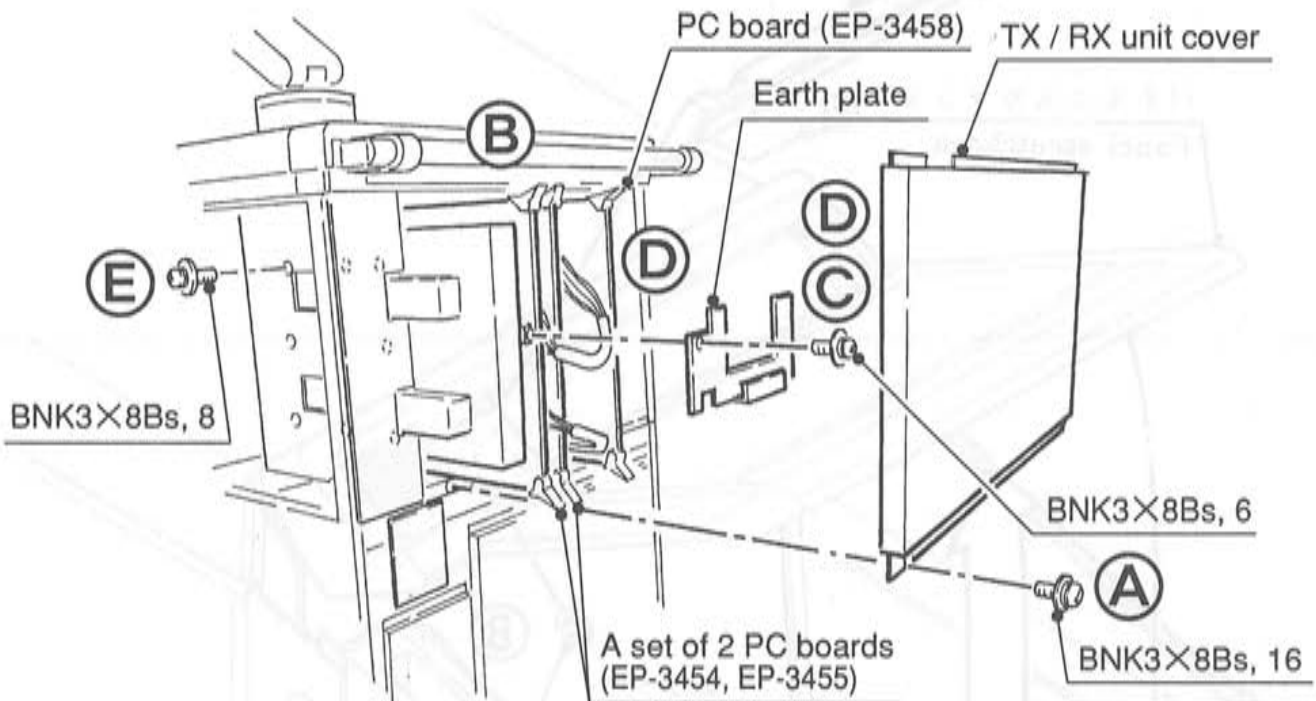


Fig. 6

● How to Remove Unit

- (2) Remove 2 screws of earth plate on left side. (A in Fig.)
- (3) Remove 4 screws and remove TX /RX unit. (B in Fig.)  
(Remove all the cables connected)

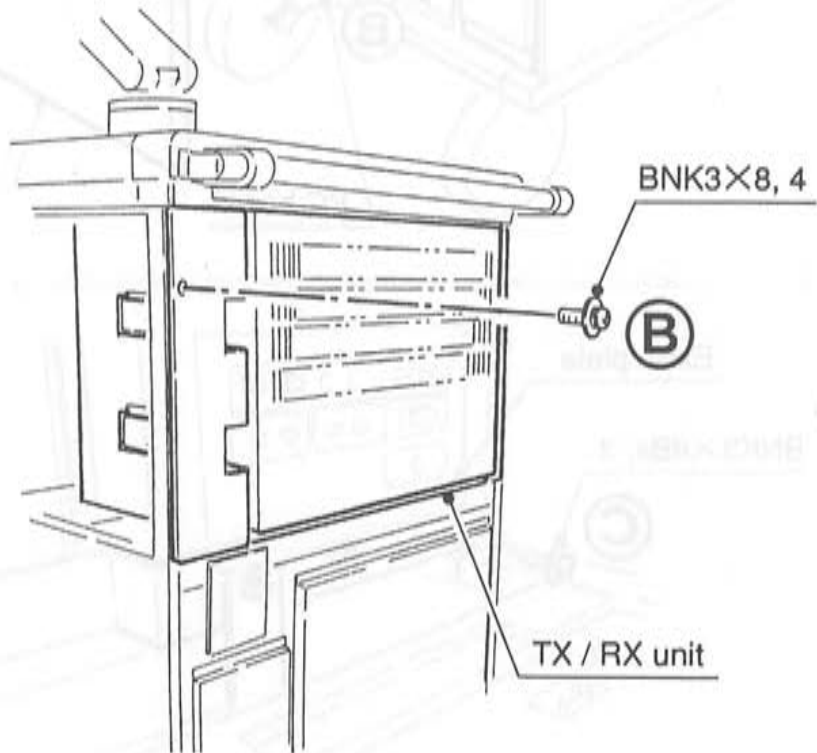
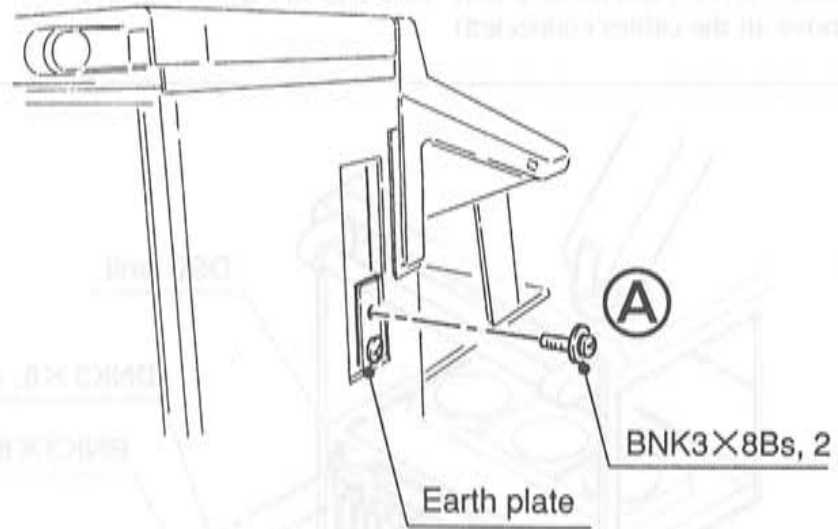


Fig. 7

## 7. How to Pull out PC Board of DSC Unit (UIM-326) and How to Remove Unit

Note: See Dismounting flowchart.

### ● How to Pull out PC Board

- (1) Remove 14 screws and remove DSC unit. (A in Fig.)  
Then PC board can be taken out.( B in Fig.)

### ● How to Remove Unit

- (2) Remove 3 screws of earth board on front side of equipment. (C in Fig.)
- (3) Remove 6 screws and remove DSC unit. (D in Fig.)  
(Remove all the cables connected)

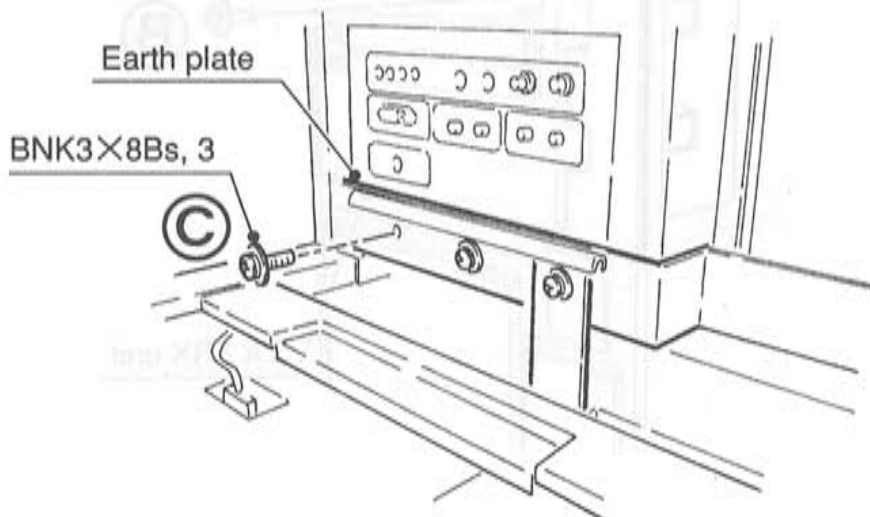
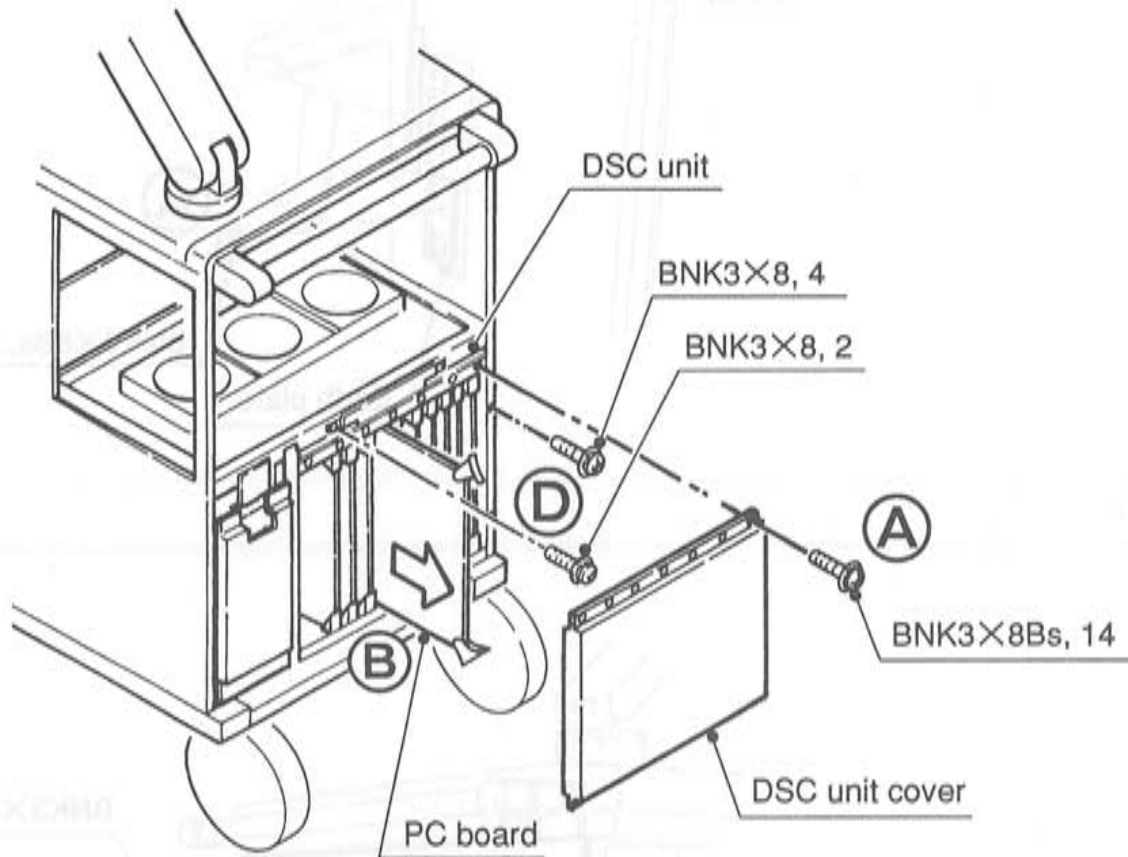


Fig. 8



## 8. How to Remove Power supply Unit (PSU-S680C)

Note : Make sure to turn off power supply of the device and lock the caster.  
And power supply unit weighs very heavily. Use utmost care to carry out operation, accordingly

- (1) When the isolation transformer is provided, remove the connector. ( Ⓐ in Fig.)
- (2) Remove all the cables connected to connector panel on the right side of the power supply unit (PSU-S680C). ( Ⓑ in Fig.)
- (3) Remove 3 screws of earth board on front side of equipment. ( Ⓒ in Fig.)

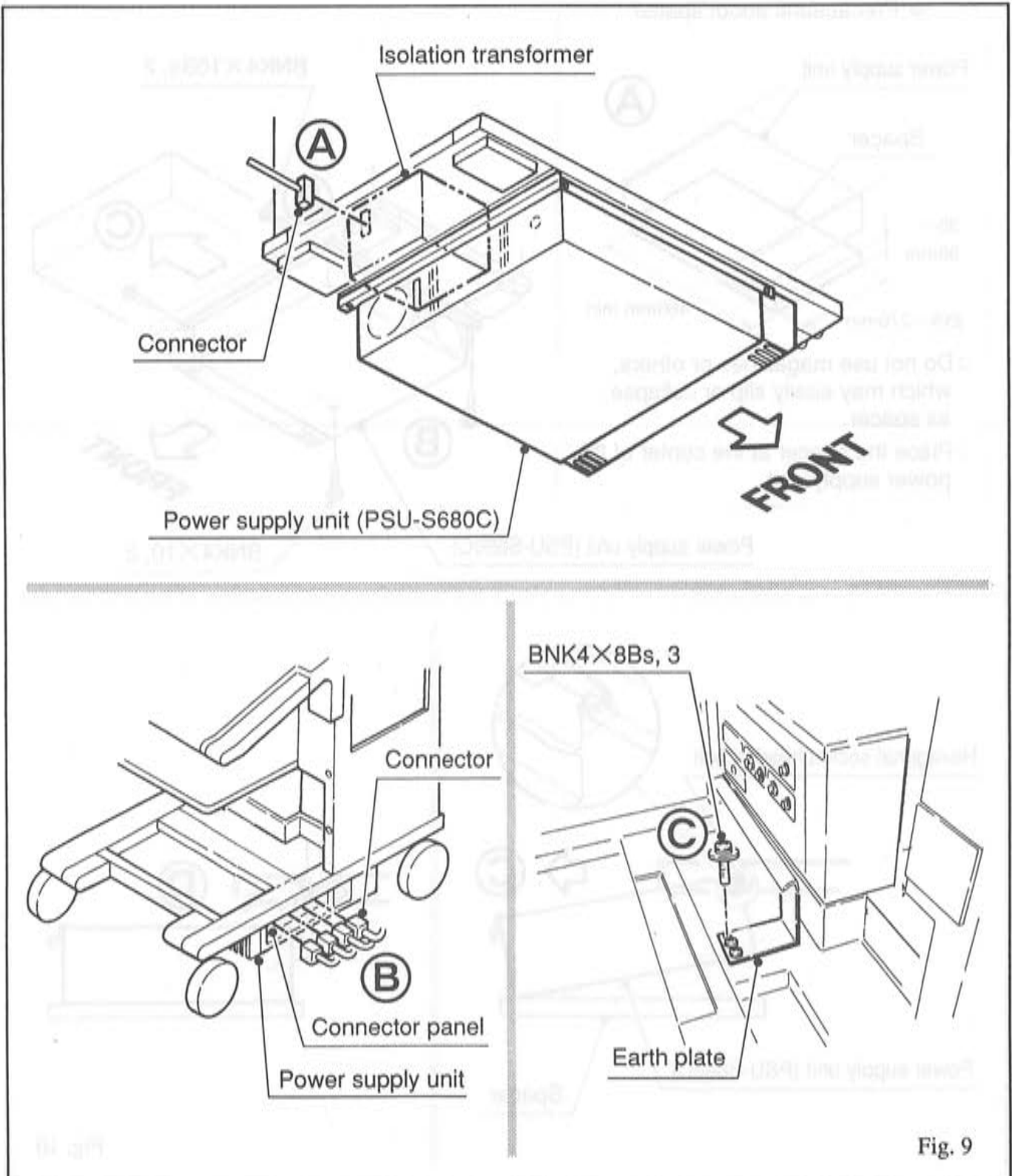
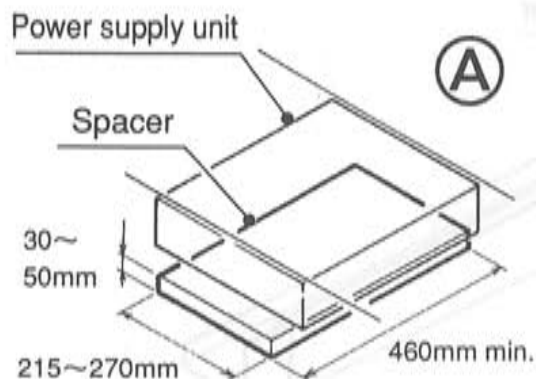


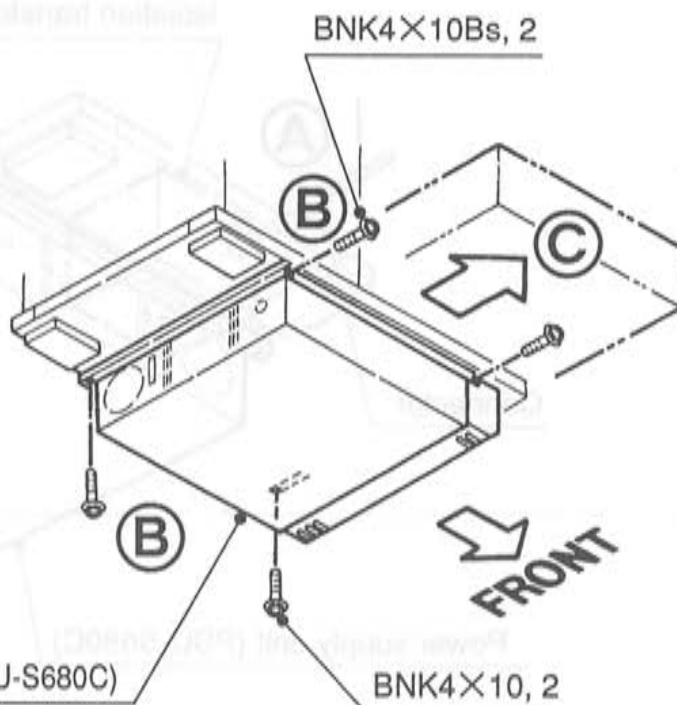
Fig. 9

- (4) Place the spacers under the power supply unit. (A in Fig.)  
(As for details of the spacer, following drawing)
- (5) Loosen to remove 2 screws under the right side face and 2 screws of the left side face respectively. (B in Fig.)
- (6) Take out the power supply unit from the left side. (C in Fig.)
- (7) As the power supply unit is struck to the hexagonal socket headed bolt as in Fig. 11 and stopped, put the hand from the upper part of the box and lift the power supply unit, and remove the unit over the hexagonal socket headed bolt. (D in Fig.)

※ Precautions about spacer



- Do not use magazines or others, which may easily slip or collapse, as spacer.
- Place the spacer at the center of the power supply unit.



Hexagonal socket headed bolt

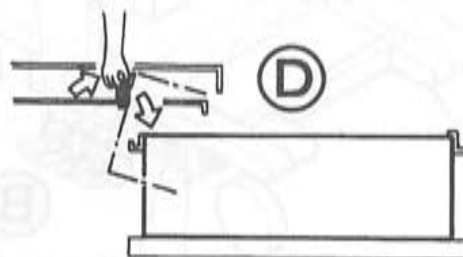
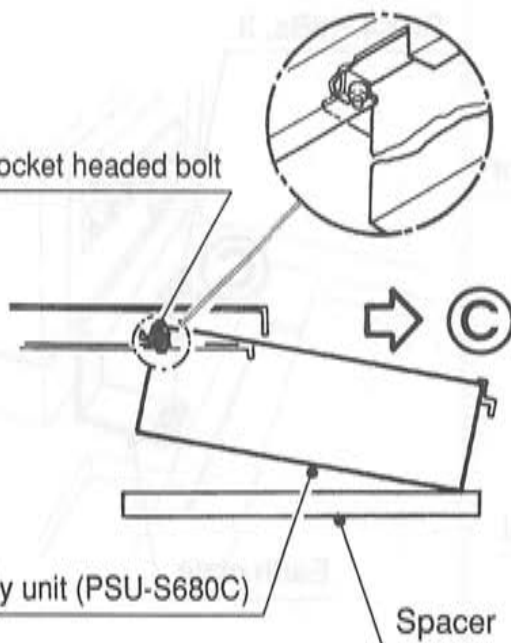


Fig. 10

## 9. How to Remove PC Board

Note: See Dismounting flowchart.

※ Remove all the cables connected to the PC board.

### ● How to Remove PC Board (EP-3265)

(1) Loosen to remove 9 screws and take the PC board (EP-3265) away. (A in Fig.)

### ● How to Remove PC Board (EP-2512)

(1) Loosen to remove respective hexagonal socket headed screws, and remove 8 nuts. (B in Fig.)

(2) Loosen to remove 8 screws and take the PC board (EP-2512) away. (C in Fig.)

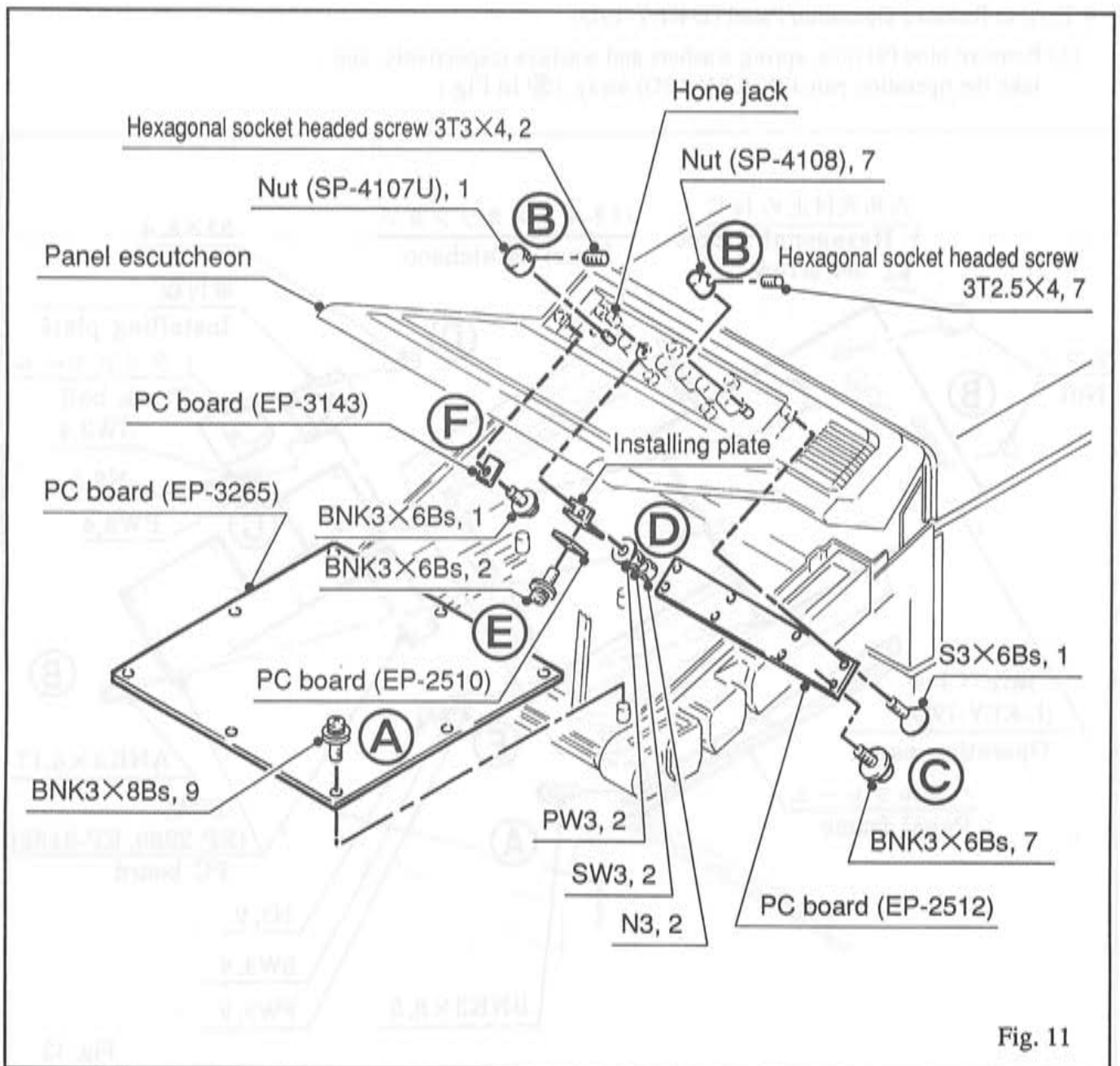
### ● How to Remove PC Board (EP-2510)

(1) Remove 2 nuts, spring washers and washers respectively and take the horn jack out of the panel frame. (D in Fig.)

(2) Loosen to remove 2 screws and take the PC board (EP-2510) out of the fixing plate. (E in Fig.)

### ● How to Remove PC Board (EP-3143)

(1) Loosen to remove 1 screw and take the PC board (EP-3143) away. (F in Fig.)



## 10. How to Remove Panel frame and PC Board of Operation Panel

Note: See Dismounting flowchart.

### ● How to Remove Panel frame

(1) Loosen to remove five (5) screws of the panel frame and take it away. (A in Fig.)

### ● How to Remove PC Board (EP-2960, EP-3182)

※ EP-2960 and EP-3182 are connected by the flexible cable, then take them out together.

(1) Remove fifteen (15) nuts, and loosen to remove seventeen (17) screws of the PC boards (EP-2960, EP-3182) and take them away. (B in Fig.)  
(Remove all the cables connected)

### ● How to Remove Track Ball

(1) Remove four (4) nuts, spring washers and washers respectively, and take the track ball out of the operation panel. (C in Fig.)  
(Remove all the cables connected)

(2) Loosen to remove four (4) screws and take the track ball out of the installing plate. (D in Fig.)

### ● How to Remove Operation Panel (L-KEY-19D)

(1) Remove nine (9) nuts, spring washers and washers respectively, and take the operation panel (L-KEY-19D) away. (E in Fig.)

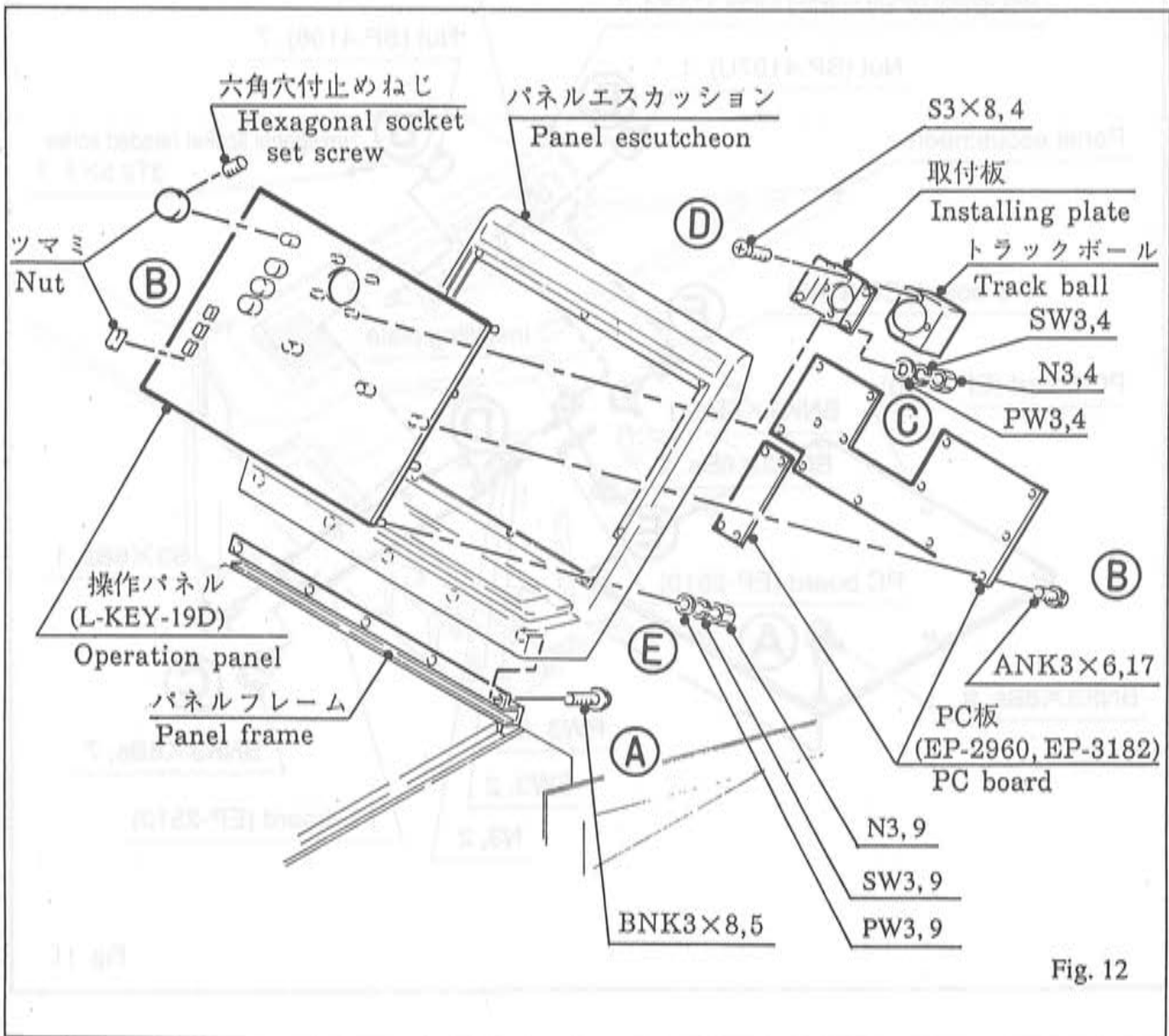
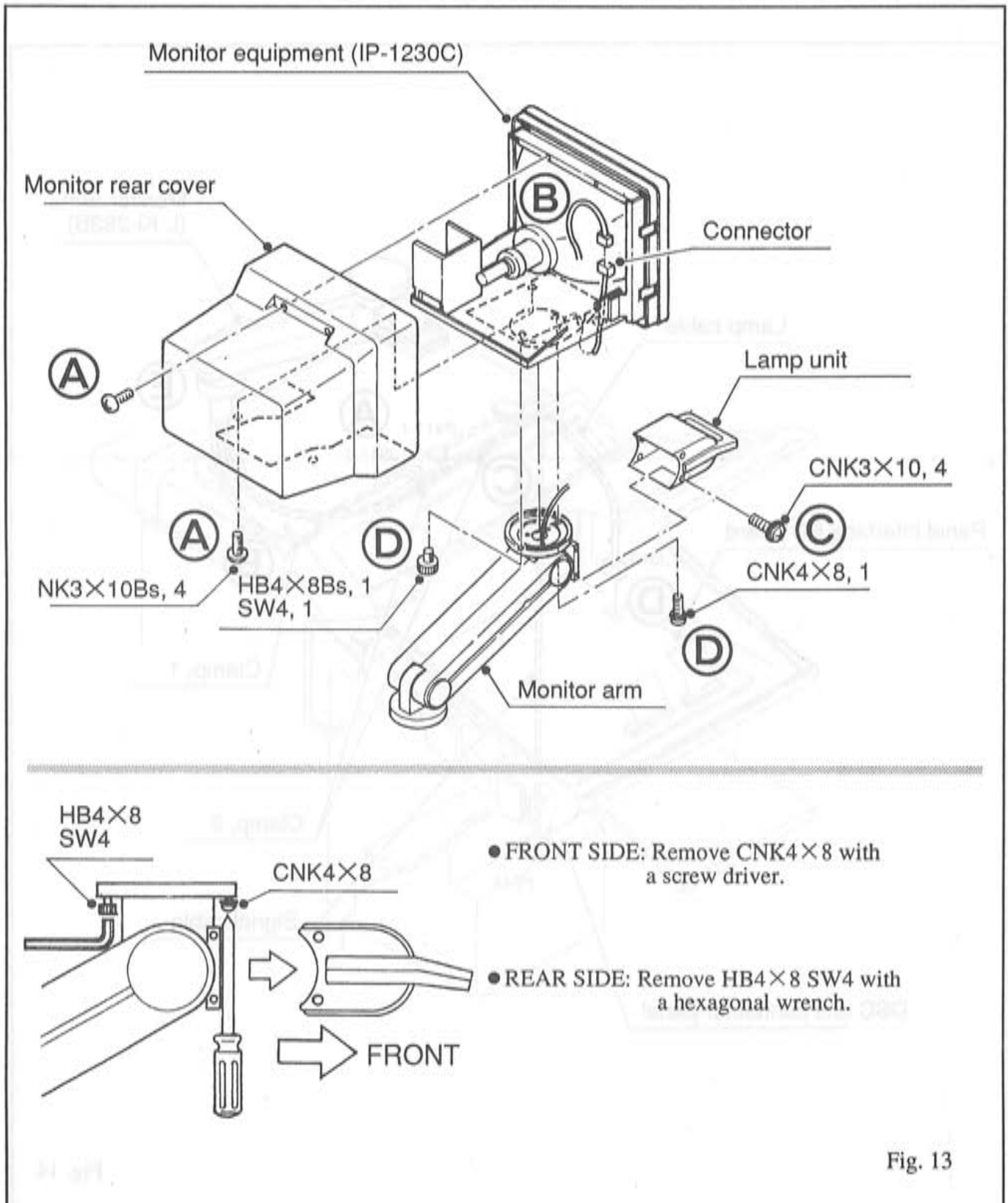


Fig. 12

## 11. How to Remove Observation Monitor Unit (IP-1230C)

**NOTE :** Do not remove monitor before tightening monitor arm knob.

- (1) Remove 4 screws and remove monitor rear cover. (A in Fig.)
- (2) Disconnect connector in monitor. (B in Fig.)
- (3) Remove 4 screws and remove lamp unit from monitor arm. (C in Fig.)
- (4) Remove 2 screws and remove monitor from monitor arm. (D in Fig.)



## 12. How to remove Monitor Arm (L-Ki-263B)

- (1) Disconnect the relay connectors (J911-1, P911-1) of the signal cable connected to the DSC unit connector panel. (A in Fig.)
- (2) Remove signal cable from a clamp. (B in Fig.)
- (3) Remove lamp cable from 2 clamps on the panel escutcheon. (C in Fig.)
- (4) Disconnect the connector (J379) of the lamp cable from panel interface PC board. (D in Fig.)
- (5) Pull up the monitor arm and remove it from the body. (E in Fig.)

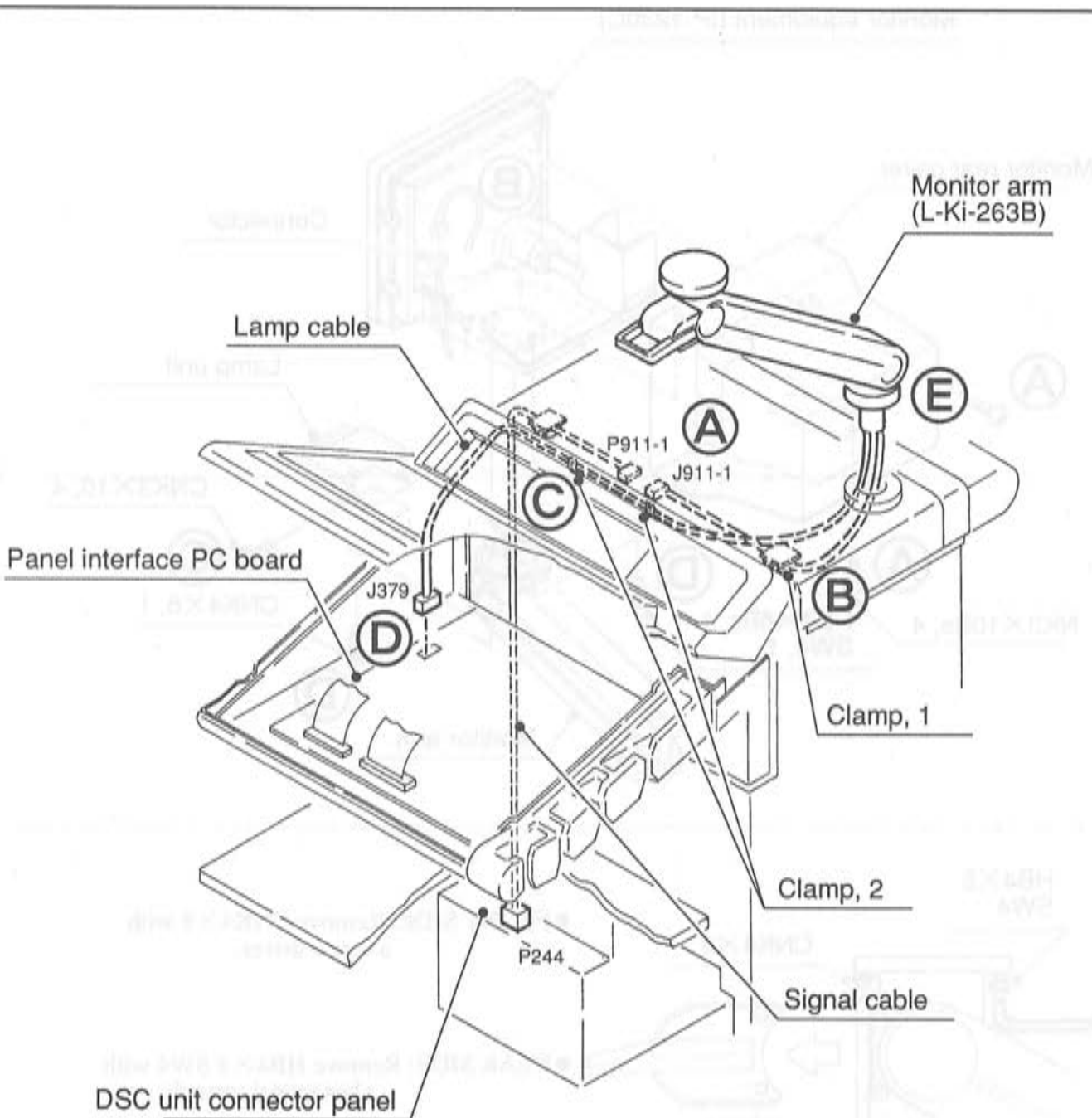


Fig. 14

### 13. How to Remove Top Cover

- (1) Remove 2 hexagonal socket headed bolts and remove the bush. (A in Fig.)
- (2) Remove 4 hexagonal socket headed bolts and 4 spring washers, and remove the spacer. (B in Fig.)
- (3) Remove 4 upper hexagonal socket headed bolts and 4 spring washers, and remove the monitor pedestal. (C in Fig.)
- (4) Remove 4 screws and remove top cover. (D in Fig.)

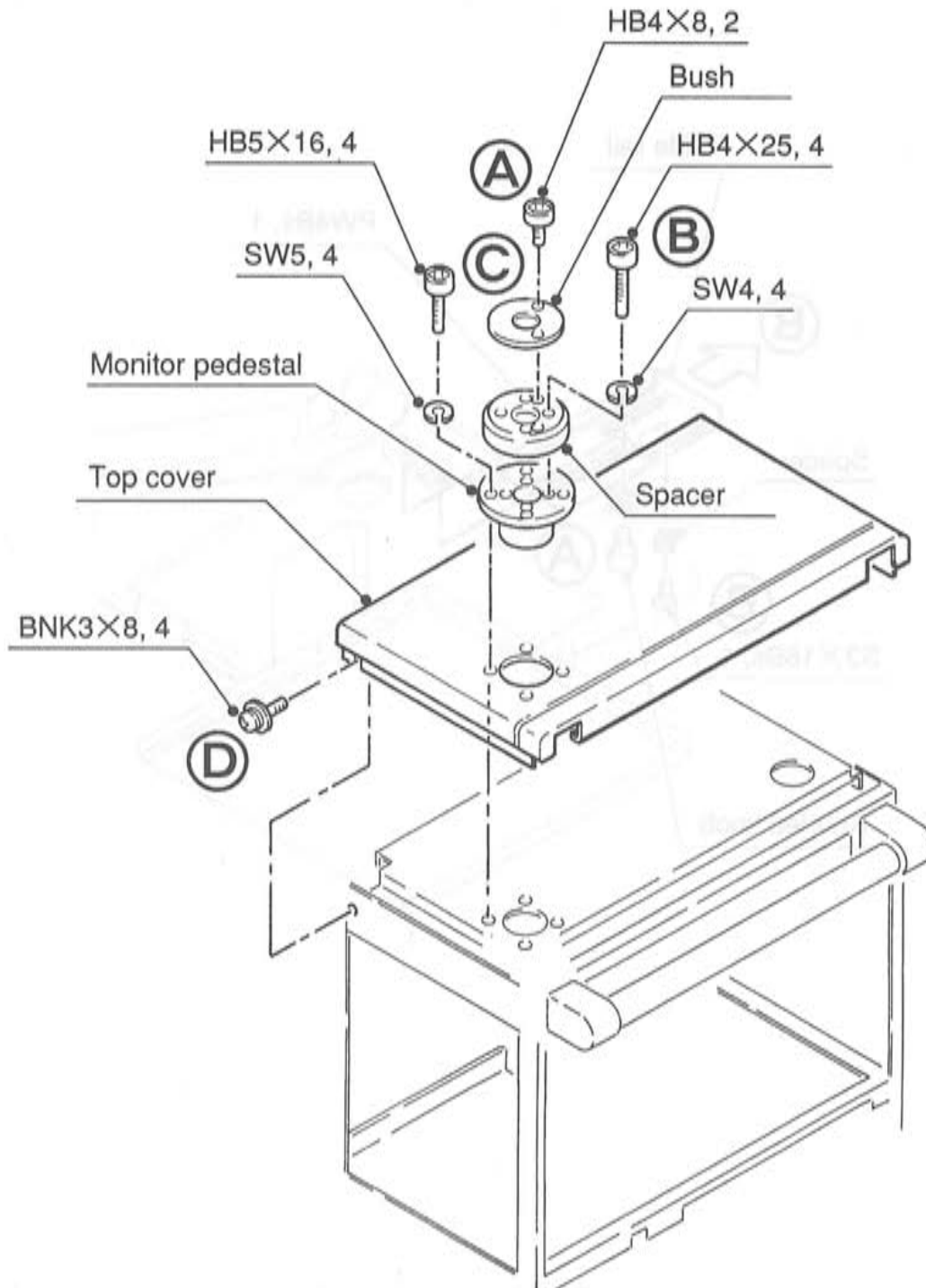


Fig. 15

## 14. How to Remove VTR Remote Controller Rack

- (1) Remove the knurled knob and 1 washer. (A in Fig.)
- (2) Remove a screw and remove spacer and pull the slide rail and remove it. (B in Fig.)

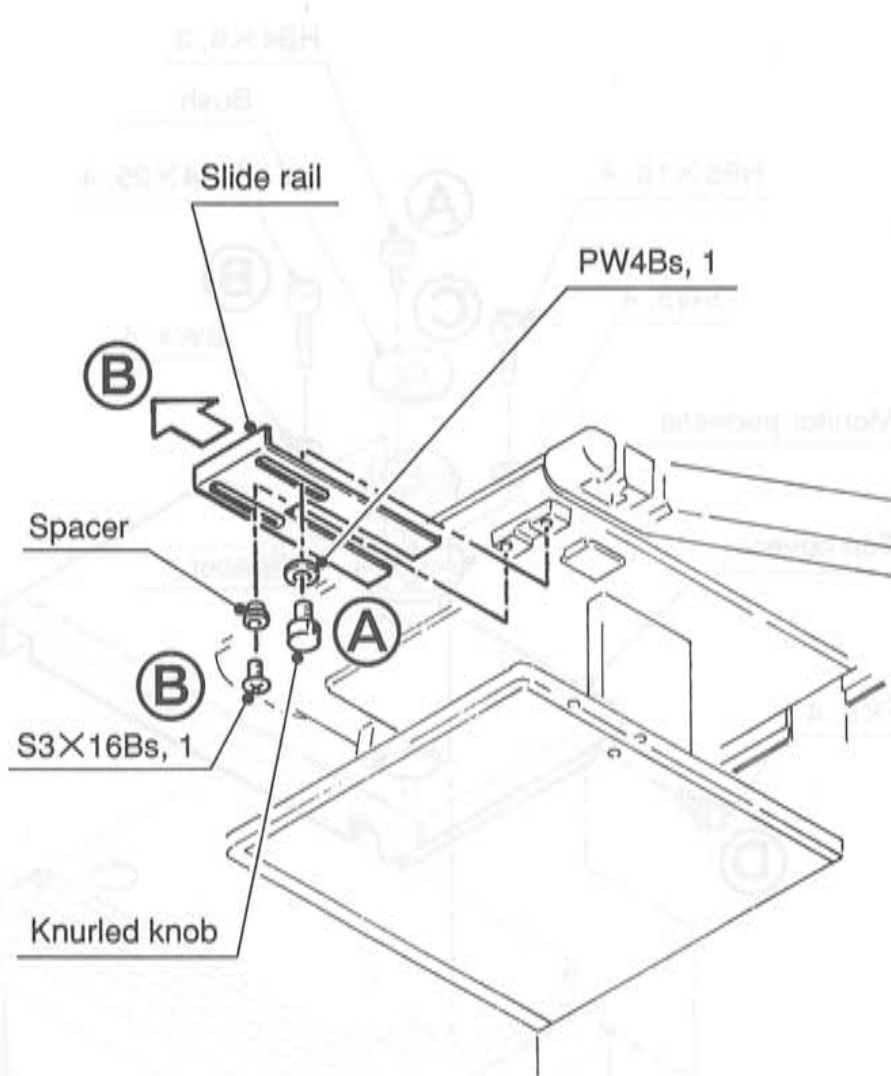


Fig. 16



## 15. How to Remove Panel Lower Cover

- (1) Remove 3 screws and remove mounting block. (A in Fig.)
- (2) Remove 2 screws and remove remote control rail. (B in Fig.)
- (3) Remove 2 screws and remove hinge. (C in Fig.)
- (4) Remove 2 screws respectively and remove 2 arms. (D in Fig.)

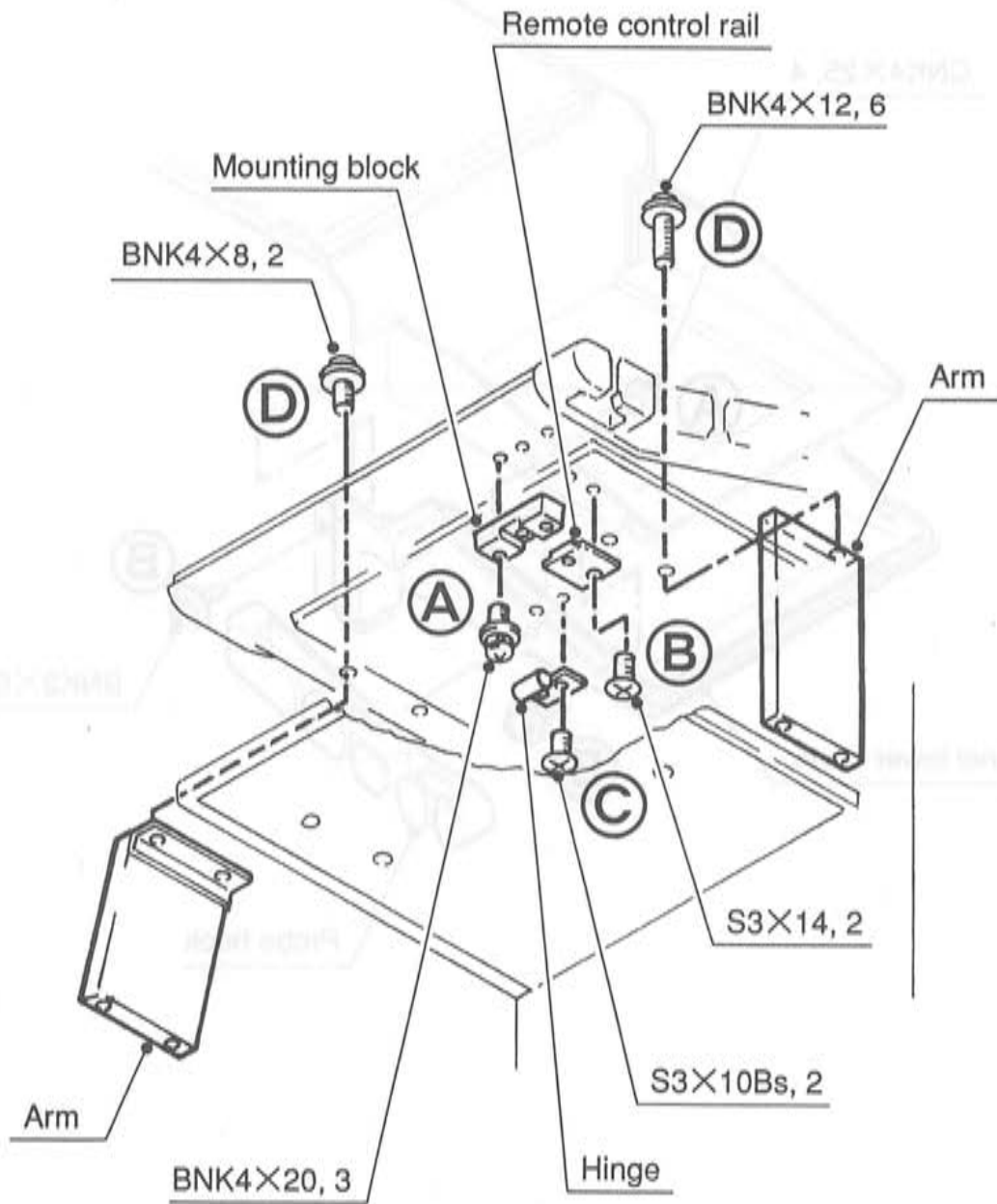


Fig. 17

(5) Remove 4 screws and remove Probe hook. (A in Fig.)

(6) Remove 8 screws and remove panel lower cover. (B in Fig.)

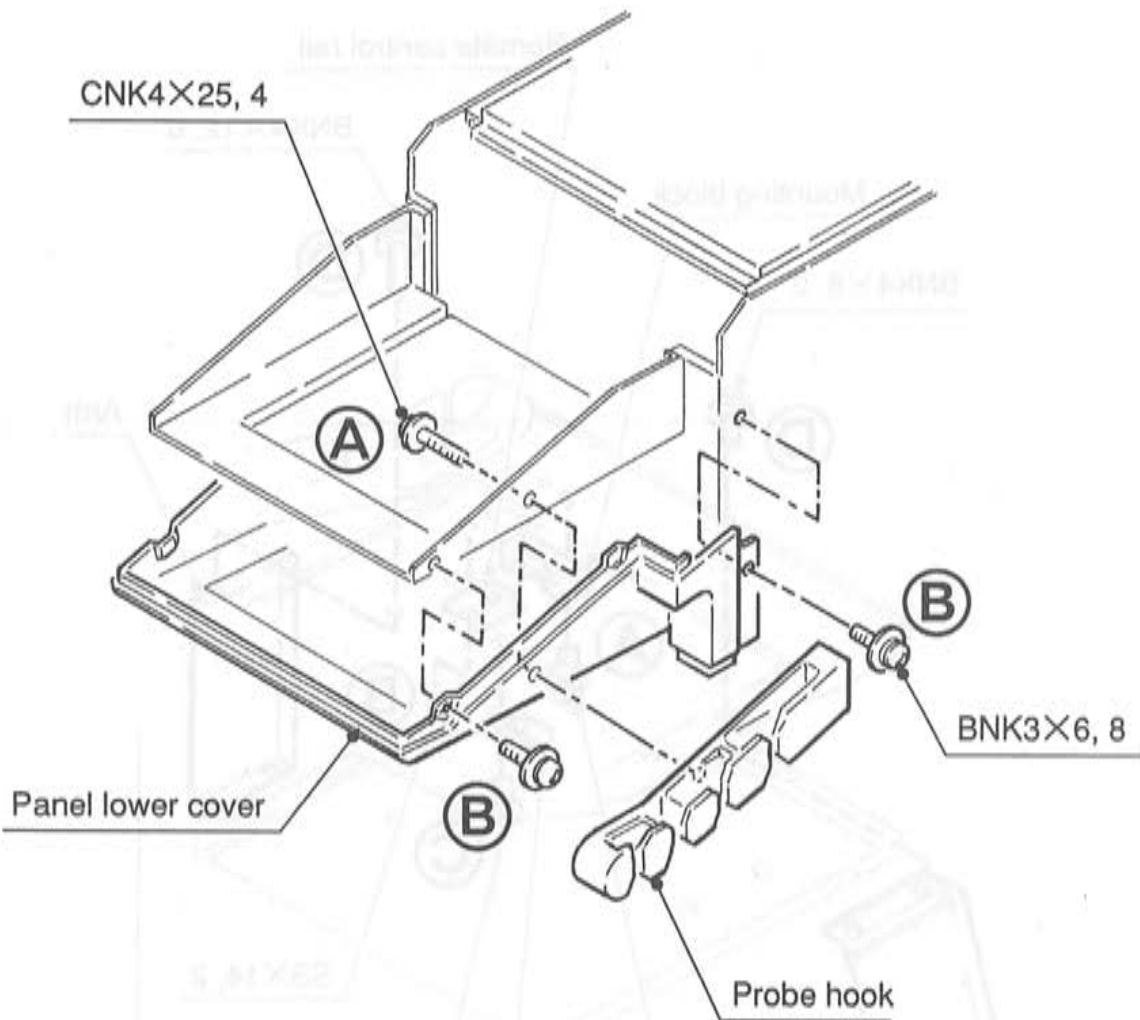


Fig. 18

# SSD-680EX据付要領書

## INSTALLATION PROCEDURES

必要な工具：M4プラスドライバー，M2.6プラスドライバー（組立先で用意すること）

注意：危険防止のため、モニタを据え付け終わるまでノブを緩めないこと。  
（バネが強く、いきなりモニタアームがはねあがるため。）

1. モニタ (IPC-1010, IPC-1010V, IPC-1230) の据付方法

(1) ロックピンを、上に引き上げ、モニタアームを、本体に対し90°の位置にする。(図1参照)

Tool required: M4 philips head screwdriver, M2,6 philips head screwdriver (To be arranged by assembly plant.)

Note: For safety, do not loosen the knob until you will have completely installed the monitor.

(The monitor arm will be jumped up suddenly due to its strong spring.)

1. Installing monitor (IPC-1010, IPC-1010V, IPC-1230)

(1) Pull up the lock pin and place the monitor arm at 90° to the body member. (See Fig. 1)

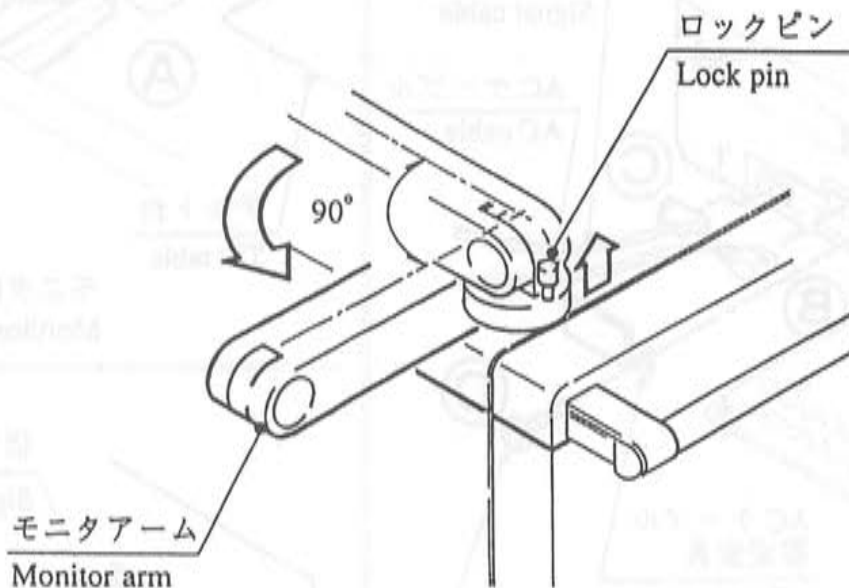


図1 Fig.1

○ モニタ (IPC-1010, 1010V)

- (2) チルト台のつめをモニタ底面のフック金具にひっかけてから、モニタを、チルト台にねじ2本で取付ける。(図中Ⓐ)
- (3) ACケーブルを、モニタ背面に接続する。(図中Ⓑ)
- (4) 信号ケーブルをモニタに接続し、取付けねじ2本で固定する。(図中Ⓒ)
- (5) ACケーブル固定金具を、ねじ2本で取付ける。(図中Ⓓ)

○ Monitor (IPC-1010, 1010V)

- (2) Hook the claw of the tilt table onto the hook metal fitting on the under side of the monitor and then, mount the monitor on the tilt table with 2 screws. (Ⓐ in Fig.)
- (3) Connect the AC cable to the back of the monitor. (Ⓑ in Fig.)
- (4) Connect the signal cable to the monitor and fasten 2 fixing screws. (Ⓒ in Fig.)
- (5) Install the AC cable fixing metal fitting with 2 screws. (Ⓓ in Fig.)

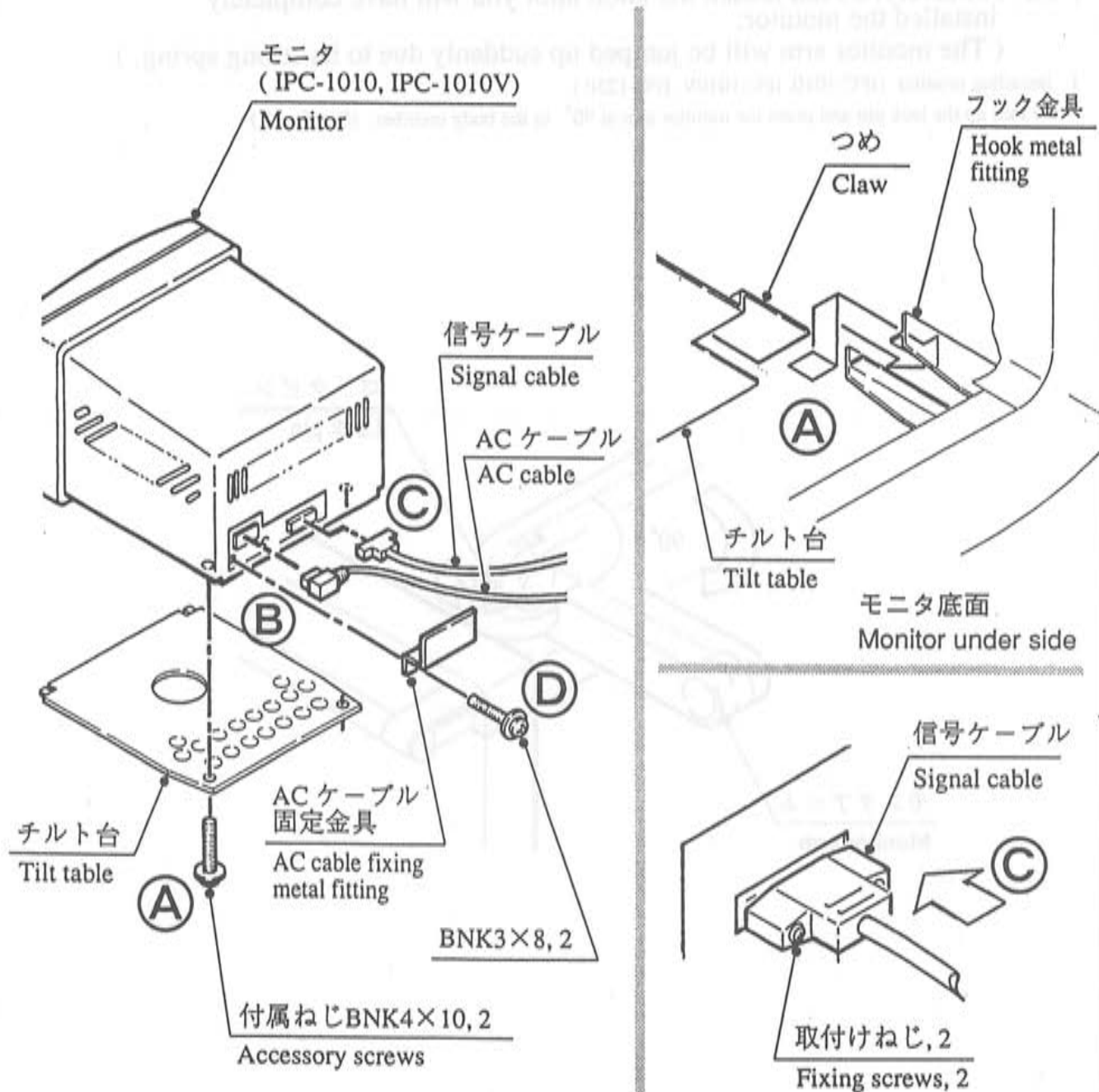


図2 Fig. 2

○ モニタ (IPC-1230W , -1230WV)

- (2) チルト台のつめをモニタ底面のスリットにひっかけてから、モニタを、チルト台にねじ4本で取付ける。( 図中 ㉑ )
- (3) ACケーブルを、モニタ背面に接続する。( 図中 ㉒ )
- (4) 信号ケーブルをモニタに接続し、取付けねじ2本で固定する。( 図中 ㉓ )
- (5) ACケーブル固定金具を、ねじ2本で取付ける。( 図中 ㉔ )

○ Monitor (IPC-1230W , -1230WV).

- (2) Hook the claw of the tilt table onto the slit on the under side of the monitor and then , mount the monitor on the tilt table with 4 screws. ( ㉑ in Fig.)
- (3) Connect the AC cable to the back of the monitor. ( ㉒ in Fig.)
- (4) Connect the signal cable to the monitor and fasten 2 fixing screws. ( ㉓ in Fig.)
- (5) Install the AC cable fixing metal fitting with 2 screws. ( ㉔ in Fig.)

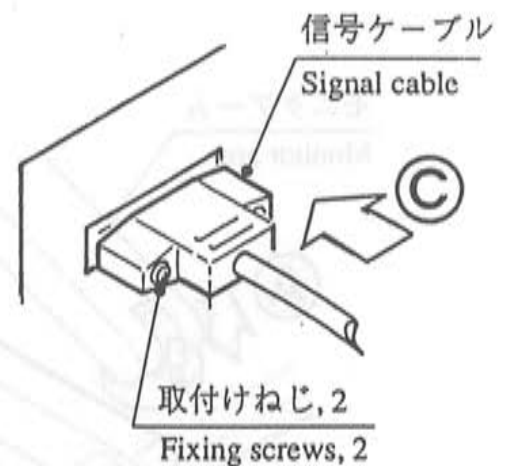
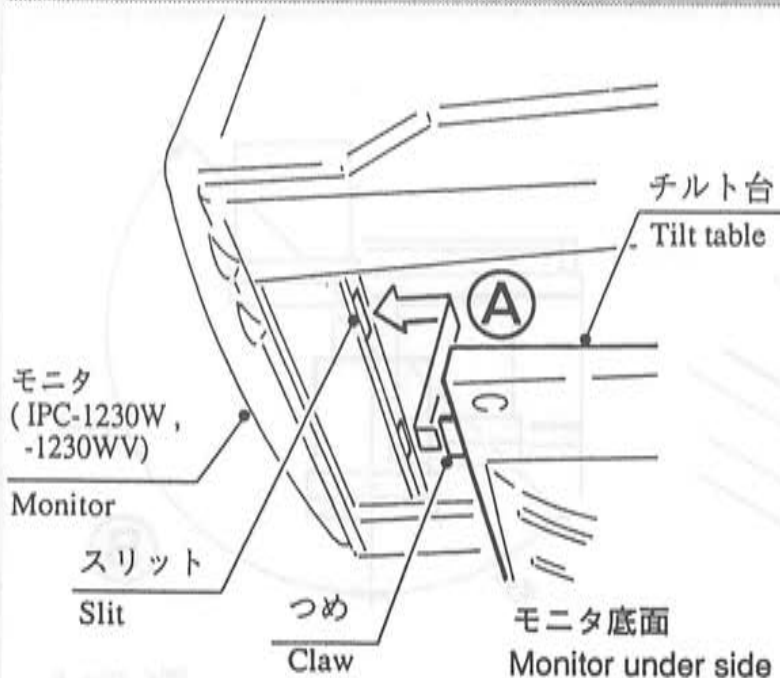
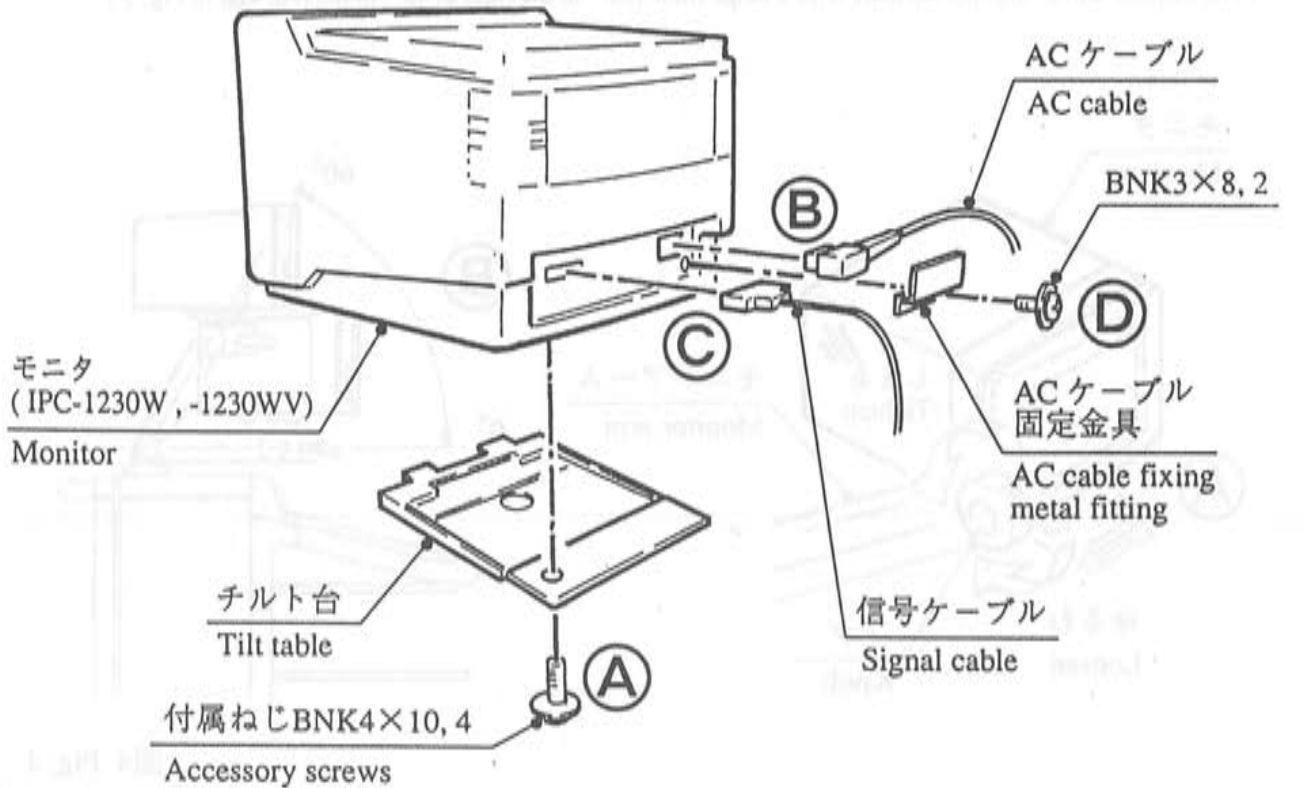


図3 Fig. 3

## 2. モニタの動作方法

- (1) モニタの上下移動はノブをゆるめて行い、適正位置でノブを締めて固定する。(図4 ㉔)
- (2) モニタアームの上下の可動範囲は、 $0^{\circ}$  ~  $60^{\circ}$  の範囲。(図4 ㉕)
- (3) モニタアームの左右旋回はモニタアームのロックピンを上に取り上げて行う。(図5 ㉔)
- (4) モニタアームの左右の可動範囲は、左に $45^{\circ}$  右に $135^{\circ}$  の範囲。(図5 ㉕)

## 2. Monitor arm maneuvering procedure

- (1) To shift the monitor vertically, first loosen the arm knob, and after duly positioning the monitor, tighten the knob to fasten the monitor down. (㉔ in Fig. 4)
- (2) The monitor arm swings vertically over a  $0^{\circ}$  to  $60^{\circ}$  range. (㉕ in Fig. 4)
- (3) When turning the monitor arm right and left, pull up the lock pin of the monitor arm first. (㉔ in Fig. 5)
- (4) The monitor arm swings horizontally over a range from  $135^{\circ}$  to the right to  $45^{\circ}$  to the left. (㉕ in Fig. 5)

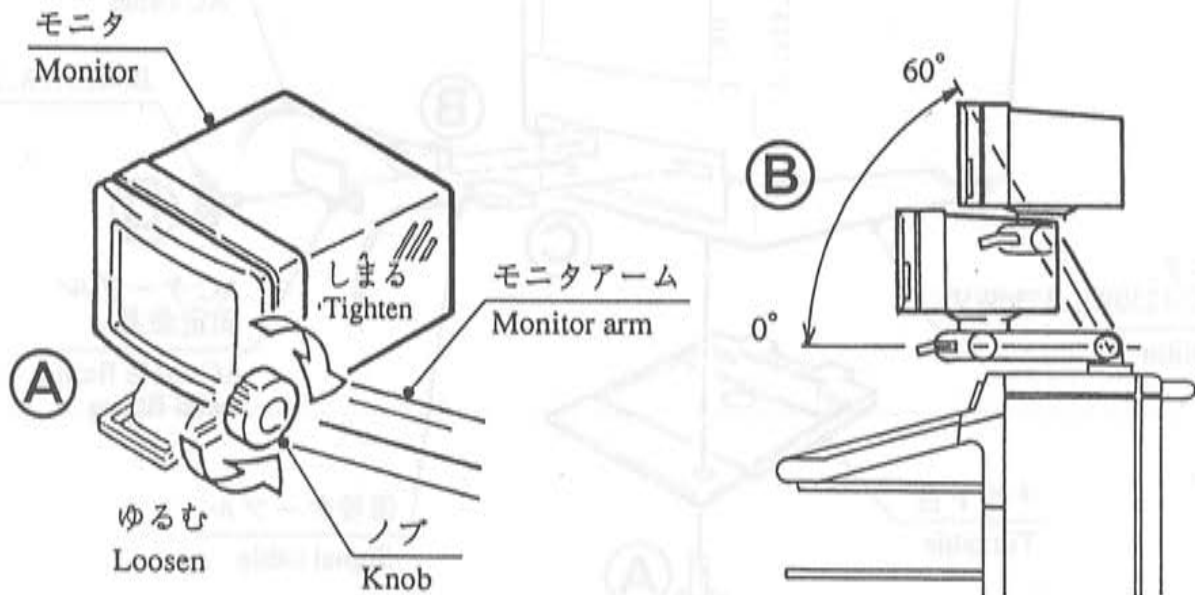


図4 Fig. 4

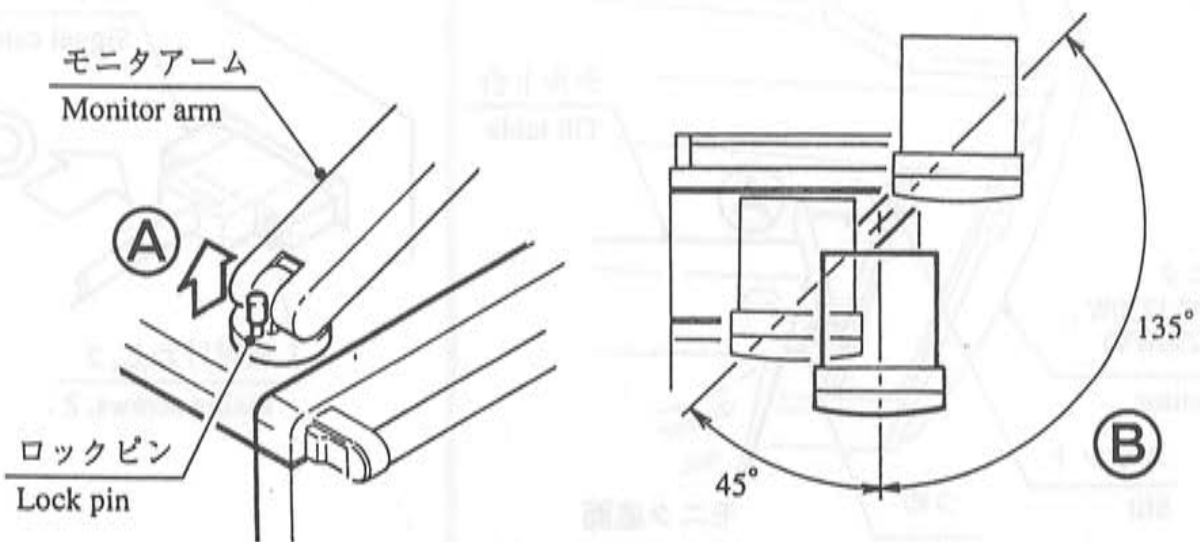


図5 Fig. 5

3. プローブ、及び、ケーブルハンガの取付方法

- (1) ケーブルハンガを、本体に差し込む。(図中 ㉑)
- (2) コネクタを接続し、プローブをプローブホルダへ入れる。(図中 ㉒)
- (3) ゼリーボトルを、ゼリーホルダに置く。(図中 ㉓)

3. Probe and cable hanger mounting procedure

- (1) Insert the cable hanger in the main unit. (㉑ in Fig.)
- (2) Mate the connector, stow probe holder. (㉒ in Fig.)
- (3) Position a gel bottle on the gel holder. (㉓ in Fig.)

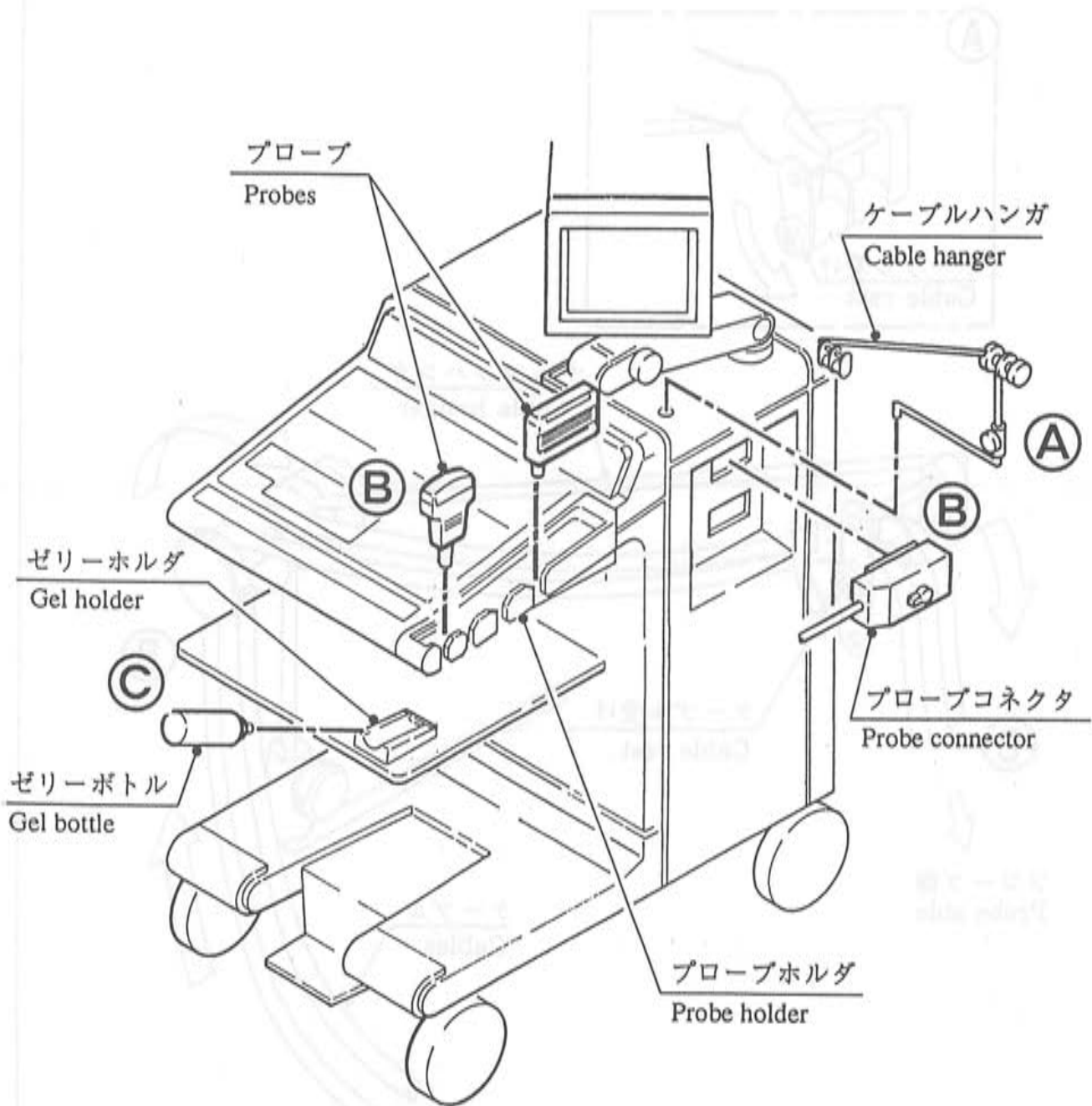


図6 Fig. 6

(3) ケーブル受の外側の部分を、下図の様に下に向ける。(図中Ⓐ)

(4) プロブのケーブルを、下図の様に引き回す。(図中Ⓑ)

(3) Orient the cable rest to have its outer end point downward as illustrated below. (Ⓐ in Fig.)

(4) Pass probe cables over the cable rest and elbow as illustrated below. (Ⓑ in Fig.)

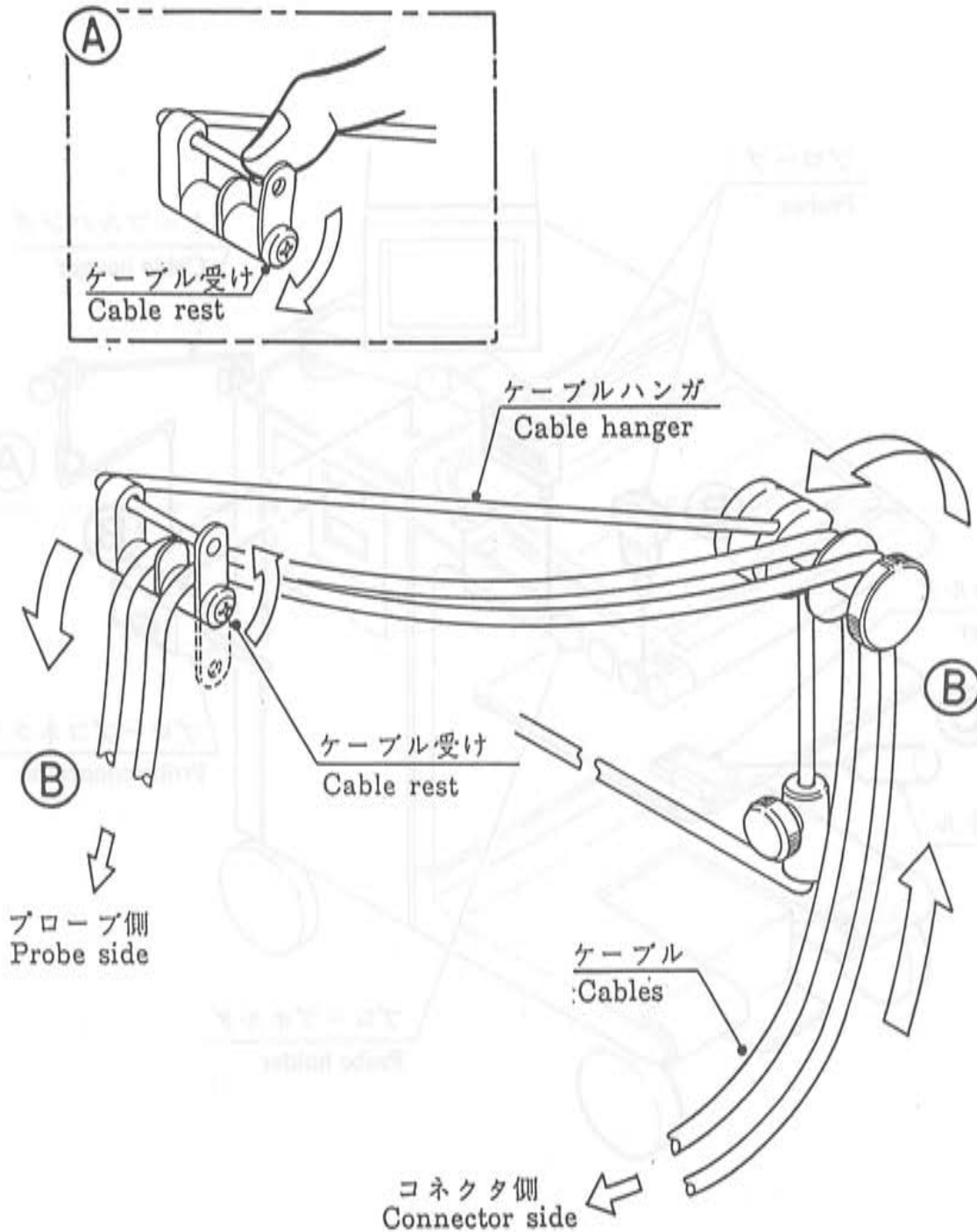


図7 Fig. 7



#### 4. オプション機器の据付方法

##### ● 撮影装置(SSZ-600)

- (1) 中間カバーをねじ2本を外して取り外す。(図中Ⓐ)
  - (2) 中間カバーの裏側に固定されているカメラ信号ケーブル・信号ケーブル・SSZ-600用電源ケーブルを、クランプより外して取り外す。(図中Ⓑ)
  - (3) 撮影装置背面から出ている電源ケーブルを、本体から出ているSSZ-600用電源ケーブルに接続する。(図中Ⓒ)
  - (4) カメラ信号ケーブルと電源ケーブルを、中間カバーの切り欠きに通して、中間カバーを、(1)と逆の手順で取り付ける。(図中Ⓓ)
- ※ 電源ケーブルのコネクタは本体内部に押し込んでおく。

#### 4. Optional equipment installing procedure

##### ● Photographic equipment (SSZ-600)

- (1) Remove the intermediate cover by removing the 2 screws. (Ⓐ in Fig.)
  - (2) Pull out the camera signal cable, signal cable and power supply cable for SSZ-600 from clamp on the rear side of the intermediate cover. (Ⓑ in Fig.)
  - (3) Connect the power supply cable extending from the back of photographic equipment with the power supply cable for SSZ-600 of the main unit. (Ⓒ in Fig.)
  - (4) Feed the camera signal cable and the power supply cable for SSZ-600 through the notch along the edge of the intermediate cover and fix the intermediate cover using the reverse procedure of (1). (Ⓓ in Fig.)
- ※ Push the connector of power supply cable into the inner of the main unit.

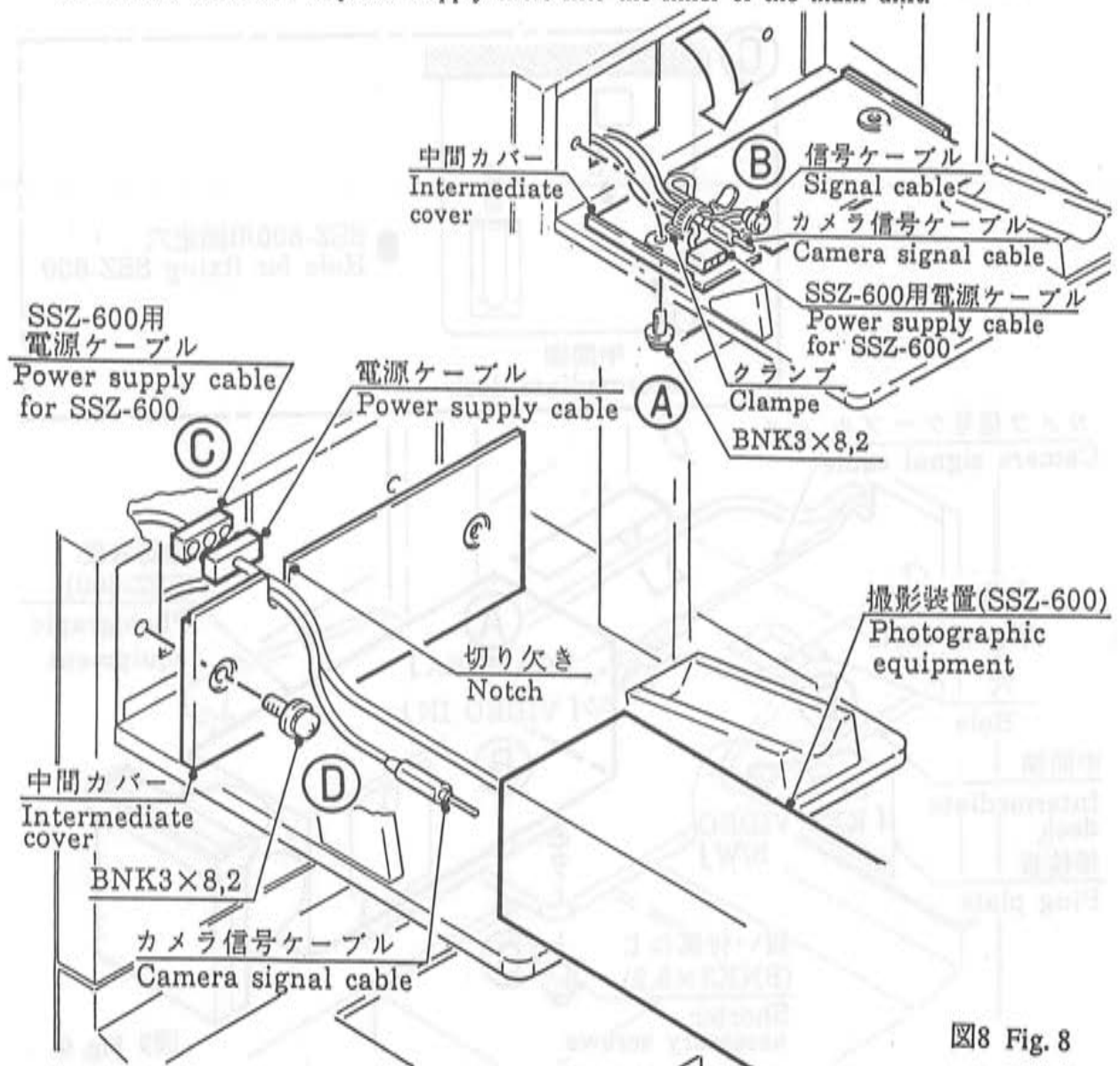
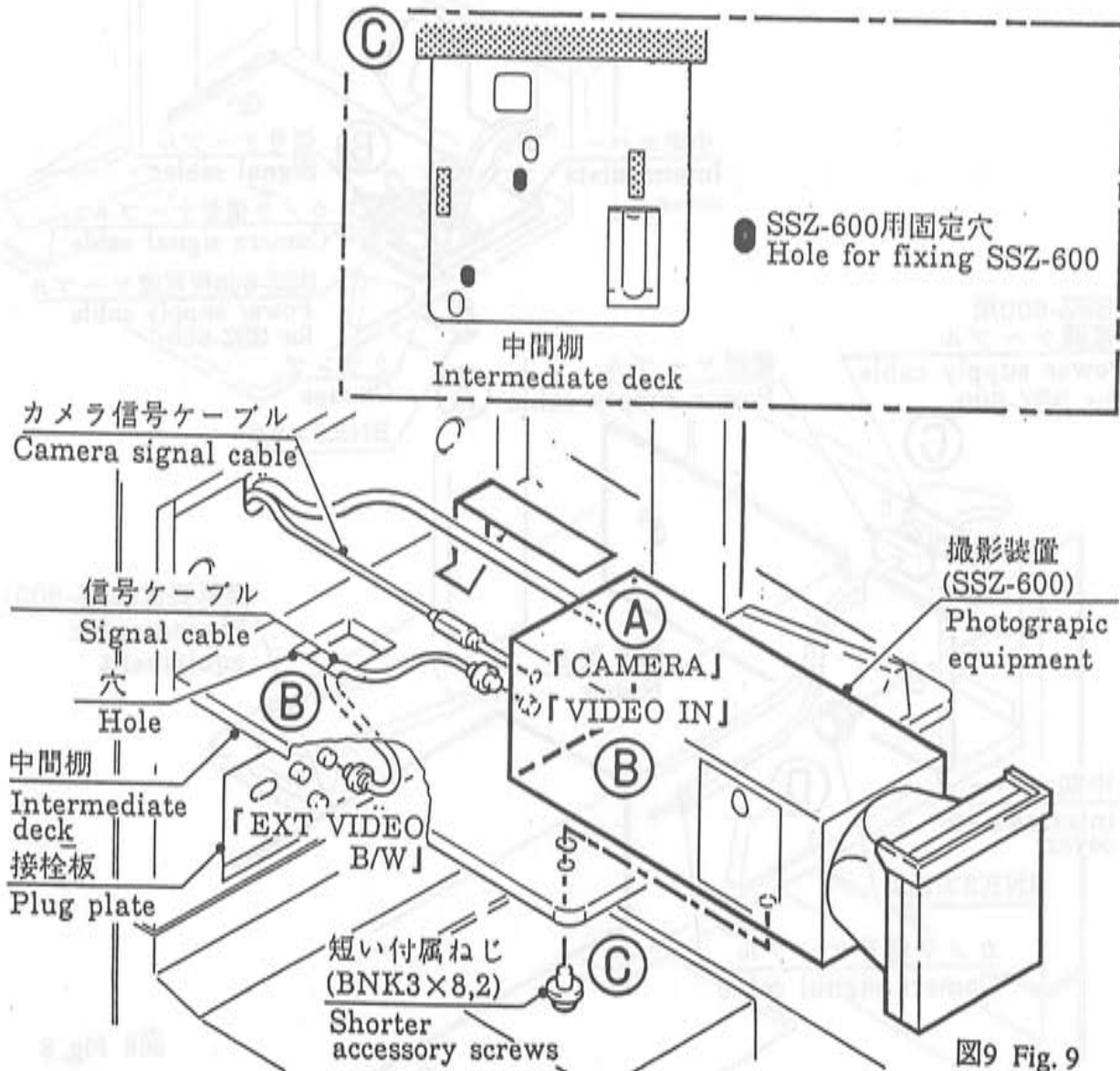


図8 Fig. 8

- (5)カメラ信号ケーブルを、撮影装置背面の「CAMERA」に接続する。(図中㉠)
- (6)信号ケーブルの一方を、撮影装置背面の「VIDEO IN」に接続し、もう一方を、中間棚の穴を通し本体前面の接栓板「EXT VIDEO B/W」に接続する。(図中㉡)
- (7)撮影装置を、付属ねじの短い方(BNK3×8)2本で図の位置に据付け固定する。(図中㉢)
- 注:付属ねじはプリンタ用(BNK3×16)、撮影装置用(BNK3×8)で長さが異なる。

- (5)Connect the camera signal cable to 「CAMERA」 on the back side of photographic equipment.  
(㉠ in Fig.)
- (6)Connect the connector of signal cable to the 「VIDEO IN」 on the back side of photographic equipment and other side through the hole intermediate deck and connect 「EXT VIDEO B/W」 to connection plug plate on the front face of the main unit. (㉡ in Fig.)
- (7)Fix the photographic equipment in the figure with 2 shorter accessory screws (BNK3×8).  
(㉢ in Fig.)
- Note: Length of accessory screws for the printer (BNK3×16), and the photography unit (BNK3×8) differs from each other.



- プリンタ (SSZ-303) , カラー撮影装置 (SSZ-203), VTR (SVO-9500, AG-7300)
  - ※VTR (SVO-9500)を中間棚に据付ける場合, プリンタ (SSZ-303), VTR (AG-7300) ・ ・ (2)の作業を行なうこと。
  - VTR (SVO-9500)を天板に据付ける場合, カラー撮影装置 (SSZ-203) ・ ・ ・ ・ ・ (2)'の作業を行なうこと。
  - (1) アイソレーショントランス (PTU-004) のふたを、ねじ、ワッシャ各2個を外して取り外し、電源ケーブルを接続する。(図中 ㉑)
  - ※ アイソレーショントランスが搭載されていない場合は、外部ACラインに接続する。
  - (2) ケーブルクランプ (UL-13) 3個を、本体の図の位置に取付け、電源ケーブルを固定する。(図中 ㉒)
  - (2)' ケーブルクランプ (UL-13) 1個を、本体の図の位置に取付け、電源ケーブルを固定する。(図中 ㉓)

- Printer (SSZ-303) , Color Photographic Equipment (SSZ-203), VTR (SVO-9500, AG-7300)
  - ※ Printer (SSZ-303), In case of the installation of VTR on the intermediate deck VTR (SVO-9500), VTR (AG-7300) ・ ・ Step (2) required.
  - Color Photographic Equipment (SSZ-203), In case of the installation of VTR on the upper plate VTR (SVO-9500) ・ ・ Step (2)' required.
  - (1) Take out 2 screws and 2 washers and remove the lid of the isolation transformer (PTU-004) and connect the power supply cable. ( ㉑ in Fig.)
  - ※ When the isoration transformer is not mounted, connect it to the external AC line.
  - (2) Mount 3 cable clamps (UL-13) on the position of the body shown in the figure, and fix the power supply cable. ( ㉒ in Fig.)
  - (2)' Mount 1 cable clamp (UL-13) on the position of the body shown in the figure, and fix the power supply cable. ( ㉓ in Fig.)

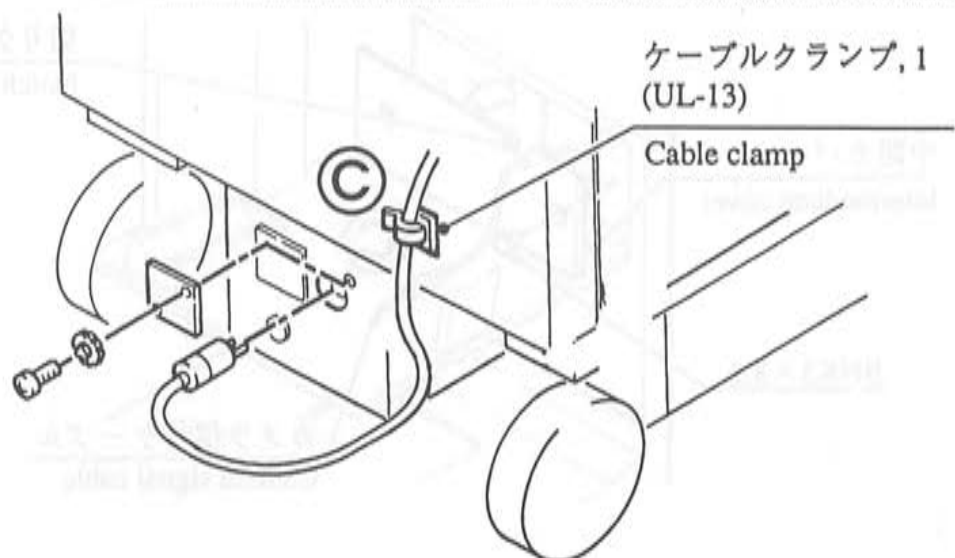
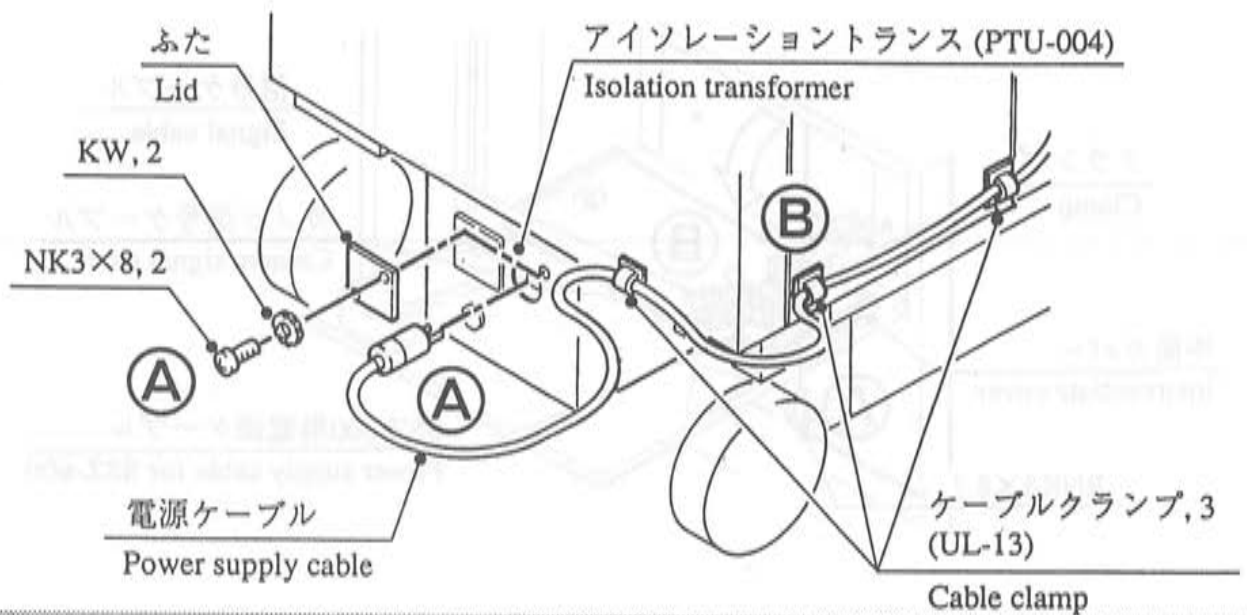


図10 Fig.10

○ プリンタ(SSZ-303)

(3) 中間カバーを、ねじ2本を外して取り外す。(図中 ㉑)

(4) 中間カバーの裏側に固定されているカメラ信号ケーブルと信号ケーブルを、クランプより外して取り外す。(図中 ㉒)

※SSZ-600用電源ケーブルはクランプに固定しておく。

(5) カメラ信号ケーブルを、中間カバーの切り欠きに通して、中間カバーを、(3)と逆の手順で取り付ける。(図中 ㉓)

○ Printer (SSZ-303)

(3) Remove the intermediate cover by removing the 2 screws. ( ㉑ in Fig.)

(4) Take out the camera signal cable and the signal cable which are clamped onto the rear side of the intermediate cover. ( ㉒ in Fig.)

※ Leave the power supply cable for SSZ-600 clamped as it is.

(5) Feed the camera signal cable through the notch along the edge of the intermediate cover and fix the intermediate cover using the reverse procedure of (3). ( ㉓ in Fig.)

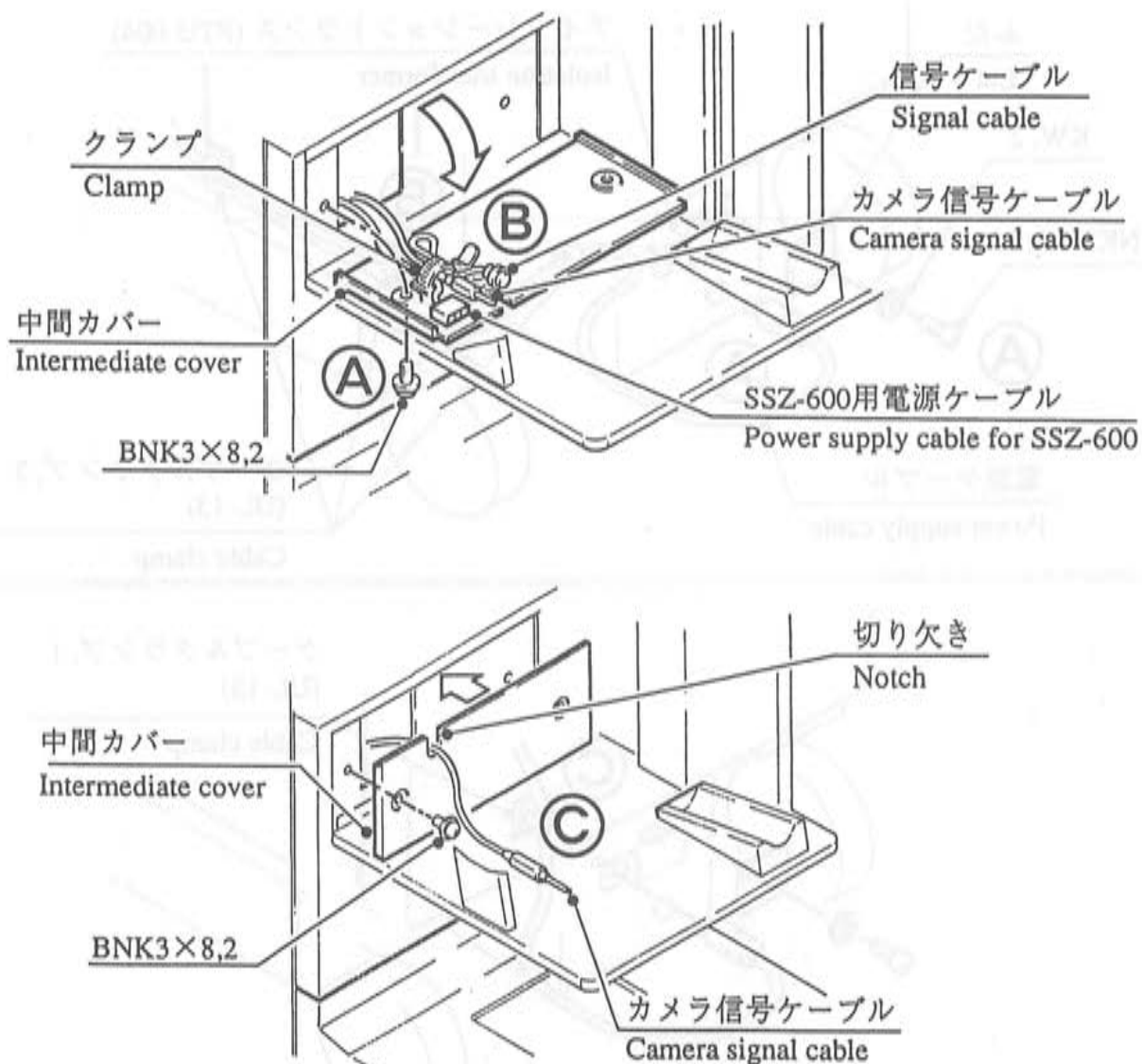


図11 Fig.11

- (6) デュアルロックファスナー (目の荒い方)を、中間棚に、図の様に張り付ける。(図中㉔)
- (7) デュアルロックファスナー (目の細かい方)を、プリンタの底面の出っ張りに、図の様に張り付ける。(図中㉕)
- (8) カメラ信号ケーブルを、プリンタ背面の「REMOTE」に接続し、SSZ-303用電源ケーブルを、中間棚の穴を通し、「AC IN」に接続する。(図中㉖)
- (9) 信号ケーブルの一方を、プリンタ背面の「VIDEO IN」に接続し、もう一方を、中間棚の穴を通し本体前面の接栓板「EXT VIDEO B/W」に接続する。(図中㉗)
- (10) プリンタを、中間棚に乗せる。(図中㉘)

- (6) Glue dual lock fastener (Rougher one) on the intermediate deck as shown in the figure in alignment. (㉔ in Fig.)
- (7) Glue dual lock fastener (Finer one) on the extruded square on printer as shown in the figure. (㉕ in Fig.)
- (8) Connect the camera signal cable with the 「REMOTE」 of the back side of the printer and power supply cable for SSZ-303 through the hole of the intermediate deck and connect with 「AC IN」. (㉖ in Fig.)
- (9) Connect the connector of signal cable to the 「VIDEO IN」 on the back side of printer and other side through the hole of the intermediate deck and connect 「EXT VIDEO B/W」 to connection plug plate on the front face of the main unit. (㉗ in Fig.)
- (10) Place printer on the intermediate deck. (㉘ in Fig.)

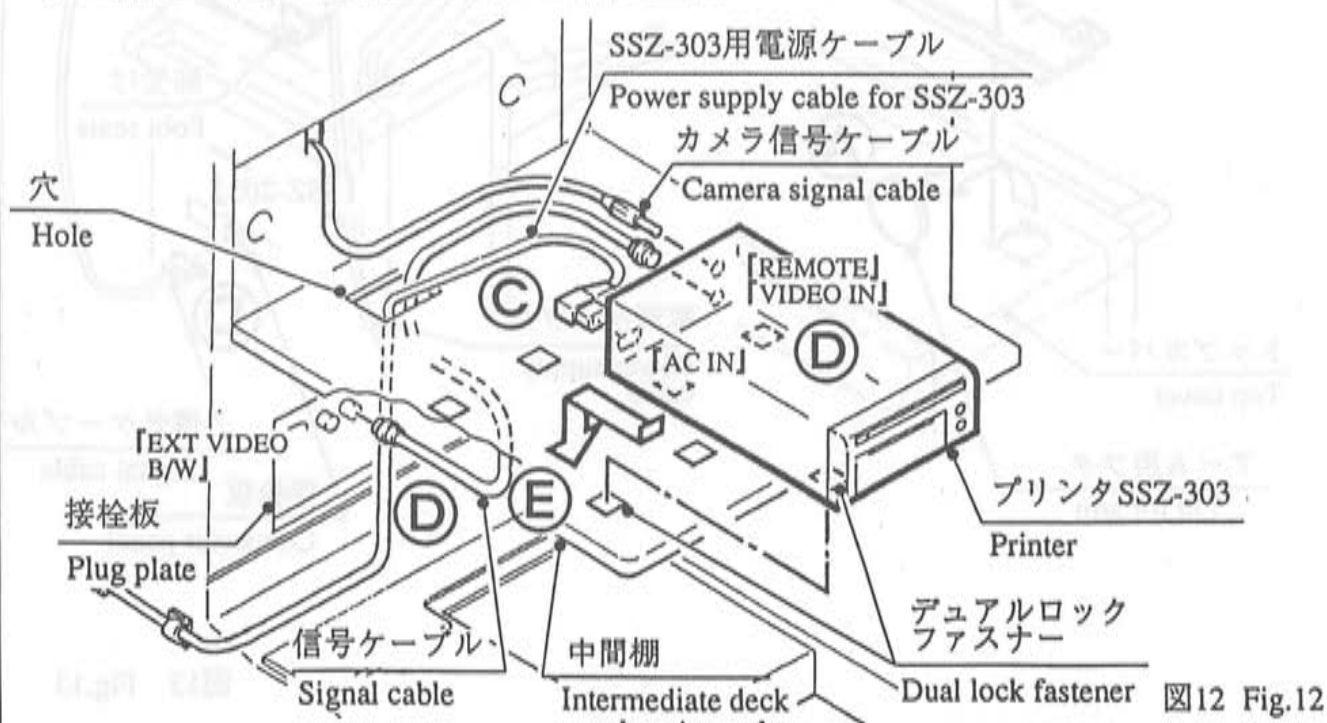
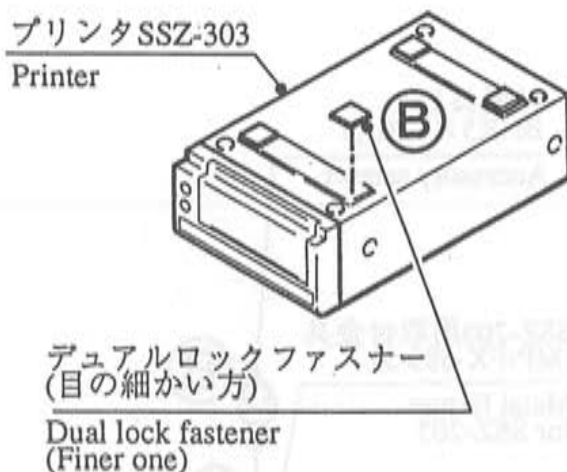
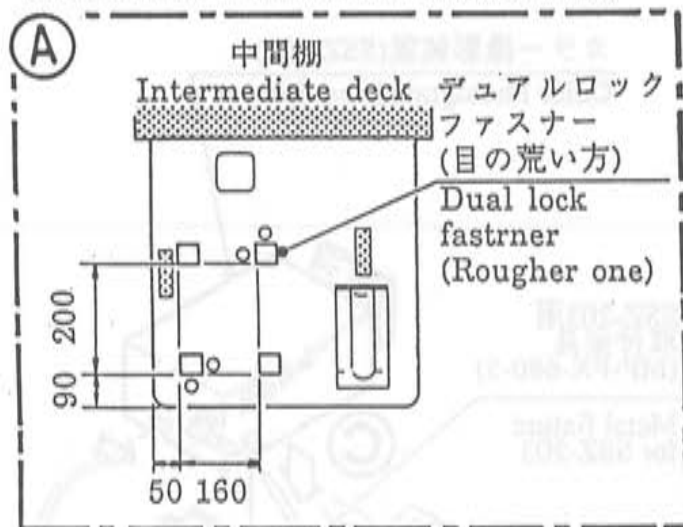


図12 Fig.12

○カラー撮影装置 (SSZ-203)

- (3) アーム用フタを、トップカバーから取り外す。(図中Ⓐ)
- (4) SSZ-203用取付金具 (MP-FX-680-5)を、付属ねじ3本で取り付ける。(図中Ⓑ)
- (5) SSZ-203を、取付金具の脚受に乗せる。(図中Ⓒ)
- (6) 信号ケーブルを、SSZ-203背面の「SIGNAL」と本体背面接栓板「SSZ-203」に接続する。(図中Ⓓ)

○ Color Photographic equipment (SSZ-203)

- (3) Remove the lid for arm from top cover.(Ⓐ in Fig.)
- (4) Mount the metal fixture (MP-FX-680-5) for SSZ-203 using the 3 accessory screws.(Ⓑ in Fig.)
- (5) Place the SSZ-203 on the metal fixture by fitting the foot in the foot seats.(Ⓒ in Fig.)
- (6) Connect one end of the signal cable with 「SIGNAL」 terminal on the back of SSZ-203 and another end with the connector panel 「SSZ-203」 on the back of the main unit.(Ⓓ in Fig.)

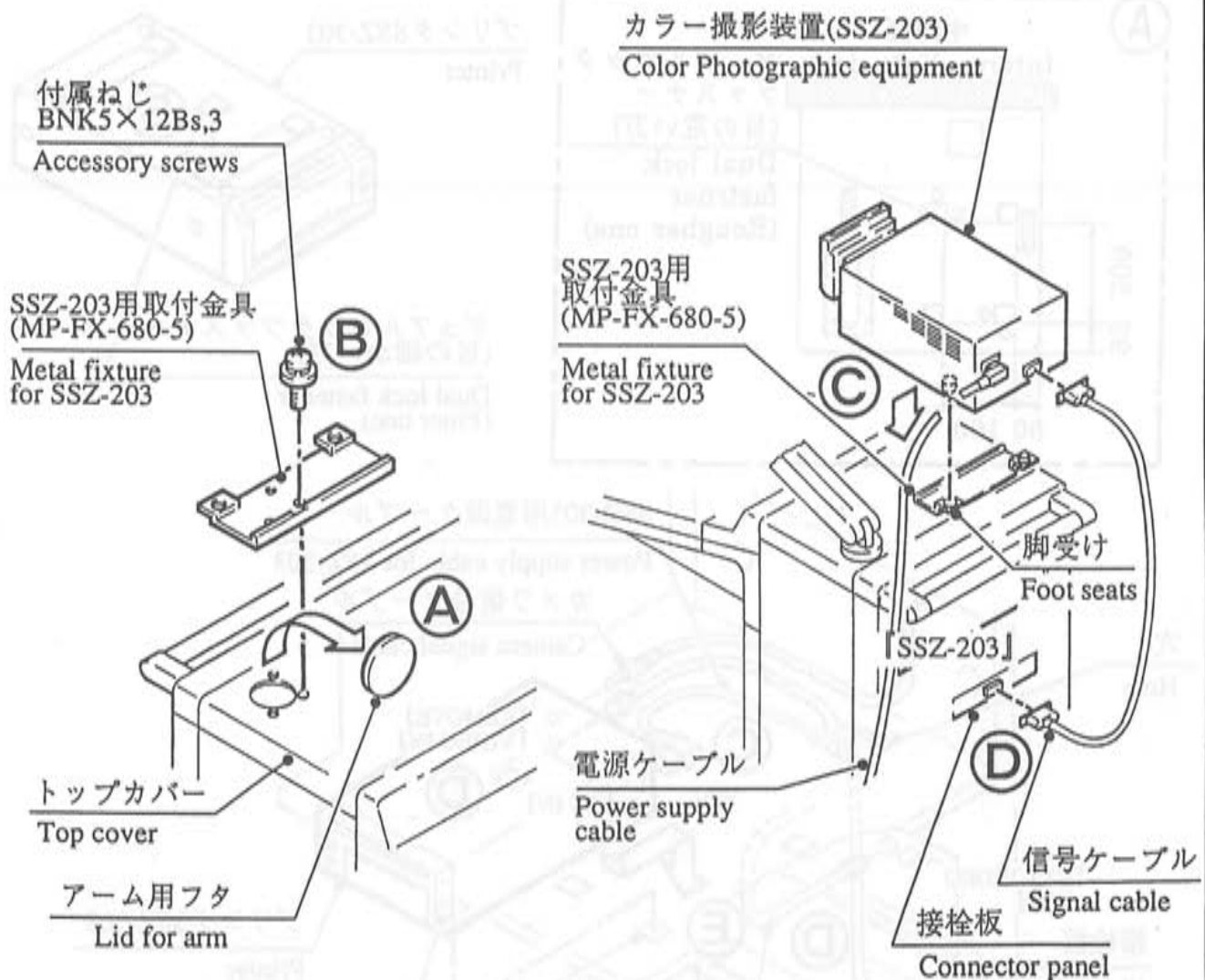


図13 Fig.13

○ VTR (SVO-9500)

1. 中間棚に据付の場合

- (3) 信号ケーブル2本、電源ケーブルを中間棚の穴に通し (図中 ㉑)、  
電源ケーブル、信号ケーブル2本を、VTR背面のコネクタにそれぞれ接続する。(図中 ㉒)
- (4) 信号ケーブル2本を接栓板にそれぞれ接続する。(図中 ㉓)
- (5) VTRを中間棚にのせる。(図中 ㉔)

○ VTR (SVO-9500)

1. In case of the installation on the intermediate deck

- (3) Feed the 2 signal cables, power supply cable through the hole of the intermediate deck (㉑ in Fig.),  
connect the power supply cable and 2 signal cables to the connector on the back side  
of the VTR respectively. (㉒ in Fig.)
- (4) Connect the 2 signal cables to the plug plate. (㉓ in Fig.)
- (5) Put the VTR on the intermediate deck. (㉔ in Fig.)

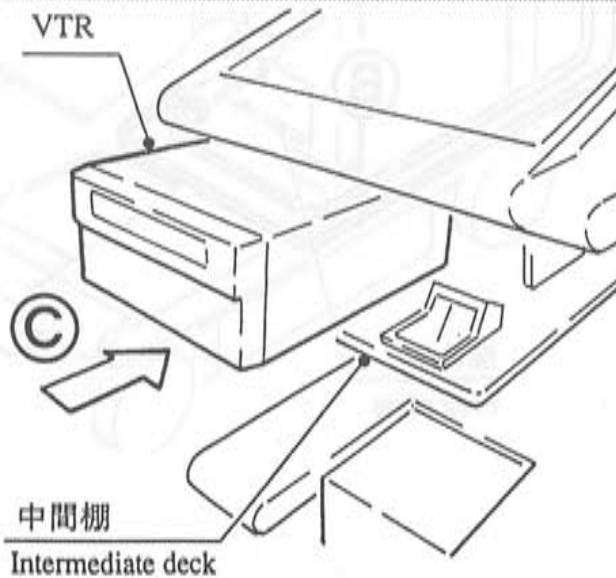
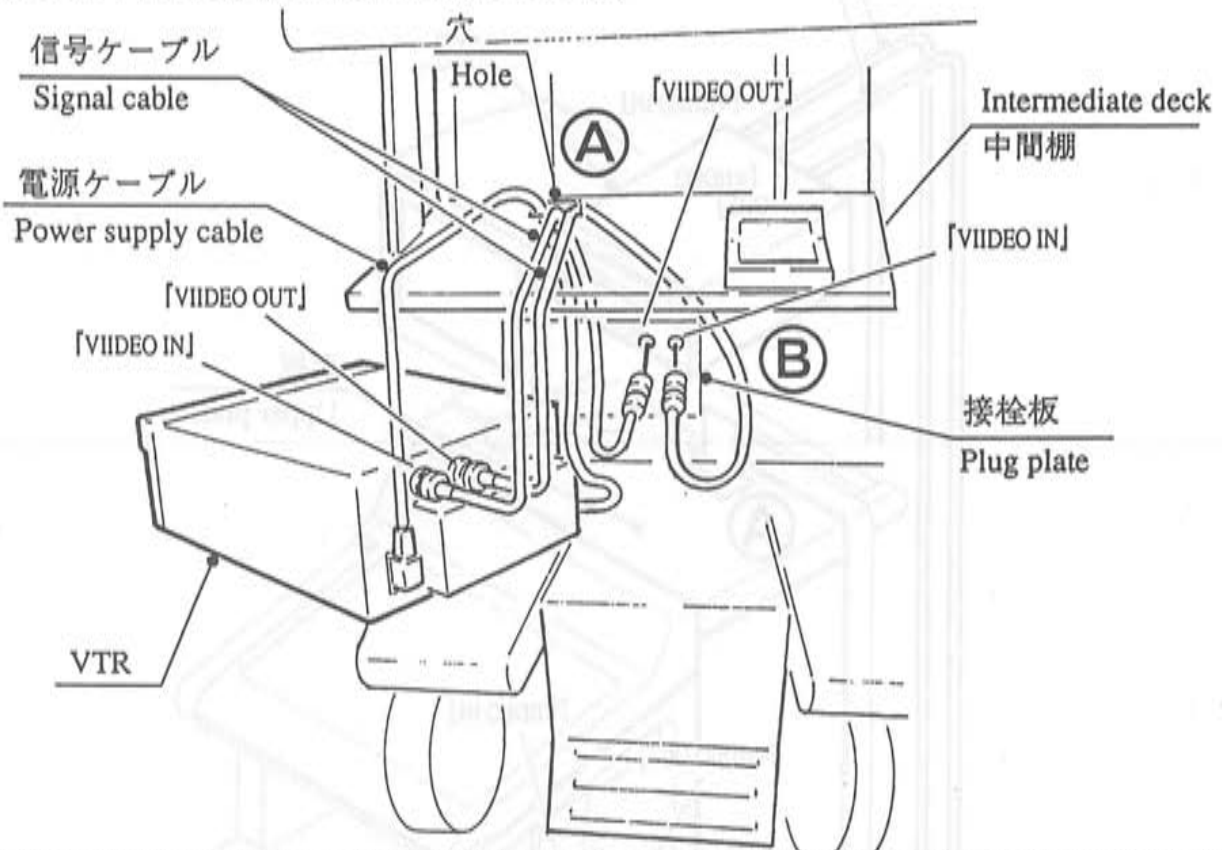


図14 Fig. 14

2. 天板上に据付の場合

- (3) VTRを天板上にのせる。(図中 ㉑)
- (4) 信号ケーブル2本を接栓板に接続する。(図中 ㉒)

2. In case of the installation on the upper plate

- (3) Put the VTR on the upper plate. (㉑ in Fig.)
- (4) Connect the 2 signal cables to the plug plate. (㉒ in Fig.)

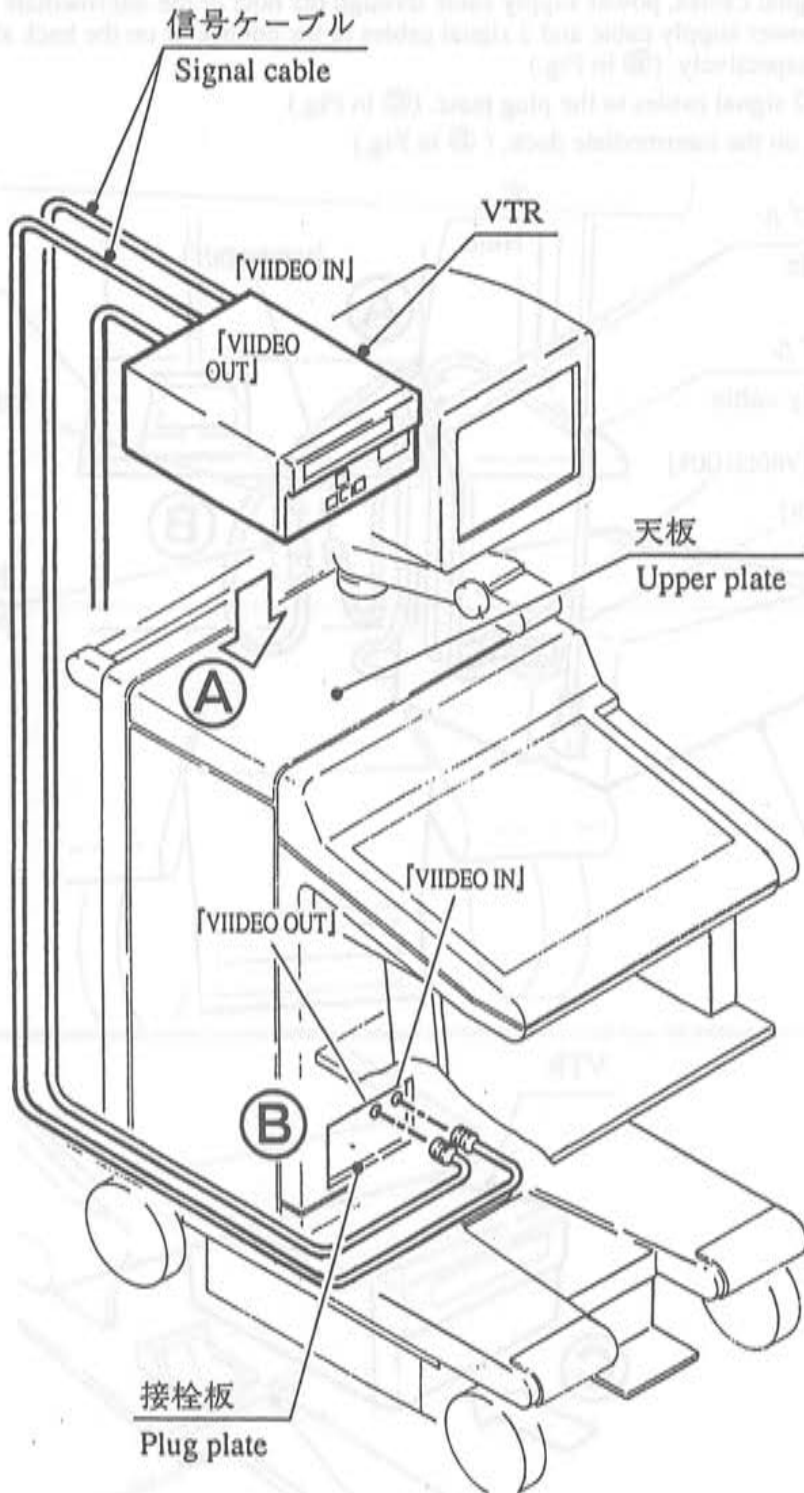


図15 Fig. 15



○ VTR(AG-7300)

(3) VTRの脚を、ベースカバーの脚受に合わせて載せる。(図中Ⓐ)

(4) 信号ケーブルの2本的一方を、VTR背面の「VIDEO IN」と「VIDEO OUT」に接続し(図中Ⓑ)、もう一方を、本体前面にある接栓板の「VIDEO OUT」と「VIDEO IN」にそれぞれ接続する。(図中Ⓒ)

○ VTR(AG-7300)

(3) Place the VTR on the base cover by fitting the foot in the foot seats. (Ⓐ in Fig.)

(4) Connect one end of the 2 signal cables with the 「VIDEO IN」 and 「VIDEO OUT」 terminals on the back of VTR unit (Ⓑ in fig.), and another end of them with the 「VIDEO OUT」 and 「VIDEO IN」 terminals on the Plug plate respectively. (Ⓒ in fig.)

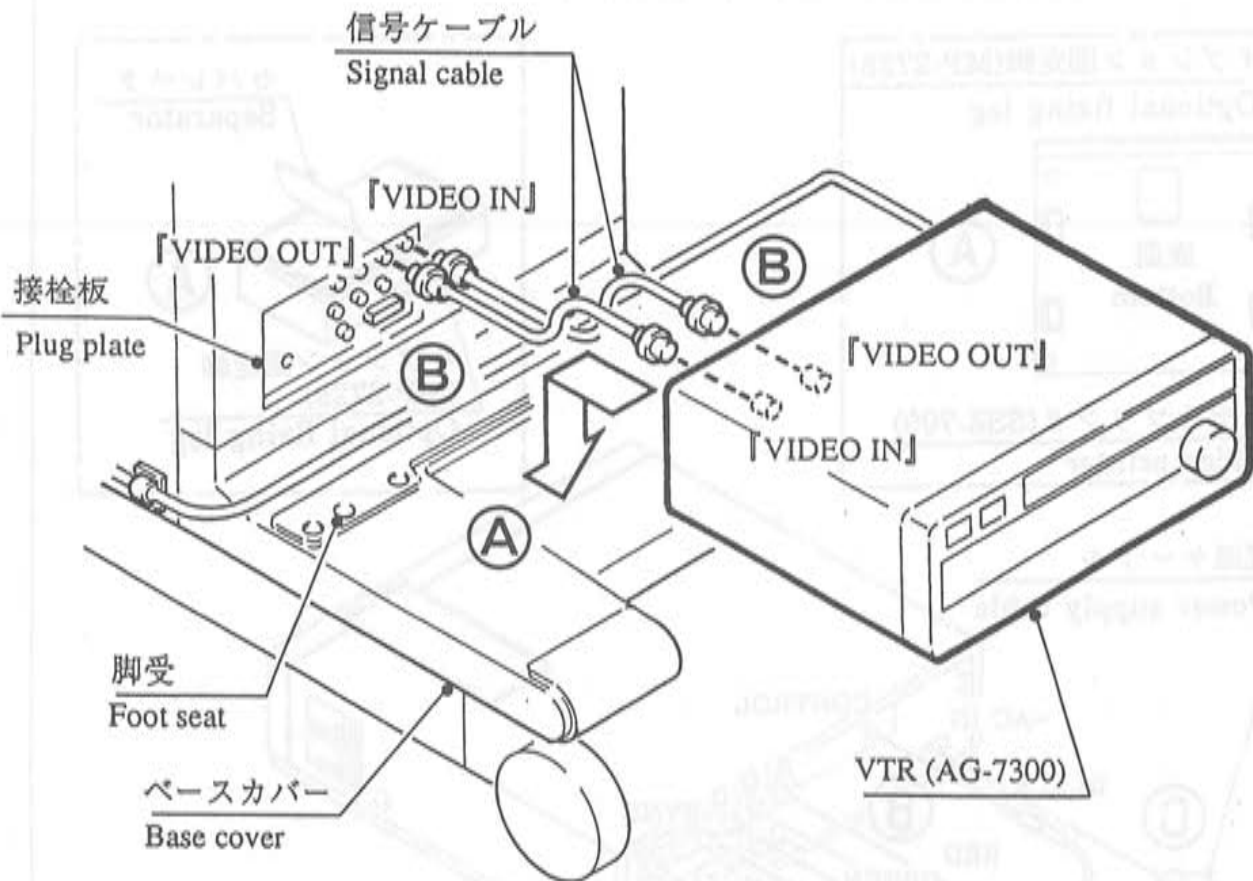


図16 Fig. 16

●ビデオプリンタ(SSZ-700)

(1)オプション固定脚(MP-2728)4個を、セパレータをはがし、ビデオプリンタ底面の図の位置に固定する。(図中Ⓐ)

注:オプション固定脚は、▽印が下側になる。

(2)信号ケーブルのコネクタ「RED」「GREEN」「BLUE」「WHITE」及び、「BLACK」を、ビデオプリンタ背面の「R」「G」「B」「SYNC」及び、「CONTROL」にそれぞれ接続する。(図中Ⓑ)

(3)電源ケーブルを、ビデオプリンタ背面の「~AC IN」に接続する。(図中Ⓒ)

(4)ケーブルクランプ(UL-13)を、ビデオプリンタ背面の図の位置に取付け、信号ケーブルを、固定する。(図中Ⓓ)

●Video printer(SSZ-700)

(1)Peel the separator and anchor the optional fixing leg (MP-2728) to the position of the bottom of the video printer shown in the figure. (Ⓐ in Fig.)

NOTE: The optional fixing leg is placed so that the portion with ▽ mark becomes downward.

(2)Connect the connectors 「RED」「GREEN」「BLUE」「WHITE」 and 「BLACK」 of the signal cable to the connectors 「R」「G」「B」「SYNC」 and 「CONTROL」 on the rear side of the video printer respectively. (Ⓑ in Fig.)

(3)Connect the power supply cable to 「~AC IN」 on the rear side of the video printer. (Ⓒ in Fig.)

(4)Mount the cable clamp (UL-13) on the position of the rear side of the video printer shown in the figure, and fix the signal cable. (Ⓓ in Fig.)

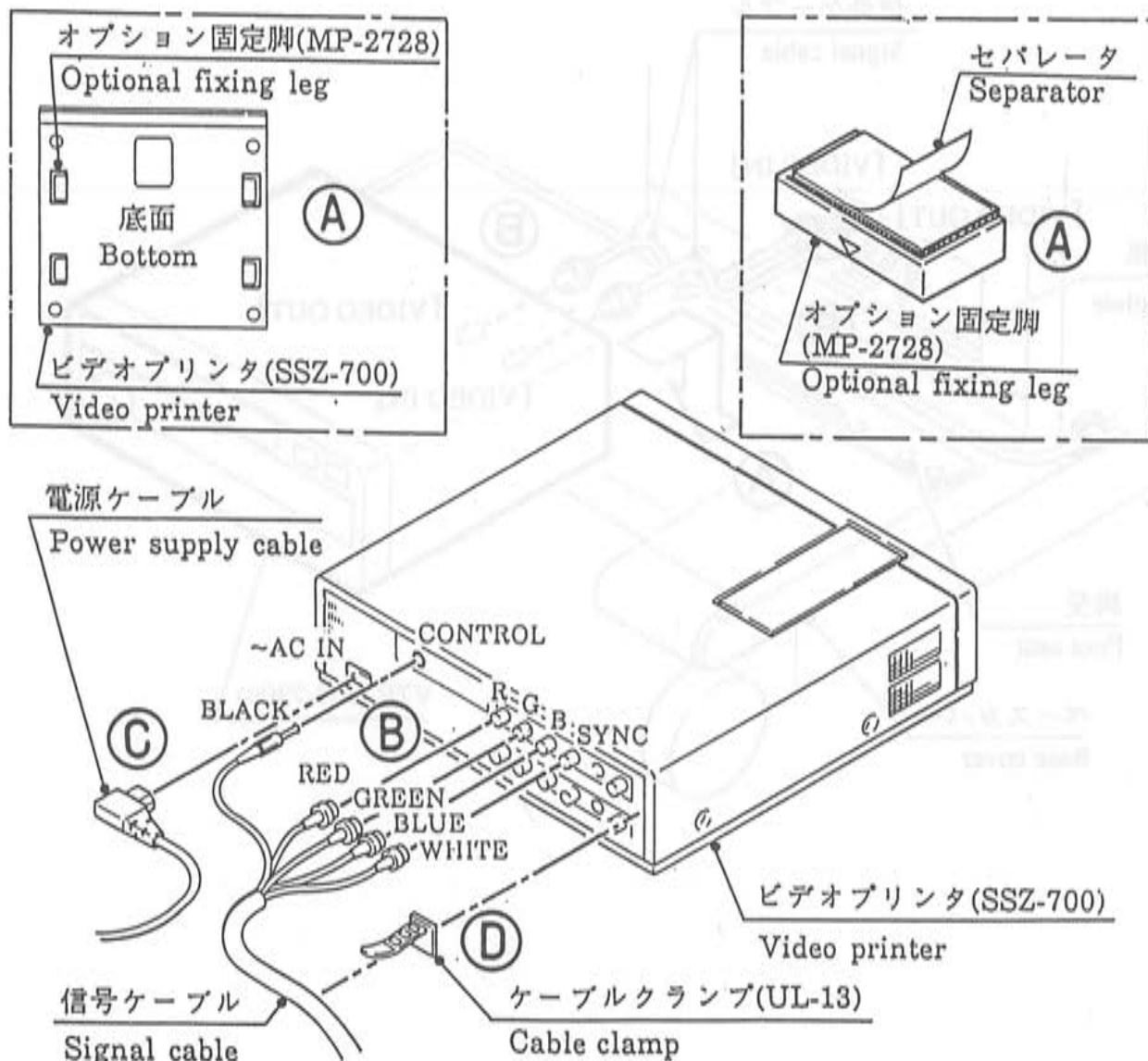


図17 Fig. 17

○天板上に据付の場合

(5) オプション固定脚のセパレータを、はがし、ビデオプリンタを、本体天板上に固定する。  
(図中Ⓐ)

(6) 信号ケーブルを、本体前面の接栓板「RGB OUT」に接続する。(図中Ⓑ)

(7) アイソレーショントランス(PTU-004)のフタを、ねじ、ワッシャ各2個を、外して取り外し、電源ケーブルを、接続する。(図中Ⓒ)

※アイソレーショントランスが搭載されていない場合は、外部ACラインに接続する。

(8) ケーブルクランプ(UL-13)3個を、本体の図の位置に取付け、信号ケーブルと電源ケーブルを、固定する。(図中Ⓓ)

○In case of installation on the upper plate

(5) Peel the separator of the optional fixing leg, and fix the video printer on the upper plate of the body. (A in Fig.)

(6) Connect the signal cable to 「RGB OUT」 of the plug plate on the front of the body. (B in Fig.)

(7) Take out 2 screws and 2 washers and remove the lid of the isolation transformer (PTU-004) and connect the power supply cable. (C in Fig.)

※ When the isolation transformer is not mounted, connect it to the external AC line.

(8) Mount 3 cable clamps (UL-13) on the position of the body shown in the figure, and fix the signal cable and the power supply cable. (D in Fig.)

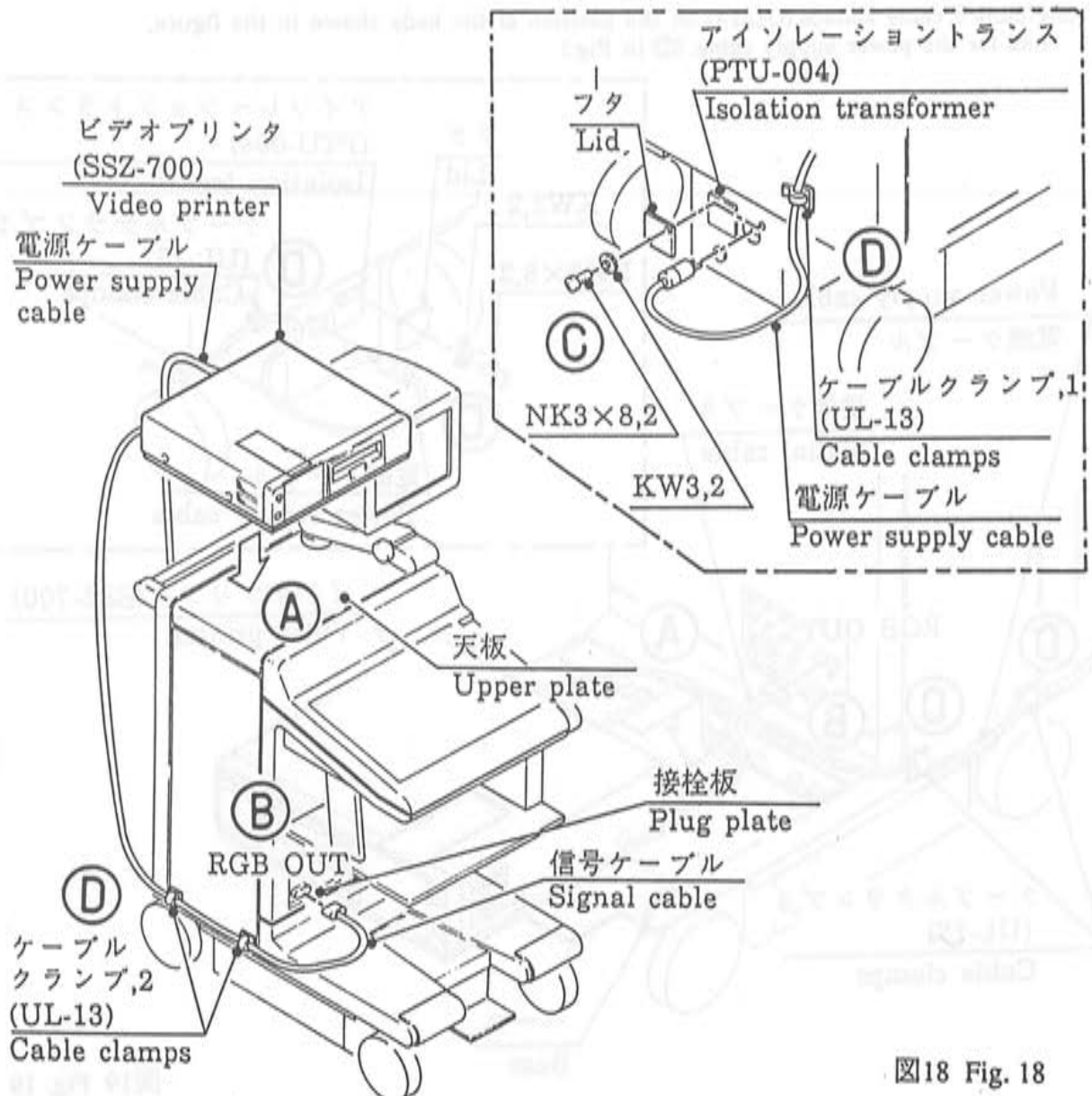


図18 Fig. 18

○ベース上に据付の場合

- (5) オプション固定脚のセパレータを、はがし、ビデオプリンタを、本体ベース上に固定する。(図中Ⓐ)
- (6) 信号ケーブルを、本体前面の接栓板「RGB OUT」に接続する。(図中Ⓑ)
- (7) アイソレーショントランス(PTU-004)のフタを、ねじ、ワッシャ各2個を外して取り外し、電源ケーブルを、接続する。(図中Ⓒ)  
※アイソレーショントランスが搭載されていない場合は、外部ACラインに接続する。
- (8) ケーブルクランプ(UL-13)3個を、本体の図の位置に取付け、電源ケーブルを、固定する。(図中Ⓓ)

○In case of installation on the base

- (5) Peel the separator of the optional fixing leg, and fix the video printer on the base of the body. (Ⓐ in Fig.)
- (6) Connect the signal cable to 「RGB OUT」 of the plug plate on the front of the body. (Ⓑ in Fig.)
- (7) Take out 2 screws and 2 washers and remove the lid of the isolation transformer (PTU-004) and connect the power supply cable. (Ⓒ in Fig.)  
※ When the isolation transformer is not mounted, connect it to the external AC line.
- (8) Mount 3 cable clamps (UL-13) on the position of the body shown in the figure, and fix the power supply cable. (Ⓓ in Fig.)

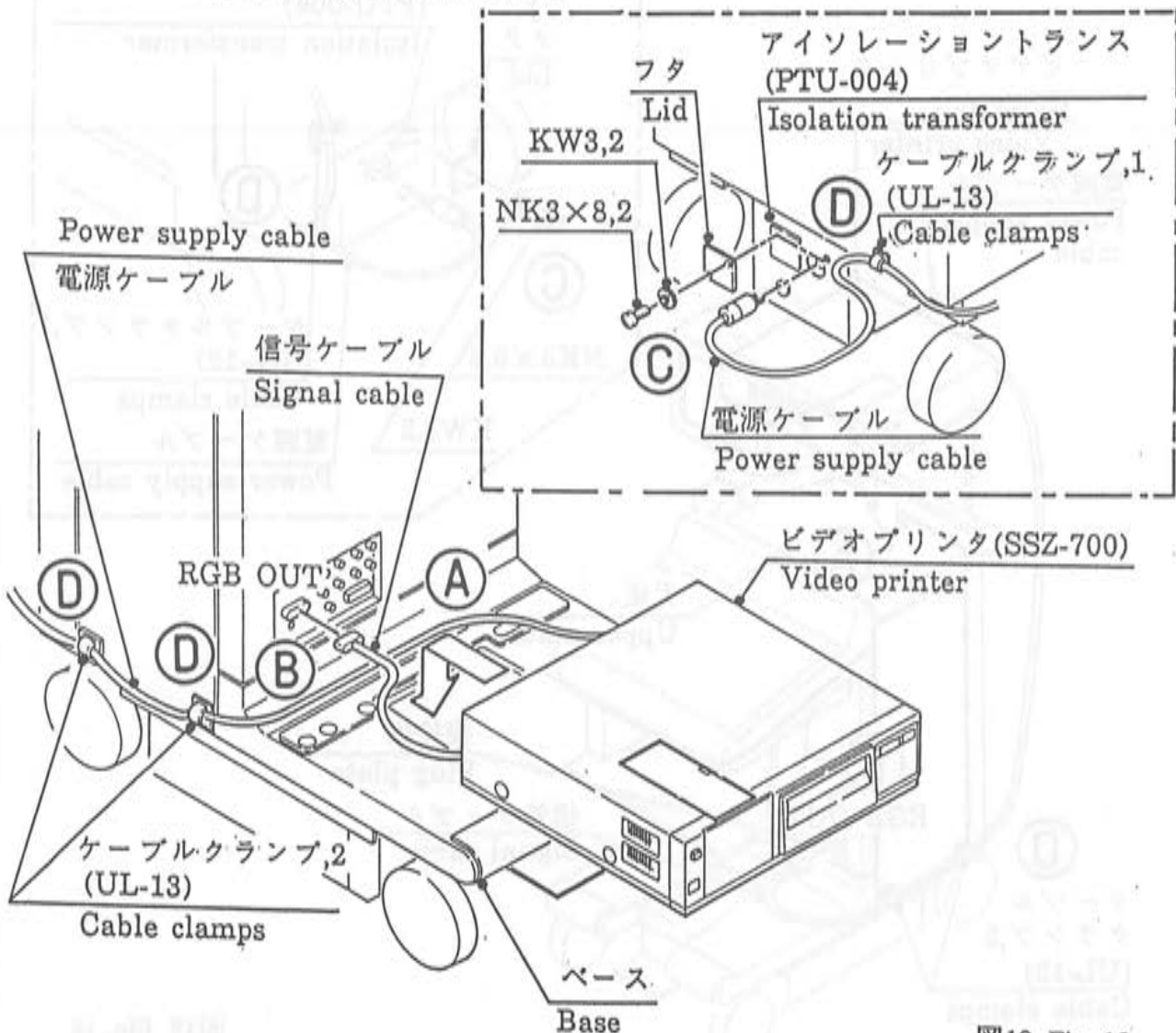


図19 Fig. 19

○VTR (AG-7300)上に据付の場合

(5)オプション固定脚のセパレータを、はがし、ビデオプリンタを、VTRの上に固定する。  
(図中Ⓐ)

(6)信号ケーブルを、本体前面の接栓板「RGB OUT」に接続する。(図中Ⓑ)

○In case of installation on the VTR (AG-7300)

(5)Peel the separator of the optional fixing leg, and fix the video printer on the VTR  
of the body. (Ⓐ in Fig.)

(6)Connect the signal cable to 「RGB OUT」 of the plug plate on the front of the body.  
(Ⓑ in Fig.)

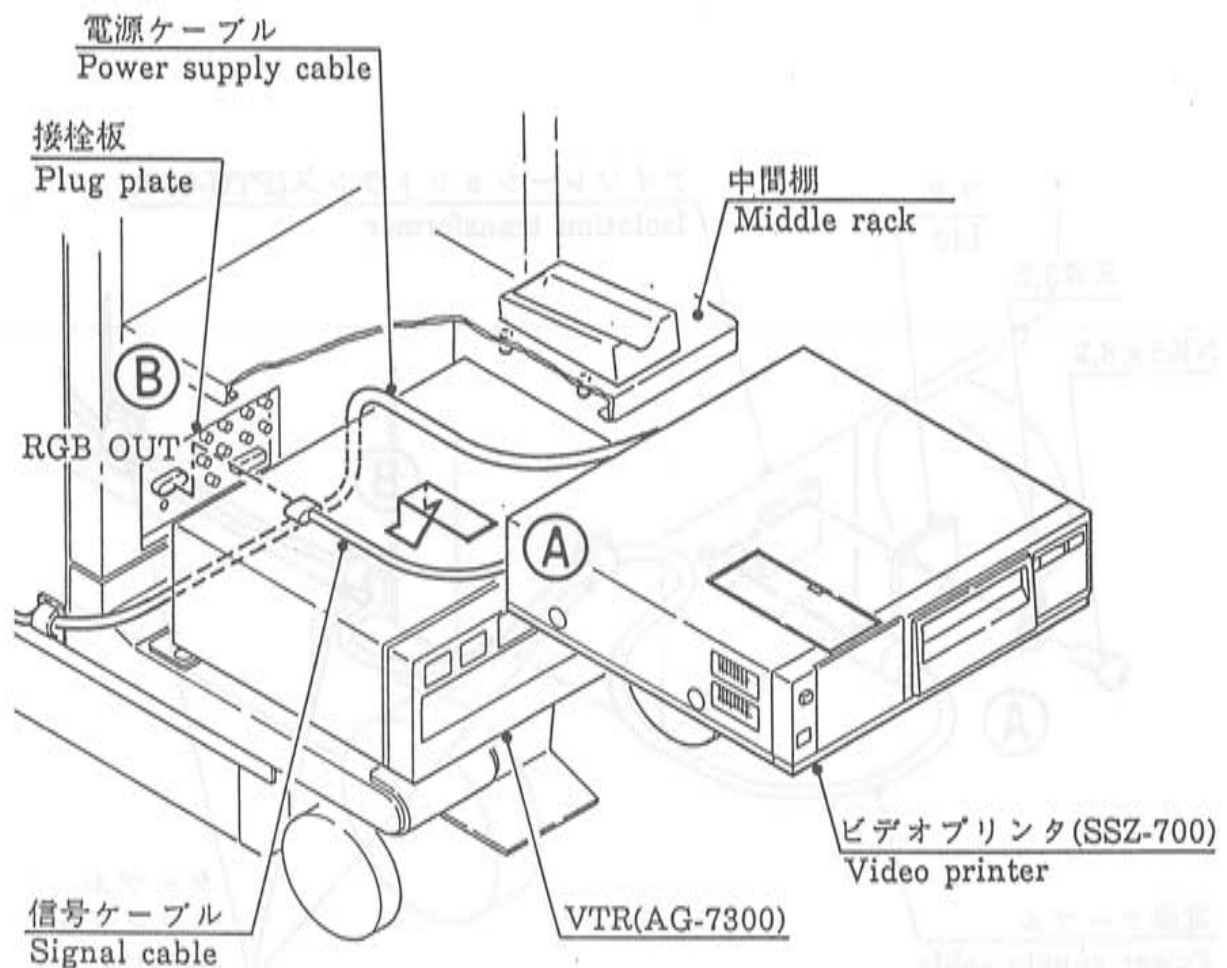


図20 Fig. 20

- (7)アイソレーショントランス(PTU-004)のフタを、ねじ、ワッシャ各2個を外して取り外し、電源ケーブルを、接続する。(図中Ⓐ)  
 ※アイソレーショントランスが搭載されていない場合は、外部ACラインに接続する。
- (8)ケーブルクランプ(UL-13)3個を、本体の図の位置に取付け、電源ケーブルを、固定する。(図中Ⓑ)
- (7)Take out 2 screws and 2 washers and remove the lid of the isolation transformer (PTU-004) and connect the power supply cable. (Ⓐ in Fig.)  
 ※When the isolation transformer is not mounted, connect it to the external AC line.
- (8)Mount 3 cable clamps (UL-13) on the position of the body shown in the figure, and fix the power supply cable. (Ⓑ in Fig.)

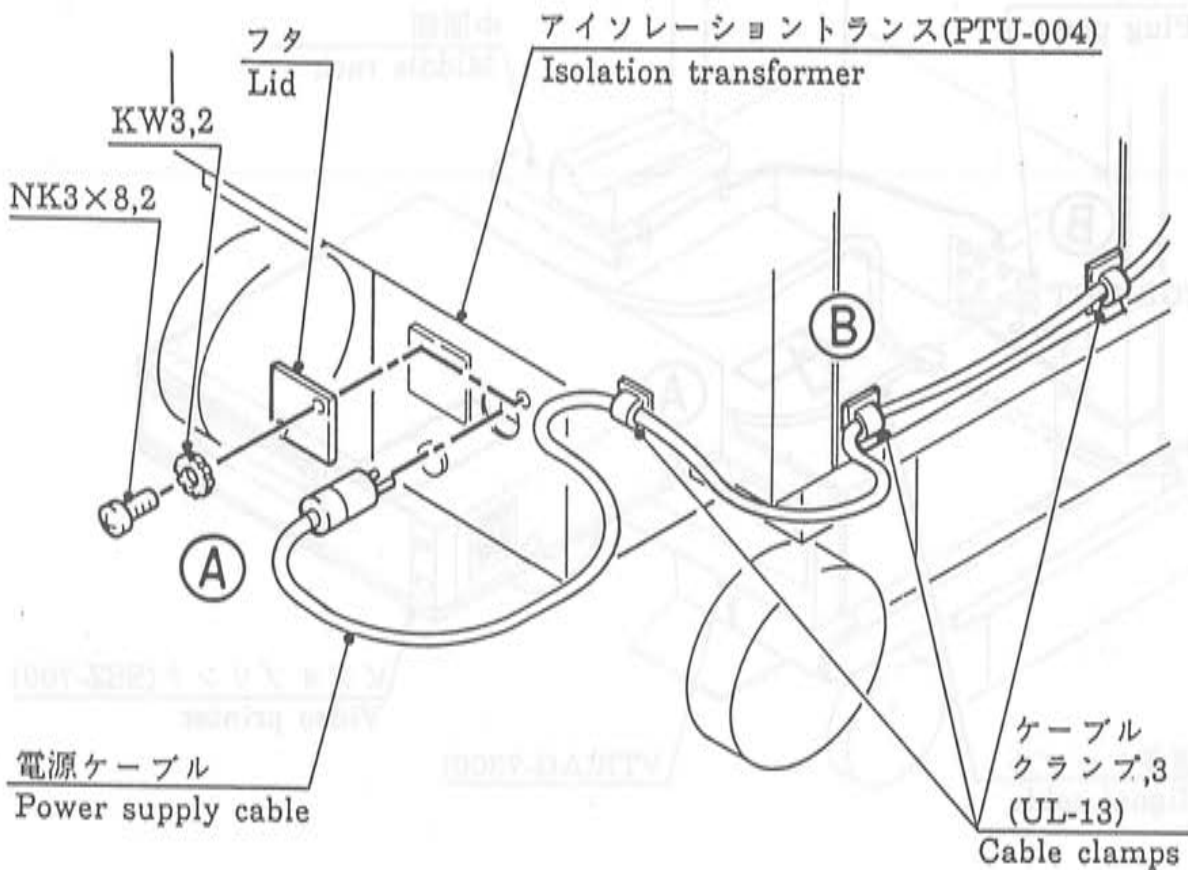


図21 Fig. 21

必要な工具：M4プラスドライバー（組立先で用意すること）、M4六角レンチ（付属品）

注意：危険防止のため、モニタを据え付け終わるまでノブを緩めないこと。  
（バネが強く、いきなりモニタアームがはねあがるため。）

### 1. モニタの据付方法

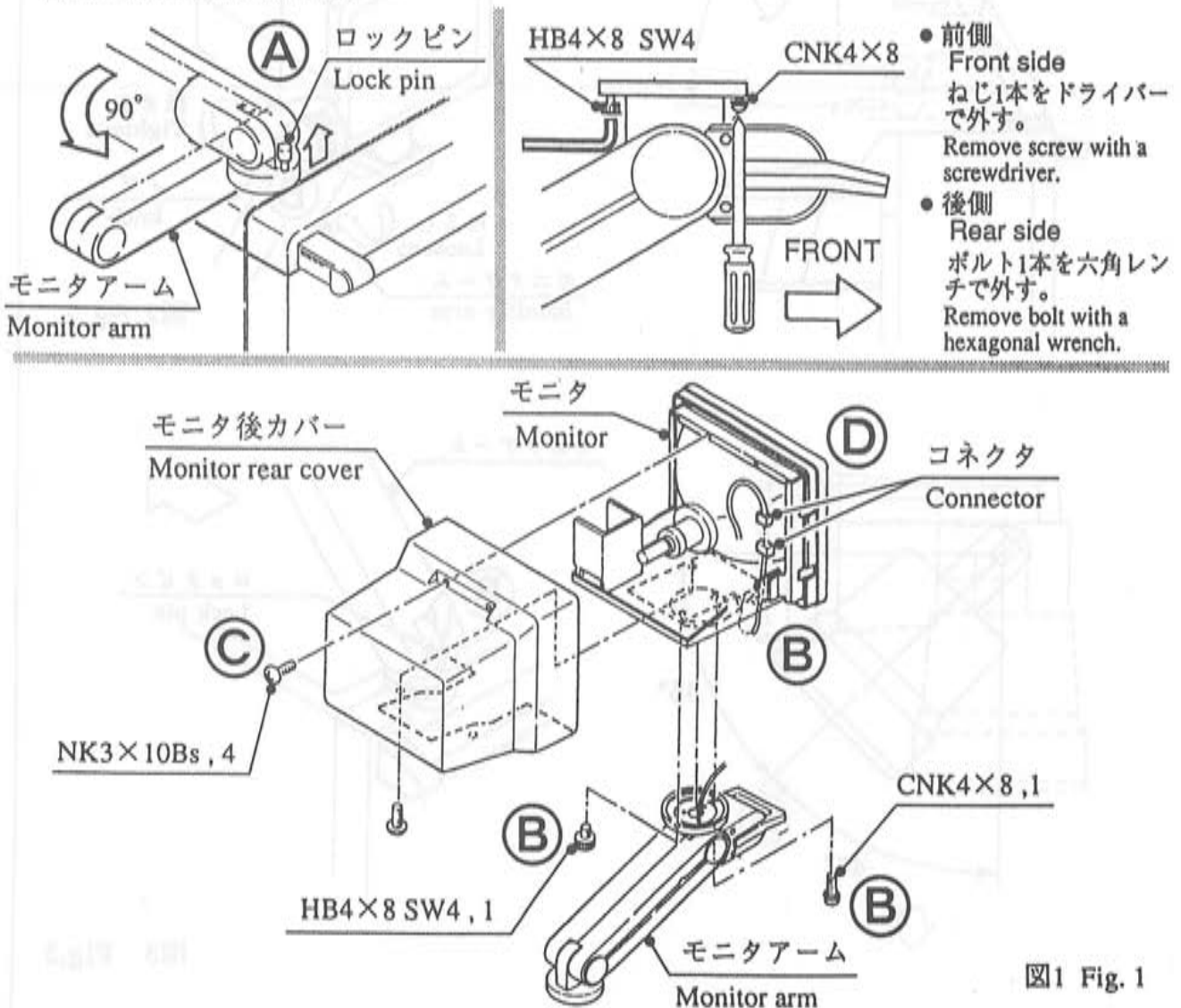
- (1) ロックピンを、上に引き上げ、モニタアームを、本体に対し90°の位置にする。(図中Ⓐ)
- (2) モニタアームから出ているコネクタをモニタに押し込み、モニタをねじ2本で取付ける。(図中Ⓑ)
- (3) モニタ後カバーをねじ4本を外して取り外す。(図中Ⓒ)
- (4) モニタ内部のコネクタにモニタアームのコネクタを接続する。(図中Ⓓ)
- (5) モニタ後カバーを取付ける。

Tool required: M4 philips head screwdriver (To be arranged by assembly plant.), M4 hexagonal wrench (Accessory)

Note: For safety, do not loosen the knob until you will have completely installed the monitor.  
(The monitor arm will be jumped up suddenly due to its strong spring.)

### 1. Installing monitor

- (1) Pull up the lock pin and place the monitor arm at 90° to the body member. (Ⓐ in Fig.)
- (2) Push the connector, extending from the monitor arm, into the monitor, and fix the monitor in place with 2 screws. (Ⓑ in Fig.)
- (3) Remove the monitor rear cover after removing 4 screws. (Ⓒ in Fig.)
- (4) Connect the monitor arm connector to the connector inside the monitor. (Ⓓ in Fig.)
- (5) Install the monitor rear cover.



## 2. モニタアームの動作方法

- (1) モニタアームの上下の可動範囲は、 $0^{\circ}$ ~ $60^{\circ}$ の範囲。(図2 ㉔)
- (2) モニタの上下移動はノブをゆるめて行い、適正位置でノブを締めて固定する。(図2 ㉕)
- (3) モニタアームの左右の可動範囲は、左に $45^{\circ}$ 右に $45^{\circ}$ の範囲。(図3 ㉔)
- (4) モニタの左右移動は、モニタアームのロックピンを上を引き上げて行う。(図3 ㉕)

## 2. Monitor arm maneuvering procedure

- (1) The monitor arm swings vertically over a  $0^{\circ}$  to  $60^{\circ}$  range. (㉔ in Fig. 2)
- (2) To shift the monitor vertically, first loosen the arm knob, and after duly positioning the monitor, tighten the knob to fasten the monitor down. (㉕ in Fig. 2)
- (3) The monitor arm swings horizontally over a range from  $45^{\circ}$  to the right to  $45^{\circ}$  to the left. (㉔ in Fig. 3)
- (4) To reorient the monitor horizontally, first lift the monitor arm lock pin. (㉕ in Fig. 3)

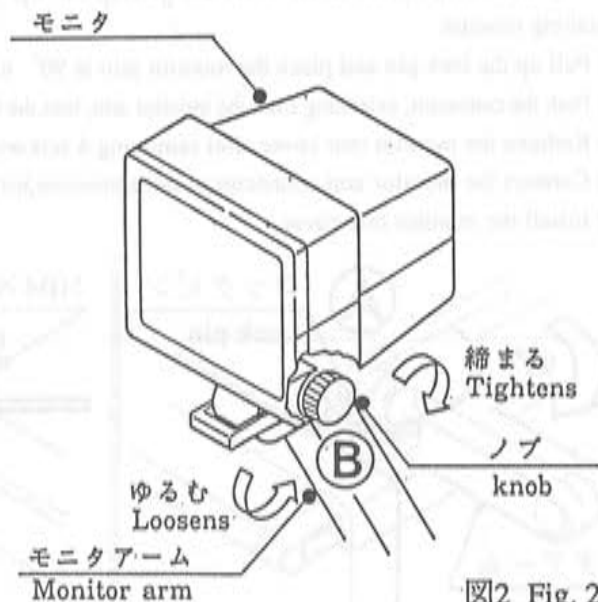
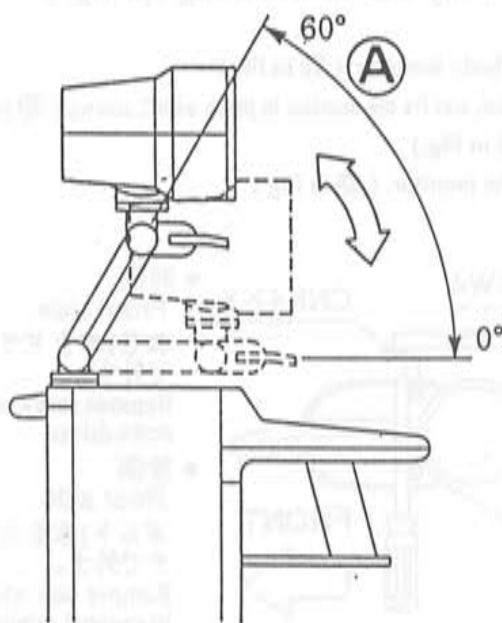


図2 Fig. 2:

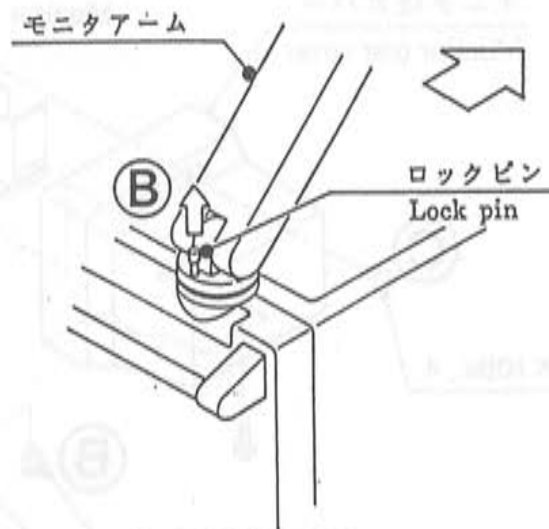
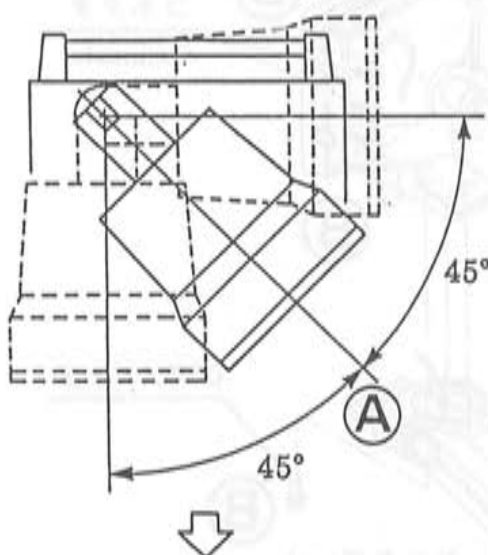


図3 Fig.3



### 3. プローブ、及び、ケーブルハンガの取付方法

- (1) ケーブルハンガを、本体に差し込む。(図中Ⓐ)
- (2) コネクタを接続し、プローブをプローブホルダへ入れる。(図中Ⓑ)
- (3) ゼリーボトルを、ゼリーホルダに置く。(図中Ⓒ)

### 3. Probe and cable hanger mounting procedure

- (1) Insert the cable hanger in the main unit. (Ⓐ in Fig.)
- (2) Mate the connector, stow probe holder. (Ⓑ in Fig.)
- (3) Position a gel bottle on the gel holder. (Ⓒ in Fig.)

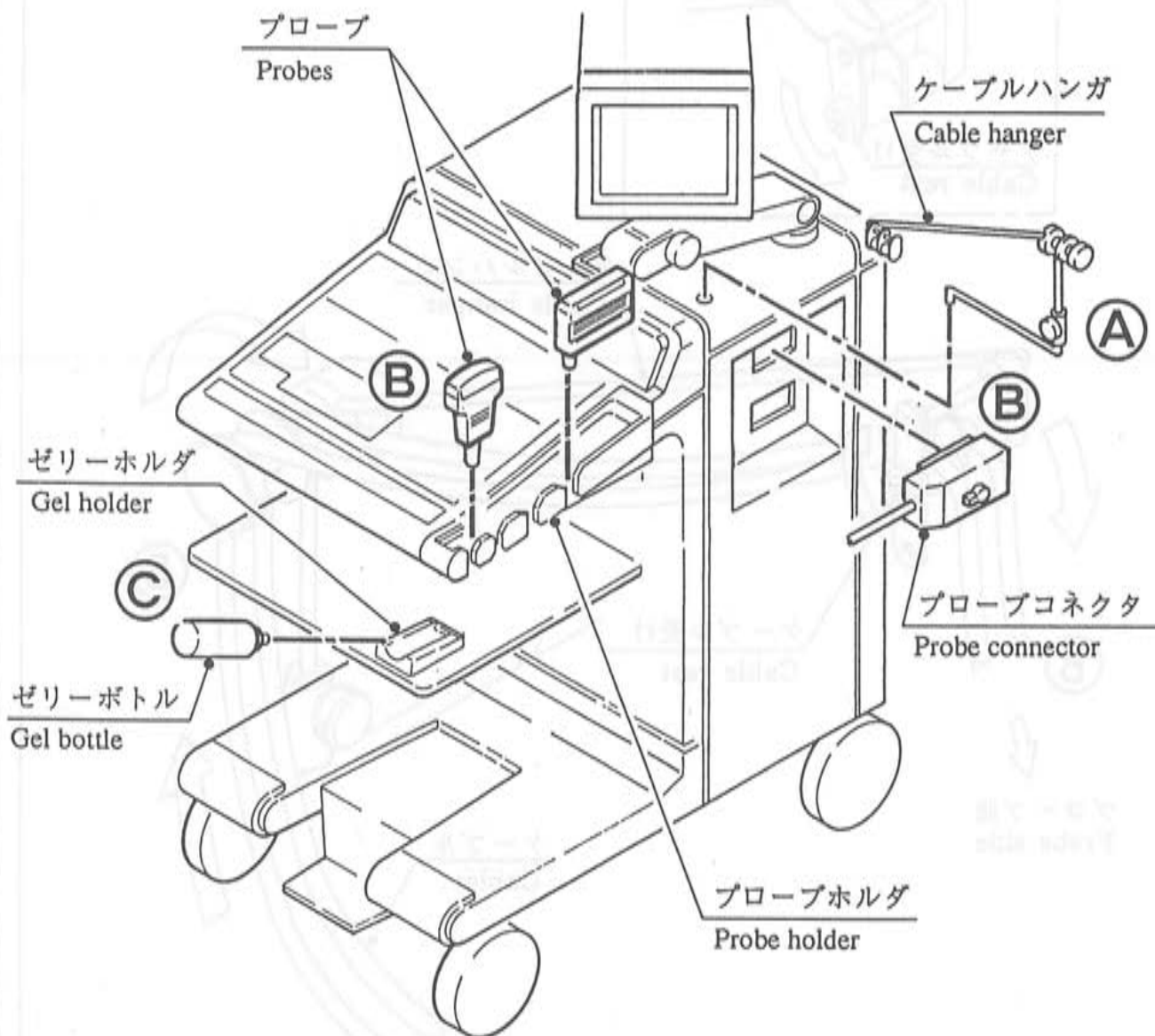


図4 Fig. 4

(3)ケーブル受の外側の部分を、下図の様に下に向ける。(図中㊸)

(4)プローブのケーブルを、下図の様に引き回す。(図中㊹)

(3)Orient the cable rest to have its outer end point downward as illustrated below. (㊸ in Fig.)

(4)Pass probe cables over the cable rest and elbow as illustrated below. (㊹ in Fig.)

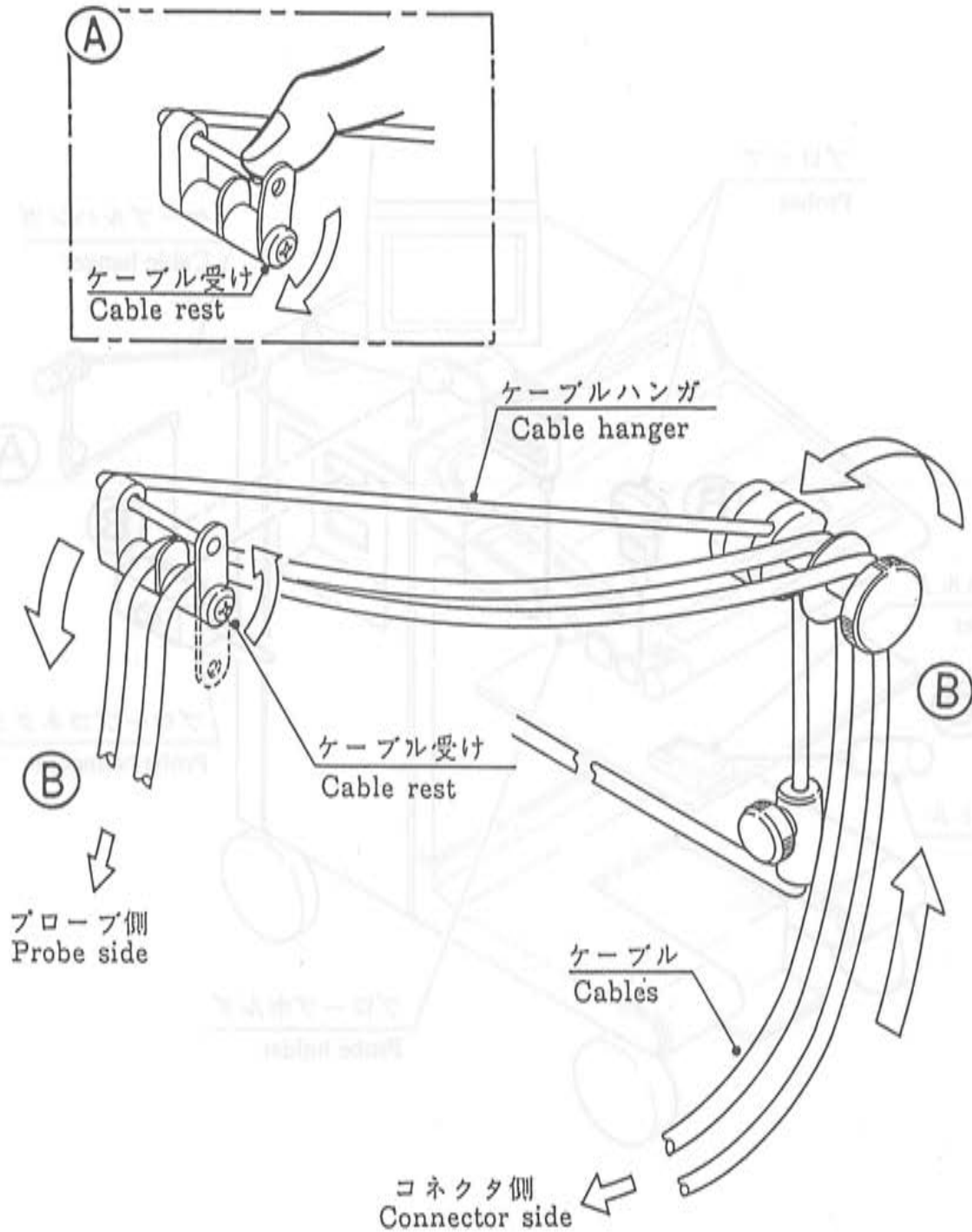


図5 Fig. 5

#### 4. オプション機器の据付方法

##### ● 撮影装置(SSZ-600)

- (1) 中間カバーをねじ2本を外して取り外す。(図中Ⓐ)
  - (2) 中間カバーの裏側に固定されているカメラ信号ケーブル・信号ケーブル・SSZ-600用電源ケーブルを、クランプより外して取り外す。(図中Ⓑ)
  - (3) 撮影装置背面から出ている電源ケーブルを、本体から出ているSSZ-600用電源ケーブルに接続する。(図中Ⓒ)
  - (4) カメラ信号ケーブルと電源ケーブルを、中間カバーの切り欠きに通して、中間カバーを、(1)と逆の手順で取り付ける。(図中Ⓓ)
- ※電源ケーブルのコネクタは本体内部に押し込んでおく。

#### 4. Optional equipment installing procedure

##### ● Photographic equipment (SSZ-600)

- (1) Remove the intermediate cover by removing the 2 screws. (Ⓐ in Fig.)
  - (2) Pull out the camera signal cable, signal cable and power supply cable for SSZ-600 from clamp on the rear side of the intermediate cover. (Ⓑ in Fig.)
  - (3) Connect the power supply cable extending from the back of photographic equipment with the power supply cable for SSZ-600 of the main unit. (Ⓒ in Fig.)
  - (4) Feed the camera signal cable and the power supply cable for SSZ-600 through the notch along the edge of the intermediate cover and fix the intermediate cover using the reverse procedure of (1). (Ⓓ in Fig.)
- ※ Push the connector of power supply cable into the inner of the main unit.

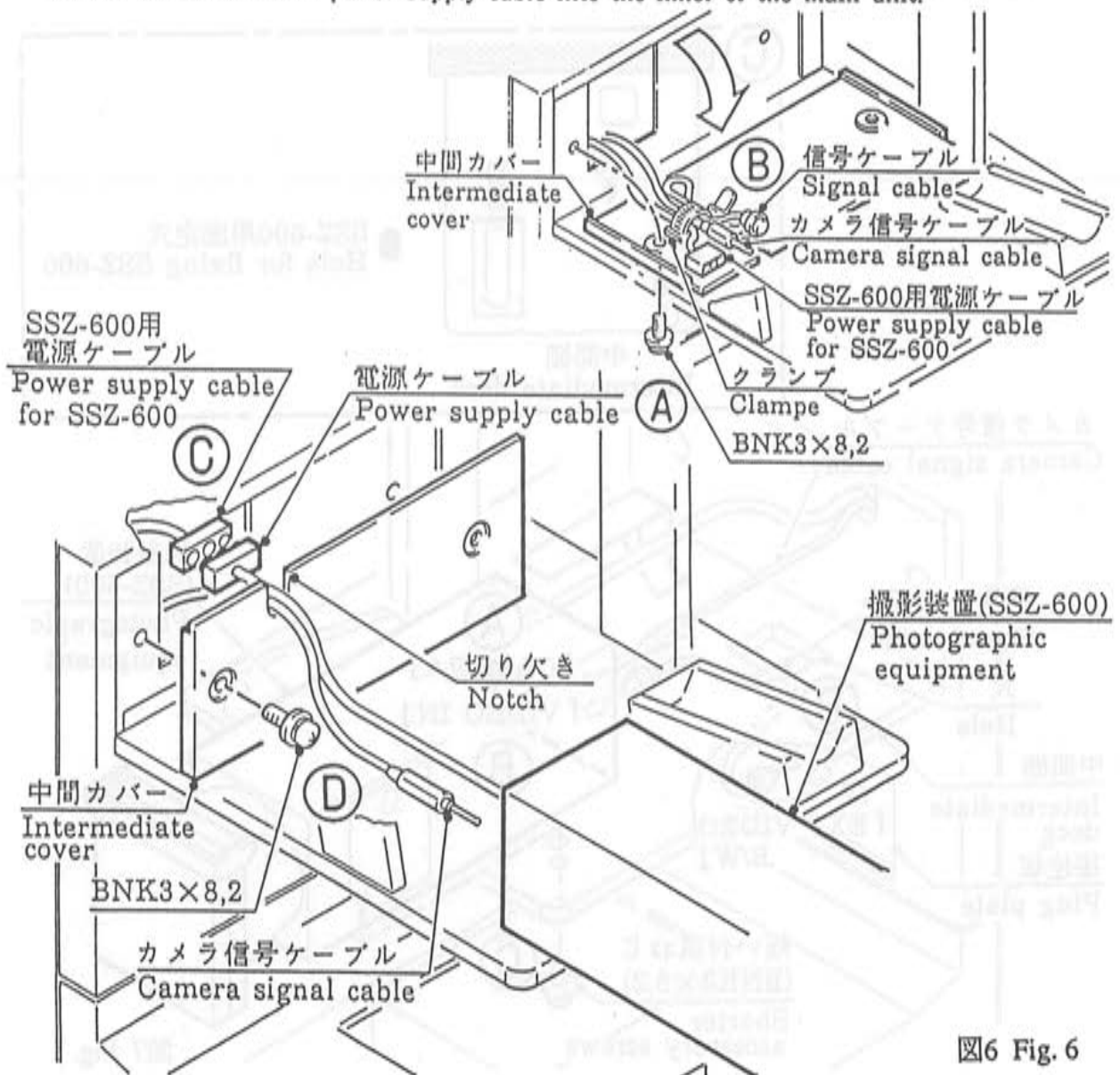


図6 Fig. 6

- (5)カメラ信号ケーブルを、撮影装置背面の「CAMERA」に接続する。(図中Ⓐ)
- (6)信号ケーブルの一方を、撮影装置背面の「VIDEO IN」に接続し、もう一方を、中間棚の穴を通し本体前面の接栓板「EXT VIDEO B/W」に接続する。(図中Ⓑ)
- (7)撮影装置を、付属ねじの短い方(BNK3×8)2本で図の位置に据付け固定する。(図中Ⓒ)

注:付属ねじはプリンタ用(BNK3×16)、撮影装置用(BNK3×8)で長さが異なる。

- (5)Connect the camera signal cable to 「CAMERA」 on the back side of photographic equipment. (Ⓐ in Fig.)
- (6)Connect the connector of signal cable to the 「VIDEO IN」 on the back side of photographic equipment and other side through the hole intermediate deck and connect 「EXT VIDEO B/W」 to connection plug plate on the front face of the main unit. (Ⓑ in Fig.)
- (7)Fix the photographic equipment in the figure with 2 shorter accessory screws (BNK3×8).

Note: Length of accessory screws for the printer (BNK3×16), and the photography unit (BNK3×8) differs from each other.

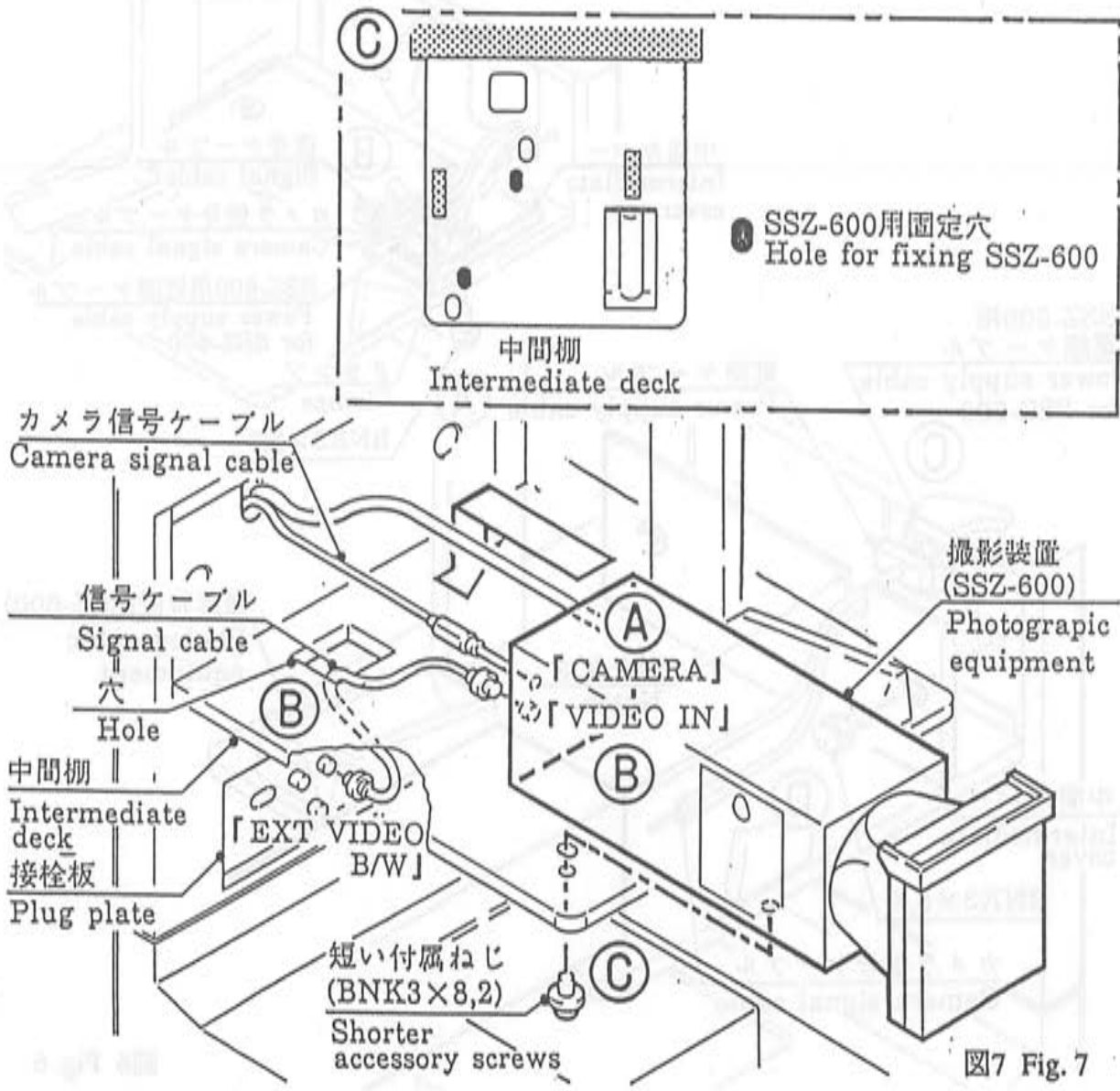


図7 Fig. 7

● プリンタ (SSZ-303), カラー撮影装置 (SSZ-203), VTR (SVO-9500, AG-7300)

※ VTR (SVO-9500) を中間棚に据付ける場合, プリンタ (SSZ-303), VTR (AG-7300) ・ ・ (2) の作業を行なうこと。  
 VTR (SVO-9500) を天板に据付ける場合 ・ ・ ・ ・ ・ (2)' の作業を行なうこと。

- (1) アイソレーショントランス (PTU-004) のふたを、ねじ、ワッシャ各2個を外して取り外し、電源ケーブルを接続する。(図中 ㉠)
- ※ アイソレーショントランスが搭載されていない場合は、外部ACラインに接続する。
- (2) ケーブルクランプ (UL-13) 3個を、本体の図の位置に取付け、電源ケーブルを固定する。(図中 ㉡)
- (2)' ケーブルクランプ (UL-13) 1個を、本体の図の位置に取付け、電源ケーブルを固定する。(図中 ㉢)

● Printer (SSZ-303), Color Photographic Equipment (SSZ-203), VTR (SVO-9500, AG-7300)

※ Printer (SSZ-303), In case of the installation of VTR on the intermediate deck VTR (SVO-9500), VTR (AG-7300) ・ ・ Step (2) required.

In case of the installation of VTR on the upper plate VTR (SVO-9500) ・ ・ ・ ・ ・ Step (2)' required.

- (1) Take out 2 screws and 2 washers and remove the lid of the isolation transformer (PTU-004) and connect the power supply cable. (㉠ in Fig.)
- ※ When the isoration transformer is not mounted, connect it to the external AC line.
- (2) Mount 3 cable clamps (UL-13) on the position of the body shown in the figure, and fix the power supply cable. (㉡ in Fig.)
- (2)' Mount 1 cable clamp (UL-13) on the position of the body shown in the figure, and fix the power supply cable. (㉢ in Fig.)

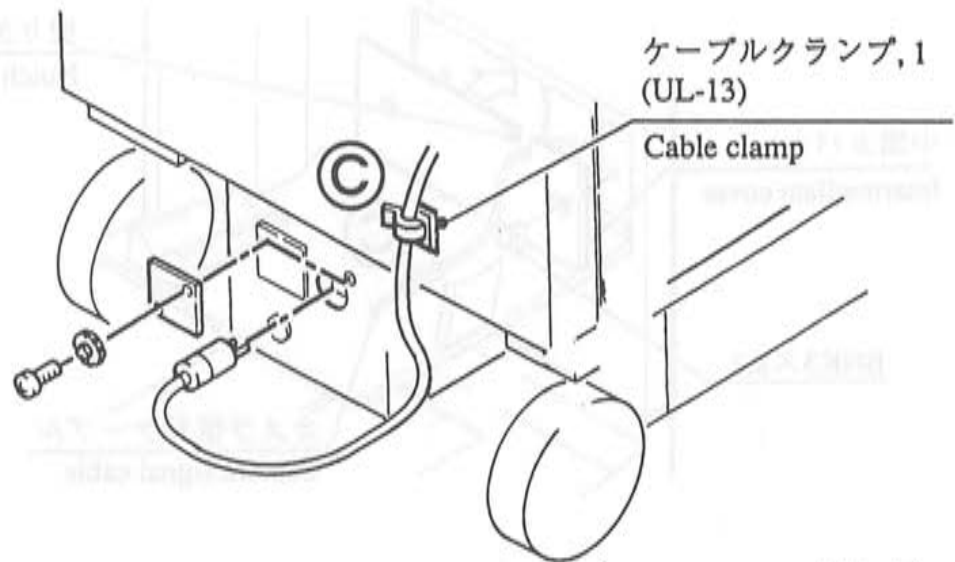
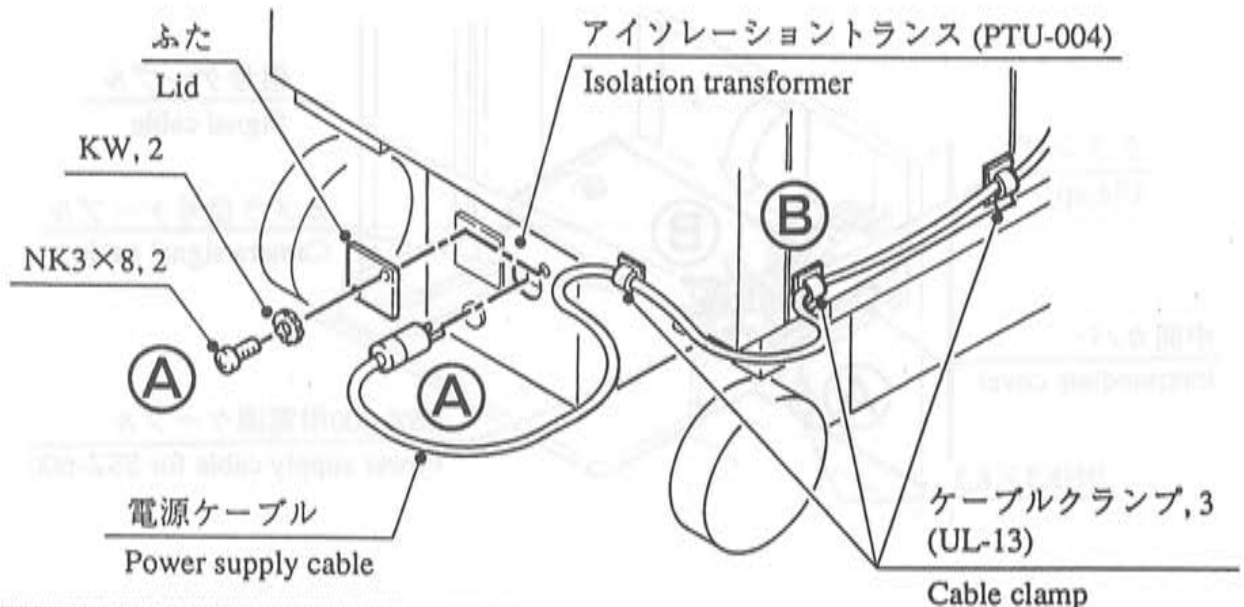


図8 Fig. 8

○ プリンタ(SSZ-303)

(3) 中間カバーを、ねじ2本を外して取り外す。(図中 ㉑)

(4) 中間カバーの裏側に固定されているカメラ信号ケーブルと信号ケーブルを、クランプより外して取り外す。(図中 ㉒)

※SSZ-600用電源ケーブルはクランプに固定しておく。

(5) カメラ信号ケーブルを、中間カバーの切り欠きに通して、中間カバーを、(3)と逆の手順で取り付ける。(図中 ㉓)

○ Printer (SSZ-303)

(3) Remove the intermediate cover by removing the 2 screws. (㉑ in Fig.)

(4) Take out the camera signal cable and the signal cable which are clamped onto the rear side of the intermediate cover. (㉒ in Fig.)

※ Leave the power supply cable for SSZ-600 clamped as it is.

(5) Feed the camera signal cable through the notch along the edge of the intermediate cover and fix the intermediate cover using the reverse procedure of (3). (㉓ in Fig.)

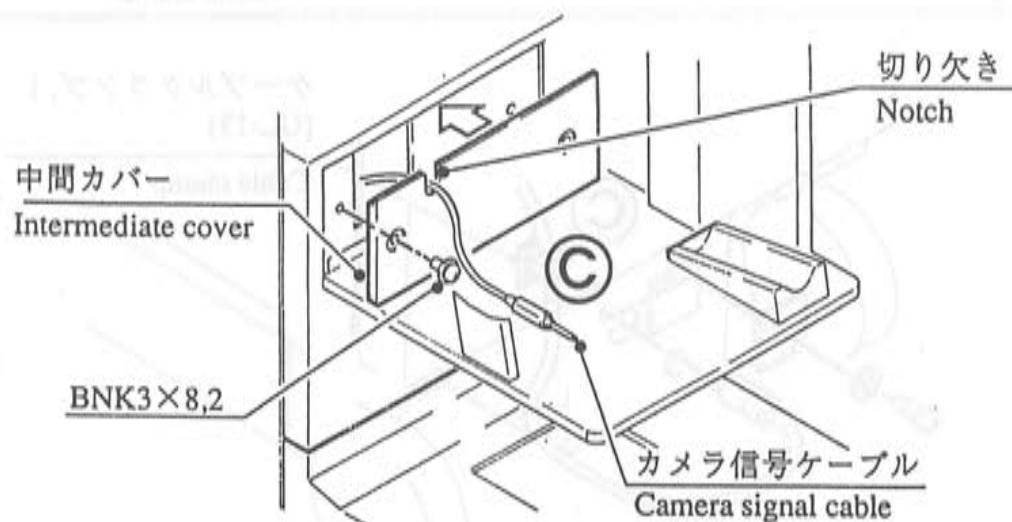
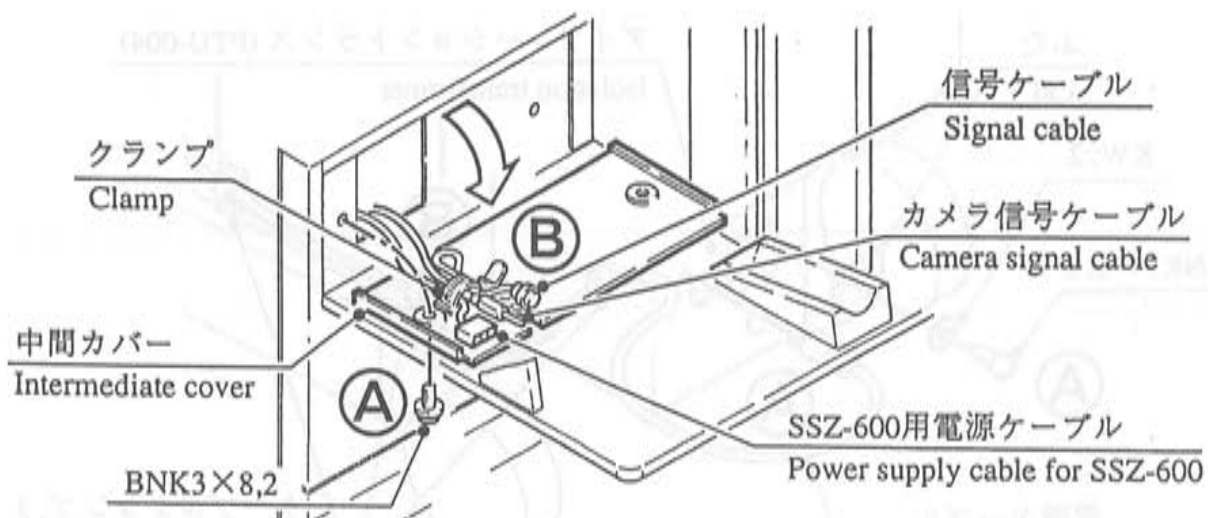


図9 Fig. 9

- (6) デュアルロックファスナー (目の荒い方)を、中間棚に、図の様に張り付ける。(図中㉔)
- (7) デュアルロックファスナー (目の細かい方)を、プリンタの底面の出っ張りに、図の様に張り付ける。(図中㉕)
- (8) カメラ信号ケーブルを、プリンタ背面の「REMOTE」に接続し、SSZ-303用電源ケーブルを、中間棚の穴を通し、「AC IN」に接続する。(図中㉖)
- (9) 信号ケーブルの一方を、プリンタ背面の「VIDEO IN」に接続し、もう一方を、中間棚の穴を通し本体前面の接栓板「EXT VIDEO B/W」に接続する。(図中㉗)
- (10) プリンタを、中間棚に乗せる。(図中㉘)

- (6) Glue dual lock fastener (Rougher one) on the intermediate deck as shown in the figure in alignment. (㉔ in Fig.)
- (7) Glue dual lock fastener (Finer one) on the extruded square on printer as shown in the figure. (㉕ in Fig.)
- (8) Connect the camera signal cable with the 「REMOTE」 of the back side of the printer and power supply cable for SSZ-303 through the hole of the intermediate deck and connect with 「AC IN」. (㉖ in Fig.)
- (9) Connect the connector of signal cable to the 「VIDEO IN」 on the back side of printer and other side through the hole of the intermediate deck and connect 「EXT VIDEO B/W」 to connection plug plate on the front face of the main unit. (㉗ in Fig.)
- (10) Place printer on the intermediate deck. (㉘ in Fig.)

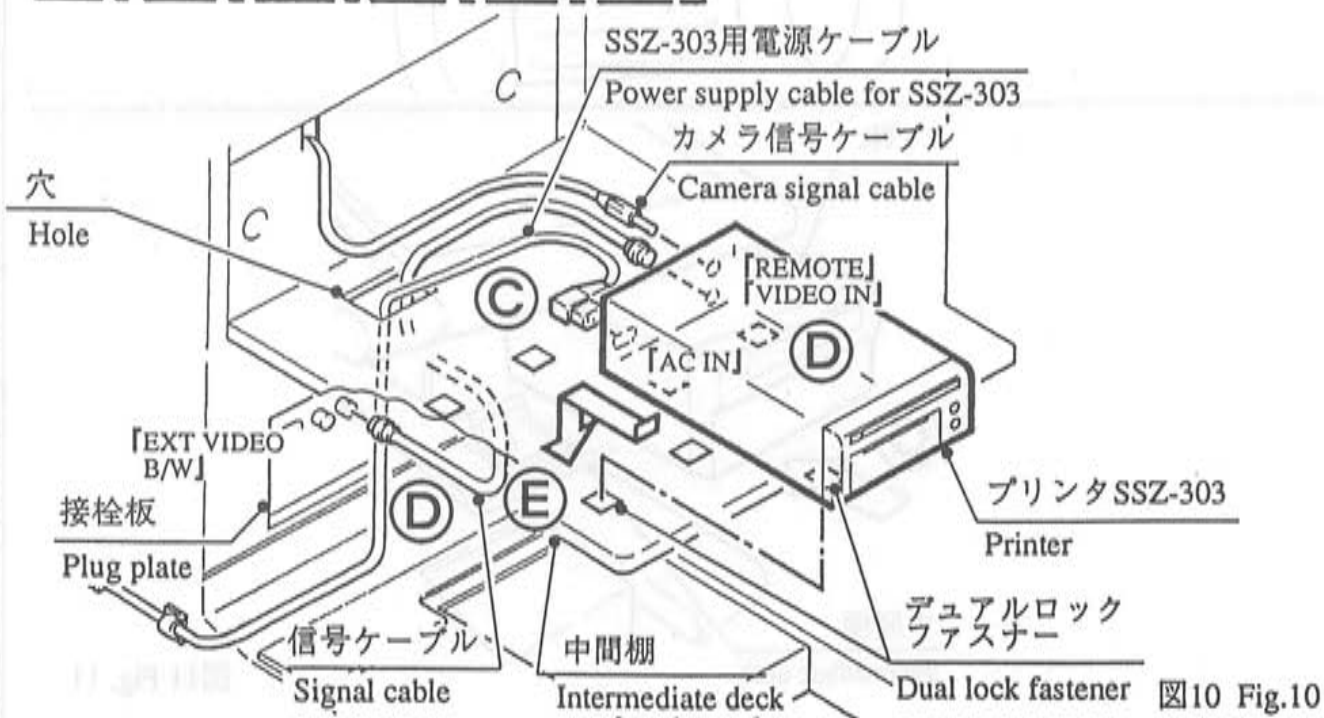
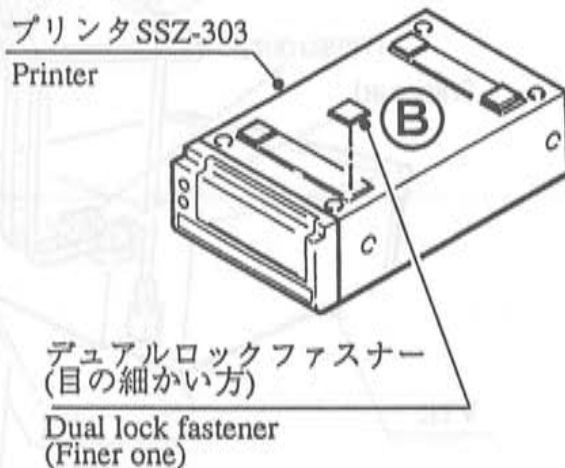
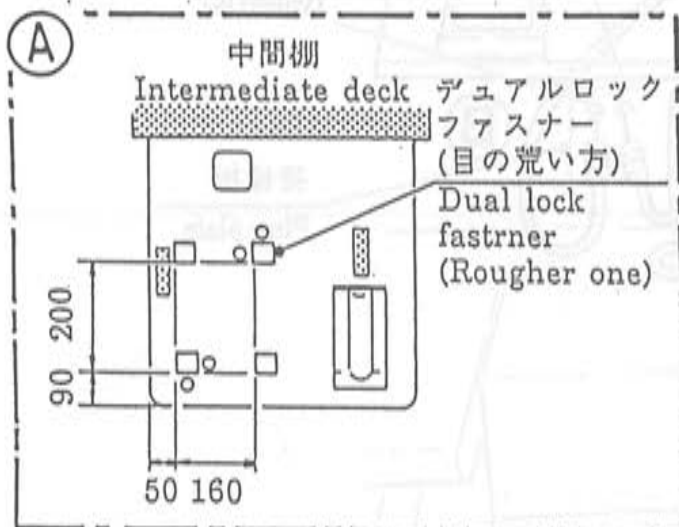


図10 Fig.10

○ VTR (SVO-9500)

1. 中間棚に据付の場合

- (3) 信号ケーブル2本、電源ケーブルを中間棚の穴に通し(図中Ⓐ)、電源ケーブル、信号ケーブル2本を、VTR背面のコネクタにそれぞれ接続する。(図中Ⓑ)
- (4) 信号ケーブル2本を接栓板にそれぞれ接続する。(図中Ⓒ)
- (5) VTRを中間棚にのせる。(図中Ⓓ)

○ VTR (SVO-9500)

1. In case of the installation on the intermediate deck

- (3) Feed the 2 signal cables, power supply cable through the hole of the intermediate deck (Ⓐ in Fig.), connect the power supply cable and 2 signal cables to the connector on the back side of the VTR respectively. (Ⓑ in Fig.)
- (4) Connect the 2 signal cables to the plug plate. (Ⓒ in Fig.)
- (5) Put the VTR on the intermediate deck. (Ⓓ in Fig.)

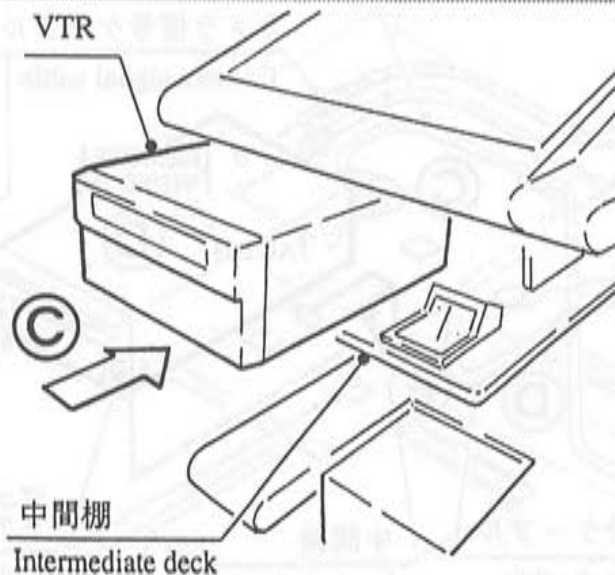
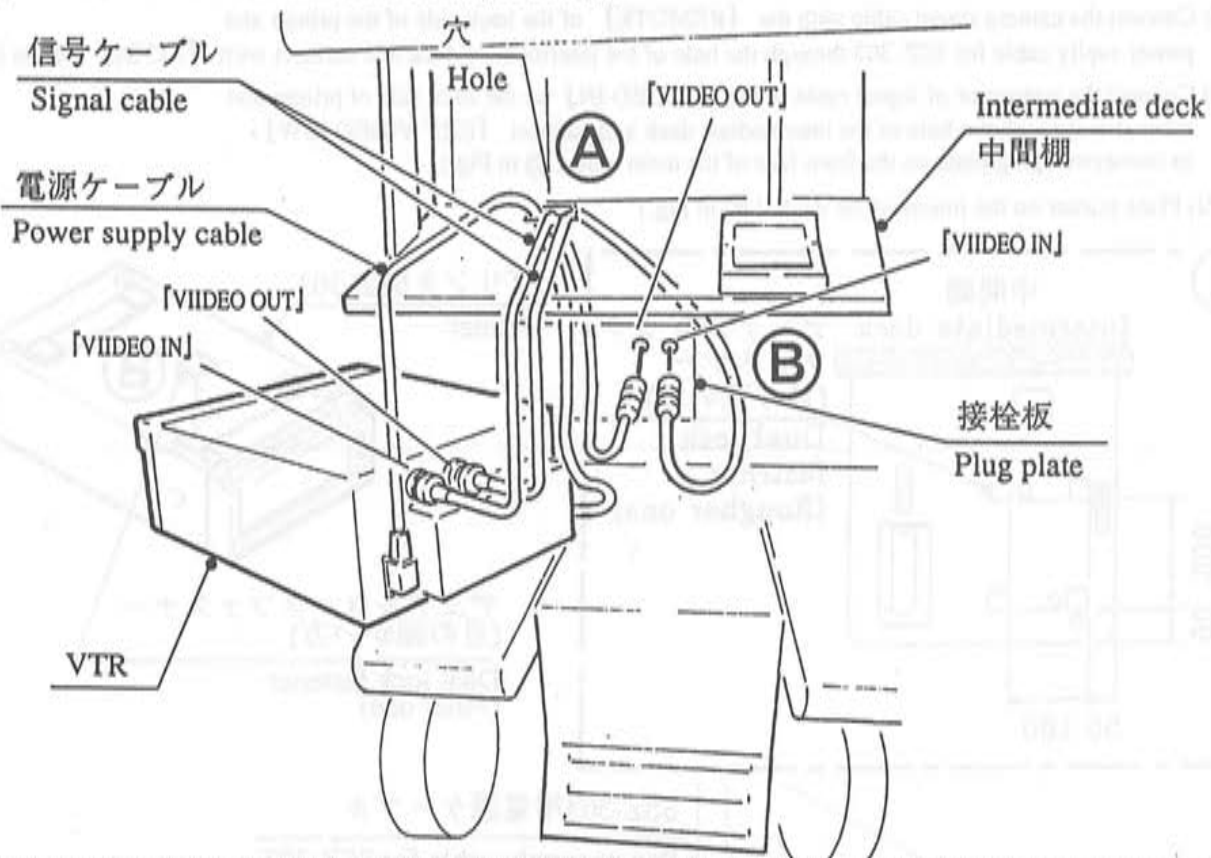


図11 Fig. 11



2. 天板上に据付の場合

(3) VTRを天板上にのせる。(図中 ㉑)

(4) 信号ケーブル2本を接栓板に接続する。(図中 ㉒)

2. In case of the installation on the upper plate

(3) Put the VTR on the upper plate. (㉑ in Fig.)

(4) Connect the 2 signal cables to the plug plate. (㉒ in Fig.)

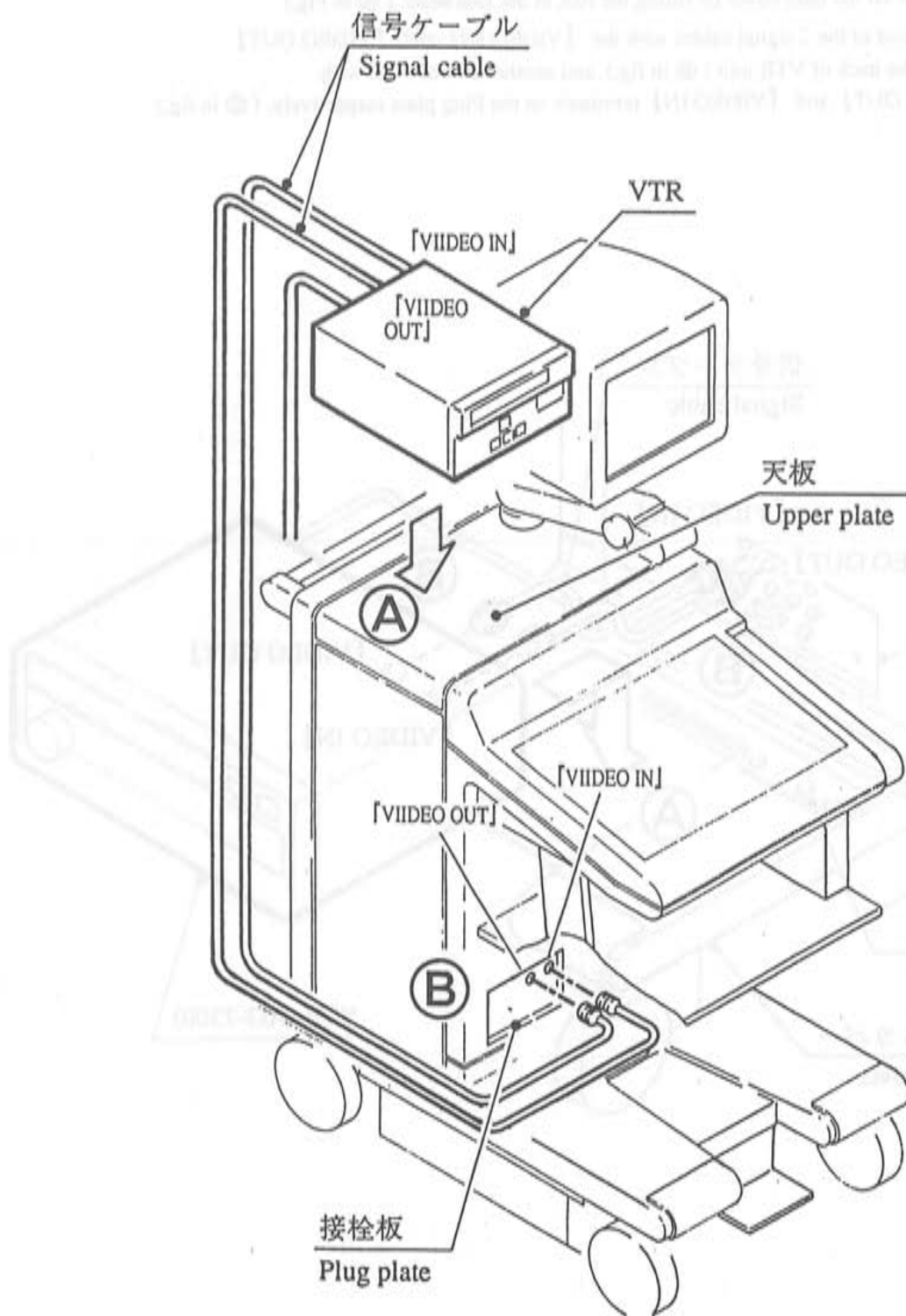


図12 Fig. 12

○ VTR(AG-7300)

(3) VTRの脚を、ベースカバーの脚受に合わせて載せる。(図中Ⓐ)

(4) 信号ケーブルの2本的一方を、VTR背面の「VIDEO IN」と「VIDEO OUT」に接続し(図中Ⓑ)、もう一方を、本体前面にある接栓板の「VIDEO OUT」と「VIDEO IN」にそれぞれ接続する。(図中Ⓒ)

○ VTR(AG-7300)

(3) Place the VTR on the base cover by fitting the foot in the foot seats. (Ⓐ in Fig.)

(4) Connect one end of the 2 signal cables with the 「VIDEO IN」 and 「VIDEO OUT」 terminals on the back of VTR unit (Ⓑ in fig.), and another end of them with the 「VIDEO OUT」 and 「VIDEO IN」 terminals on the Plug plate respectively. (Ⓒ in fig.)

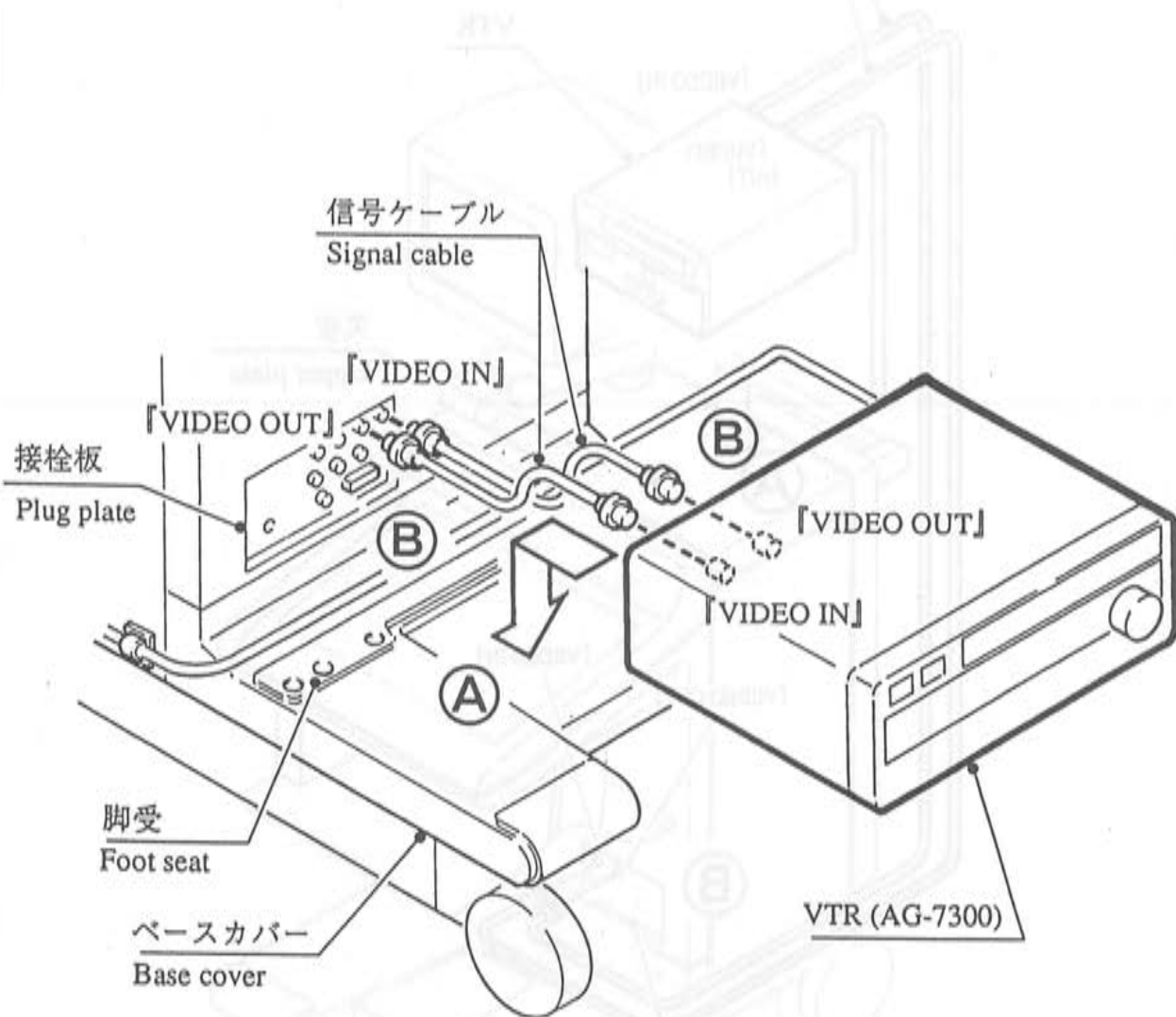


図13 Fig. 13

# UGR-680STD

SSD-680STD 改造キット



改造 据付 仕様書・要領書

整理号 MS5-0361 - 葉番 / /

配布先	名称	SSD-680STD 改造キット		作成	担当	検印	承認
	形名	UGR-680STD		企画課 93年11月19日	企画G 93.11.19 近藤	企画 93.11.19 黒木	114 93.11.19

オーダー	MW-24091 ~	備考
納入先		

本書はSSD-680STDにドブラユニットUGR-680STDを取りつけるための改造要領書である。  
すべてのSSD-680STDに適用される。

改造内容概略

- 1 パネルカバー類の取り外し
- 2 スピーカーの取り付け
- 3 INDEPENDENTプローブコネクタの取り付け
- 4 ドブラユニットDM-5の組み込み
- 5 アース板の取り付け
- 6 ケーブル類の接続

本改造終了後、履歴表示銘板の1番にまるをつけること。

改造時間 約 2H

This manual is to install UGR-680STD in SSD-680STD.

Modification procedure

- 1 Take away cover panel.
- 2 Install speaker unit.
- 3 Install Independent probe connector.
- 4 Install Doppler unit DM-5
- 5 Put on ground plate.
- 6 Connect cables.

After all the modification is done, put circle on No. 1 of the mod.history label.

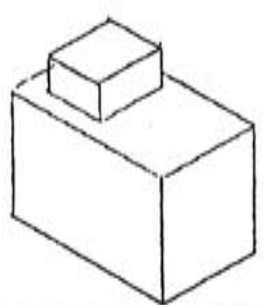
Modification time is about 2 hours.

出図印

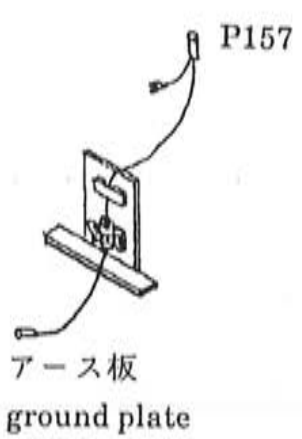
改訂	
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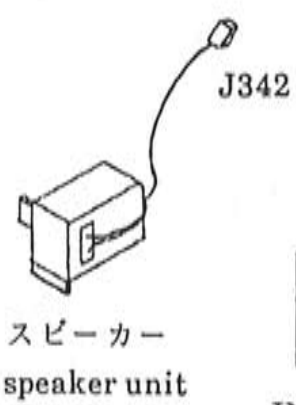
使用部品リスト  
parts list



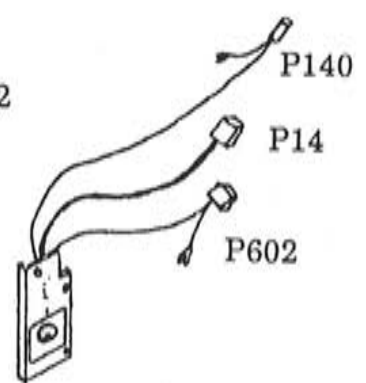
ドブラユニット (DM-5)  
Doppler unit (DM-5)



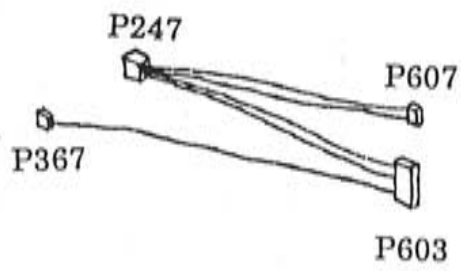
アース板  
ground plate



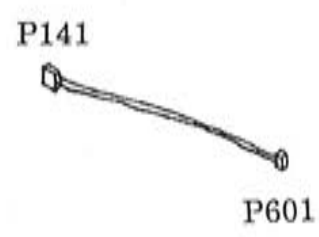
スピーカー  
speaker unit



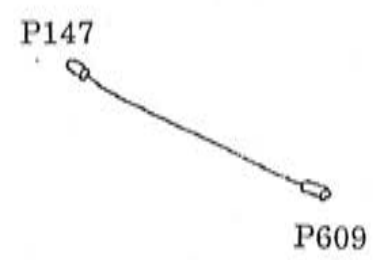
INDコネクタ板  
IND connector



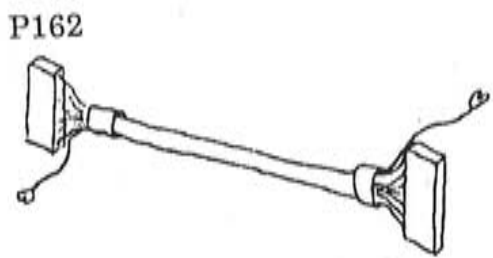
P603



P601



P609



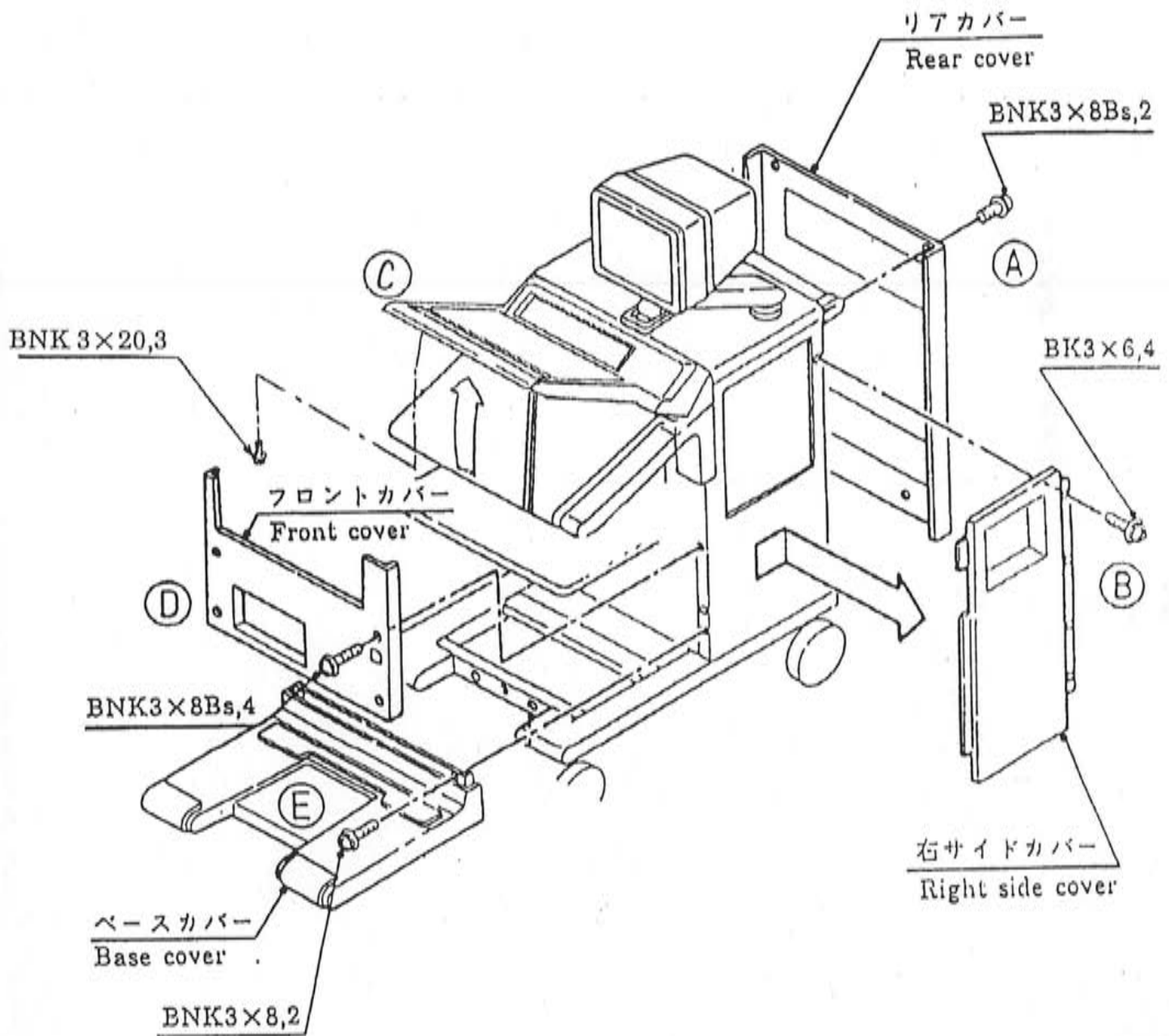
P604

他ビス類  
and screws





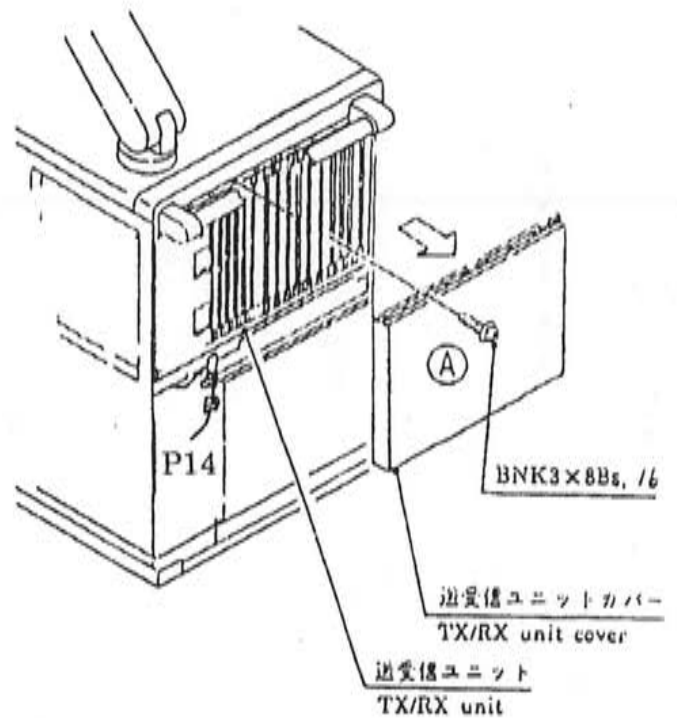
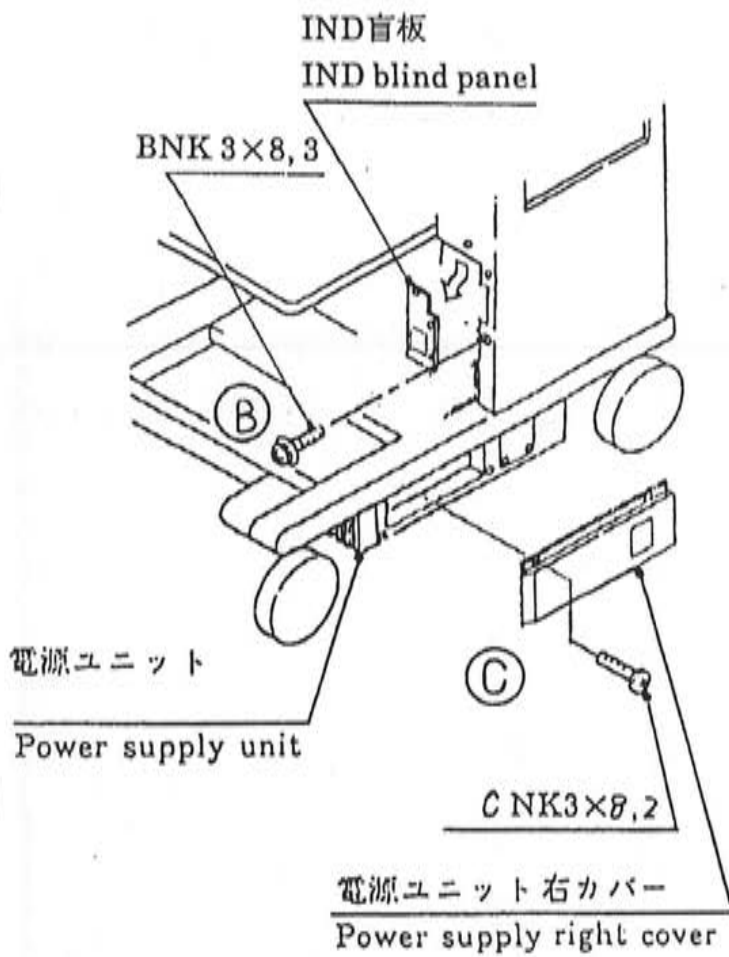
- |                     |   |
|---------------------|---|
| 1) リアカバーを外す。(図中A)   | 1) Remove the rear cover panel. (fig.A)       |
| 2) 右サイドカバーを外す。(図中B) | 2) Remove the right side cover panel. (fig.B) |
| 3) エスカッションを開く。(図中C) | 3) Open the operation panel. (fig.C)          |
| 4) フロントカバーを外す。(図中D) | 4) Remove the front cover panel. (fig.D)      |
| 5) ベースカバーを外す。(図中E)  | 5) Remove the base cover panel. (fig.E)       |





- 1) GEUカバーを外す。(図中A)
- 2) IND盲板を外す。(図中B)  
(これは不要となる。)
- 3) 電源右カバーを外す。(図中C)

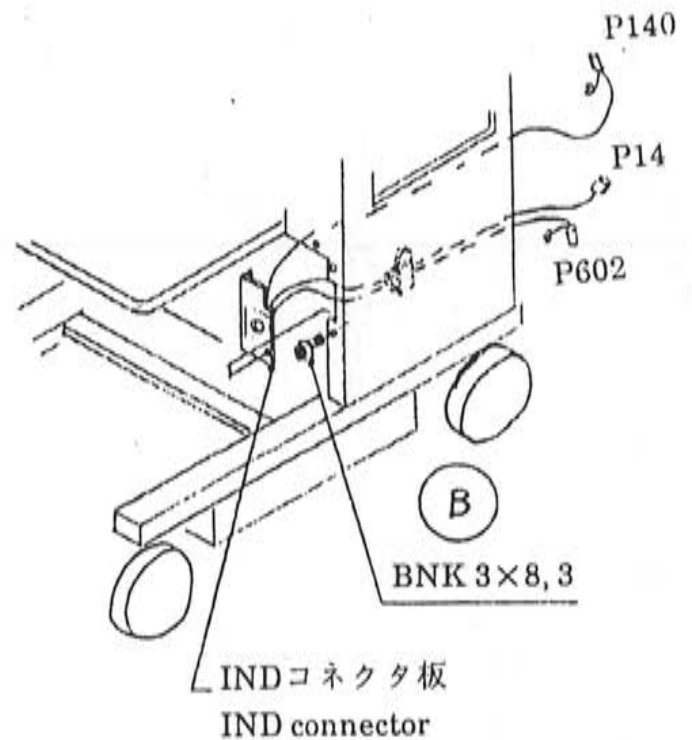
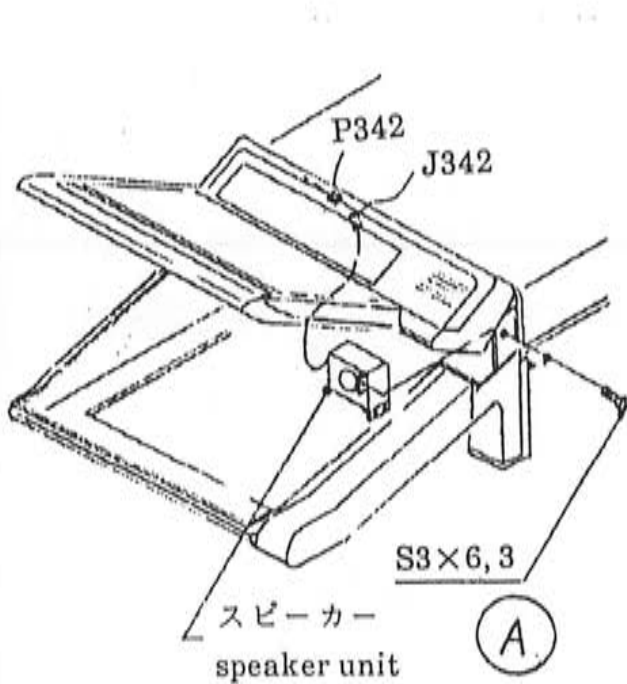
- 1) Remove GEU unit cover. (fig.A)
- 2) Remove IND blind panel. (fig.B)  
(no use anymore)
- 3) Remove IND blind panel. (fig.C)





- 1) スピーカを固定し、J342をエスカッション内側にクランプされているP342と接続する。(図中A)
- 2) INDコネクタ板を固定し、P14 P602を本体のULクランプに通す。P140はクランプしない。(図中B)

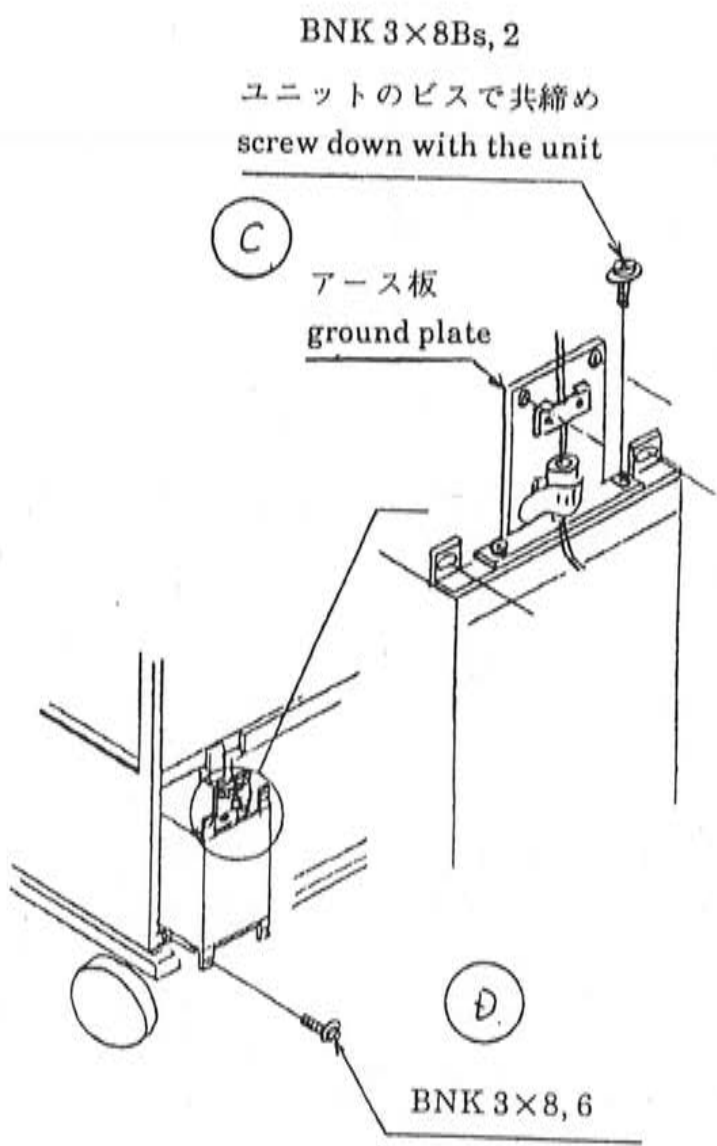
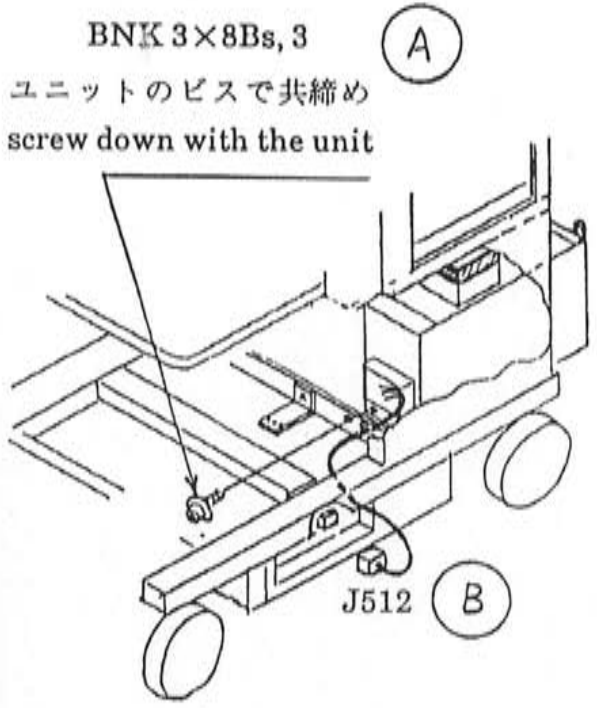
- 1) Screw down the speaker unit and connect J342 with P342 which is clamped on the back of operation panel. (fig.A)
- 2) Screw down the IND connector and clamp P14 and P602 with cable clamp on the main unit. Do not clamp P140. (fig.B)





- 1) ドブラユニットを筐体に入れ基準アースにユニットのビスで共締めする。(図中A)
- 2) J512を電源に接続する。(図中B)
- 3) アース板をドブラのビスで共締めする。(図中C)
- 4) ドブラを本体に固定する。(図中D)

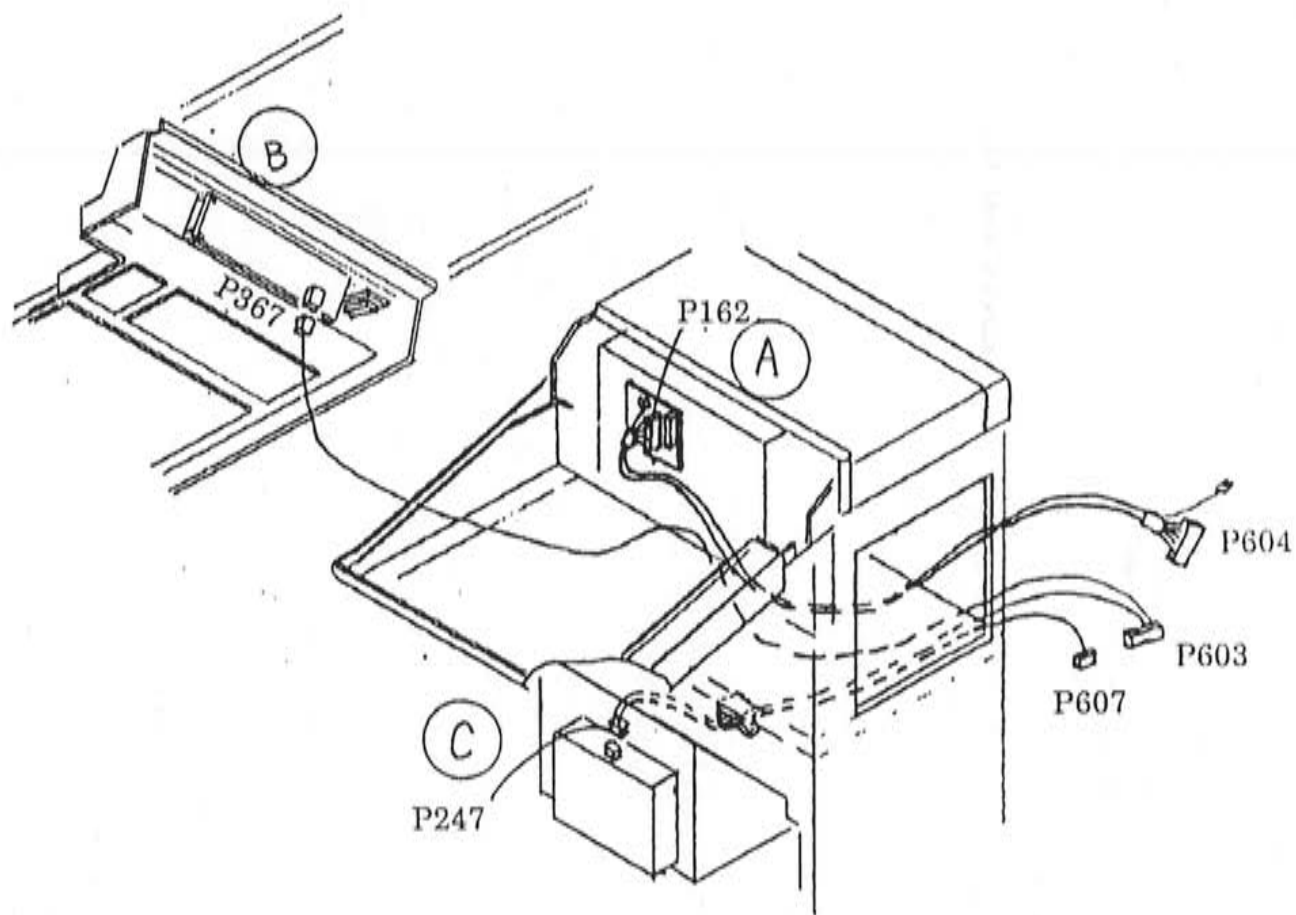
- 1) Install the Doppler unit and screw the unit together with the ground plate. (fig.A)
- 2) Connect J512 with P512 on the power supply. (fig.B)
- 3) Screw down the ground plate with the screws of the Doppler unit. (fig.C)
- 4) Screw the Doppler unit with the main unit. (fig.D)





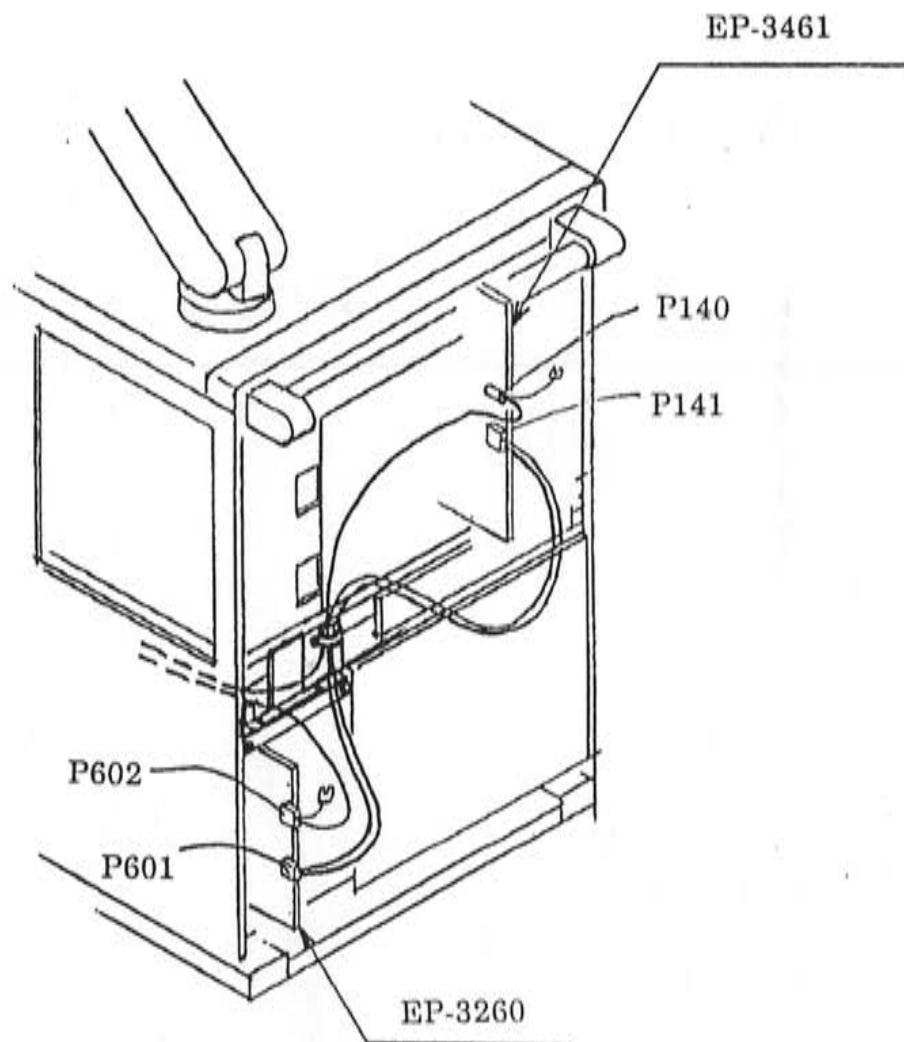


- |                                       |  |
|---------------------------------------|--|
| 1) P162をGUE裏面のEP-3525に接続する。(図中A)      | 1) Connect P162 with J162 on EP-3525 which is on the back of GEU unit. (fig.A)         |
| 2) P367をブラインドパネルEP-2512に接続する。(図中B)    | 2) Connect P367 with J367 on EP-2512 which is on the back of blind panel. (fig.B)      |
| 3) P247をUIM接栓板に接続し、本体のULクランプに通す。(図中C) | 3) Connect P247 with J247 on UIM connector box, and clamp it with cable clamp. (fig.C) |



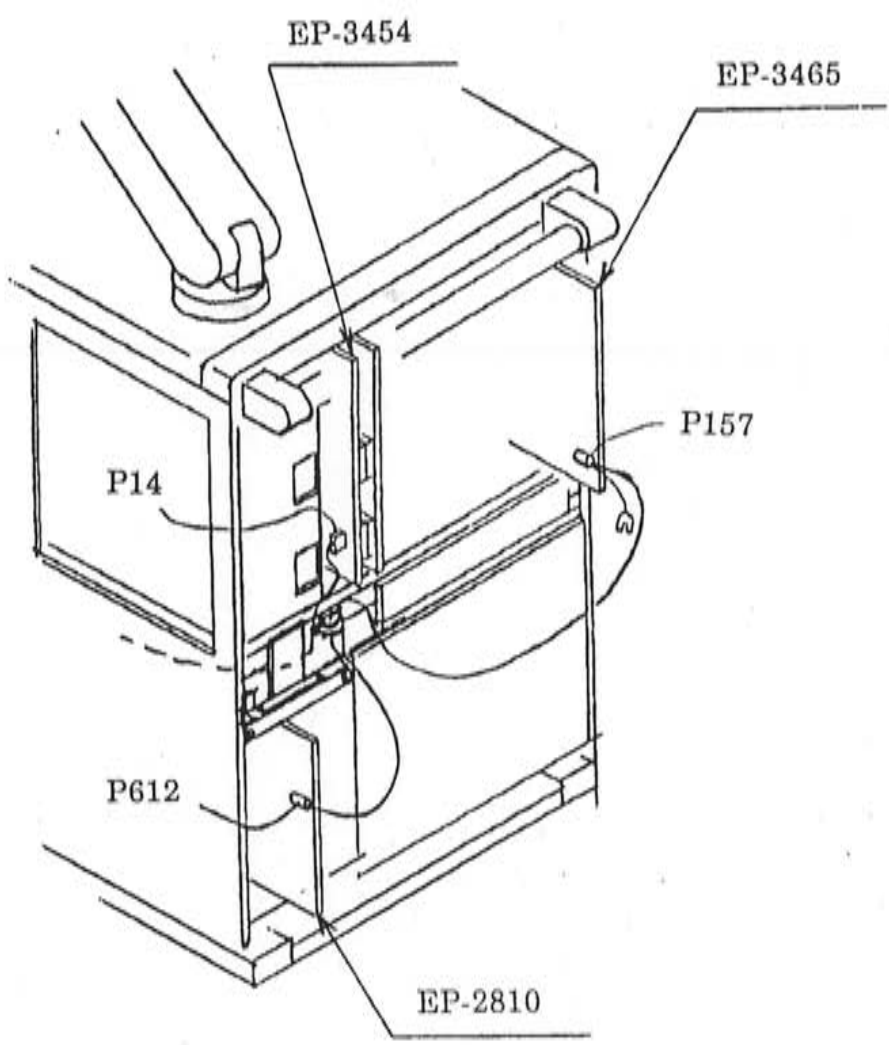


- 1) 各コネクタを図のように接続する。 1) Connect each cable as indicated in the fig.



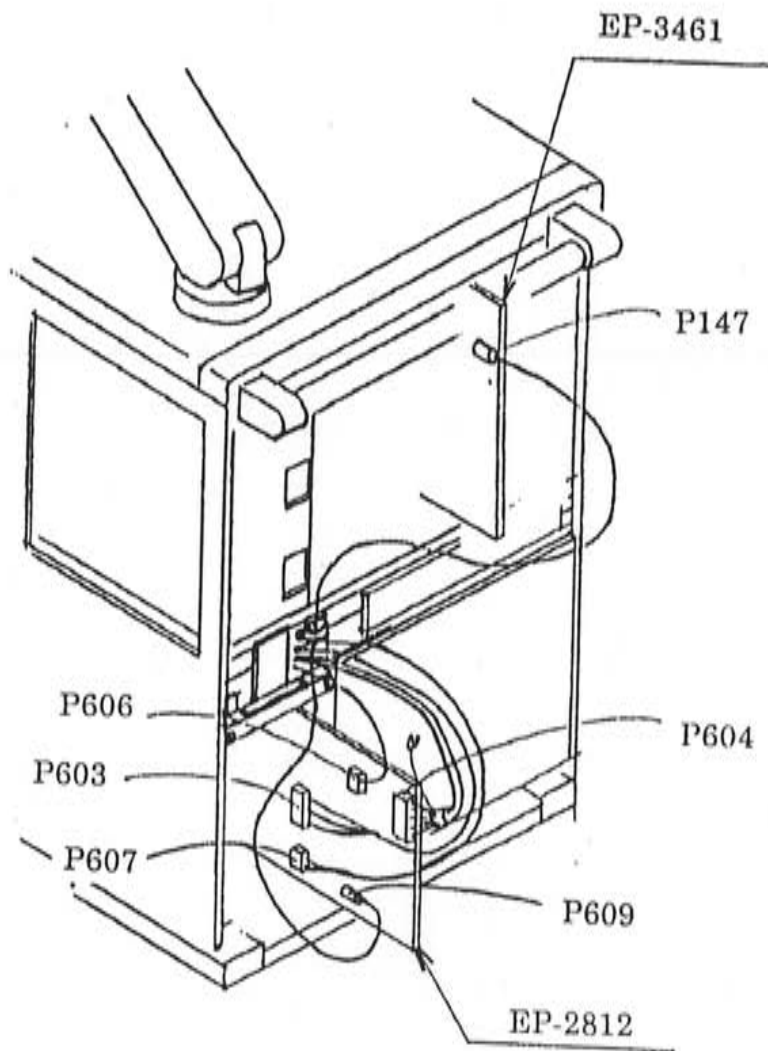


- 1) 各コネクタを図のように接続する。 1) Connect each cable as indicated in the fig.





- 1) 各コネクタを図のように接続する。 1) Connect each cable as indicated in the fig.



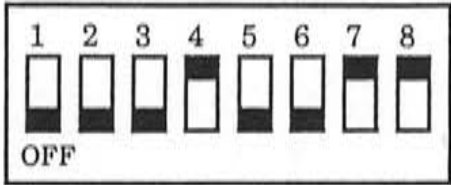




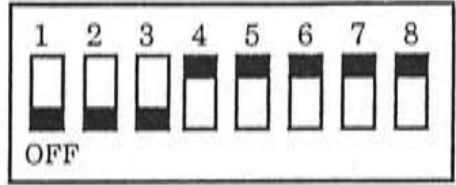
- |   |   |
|---|---|
| <p>1) EP-3265のディップスイッチの設定を図のようにする。</p> <p>2) 電源を入れ、ドブラが正常に機能しているか確認する。</p> <p>3) すべてのカバーをもとにもどす。アース端子は近くのカバービスと共締めする。</p> | <p>1) Set the digital switch on EP-3265 as indicated in the figure.</p> <p>2) Power on and check the Doppler function.</p> <p>3) Take the all the cover panel on. Screw the ground cables together with the covers.</p> |
|---|---|

国内、一般貿易向け  
For all countries without USA

CFM-680STDが組み込まれていない場合  
In case CFM-680STD is not installed.

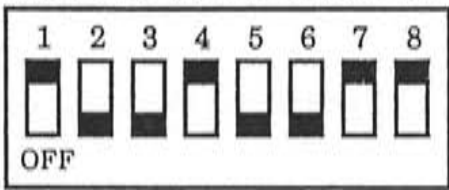


CFM-680STDが既に組み込まれている場合  
In case CFM-680STD is already installed.

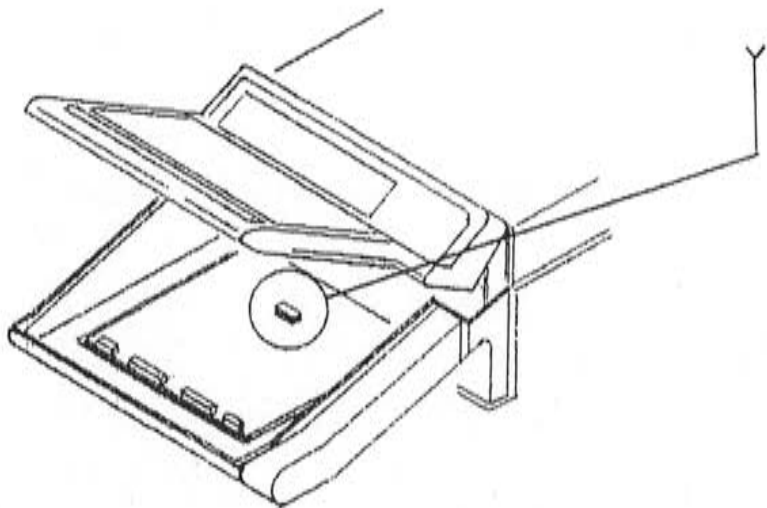
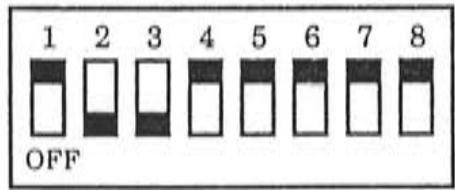


Aloka USA および Corometrics向け  
For Aloka USA and Corometrics inly

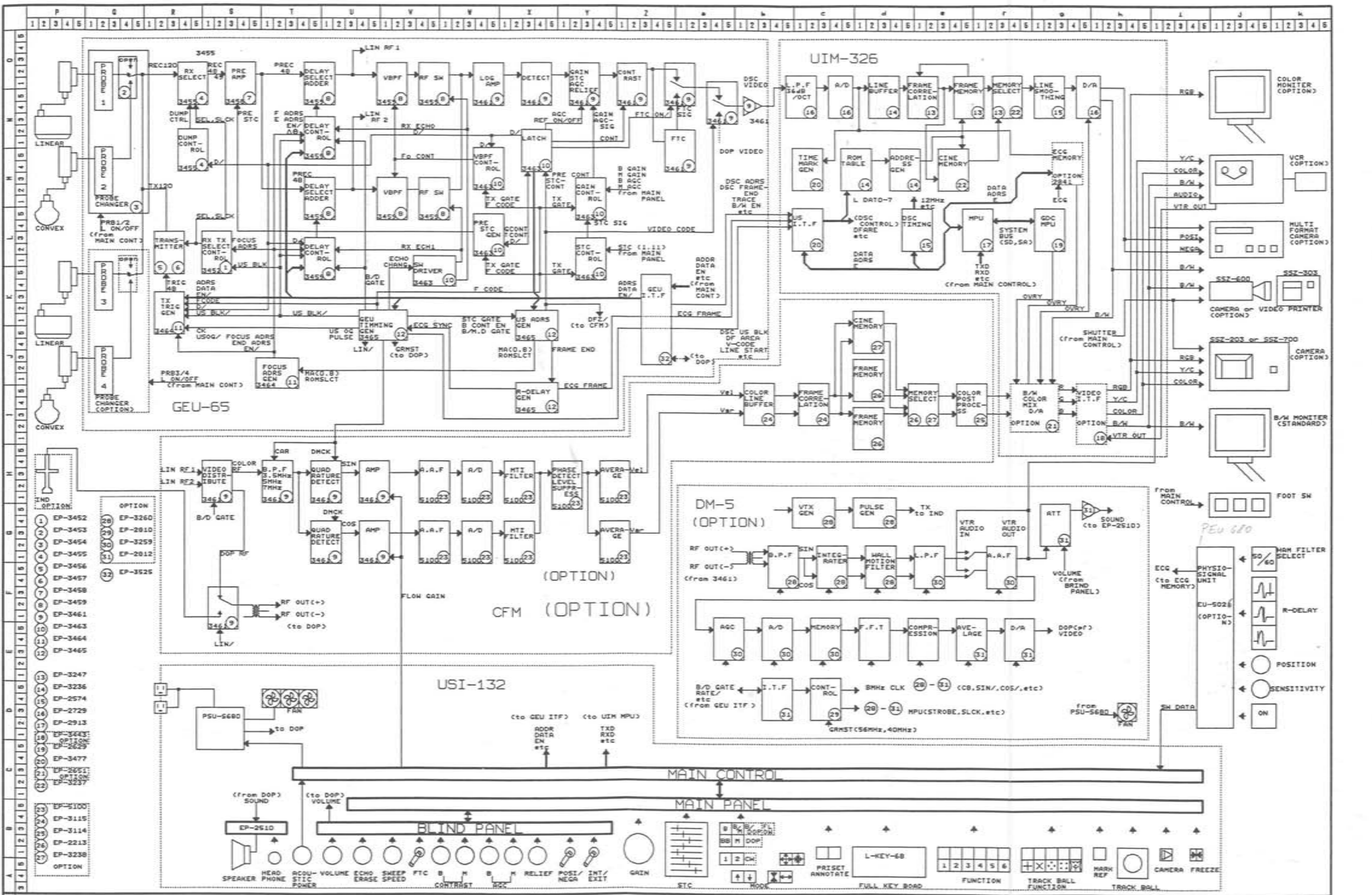
CFM-680STDが組み込まれていない場合  
In case CFM-680STD is not installed.



CFM-680STDが既に組み込まれている場合  
In case CFM-680STD is already installed.







REVISIONS

1	EP-3452
2	EP-3453
3	EP-3454
4	EP-3455
5	EP-3456
6	EP-3457
7	EP-3458
8	EP-3459
9	EP-3461
10	EP-3463
11	EP-3464
12	EP-3465
13	EP-3247
14	EP-3236
15	EP-2574
16	EP-2729
17	EP-2913
18	EP-3443
19	EP-2629
20	EP-3477
21	EP-2651
22	EP-3237
23	EP-3100
24	EP-3115
25	EP-3114
26	EP-2213
27	EP-3238
28	OPTION
29	OPTION
30	OPTION
31	OPTION
32	OPTION

<b>Aloka</b>		TITLE	MODEL	1/1
3RD ANGLE PROJECTION		SYSTEM BLOCK	SSD-680 STD	
SCALE	UNITS	DRAWN	DESIGNED	CHECKED
	mm			APPO
		DRAWING NO.		
		MA300110		

MAIN CONTROL

BP-003

この図は、HIMEX-3000型デジタルビデオカメラのPCBブロック図を示しています。この図は、カメラの電子回路の主要な部分を示しています。この図は、カメラの電子回路の主要な部分を示しています。

PCB BLOCK DIAGRAM



## 6-1 EP-3265 MAIN CONTROL

このPCBは、HD68B09(MPU)を搭載し、PANELなどからの各種情報を読み、DSCユニット及び送受信ユニット(GEU)へ命令を送ると共に、PANEL LUMPの点滅の制御などを行っている。又DOPPLERユニットとの情報交換(GEUユニット経由)及び、生体ユニット(OPTION)の制御も行われている。

## SIGNAL LIST

J370		J371		J372		J373		J374	
1	GND	1	+x	1	GND	1	B1/	1	PHSE L0
2	TXD+	2	-x	2	RDB	2	STB	2	PHSE L1
3	TXD-	3	+y	3	TDB	3	B2/	3	R-R/
4	RXD+	4	-y	4	CTS	4		4	R-R
5	RXD-	5	B1 FRZ/	5	RTS	5	B3/	5	
6	TXC+	6	B2 FRZ/	6		6	+5V	6	ECG SW/
7	TXC-	7	M FRZ/	7	GND	7	B4/	7	PCG SW/
8	RXC+	8	GND	8		8	+5V	8	PL1 SW/
9	RXC-	9	GND	9		9	B5/	9	PL2 SW/
10		10	GND	10		10	GND	10	ECG LP
		11		11		11	B6/	11	PCG LP
		12		12		12	GND	12	PL1 LP
		13		13		13	B7/	13	PL2 LP
		14		14	+5V	14	GND	14	
				15		15	B8/	15	GND
				16		16	GND	16	GND
				17		17	GND		
				18		18	GND		
				19		19	GND		
				20	DCB	20	GND		
				21					
				22					
				23					
				24					
				25					

J375			
1	R-R/	21	a6
2	GND	22	GND
3	Tx	23	d0
4	GND	24	GND
5	Rx	25	d1
6	GND	26	GND
7	q	27	d2
8	GND	28	GND
9	a0	29	d3
10	GND	30	GND
11	a1	31	d4
12	GND	32	GND
13	a2	33	d5
14	GND	34	GND
15	a3	35	d6
16	GND	36	GND
17	a4	37	d7
18	GND	38	GND
19	a5	39	CPU AV/
20	GND	40	

J376			
1	+5V	26	C
2	+5V	27	L ON/OFF
3	GND	28	GND
4	PRB 1/2	29	GND
5	PCD 101	30	GND
6	PCD 102	31	PCD 301
7	PCD 103	32	PCD 302
8	PCD 104	33	PCD 303
9	PCD 105	34	PCD 304
10	PCD 106	35	PCD 305
11	PCD 107	36	PCD 401
12	PCD 108	37	PCD 402
13	PCD 201	38	PCD 403
14	PCD 202	39	PCD 404
15	PCD 203	40	PCD 405
16	PCD 204	41	PCD 406
17	PCD 205	42	PCD 407
18	PCD 206	43	PCD 408
19	PCD 207	44	P.S 1
20	PCD 208	45	P.S 2
21	PC 301	46	P.P.B 3/4
22	PC 302	47	PCD 307
23	PC 303	48	PCD 308
24	B 1/2	49	+5V
25	PCD 306	50	GND

J377	
1	+5VA
2	+5VA
3	GND
4	-5VA

J378	
1	SHUTTER
2	GND

J379	
1	
2	
3	+15V
4	GND
5	GND

J381	
1	B FRZ/
2	GND
3	M FRZ/
4	GND
5	CAMERA/
6	GND
7	CP1 I/
8	CP1 O
9	GND
10	CP2 I/
11	CP2 O
12	GND

J385	
1	+10V
2	+10V
3	A/D 3
4	AGND
5	A/D 4

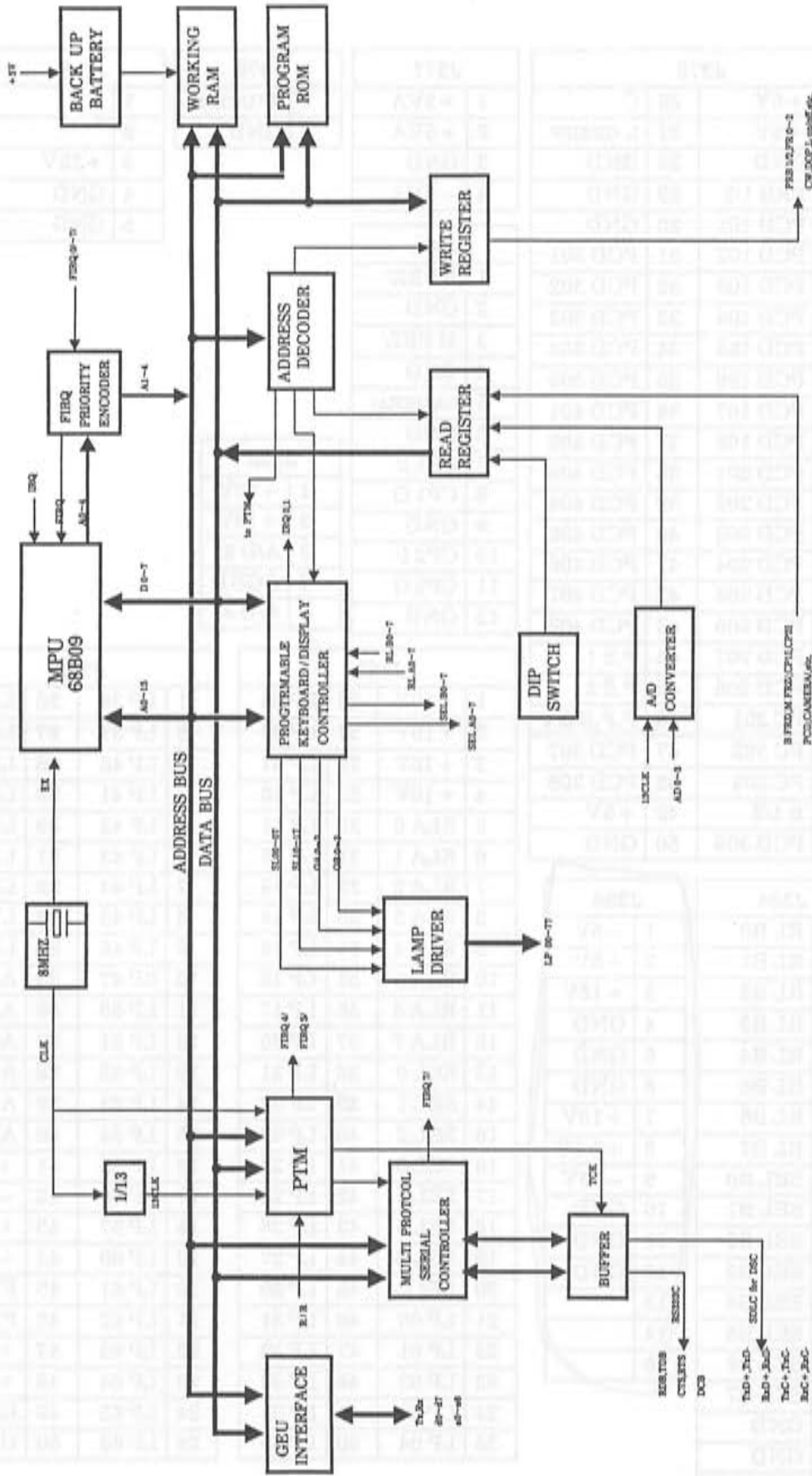
J384	
1	RL B0
2	RL B1
3	RL B2
4	RL B3
5	RL B4
6	RL B5
7	RL B6
8	RL B7
9	SEL B0
10	SEL B1
11	SEL B2
12	SEL B3
13	SEL B4
14	SEL B5
15	SEL B6
16	SEL B7
17	GND
18	GND
19	GND
20	GND

J386	
1	-5V
2	+5V
3	+15V
4	GND
5	GND
6	GND
7	+10V
8	+5.1V
9	-15V
10	GND
11	GND
12	GND
13	
14	
15	

J382			
1	+10V	26	LP 05
2	+10V	27	LP 06
3	+10V	28	LP 07
4	+10V	29	LP 10
5	RLA 0	30	LP 11
6	RLA 1	31	LP 12
7	RLA 2	32	LP 13
8	RLA 3	33	LP 14
9	RLA 4	34	LP 15
10	RLA 5	35	LP 16
11	RLA 6	36	LP 17
12	RLA 7	37	LP 20
13	SEL 0	38	LP 21
14	SEL 1	39	LP 22
15	SEL 2	40	LP 23
16	SEL 3	41	LP 24
17	SEL 4	42	LP 25
18	SEL 5	43	LP 26
19	SEL 6	44	LP 27
20	SEL 7	45	LP 30
21	LP 00	46	LP 31
22	LP 01	47	LP 32
23	LP 02	48	LP 33
24	LP 03	49	LP 34
25	LP 04	50	LP 35

J383			
1	LP 36	26	LP 67
2	LP 37	27	LP 70
3	LP 40	28	LP 71
4	LP 41	29	LP 72
5	LP 42	30	LP 73
6	LP 43	31	LP 74
7	LP 44	32	LP 75
8	LP 45	33	LP 76
9	LP 46	34	LP 77
10	LP 47	35	A/D 0
11	LP 50	36	A/D 1
12	LP 51	37	A/D 2
13	LP 52	38	AGND
14	LP 53	39	AGND
15	LP 54	40	AGND
16	LP 55	41	+X
17	LP 56	42	-X
18	LP 57	43	+Y
19	LP 60	44	-Y
20	LP 61	45	FRZ 0
21	LP 62	46	FRZ 1
22	LP 63	47	+5V
23	LP 64	48	+5V
24	LP 65	49	GND
25	LP 66	50	GND

Section 6 PCB Block Diagram



Aloka	TITLE 名称 MAIN CONTROL	MODEL 型号 EP-3265	1/1
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REVERSE PROBE SECTION  
 (REVERSE PROBE WHICH RELAY R.W.)

REVERSE PROBE 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

REVERSE PROBE LIST

REVERSE PROBE LIST		REVERSE PROBE LIST	
NO.	DESCRIPTION	NO.	DESCRIPTION
1	...	1	...
2	...	2	...
3	...	3	...
4	...	4	...
5	...	5	...
6	...	6	...
7	...	7	...
8	...	8	...
9	...	9	...
10	...	10	...
11	...	11	...
12	...	12	...
13	...	13	...
14	...	14	...
15	...	15	...
16	...	16	...
17	...	17	...
18	...	18	...
19	...	19	...
20	...	20	...
21	...	21	...
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25	...	25	...
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28	...	28	...
29	...	29	...
30	...	30	...
31	...	31	...
32	...	32	...
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36	...	36	...
37	...	37	...
38	...	38	...
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41	...	41	...
42	...	42	...
43	...	43	...
44	...	44	...
45	...	45	...
46	...	46	...
47	...	47	...
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91	...	91	...
92	...	92	...
93	...	93	...
94	...	94	...
95	...	95	...
96	...	96	...
97	...	97	...
98	...	98	...
99	...	99	...
100	...	100	...



## 6-2 EP-3454 PROBE SELECTOR (EP-3453 PROBE SELECT RELAY を含む)

この基板ではPROBE 1, 2 の切換えを行っています。

### EP-3454 SIGNAL LIST

J100-1			J100-2		
	A	B		A	B
1	A1 GND	A1 GND	1	A GND	A GND
2	A1 GND	A1 GND	2	PRB 1/2	L ON/OFF
3	PCD 101	PS 1	3	A GND	TX 78
4	PCD 103	PCD 102	4	TX 116	TX 30
5	PCD 105	PCD 104	5	TX 68	TX 77
6	PCD 107	PCD 106	6	TX 20	TX 29
7	PCD 201	PCD 108	7	TX 115	A GND
8	PCD 203	PCD 202	8	TX 67	TX 76
9	PCD 205	PCD 204	9	TX 19	TX 28
10	PCD 207	PCD 206	10	TX 114	TX 75
11	PC 303	PCD 208	11	TX 66	TX 27
12	PC 301	PC 302	12	TX 18	TX 74
13	+5VA	A1 GND	13	TX 113	TX 26
14	A GND	A GND	14	TX 65	TX 73
15	+5V	+5V	15	TX 17	TX 25
16	(+5.1V)	(+5.1V)	16	A GND	A GND
17	A GND	A GND	17	TX 104	TX 112
18	TX 87	TX 88	18	TX 56	TX 64
19	TX 39	TX 40	19	TX 8	TX 16
20	TX 85	TX 86	20	TX 103	TX 111
21	TX 37	TX 38	21	TX 55	TX 63
22	A GND	A GND	22	TX 7	TX 15
23	TX 84	TX 96	23	TX 102	TX 110
24	TX 36	TX 48	24	TX 54	TX 62
25	TX 83	TX 95	25	TX 6	TX 14
26	TX 35	TX 47	26	TX 101	TX 109
27	TX 82	TX 94	27	TX 53	TX 61
28	TX 34	TX 46	28	TX 5	TX 13
29	TX 81	TX 92	29	A GND	A GND
30	TX 33	TX 45	30	TX 100	TX 108
31	A GND	A GND	31	TX 52	TX 60
32	A GND	TX 92	32	TX 4	TX 12
33	TX 120	TX 44	33	TX 99	TX 107
34	TX 72	TX 91	34	TX 51	TX 59
35	TX 24	TX 43	35	TX 3	TX 11
36	TX 119	TX 90	36	TX 98	TX 106
37	TX 71	TX 42	37	TX 50	TX 58
38	TX 23	TX 89	38	TX 2	TX 10
39	TX 118	TX 41	39	TX 97	TX 105
40	TX 70	A GND	40	TX 49	TX 57
41	TX 22	TX 80	41	TX 1	TX 9
42	TX 117	TX 32	42	A GND	A GND
43	TX 69	TX 79	43		
44	TX 21	TX 31	44	A GND	A GND
45	A GND	A GND	45	A GND	A GND

## EP-3454 SIGNAL LIST

J3				J4				J5			
1	Rx 9	26	GND	1	Rx 25	26	GND	1	Rx 37	26	GND
2	GND	27	Rx 61	2	GND	27	Rx 79	2	GND	27	Rx 91
3	Rx 57	28	GND	3	Rx 73	28	GND	3	Rx 85	28	GND
4	GND	29	Rx 109	4	GND	29	Rx 32	4	GND	29	Rx 44
5	Rx 105	30	GND	5	Rx 26	30	GND	5	Rx 38	30	GND
6	GND	31	Rx 14	6	GND	31	Rx 80	6	GND	31	Rx 92
7	Rx 10	32	GND	7	Rx 74	32	GND	7	Rx 86	32	GND
8	GND	33	Rx 62	8	GND	33	Rx 33	8	GND	33	Rx 45
9	Rx 58	34	GND	9	Rx 27	34	GND	9	Rx 39	34	GND
10	GND	35	Rx 110	10	GND	35	Rx 81	10	GND	35	Rx 93
11	Rx 106	36	GND	11	Rx 75	36	GND	11	Rx 87	36	GND
12	GND	37	Rx 15	12	GND	37	Rx 34	12	GND	37	Rx 46
13	Rx 11	38	GND	13	Rx 28	38	GND	13	Rx 40	38	GND
14	GND	39	Rx 63	14	GND	39	Rx 82	14	GND	39	Rx 94
15	Rx 59	40	GND	15	Rx 76	40	GND	15	Rx 88	40	GND
16	GND	41	Rx 111	16	GND	41	Rx 35	16	GND	41	Rx 47
17	Rx 107	42	GND	17	Rx 29	42	GND	17	Rx 41	42	GND
18	GND	43	Rx 16	18	GND	43	Rx 83	18	GND	43	Rx 95
19	Rx 12	44	GND	19	Rx 77	44	GND	19	Rx 89	44	GND
20	GND	45	Rx 64	20	GND	45	Rx 36	20	GND	45	Rx 48
21	Rx 60	46	GND	21	Rx 30	46	GND	21	Rx 42	46	GND
22	GND	47	Rx 112	22	GND	47	Rx 84	22	GND	47	Rx 96
23	Rx 108	48	GND	23	Rx 78	48	GND	23	Rx 90	48	GND
24	GND	49		24	GND	49		24	GND	49	
25	Rx 13	50	GND	25	Rx 31	50	GND	25	Rx 43	50	GND

J14	
1	PCD 303
2	PCD 302
3	PCD 301
4	GND

J11 (to Probe Connector 1)	
1	PCD 108
2	PCD 107
3	PCD 106
4	PCD 105
5	PCD 104
6	PCD 103
7	PCD 102
8	PCD 101
9	GND

J12 (to Probe Connector 1)	
1	PCD 208
2	PCD 207
3	PCD 206
4	PCD 205
5	PCD 204
6	PCD 203
7	PCD 202
8	PCD 201
9	GND

J13 (to Probe connector1&2)	
1	PRB 1 L OFF
2	GND
3	PRB 1 L ON
4	GND
5	PRB 2 L OFF
6	GND
7	PRB 2 L ON
8	GND

EP-3454 SIGNAL LIST

for Probe Connector 1

to PB 1	J11 (A1)		J12 (B1)		J13 (C1)		J14 (D1)		J15 (E1)	
	1	VRTN	1	TX 106	1	TX 76	1	TX 46	1	TX 16
	2	VRTN	2	TX 107	2	TX 77	2	TX 47	2	TX 17
	3	PROBE 1	3	TX 93	3	TX 63	3	TX 33	3	TX 3
	4	PROBE 1	4	TX 92	4	TX 62	4	TX 32	4	TX 2
	5	A GND	5	TX 91	5	TX 61	5	TX 31	5	TX 1
	6	A GND	6	TX 108	6	TX 78	6	TX 48	6	TX 18
to PB 2	J21 (A1)		J22 (B1)		J23 (C1)		J24 (D1)		J25 (E1)	
	1	VRTN	1	TX 96	1	TX 66	1	TX 36	1	TX 6
	2	VRTN	2	TX 109	2	TX 79	2	TX 49	2	TX 19
	3	PROBE 1	3	TX 94	3	TX 64	3	TX 34	3	TX 4
	4	PROBE 1	4	TX 111	4	TX 81	4	TX 51	4	TX 21
	5	A GND	5	TX 110	5	TX 80	5	TX 50	5	TX 20
	6	A GND	6	TX 95	6	TX 65	6	TX 35	6	TX 5
to PB 3	J31 (A1)		J32 (B1)		J33 (C1)		J34 (D1)		J35 (E1)	
	1	VRTN	1	TX 99	1	TX 69	1	TX 39	1	TX 9
	2	VRTN	2	TX 112	2	TX 82	2	TX 52	2	TX 22
	3	PROBE 1	3	TX 97	3	TX 67	3	TX 37	3	TX 7
	4	PROBE 1	4	TX 114	4	TX 84	4	TX 54	4	TX 24
	5	A GND	5	TX 113	5	TX 83	5	TX 53	5	TX 23
	6	A GND	6	TX 98	6	TX 68	6	TX 38	6	TX 8
to PB 5	J41 (A1)		J42 (B1)		J43 (C1)		J44 (D1)		J45 (E1)	
	1	VRTN	1	TX 117	1	TX 87	1	TX 57	1	TX 27
	2	VRTN	2	TX 115	2	TX 85	2	TX 55	2	TX 25
	3	PROBE 1	3	TX 101	3	TX 71	3	TX 41	3	TX 11
	4	PROBE 1	4	TX 102	4	TX 72	4	TX 42	4	TX 12
	5	A GND	5	TX 116	5	TX 86	5	TX 56	5	TX 26
	6	A GND	6	TX 100	6	TX 70	6	TX 40	6	TX 10
to PB 6	J51 (A1)		J52 (B1)		J53 (C1)		J54 (D1)		J55 (E1)	
	1	VRTN	1	TX 104	1	TX 74	1	TX 44	1	TX 14
	2	VRTN	2	TX 105	2	TX 75	2	TX 45	2	TX 15
	3	PROBE 1	3	TX 120	3	TX 90	3	TX 60	3	TX 30
	4	PROBE 1	4	TX 103	4	TX 73	4	TX 43	4	TX 13
	5	A GND	5	TX 118	5	TX 88	5	TX 58	5	TX 28
	6	A GND	6	TX 119	6	TX 89	6	TX 59	6	TX 29

## EP-3454 SIGNAL LIST

for Probe Connector 2

to PB 6									
J11 (A1)		J12 (B1)		J13 (C1)		J14 (D1)		J15 (E1)	
1	VRTN	1	TX 106	1	TX 76	1	TX 46	1	TX 16
2	VRTN	2	TX 107	2	TX 77	2	TX 47	2	TX 17
3	PROBE 2	3	TX 93	3	TX 63	3	TX 33	3	TX 3
4	PROBE 2	4	TX 92	4	TX 62	4	TX 32	4	TX 2
5	A GND	5	TX 91	5	TX 61	5	TX 31	5	TX 1
6	A GND	6	TX 108	6	TX 78	6	TX 48	6	TX 18
to PB 7									
J21 (A1)		J22 (B1)		J23 (C1)		J24 (D1)		J25 (E1)	
1	VRTN	1	TX 96	1	TX 66	1	TX 36	1	TX 6
2	VRTN	2	TX 109	2	TX 79	2	TX 49	2	TX 19
3	PROBE 2	3	TX 94	3	TX 64	3	TX 34	3	TX 4
4	PROBE 2	4	TX 111	4	TX 81	4	TX 51	4	TX 21
5	A GND	5	TX 110	5	TX 80	5	TX 50	5	TX 20
6	A GND	6	TX 95	6	TX 65	6	TX 35	6	TX 5
to PB 8									
J31 (A1)		J32 (B1)		J33 (C1)		J34 (D1)		J35 (E1)	
1	VRTN	1	TX 99	1	TX 69	1	TX 39	1	TX 9
2	VRTN	2	TX 112	2	TX 82	2	TX 52	2	TX 22
3	PROBE 2	3	TX 97	3	TX 67	3	TX 37	3	TX 7
4	PROBE 2	4	TX 114	4	TX 84	4	TX 54	4	TX 24
5	A GND	5	TX 113	5	TX 83	5	TX 53	5	TX 23
6	A GND	6	TX 98	6	TX 68	6	TX 38	6	TX 8
to PB 9									
J41 (A1)		J42 (B1)		J43 (C1)		J44 (D1)		J45 (E1)	
1	VRTN	1	TX 117	1	TX 87	1	TX 57	1	TX 27
2	VRTN	2	TX 115	2	TX 85	2	TX 55	2	TX 25
3	PROBE 2	3	TX 101	3	TX 71	3	TX 41	3	TX 11
4	PROBE 2	4	TX 102	4	TX 72	4	TX 42	4	TX 12
5	A GND	5	TX 116	5	TX 86	5	TX 56	5	TX 26
6	A GND	6	TX 100	6	TX 70	6	TX 40	6	TX 10
to PB 10									
J51 (A1)		J52 (B1)		J53 (C1)		J54 (D1)		J55 (E1)	
1	VRTN	1	TX 104	1	TX 74	1	TX 44	1	TX 14
2	VRTN	2	TX 105	2	TX 75	2	TX 45	2	TX 15
3	PROBE 2	3	TX 120	3	TX 90	3	TX 60	3	TX 30
4	PROBE 2	4	TX 103	4	TX 73	4	TX 43	4	TX 13
5	A GND	5	TX 118	5	TX 88	5	TX 58	5	TX 28
6	A GND	6	TX 119	6	TX 89	6	TX 59	6	TX 29

EP-3453 SIGNAL LIST

to  
Probe  
Connector  
1

CN 11		CN 12		CN 13		CN 14	
1	# 108	1	# 78	1	# 48	1	# 18
2		2		2		2	
3	# 106	3	# 76	3	# 46	3	# 16
4		4		4		4	
5	# 93	5	# 63	5	# 33	5	# 3
6		6		6		6	
7	# 91	7	# 61	7	# 31	7	# 1
8		8		8		8	
9	# 107	9	# 77	9	# 47	9	# 17
10		10		10		10	
11	G (to S1)	11	G (to L1)	11	G (to G1)	11	G (to C1)
12		12		12		12	
13	# 92	13	# 62	13	# 32	13	# 2
14	G (to P1)	14	G (to J1)	14	G (to E1)	14	G (to A1)

CN 21		CN 22		CN 23		CN 24	
1	# 111	1	# 81	1	# 51	1	# 21
2		2		2		2	
3	# 109	3	# 79	3	# 49	3	# 19
4		4		4		4	
5	# 96	5	# 66	5	# 36	5	# 6
6		6		6		6	
7	# 94	7	# 64	7	# 34	7	# 4
8		8		8		8	
9	# 120	9	# 80	9	# 50	9	# 20
10		10		10		10	
11	G (to S3)	11	G (to L3)	11	G (to G3)	11	G (to C3)
12		12		12		12	
13	# 96	13	# 65	13	# 35	13	# 5
14	G (to P3)	14	G (to J3)	14	G (to E3)	14	G (to A3)

CN 31		CN 32		CN 33		CN 34	
1	# 114	1	# 84	1	# 54	1	# 24
2		2		2		2	
3	# 112	3	# 82	3	# 52	3	# 22
4		4		4		4	
5	# 99	5	# 69	5	# 39	5	# 9
6		6		6		6	
7	# 97	7	# 97	7	# 37	7	# 7
8		8		8		8	
9	# 113	9	# 83	9	# 53	9	# 23
10		10		10		10	
11	G (to S5)	11	G (to L5)	11	G (to G5)	11	G (to C5)
12		12		12		12	
13	# 98	13	# 68	13	# 38	13	# 8
14	G (to P5)	14	G (to J5)	14	G (to E5)	14	G (to A5)

EP-3453 SIGNAL LIST

to Probe Connector 1	CN 41		CN 42		CN 43		CN 44	
	1	# 117	1	# 87	1	# 57	1	# 27
	2		2		2		2	
	3	# 115	3	# 85	3	# 55	3	# 25
	4		4		4		4	
	5	# 102	5	# 72	5	# 42	5	# 12
	6		6		6		6	
	7	# 100	7	# 70	7	# 40	7	# 10
	8		8		8		8	
	9	# 106	9	# 86	9	# 56	9	# 26
	10		10		10		10	
	11	G (to S7)	11	G (to L7)	11	G (to G7)	11	G (to C7)
	12		12		12		12	
	13	# 101	13	# 71	13	# 41	13	# 11
14	G (to P7)	14	G (to J7)	14	G (to E7)	14	G (to A7)	
	CN 51		CN 52		CN 53		CN 54	
	1	# 120	1	# 90	1	# 60	1	# 30
	2		2		2		2	
	3	# 118	3	# 88	3	# 58	3	# 28
	4		4		4		4	
	5	# 105	5	# 75	5	# 45	5	# 15
	6		6		6		6	
	7	# 103	7	# 73	7	# 43	7	# 13
	8		8		8		8	
	9	# 119	9	# 89	9	# 59	9	# 29
	10		10		10		10	
	11	G (to S9)	11	G (to L9)	11	G (to G9)	11	G (to C9)
	12		12		12		12	
	13	# 104	13	# 74	13	# 44	13	# 14
	14	G (to P9)	14	G (to J9)	14	G (to E9)	14	G (to A9)

EP-3453 SIGNAL LIST

Probe Connector 1										
	1	2	3	4	5	6	7	8	9	0
A	G	#1	G	#4	G	#7	G	#10	G	#13
B	#2	#3	#5	#6	#8	#9	#11	#12	#14	#15
C	G	#16	G	#19	G	#22	G	#25	G	#28
D	#17	#18	#20	#21	#23	#24	#26	#27	#29	#30
E	G	#31	G	#34	G	#37	G	#40	G	#43
F	#32	#33	#35	#36	#38	#39	#41	#42	#44	#45
G	G	#46	G	#49	G	#52	G	#55	G	#58
H	#47	#48	#50	#51	#53	#54	#56	#57	#59	#60
J	G	#61	G	#64	G	#67	G	#70	G	#73
K	#62	#63	#65	#66	#68	#69	#71	#72	#74	#75
L	G	#76	G	#79	G	#82	G	#85	G	#88
M	#77	#78	#80	#81	#83	#84	#86	#87	#89	#90
N	L/	L		GL	GL		LD			
P	G	#91	G	#94	G	#97	G	#100	G	#103
R	#92	#93	#95	#96	#98	#99	#101	#102	#104	#105
S	G	#106	G	#109	G	#112	G	#115	G	#118
T	#107	#108	#110	#111	#113	#114	#116	#117	#119	#120
U										
V										
W										
X										
Y										
Z										
a										
b										
c	PC18	PC17	PC16	PC15	PC14	PC13	PC12	PC11	GC (GND Common)	

EP-3453 SIGNAL LIST

Probe Connector 2										
	1	2	3	4	5	6	7	8	9	0
A	G	#1	G	#4	G	#7	G	#10	G	#13
B	#2	#3	#5	#6	#8	#9	#11	#12	#14	#15
C	G	#16	G	#19	G	#22	G	#25	G	#28
D	#17	#18	#20	#21	#23	#24	#26	#27	#29	#30
E	G	#31	G	#34	G	#37	G	#40	G	#43
F	#32	#33	#35	#36	#38	#39	#41	#42	#44	#45
G	G	#46	G	#49	G	#52	G	#55	G	#58
H	#47	#48	#50	#51	#53	#54	#56	#57	#59	#60
J	G	#61	G	#64	G	#67	G	#70	G	#73
K	#62	#63	#65	#66	#68	#69	#71	#72	#74	#75
L	G	#76	G	#79	G	#82	G	#85	G	#88
M	#77	#78	#80	#81	#83	#84	#86	#87	#89	#90
N	L/	L		GL	GL		LD			
P	G	#91	G	#94	G	#97	G	#100	G	#103
R	#92	#93	#95	#96	#98	#99	#101	#102	#104	#105
S	G	#106	G	#109	G	#112	G	#115	G	#118
T	#107	#108	#110	#111	#113	#114	#116	#117	#119	#120
U										
V										
W										
X										
Y										
Z										
a										
b										
c	PC28	PC27	PC26	PC25	PC24	PC23	PC22	PC21	GC (GND Common)	



EP-3453 SIGNAL LIST

to  
Probe  
Connector  
2

<b>CN 11</b>		<b>CN 12</b>		<b>CN 13</b>		<b>CN 14</b>	
1	# 108	1	# 78	1	# 48	1	# 18
2		2		2		2	
3	# 106	3	# 76	3	# 46	3	# 16
4		4		4		4	
5	# 93	5	# 63	5	# 33	5	# 3
6		6		6		6	
7	# 91	7	# 61	7	# 31	7	# 1
8		8		8		8	
9	# 107	9	# 77	9	# 47	9	# 17
10		10		10		10	
11	G (to S1)	11	G (to L1)	11	G (to G1)	11	G (to C1)
12		12		12		12	
13	# 92	13	# 62	13	# 32	13	# 2
14	G (to P1)	14	G (to J1)	14	G (to E1)	14	G (to A1)
<b>CN 21</b>		<b>CN 22</b>		<b>CN 23</b>		<b>CN 24</b>	
1	# 111	1	# 81	1	# 51	1	# 21
2		2		2		2	
3	# 109	3	# 79	3	# 49	3	# 19
4		4		4		4	
5	# 96	5	# 66	5	# 36	5	# 6
6		6		6		6	
7	# 94	7	# 64	7	# 34	7	# 4
8		8		8		8	
9	# 120	9	# 80	9	# 50	9	# 20
10		10		10		10	
11	G (to S3)	11	G (to L3)	11	G (to G3)	11	G (to C3)
12		12		12		12	
13	# 96	13	# 65	13	# 35	13	# 5
14	G (to P3)	14	G (to J3)	14	G (to E3)	14	G (to A3)
<b>CN 31</b>		<b>CN 32</b>		<b>CN 33</b>		<b>CN 34</b>	
1	# 114	1	# 84	1	# 54	1	# 24
2		2		2		2	
3	# 112	3	# 82	3	# 52	3	# 22
4		4		4		4	
5	# 99	5	# 69	5	# 39	5	# 9
6		6		6		6	
7	# 97	7	# 97	7	# 37	7	# 7
8		8		8		8	
9	# 113	9	# 83	9	# 53	9	# 23
10		10		10		10	
11	G (to S5)	11	G (to L5)	11	G (to G5)	11	G (to C5)
12		12		12		12	
13	# 98	13	# 68	13	# 38	13	# 8
14	G (to P5)	14	G (to J5)	14	G (to E5)	14	G (to A5)

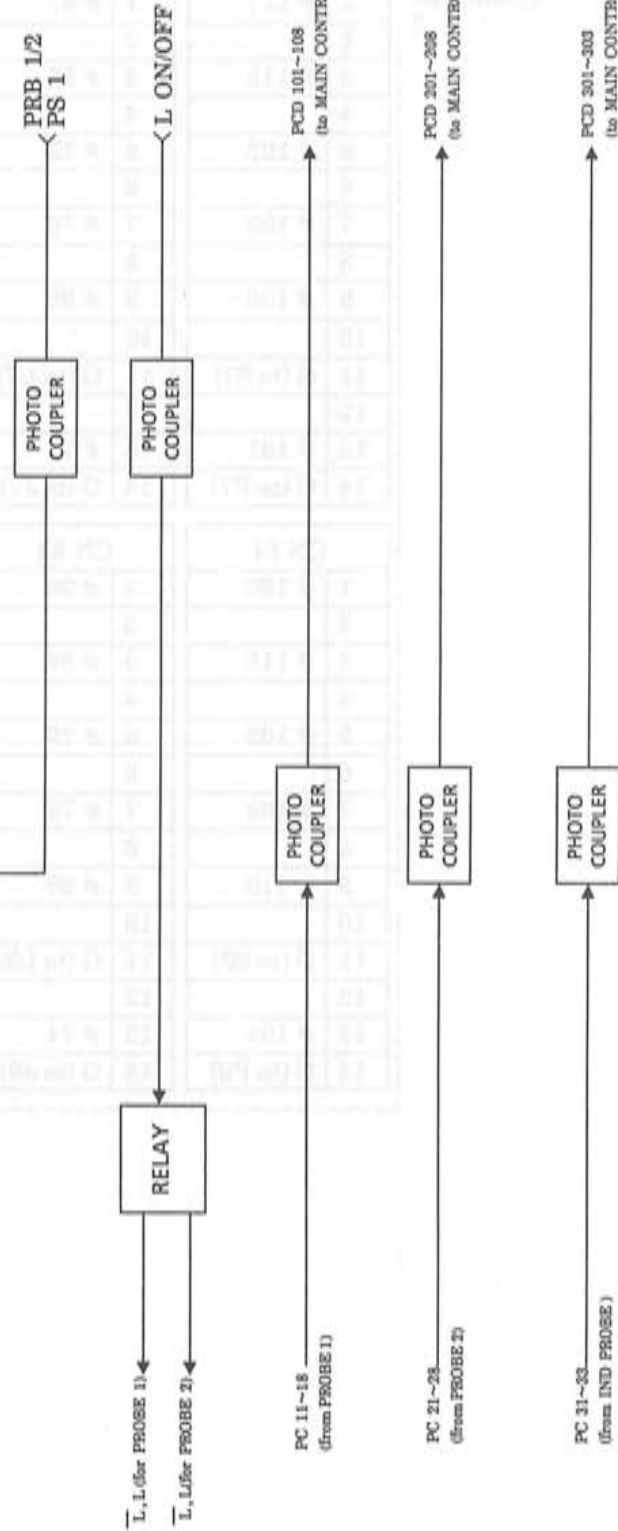
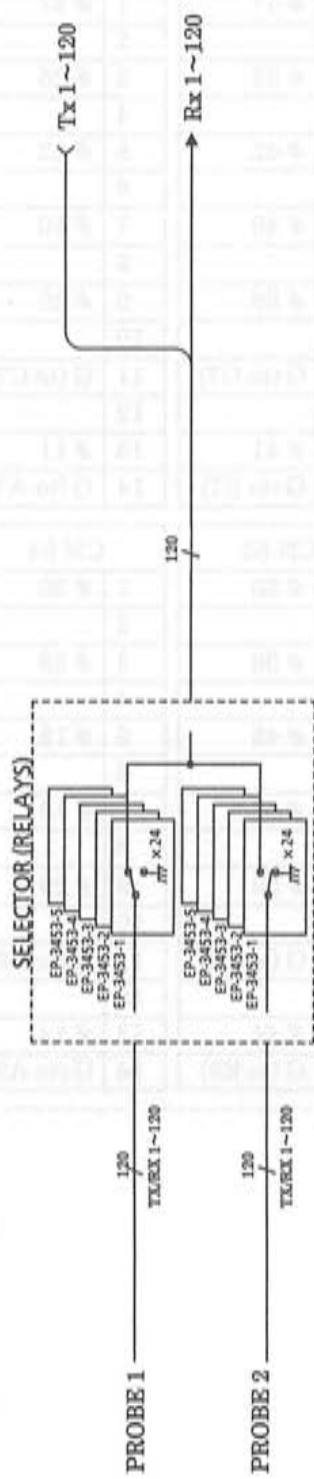
EP-3453 SIGNAL LIST

to  
Probe  
Connector  
2

CN 41		CN 42		CN 43		CN 44	
1	# 117	1	# 87	1	# 57	1	# 27
2		2		2		2	
3	# 115	3	# 85	3	# 55	3	# 25
4		4		4		4	
5	# 102	5	# 72	5	# 42	5	# 12
6		6		6		6	
7	# 100	7	# 70	7	# 40	7	# 10
8		8		8		8	
9	# 106	9	# 86	9	# 56	9	# 26
10		10		10		10	
11	G (to S7)	11	G (to L7)	11	G (to G7)	11	G (to C7)
12		12		12		12	
13	# 101	13	# 71	13	# 41	13	# 11
14	G (to P7)	14	G (to J7)	14	G (to E7)	14	G (to A7)

CN 51		CN 52		CN 53		CN 54	
1	# 120	1	# 90	1	# 60	1	# 30
2		2		2		2	
3	# 118	3	# 88	3	# 58	3	# 28
4		4		4		4	
5	# 105	5	# 75	5	# 45	5	# 15
6		6		6		6	
7	# 103	7	# 73	7	# 43	7	# 13
8		8		8		8	
9	# 119	9	# 89	9	# 59	9	# 29
10		10		10		10	
11	G (to S9)	11	G (to L9)	11	G (to G9)	11	G (to C9)
12		12		12		12	
13	# 104	13	# 74	13	# 44	13	# 14
14	G (to P9)	14	G (to J9)	14	G (to E9)	14	G (to A9)



EP-3453-1~5 各2枚づつ合計10枚のPCBはEP-3454にコネクタで接続されています。  
 10 PCBs, EP-3453-1~5 X 2, are mounted on one EP-3454 by the connectors.

	TITLE 名称 <b>PROBE SELECTOR</b>	MODEL 形名 <b>EP-3454</b>	1/1
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0-5 101-0400 5X SELECT

The PCB consists of the DAMPER BOARD and the PCB CONTROL BOARD. The PCB CONTROL BOARD is shown in Figure 6-17.

SHOWN 100%



6-3 EP-3455 RX SELECT

This PCB consists of the DAMPER circuit, the SELECTOR circuit for selecting 48 of 120 transducers total, and the SELECTOR CONTROL circuit.

SIGNAL LIST

J101		
A	J1	B
A GND	45	A GND
A GND	44	TX 21
A GND	43	TX 69
A GND	42	TX117
A GND	41	TX 22
A GND	40	TX 70
A GND	39	TX118
A GND	38	TX 23
A GND	37	TX 71
A GND	36	TX119
A GND	35	TX 24
A GND	34	TX 72
A GND	33	TX120
A GND	32	A GND
	31	
	30	
	29	
	28	
	27	
	26	
	25	
	24	
	23	
	22	
	21	
	20	
	19	
	18	
	17	
	16	
SLCK23	15	SLCK22
SLCK21	14	SLCK20
SLCK19	13	SLCK18
SLCK17	12	SLCK16
SLCK15	11	SLCK14
SLCK13	10	SLCK12
SEL 7	9	SEL 6
SEL 5	8	SEL 4
SEL 3	7	SEL 2
SEL 1	6	SEL 0
D/	5	D/
-5V	4	-5V
+5V	3	+5V
A GND	2	A GND
A GND	1	A GND

J101		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+5V	43	+5V
A GND	42	A GND
A GND	41	TX 1
A GND	40	TX 49
A GND	39	TX 97
A GND	38	TX 2
A GND	37	TX 50
A GND	36	TX 98
A GND	35	TX 3
A GND	34	TX 51
A GND	33	TX 99
A GND	32	TX 4
A GND	31	TX 52
A GND	30	TX100
A GND	29	A GND
A GND	28	TX 5
A GND	27	TX 53
A GND	26	TX101
A GND	25	TX 6
A GND	24	TX 54
A GND	23	TX102
A GND	22	TX 7
A GND	21	TX 55
A GND	20	TX103
A GND	19	TX 8
A GND	18	TX 56
A GND	17	TX104
A GND	16	A GND
A GND	15	TX 17
A GND	14	TX 65
A GND	13	TX113
A GND	12	TX 18
A GND	11	TX 66
A GND	10	TX114
A GND	9	TX 19
A GND	8	TX 67
A GND	7	TX115
A GND	6	TX 20
A GND	5	TX 68
A GND	4	TX116
A GND	3	A GND
	2	
A GND	1	A GND

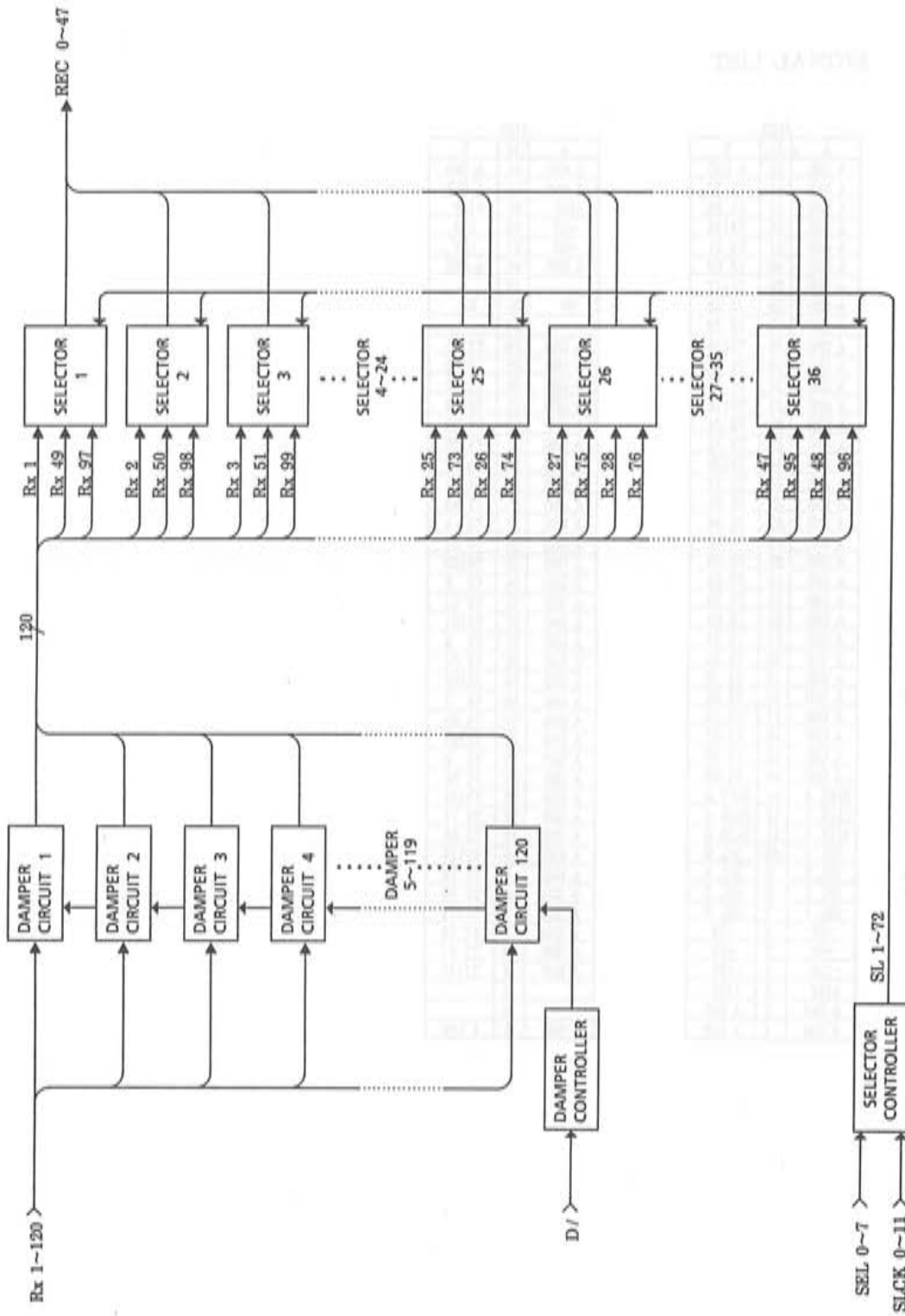
P3				P4				P5			
1	Rx 9	26	GND	1	Rx 25	26	GND	1	Rx 37	26	GND
2	GND	27	Rx 61	2	GND	27	Rx 79	2	GND	27	Rx 91
3	Rx 57	28	GND	3	Rx 73	28	GND	3	Rx 85	28	GND
4	GND	29	Rx 109	4	GND	29	Rx 32	4	GND	29	Rx 44
5	Rx 105	30	GND	5	Rx 26	30	GND	5	Rx 38	30	GND
6	GND	31	Rx 14	6	GND	31	Rx 80	6	GND	31	Rx 92
7	Rx 10	32	GND	7	Rx 74	32	GND	7	Rx 86	32	GND
8	GND	33	Rx 62	8	GND	33	Rx 33	8	GND	33	Rx 45
9	Rx 58	34	GND	9	Rx 27	34	GND	9	Rx 39	34	GND
10	GND	35	Rx 110	10	GND	35	Rx 81	10	GND	35	Rx 93
11	Rx 106	36	GND	11	Rx 75	36	GND	11	Rx 87	36	GND
12	GND	37	Rx 15	12	GND	37	Rx 34	12	GND	37	Rx 46
13	Rx 11	38	GND	13	Rx 28	38	GND	13	Rx 40	38	GND
14	GND	39	Rx 63	14	GND	39	Rx 82	14	GND	39	Rx 94
15	Rx 59	40	GND	15	Rx 76	40	GND	15	Rx 88	40	GND
16	GND	41	Rx 111	16	GND	41	Rx 35	16	GND	41	Rx 47
17	Rx 107	42	GND	17	Rx 29	42	GND	17	Rx 41	42	GND
18	GND	43	Rx 16	18	GND	43	Rx 83	18	GND	43	Rx 95
19	Rx 12	44	GND	19	Rx 77	44	GND	19	Rx 89	44	GND
20	GND	45	Rx 64	20	GND	45	Rx 36	20	GND	45	Rx 48
21	Rx 60	46	GND	21	Rx 30	46	GND	21	Rx 42	46	GND
22	GND	47	Rx 112	22	GND	47	Rx 84	22	GND	47	Rx 96
23	Rx 108	48	GND	23	Rx 78	48	GND	23	Rx 90	48	GND
24	GND	49		24	GND	49		24	GND	49	
25	Rx 13	50	GND	25	Rx 31	50	GND	25	Rx 43	50	GND

J6				J7				J8			
1	GND	2	REC 0	1	REC 12	2	GND	1	REC 24	2	GND
3	GND	4	REC 1	3	REC 13	4	GND	3	REC 25	4	GND
5	GND	6	REC 2	5	REC 14	6	GND	5	REC 26	6	GND
7	GND	8	REC 3	7	REC 15	8	GND	7	REC 27	8	GND
9	GND	10	REC 4	9	GND	10	REC 16	9	REC 28	10	GND
11	GND	12	REC 5	11	GND	12	REC 17	11	REC 29	12	GND
13	GND	14	REC 6	13	GND	14	REC 18	13	REC 30	14	GND
15	GND	16	REC 7	15	GND	16	REC 19	15	REC 31	16	GND
17	REC 8	18	GND	17	GND	18	REC 20	17	REC 32	18	GND
19	REC 9	20	GND	19	GND	20	REC 21	19	REC 33	20	GND
21	REC 10	22	GND	21	GND	22	REC 22	21	REC 34	22	GND
23	REC 11	24	GND	23	GND	24	REC 23	23	REC 35	24	GND

Section 6 PCB Block Diagram

J9				J1				J2			
1	REC 36	2	GND	GND	16	REC 1	1	GND	16	REC 1	1
3	REC 37	4	GND	GND	17	REC 2	2	GND	17	REC 2	2
5	REC 38	6	GND	GND	18	REC 3	3	GND	18	REC 3	3
7	REC 39	8	GND	GND	19	REC 4	4	GND	19	REC 4	4
9	REC 40	10	GND	GND	20	REC 5	5	GND	20	REC 5	5
11	REC 41	12	GND	GND	21	REC 6	6	GND	21	REC 6	6
13	REC 42	14	GND	GND	22	REC 7	7	GND	22	REC 7	7
15	REC 43	16	GND	GND	23	REC 8	8	GND	23	REC 8	8
17	REC 44	18	GND	GND	24	REC 9	9	GND	24	REC 9	9
19	REC 45	20	GND	GND	25	REC 10	10	GND	25	REC 10	10
21	REC 46	22	GND	GND	26	REC 11	11	GND	26	REC 11	11
23	REC 47	24	GND	GND	27	REC 12	12	GND	27	REC 12	12
					28	REC 13	13	GND	28	REC 13	13
					29	REC 14	14	GND	29	REC 14	14
					30	REC 15	15	GND	30	REC 15	15
					31	REC 16	16	GND	31	REC 16	16
					32	REC 17	17	GND	32	REC 17	17
					33	REC 18	18	GND	33	REC 18	18
					34	REC 19	19	GND	34	REC 19	19
					35	REC 20	20	GND	35	REC 20	20
					36	REC 21	21	GND	36	REC 21	21
					37	REC 22	22	GND	37	REC 22	22
					38	REC 23	23	GND	38	REC 23	23
					39	REC 24	24	GND	39	REC 24	24
					40	REC 25	25	GND	40	REC 25	25
					41	REC 26	26	GND	41	REC 26	26
					42	REC 27	27	GND	42	REC 27	27
					43	REC 28	28	GND	43	REC 28	28
					44	REC 29	29	GND	44	REC 29	29
					45	REC 30	30	GND	45	REC 30	30
					46	REC 31	31	GND	46	REC 31	31
					47	REC 32	32	GND	47	REC 32	32
					48	REC 33	33	GND	48	REC 33	33
					49	REC 34	34	GND	49	REC 34	34
					50	REC 35	35	GND	50	REC 35	35





6-4 EP-3456 TX1

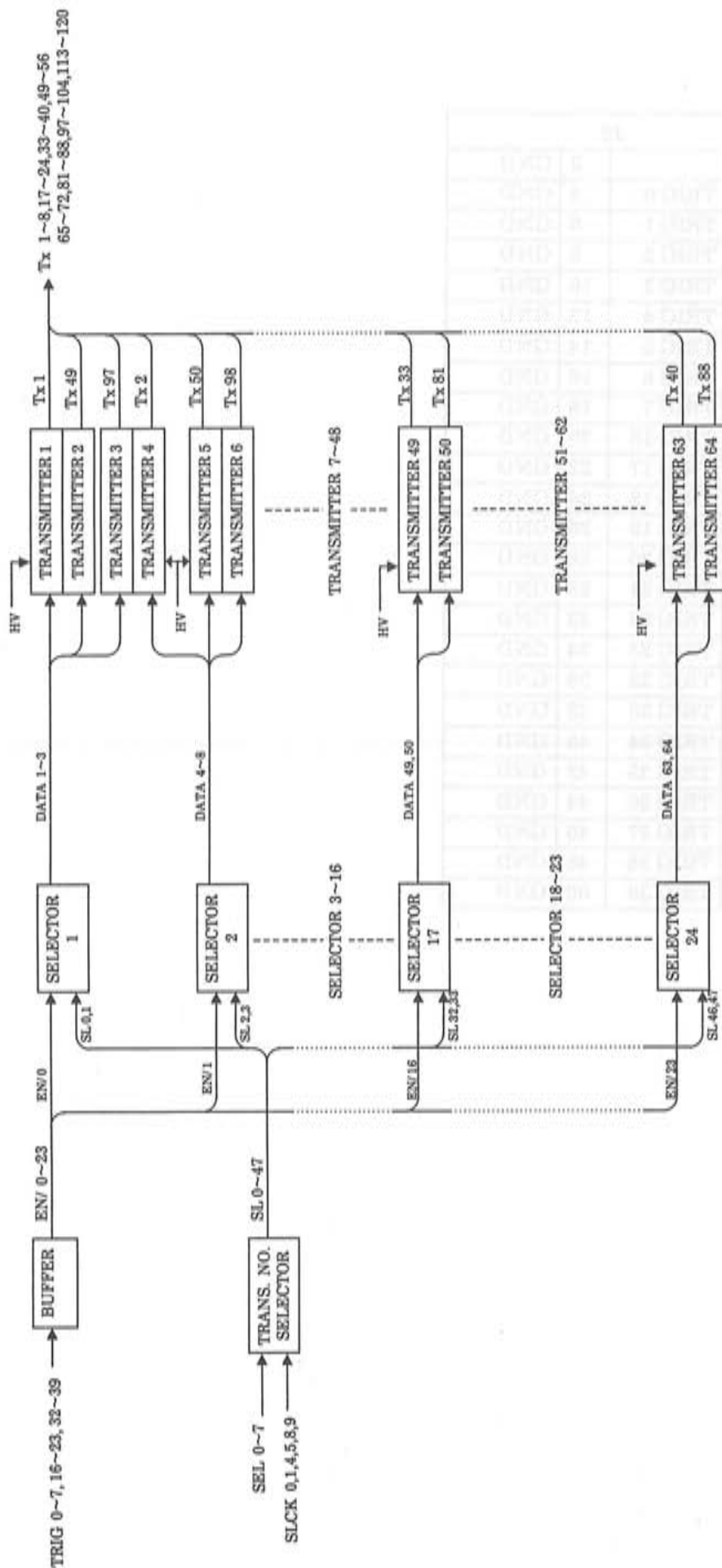
One set of two PCBs, EP-3456(TX1) and EP-3457(TX2), consists of 120 transmission pulse generators for oscillating transducers.  
 EP-3456(TX1) has 64 transmitters.

SIGNAL LIST

J102		
A	J1	B
A GND	45	A GND
A GND	44	TX 20
A GND	43	TX 68
A GND	42	TX118
A GND	41	TX 21
A GND	40	TX 69
A GND	39	TX117
A GND	38	TX 22
A GND	37	TX 70
A GND	36	TX118
A GND	35	TX 23
A GND	34	TX 71
A GND	33	TX119
A GND	32	TX 24
A GND	31	TX 72
A GND	30	TX120
A GND	29	TX 33
A GND	28	TX 81
A GND	27	TX 34
A GND	26	TX 82
A GND	25	TX 35
A GND	24	TX 83
A GND	23	TX 36
A GND	22	TX 84
A GND	21	TX 37
A GND	20	TX 85
A GND	19	TX 38
A GND	18	TX 86
A GND	17	TX 39
A GND	16	TX 87
A GND	15	TX 40
A GND	14	TX 88
SLCK 9	13	SLCK 8
SLCK 5	12	SLCK 4
SLCK 1	11	SLCK 0
SEL 7	10	SEL 6
SEL 5	9	SEL 4
SEL 3	8	SEL 2
SEL 1	7	SEL 0
-5V	6	-5V
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J102		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
+5V	42	+5V
-5V	41	-5V
A GND	40	A GND
	39	
HW	38	HW
	37	
A GND	36	TX 1
A GND	35	TX 49
A GND	34	TX 97
A GND	33	TX 2
A GND	32	TX 50
A GND	31	TX 98
A GND	30	TX 3
A GND	29	TX 51
A GND	28	TX 99
A GND	27	TX 4
A GND	26	TX 52
A GND	25	TX100
A GND	24	TX 5
A GND	23	TX 53
A GND	22	TX101
A GND	21	TX 6
A GND	20	TX 54
A GND	19	TX102
A GND	18	TX 7
A GND	17	TX 55
A GND	16	TX103
A GND	15	TX 8
A GND	14	TX 56
A GND	13	TX104
A GND	12	TX 17
A GND	11	TX 65
A GND	10	TX113
A GND	9	TX 18
A GND	8	TX 66
A GND	7	TX114
A GND	6	TX 19
A GND	5	TX 67
A GND	4	TX115
	3	
	2	
A GND	1	A GND

J3			
1		2	GND
3	TRIG 0	4	GND
5	TRIG 1	6	GND
7	TRIG 2	8	GND
9	TRIG 3	10	GND
11	TRIG 4	12	GND
13	TRIG 5	14	GND
15	TRIG 6	16	GND
17	TRIG 7	18	GND
19	TRIG 16	20	GND
21	TRIG 17	22	GND
23	TRIG 18	24	GND
25	TRIG 19	26	GND
27	TRIG 20	28	GND
29	TRIG 21	29	GND
31	TRIG 22	32	GND
33	TRIG 23	34	GND
35	TRIG 32	36	GND
37	TRIG 33	38	GND
39	TRIG 34	40	GND
41	TRIG 35	42	GND
43	TRIG 36	44	GND
45	TRIG 37	46	GND
47	TRIG 38	48	GND
49	TRIG 39	50	GND



<b>Aloka</b>	TITLE 名称 <b>TX 1</b>	MODEL 形名 <b>EP-3456</b>	<b>1 / 1</b>
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2 X 2 7088-43 040

FOR USE OF THE USER (BY 8401100) FOR THE 8401100 (2001) AND 8401100 (2002) CONTAINS THE FOLLOWING INFORMATION:  
FOR THE 8401100 (2001) AND 8401100 (2002) CONTAINS THE FOLLOWING INFORMATION:  
FOR THE 8401100 (2001) AND 8401100 (2002) CONTAINS THE FOLLOWING INFORMATION:

TABLE 1

Item	Description	Quantity	Part Number	Notes
1	...	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...
6	...	...	...	...
7	...	...	...	...
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...
11	...	...	...	...
12	...	...	...	...
13	...	...	...	...
14	...	...	...	...
15	...	...	...	...
16	...	...	...	...
17	...	...	...	...
18	...	...	...	...
19	...	...	...	...
20	...	...	...	...
21	...	...	...	...
22	...	...	...	...
23	...	...	...	...
24	...	...	...	...
25	...	...	...	...
26	...	...	...	...
27	...	...	...	...
28	...	...	...	...
29	...	...	...	...
30	...	...	...	...
31	...	...	...	...
32	...	...	...	...
33	...	...	...	...
34	...	...	...	...
35	...	...	...	...
36	...	...	...	...
37	...	...	...	...
38	...	...	...	...
39	...	...	...	...
40	...	...	...	...
41	...	...	...	...
42	...	...	...	...
43	...	...	...	...
44	...	...	...	...
45	...	...	...	...
46	...	...	...	...
47	...	...	...	...
48	...	...	...	...
49	...	...	...	...
50	...	...	...	...

6-5 EP-3457 TX 2

One set of two PCBs, EP-3456(TX1) and EP-3457(TX2), consists of 120 transmission pulse generators for oscillating transducers.  
 EP-3457(TX2) has 56 transmitters.

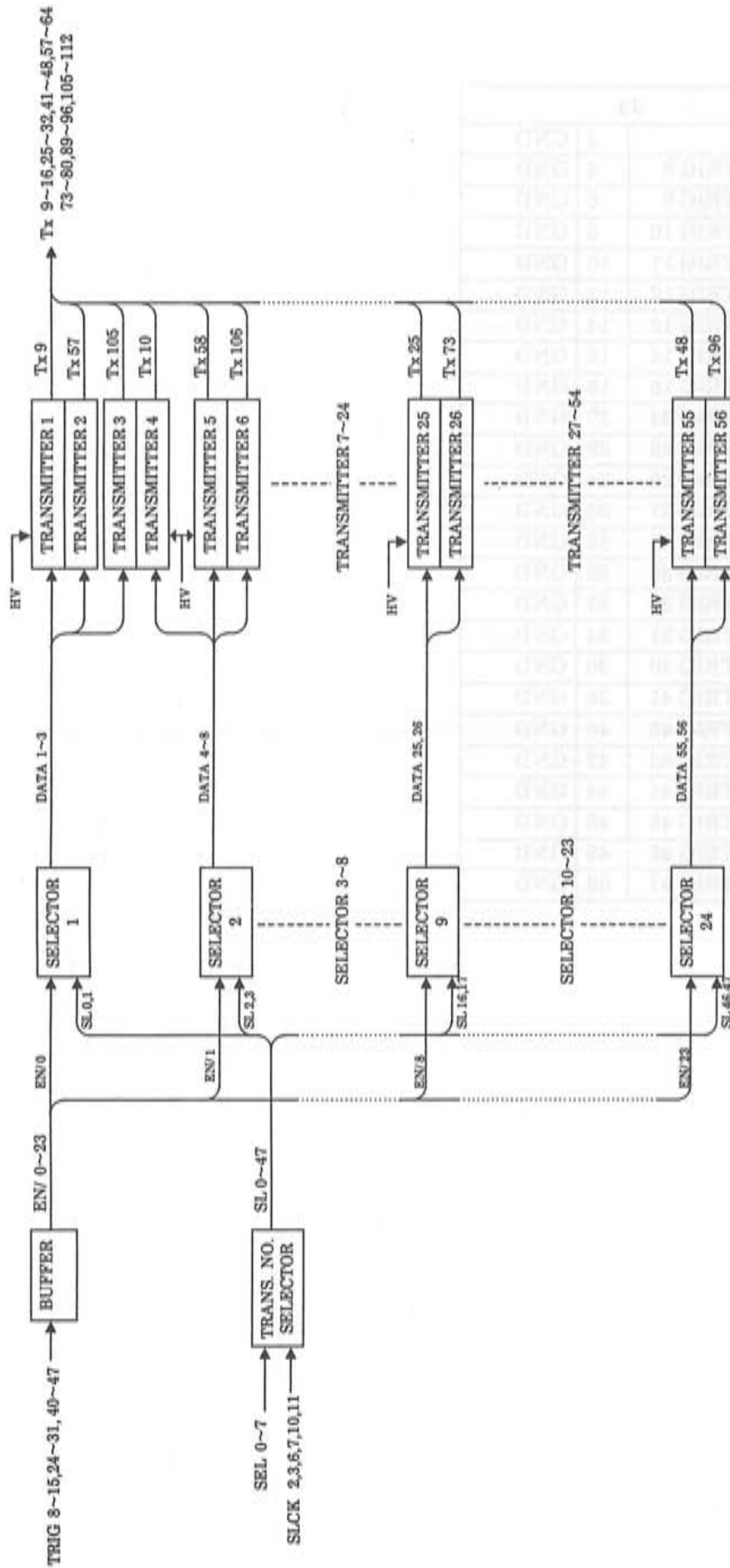
SIGNAL LIST

J103		
A	J1	B
A GND	45	A GND
A GND	44	TX 77
A GND	43	TX 30
A GND	42	TX 78
A GND	41	TX 31
A GND	40	TX 79
A GND	39	TX 32
A GND	38	TX 80
A GND	37	TX 41
A GND	36	TX 89
A GND	35	TX 42
A GND	34	TX 90
A GND	33	TX 43
A GND	32	TX 91
A GND	31	TX 44
A GND	30	TX 92
A GND	29	TX 45
A GND	28	TX 93
A GND	27	TX 46
A GND	26	TX 94
A GND	25	TX 47
A GND	24	TX 95
A GND	23	TX 48
A GND	22	TX 96
USBLK/	21	S/L
FADRS 7	20	FADRS 6
FADRS 5	19	FADRS 4
FADRS 3	18	FADRS 2
FADRS 1	17	FADRS 0
SLCK11	16	SLCK10
SLCK 9	15	SLCK 8
SLCK 7	14	SLCK 6
SLCK 5	13	SLCK 4
SLCK 3	12	SLCK 2
SLCK 1	11	SLCK 0
SEL 7	10	SEL 6
SEL 5	9	SEL 4
SEL 3	8	SEL 2
SEL 1	7	SEL 0
-5V	6	-5V
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J103		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
+5V	42	+5V
-5V	41	-5V
A GND	40	A GND
	39	
IV	38	IV
	37	
A GND	36	TX 9
A GND	35	TX 57
A GND	34	TX105
A GND	33	TX 10
A GND	32	TX 58
A GND	31	TX106
A GND	30	TX 11
A GND	29	TX 59
A GND	28	TX107
A GND	27	TX 12
A GND	26	TX 60
A GND	25	TX108
A GND	24	TX 13
A GND	23	TX 61
A GND	22	TX109
A GND	21	TX 14
A GND	20	TX 62
A GND	19	TX110
A GND	18	TX 15
A GND	17	TX 63
A GND	16	TX111
A GND	15	TX 16
A GND	14	TX 64
A GND	13	TX112
A GND	12	TX 25
A GND	11	TX 73
A GND	10	TX 26
A GND	9	TX 74
A GND	8	TX 27
A GND	7	TX 75
A GND	6	TX 28
A GND	5	TX 76
A GND	4	TX 29
	3	
	2	
A GND	1	A GND

J3			
1		2	GND
3	TRIG 8	4	GND
5	TRIG 9	6	GND
7	TRIG 10	8	GND
9	TRIG 11	10	GND
11	TRIG 12	12	GND
13	TRIG 13	14	GND
15	TRIG 14	16	GND
17	TRIG 15	18	GND
19	TRIG 24	20	GND
21	TRIG 25	22	GND
23	TRIG 26	24	GND
25	TRIG 27	26	GND
27	TRIG 28	28	GND
29	TRIG 29	29	GND
31	TRIG 30	32	GND
33	TRIG 31	34	GND
35	TRIG 40	36	GND
37	TRIG 41	38	GND
39	TRIG 42	40	GND
41	TRIG 43	42	GND
43	TRIG 44	44	GND
45	TRIG 45	46	GND
47	TRIG 46	48	GND
49	TRIG 47	50	GND





<p><b>Aloka</b></p>	<p>TITLE 名称 <b>TX 2</b></p>	<p>MODEL 型号 <b>EP-3457</b></p>	<p>1 / 1</p>
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5/14/02 10:00 AM 2-3

PCB Block Diagram

PCB Block Diagram

PCB	Block	Value	Unit
1	1	1	
1	2	1	
1	3	1	
1	4	1	
1	5	1	
1	6	1	
1	7	1	
1	8	1	
1	9	1	
1	10	1	
1	11	1	
1	12	1	
1	13	1	
1	14	1	
1	15	1	
1	16	1	
1	17	1	
1	18	1	
1	19	1	
1	20	1	
1	21	1	
1	22	1	
1	23	1	
1	24	1	
1	25	1	
1	26	1	
1	27	1	
1	28	1	
1	29	1	
1	30	1	
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1	94	1	
1	95	1	
1	96	1	
1	97	1	
1	98	1	
1	99	1	
1	100	1	

PCB	Block	Value	Unit
1	1	1	
1	2	1	
1	3	1	
1	4	1	
1	5	1	
1	6	1	
1	7	1	
1	8	1	
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1	94	1	
1	95	1	
1	96	1	
1	97	1	
1	98	1	
1	99	1	
1	100	1	



6-6 EP-3458 Pre AMP

It consists of 48 Pre Amp circuits.

SIGNAL LIST

J104		
A	J1	B
A GND	45	A GND
REC' 30	44	REC' 31
A GND	43	A GND
REC' 32	42	REC' 33
REC' 34	41	REC' 35
REC' 36	40	REC' 37
REC' 38	39	REC' 39
A GND	38	A GND
REC' 40	37	REC' 41
REC' 42	36	REC' 43
REC' 44	35	REC' 45
REC' 46	34	REC' 47
A GND	33	A GND
	32	
	31	
	30	
	29	
	28	
	27	
	26	
	25	
	24	
	23	
	22	
	21	
	20	
	19	
	18	
	17	
	16	
	15	
	14	
	13	
	12	
	11	
	10	
A GND	9	PRE STC
	8	
	7	
-5V	6	-5V
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

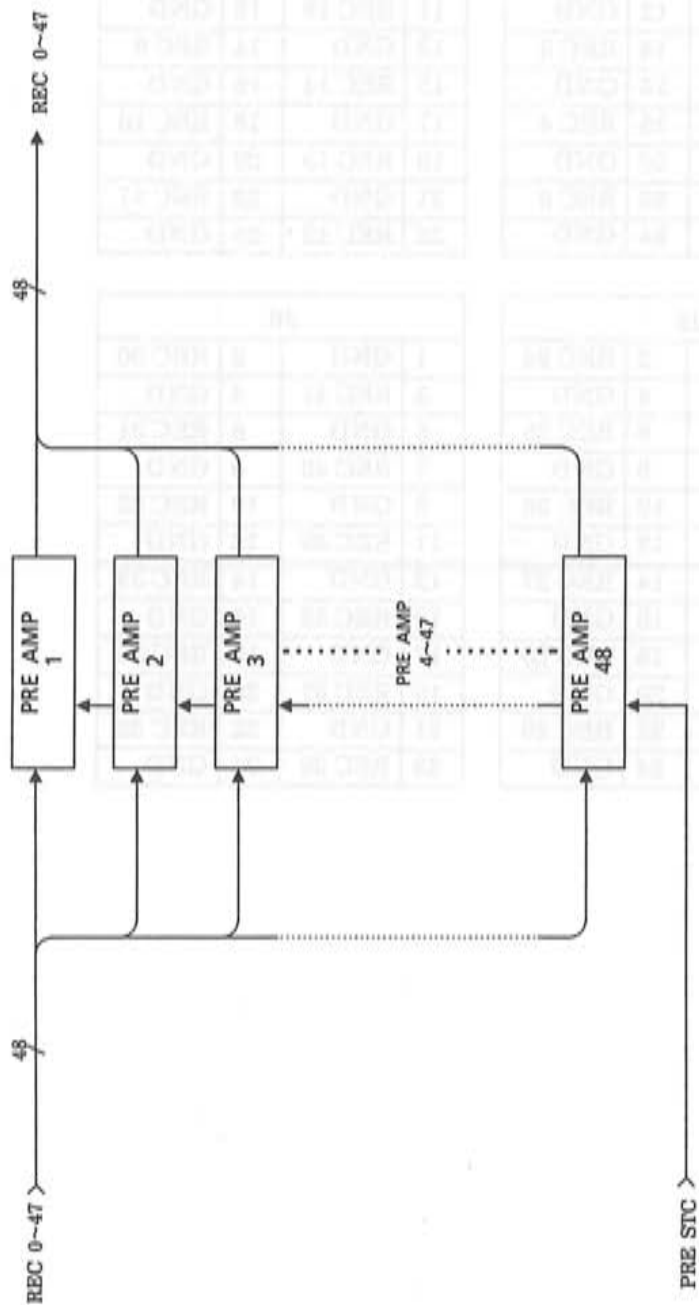
J104		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
+5V	42	+5V
-5V	41	-5V
A GND	40	A GND
A GND	39	A GND
REC 0	38	REC 1
REC 2	37	REC 3
REC 4	36	REC 5
REC 6	35	REC 7
A GND	34	A GND
REC 8	33	REC 9
REC10	32	REC11
REC12	31	REC13
REC14	30	REC15
A GND	29	A GND
REC16	28	REC17
REC18	27	REC19
REC20	26	REC21
REC22	25	REC23
A GND	24	A GND
REC24	23	REC25
REC26	22	REC27
REC28	21	REC29
A GND	20	A GND
	19	
	18	
	17	
	16	
	15	
	14	
	13	
	12	
	11	
	10	
	9	
	8	
	7	
	6	
	5	
	4	
	3	
	2	
A GND	1	A GND

J3			
1	GND	2	REC 0
3	REC 23	4	GND
5	GND	6	REC 1
7	REC 22	8	GND
9	GND	10	REC 2
11	REC 21	12	GND
13	GND	14	REC 3
15	REC 20	16	GND
17	GND	18	REC 4
19	REC 16	20	GND
21	GND	22	REC 5
23	REC 18	24	GND

J4			
1	GND	2	REC 6
3	REC 17	4	GND
5	GND	6	REC 7
7	REC 16	8	GND
9	GND	10	REC 8
11	REC 15	12	GND
13	GND	14	REC 9
15	REC 14	16	GND
17	GND	18	REC 10
19	REC 13	20	GND
21	GND	22	REC 11
23	REC 12	24	GND

J5			
1	GND	2	REC 24
3	REC 47	4	GND
5	GND	6	REC 25
7	REC 46	8	GND
9	GND	10	REC 26
11	REC 45	12	GND
13	GND	14	REC 27
15	REC 44	16	GND
17	GND	18	REC 28
19	REC 43	20	GND
21	GND	22	REC 29
23	REC 42	24	GND

J6			
1	GND	2	REC 30
3	REC 41	4	GND
5	GND	6	REC 31
7	REC 40	8	GND
9	GND	10	REC 32
11	REC 39	12	GND
13	GND	14	REC 33
15	REC 38	16	GND
17	GND	18	REC 34
19	REC 37	20	GND
21	GND	22	REC 35
23	REC 36	24	GND



TITLE 名称	Pre AMP	MODEL 型号 EP-3458	1/1
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BUDGET 88-93

7.9

THIS TABLE IS A SUMMARY OF THE BUDGET FOR THE FISCAL YEAR 1988-89. THE BUDGET IS DIVIDED INTO FOUR CATEGORIES: PERSONNEL, TRAVEL, CONTRACTS, AND OTHER. THE TOTAL BUDGET FOR THE YEAR IS \$1,000,000. THE BUDGET IS SUBJECT TO CHANGE DURING THE YEAR.

TABLE 1

Category	Sub-Category	Item	Amount	
PERSONNEL	SALARY	Director	120,000	
		Assistant Director	80,000	
		Chief of Staff	60,000	
		Section Chief	50,000	
		Staff	40,000	
		Temporary	30,000	
		Contract	20,000	
		Travel	10,000	
		Other	10,000	
		Grand Total		1,000,000
TRAVEL	Domestic	Transportation	10,000	
		Meals	5,000	
		Accommodation	5,000	
		Other	5,000	
		International	5,000	
		Transportation	5,000	
		Meals	5,000	
		Accommodation	5,000	
		Other	5,000	
		Grand Total		100,000
CONTRACTS	Professional	Consulting	100,000	
		Research	50,000	
		Analysis	50,000	
		Other	50,000	
		Administrative	50,000	
		Printing	50,000	
		Travel	50,000	
		Other	50,000	
		Grand Total		1,000,000
		OTHER	Miscellaneous	Supplies
Equipment	10,000			
Travel	10,000			
Other	10,000			
Grand Total				100,000

6-7 EP-3459 RX FOCUS

Two PCBs used for dynamic focus of received signal consist of five blocks, namely,  
 1) IN-VI-BUFFER, 2) MATRIX SWITCH and MATRIX SWITCH CONTROLLER,  
 3) DELAY-LINE, 4) VARIABLE BAND PASS FILTER, and 5) TRANSFORMER.

SIGNAL LIST

J105		
A	J1	B
A GND	45	A GND
A GND	44	A GND
A GND	43	A GND
A GND	42	A GND
A GND	41	A GND
DSA 0	40	DSA 1
DSA 2	39	DSA 3
DSA 4	38	DSA 5
YSA 0	37	YSA 1
YSA 2	36	GND
GND	35	CKA
R.ADA0	34	R.ADA1
R.ADA2	33	R.ADA3
R.ADA4	32	R.ADA5
RA	31	C.SA/
	30	
D/D GATE	29	
SA 1	28	SA 2
XA3	27	SA 0
XA 1	26	XA 2
D/	25	XA 0
FADRS 6	24	+5V
FADRS 4	23	FADRS 5
FADRS 2	22	FADRS 3
FADRS 0	21	FADRS 1
	20	
	19	
	18	USBLK/
GND	17	GND
ADRS 1	16	ADRS 0
ADRS 3	15	ADRS 2
GND	14	EN1/
DATA 6	13	DATA 7
DATA 4	12	DATA 5
DATA 2	11	DATA 3
DATA 0	10	DATA 1
	9	
	8	
+5.1V	7	+5.1V
	6	
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J105		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5V	41	+5V
-5V	40	-5V
A GND	39	A GND
REC 0	38	REC 1
REC 2	37	REC 3
REC 4	36	REC 5
REC 6	35	REC 7
A GND	34	A GND
REC 8	33	REC 9
REC10	32	REC11
REC12	31	REC13
REC14	30	REC15
A GND	29	A GND
REC16	28	REC17
REC18	27	REC19
REC20	26	REC21
REC22	25	REC23
A GND	24	A GND
REC24	23	REC25
REC26	22	REC27
REC28	21	REC29
REC30	20	REC31
A GND	19	A GND
REC32	18	REC33
REC34	17	REC35
REC36	16	REC37
REC38	15	REC39
A GND	14	A GND
REC40	13	REC41
REC42	12	REC43
REC44	11	REC45
REC46	10	REC47
A GND	9	A GND
A GND	8	RECSEC A
	7	
	6	
	5	
	4	
	3	
	2	
A GND	1	A GND

J106		
A	J1	B
A GND	45	A GND
A GND	44	A GND
A GND	43	A GND
A GND	42	A GND
A GND	41	A GND
DSB 0	40	DSB 1
DSB 2	39	DSB 3
DSB 4	38	DSB 5
YSB 0	37	YSB 1
YSB 2	36	GND
GND	35	CKB
R.ADB0	34	R.ADB1
R.ADB2	33	R.ADB3
R.ADB4	32	R.ADB5
RB	31	C.SB/
	30	
D/D GATE	29	
SB 1	28	SB 2
XB 3	27	SB 0
XB 1	26	XB 2
D/	25	XB 0
FADRS 6	24	GND
FADRS 4	23	FADRS 5
FADRS 2	22	FADRS 3
FADRS 0	21	FADRS 1
	20	
	19	
	18	USBLK/
GND	17	GND
ADRS 1	16	ADRS 0
ADRS 3	15	ADRS 2
GND	14	EN1/
DATA 6	13	DATA 7
DATA 4	12	DATA 5
DATA 2	11	DATA 3
DATA 0	10	DATA 1
	9	
	8	
+5.1V	7	+5.1V
	6	
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J106		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5V	41	+5V
-5V	40	-5V
A GND	39	A GND
REC 0	38	REC 1
REC 2	37	REC 3
REC 4	36	REC 5
REC 6	35	REC 7
A GND	34	A GND
REC 8	33	REC 9
REC10	32	REC11
REC12	31	REC13
REC14	30	REC15
A GND	29	A GND
REC16	28	REC17
REC18	27	REC19
REC20	26	REC21
REC22	25	REC23
A GND	24	A GND
REC24	23	REC25
REC26	22	REC27
REC28	21	REC29
REC30	20	REC31
A GND	19	A GND
REC32	18	REC33
REC34	17	REC35
REC36	16	REC37
REC38	15	REC39
A GND	14	A GND
REC40	13	REC41
REC42	12	REC43
REC44	11	REC45
REC46	10	REC47
A GND	9	A GND
A GND	8	RECSEC B
	7	
	6	
	5	
	4	
	3	
	2	
A GND	1	A GND

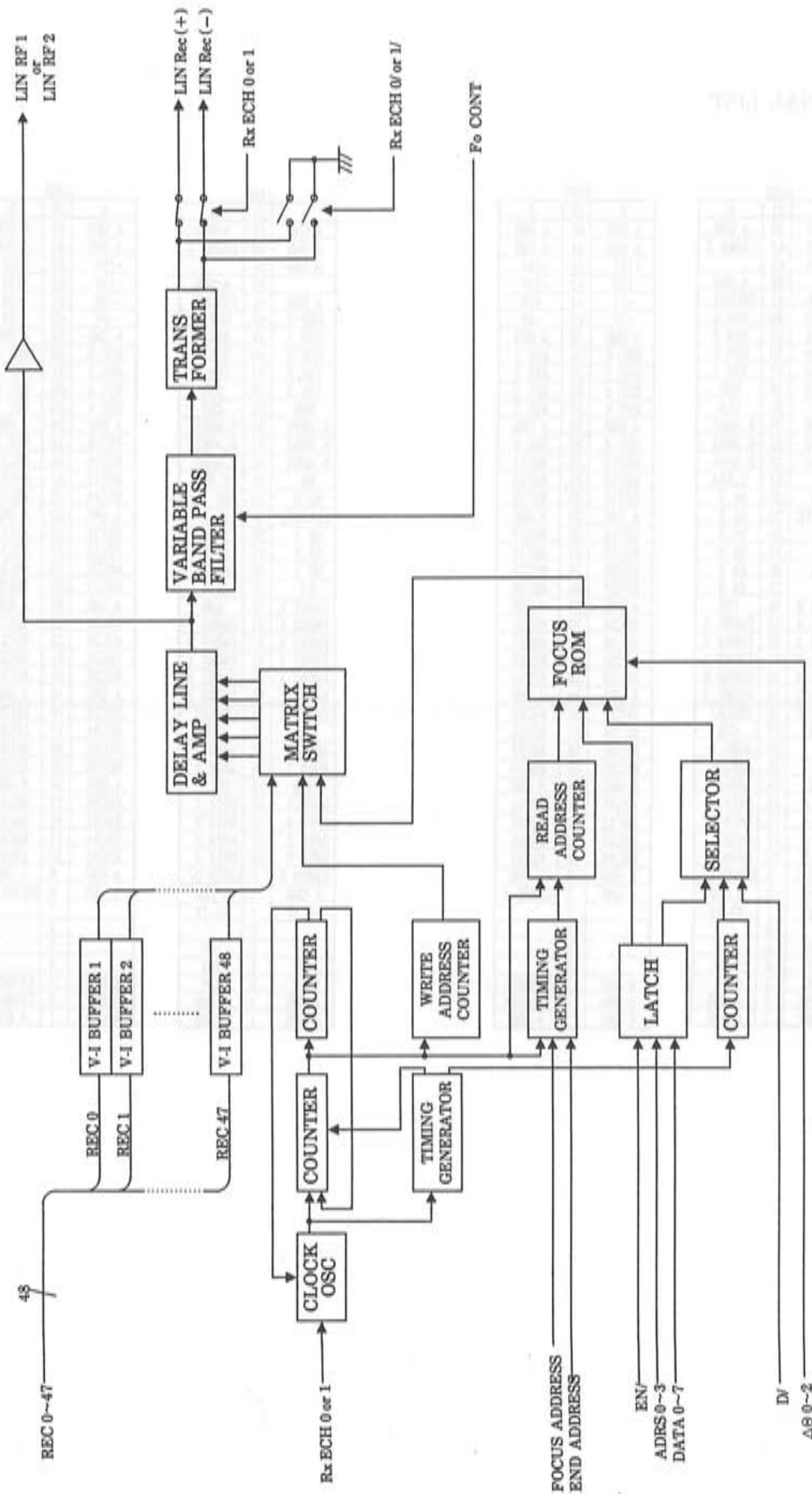
SIGNAL LIST

J107		
A	J1	B
A GND	45	A GND
A GND	44	LINRF 2
A GND	43	
	42	A GND
A GND	41	FOCONT
DSA 0	40	DSA 1
DSA 2	39	DSA 3
DSA 4	38	DSA 5
YSA 0	37	YSA 1
YSA 2	36	GND
GND	35	CKA
R.ADA0	34	R.ADA1
R.ADA2	33	R.ADA3
R.ADA4	32	R.ADA5
RA	31	C.SA/
AQ 0	30	AQ 1
B/D GATE	29	AQ 2
SA 1	28	SA 2
XA 3	27	SA 0
XA 1	26	XA 2
D/	25	XA 0
FADRS 6	24	+5V
FADRS 4	23	FADRS 5
FADRS 2	22	FADRS 3
FADRS 0	21	FADRS 1
EADRS 4	20	EADRS 3
EADRS 2	19	EADRS 1
EADRS 0	18	USBLK/
GND	17	GND
ADRS 1	16	ADRS 0
ADRS 3	15	ADRS 2
GND	14	ENI/
DATA 6	13	DATA 7
DATA 4	12	DATA 5
DATA 2	11	DATA 3
DATA 0	10	DATA 1
RXECH 1	9	RXECH 1/
A GND	8	A GND
+5.1V	7	+5.1V
	6	
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J107		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5V	41	+5V
-5V	40	-5V
A GND	39	A GND
REC 0	38	REC 1
REC 2	37	REC 3
REC 4	36	REC 5
REC 6	35	REC 7
A GND	34	A GND
REC 8	33	REC 9
REC10	32	REC11
REC12	31	REC13
REC14	30	REC15
A GND	29	A GND
REC16	28	REC17
REC18	27	REC19
REC20	26	REC21
REC22	25	REC23
A GND	24	A GND
REC24	23	REC25
REC26	22	REC27
REC28	21	REC29
REC30	20	REC31
A GND	19	A GND
REC32	18	REC33
REC34	17	REC35
REC36	16	REC37
REC38	15	REC39
A GND	14	A GND
REC40	13	REC41
REC42	12	REC43
REC44	11	REC45
REC46	10	REC47
A GND	9	A GND
A GND	8	RECSEC A
	7	
	6	
	5	
	4	
A GND	3	LINREC-
A GND	2	LINREC+
A GND	1	A GND

J108		
A	J1	B
A GND	45	A GND
A GND	44	LINRF 1
A GND	43	
	42	A GND
A GND	41	FOCONT
DSB 0	40	DSB 1
DSB 2	39	DSB 3
DSB 4	38	DSB 5
YSB 0	37	YSB 1
YSB 2	36	GND
GND	35	CKB
R.ADB0	34	R.ADB1
R.ADB2	33	R.ADB3
R.ADB4	32	R.ADB5
RB	31	C.SB/
BQ 0	30	BQ 1
B/D GATE	29	BQ 2
SB 1	28	SB 2
XB 3	27	SB 0
XB 1	26	XB 2
D/	25	XB 0
FADRS 6	24	GND
FADRS 4	23	FADRS 5
FADRS 2	22	FADRS 3
FADRS 0	21	FADRS 1
EADRS 4	20	EADRS 3
EADRS 2	19	EADRS 1
EADRS 0	18	USBLK/
GND	17	GND
ADRS 1	16	ADRS 0
ADRS 3	15	ADRS 2
GND	14	ENI/
DATA 6	13	DATA 7
DATA 4	12	DATA 5
DATA 2	11	DATA 3
DATA 0	10	DATA 1
RXECH 0	9	RXECH 0/
A GND	8	A GND
+5.1V	7	+5.1V
	6	
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J108		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5V	41	+5V
-5V	40	-5V
A GND	39	A GND
REC 0	38	REC 1
REC 2	37	REC 3
REC 4	36	REC 5
REC 6	35	REC 7
A GND	34	A GND
REC 8	33	REC 9
REC10	32	REC11
REC12	31	REC13
REC14	30	REC15
A GND	29	A GND
REC16	28	REC17
REC18	27	REC19
REC20	26	REC21
REC22	25	REC23
A GND	24	A GND
REC24	23	REC25
REC26	22	REC27
REC28	21	REC29
REC30	20	REC31
A GND	19	A GND
REC32	18	REC33
REC34	17	REC35
REC36	16	REC37
REC38	15	REC39
A GND	14	A GND
REC40	13	REC41
REC42	12	REC43
REC44	11	REC45
REC46	10	REC47
A GND	9	A GND
A GND	8	RECSEC B
	7	
	6	
	5	
	4	
A GND	3	LINREC-
A GND	2	LINREC+
A GND	1	A GND



TITLE 名称	RX FOCUS	MODEL 型号	EP-3459
Aloka			1 / 1





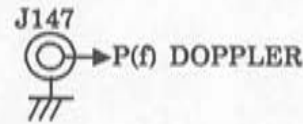
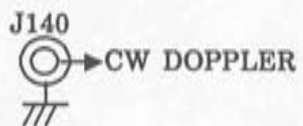
6-8 EP-3461 MAIN AMP & COLOR ITF

This PCB has the function of processing the signals received from the VBPF in the RX FOCUS (EP-3459) before sending the signals to the DSC, the function of selecting either color or PW doppler signal, and the COLOR ITF circuit converting the received signal into the signal which COLOR FLOW PROCESSOR board (EP-5100) needs.

SIGNAL LIST

J109		
A	J1	B
A GND	45	A GND
A GND	44	LINRF 1
A GND	43	LINRF 2
	42	A GND
A GND	41	
	40	ECHANGE
	39	VIDCODE1
	38	
	37	
	36	
	35	B/D GATE
	34	
FLGAIN7	33	FLGAIN6
FLGAIN5	32	FLGAIN4
FLGAIN3	31	FLGAIN2
FLGAIN1	30	FLGAIN0
	29	LIN/
	28	
	27	
	26	
	25	
	24	
	23	
	22	
	21	
	20	
	19	
	18	
	17	
	16	
	15	
RF GATE	14	
WRDCLK	13	
	12	
	11	
GND	10	GND
CAR 0	9	CAR 1
DMCK	8	DMCK/
GND	7	GND
-5V	6	-5V
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

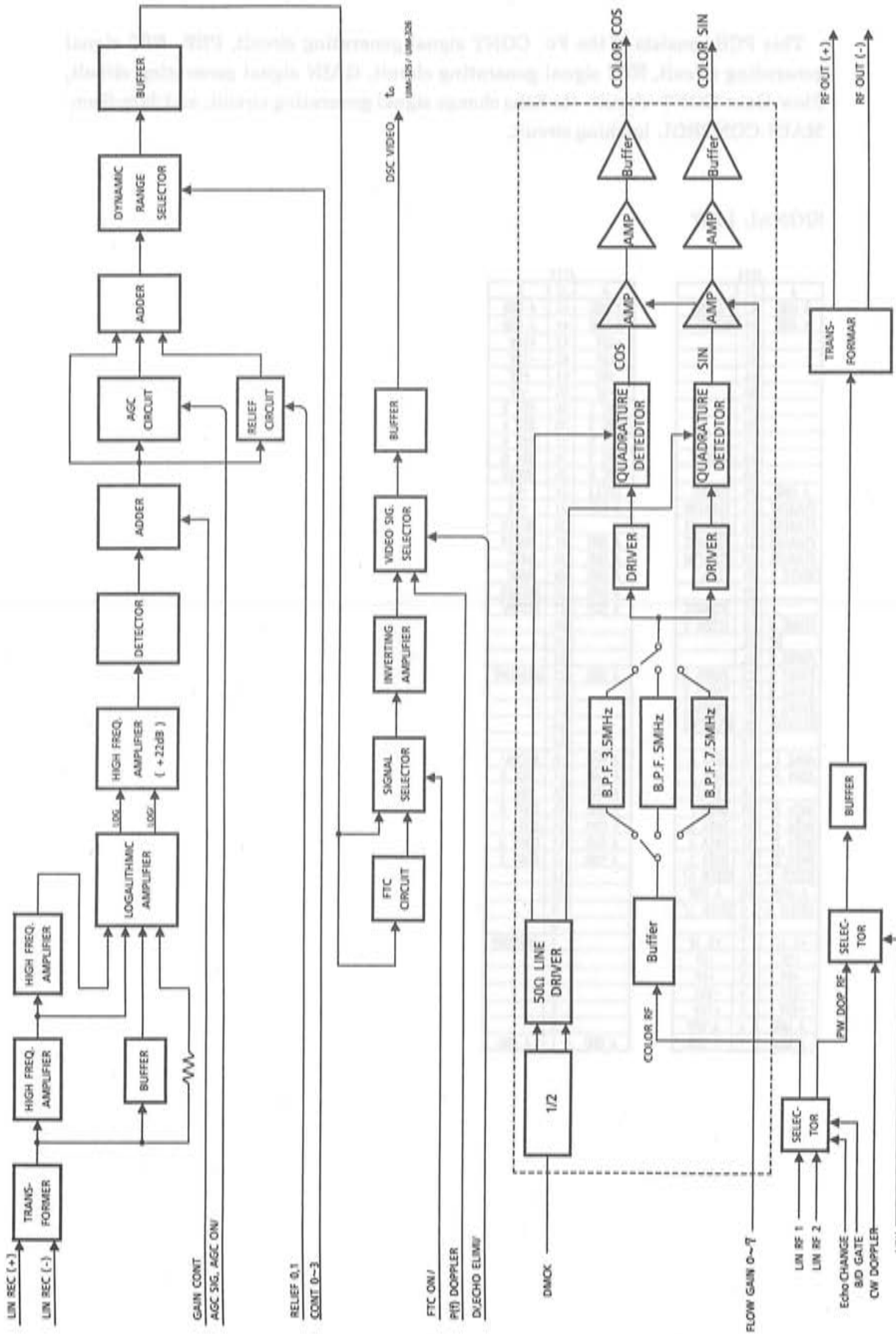
J109		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5V	41	+5V
-5V	40	-5V
	39	
	38	
	37	
	36	
	35	
	34	
	33	
	32	
	31	
	30	
	29	
GND	28	AGCSIG
GND	27	FTCON/
	26	
	25	
	24	
GND	23	GAINCONT
	22	L/S
	21	
	20	
	19	
GND	18	AGCON/
GND	17	REL 0
GND	16	REL 1
GND	15	CONT 0
GND	14	CONT 1
GND	13	CONT 2
GND	12	
	11	
	10	
	9	
A GND	8	A GND
	7	
	6	
	5	
	4	
A GND	3	LINREC-
A GND	2	LINREC+
A GND	1	A GND



J141	
1	RF OUT (-)
2	GND
3	RF OUT (+)
4	GND

J146	
1	GND
2	DSC VIDEO

J160	
1	COLOR SIN
2	GND
3	COLOR COS
4	GND



<b>Aloka</b>	TITLE 名称 <b>MAIN AMP &amp; COLOR ITF</b>	MODEL 形态 <b>EP-3461</b>	<b>1 / 1</b>
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EP-3461\* -1 : SSD-680EX用、破線内の部品取り付け  
 For SSD-680EX, Parts in the dot line are mounted.  
 EP-3461\* -2 : SSD-680STD用、破線内の部品なし  
 For SSD-680STD, Parts in the dot line are not mounted.

6-9

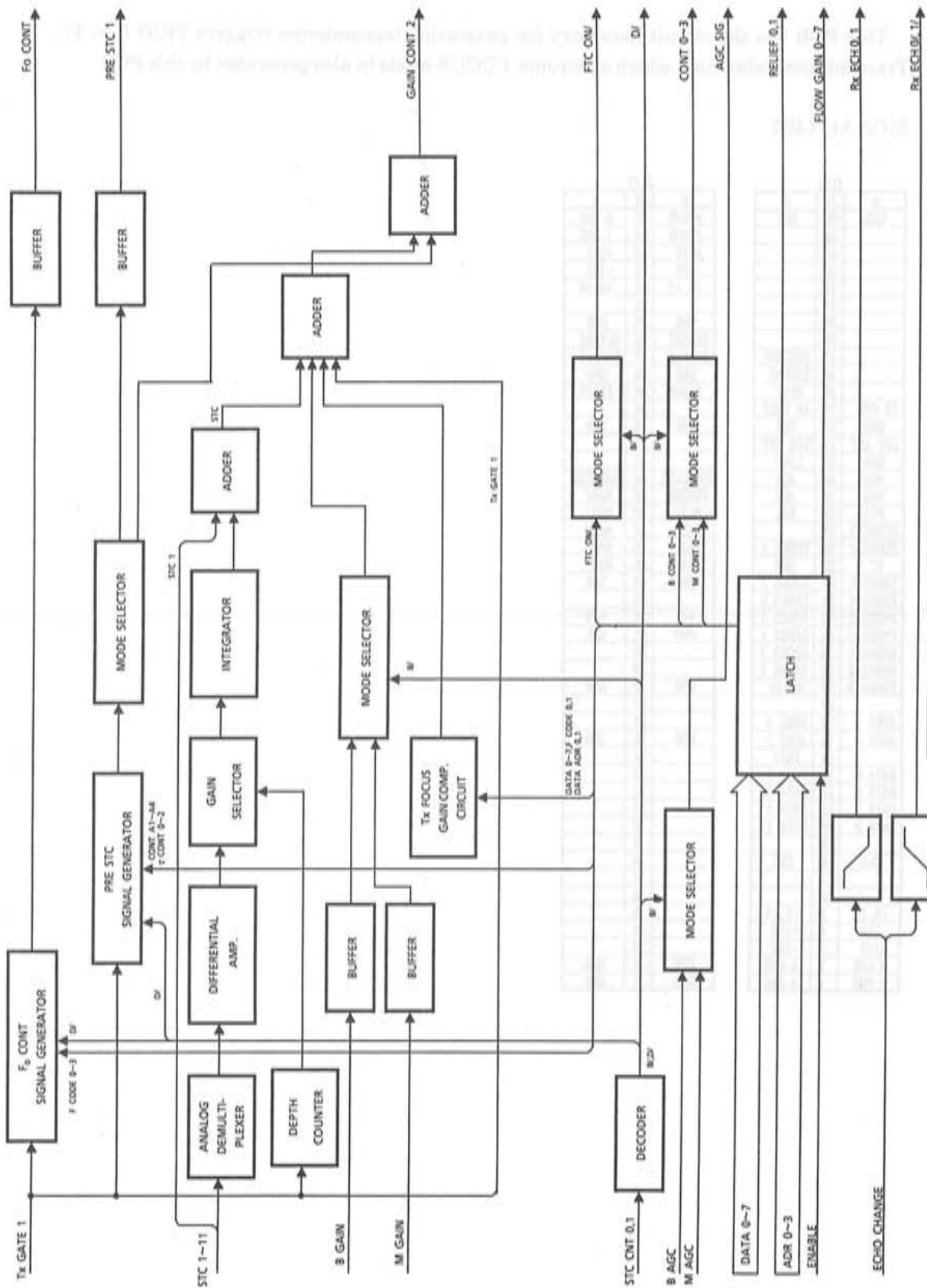
EP-3463 VBPF & GAIN CONTROL

This PCB consists of the F0 CONT signal generating circuit, PRE STC signal generating circuit, STC signal generating circuit, GAIN signal generating circuit, Flow Gain CONT circuit, Rx Echo change signal generating circuit, and data-from-MAIN-CONTROL latching circuit.

SIGNAL LIST

J111		
A	J1	B
A GND	45	A GND
A GND	44	PRESTC 1
	43	
	42	
	41	
	40	
	39	
	38	
	37	
	36	USBLK/
	35	
A GND	34	FOCONT
FLGAIN7	33	FLGAIN8
FLGAIN5	32	FLGAIN4
FLGAIN3	31	FLGAIN2
FLGAIN1	30	FLGAIN0
FLGATE 1	29	LIN/
	28	
	27	ECHANGE
PCODE 0	26	PCODE 1
D/	25	
FADRS 6	24	
FADRS 4	23	FADRS 5
FADRS 2	22	FADRS 3
FADRS 0	21	FADRS 1
STCNTD1	20	STCNTD0
	19	
ADRS 1	18	ADRS 0
ADRS 3	17	ADRS 2
	16	ENO/
DATA 6	15	DATA 7
DATA 4	14	DATA 5
DATA 2	13	DATA 3
DATA 0	12	DATA 1
RXECH 0	11	RXECH 0/
A GND	10	A GND
RXECH 1	9	RXECH 1/
	8	
+5.1V	7	+5.1V
-5V	6	-5V
+5V	5	+5V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J111		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5V	41	+5V
-5V	40	-5V
STC 1	39	STC 2
STC 3	38	STC 4
STC 5	37	STC 6
STC 7	36	STC 8
STC 9	35	STC10
STC11	34	+V1
A GND	33	+V2
	32	MGAIN
A GND	31	BGAIN
A GND	30	BAGC
A GND	29	MAGC
A GND	28	AGCSIG
A GND	27	FTCON/
	26	
	25	
	24	
A GND	23	GAINCONT
	22	
	21	
	20	
	19	
A GND	18	AGCON/
A GND	17	REL 0
A GND	16	REL 1
A GND	15	CONT 0
A GND	14	CONT 1
A GND	13	CONT 2
A GND	12	CONT 3
	11	
	10	
	9	
	8	
	7	PRECONT
	6	
	5	
	4	
	3	
	2	
A GND	1	A GND



<b>Aloka</b>		TITLE 名称 <b>VBPf &amp; GAIN CONTROL</b>	MODEL 型号 <b>EP-3463</b>	1 / 1
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6-10 EP-3464 TX TRIGGER GENE

This PCB has the circuit necessary for generating transmission triggers TRIG 0 to 47. Transmission delay time which electronic FOCUS needs in also generated by this PCB.

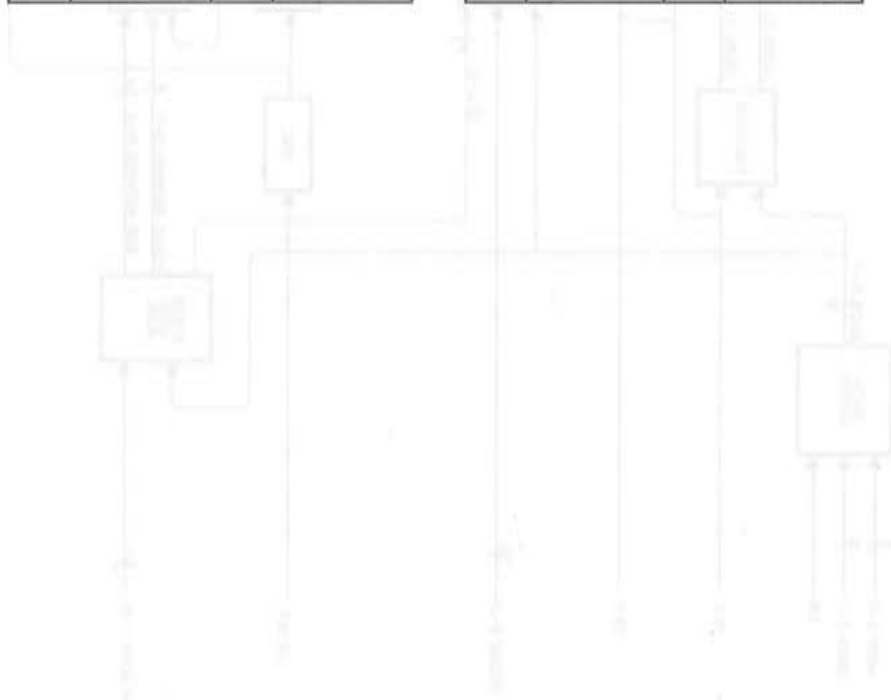
SIGNAL LIST

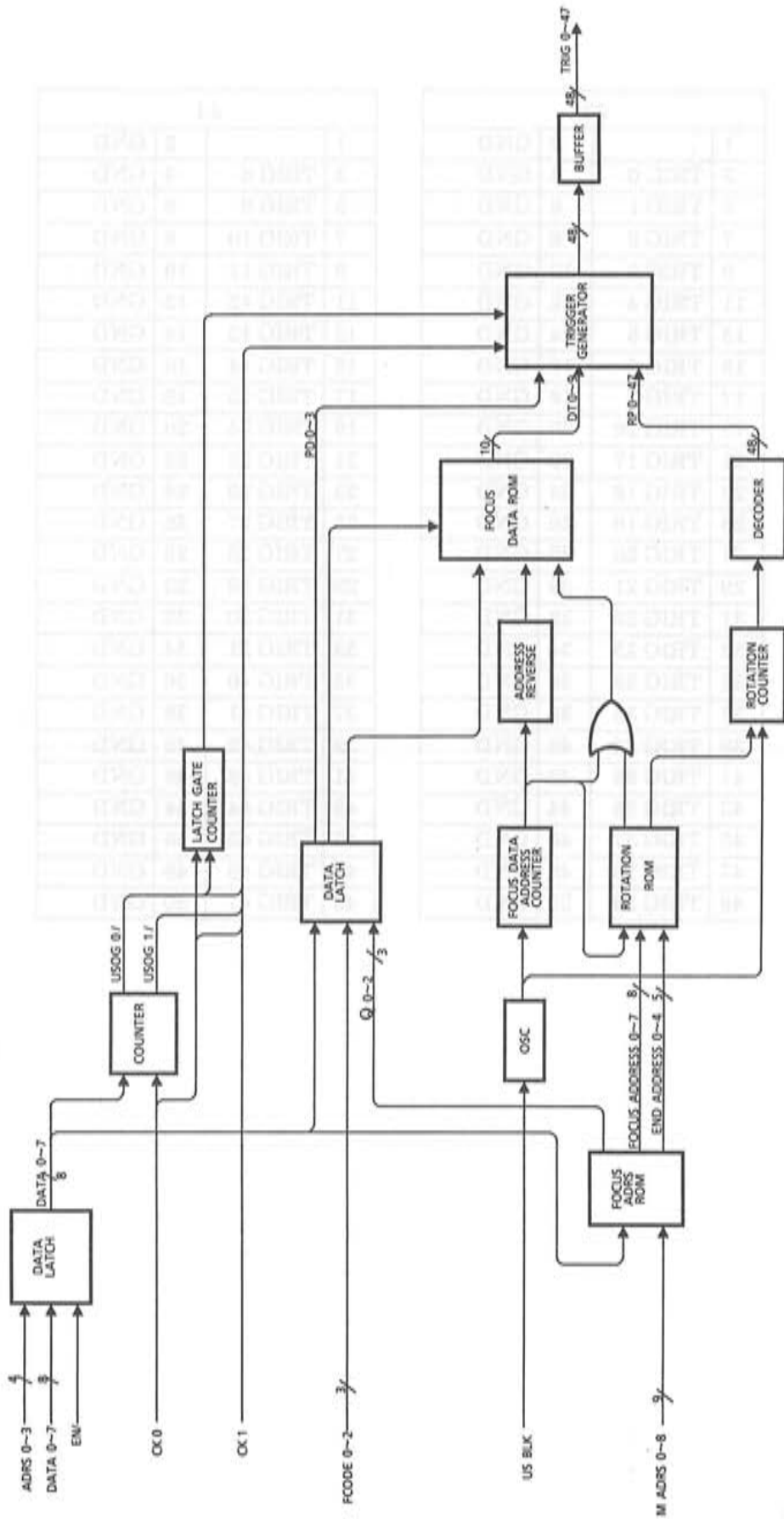
J112		
A	J1	B
GND	45	GND
	44	
	43	
	42	
	41	
	40	
	39	
	38	
	37	PRECONT
	36	TXCONT
	35	DFZ/
TX OFF	34	LIN USGT
GND	33	GND
CPU AV/	32	TRIG OFF
GND	31	LIN/
AQ0	30	AQ1
BQ0	29	AQ2
BQ2	28	BQ1
FOODE 2	27	
FOODE 0	26	FOODE 1
D/	25	GND
FADRS 6	24	FADRS 7
FADRS 4	23	FADRS 5
FADRS 2	22	FADRS 3
FADRS 0	21	FADRS 1
EADRS 4	20	EADRS 3
EADRS 2	19	EADRS 1
EADRS 0	18	USBLK/
	17	
ADRS 1	16	ADRS 0
ADRS 3	15	ADRS 2
	14	EN3/
DATA 6	13	DATA 7
DATA 4	12	DATA 5
DATA 2	11	DATA 3
DATA 0	10	DATA 1
	9	
CK0	8	CK1
	7	
	6	
+5.1V	5	+5.1V
-15V	4	-15V
+15V	3	+15V
A GND	2	A GND
A GND	1	A GND

J112		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+15V	43	+15V
-15V	42	-15V
+5.1V	41	+5.1V
	40	
GND	39	GND
SPRSET	38	SLTSET
TXSEL2	37	TXSEL3
GND	36	GND
EQSET	35	FASET
	34	
GND	33	GND
	32	
	31	
ROMSLCT1	30	ROMSLCT0
FEMEND	29	MA8/
MA7/	28	MA6/
MA5/	27	MA4/
MA3/	26	MA2/
MA1/	25	MA0/
GND	24	GND
	23	
S/L	22	L/S
GND	21	GND
	20	
	19	
GND	18	GND
	17	
	16	
GND	15	GND
	14	
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	12	
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	7	
	6	
	5	
	4	
	3	
GND	2	GND
GND	1	GND

J3			
1		2	GND
3	TRIG 0	4	GND
5	TRIG 1	6	GND
7	TRIG 2	8	GND
9	TRIG 3	10	GND
11	TRIG 4	12	GND
13	TRIG 5	14	GND
15	TRIG 6	16	GND
17	TRIG 7	18	GND
19	TRIG 16	20	GND
21	TRIG 17	22	GND
23	TRIG 18	24	GND
25	TRIG 19	26	GND
27	TRIG 20	28	GND
29	TRIG 21	29	GND
31	TRIG 22	32	GND
33	TRIG 23	34	GND
35	TRIG 32	36	GND
37	TRIG 33	38	GND
39	TRIG 34	40	GND
41	TRIG 35	42	GND
43	TRIG 36	44	GND
45	TRIG 37	46	GND
47	TRIG 38	48	GND
49	TRIG 39	50	GND

J4			
1		2	GND
3	TRIG 8	4	GND
5	TRIG 9	6	GND
7	TRIG 10	8	GND
9	TRIG 11	10	GND
11	TRIG 12	12	GND
13	TRIG 13	14	GND
15	TRIG 14	16	GND
17	TRIG 15	18	GND
19	TRIG 24	20	GND
21	TRIG 25	22	GND
23	TRIG 26	24	GND
25	TRIG 27	26	GND
27	TRIG 28	28	GND
29	TRIG 29	29	GND
31	TRIG 30	32	GND
33	TRIG 31	34	GND
35	TRIG 40	36	GND
37	TRIG 41	38	GND
39	TRIG 42	40	GND
41	TRIG 43	42	GND
43	TRIG 44	44	GND
45	TRIG 45	46	GND
47	TRIG 46	48	GND
49	TRIG 47	50	GND





<p><b>Aloka</b></p>	<p>TITLE 名称 <b>TX TRIGGER GENE</b></p>	<p>MODEL 型号 <b>EP-3464</b></p>
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REVISED DATE: 11-8

THIS PCB LAYOUT IS THE PROPERTY OF THE COMPANY AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

DATE: 11-8

NO.	DESCRIPTION	QTY	UNIT	REMARKS
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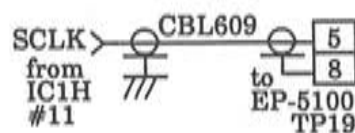
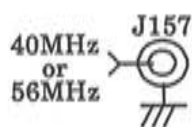
6-11 EP-3465 GEU TIMING & ADDRESS

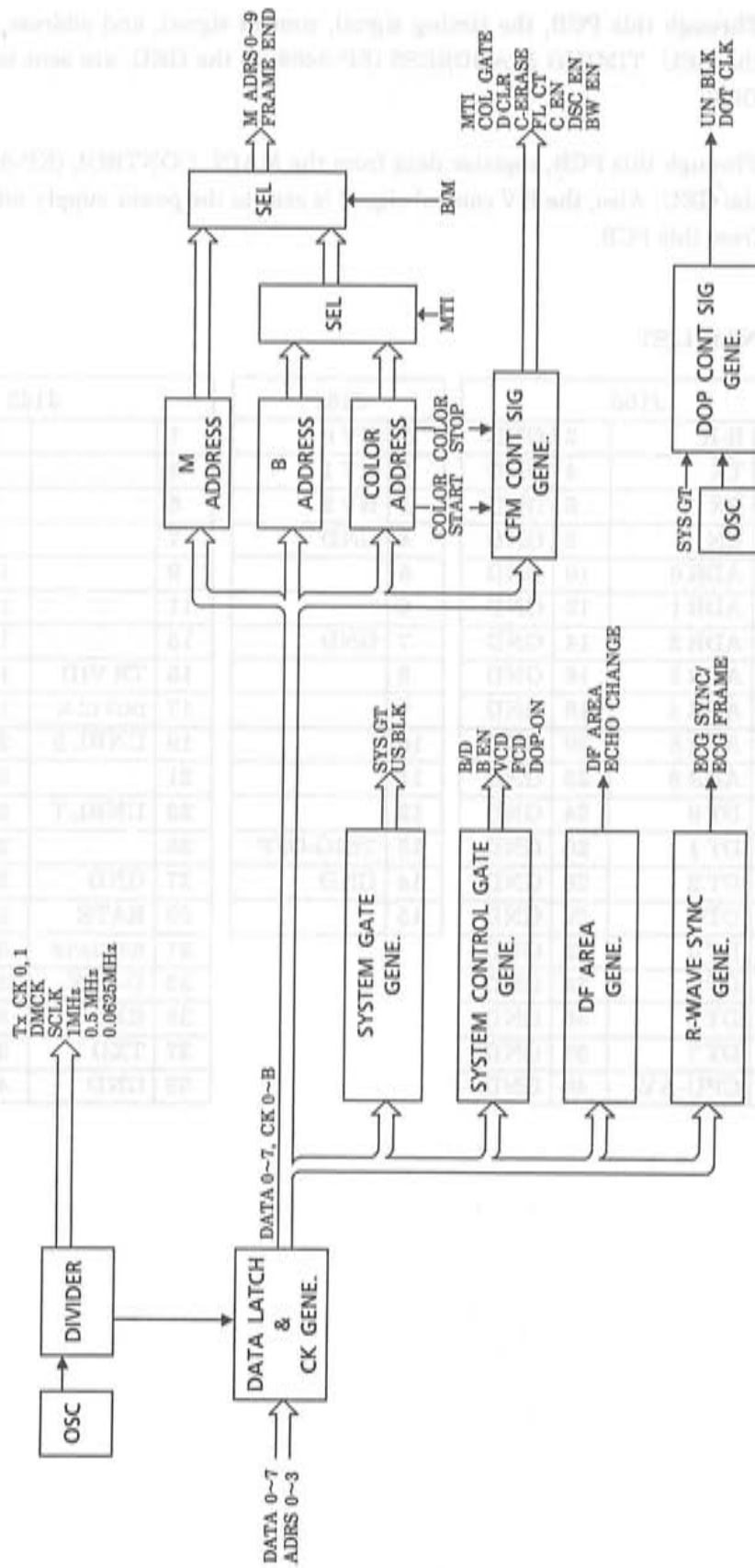
This PCB consists of the timing signal generating part and the address generating part.

SIGNAL LIST

J113		
A	J1	B
GND	45	GND
	44	TX CONT
	43	
	42	
	41	
	40	
	39	
	38	
	37	
	36	
	35	DFZ/
TX OFF	34	LN USGT
B/D GATE	33	GND
	32	
	31	
TXGATE1	30	
GND	29	GND
	28	
FCODE 2	27	EXCHANGE
FCODE 0	26	FCODE 1
	25	GND
	24	
	23	
56/40	22	GND
	21	△
	20	△ GATE
V/DCODE1	19	USBLK/
STCCNT0	18	STCCNT1
GND	17	GND
ADRS 1	16	ADRS 0
ADRS 3	15	ADRS 2
EN2/	14	EN4/
DATA 6	13	DATA 7
DATA 4	12	DATA 5
DATA 2	11	DATA 3
DATA 0	10	DATA 1
CARD	9	CAR1
CKO	8	CK1
DNCLK	7	DNCLK/
GND	6	GND
R-R'	5	CCB/
+5.1V	4	+5.1V
+5.1V	3	+15V
GND	2	A GND
GND	1	GND

J113		
A	J2	B
A GND	45	A GND
A GND	44	A GND
+5.1V	43	+5.1V
+5.1V	42	+5.1V
	41	
GND	40	GND
	39	
SPRSET	38	SLTSET
TXSEL2	37	TXSEL3
	36	
ERSET	35	FASET
GND	34	GND
ECC-FRM	33	V-CODE1
DF AREA	32	V-CODE0
INSEYET	31	USBLK
ROMSLCT1	30	ROMSLCT0
FRMEND	29	MA6/
MA7/	28	MA6/
MA5/	27	MA4/
MA3/	26	MA2/
MA1/	25	MA0/
GND	24	GND
FLW CT/	23	SCLK
C-GATE	22	C-EN
DSC-CEN	21	DCLR
FLWAREA	20	B/W EN
MT1 EN/	19	DFZ/
COLORER	18	ZIRQ
	17	(ALTRM)
GND	16	GND
	15	D-OFF
56 SLCT	14	B/D GATE
DOT CLK	13	DOP RATE
	12	SP UNBLK
	11	FR UNBLK
GND	10	GND
	9	
	8	
	7	PRECONT
	6	
	5	
	4	
	3	
GND	2	GND
GND	1	GND





**Aloka**

TITLE 名称  
GEU TIMING & ADDRESS

MODEL 形名

EP-3465

1/1

6-12 EP-3525 GEU INTERFACE

- 1) Through this PCB, the timing signal, control signal, and address, generated by the GEU TIMING & ADDRESS (EP-3465) in the GEU, are sent to the DSC and DOP.
- 2) Through this PCB, register data from the MAIN CONTROL (EP-3265) is sent to the GEU. Also, the HV control signal is sent to the power supply unit (PSU-S680) from this PCB.

SIGNAL LIST

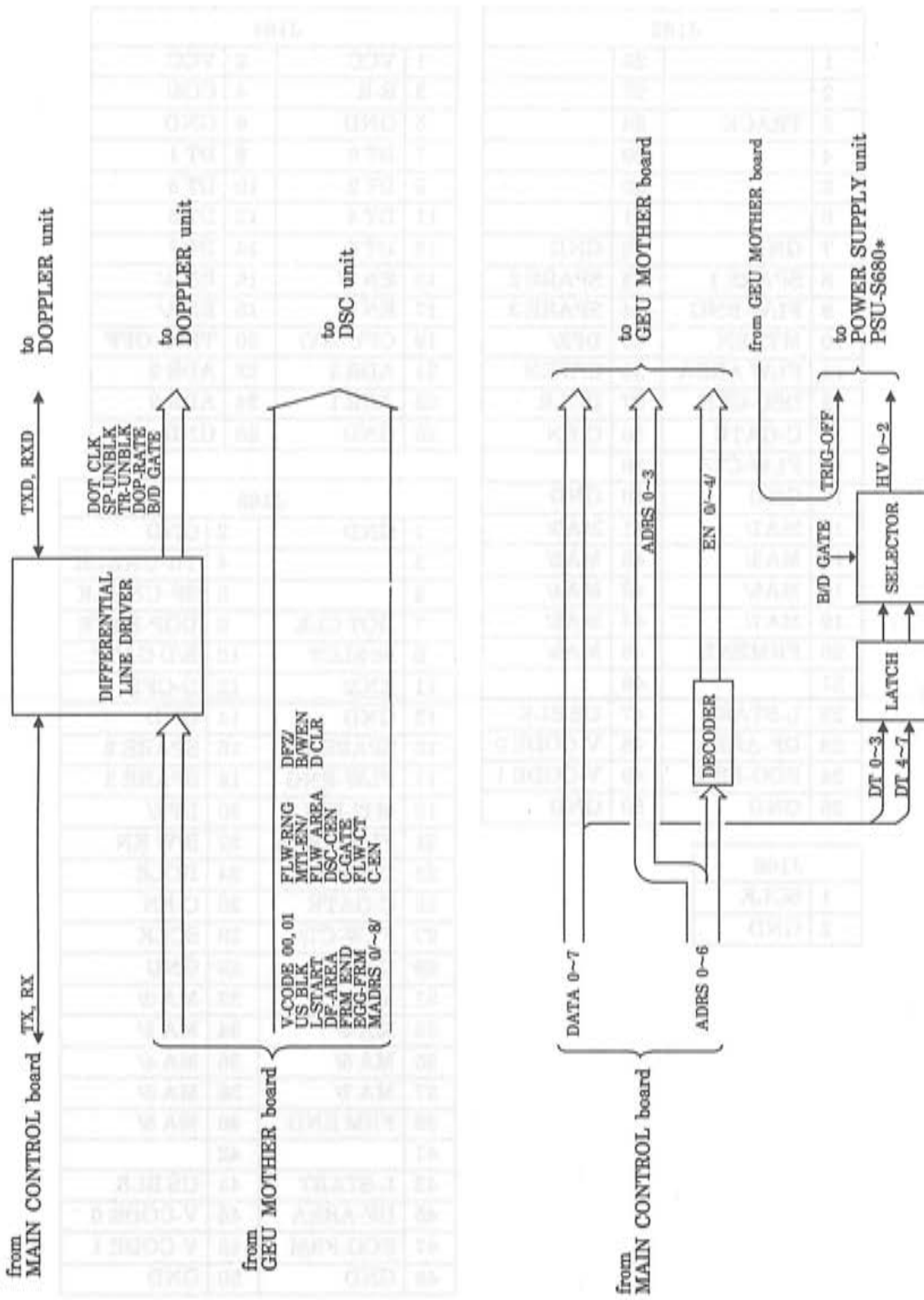
J160				J161		J162			
1	R-R	2	GND	1	HV 0	1		2	
3	TX	4	GND	2	HV 1	3		4	
5	RX	6	GND	3	HV 2	5		6	
7	EN	8	GND	4	GND	7		8	
9	ADR 0	10	GND	5		9		10	
11	ADR 1	12	GND	6		11		12	
13	ADR 2	14	GND	7	GND	13		14	
15	ADR 3	16	GND	8		15	TR VID	16	TR VID/
17	ADR 4	18	GND	9		17	DOT CLK	18	DOT CLK/
19	ADR 5	20	GND	10		19	UNBL S	20	UNBL S/
21	ADR 6	22	GND	11		21		22	
23	DT 0	24	GND	12		23	UNBL T	24	UNBL T/
25	DT 1	26	GND	13	TRIG-OFF	25		26	56SLCT/
27	DT 2	28	GND	14	GND	27	GND	28	R-R
29	DT 3	29	GND	15		29	RATE	29	RATE/
31	DT 4	32	GND			31	B/D GATE	32	B/D GATE/
33	DT 5	34	GND			33	D-OFF	34	D-OFF/
35	DT 6	36	GND			35	RXD	36	RXD/
37	DT 7	38	GND			37	TXD	38	TXD/
39	CPU-AV/	40	GND			39	GND	40	VCC

J163			
1		26	
2		27	
3	TRACE	28	
4		29	
5		30	
6		31	
7	GND	32	GND
8	SPARE 1	33	SPARE 2
9	FLW-RNG	34	SPARE 3
10	MTI-EN	35	DFZ/
11	FLW AREA	36	B/WEN
12	DSC-CEN	37	DCLR
13	C-GATE	38	C-EN
14	FLW-CT/	39	
15	GND	40	GND
16	MA1/	41	MA0/
17	MA3/	42	MA2/
18	MA5/	43	MA4/
19	MA7/	44	MA6/
20	FRMEND	45	MA8/
21		46	
22	L-START	47	US BLK
23	DF-AREA	48	V-CODE 0
24	ECG-FRM	49	V-CODE 1
25	GND	50	GND

J166	
1	SCLK
2	GND

J164			
1	VCC	2	VCC
3	R-R	4	CC8/
5	GND	6	GND
7	DT 0	8	DT 1
9	DT 2	10	DT 3
11	DT 4	12	DT 5
13	DT 6	14	DT 7
15	EN 2/	16	EN 4/
17	EN 0/	18	EN 1/
19	CPU-AV/	20	TRIG-OFF
21	ADR 3	22	ADR 2
23	ADR 1	24	ADR 0
25	GND	26	GND

J165			
1	GND	2	GND
3		4	TR-UNBLK
5		6	SP-UNBLK
7	DOT CLK	8	DOP-RATE
9	56 SLCT	10	B/D GATE
11	EN3/	12	D-OFF
13	GND	14	GND
15	SPARE 1	16	SPARE 2
17	FLW-RNG	18	SPARE 3
19	MTI-EN/	20	DFZ/
21	FLW AREA	22	B/W EN
23	DSC-CEN	24	DCLR
25	C-GATE	26	C-EN
27	FLW-CT/	28	SCLK
29	GND	29	GND
31	MA 1/	32	MA 0/
33	MA 3/	34	MA 2/
35	MA 5/	36	MA 4/
37	MA 7/	38	MA 6/
39	FRM END	40	MA 8/
41		42	
43	L-START	44	US BLK
45	DF-AREA	46	V-CODE 0
47	ECG-FRM	48	V-CODE 1
49	GND	50	GND



<b>Aloka</b>	TITLE 名称 GEU INTERFACE	MODEL 型号 EP-3525	1/1
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REVISED BY DATE

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REVISED

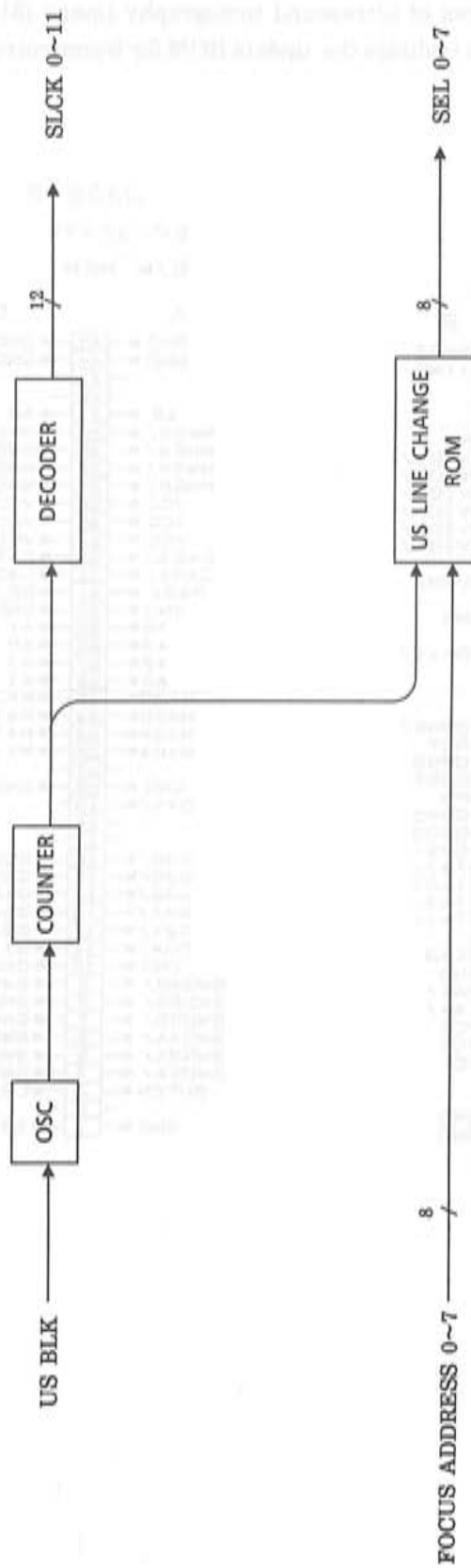
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10	0	0	10
11	0	0	11
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95	0	0	95
96	0	0	96
97	0	0	97
98	0	0	98
99	0	0	99
100	0	0	100

## 6-13 EP-3452 RX SELECT CONT

This control circuit is used for selecting a transducer number.

## SIGNAL LIST

J1		J2	
1	GND	1	SEL 0
2	GND	2	SEL 1
3	+5V	3	SEL 2
4	+5V	4	SEL 3
5		5	SEL 4
6		6	SEL 5
7	FOCUS ADDRESS 0	7	SEL 6
8	FOCUS ADDRESS 1	8	SEL 7
9	FOCUS ADDRESS 2	9	SLCK 0
10	FOCUS ADDRESS 3	10	SLCK 1
11	FOCUS ADDRESS 4	11	SLCK 2
12	FOCUS ADDRESS 5	12	SLCK 3
13	FOCUS ADDRESS 6	13	SLCK 4
14	FOCUS ADDRESS 7	14	SLCK 5
15	LIN/SEC	15	SLCK 6
16	US BLK	16	SLCK 7
		17	SLCK 8
		18	SLCK 9
		19	SLCK 10
		20	SLCK 11
		21	SLCK 12
		22	SLCK 13
		23	SLCK 14
		24	SLCK 15
		25	SLCK 16
		26	SLCK 17
		27	SLCK 18
		28	SLCK 19
		29	SLCK 20
		29	SLCK 21
		31	SLCK 22
		32	SLCK 23
		33	
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		35	
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		37	
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		39	
		40	



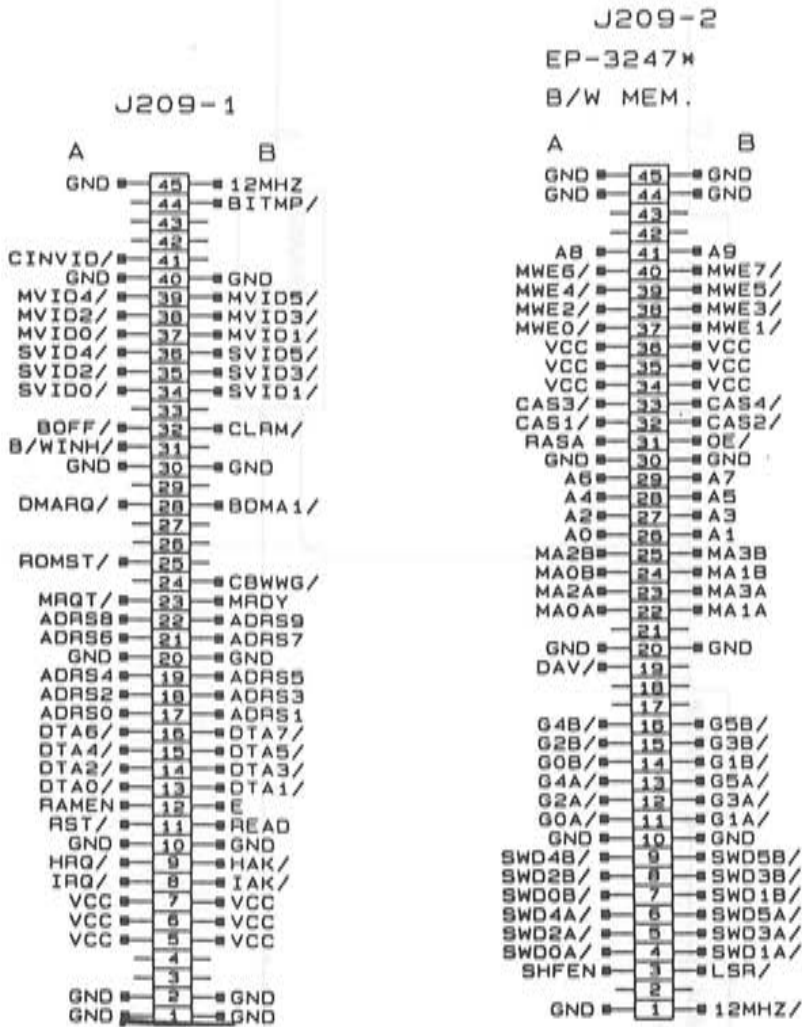
1/1	MODEL 形名 <b>EP-3452</b>	TITLE 名義 <b>RX SELECT CONT</b>	<b>Aloka</b>
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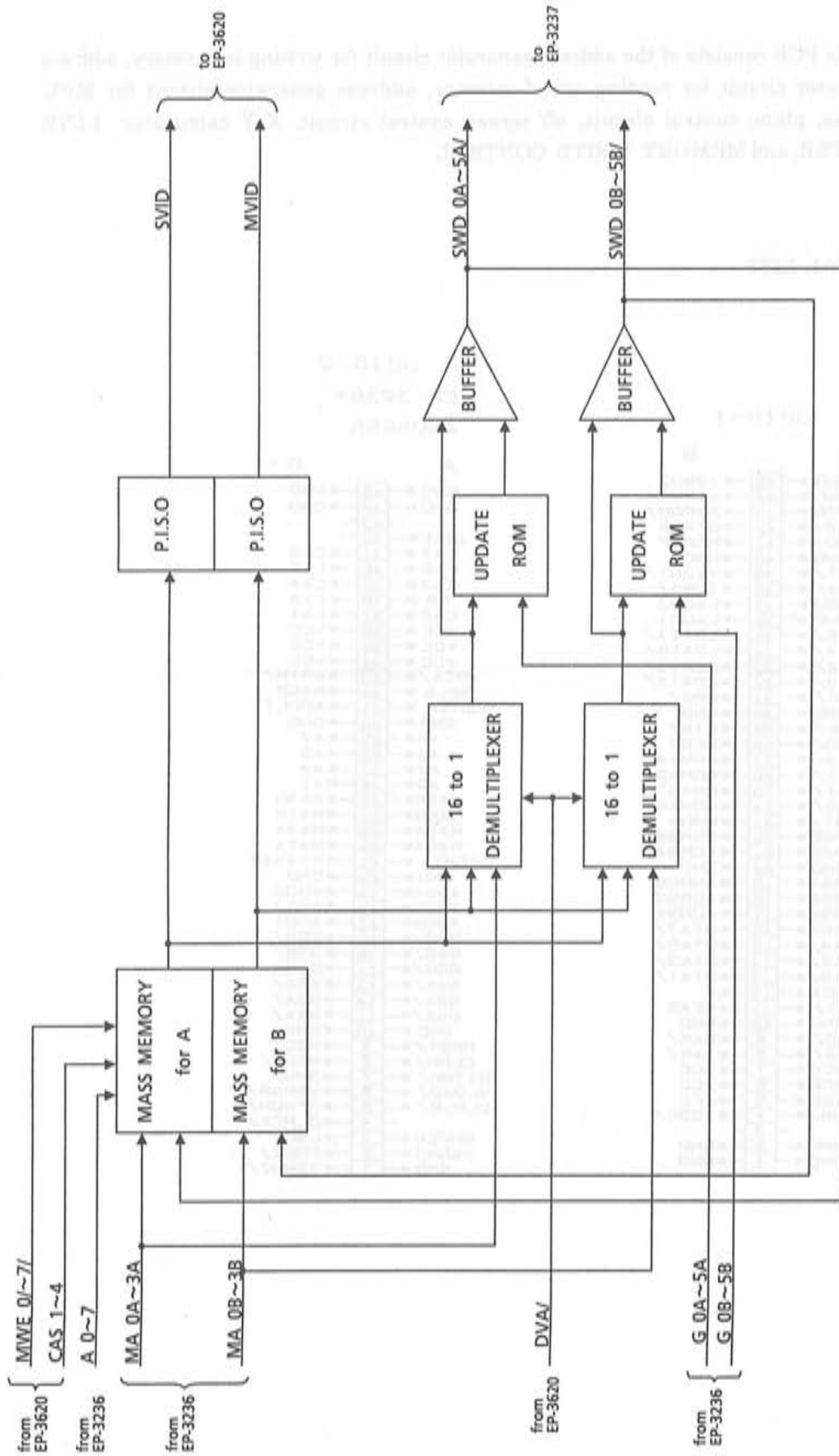


6-14 EP-3247 B/W MEMORY

This PCB includes the mass memory for B/W having a capacity large enough to cover the whole area of ultrasound tomography image (512 pixels×512 pixels×6 bits). The PCB also includes the update ROM for frame correlation use.

SIGNAL LIST

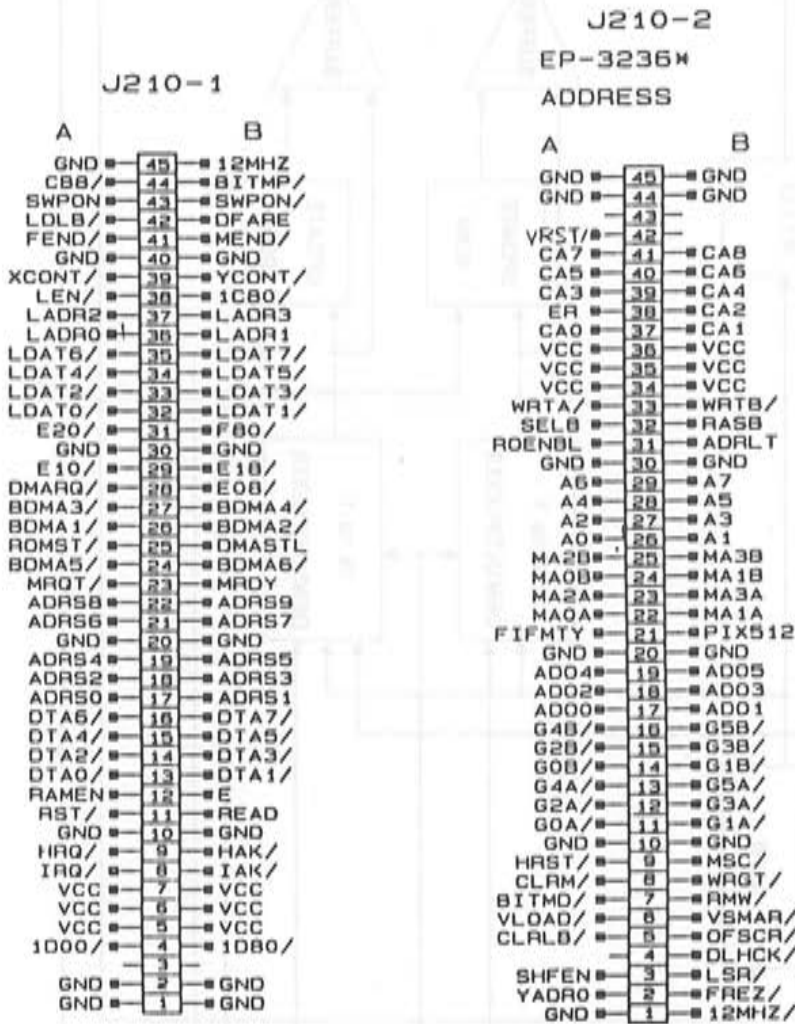


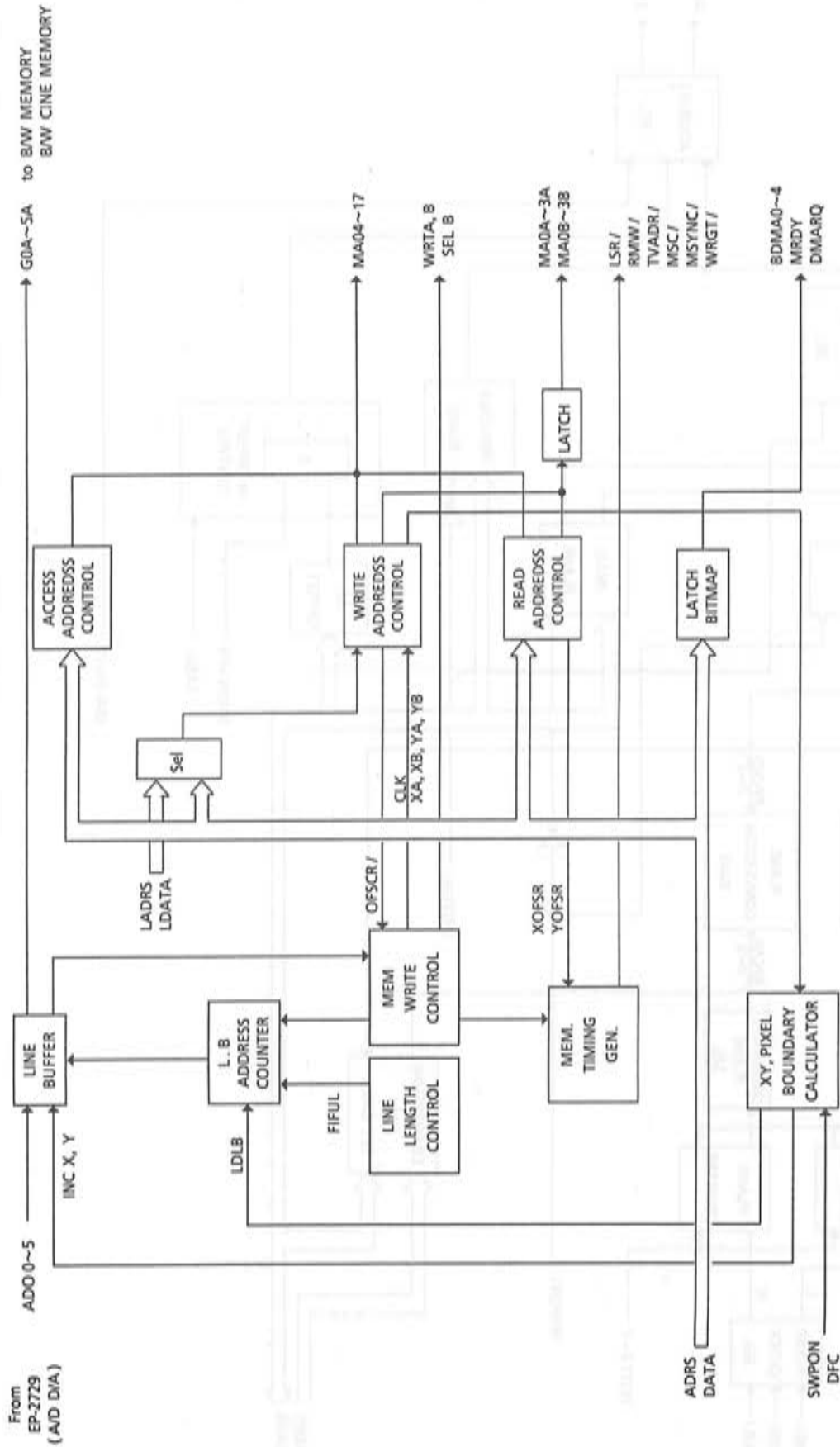


6-15 EP-3236 DSC ADDRESS

This PCB consists of the address generator circuit for writing in memory, address generator circuit for reading out of memory, address generator circuit for MPU Access, plane control circuit, off screen control circuit, X-Y calculator, LINE BUFFER, and MEMORY WRITE CONTROL.

SIGNAL LIST

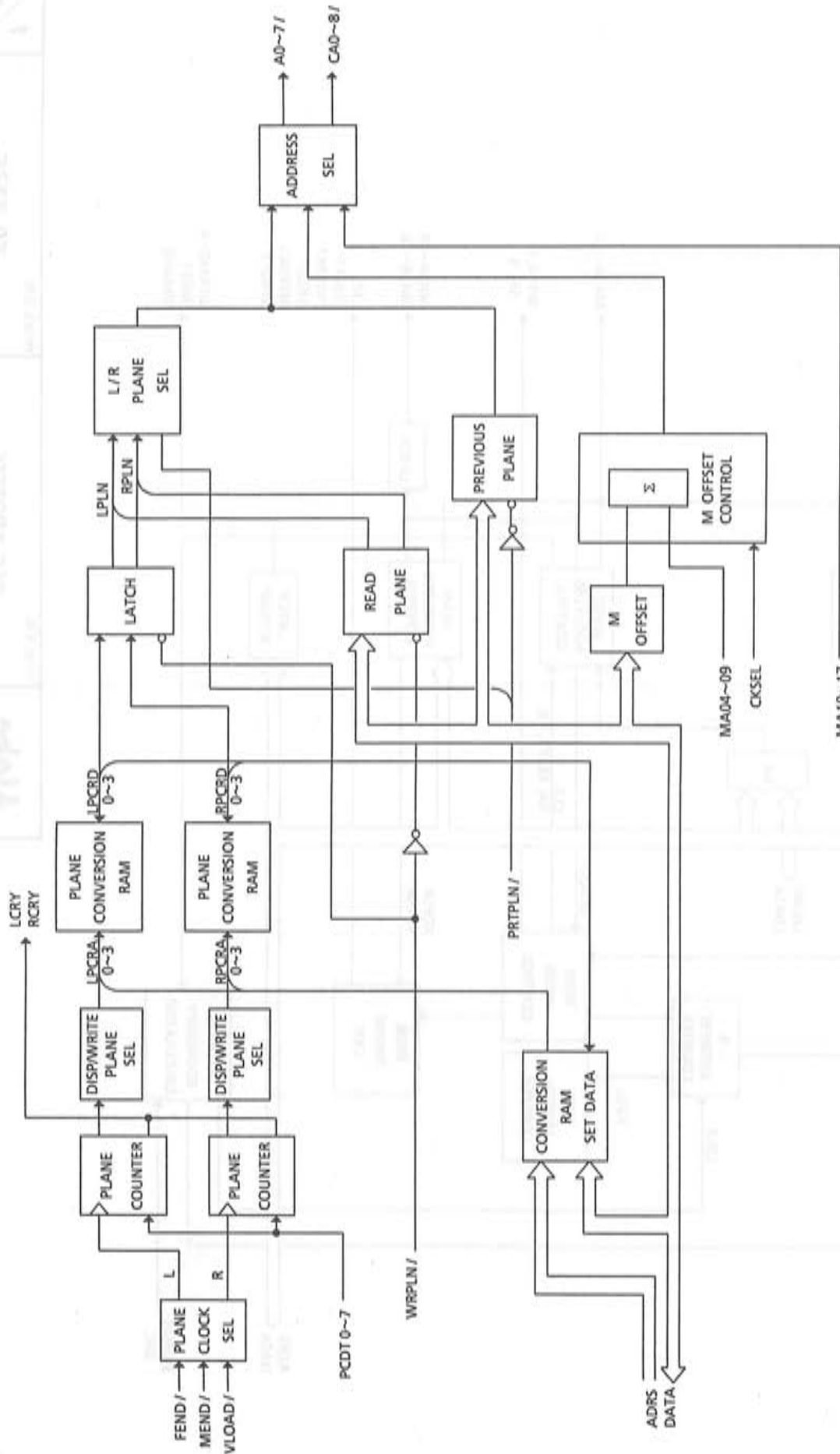




77040  
 TRAC NUMBER  
 EP-3236

<p><b>Aloka</b></p> <p>TITLE 名称</p>	<p>DSC ADDRESS</p>	<p>MODEL 型号</p> <p><b>EP-3236</b></p> <p>1 / 2</p>
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Section 6 PCB Block Diagram



<p>TITLE 名称 <b>Aloka</b></p>	<p>MODEL 型号 <b>EP-3236</b></p>
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REVISED 02/2000 6-18

This PCB includes the following components, including associated components (the primary circuit, the secondary circuit, and the control circuit).

WIRING LIST

REVISED 02/2000

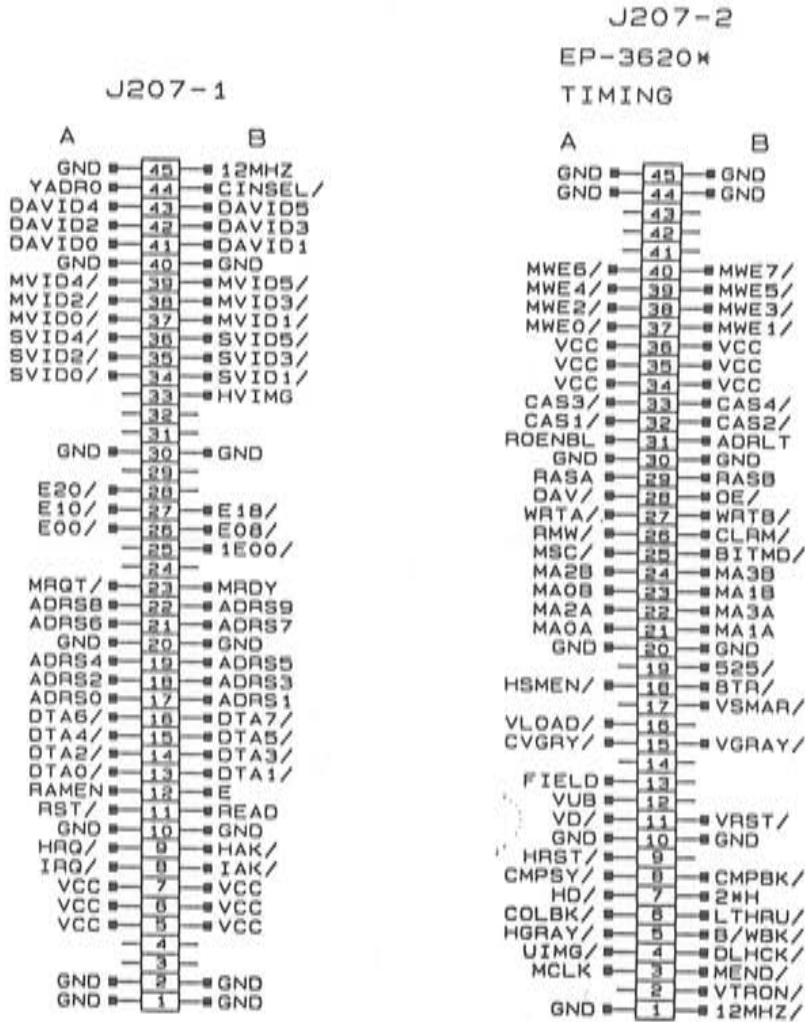
WIRING LIST

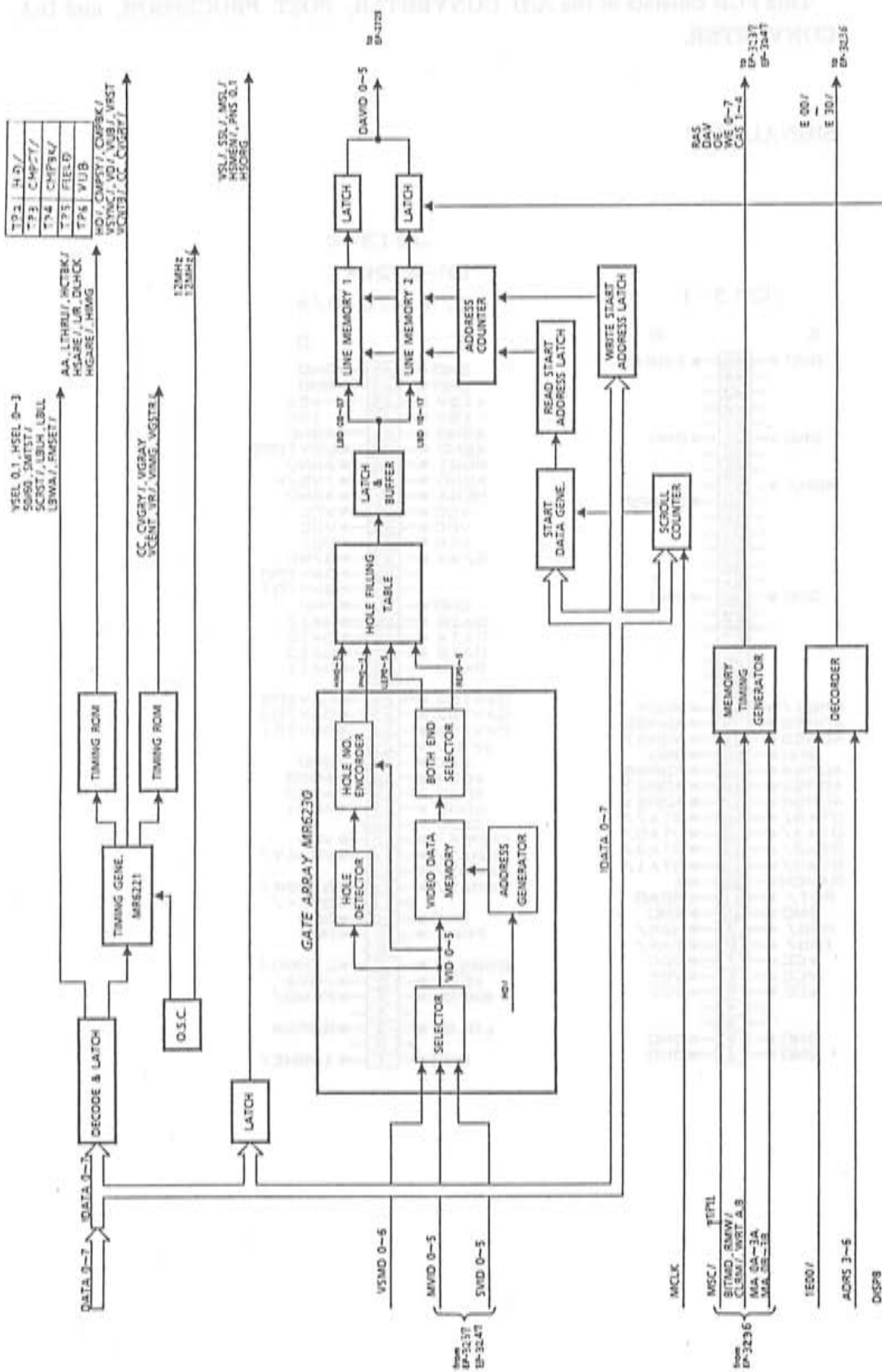
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70	...	...	...	...
71	...	...	...	...
72	...	...	...	...
73	...	...	...	...
74	...	...	...	...
75	...	...	...	...
76	...	...	...	...
77	...	...	...	...
78	...	...	...	...
79	...	...	...	...
80	...	...	...	...
81	...	...	...	...
82	...	...	...	...
83	...	...	...	...
84	...	...	...	...
85	...	...	...	...
86	...	...	...	...
87	...	...	...	...
88	...	...	...	...
89	...	...	...	...
90	...	...	...	...
91	...	...	...	...
92	...	...	...	...
93	...	...	...	...
94	...	...	...	...
95	...	...	...	...
96	...	...	...	...
97	...	...	...	...
98	...	...	...	...
99	...	...	...	...
100	...	...	...	...

6-16 EP-3620 DSC TIMING

This PCB consists of the timing generating circuit, horizontal smoothing circuit, line memory circuit, and memory timing control circuit

SIGNAL LIST





Aloka

DSC TIMING

TITLE 名称

MODEL 名称

EP-3620

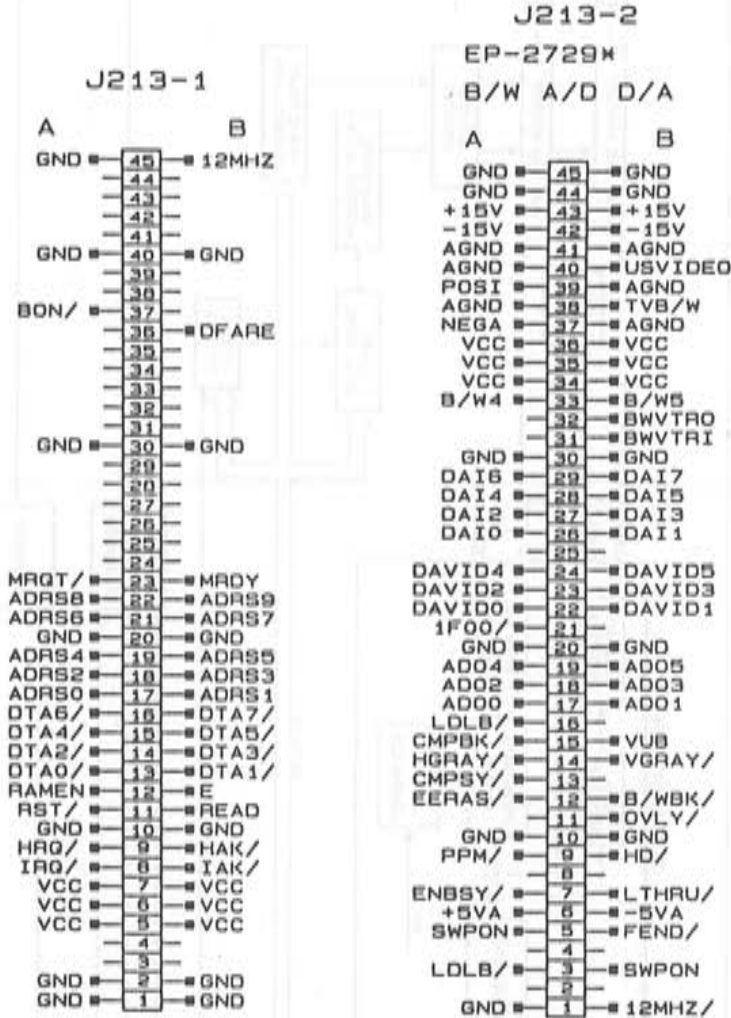
1/1

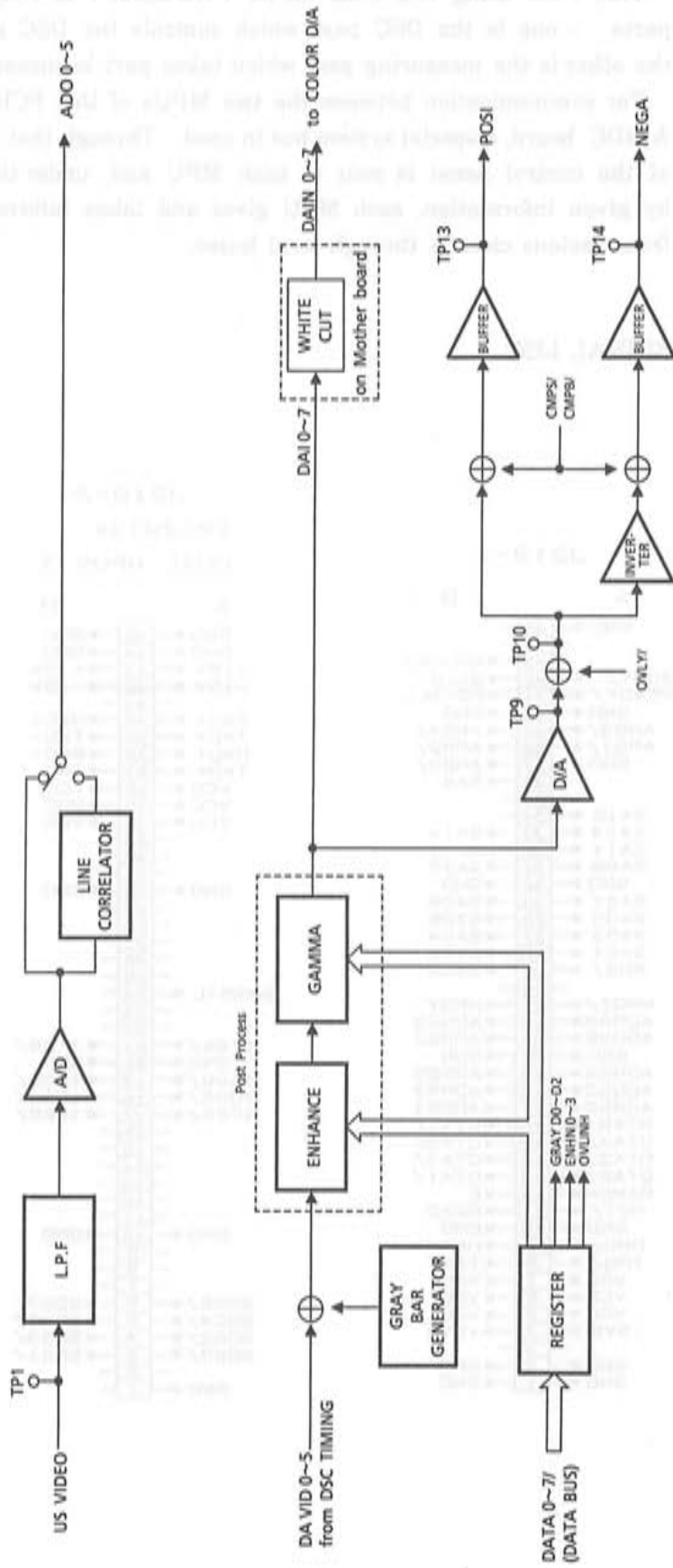


6-17 EP-2729 A/D, D/A

This PCB consists of the A/D CONVERTER, POST PROCESSOR, and D/A CONVERTER.

SIGNAL LIST





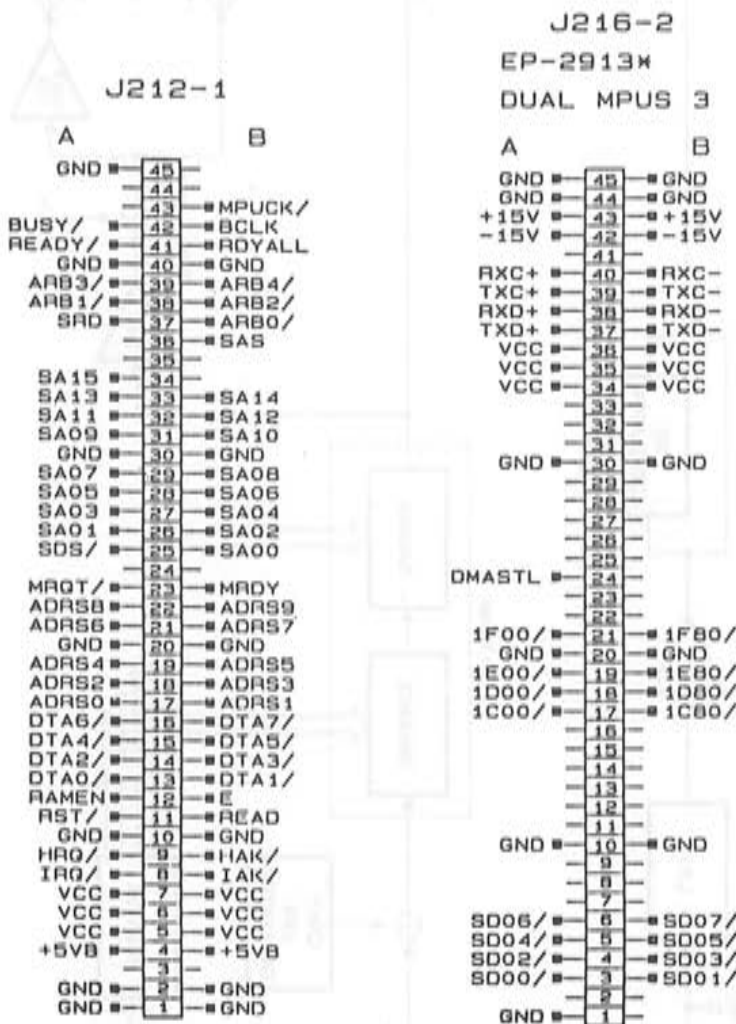
<b>Aloka</b>	TITLE 名称 <b>AID, DIA</b>	MODEL 型号 <b>EP-2729</b>	1 / 1
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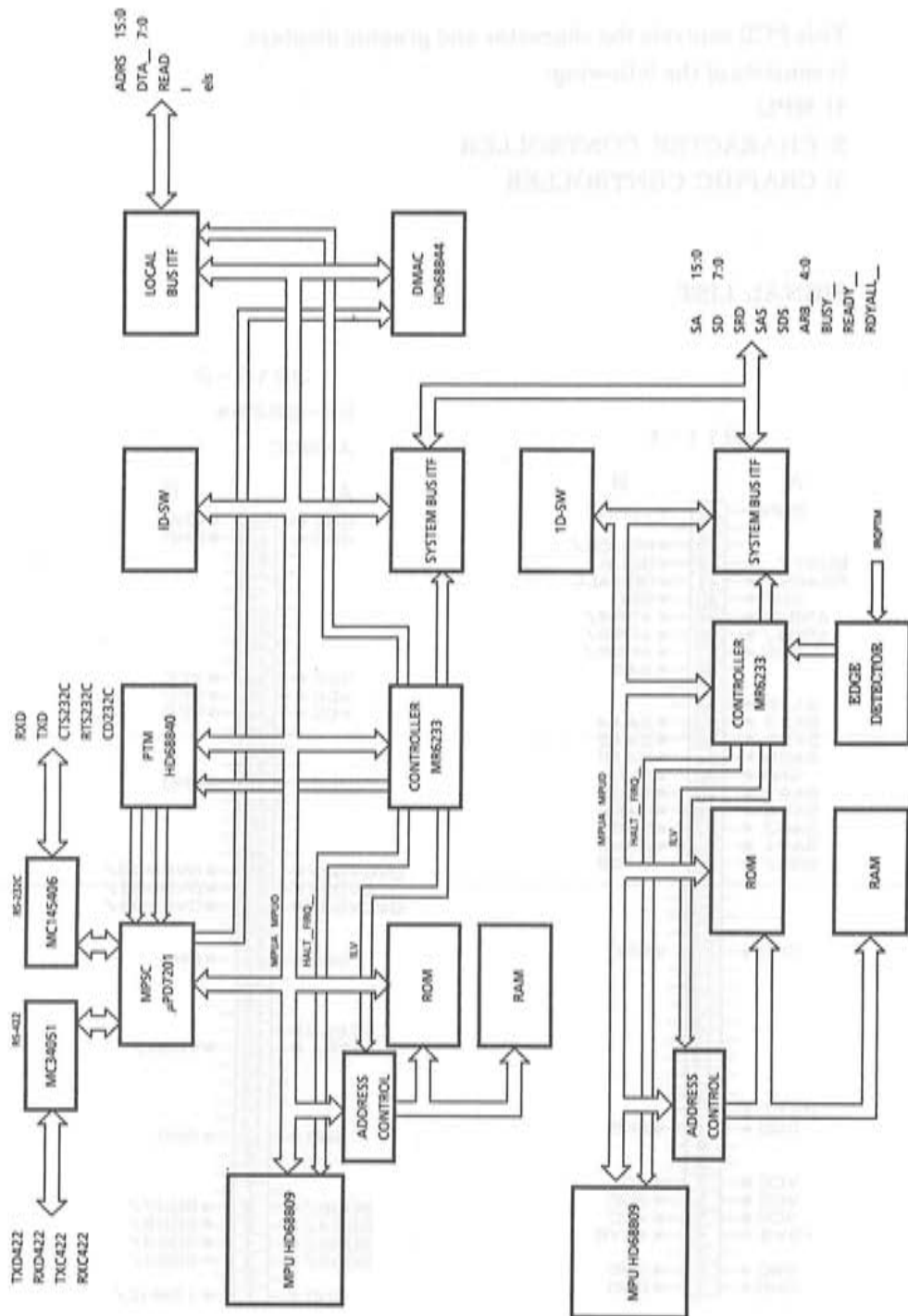
6-18 EP-2913 DUAL MPU

This PCB using two 8-bit MPUs (HD68B09) is roughly divided into two parts -- one is the DSC part which controls the DSC and periphery I/O and the other is the measuring part which takes part in measurement.

For communication between the two MPUs of this PCB and the MPU on the A-GDC board, a special system bus is used. Through that bus, information given at the control panel is sent to each MPU and, under the condition determined by given information, each MPU gives and takes information and data to and from various circuits through local buses.

SIGNAL LIST





<b>Aloka</b>	<b>DUAL MPU</b>	<b>EP-2913</b>	<b>1/1</b>
TITLE 名称	MODEL 名称		

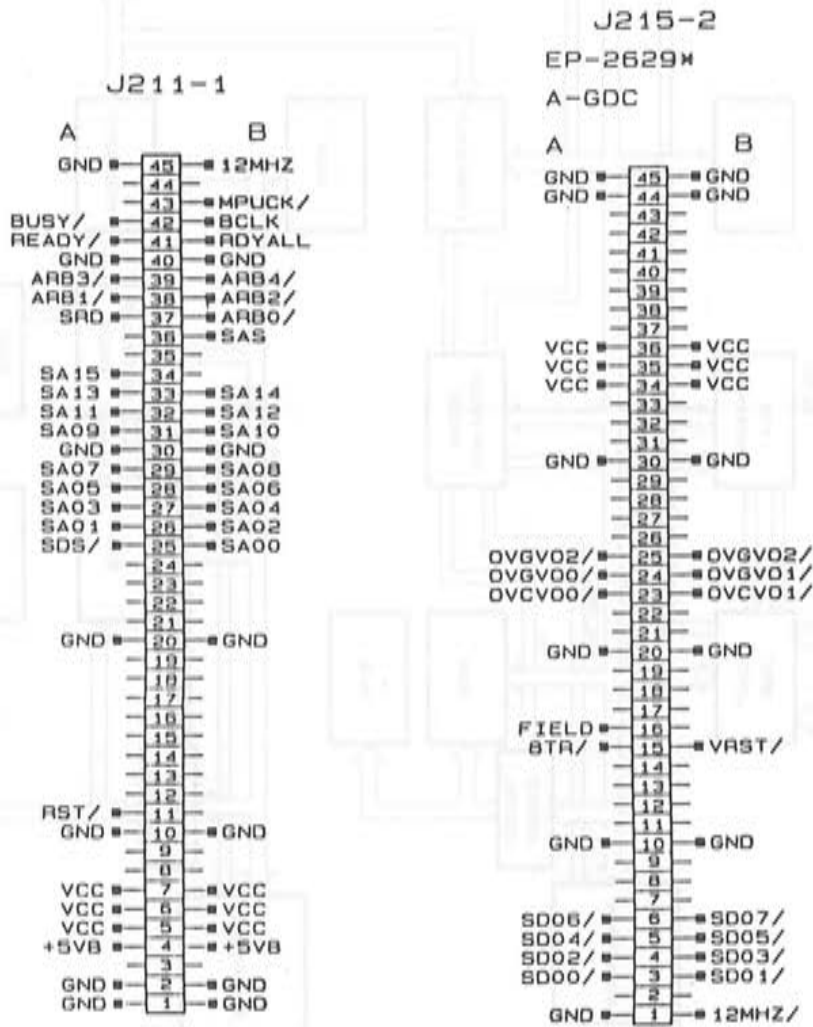
6-19 EP-2629 AGDC

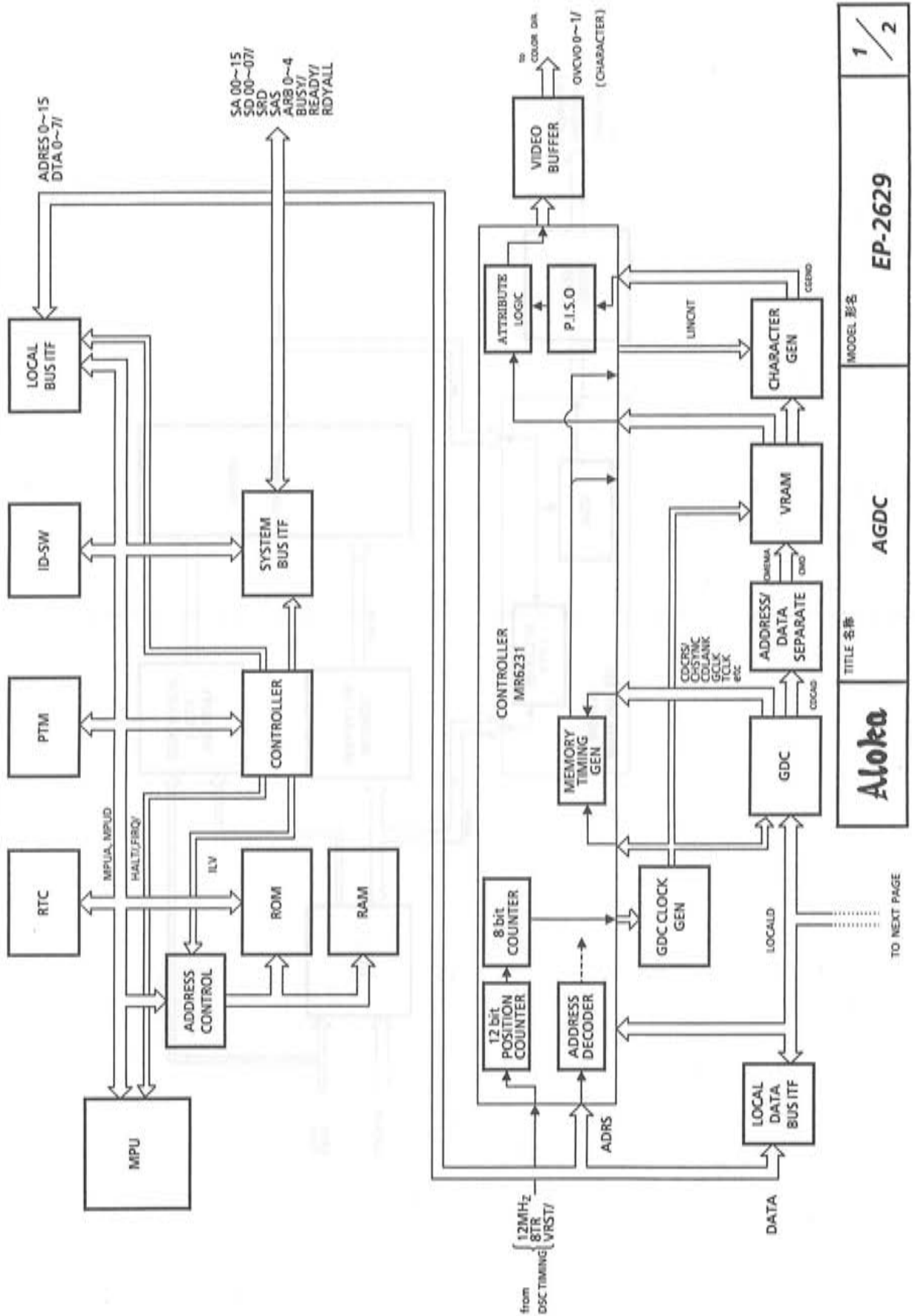
This PCB controls the character and graphic displays.

It consists of the following:

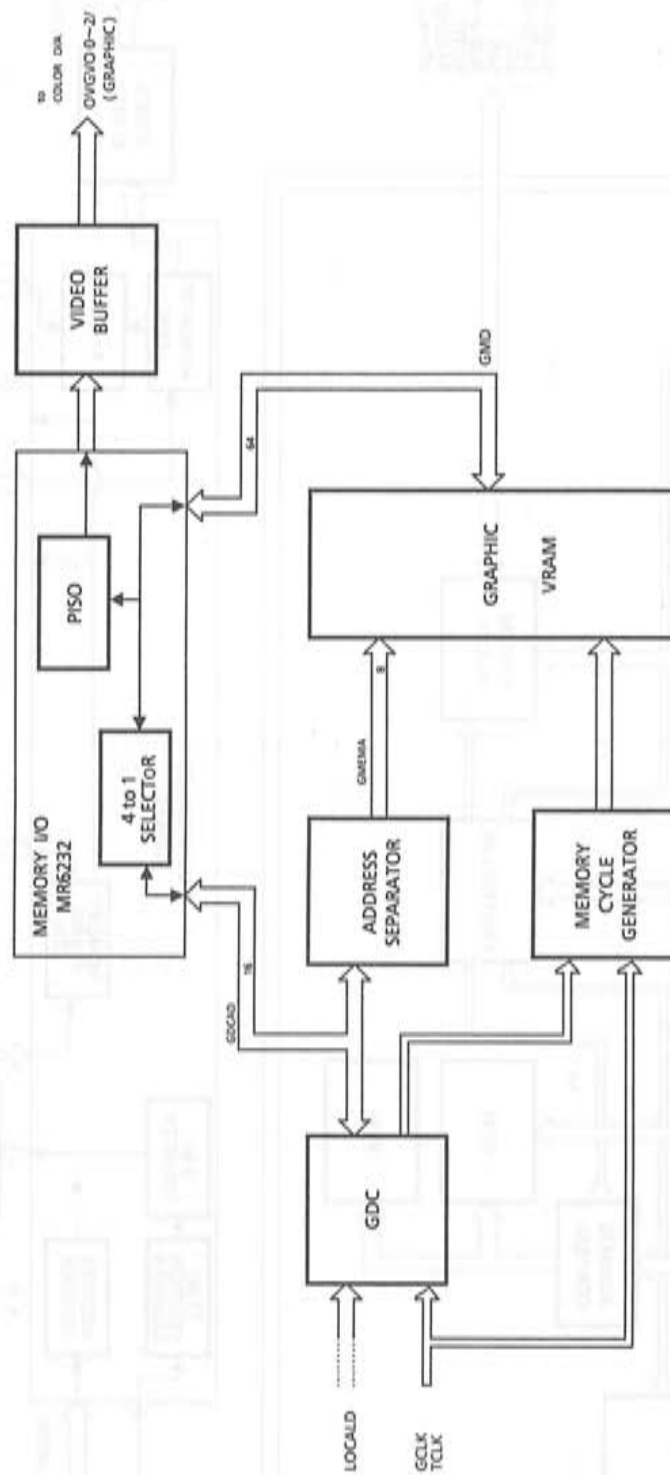
- 1) MPU
- 2) CHARACTER CONTROLLER
- 3) GRAPHIC CONTROLLER

SIGNAL LIST





Section 6 PCB Block Diagram



<b>Aloka</b>	TITLE 名称 <b>AGDC</b>	MODEL 型号 <b>EP-2629</b>	<b>2 / 2</b>
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08-0 NR-0477 US ITR

This PCB consists of the various blocks of circuitry such as ROM, RAM, I/O, and other peripheral components. The PCB is divided into several functional blocks, each of which is connected to a common bus system. The bus system allows for data and control signals to be transmitted between the various blocks. The PCB is designed to be modular, allowing for easy replacement or upgrade of individual components.

FIGURE 1

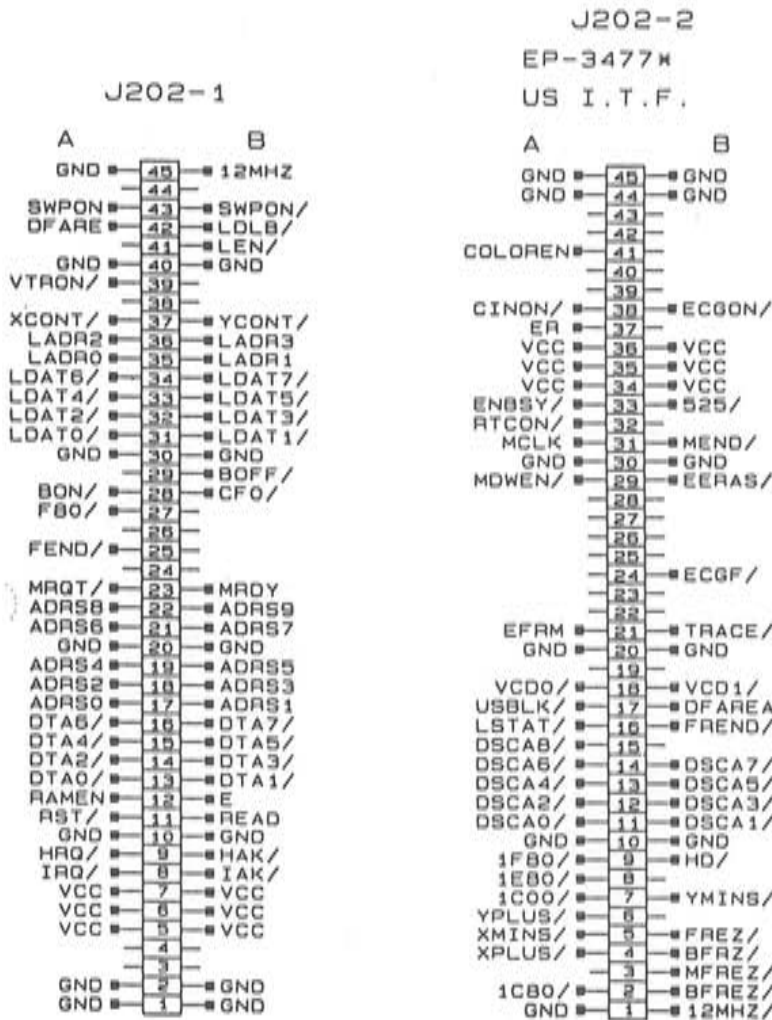


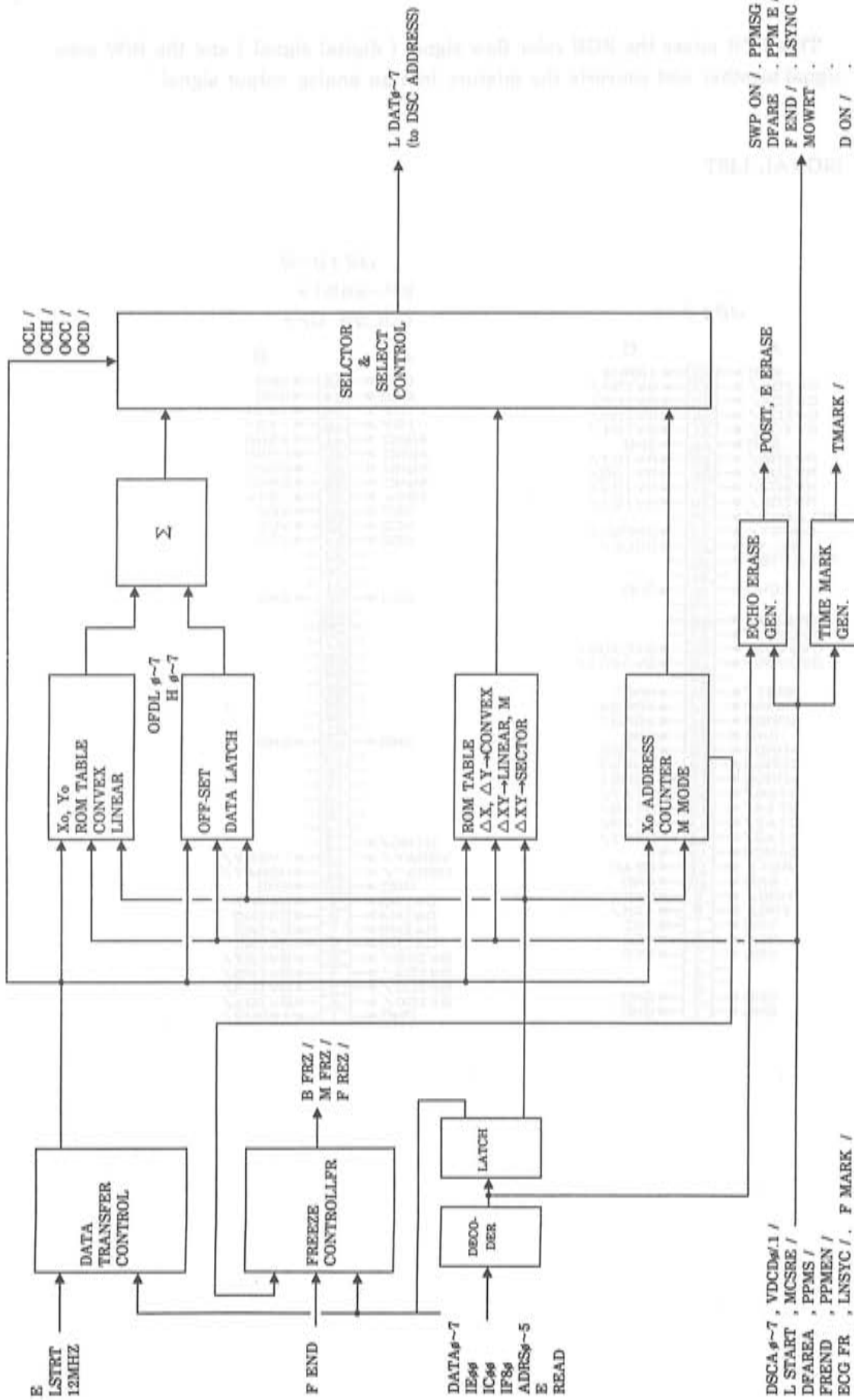


6-20 EP-3477 US ITF

This PCB consists of the various kinds of circuit such as ROM TABLE, ECHO ERASE, M-MODE TIME MARKER, TRACK BALL READ, and OPTION BOARD DETECTION circuits, which hold information necessary for writing in US signal to the memory.

SIGNAL LIST



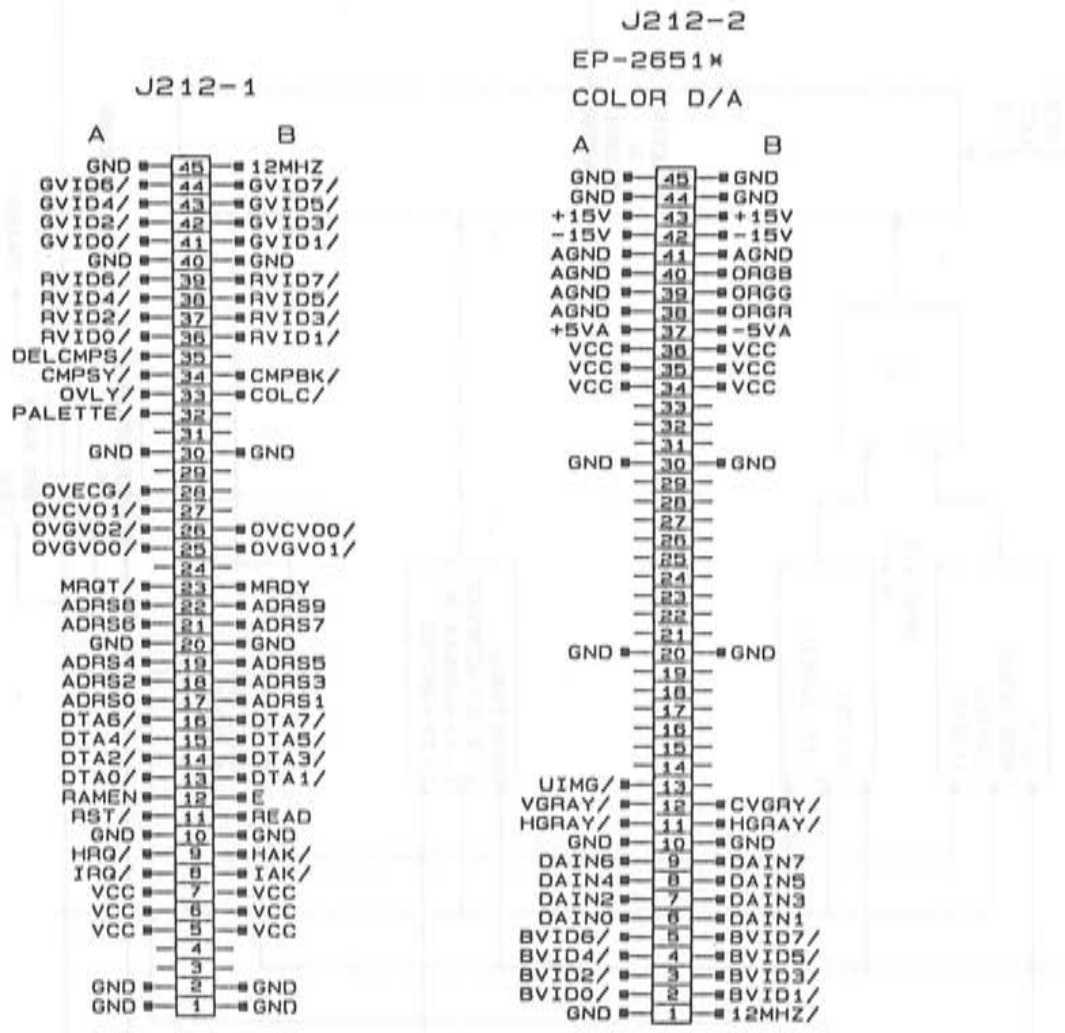


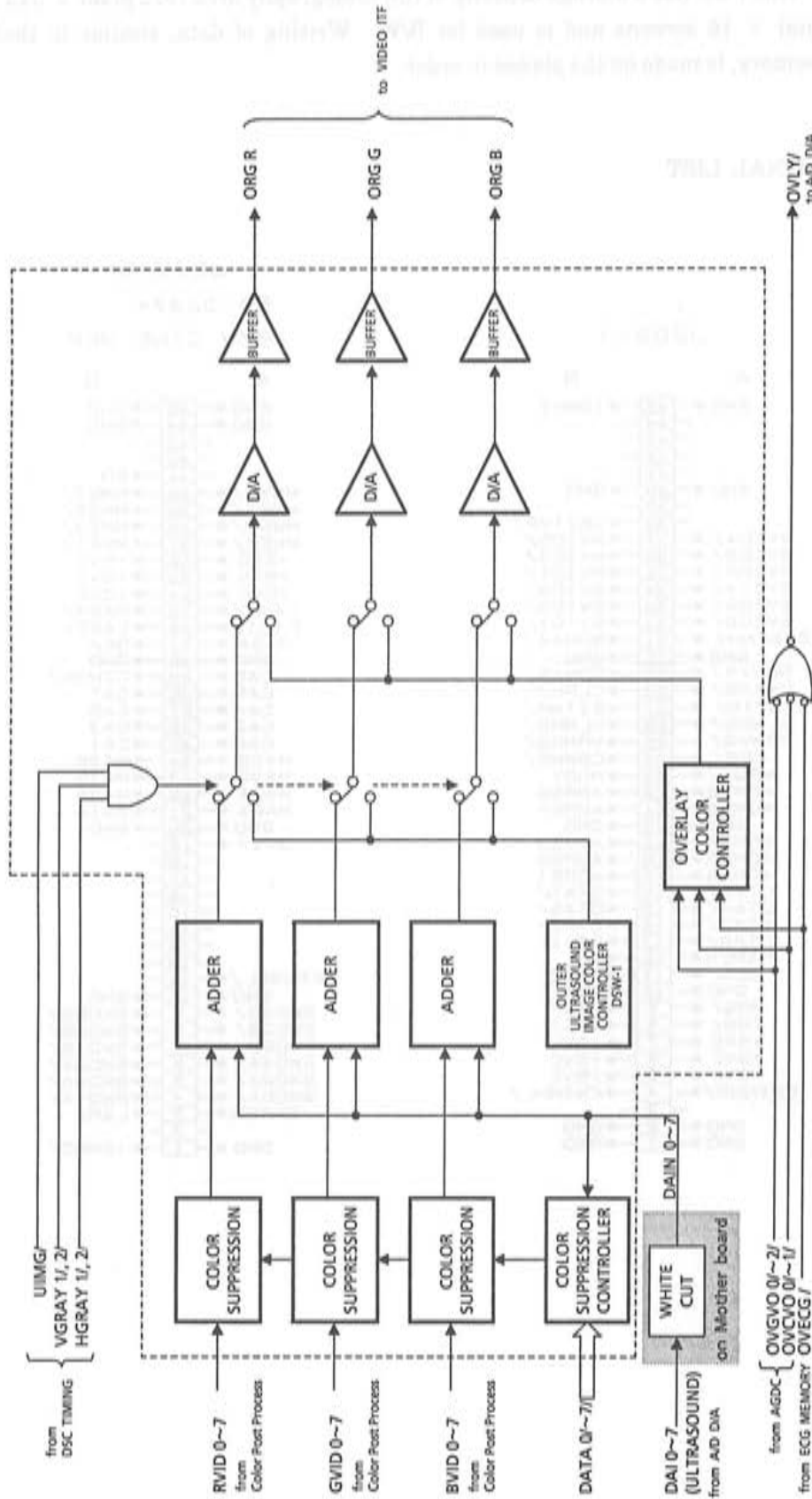
<b>Aloka</b>	TITLE 名称 <b>US ITF</b>	MODEL 型号 <b>EP-3477</b>	<b>1 / 1</b>
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6-21 EP-2651 COLOR D/A

This PCB mixes the RGB color flow signal ( digital signal ) and the B/W echo signal together and converts the mixture into an analog output signal.

SIGNAL LIST





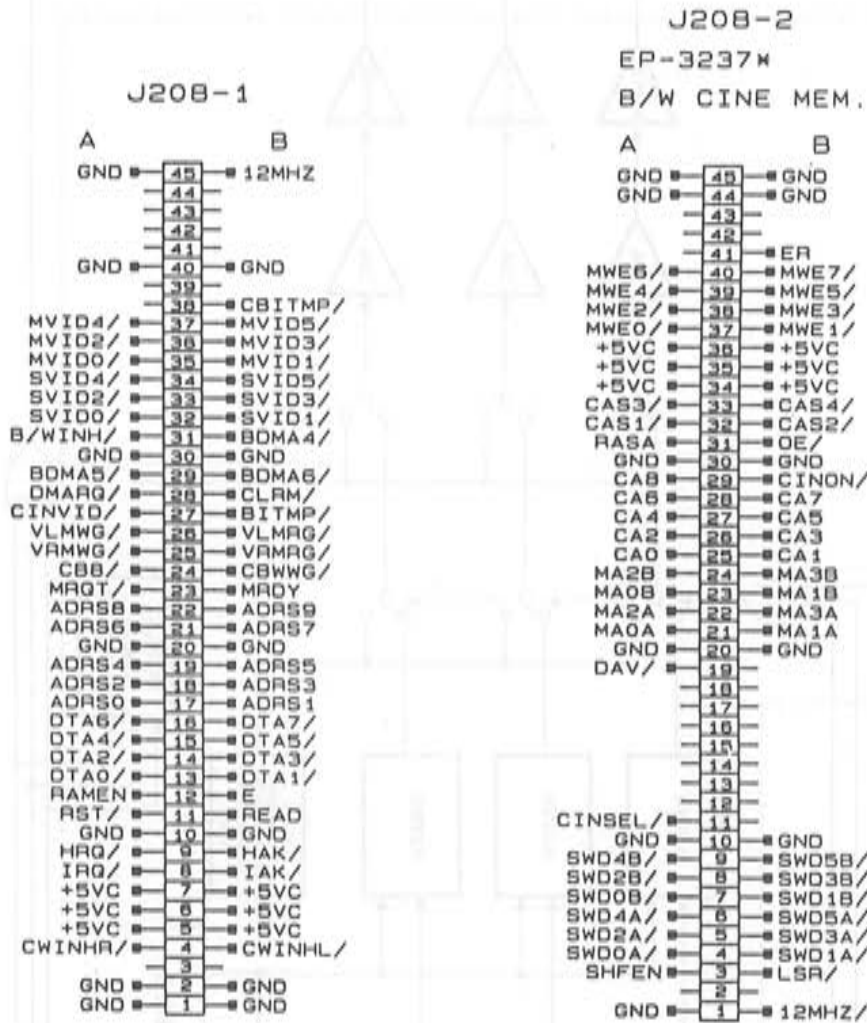
EP-2651\* -4: SSD-680EX用、破線内の部品取り付け  
 For SSD-680EX, Parts in the dot line are mounted.  
 EP-2651\* -3: SSD-680STD用、破線内の部品なし  
 For SSD-680STD, Parts in the dot line are not mounted.

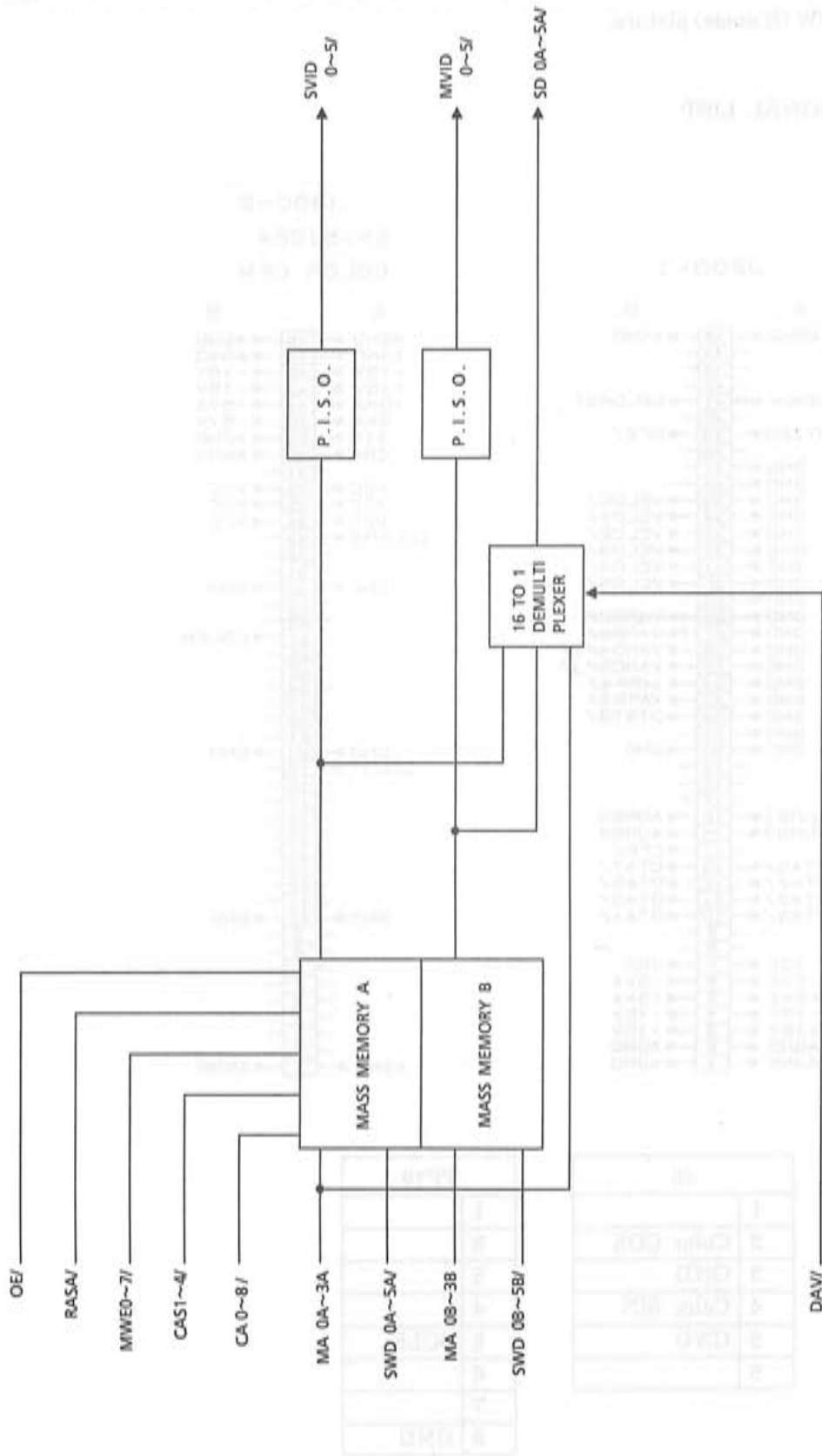
<b>Aloka</b>	TITLE 名称	MODEL 形名	1 / 1
	COLOR D/A	EP-2651	

6-22 EP-3237 B/W CINE MEMORY

This PCB has a storage capacity of full tomography area (512 pixel × 512 pixel × 6 bits) × 16 screens and is used for B/W. Writing of data, similar to that of main memory, is made on the planes in order.

SIGNAL LIST



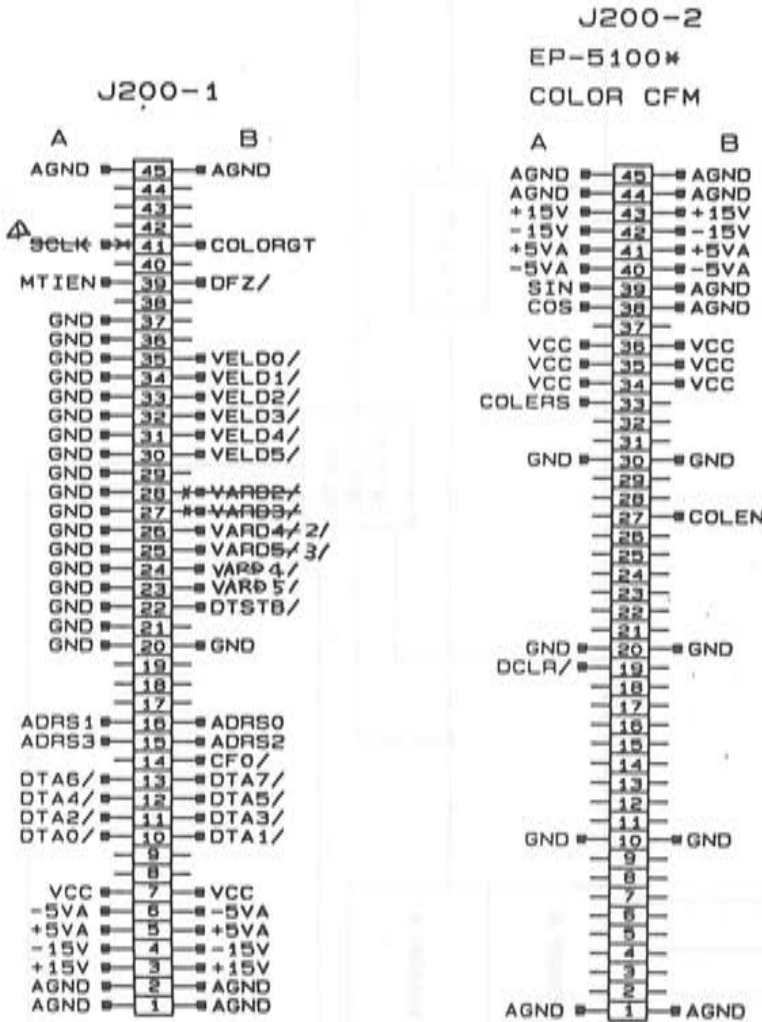


1 / 1	MODEL 形名 EP-3237	TITLE 名 BIW CINE MEMORY	Aloka
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6-23 EP-5100 COLOR FLOW PROCESSOR

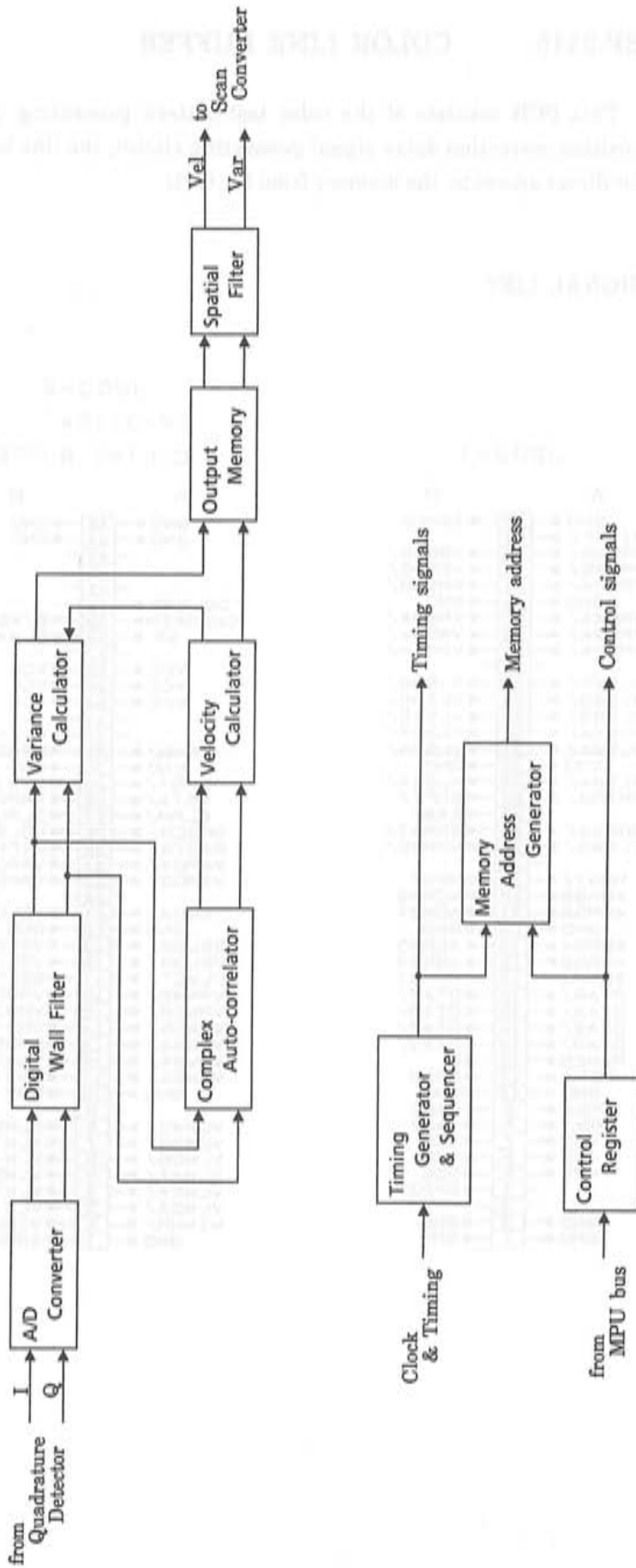
This board converts the frequency shifts included in the ultrasound reception signal into color information which is to be displayed, as a two-dimensional image, on the B/W (B mode) picture.

SIGNAL LIST



J5	
1	
2	Color COS
3	GND
4	Color SIN
5	GND
6	

TP19	
1	
2	
3	
4	
5	SCLK
6	
7	
8	GND



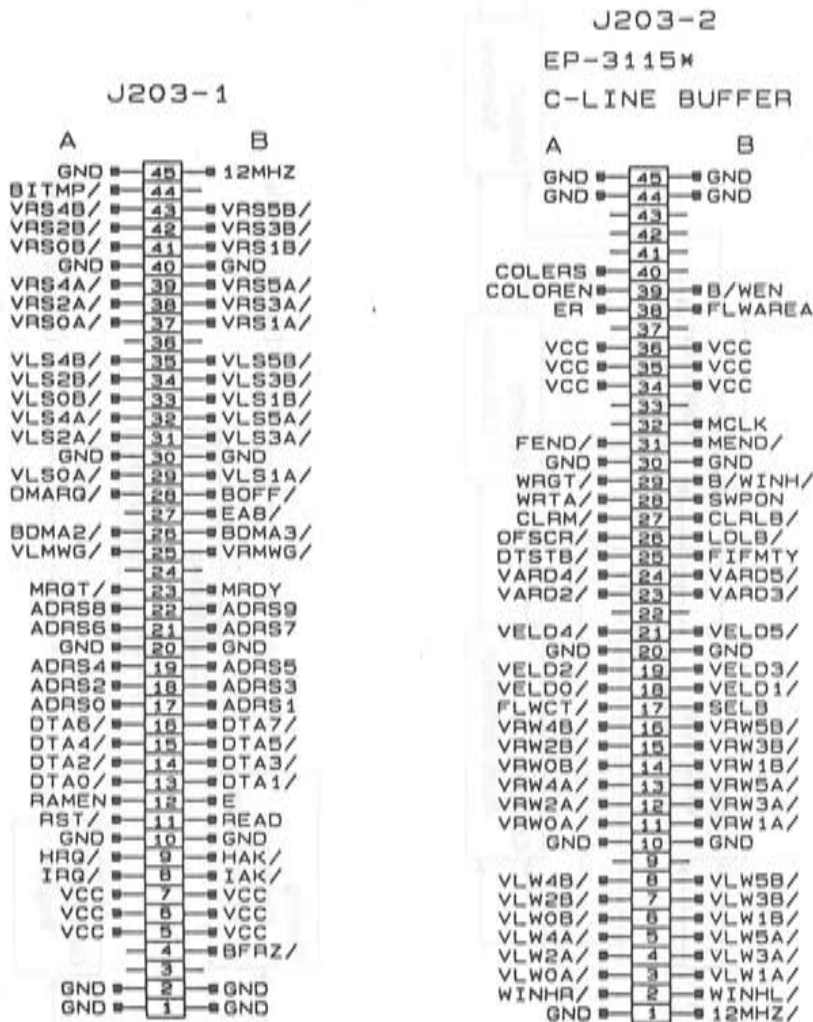
1 / 1	MODEL 形名 <b>EP-5100</b>	TITLE 名簿 <b>COLOR FLOW PROCESSOR</b>	<b>Aloka</b>
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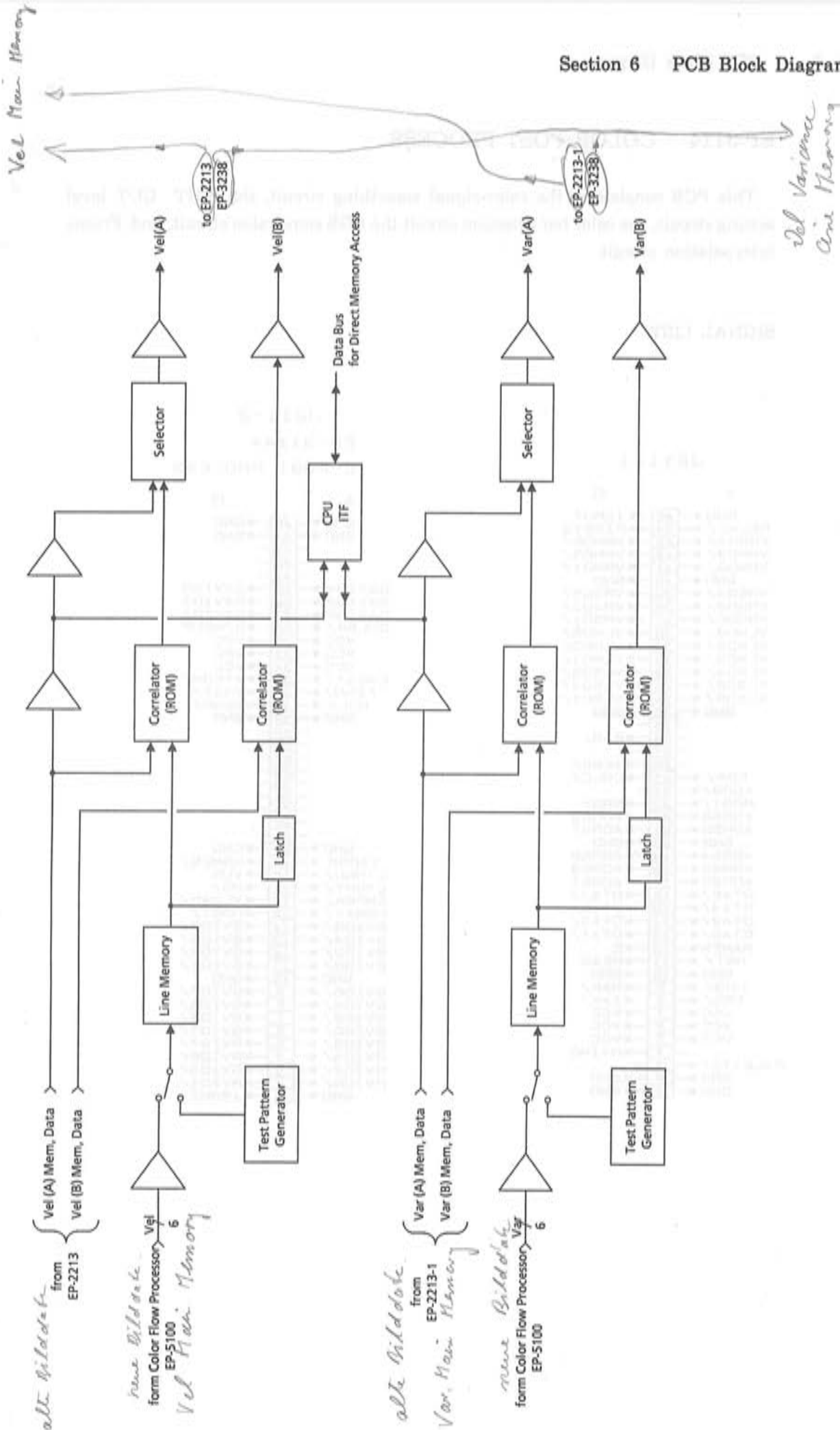


6-24 EP-3115 COLOR LINE BUFFER

This PCB consists of the color test-pattern generating circuit, the color, B/W position correction delay signal generating circuit, the line buffer, and the interface for direct access to the memory from the CPU.

SIGNAL LIST



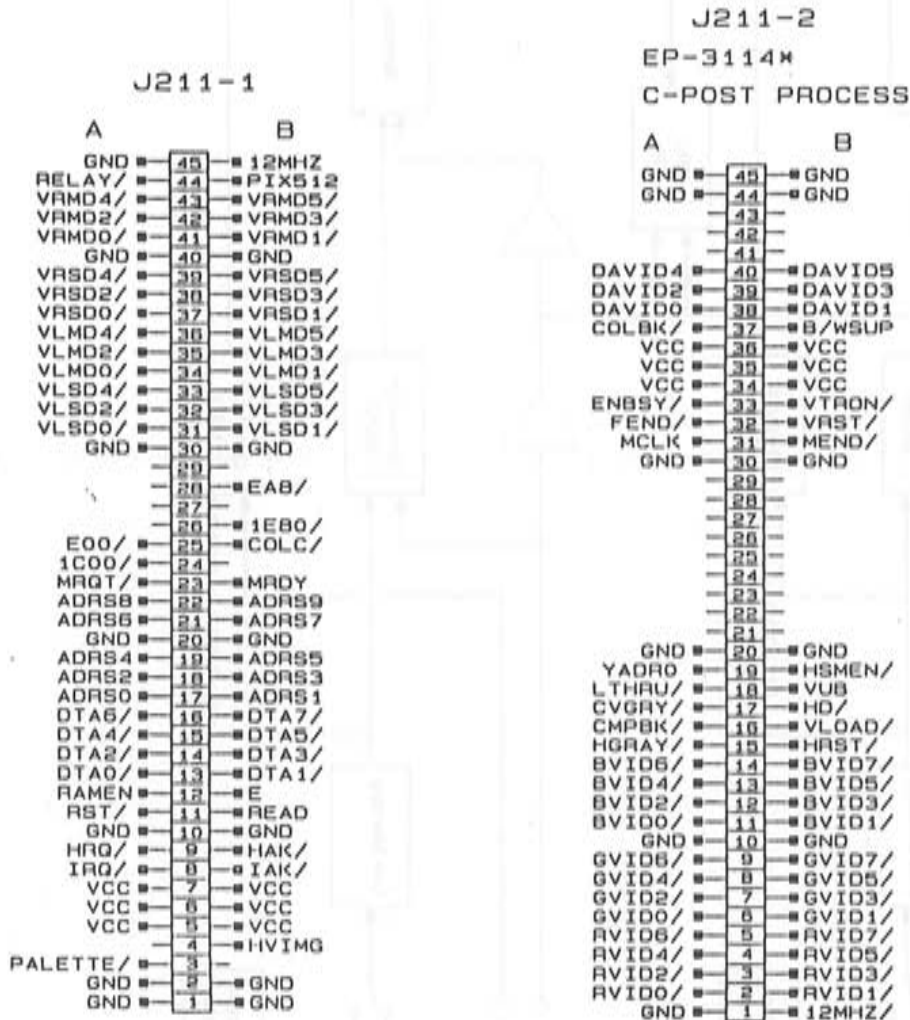


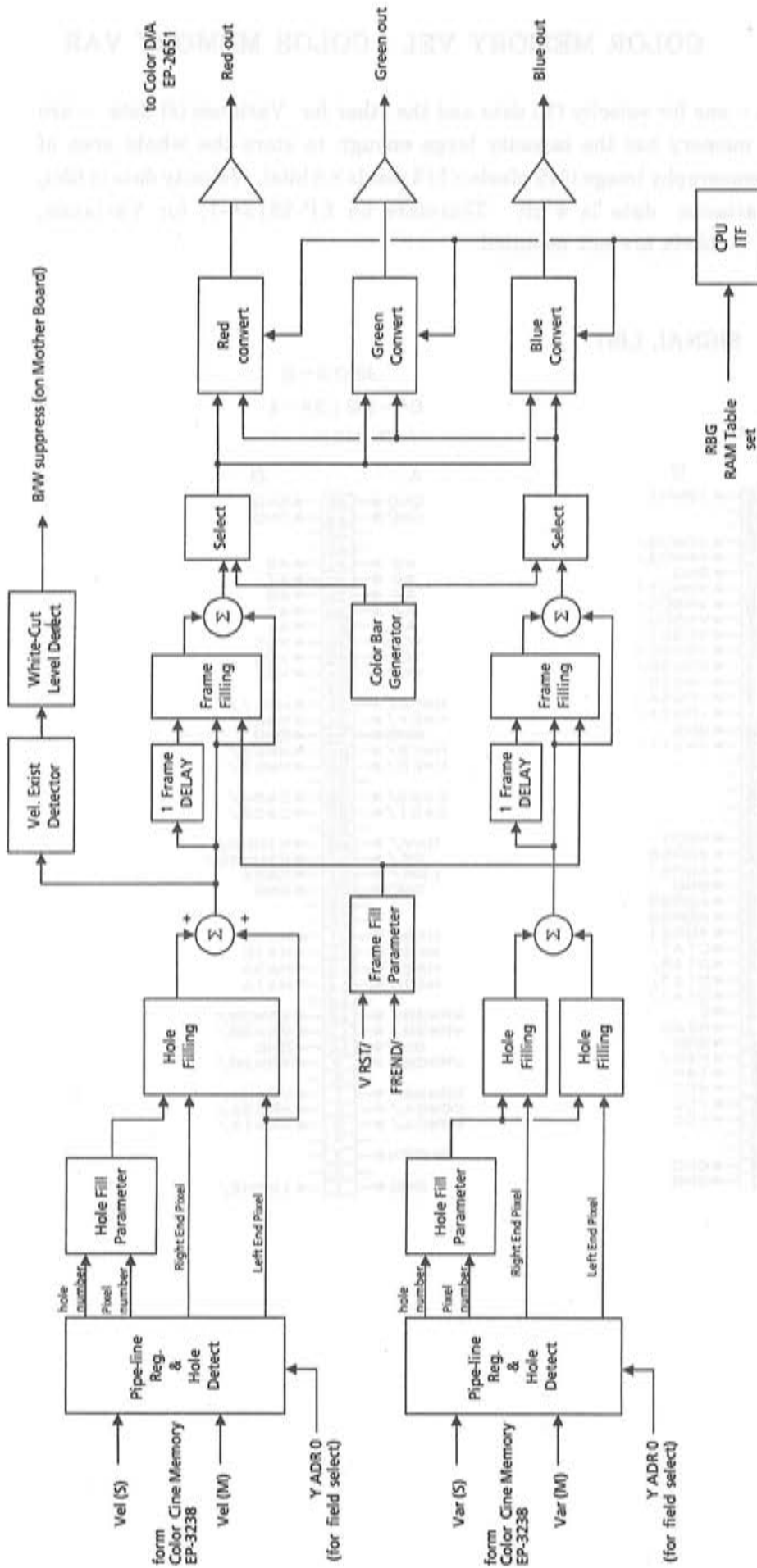
TITLE 名称		MODEL 型号	1/1
Aloka		COLOR LINE BUFFER	EP-3115

6-25 EP-3114 COLOR POST PROCESS

This PCB consists of the color-signal smoothing circuit, the WHT CUT level setting circuit, the color bar selection circuit the RGB conversion circuit, and Frame interpolation circuit.

SIGNAL LIST



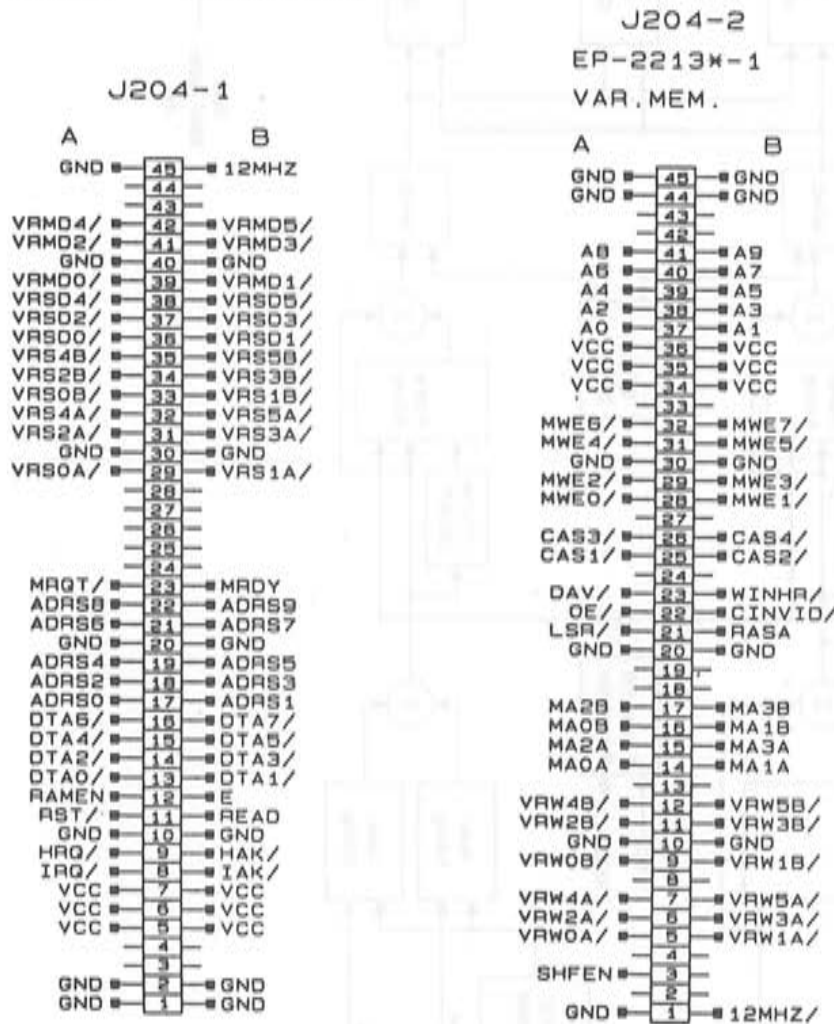


1 / 1	MODEL 形名 EP-3114	TITLE 名務 COLOR POST PROCESS	Aloka
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6-26 EP-2213 COLOR MEMORY VEL / COLOR MEMORY VAR

Two PCBs -- one for velocity (V) data and the other for Variance ( $\delta$ ) data -- are used. Each memory has the capacity large enough to store the whole area of ultrasound tomography image (512 pixels $\times$ 512 pixels $\times$ 6 bits). Velocity data is 6bit, however Variance data is 4 bit. Therefore on EP-2213\*-1, for Variance, unnecessary D-RAMs are not mounted.

EP-2213 SIGNAL LIST



EP-2213-1 SIGNAL LIST

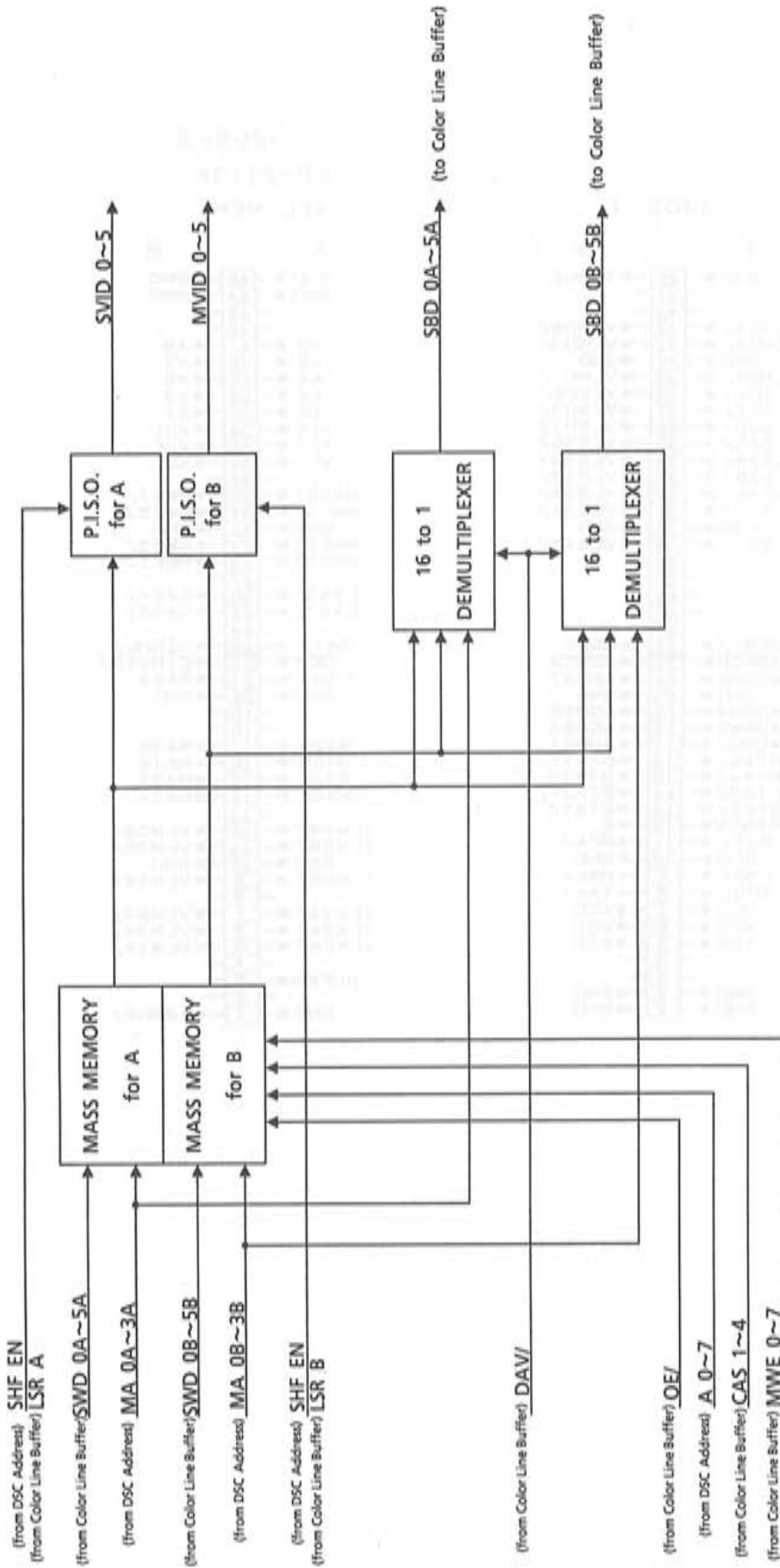
J205-1

A		B	
GND	45	12MHZ	
	44		
	43		
VLMD4/	42	VLMD5/	
VLMD2/	41	VLMD3/	
GND	40	GND	
VLMD0/	39	VLMD1/	
VLS04/	38	VLS05/	
VLS02/	37	VLS03/	
VLS00/	36	VLS01/	
VLS48/	35	VLS58/	
VLS28/	34	VLS38/	
VLS08/	33	VLS18/	
VLS4A/	32	VLS5A/	
VLS2A/	31	VLS3A/	
GND	30	GND	
VLS0A/	29	VLS1A/	
	28		
	27		
	26		
	25		
	24		
MRQT/	23	MRDY	
ADRS8	22	ADRS9	
ADRS6	21	ADRS7	
GND	20	GND	
ADRS4	19	ADRS5	
ADRS2	18	ADRS3	
ADRS0	17	ADRS1	
DTA8/	16	DTA7/	
DTA4/	15	DTA5/	
DTA2/	14	DTA3/	
DTA0/	13	DTA1/	
RAMEN	12	E	
RST/	11	READ	
GND	10	GND	
HRQ/	9	HAK/	
IRQ/	8	IAK/	
VCC	7	VCC	
VCC	6	VCC	
VCC	5	VCC	
	4		
	3		
GND	2	GND	
GND	1	GND	

J205-2

EP-2213\*  
VEL. MEM.

A		B	
GND	45	GND	
GND	44	GND	
	43		
	42		
AB	41	A9	
AB	40	A7	
A4	39	A5	
A2	38	A3	
A0	37	A1	
VCC	36	VCC	
VCC	35	VCC	
VCC	34	VCC	
	33		
MWE6/	32	MWE7/	
MWE4/	31	MWE5/	
GND	30	GND	
MWE2/	29	MWE3/	
MWE0/	28	MWE1/	
	27		
CAS3/	26	CAS4/	
CAS1/	25	CAS2/	
	24		
DAV/	23	WINHL/	
OE/	22	CINVID/	
LSR/	21	RASA	
GND	20	GND	
	19		
	18		
MA2B	17	MA3B	
MA0B	16	MA1B	
MA2A	15	MA3A	
MA0A	14	MA1A	
	13		
VLW4B/	12	VLW5B/	
VLW2B/	11	VLW3B/	
GND	10	GND	
VLW0B/	9	VLW1B/	
	8		
VLW4A/	7	VLW5A/	
VLW2A/	6	VLW3A/	
VLW0A/	5	VLW1A/	
	4		
SHFEN	3		
	2		
GND	1	12MHZ/	



<b>Aloka</b>	TITLE 名称 COLOR MEMORY VEL COLOR MEMORY VAR	MODEL 形名 EP-2213 EP-2213 -1	1 / 1
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EP-2213\* : for Velocity  
EP-2213\*-1 : for Variance

PCB BLOCK DIAGRAM

The PCB has four layers for both internal and external. The internal layer is a 2-layer system with a prepreg core and prepreg. The external layer is a 2-layer system with a prepreg core and prepreg. The prepreg is a 2-layer system with a prepreg core and prepreg. The prepreg is a 2-layer system with a prepreg core and prepreg.

PCB BLOCK DIAGRAM

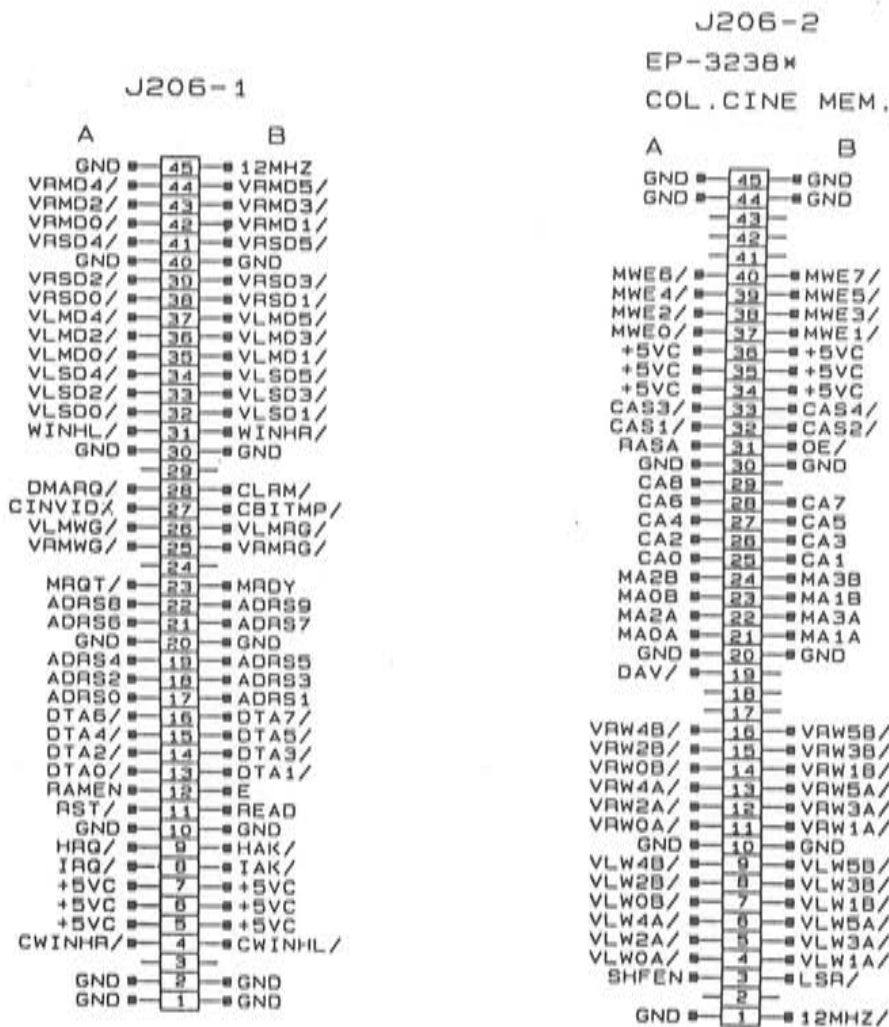


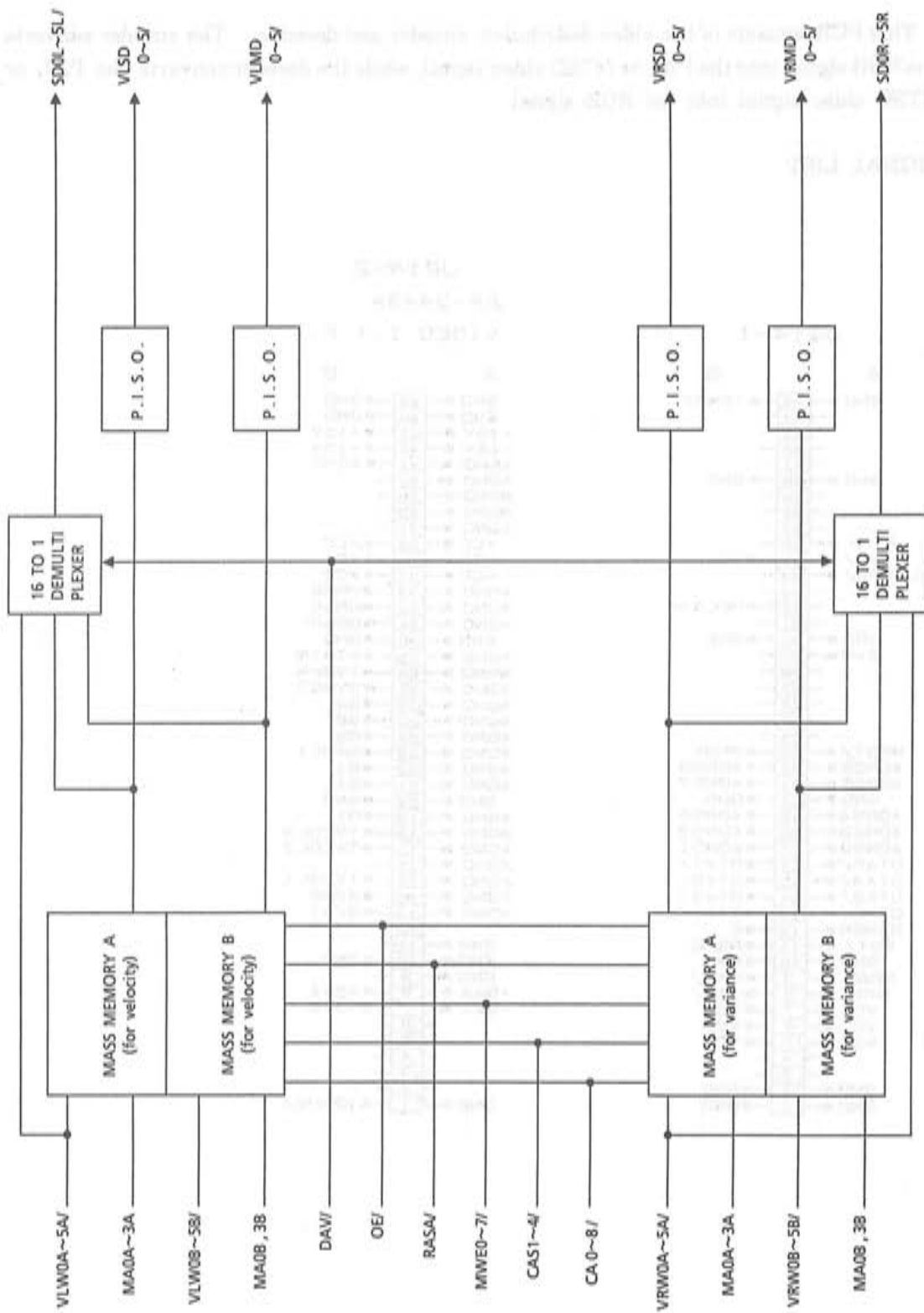


6-27 EP-3238 COLOR CINE MEMORY

This PCB has Cine memory for both velocity and variance. The memory capacity is 512pixels×512pixels×6bits×16planes for velocity, and 512pixels×512pixels×4bits×16planes for variance. Writing of data, similar to that of Color memory, is made on the planes in order.

SIGNAL LIST



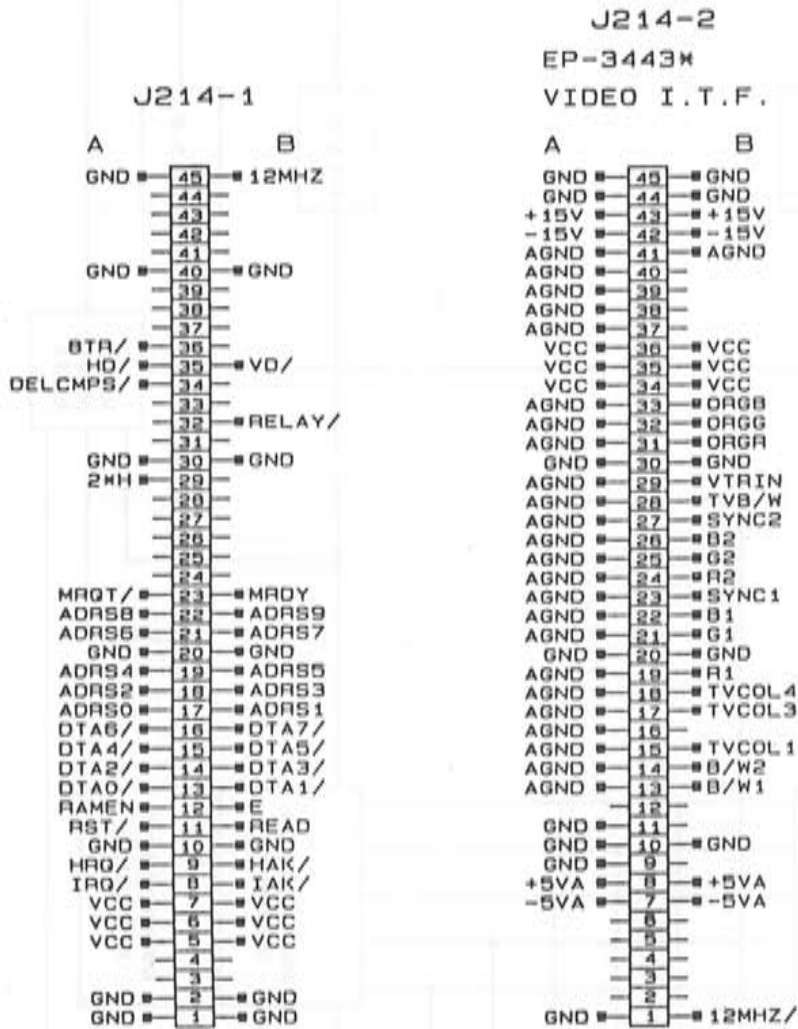


<b>Aloka</b>	TITLE 名称	MODEL 型号	<b>1 / 1</b>
	<b>COLOR CINE MEMORY</b>		<b>EP-3238</b>

6-28 EP-3443 VIDEO ITF

This PCB consists of the video distributor, encoder and decoder. The encoder converts the RGB signal into the PAL or NTSC video signal, while the decoder converts the PAL or NTSC video signal into the RGB signal.

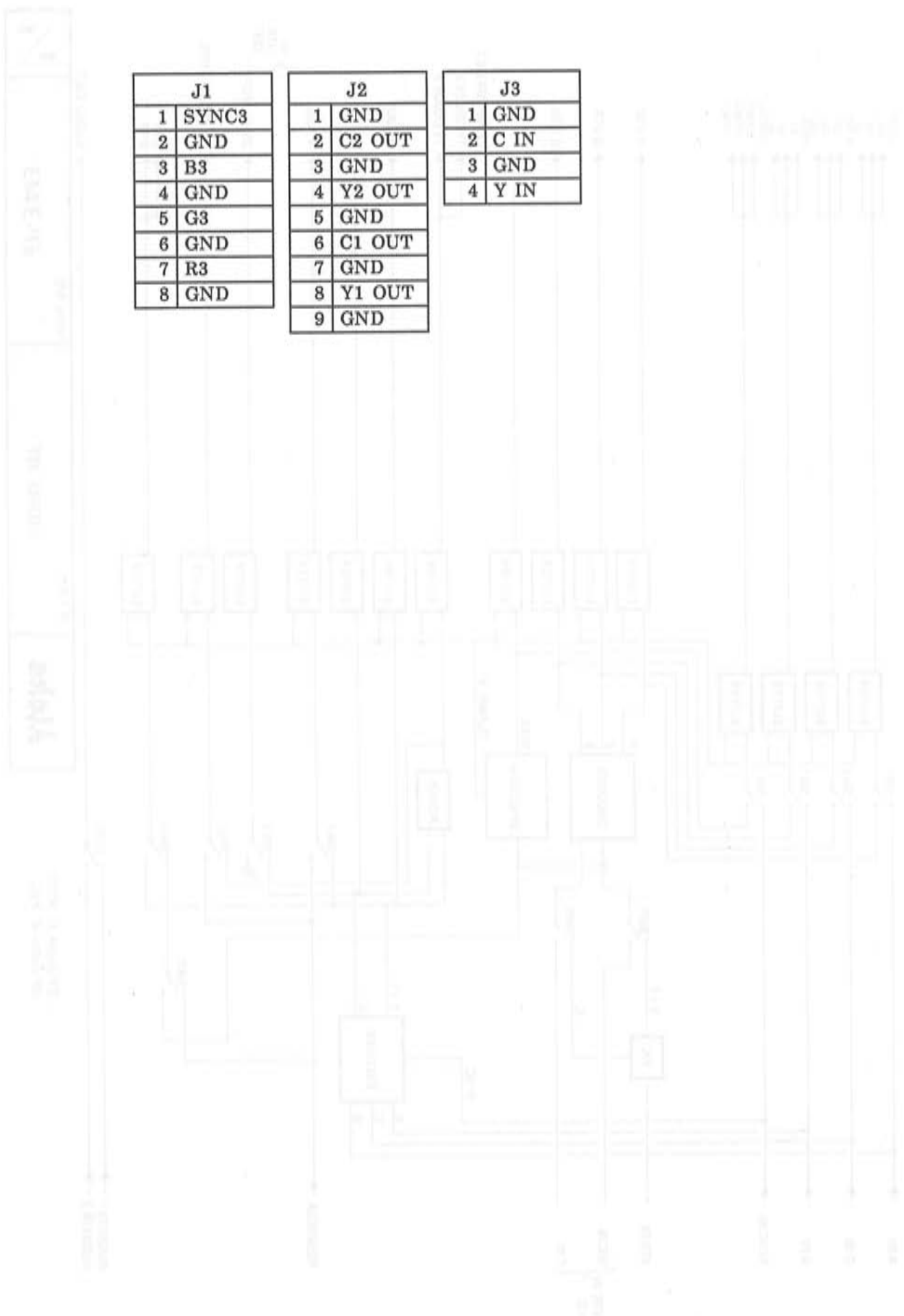
SIGNAL LIST



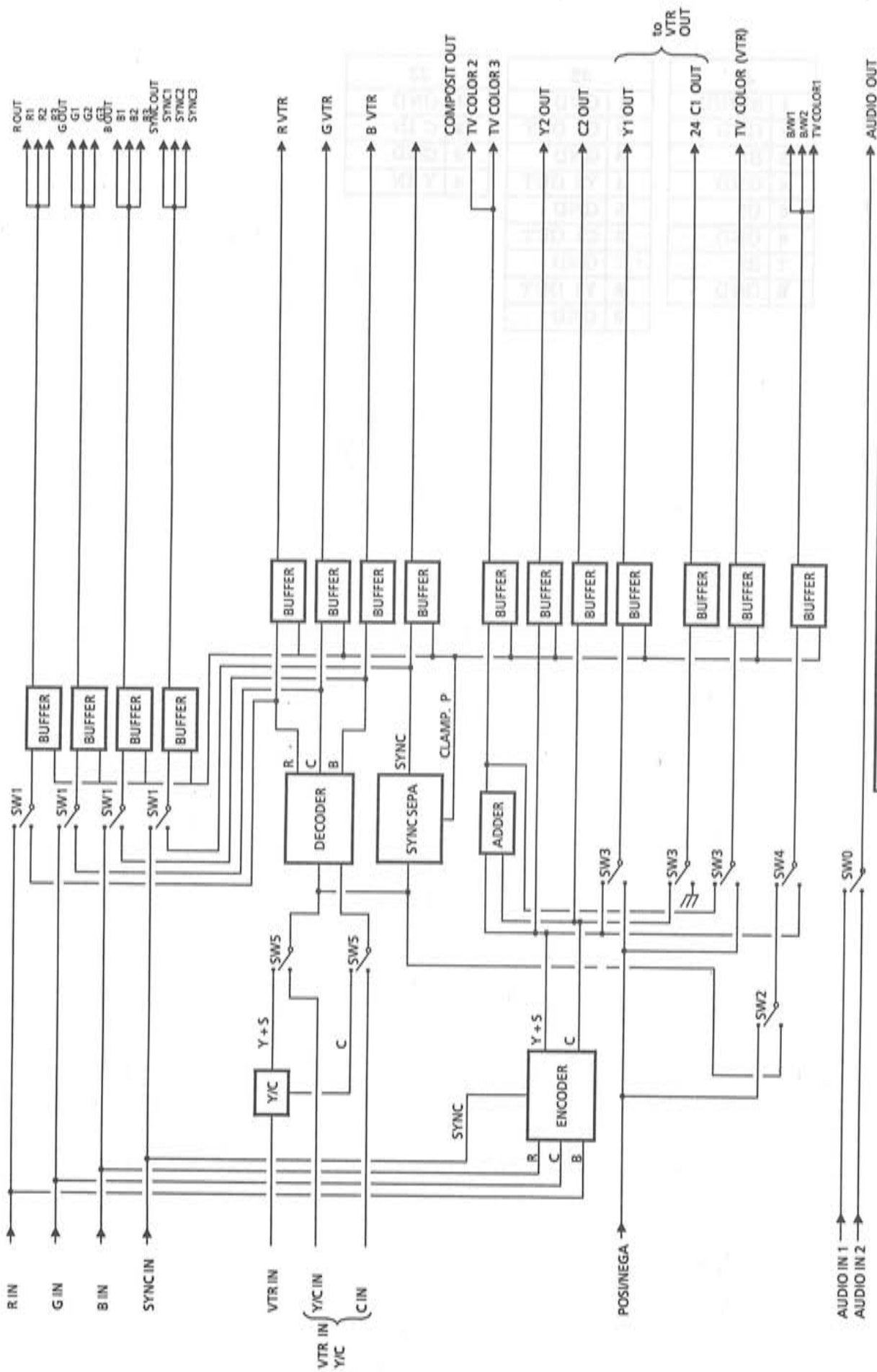
J1	
1	SYNC3
2	GND
3	B3
4	GND
5	G3
6	GND
7	R3
8	GND

J2	
1	GND
2	C2 OUT
3	GND
4	Y2 OUT
5	GND
6	C1 OUT
7	GND
8	Y1 OUT
9	GND

J3	
1	GND
2	C IN
3	GND
4	Y IN



Section 6 PCB Block Diagram



<b>Aloka</b>	TITLE 名称 <b>VIDEO IF</b>	MODEL 型号 <b>EP-3443</b>	1 / 1
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EP-3443\* -5 : NTSC  
EP-3443\* -6 : PAL

XXXXXX XXXX-XX-XX

In this report, information will be provided to help the PCB owner understand the PCB contamination levels in the soil of the PCB site. The PCB owner should be aware that the PCB contamination levels in the soil are not necessarily related to the PCB contamination levels in the air. The PCB contamination levels in the air are determined by the PCB contamination levels in the soil.

The PCB contamination levels in the soil are determined by the PCB contamination levels in the air. The PCB contamination levels in the air are determined by the PCB contamination levels in the soil. The PCB contamination levels in the soil are determined by the PCB contamination levels in the air.

A PCB contamination level in the soil is determined by the PCB contamination level in the air. The PCB contamination level in the air is determined by the PCB contamination level in the soil. The PCB contamination level in the soil is determined by the PCB contamination level in the air.

TABLE 1

PCB Contamination Level in Soil (ppm)	PCB Contamination Level in Air (ppm)	PCB Contamination Level in Soil (ppm)	PCB Contamination Level in Air (ppm)	PCB Contamination Level in Soil (ppm)	PCB Contamination Level in Air (ppm)
10	10	10	10	10	10
20	20	20	20	20	20
30	30	30	30	30	30
40	40	40	40	40	40
50	50	50	50	50	50
60	60	60	60	60	60
70	70	70	70	70	70
80	80	80	80	80	80
90	90	90	90	90	90
100	100	100	100	100	100

6-29 EP-3260 DOP TXRX

In this equipment, transmission and receiving are possible in both the PW and CW operation modes. In the case of CW operation mode, one of two probes is used for transmission only and the other for receiving only. In the PW operation mode, each probe is used for both transmission and receiving at the same time.

The received echo signal is subjected to a band limitation while it passes through a band pass filter. Since four kinds of filters are mounted, frequency usable for doppler measurement depends on what filter is selected. Selection of one of four filters is made by serial control data "FSLE."

After passing through a filter, the signal is divided by orthogonal transform detection into two lines. In the case of PW operation mode, a range gate is applied to a signal of the aimed part and the signal in the gate is held by integration. Here, the serial control data "MATCH GAIN" determines integration time constant. In the case of CW operation mode, no range gate is used and no integration is made. Here, the above-mentioned "MATCH GAIN" determines only the gain.

SIGNAL LIST

J100

pin	A	B	pin	A	B
1	+5Va		26		
2	+5Va		27		
3	A-GND		28		
4	+15V		39		
5	-15V		30		VTX IN
6	D-GNDa		31		
7			32		
8			33		
9			34		
10			35	STROBE	SCLK
11	HPA-G	HPA	36	SD2	SD1
12	HPB-G	HPB	37		
13			38		
14			39		
15			40		
16	CW/		41		
17	DSAMPLE/	XMIT	42		
18	MATCH/	RST	43		
19		TESTTYPE	44		
20	CWRELAY		45	C8-G	C8
21			46		
22			47		
23			48		
24			49	D-GNDa	
25	D-GNDa		50	D-GNDa	

J1, J2, J3

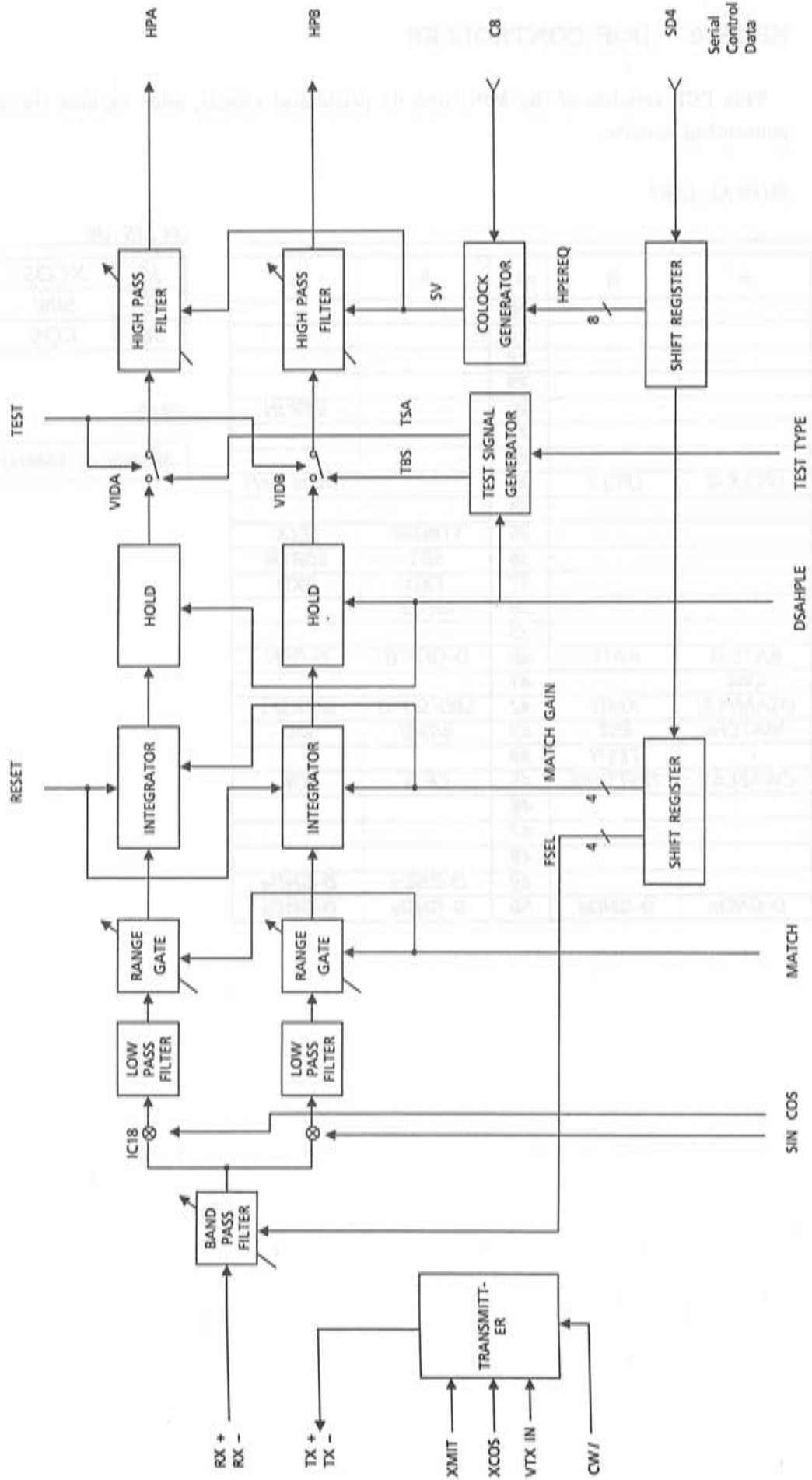
J1	X-COS
J2	SIN/
J3	COS

J601

pin	
1	RX +
2	GND
3	RX-

J602

pin	
1	TX +
2	GND
3	TX-
4	N.C.



1 / 1	EP-3260	DOP TX RX	Aloka
MODEL 形名		TITLE 名番	



6-30 EP-2810 DOP CONTROLLER

This PCB consists of the MPU and its peripheral circuit, and various timing generating circuits.

SIGNAL LIST

J110

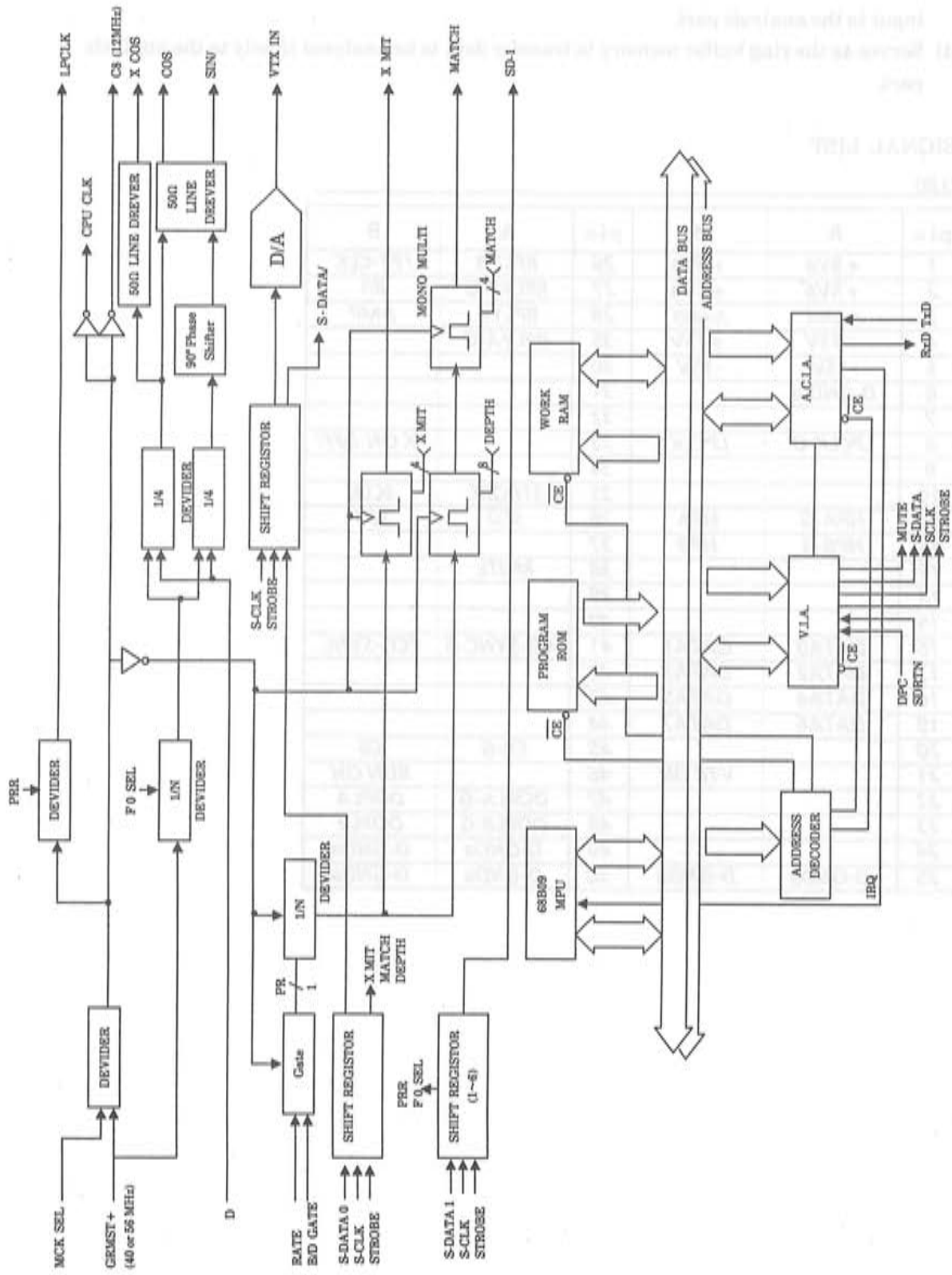
pin	A	B	pin	A	B
1			26		
2			27		
3			28		
4			39		
5			30		VTX IN
6			31		
7			32		
8	LPCLK-G	LPCLK	33		TXON-OFF/
9			34		
10			35	STROBE	SCLK
11			36	SD1	SDRTN
12			37	TXD	RXD
13			38	MUTE	
14			39		
15	RATE-G	RATE	40	D-OFF/-G	D-OFF/
16	CW/		41		
17	DSAMPLE/	XMIT	42	MCKSEL-G	MCKSEL
18	MATCH/	RST	43	B/D-G	B/D
19		TEST/	44		
20	CWRELAY	TESTTYPE	45	C8-G	C8
21			46		
22			47		
23			48		
24			49	D-GNDa	D-GNDa
25	D-GNDa	D-GNDa	50	D-GNDa	D-GNDa

J4, J5, J6

J4	XCOS
J5	SIN/
J6	COS

J612

40MHz or 56MHz



1 / 1
DOP CONTROLLER
EP-2810
MODEL 形名
TITLE 名册
Aloka

## 6-31 EP-3259 DOP FILTER

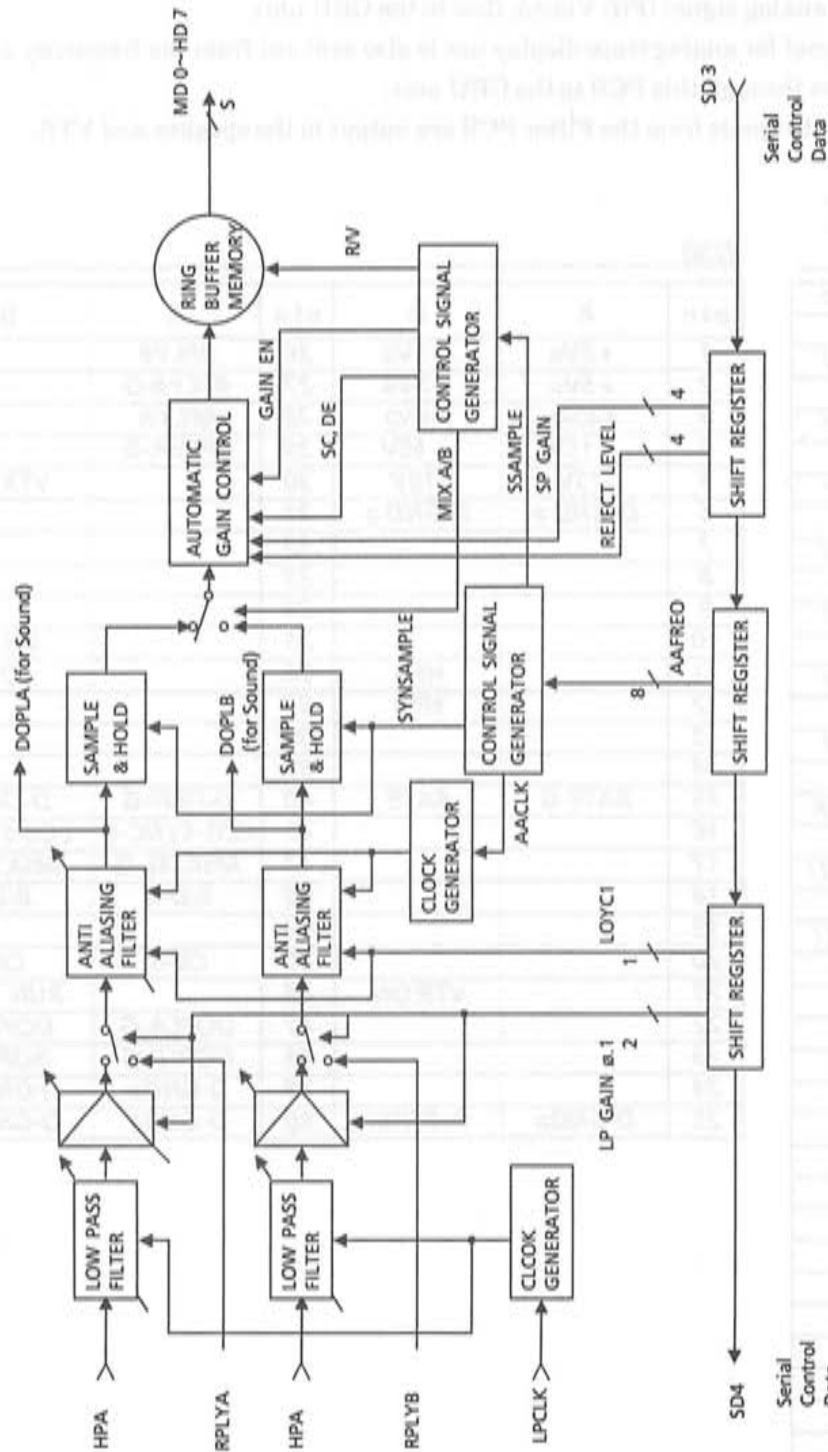
This PCB has the following four functions :

- (1) Serves as the Low Pass Filter circuit to increase the S/N ratio of doppler signals.
- (2) Serves as the AA Filter (Anti-Allasing Filter) circuit.
- (3) Serves as the AGC (Automatic Gain Control) circuit to expand the dynamic range of input to the analysis part.
- (4) Serves as the ring buffer memory to transfer data to be analyzed timely to the analysis part.

## SIGNAL LIST

*J120*

pin	A	B	pin	A	B
1	+5Va	+5Va	26	RPLYB	FFT-CLK
2	+5Va	+5Va	27	RPLYB-G	R/I
3	A-GND	A-GND	28	RPLYA	AMP
4	+15V	+15V	39	RPLYA-G	
5	-15V	-15V	30		
6	D-GNDa		31		
7			32		
8	LPCLK-G	LPCLK	33		TX ON-OFF/
9			34		
10			35	STROBE	SCLK
11	HPA-G	HPA	36	SD2	SD1
12	HPB-G	HPB	37		
13			38	MUTE	
14			39		
15			40		
16	DATA0	DATA1	41	ECG-SYNC-G	ECG-SYNC
17	DATA2	DATA3	42		
18	DATA4	DATA5	43		
19	DATA6	DATA7	44		
20			45	C8-G	C8
21		VTR ON	46		RUN ON
22			47	DOPLA-G	DOPLA
23			48	DOPLB-G	DOPLB
24			49	D-GNDa	D-GNDa
25	D-GNDa	D-GNDa	50	D-GNDa	D-GNDa



## 6-32 EP-2812 DOP INTERFACE

128-point spectrum data (SPVID 0/~6/) from the frequency analysis part pass through the smoothing circuit in the vertical direction (frequency-axis direction) and, after converted into analog signal (P(f) Video), flow to the GEU unit.

The PPM signal for analog trace display use is also sent out from the frequency analysis part and it flows through this PCB to the CEU unit.

Doppler sound signals from the Filter PCB are output to the speaker and VTR.

## SIGNAL LIST

J7

1	SPVID0/
2	GND
3	SPVID1/
4	GND
5	SPVID2/
6	GND
7	SPVID3/
8	GND
9	SPVID4/
10	GND
11	SPVID5/
12	GND
13	SPVID6/
14	GND
15	TRPPM/
16	GND
17	DATACLK
18	GND
19	SPC UNBL/
20	GND
21	TR UNBL/
22	GND
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	RXD/
36	GND
37	TXD/
38	GND
39	INTRES/
40	GND

J130

pin	A	B	pin	A	B
1	+5Va	+5Va	26	RPLYB	
2	+5Va	+5Va	27	RPLYB-G	
3	A-GND	A-GND	28	RPLYA	
4	+15V	+15V	39	RPLYA-G	
5	-15V	-15V	30		VTX IN
6	D-GND a	D-GND a	31		
7			32		
8			33		
9			34		
10			35		SCLK
11		HPA	36		SD1
12		HPB	37		
13			38		
14			39		
15	RATE-G	RATE	40	D-OFFI-G	D-OFFI
16			41	ECG-SYNC-G	ECG-SYNC
17			42	MSKSEL-G	MSKSEL
18			43	B/D-G	B/D
19			44		
20			45	C8-G	C8
21		VTR ON	46		RUN ON
22			47	DOPLA-G	DOPLA
23			48	DOPLB-G	DOPLB
24			49	D-GNDa	D-GNDa
25	D-GNDa	D-GNDa	50	D-GNDa	D-GNDa

J603

1	DOPLA
2	DOPL-G
3	
4	GND
5	
6	GND
7	
8	
9	RPLYA
10	RPLY-G
11	RPLYB
12	RPLY-G
13	DOPLB
14	DOPL-G
15	
16	GND
17	GND
18	GND
19	
20	VOLUME-G
21	
22	
23	
24	
25	
26	

J604

1	DSVID1
2	DSVID1
3	DSVID2
4	DSVID2
5	DSVID3
6	DSVID3
7	DSVID4
8	DSVID4
9	DSVID5
10	DSVID5
11	DSVID6
12	DSVID6
13	DSVID7
14	DSVID7
15	TRVID
16	TRVID
17	DOT CLK
18	DOT CLK
19	UNBLS
20	UNBLS
21	NC
22	NC
23	UNBLT
24	UNBLT
25	NC
26	48MHz/
27	48MHz/-G
28	INTRES
29	RATE
30	RATE
31	B/D GATE
32	B/D GATE
33	D-OFF/
34	D-OFF/
35	SD1
36	SD1
37	SDRTN
38	SDRTN
39	GND
40	NC

J606

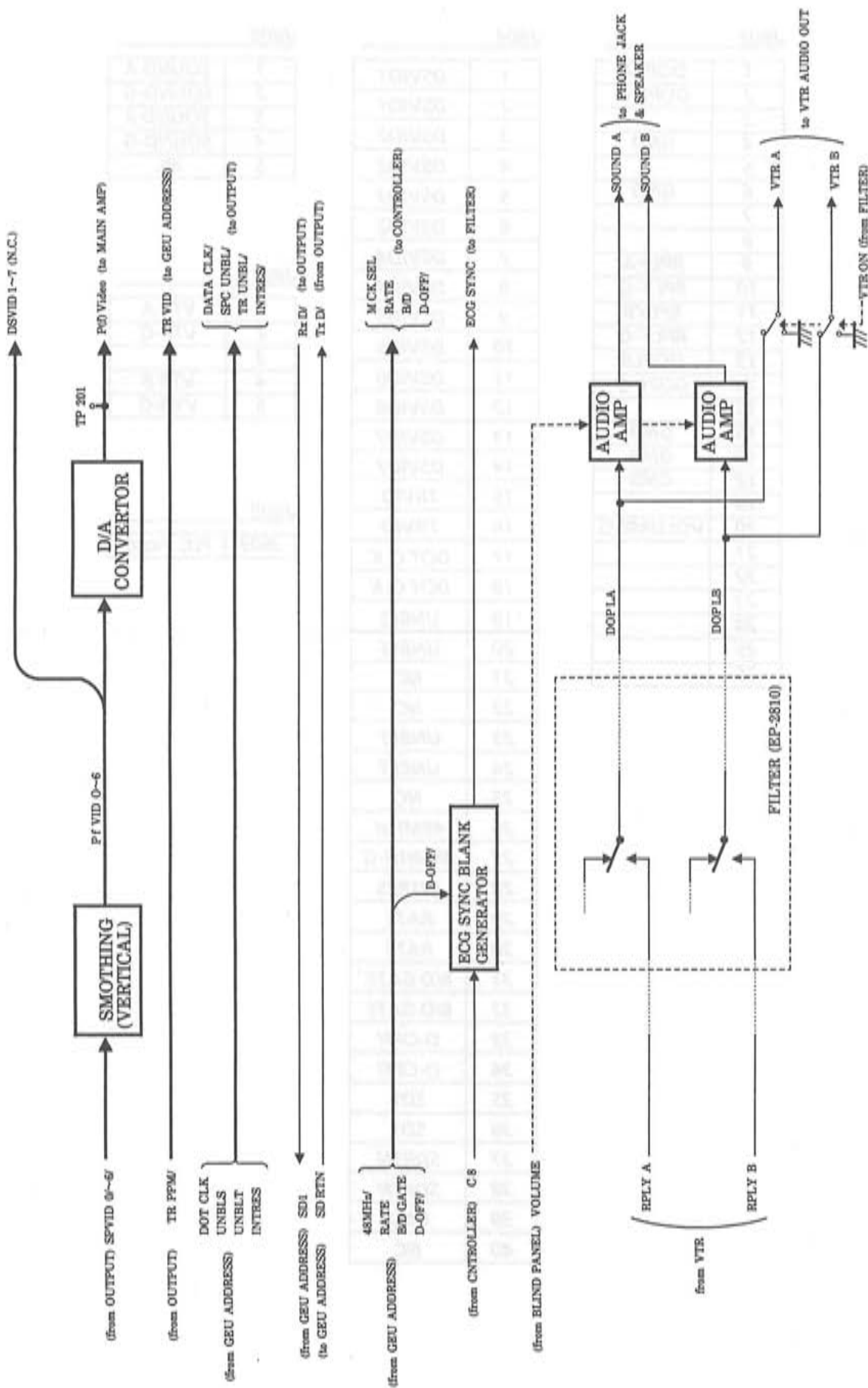
1	SOUND A
2	SOUND-G
3	SOUND B
4	SOUND-G
5	NC

J607

1	VTRA
2	VTR-G
3	
4	VTR B
5	VYR-G

J609

J609	P(f) VIDEO
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<b>Aloka</b>	TITLE 名称 <b>DOP INTERFACE</b>	MODEL 型号 <b>EP-2812</b>	<b>1 / 1</b>
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The primary purpose of this document is to provide a detailed description of the PCB block diagram for the [Product Name]. This document is intended for use by the design and manufacturing teams to ensure that the PCB is designed and manufactured correctly. The PCB block diagram shows the physical layout of the PCB, including the locations of all components, the routing of the traces, and the placement of the vias. The PCB block diagram is a critical part of the PCB design process, and it is essential to ensure that it is accurate and complete. This document provides a detailed description of the PCB block diagram, including the locations of all components, the routing of the traces, and the placement of the vias. The PCB block diagram is a critical part of the PCB design process, and it is essential to ensure that it is accurate and complete.

PCB BLOCK DIAGRAM

Pin	Signal	Level	Pin	Signal	Level
1	VCC	5V	1	VCC	5V
2	GND	0V	2	GND	0V
3	DATA	3.3V	3	DATA	3.3V
4	DATA	3.3V	4	DATA	3.3V
5	DATA	3.3V	5	DATA	3.3V
6	DATA	3.3V	6	DATA	3.3V
7	DATA	3.3V	7	DATA	3.3V
8	DATA	3.3V	8	DATA	3.3V
9	DATA	3.3V	9	DATA	3.3V
10	DATA	3.3V	10	DATA	3.3V
11	DATA	3.3V	11	DATA	3.3V
12	DATA	3.3V	12	DATA	3.3V
13	DATA	3.3V	13	DATA	3.3V
14	DATA	3.3V	14	DATA	3.3V
15	DATA	3.3V	15	DATA	3.3V
16	DATA	3.3V	16	DATA	3.3V
17	DATA	3.3V	17	DATA	3.3V
18	DATA	3.3V	18	DATA	3.3V
19	DATA	3.3V	19	DATA	3.3V
20	DATA	3.3V	20	DATA	3.3V
21	DATA	3.3V	21	DATA	3.3V
22	DATA	3.3V	22	DATA	3.3V
23	DATA	3.3V	23	DATA	3.3V
24	DATA	3.3V	24	DATA	3.3V
25	DATA	3.3V	25	DATA	3.3V
26	DATA	3.3V	26	DATA	3.3V
27	DATA	3.3V	27	DATA	3.3V
28	DATA	3.3V	28	DATA	3.3V
29	DATA	3.3V	29	DATA	3.3V
30	DATA	3.3V	30	DATA	3.3V



## 6-33 FFT PCB

The frequency analyzer (NJK-196A) consists of the FFT PCB and OUTPUT PCB.

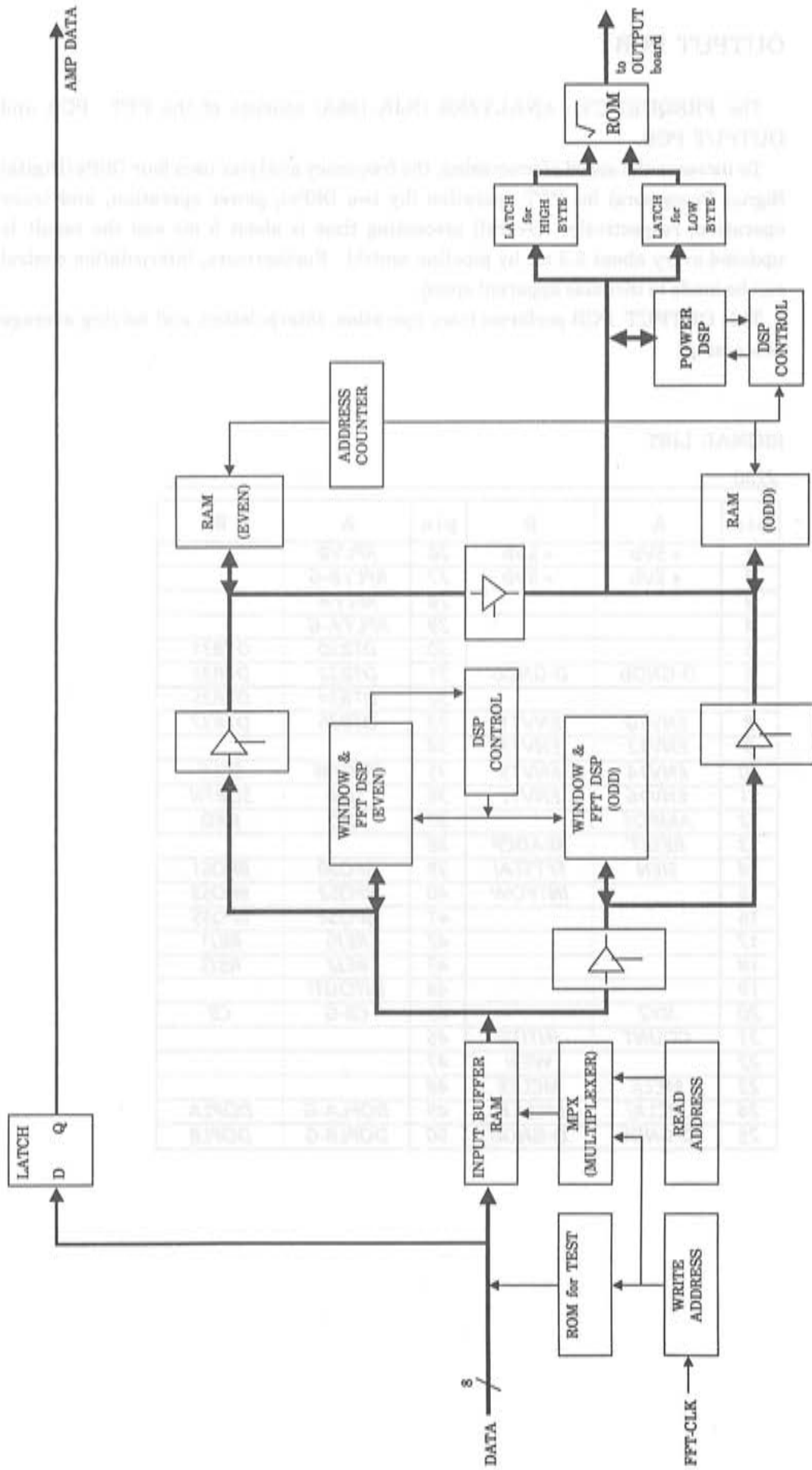
To increase the speed of processing, the frequency analyzer uses four DSPs (Digital signal Processors) for FFT operation (by two DSPs), power operation, and trace operation, respectively. Overall processing time is about 5 ms and the result is updated every about 2.3 ms by pipeline control. Furthermore, interpolation control can be made to increase apparent speed.

This FFT PCB performs FFT operation and power operation.

## SIGNAL LIST

J140

pin	A	B	pin	A	B
1	+5Va		26		FFT-CLK
2	+5Va		27		R/I
3			28		AMP
4			39		
5			30	DTB30	DTB31
6	D-GND a		31	DTB32	DTB33
7			32	DTB34	DTB35
8	ENV10	ENV11	33	DTB36	DTB37
9	ENV12	ENV13	34		
10	ENV14	ENV15	35	STROBE	SCLK
11	ENV16	ENV17	36	SD3	SD4
12	AMPOE		37		
13	RESET	READCP	38		
14	SINE	FFT STA/	39	BPOS0	BPOS1
15		INTPOW	40	BPOS2	BPOS3
16	DATA0	DATA1	41	BPOS4	BPOS5
17	DATA2	DATA3	42	REJ0	REJ1
18	DATA4	DATA5	43	REJ2	REJ3
19	DATA6	DATA7	44	INOUT/	
20	XYZ		45	C8-G	C8
21	COUNT	INTITE	46		
22		WE3/	47		
23	MCLK	MCLKE	48		
24	MCLK/	MCLKE/	49	D-GNDb	D-GNDb
25	D-GNDb	D-GNDb	50	D-GNDb	D-GNDb



TITLE: 6-88	MODEL: 8-8	1/1
FFT Calculator		FFT (NJK-196A)
<b>Aloha</b>		

## 6-34 OUTPUT PCB

The FREQUENCY ANALYZER (NJK-196A) consists of the FFT PCB and OUTPUT PCB.

To increase the speed of processing, the frequency analyzer uses four DSPs (Digital Signal Processors) for FFT operation (by two DSPs), power operation, and trace operation, respectively. Overall processing time is about 5 ms and the result is updated every about 2.3 ms by pipeline control. Furthermore, interpolation control can be made to increase apparent speed.

This OUTPUT PCB performs trace operation, interpolation, and moving average processing.

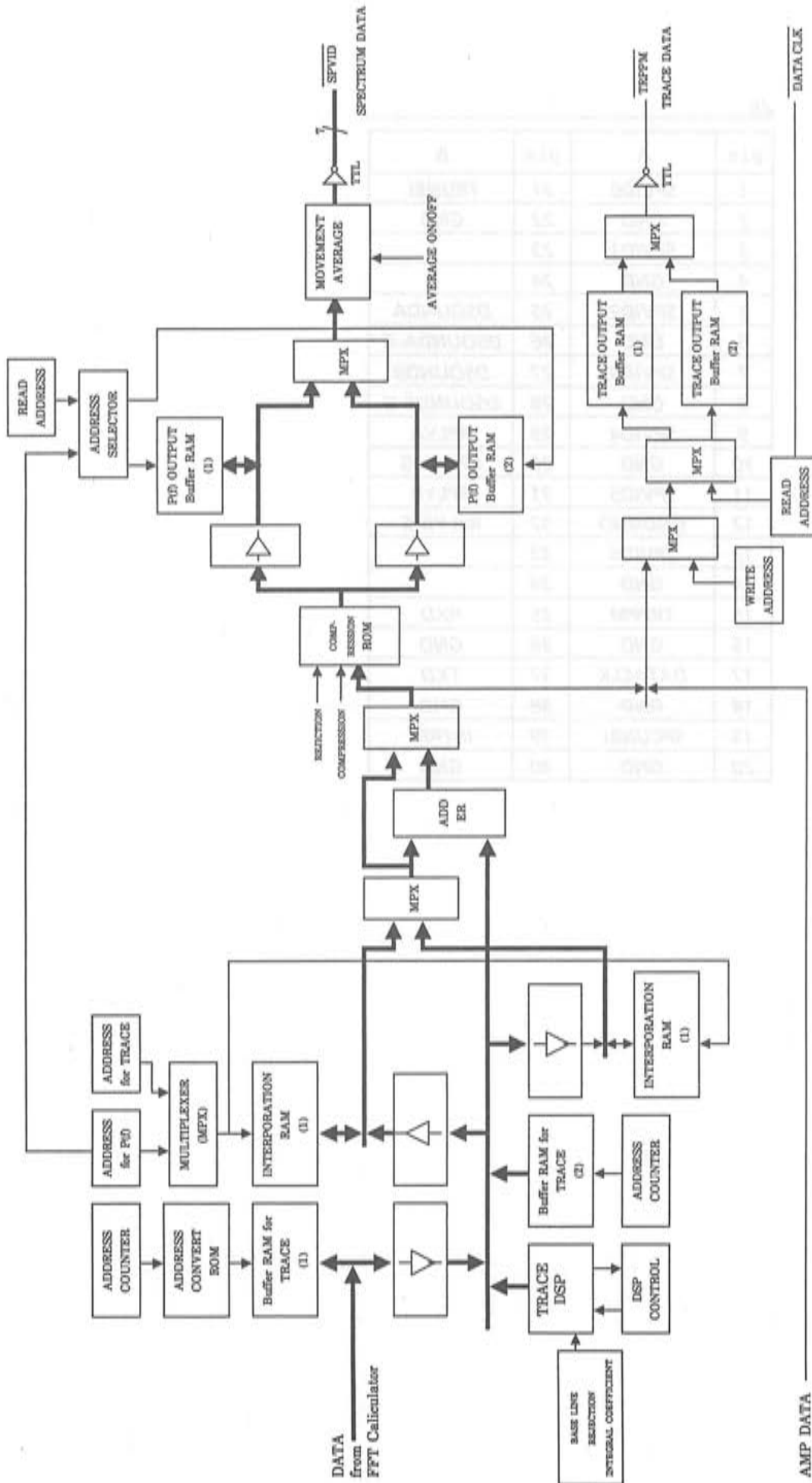
## SIGNAL LIST

*J150*

pin	A	B	pin	A	B
1	+5Vb	+5Vb	26	RPLYB	
2	+5Vb	+5Vb	27	RPLYB-G	
3			28	RPLYA	
4			39	RPLYA-G	
5			30	DTB30	DTB31
6	D-GNDb	D-GNDb	31	DTB32	DTB33
7			32	DTB34	DTB35
8	ENV10	ENV11	33	DTB36	DTB37
9	ENV12	ENV13	34		
10	ENV14	ENV15	35	STROBE	SCLK
11	ENV16	ENV17	36	SD4	SDRTN
12	AMPOE		37	TXD	RXD
13	RESET	READCP	38		
14	SIEN	FFTSTA/	39	BPOS0	BPOS1
15		INTPOW	40	BPOS2	BPOS3
16			41	BPOS4	BPOS5
17			42	REJ0	REJ1
18			43	REJ2	REJ3
19			44	INTOUT/	
20	XYZ		45	C8-G	C8
21	COUNT	INTITE	46		
22		WE3/	47		
23	MCLK	MCLKE	48		
24	MCLK/	MCLKE/	49	DOPLA-G	DOPLA
25	D-GNDb	D-GNDb	50	DOPLB-G	DOPLB

J8

pin	A	pin	A
1	SPVID0	21	TRUNBL
2	GND	22	GND
3	SPVID1	23	
4	GND	24	
5	SPVID2	25	DSOUNDA
6	GND	26	DSOUNDA-G
7	SPVID3	27	DSOUNDB
8	GND	28	DSOUNDB-G
9	SPVID4	29	RPLYA
10	GND	30	RPLYA-G
11	SPVID5	31	RPLYB
12	GNDGND	32	RPLYB-G
13	SPVID6	33	
14	GND	34	
15	TRPPM	35	RXD
16	GND	36	GND
17	DATACLK	37	TXD
18	GND	38	GND
19	SPCUNBL	39	INTRES
20	GND	40	GND



1 / 1	MODEL 番号 <b>OUTPUT (NJK-196A)</b>	TITLE 名称 <b>TRACE Calculator &amp; Output Buffer</b>	<b>Aloka</b>
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25-1117 147810 AMP 8-18

This board equipped with 100 AMP and 5 WAVE DETECTOR

BOARD LAYER

LAYER		LAYER		LAYER	
1	FRONT	1	FRONT	1	FRONT
2	FRONT	2	FRONT	2	FRONT
3	FRONT	3	FRONT	3	FRONT
4	FRONT	4	FRONT	4	FRONT
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97	FRONT	97	FRONT	97	FRONT
98	FRONT	98	FRONT	98	FRONT
99	FRONT	99	FRONT	99	FRONT
100	FRONT	100	FRONT	100	FRONT

## 6-35 EP-3117 PHYSIO AMP

This board composed with ECG AMP and R-WAVE DETECTOR.

## SIGNAL LIST

J704	
1	+5V
2	GND
3	+15V
4	GND
5	-15V
6	GND

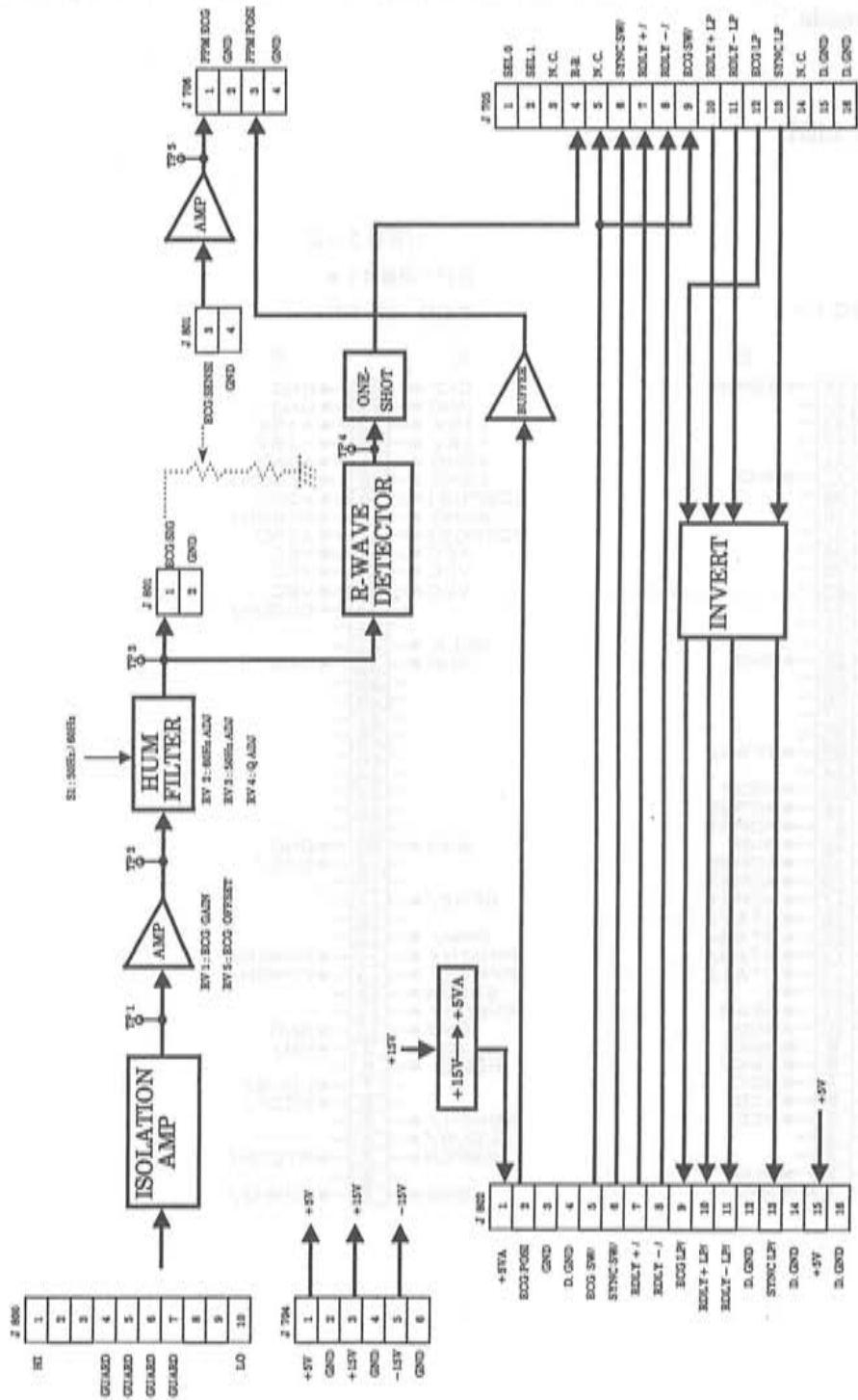
J705	
1	SEL 0
2	SEL 1
3	N. C.
4	R-R
5	N. C.
6	SYNC SW/
7	RDLY + /
8	RDLY - /
9	ECG SW/
10	RDLY + LP
11	RDLY - LP
12	ECG LP
13	SYNC LP
14	N. C.
15	D. GND
16	D. GND

J706	
1	PPM ECG
2	GND
3	PPM POSI
4	GND

J800	
1	HI
2	
3	
4	GUARD
5	GUARD
6	GUARD
7	GUARD
8	
9	
10	LO

J801	
1	ECG SIG
2	GND
3	ECG SENSI
4	GND

J802	
1	+5VA
2	ECG POSI
3	GND
4	D. GND
5	ECG SW/
6	SYNC SW/
7	RDLY + /
8	RDLY - /
9	ECG LP/
10	RDLY + LP/
11	RDLY - LP/
12	D. GND
13	SYNC LP/
14	D. GND
15	+5V
16	D. GND



<b>Aloka</b>	TITLE 名称 <b>PHYSIO AMP</b>	MODEL 形名 <b>EP-3117</b>
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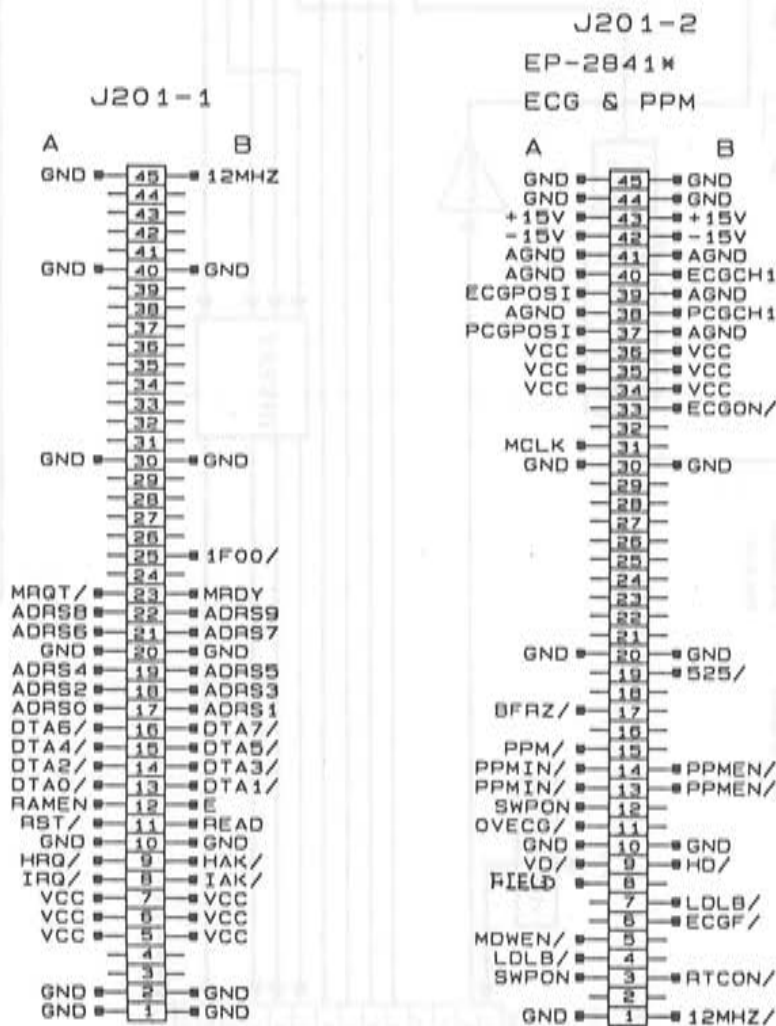
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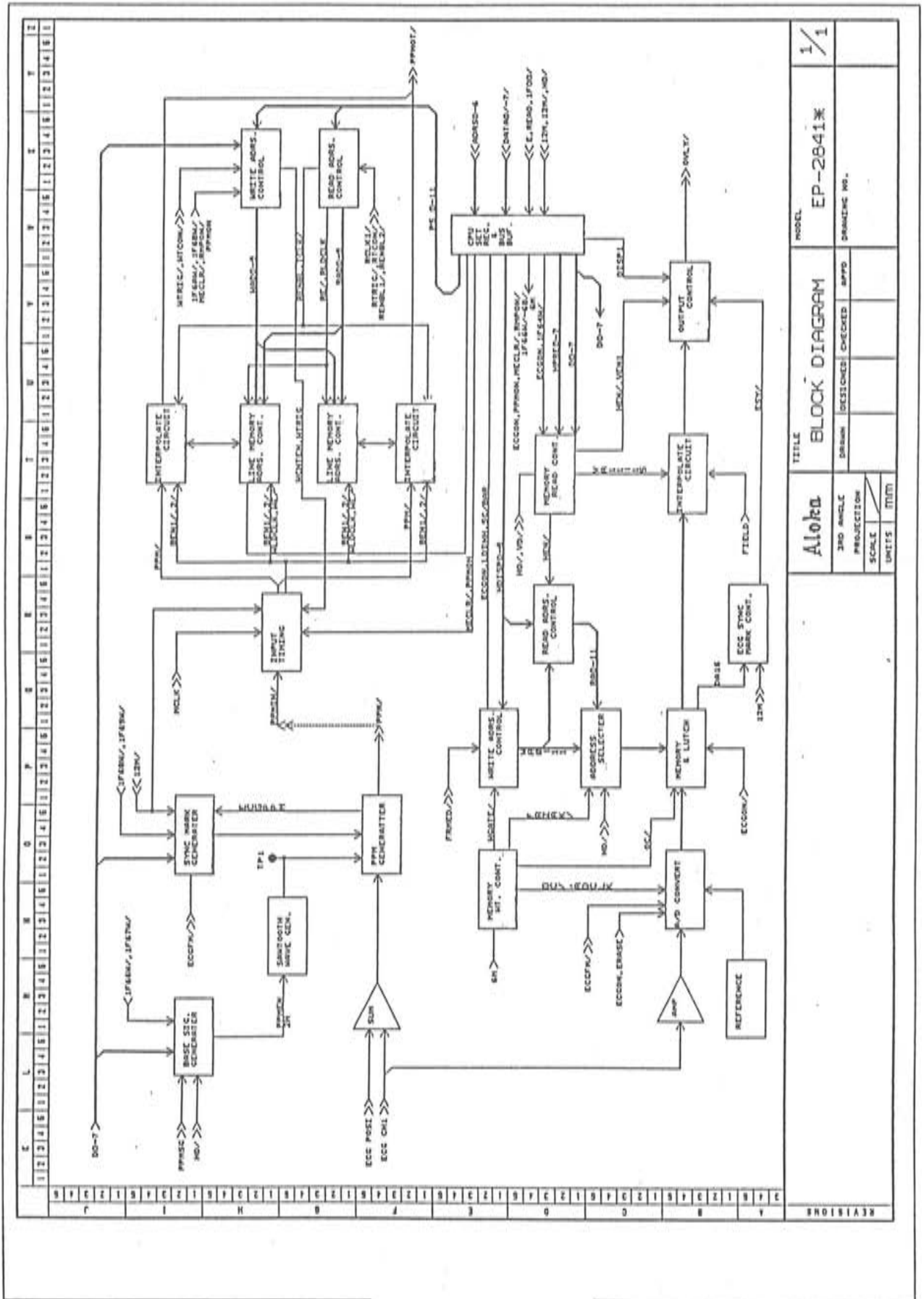


6-36 EP-2841 ECG MEMORY

This PC converts the physiological signals into image signals and makes it possible to freeze the image, as like the supersonic echo image, by writing those signals in the memory. With this PC, the physiological signals are displayed in the manner of overlay, like graphic display, in the B-mode, and displayed as PPM on the M image in the case of B/M, M-mode.

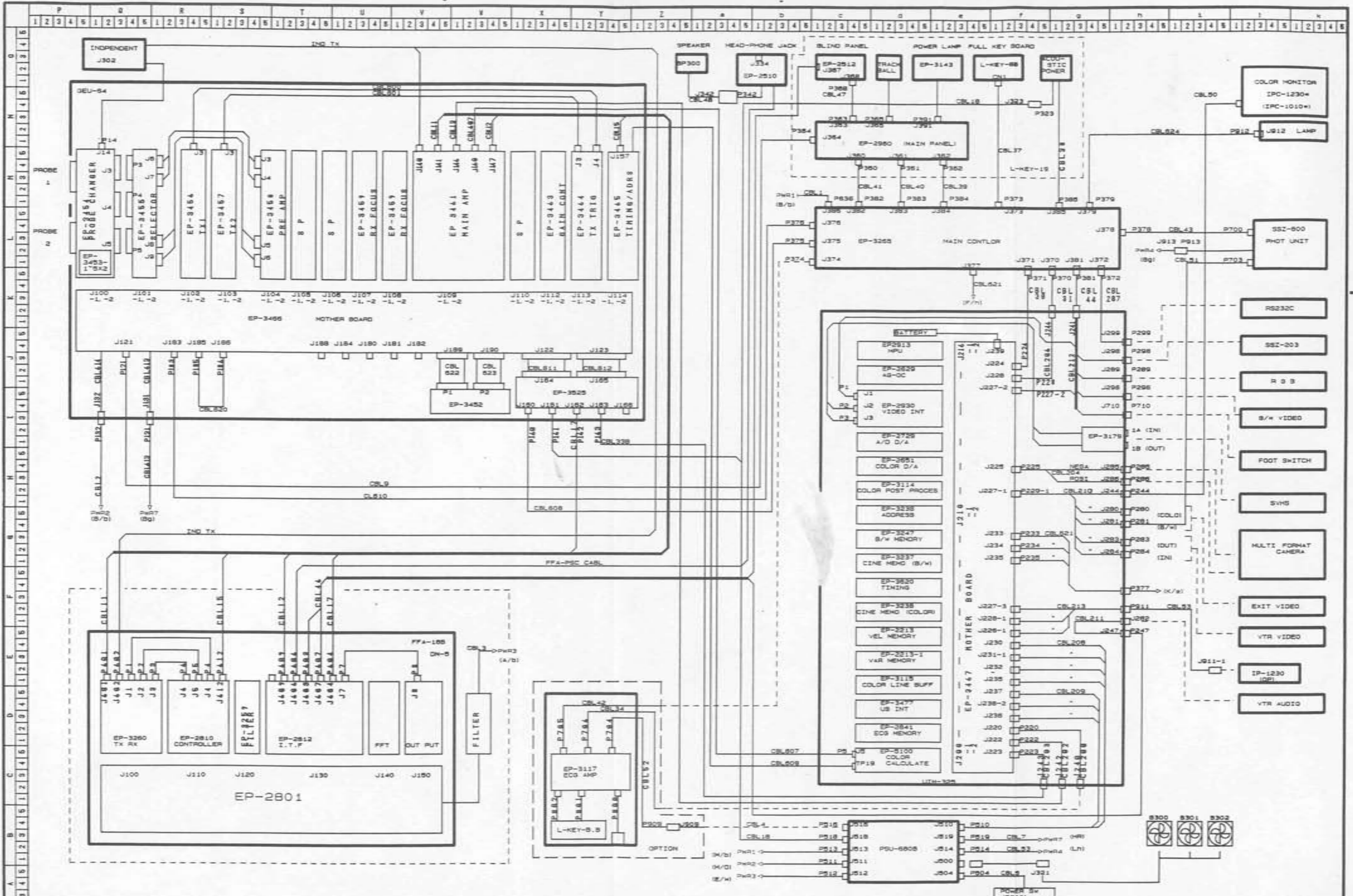
SIGNAL LIST



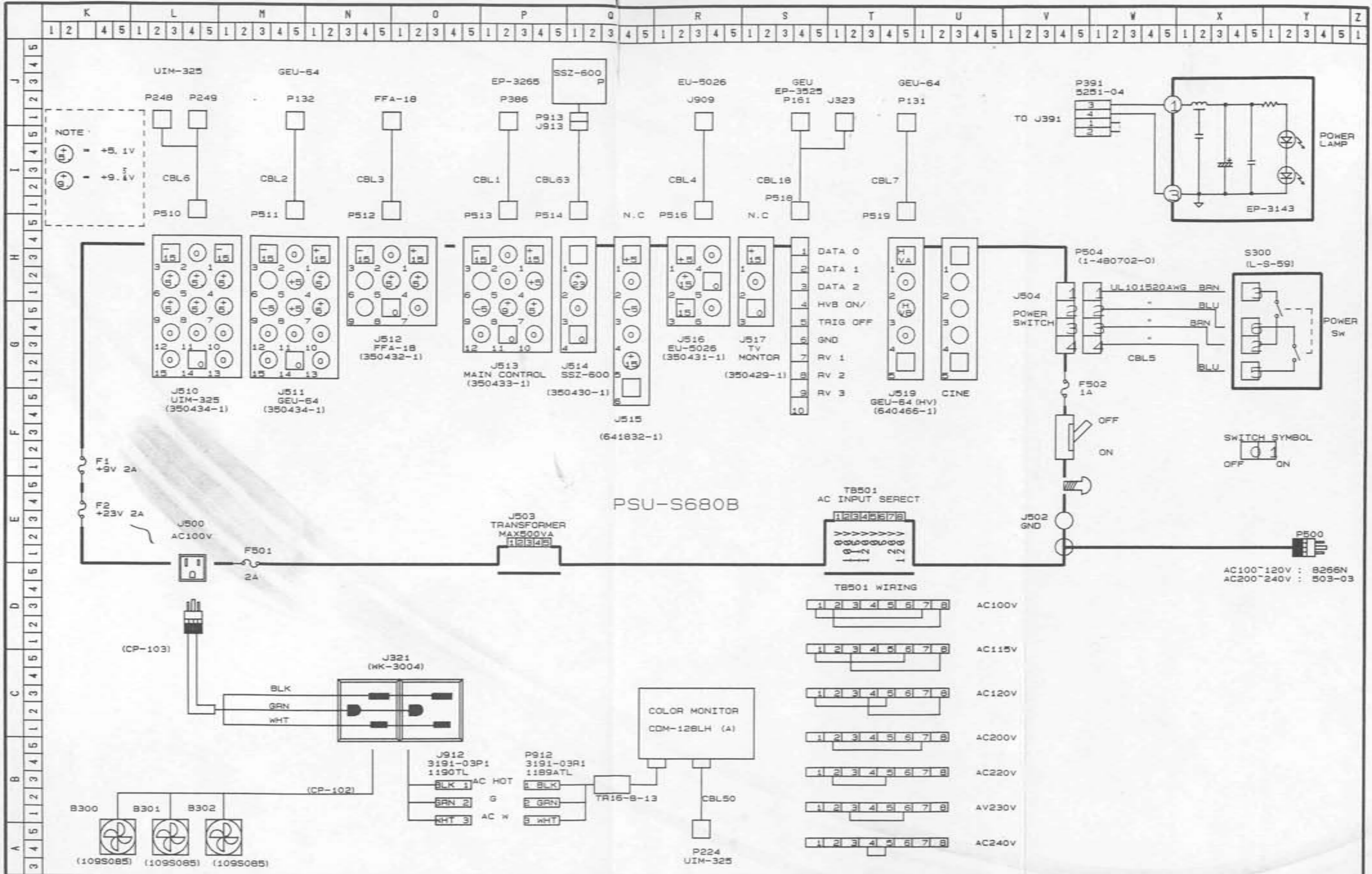


REVISED		TITLE		MODEL		1/1	
A		Alata		BLOCK DIAGRAM		EP-2841X	
B		3RD ANGLE PROJECTION		DRAWN		DESIGNED	
C		SCALE		CHECKED		APPROVED	
D		UNITS		MUM		DRAWING NO.	



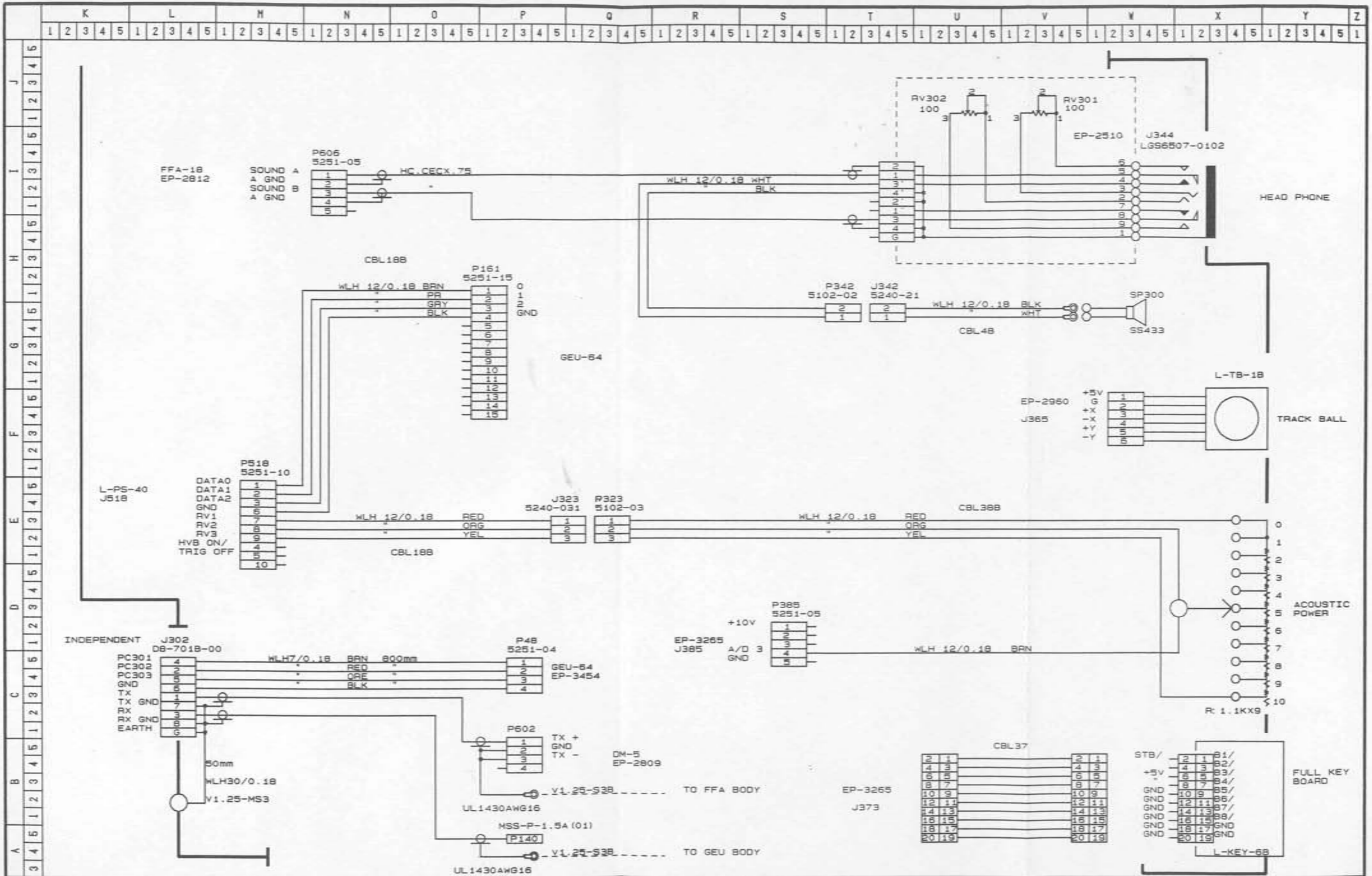


REVISIONS	Aloka		TITLE	550-560 EX	MODEL	PSC-118	1/4
	3RD ANGLE PROJECTION		CABLE CONNECTION		DRAWING NO.		
	SCALE	UNIT	DATE	APPROVED	MC 357115		



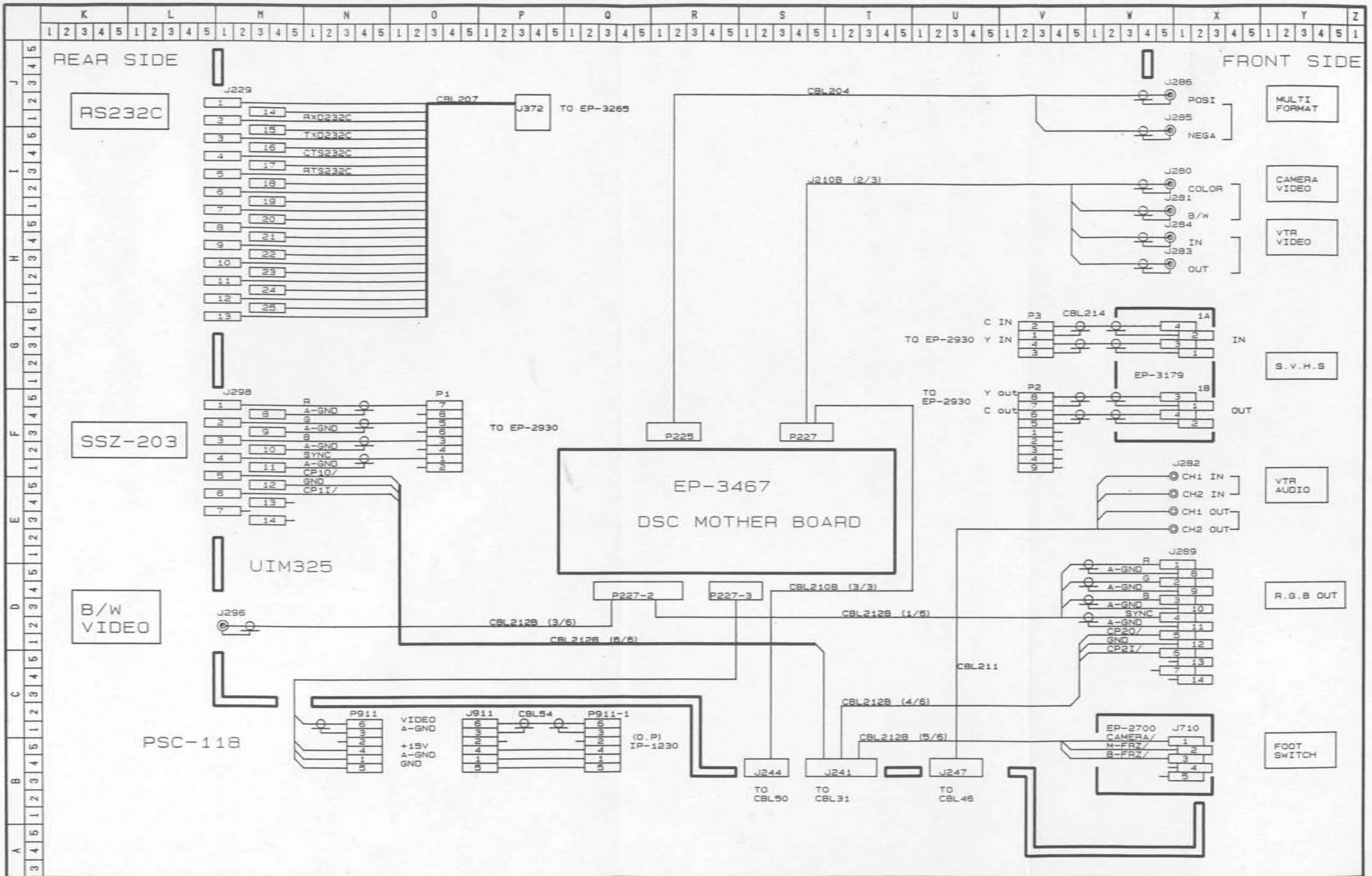
REVISIONS	7- 02	
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<b>Aloka</b>		TITLE SSO-680EX		MODEL		2/4
		CABLE CONNECTION		PSC-118		
3RD ANGLE PROJECTION		DRAWN	DESIGNED	CHECKED	APPD	DRAWING NO.
SCALE		UNITS	MM		MC 327146	



REVISIONS	7-03

<b>Aloka</b>	TITLE SSD-680 EX				MODEL	3/4
	CABLE CONNECTION				PSC-118	
3RD ANGLE PROJECTION	DRAWN	DESIGNED	CHECKED	APPD	DRAWING NO.	
SCALE	1:1	1:1	1:1	1:1	MC 327147	
UNITS	mm	mm	mm	mm		



REVISIONS	7-04		<b>Aloka</b>		TITLE SSD-680EX		MODEL PSC-118		4/4	
	3RD ANGLE PROJECTION		DRAWN	DESIGNED	CHECKED	APPROVED	DRAWING NO.			
	SCALE		野田	野田	近藤	八木	MC 327148			
	UNITS mm		野田	野田	近藤	八木				

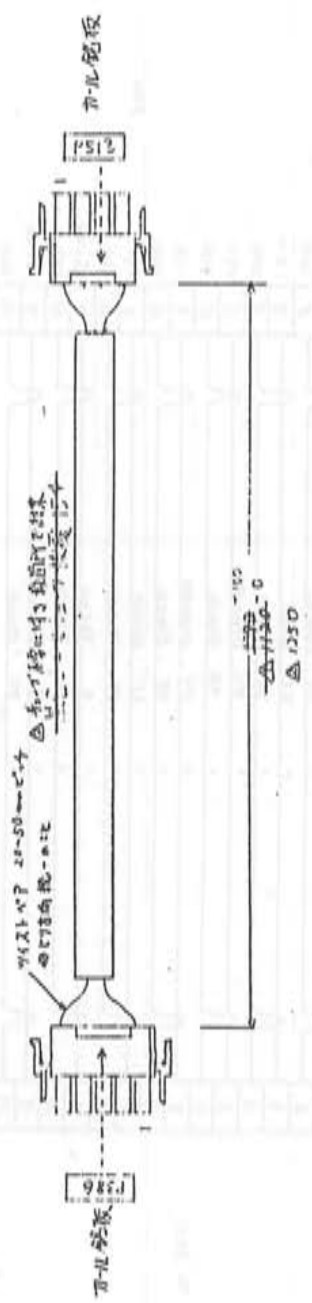
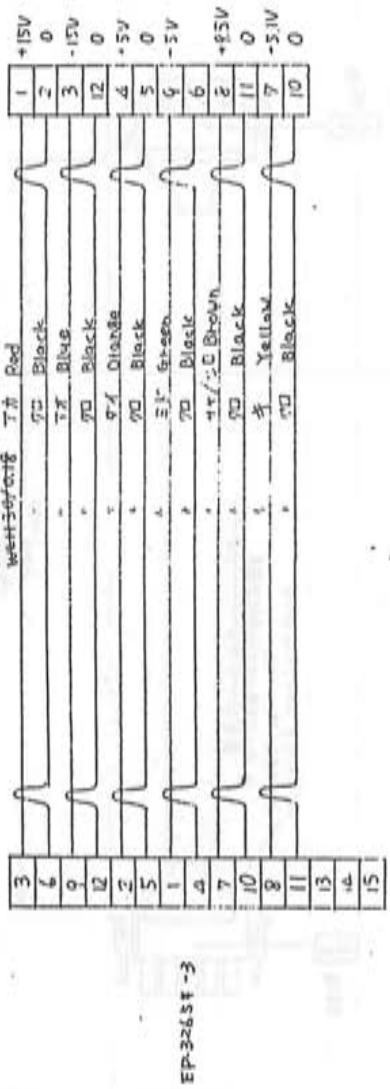
Y X W V U T S R Q P O N M L K J I H G F E D C B A

P386

P513

P-480710-0 (AMP)  
350689-3 ( \* )

P-480728-0 (AMP)  
350689-3 ( \* )



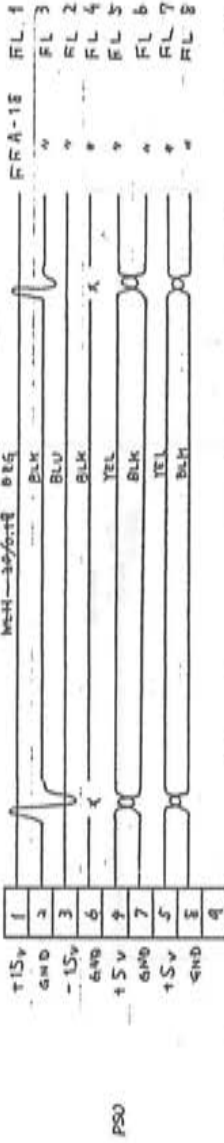
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	△ 17-12-14 HW 9552 #71 10.12.1929	△ 17-12-14 HW 9552 #71 10.12.1929	△ 17-12-14 HW 9552 #71 10.12.1929
TITLE	CABLE 1		
MODEL NO.	CABLE 1		
DRAWING NO.	80-15-00-A-12		
CHECKED BY	王光	APPROVED	
DRAWN BY	王光	DATE	95.05.20
SCALE	1:1	UNITS	MM
3RD ANGLE PROJECTION	第三角法		
ALOKA			
MODEL NO.	CABLE 1		
DRAWING NO.	80-15-00-A-12		
CHECKED BY	王光		
DRAWN BY	王光		
DATE	95.05.20		
SCALE	1:1		
UNITS	MM		
3RD ANGLE PROJECTION	第三角法		



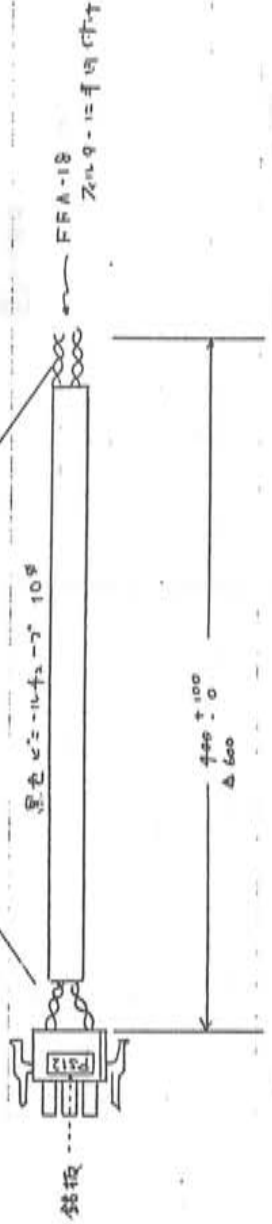


K		L		M		N		O		P		Q		R		S		T		U		V		W		X		Y		Z									
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

PS12  
 1-480708-0 (AMP)  
 350889-8 (2)



注記  
 50mm/100mm 以下



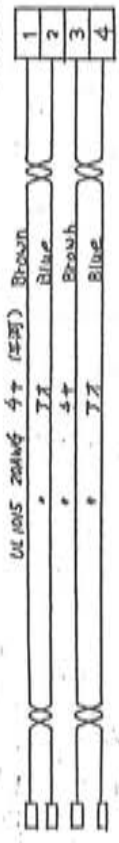
REVISED LIST				TITLE NAME				MODEL NAME				DRAWING NO. MODEL				1/1			
3RD ANGLE PROJECTION				3RD ANGLE PROJECTION				CABLE 3				CC-L-PE-60-C09							
第3角法				第3角法				DESIGNED BY				DRAWING NO. MODEL							
SCALE				SCALE				CHECKED BY				DRAWING NO. MODEL							
UNITS				UNITS				APPROVED BY				DRAWING NO. MODEL							
				1:1				1:1				MC 514836							

K	J	I	H	G	F	E	D	C	B	A	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z								
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

FV8HDF A25-350B (4芯2極用)  
x4

P504

I-480702-0 (AMP)  
550889-3 (AMP)



T0  
PSC  
S300

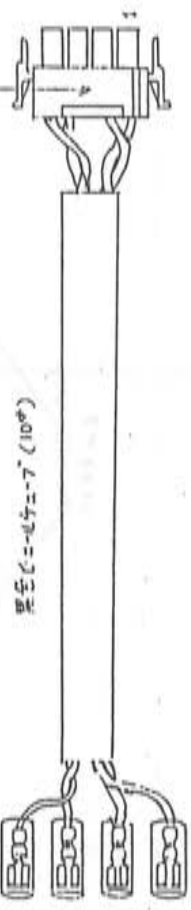
J504

FSU-540

加工銘板  
P504

絶縁ケーブル

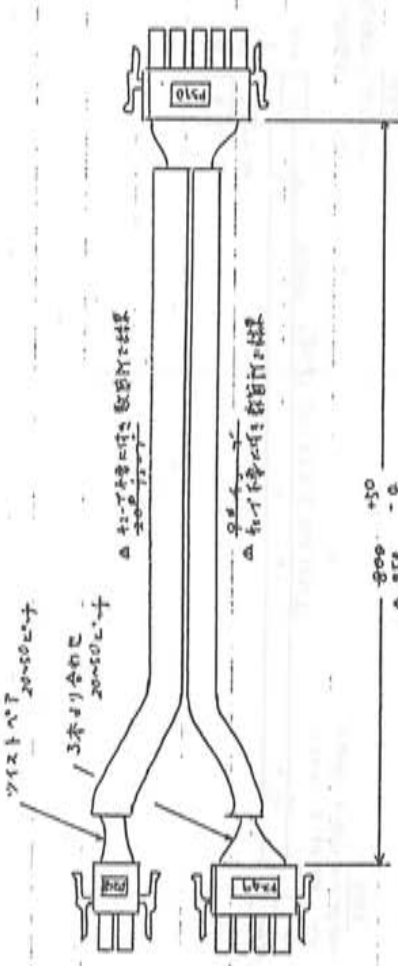
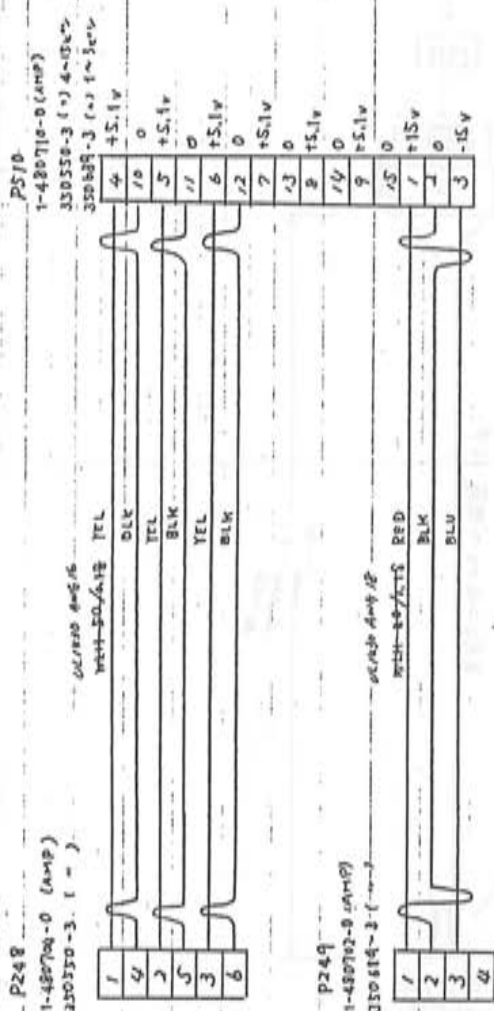
黒色エニシケケーブル (10φ)



REVIEWS 変更	Aloka		TITLE 名称 CABLES		MODEL CO-4-P3-GT-E-14
	3RD ANGLE PROJECTION 第3角法	DESIGNED BY 工務 18-12-15	CHECKED BY 工務 18-12-15	APPROVED BY 工務 18-12-15	DRAWING NO 図番 MC314837
D/4-11 EHL/T/IL （4芯2極） 110050072（110050072） 1100 1100					



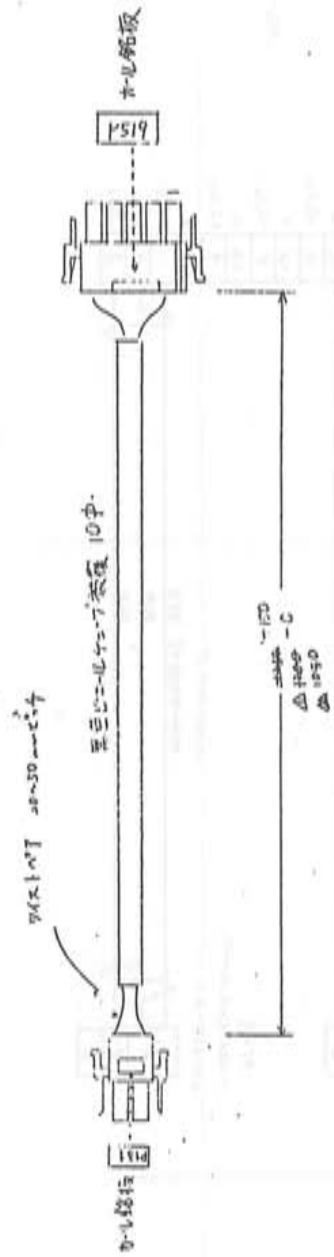
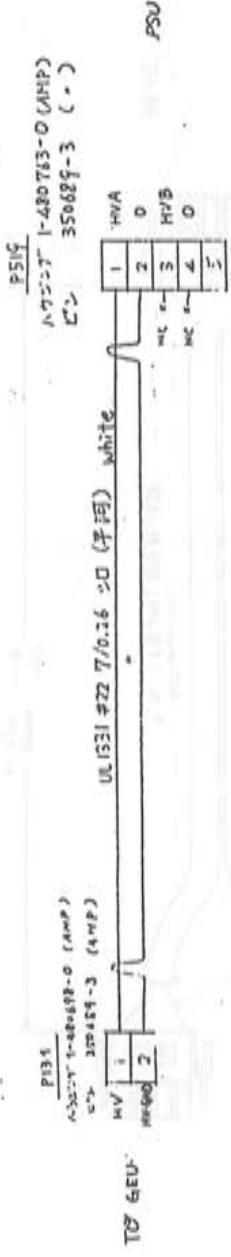
K L M N O P Q R S T U V W X Y Z  
 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1



REVIEWS 変更	TITLE 名称			MODEL 型号		DRAWING NO. 図番	
	CABLE 6			CO-1-PS-40-F-07		MC 314838	
3 4 5	3RD ANGLE PROJECTION 第3角法			DRAWN BY 作図	DESIGNED BY 設計	CHECKED BY 検査	APPROVED BY 承認
2 1	SCALE 比率			DATE 日期		SCALE 縮尺	
4 5 1 2 3	UNITS 単位			DATE 日期		SCALE 縮尺	
471114 011172 (K11622) 116010 (K11622) 116 HEADS							

UJEM PWR L-9018-R-A3

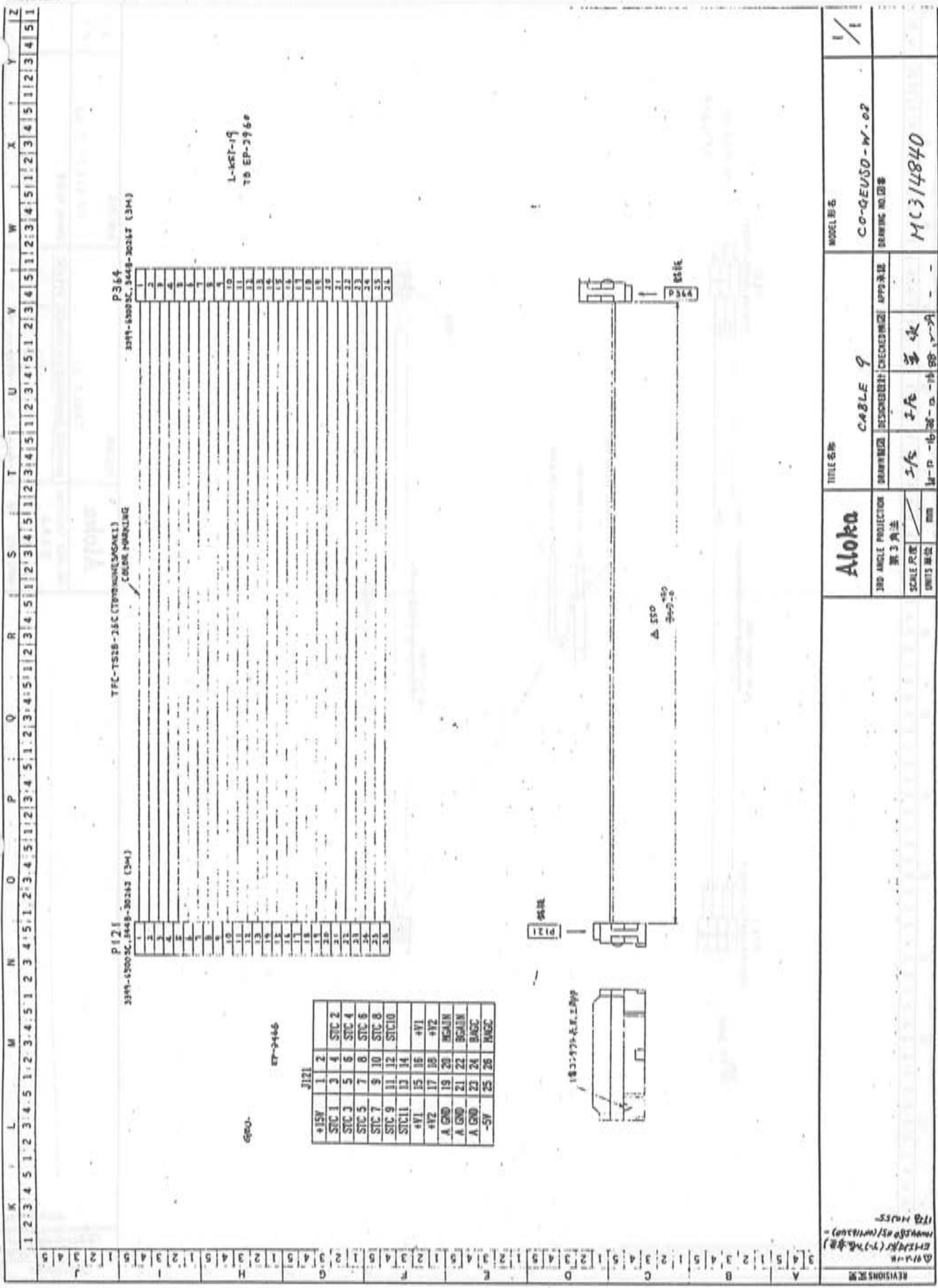
K L M N O P Q R S T U V W X Y Z  
 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1



△89-12-29  
 大塚  
 HW 9552 #51  
 88 18-M2V9  
 89/2-14  
 01250(8-28)  
 196 Hours

REVISEMENTS		DATE		MODEL	
3	4	1	1	CO-L-FC 40-G-12	1/1
Aloka		CABLE 7		DRAWING NO. 028	
100 ANGLE PROJECTION		CHECKED BY		MC 314839	
第3角法		APPROVED		L-803-00-02 A.7	
SCALE 1:1		DATE			
UNITS MM		72-10-15			
		88.12.19			
		土倉			
		工務			
		宇味			





P121 3391-4500SC, 3449-30243 (3M)

P364 3391-4500SC, 3449-30247 (3M)

TFC-TS28-26C (TFC) (MAGNETIC) COLOR MARKING

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26

L-467-19  
76 EP-2960

ET-9446

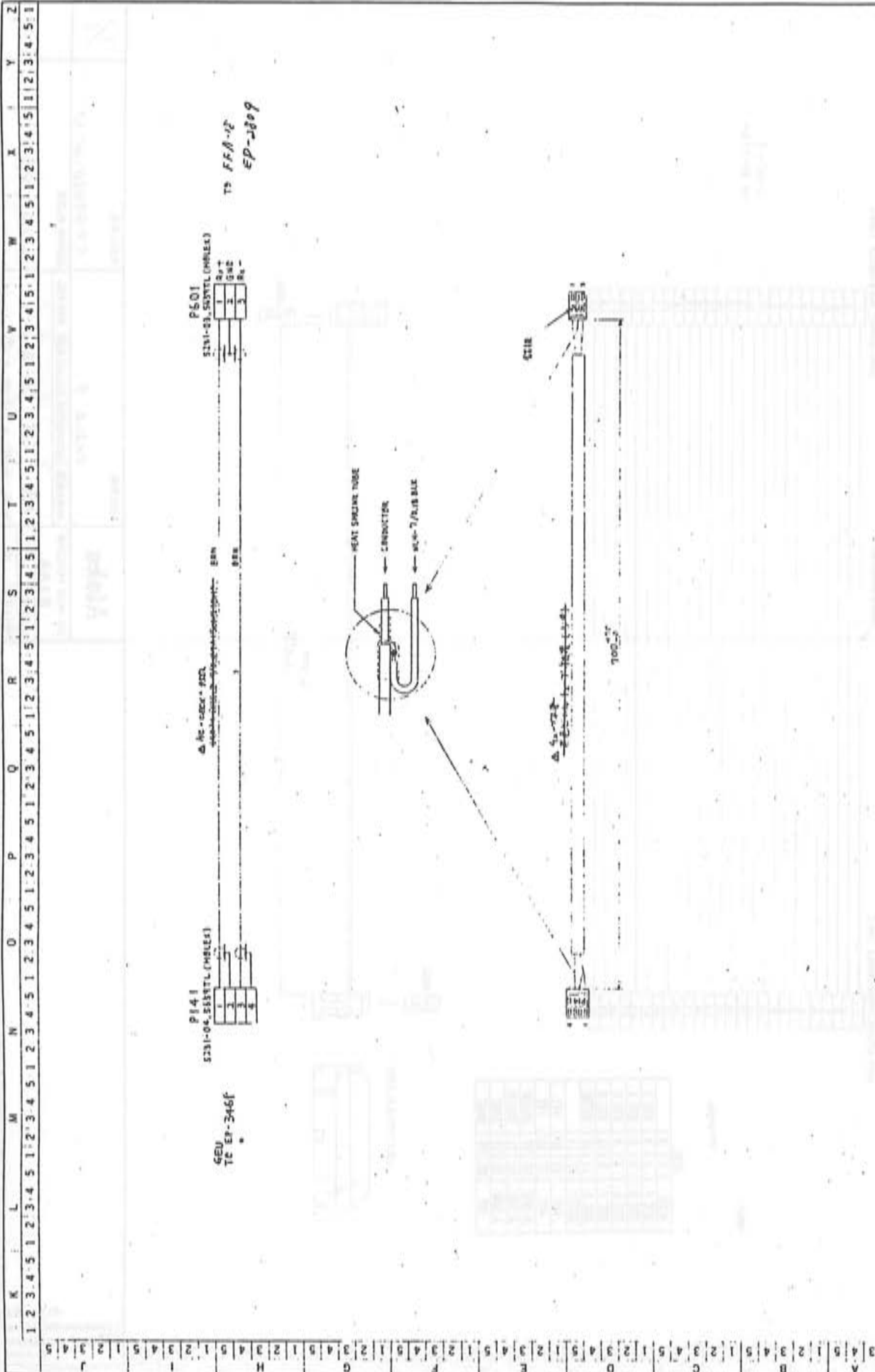
J121

+15V	1	2
STC 1	3	4
STC 2	5	6
STC 3	7	8
STC 4	9	10
STC 5	11	12
STC 6	13	14
STC 7	15	16
STC 8	17	18
STC 9	19	20
STC 10	21	22
STC 11	23	24
STC 12	25	26
+V1		
+V2		
A GND		
B GND		
C GND		
D GND		
E GND		
F GND		
GND		
AVC		

REVISEMENTS DATE BY	TITLE NAME <b>CABLE 9</b>		MODEL NO. CO-GEUSD-W.02
	DESIGNED BY JFC	CHECKED BY JFC	DRAWING NO. MC314840
3RD ANGLE PROJECTION 第3角法		SCALE 1:1	SCALE UNIT mm

01244  
CABLE (7-1) (A.1.1.000)  
180-970-A.1.1.000  
178 HUS5

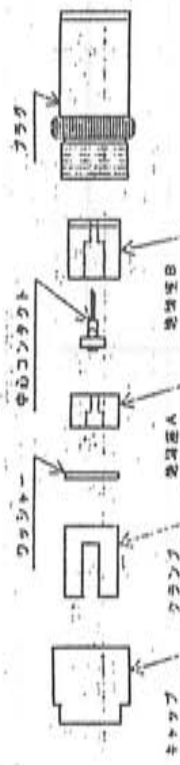




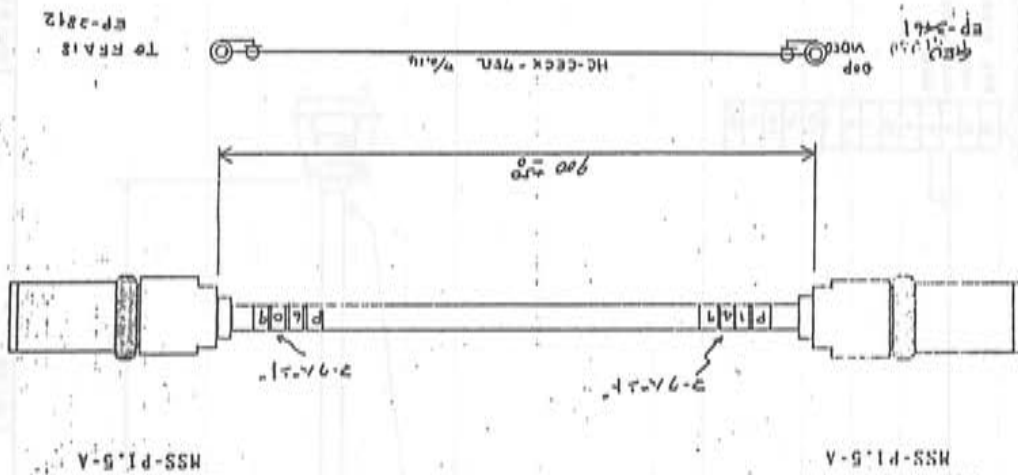
REVISIONS 変更		TITLE 名称		MODEL 型号	
Aloka		CABLE II		CO-GROUSE-J-08	
3RD ANGLE PROJECTION 第3角法		DRAWN BY 描画者		DRAWING NO. 図番	
SCALE 尺法		CHECKED BY 検査者		MC 31484	
UNITS 単位		DATE 日付		19-10-2011	
		WORK 工号		18811	
		DRAWN 描画		18811	
		DATE 日付		19-10-2011	
		DRAWING NO. 図番		MC 31484	
		MODEL 型号		CO-GROUSE-J-08	
		TITLE 名称		CABLE II	
		DRAWN BY 描画者		MC 31484	
		CHECKED BY 検査者		18811	
		DATE 日付		19-10-2011	
		WORK 工号		18811	
		DRAWN 描画		18811	
		DATE 日付		19-10-2011	
		DRAWING NO. 図番		MC 31484	
		MODEL 型号		CO-GROUSE-J-08	

K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1

### MSS-P-1.5A ケーブル接続手順



- 1) 左図の如く各部品を組み立てる。  
2) ケーブルにキャップを嵌す。  
3) ブラケットを嵌す。
- 4) 左図のようにシールリングをはきおとしワッシャーを挿入後、1mmにてシールリングを嵌す。  
(ブラケットはスリ溝の方向に嵌す)
- 5) 外面調整を施す。
- 6) 奥組込めを挿入し調整を施す。  
(奥組込めは挿入方向を間違えない)
- 7) 中心ピンをケーブルの芯線に挿入しハンダ付けする。  
(ハンダの盛り上がりのない状態)
- 8) 奥組込めを挿入する。  
奥組込めと奥組込めとの間に隙きが生ずる。  
調整する。
- 9) ブラケットを嵌す。
- 10) キャップをブラケットの奥に嵌め込み調整する。

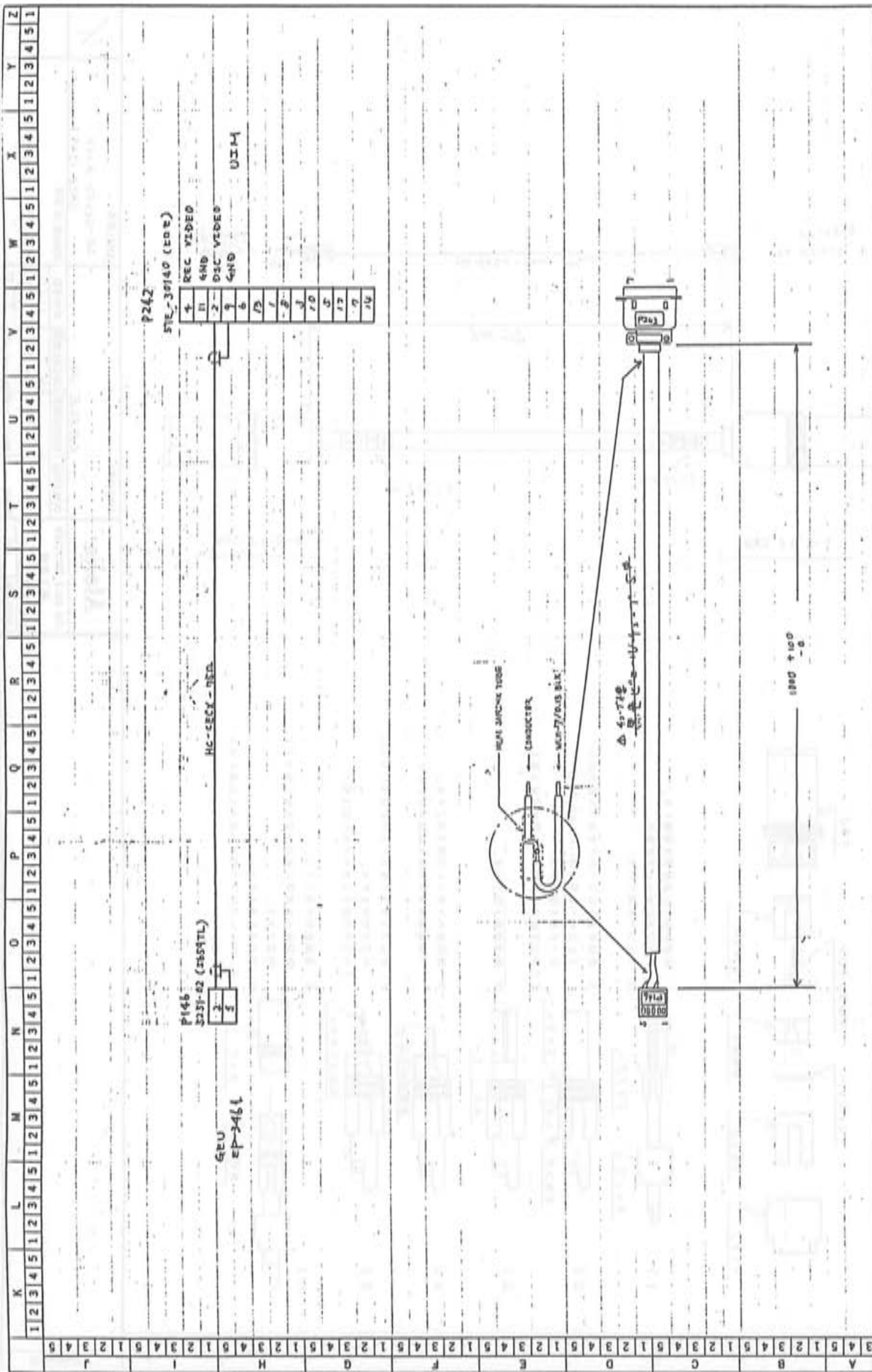


to RAIS  
EP-2812

900 ±0.5  
φ6.3

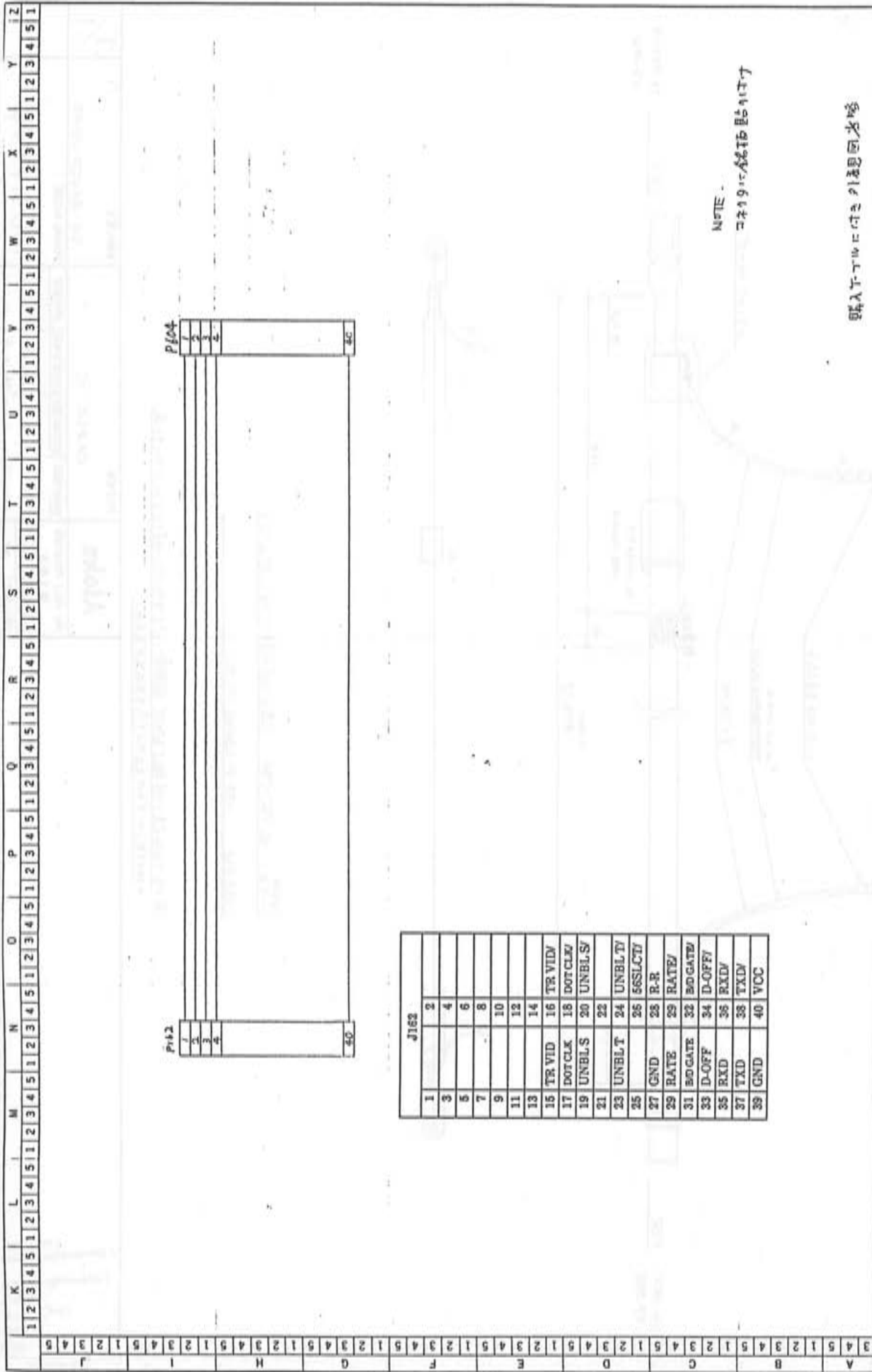
3 4 5		2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5																									
A		B		C		D		E		F		G		H		I		J		K		L		M		N		O		P		Q		R		S		T		U		V		W		X		Y		Z	
REVIEWS変更																																																			
TITLE名称												MODEL番号												1/1																											
Aloka												CO-GEVD9-K-10												DRAWING NO. 11																											
3RD ANGLE PROJECTION						DESIGNER 氏名						CHECKED 氏名						APPORVED 氏名																																	
第3角法						工業 工学						工業 工学						工業 工学																																	
SCALE 尺法						1:1						1:1						1:1																																	
UNITS 単位						mm						mm						mm																																	
MSS-P-1.5A ケーブル接続手順																																																			
MSS-P-1.5-A																																																			
CABLE 12																																																			
MC314842																																																			





REVISONS 変更		Aloka		TITLE 名称		MODEL 型号		1/1	
3RD ANGLE PROJECTION 第三角法		SCALE 尺法		DRAWING NO. 図番		CABLE 13		CO-GEU/S4-S-10	
UNITS 単位		MIN		CHECKED 検出		DRAWING NO. 図番		MC 314843	
				DESIGNED 設計		DRAWING NO. 図番			
				WORK 工程		DRAWING NO. 図番			
				DATE 12-11-20-12		DRAWING NO. 図番			





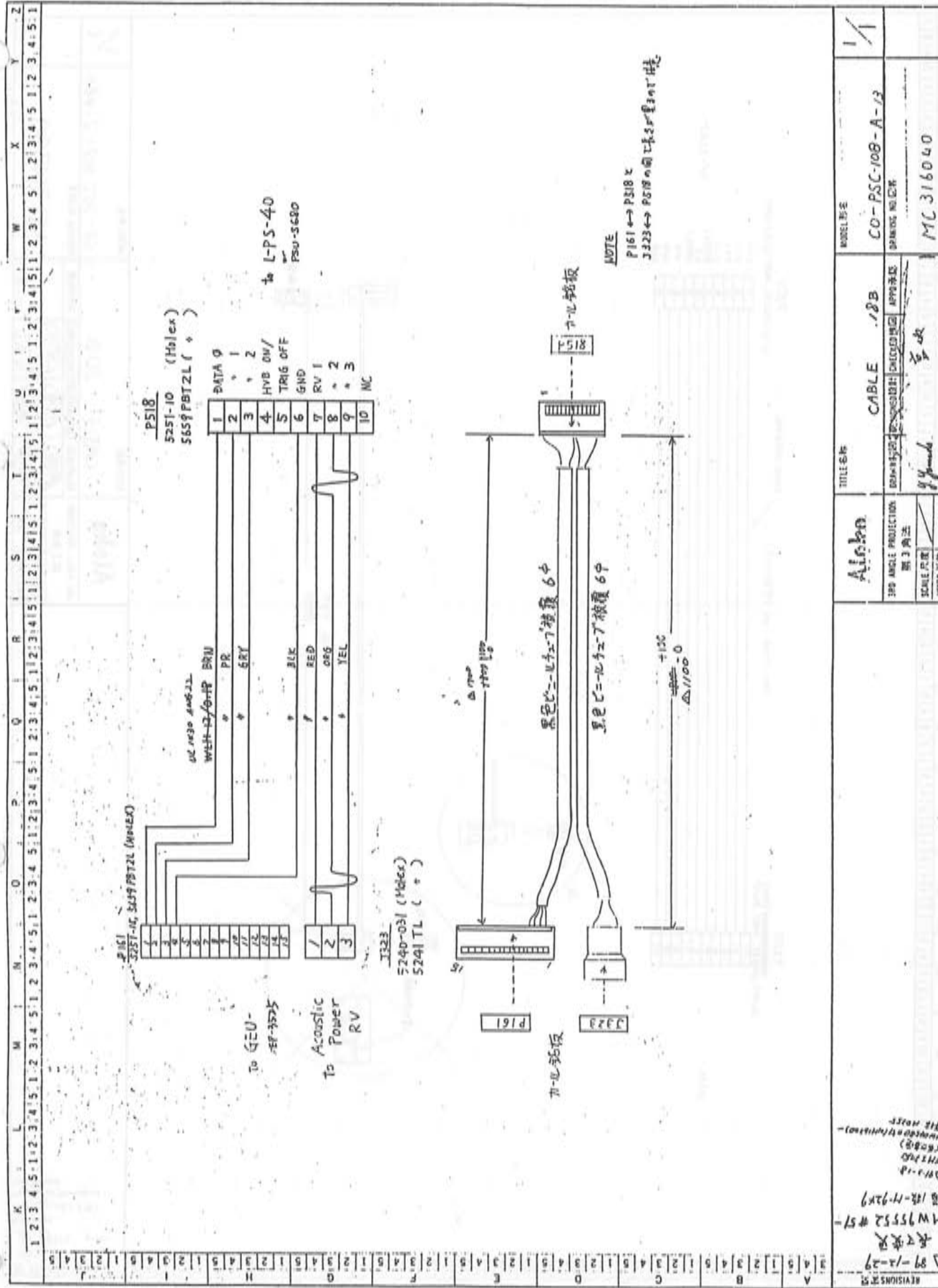
J162	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	TR VID 16
17	TR VID 16 TR VID
17	DOT CLK 18
19	UNBL S 20
21	UNBL S 20
21	UNBL T 24
23	UNBL T 24
25	56SLCT Y
27	GND 23
29	RATE 29
31	BOGATE 33
33	D-OFF 34
35	RXD 36
37	TXD 38
39	GND 40
	VCC

NOTE  
 コネクターは別添付図を参照

購入に付く別添付図を参照

A 3 4 5	REVISIONS 変更	Aloka		TITLE 名称		MODEL 番名 (L-CABLE-177-11)		1 / 1
		3RD ANGLE PROJECTION 第3角法	DESIGNED BY 工藤 善敏	CBL 17	CO-GEU50-Q-11			
B 4 5		SCALE 尺度	DRAWING NO. 図番	APPROVED BY 承認者	DATE 日付	DRAWING NO. 図番		
C 1 2 3 4 5		UNITS 単位	UNIT 1-29	PR 6-29	MC 3/82.11			
D 1 2 3 4 5								
E 1 2 3 4 5								
F 1 2 3 4 5								
G 1 2 3 4 5								
H 1 2 3 4 5								
I 1 2 3 4 5								
J 1 2 3 4 5								

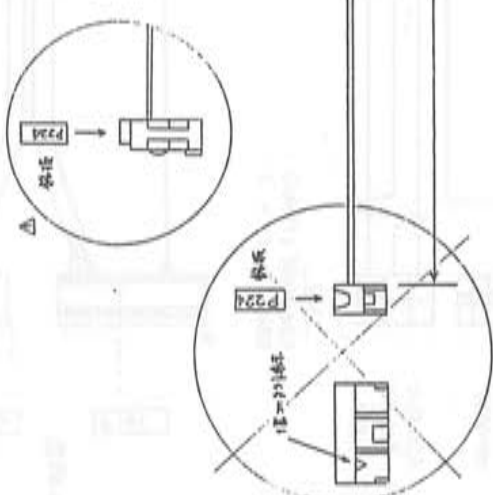
L-40-10-82



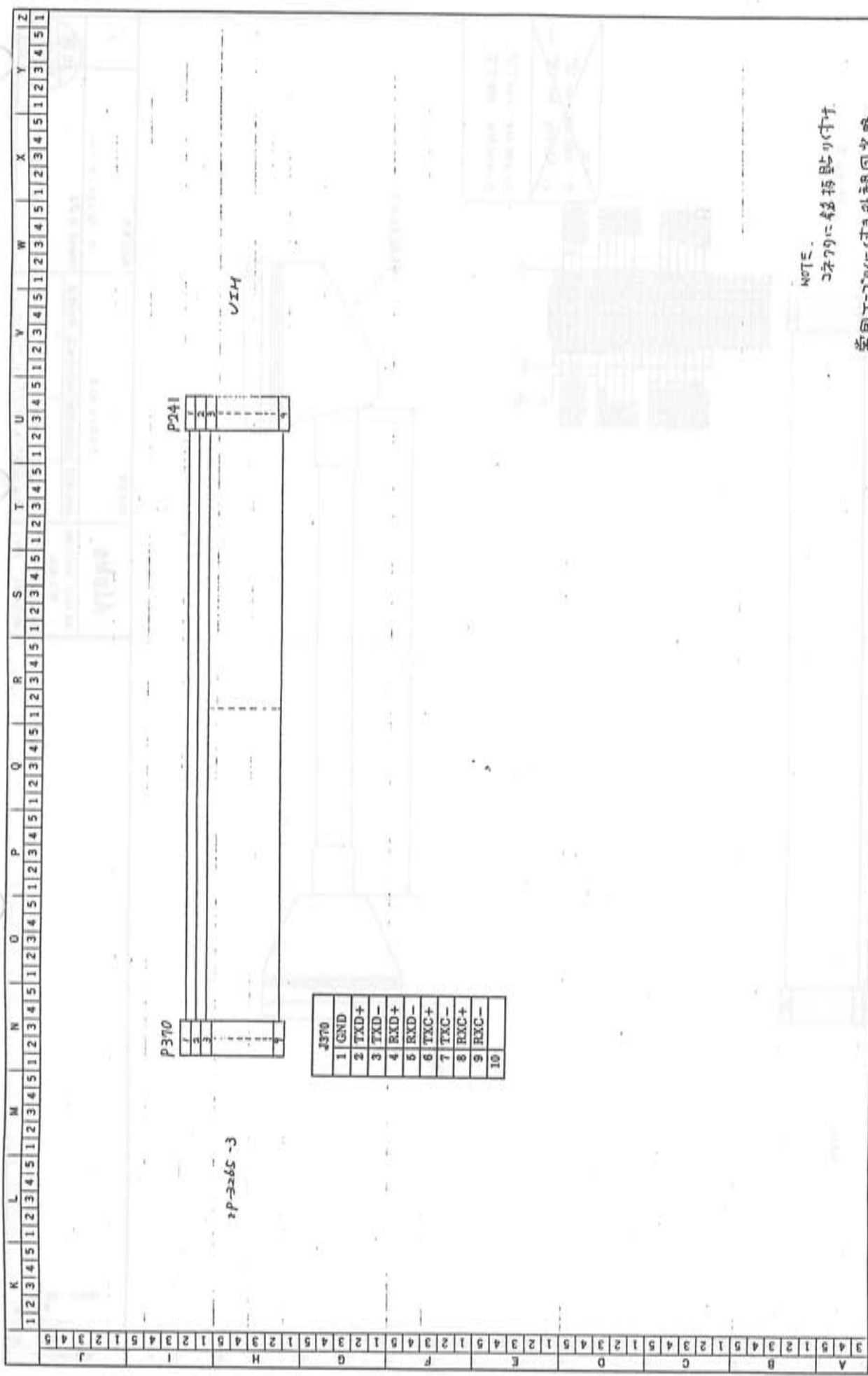
REVISED 88	MODEL USE	MODEL NO	MODEL USE
89-1-a-29	CO-PSC-108-A-13	CABLE 18B	CO-PSC-108-A-13
HW 75552 #57-	DATE	DESIGNED BY	DATE
18 18x-11-72x9	11/11/88	CHKD BY	11/11/88
長 2 英尺	APP'D	BY	
△ 89-1-a-29	98.0.29	MC 316040	



K	J	I	H	G	F	E	D	C	B	A	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1



REVISIONS 変更	Δ 57.12.91 LM. 9542 57.12.91	37.2.91 FRITZ (6.4.91) 1/8 HOLES	MODEL 品名 CO - PSC 108 - J-08B DRAWING NO. 図番 MC 314398	1/1
Aloka	3RD ANGLE PROJECTION 第3角法 SCALE 尺度 UNITS 单位 MM	DESIGNED 设计 CHECKED 校对 APPROVED 审核	CABLE 30 B	MODEL 品名 CO - PSC 108 - J-08B DRAWING NO. 图番 MC 314398

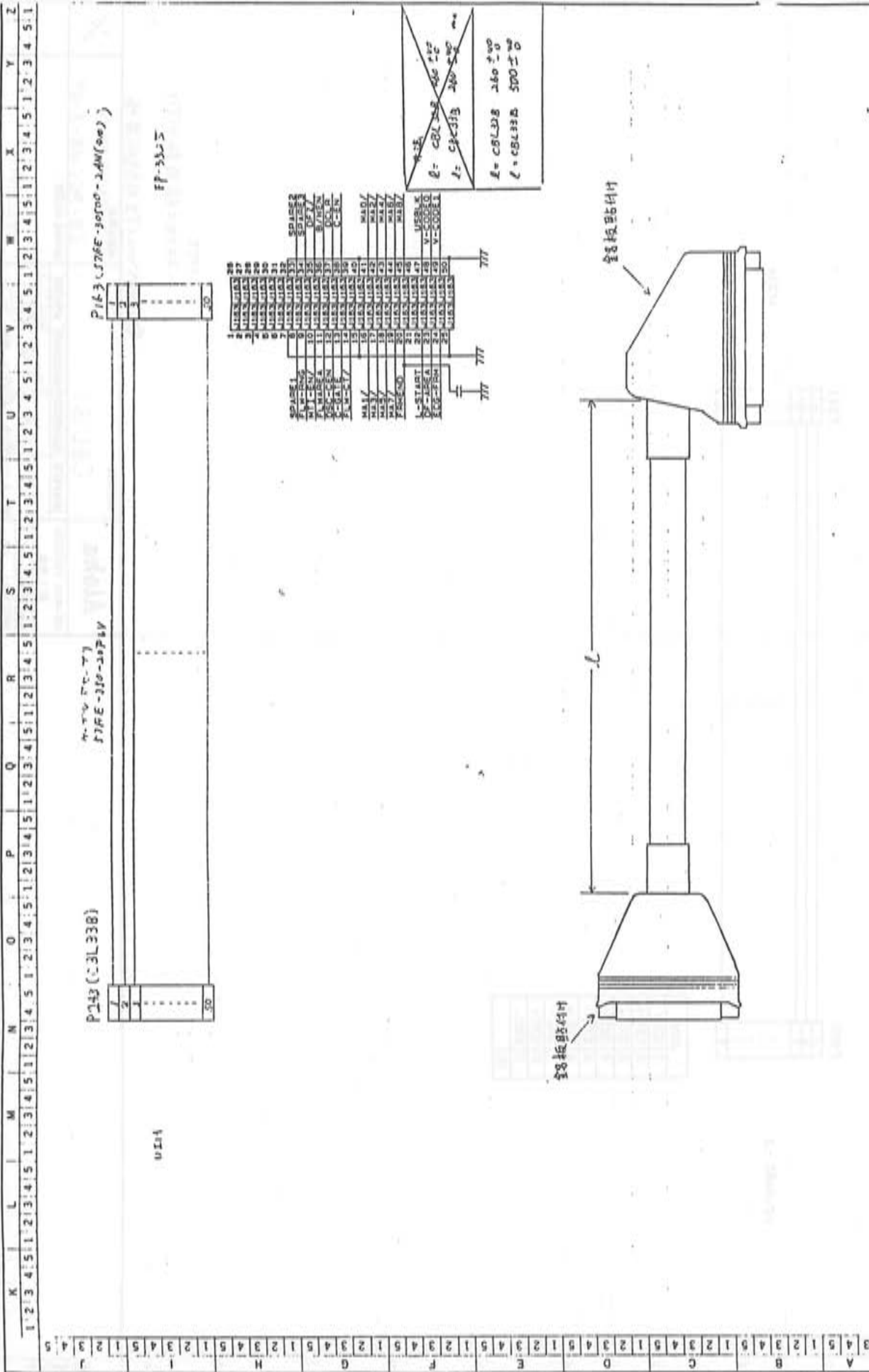


J370	
1	GND
2	TXD+
3	TXD-
4	RXD+
5	RXD-
6	TXC+
7	TXC-
8	RXC+
9	RXC-
10	

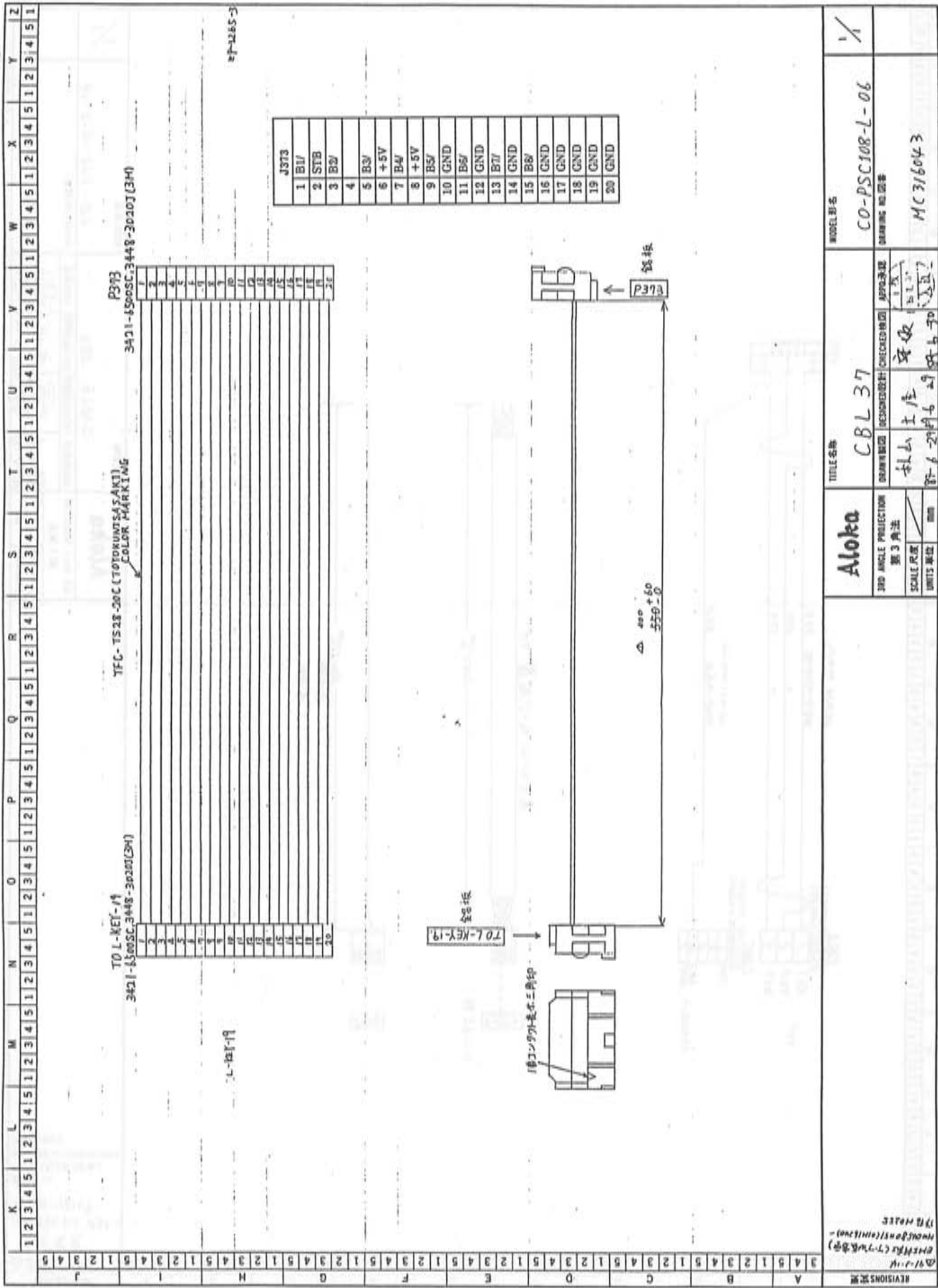
REVISEMENTS			TITLE 名称			MODEL 品名			DRAWING NO. 図番			SCALE 縮尺		
			Aloka			CBL 31			CO-PSC 108-P-C2			1/1		
3RD ANGLE PROJECTION 第3角法			DESIGNED BY 設計者			CHECKED BY 検査者			APP'D 承認者					
SCALE 尺度			社山 土佐			宇佐								
UNITS 単位			100			200						M/C 3/60C/1		

NOTE:  
この図に転写貼付済み

常用T-70Vに付の外装同省略



ALOKA 東京 Tokyo 1-6-18-H117	TITLE 名称 CABLE 338		MODEL 番号 10-01070-Y-00
	3RD ANGLE PROJECTION 第三角法	DESIGNED BY 山崎 隆夫	DRAWING NO 図番 10-01070-Y-00
	SCALE 尺法 UNIT 単位 mm	CHECKED BY 山崎 隆夫	DATE 1973.6.22
出回 82.8.16 山口			



TO L-KEY-19  
3421-6500SC-3448-3020J(3M)

YFC-1S28-20C (TOTOHUNASAKI)  
COLOR MARKING

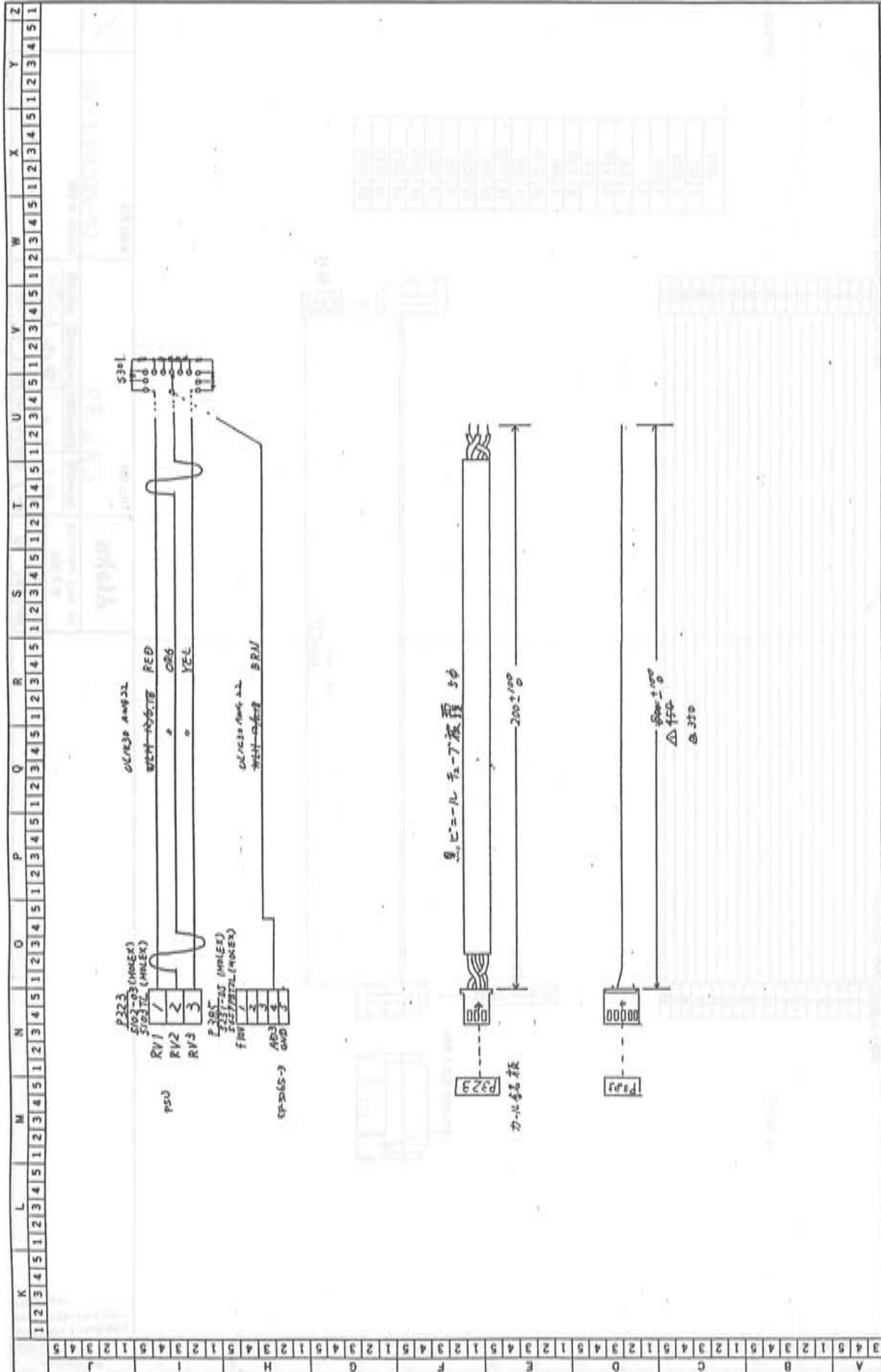
TO L-KEY-18  
3421-6500SC-3448-3020J(3M)

J373	
1	B1/
2	STB
3	B2/
4	
5	B3/
6	+5V
7	B4/
8	+5V
9	B5/
10	GND
11	B6/
12	GND
13	B7/
14	GND
15	B8/
16	GND
17	GND
18	GND
19	GND
20	GND

REVISIONS 変更  
 01/01/14  
 01/01/14 (7/10/09)  
 1/10/14

<b>Aloka</b>		TITLE 名番 CBL 37		MODEL 名番 CO-PSC108-L-06	
3RD ANGLE PROJECTION 第3角法	SCALE 尺度 UNIT 单位 mm	DRAWING 図面 土佐	DESIGN 設計 土佐	CHECKED 検査 土佐	MARKING 印 MC316043



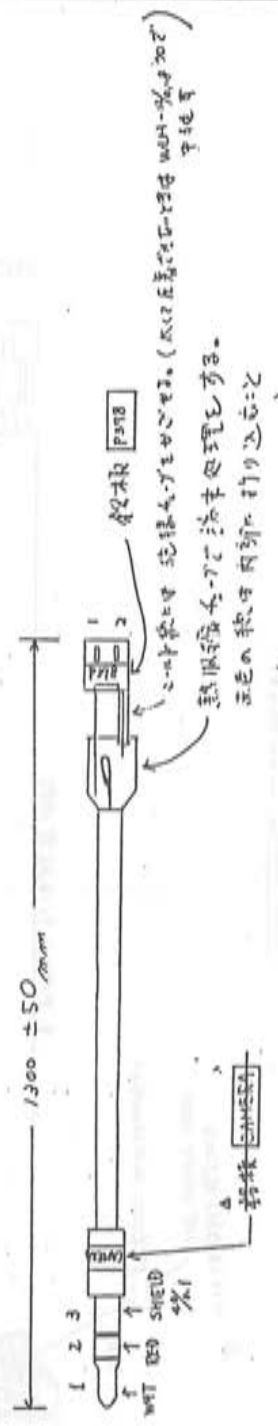


REVIEWS 変更		TITLE 名称		MODEL 型号	
△ 89-12-27 * 2 変更 HW 955 52 151 印 175. 172 17 @ 20. 14 PHI 175 (C. 280) HW 550 151 (C. 1200) (175 HOLE)		Aloka		CABLE 38B	
3RD ANGLE PROJECTION 第3角注		DRAWN BY Y. Yamada		CHECKED BY [Signature]	
SCALE 尺規		DESIGNED BY [Signature]		DRAWING NO. 図番	
UNITS 單位		89-12-27		CO-PSC-108-D-08	
				MC 316044	

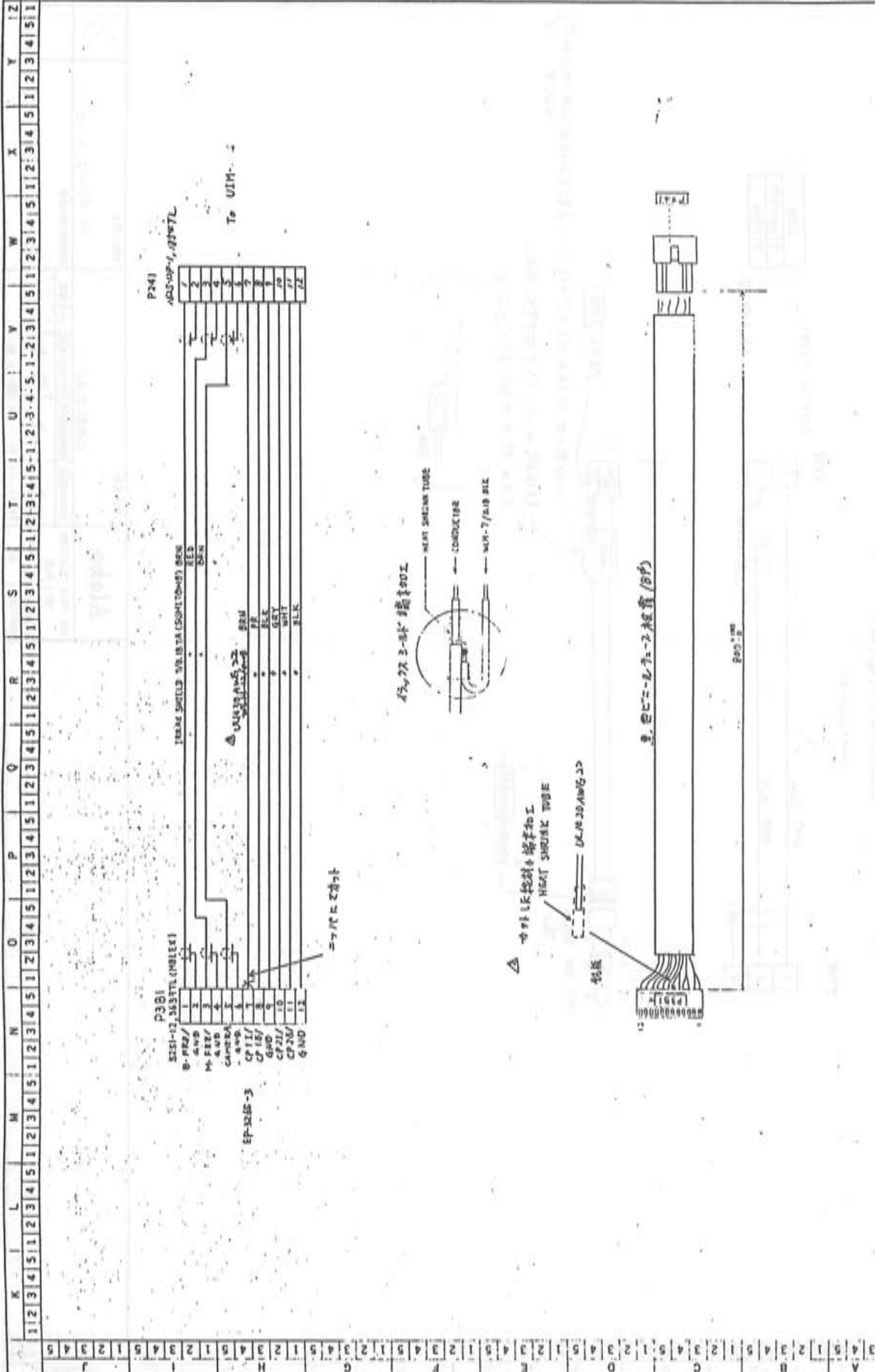
REVISIONS AREA  
 A 3 4 5 1 2 3 4  
 B 3 4 5 1 2 3 4  
 C 3 4 5 1 2 3 4  
 D 3 4 5 1 2 3 4  
 E 3 4 5 1 2 3 4  
 F 3 4 5 1 2 3 4  
 G 3 4 5 1 2 3 4  
 H 3 4 5 1 2 3 4  
 I 3 4 5 1 2 3 4  
 J 3 4 5 1 2 3 4

REV. NO. 2  
 DATE 7/23/67  
 PROJECT 7-70 (75 磁気)

PROD. 7-70 (75 磁気)



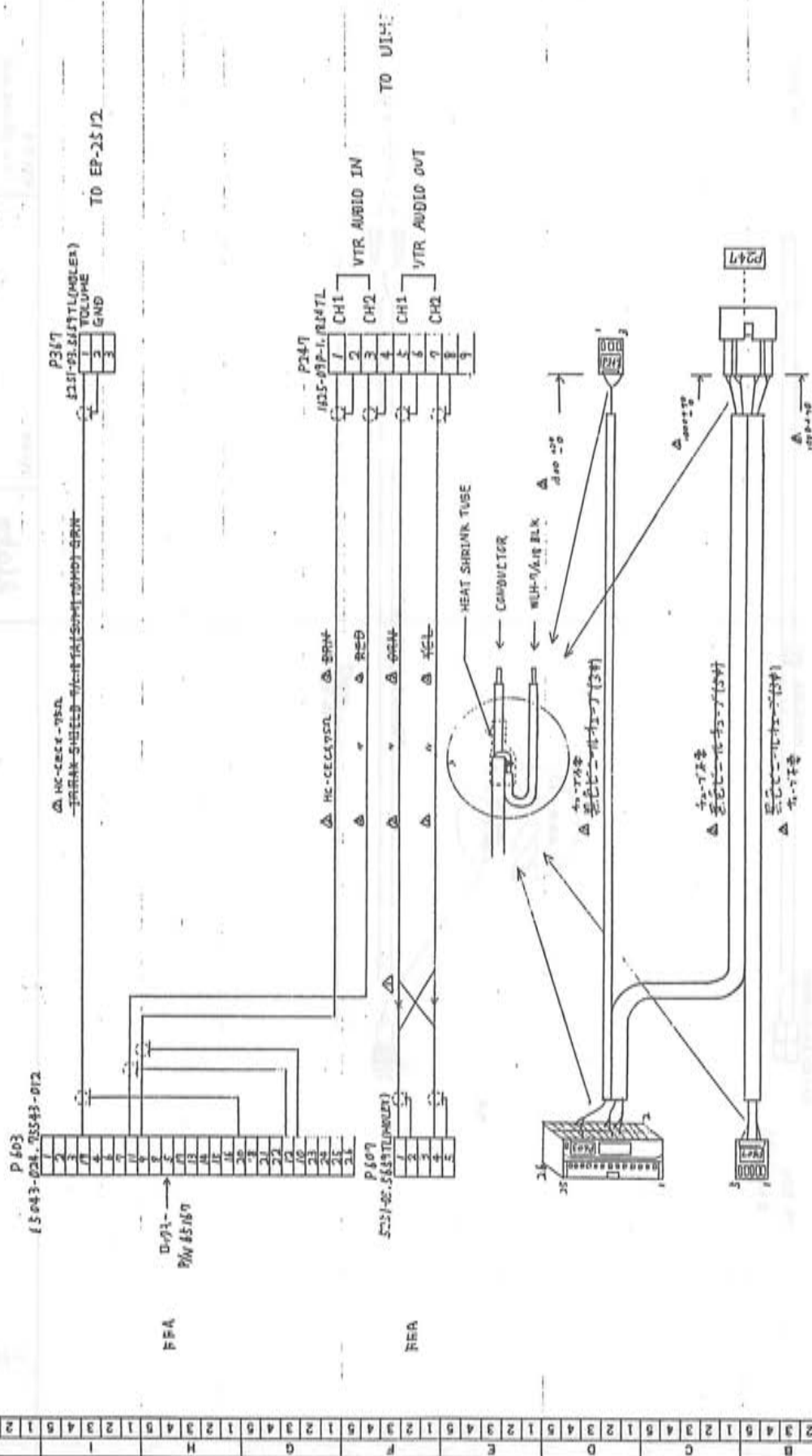
TITLE 名称		CABLE 名		MODEL 名	
3RD ANGLE PROJECTION 第3角法	DRAWING NO.	DESIGNER	CHECKER	APP. NO.	MODEL NO.
SCALE 尺貫	工尺	工尺	工尺	工尺	工尺
UNITS 単位	mm	mm	mm	mm	mm
Aloka		CO-PS/108-E-15		DRAWING NO. 図番	
REV. NO. 2		HC 314 857			



REVIZIONS LIST		MODEL NAME		MODEL NO.	
Δ 90-3-02 EA		CABLE 4股 C		CO-PScri2-F-08	
UL 絞線		DRAWING DESIGNED		DRAWING NO. 008	
490-5-17 絞線		CHECKED		MC310065	
552-200 絞線		DESIGNED			
490-5-17 絞線		APPROVED			
490-5-17 絞線		DATE			
490-5-17 絞線		BY			



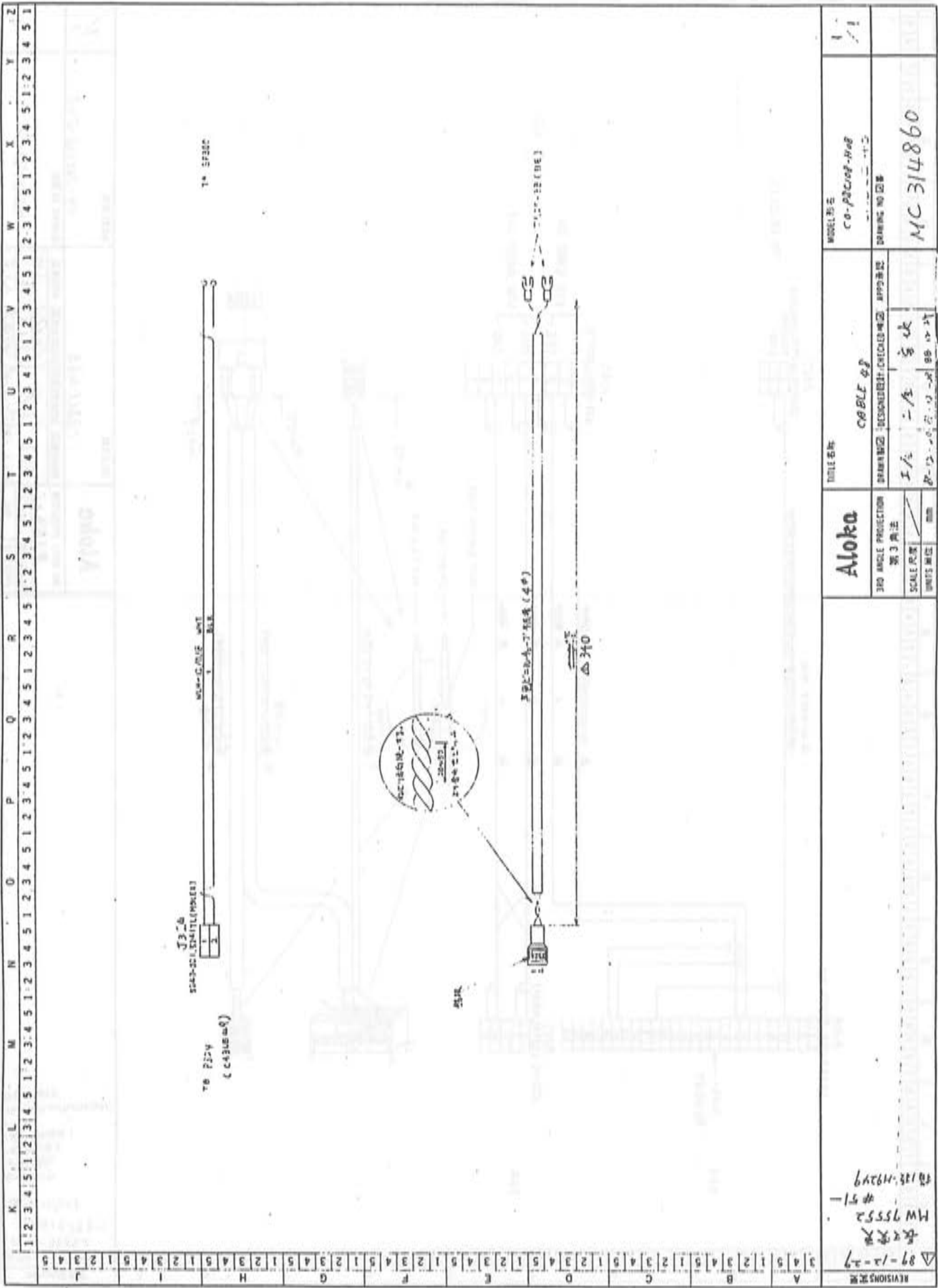
K L M N O P Q R S T U V W X Y Z  
1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1



TO EP-25/2

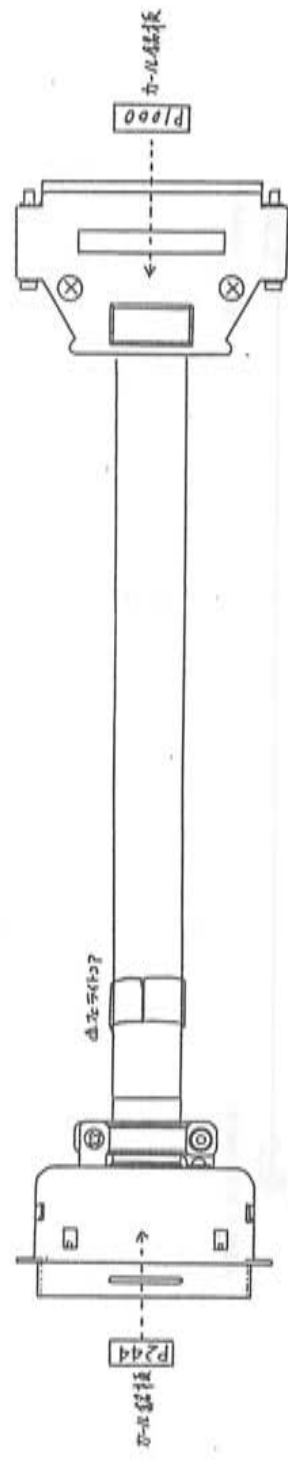
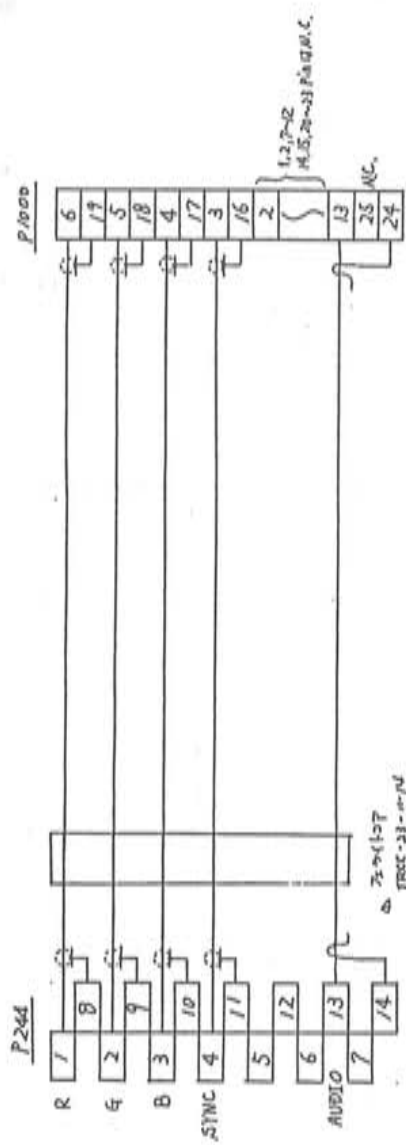
TO UIH:

REVISED BY H W - 79952 91M1723~ 7B/H/207					TITLE Aloka CABLE 463					MODEL NO C-Porter-S-2					DRAWING NO HC 316210				
3RD ANGLE PROJECTION 第3角法					CHECKED 全檢					APPROVED 1. 林上 10.21.79 2. 林上 10.21.79					SCALE 1:1				
UNITS MM															L-913-10-82-13				



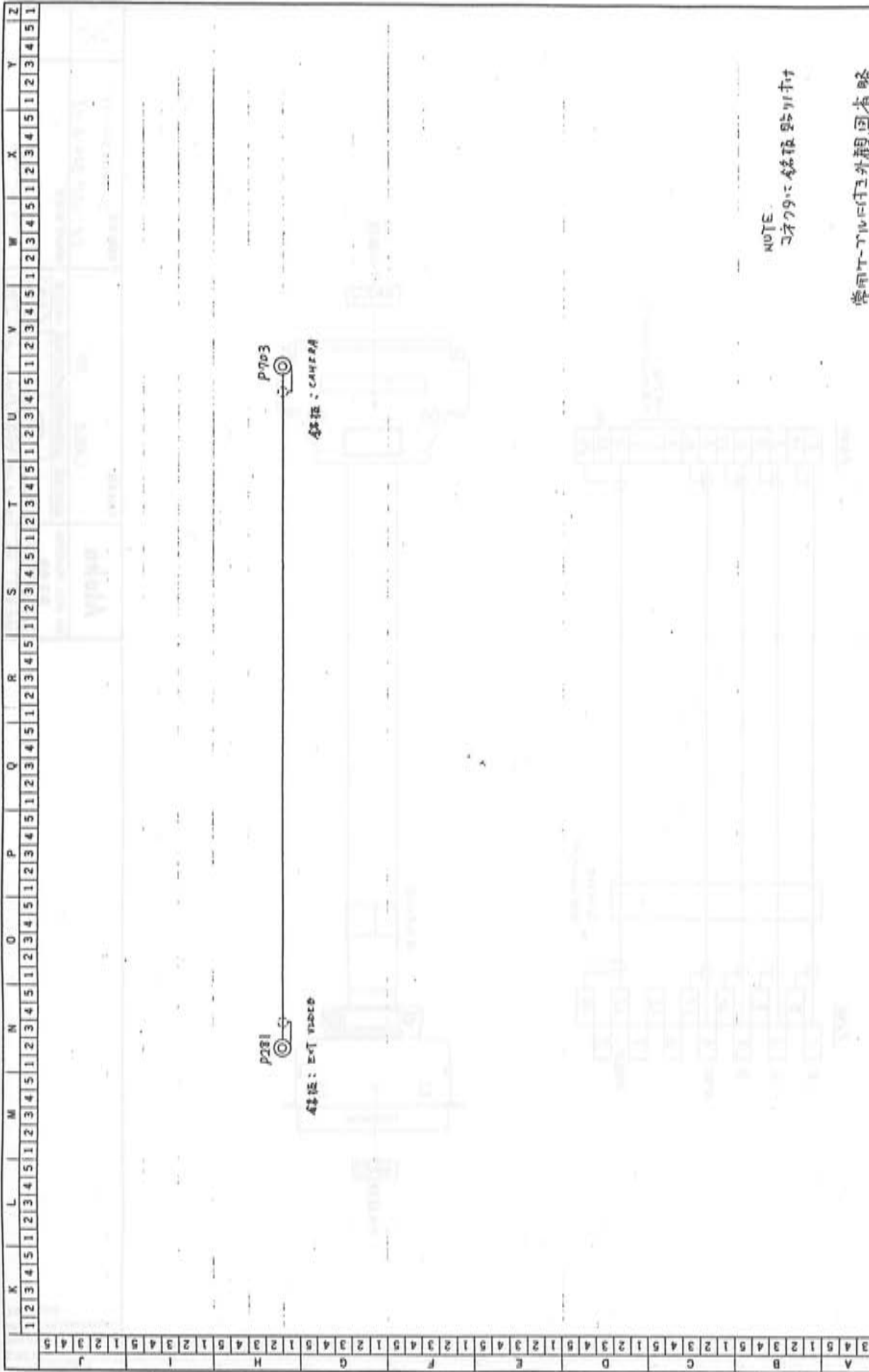
REVIZIONS 変更	NO. 1	DATE	BY
	1		
△ 89-12-27	長又	MW 75552	#51-
		8018-11929	
TITLE 名称		MODEL 名	
CABLE 42		CO-P22C08-008	
DRAWING NO. 図番		DRAWING NO. 図番	
MC 314860			
3RD ANGLE PROJECTION		DRAWING NO. 図番	
第3角法		CABLE 42	
SCALE 尺法		1/2 - 1/2 5/8	
UNITS 単位		mm	

Grid coordinates: A-Z (A-Z), 1-5 (1-5), J (J)



REVISIONS 変更		TITLE 名稱		MODEL 型号		DRAWING NO. 圖番		DATE 日期		BY 製圖		CHECKED 校核		APPROVED 承認	
3		CABLE 50		CABLE 50		CO-UIH-324-K-19		198-0-19		198-0-19		198-0-19		198-0-19	
4		DRAWING NO. 圖號		DRAWING NO. 圖號		DRAWING NO. 圖號		DRAWING NO. 圖號		DRAWING NO. 圖號		DRAWING NO. 圖號		DRAWING NO. 圖號	
5		SCALE 比例		SCALE 比例		SCALE 比例		SCALE 比例		SCALE 比例		SCALE 比例		SCALE 比例	
A		UNITS 單位		UNITS 單位		UNITS 單位		UNITS 單位		UNITS 單位		UNITS 單位		UNITS 單位	
B		3RD ANGLE PROJECTION 第三角法		3RD ANGLE PROJECTION 第三角法		3RD ANGLE PROJECTION 第三角法		3RD ANGLE PROJECTION 第三角法		3RD ANGLE PROJECTION 第三角法		3RD ANGLE PROJECTION 第三角法		3RD ANGLE PROJECTION 第三角法	
C		Aloka		Aloka		Aloka		Aloka		Aloka		Aloka		Aloka	
D		P244		P244		P244		P244		P244		P244		P244	
E		P1000		P1000		P1000		P1000		P1000		P1000		P1000	
F		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14	
G		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.	
H		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.	
I		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO	
J		P244		P244		P244		P244		P244		P244		P244	
K		P1000		P1000		P1000		P1000		P1000		P1000		P1000	
L		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14	
M		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.	
N		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.	
O		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO	
P		P244		P244		P244		P244		P244		P244		P244	
Q		P1000		P1000		P1000		P1000		P1000		P1000		P1000	
R		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14	
S		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.	
T		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.	
U		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO		R, B, SYNC, AUDIO	
V		P244		P244		P244		P244		P244		P244		P244	
W		P1000		P1000		P1000		P1000		P1000		P1000		P1000	
X		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14		PROC-31-0-14	
Y		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.		1,2,7-12 14,5,20-31 P.A.M.C.	
Z		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.		A.C.	

REVISIONS 変更



NOTE  
カメラの銘板點別付

常用モデルに付外觀図省略

REVISEMENTS		TITLE NAME		MODEL NAME	
3	4	Aloka		(NCS 0105)	
2	5	3RD ANGLE PROJECTION 第三角法		C0-PSC108-Q-05	
1	6	SCALE 1:1		DRAWING NO. 0288	
	7	UNITS 単位		MC 316047	
	8	DESIGNED BY 設計者		APPROVED BY 承認者	
	9	CHECKED BY 検査者		DATE 日期	
	10	DRAWN BY 製図者		SCALE 縮尺	
	11	DESIGNED BY 設計者		SCALE 縮尺	
	12	CHECKED BY 検査者		SCALE 縮尺	
	13	DRAWN BY 製図者		SCALE 縮尺	
	14	DESIGNED BY 設計者		SCALE 縮尺	
	15	CHECKED BY 検査者		SCALE 縮尺	
	16	DRAWN BY 製図者		SCALE 縮尺	
	17	DESIGNED BY 設計者		SCALE 縮尺	
	18	CHECKED BY 検査者		SCALE 縮尺	
	19	DRAWN BY 製図者		SCALE 縮尺	
	20	DESIGNED BY 設計者		SCALE 縮尺	
	21	CHECKED BY 検査者		SCALE 縮尺	
	22	DRAWN BY 製図者		SCALE 縮尺	
	23	DESIGNED BY 設計者		SCALE 縮尺	
	24	CHECKED BY 検査者		SCALE 縮尺	
	25	DRAWN BY 製図者		SCALE 縮尺	
	26	DESIGNED BY 設計者		SCALE 縮尺	
	27	CHECKED BY 検査者		SCALE 縮尺	
	28	DRAWN BY 製図者		SCALE 縮尺	
	29	DESIGNED BY 設計者		SCALE 縮尺	
	30	CHECKED BY 検査者		SCALE 縮尺	
	31	DRAWN BY 製図者		SCALE 縮尺	
	32	DESIGNED BY 設計者		SCALE 縮尺	
	33	CHECKED BY 検査者		SCALE 縮尺	
	34	DRAWN BY 製図者		SCALE 縮尺	
	35	DESIGNED BY 設計者		SCALE 縮尺	

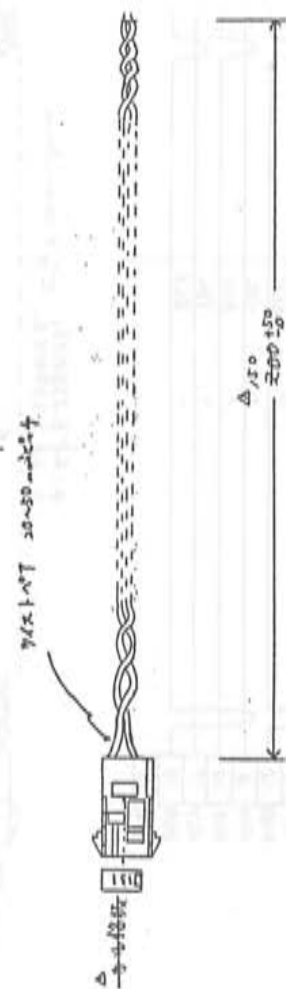






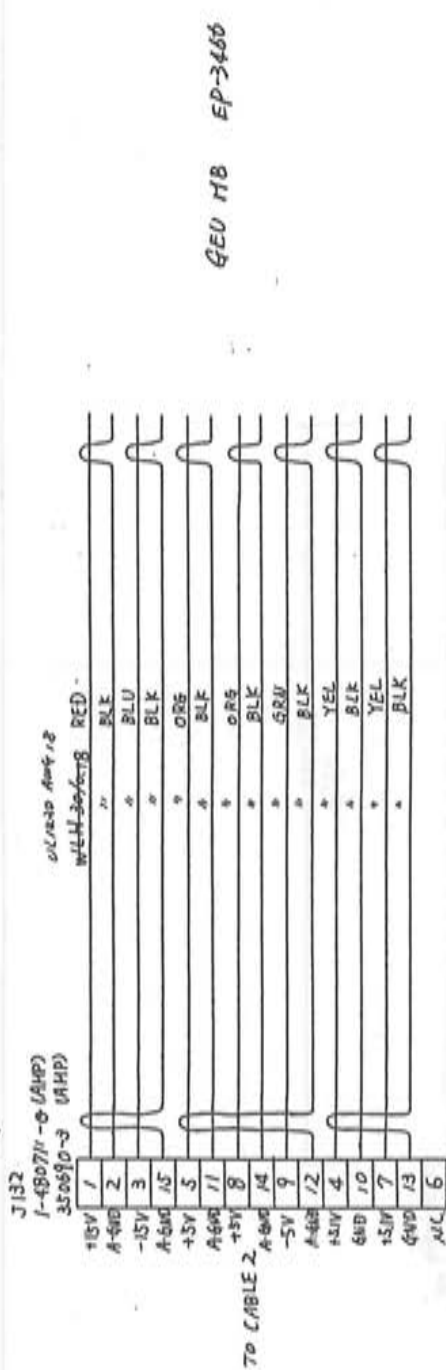
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J134  
 1-480V-0 (AMP)  
 2-320V-3 (AMP)  
 MV 1  
 MV 2  
 TO CABLE 7  
 UL1331 #72 7/0.26 SO (平河) WHITE  
 WLT-1 19/0.18 70 BLACK  
 TO GEU MB EP-3466



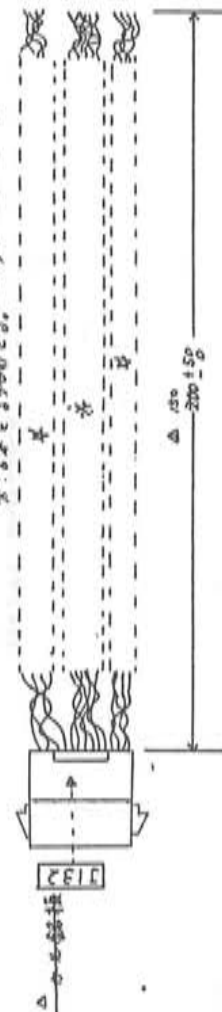
REVISEMENTS		TITLE 名称				MODEL 型号	
3	A	3RD ANGLE PROJECTION 第3角法	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番
2	B	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	C	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	D	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	E	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	F	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	G	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	H	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	I	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	J	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	K	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	L	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	M	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	N	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	O	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	P	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	Q	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	R	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	S	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	T	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	U	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	V	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	W	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	X	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	Y	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号
1	Z	SCALE 尺度	UNITS 单位	NO. 图号	DATE 日期	DRIVING NO. 团番	MODEL 型号

		K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z								
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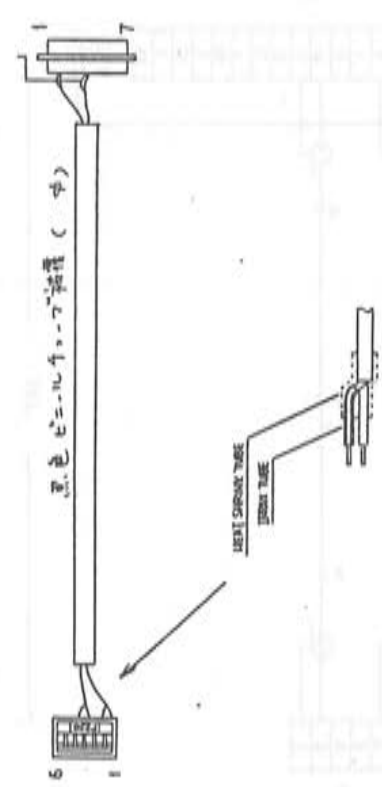
GEU HB EP-3460

5. 4番ピンは接地、L字ボルトで固定  
 6. 6番ピンは接地、L字ボルトで固定

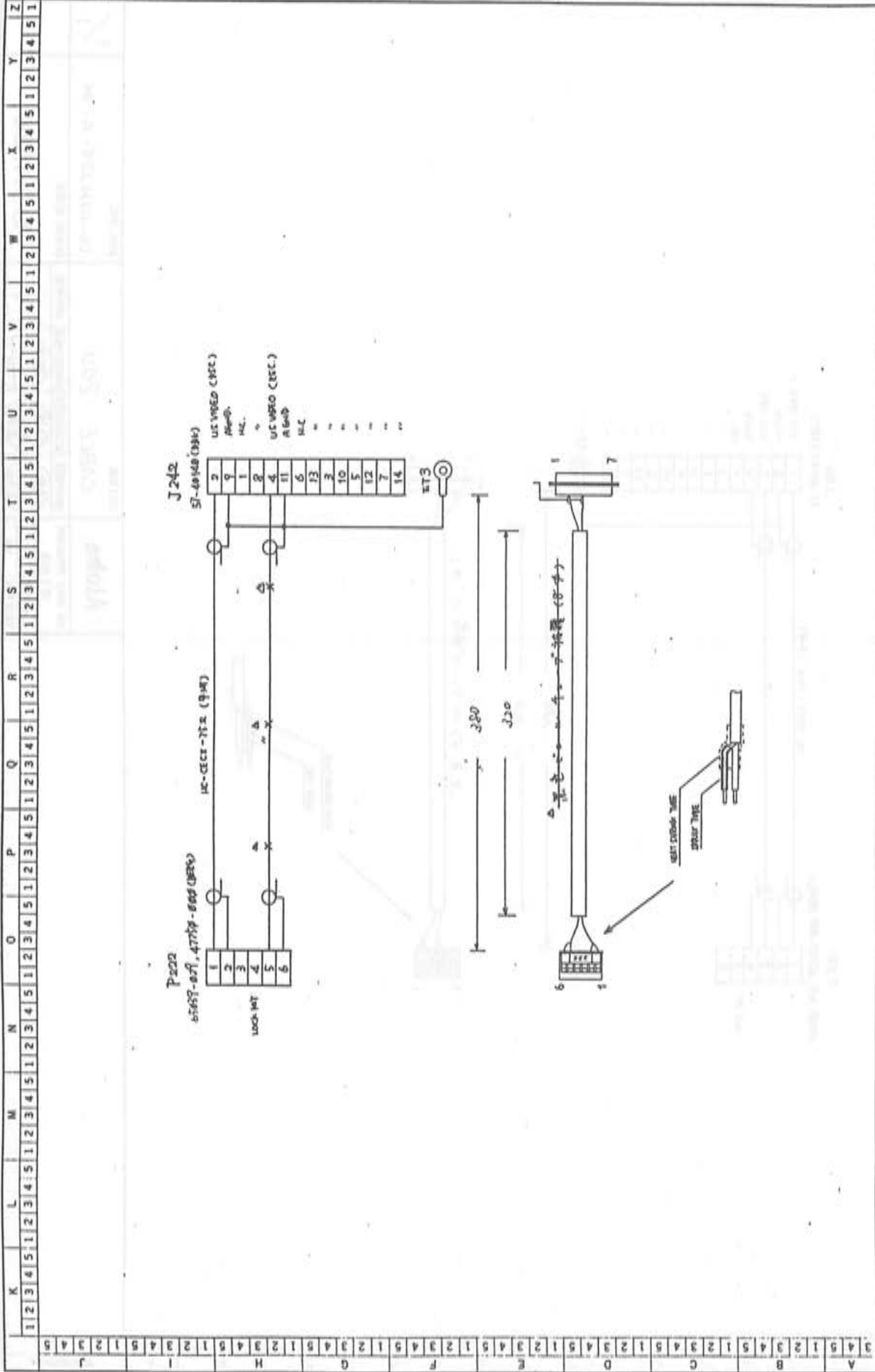


REVISES 変更		3RD ANGLE PROJECTION 第三角法		Aloka		TITLE 名称		MODEL 型号			
3	4	5	1	2	3	4	5	CABLE 103 D		CO-GEU-SD-S-02 B	
DRAWING NO. 図番		SCALE 尺度		UNITS 单位		DRAWING NO. 图番		DRAWING NO. 图番			
350690-3		1:1		mm		MC 314864		MC 314864			

K L M N O P Q R S T U V W X Y Z  
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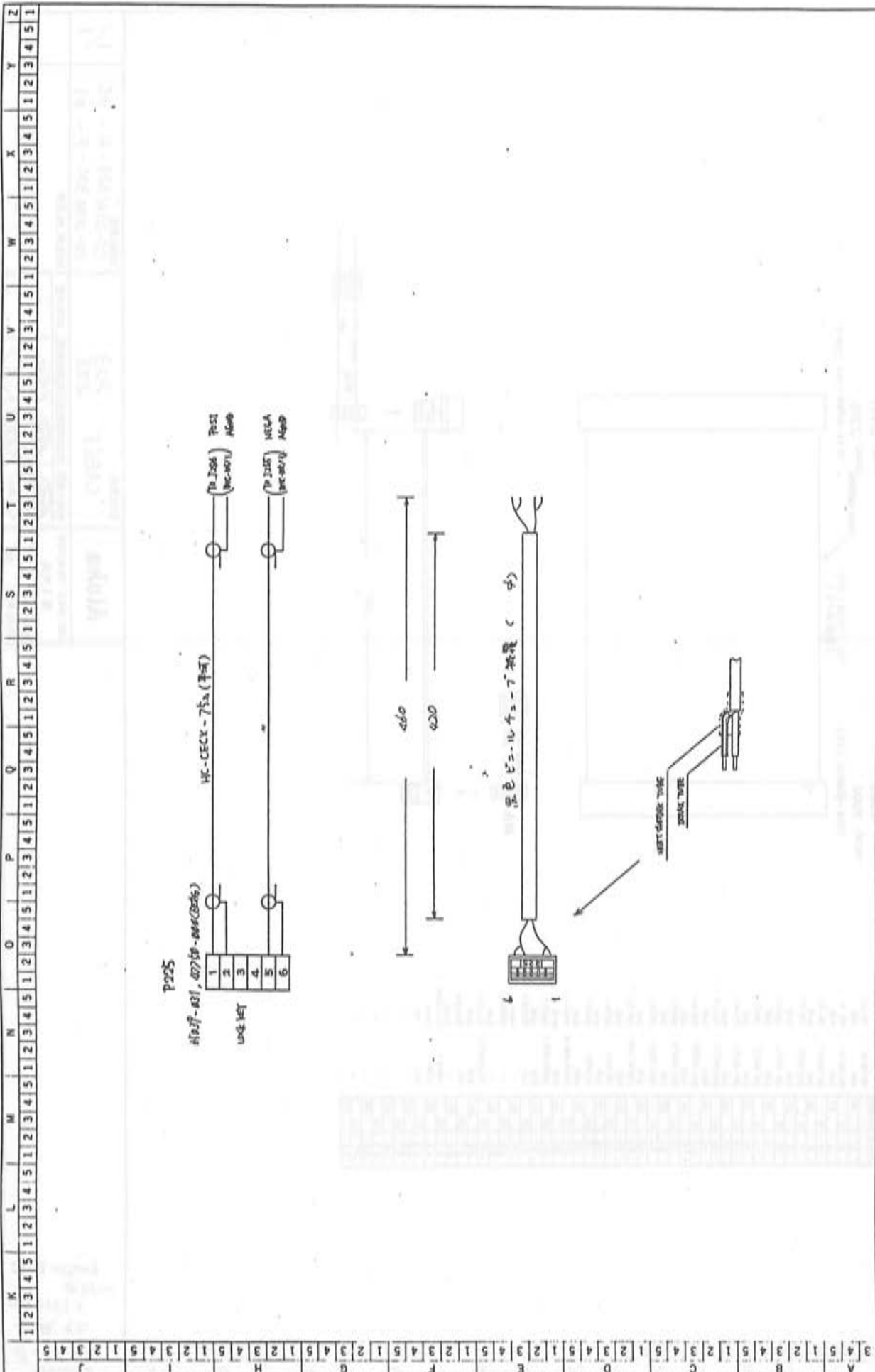
		MODEL NO. CO-UM324-A-04		1/1
		DRAWING NO. 028		MC 314388
TITLE NAME <b>Aloka</b> CABLE 200		DESIGNED BY 田中 達也	CHECKED BY 池田 宏樹	APPROVED [Signature]
3RD ANGLE PROJECTION 第3角法		SCALE RATIO 比例尺 1:1	SCALE UNIT 単位 ㎜	
REVISIONS 変更				



REVIEWS 変更		Aloka		TITLE 名称		MODEL 型号		1/1	
3RD ANGLE PROJECTION 第3角法		SCALE 尺度		CABLE 202		CO-UJM324-C-04			
UNIT 单位		MM		DESIGNED BY 设计		DRAWING 图号			
				CHECKED BY 检查		MC 314390			
				DATE 日期					
				BY 姓名					
				NO. 序号					
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				SCALE 尺度					
				3RD ANGLE PROJECTION					
				Aloka					

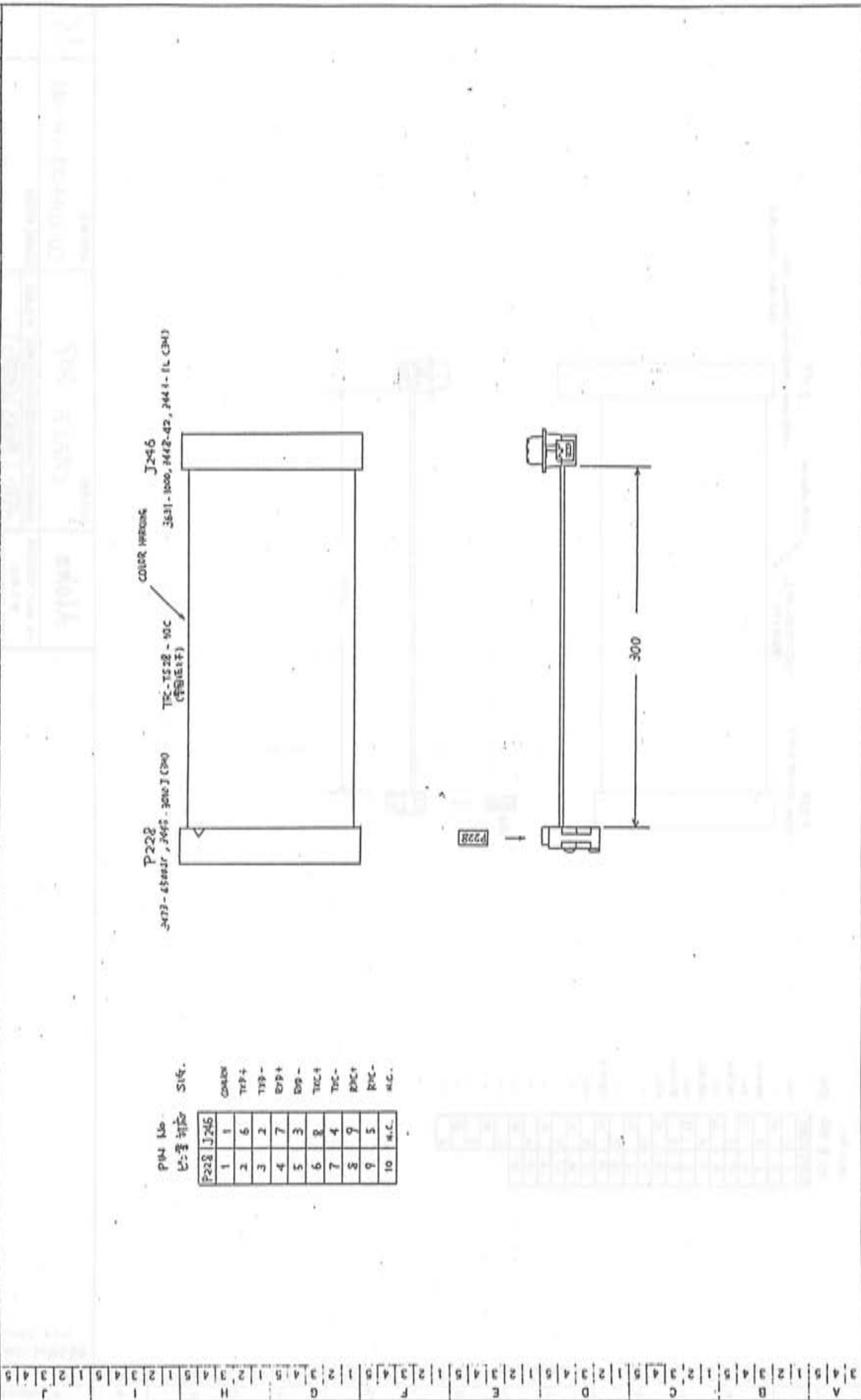
1/1  
 MC 314390  
 CO-UJM324-C-04  
 MODEL 型号

K	J	I	H	G	F	E	D	C	B	A														3	4	5	1	2	3	4	5																				
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5							
PIN No. 心差訂修 STANDARD													<p>           品名: P223 品番: J243            仕様: P226 仕様: J245            750-65003C (3M) 仕様: YTFE-60300-2M (30K)            TFC-1028-BOC (仕様訂修)         </p> <p>           品名: P223 品番: J243            仕様: P226 仕様: J245            750-65003C (3M) 仕様: YTFE-60300-2M (30K)            TFC-1028-BOC (仕様訂修)         </p> <p>           品名: P223 品番: J243            仕様: P226 仕様: J245            750-65003C (3M) 仕様: YTFE-60300-2M (30K)            TFC-1028-BOC (仕様訂修)         </p> <p>           品名: P223 品番: J243            仕様: P226 仕様: J245            750-65003C (3M) 仕様: YTFE-60300-2M (30K)            TFC-1028-BOC (仕様訂修)         </p> <p>           品名: P223 品番: J243            仕様: P226 仕様: J245            750-65003C (3M) 仕様: YTFE-60300-2M (30K)            TFC-1028-BOC (仕様訂修)         </p>													MODEL NO. CO-UIM324-D-05 MODEL NO. CO-UIM304-F-05 DRAWING NO. MC 314391																									
													TITLE 名称: CABLE 203 205 DRAWING NO. 203 205 DESIGNER 設計: 203 205 CHECKER 検査: 203 205 APPR 承認: 203 205													3RD ANGLE PROJECTION 第3角法 SCALE 尺度: 1:1 UNITS 単位: MM													ALOKA MODEL NO. CO-UIM324-D-05 MODEL NO. CO-UIM304-F-05 DRAWING NO. MC 314391												
													品名: P223 品番: J243 仕様: P226 仕様: J245 750-65003C (3M) 仕様: YTFE-60300-2M (30K) TFC-1028-BOC (仕様訂修)													MODEL NO. CO-UIM324-D-05 MODEL NO. CO-UIM304-F-05 DRAWING NO. MC 314391																									



REVIEWS 変更		Aloka		TITLE 名称 CABLE 204		MODEL 型号 CO-UIM324-E-04		DRAWING NO. 図番 MC 314392		SCALE 比例尺 1/1	
3 4 5		3 4 5		3 4 5		3 4 5		3 4 5		3 4 5	
A		B		C		D		E		F	
G		H		I		J		K		L	
M		N		O		P		Q		R	
S		T		U		V		W		X	
Y		Z		1		2		3		4	
5		6		7		8		9		0	

K L M N O P Q R S T U V W X Y Z  
 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1



P228 4073-4584R, 3665-3000J (300)  
 TRC-TS28-90C (FURNISH)  
 COLOR WEAVING J246  
 3631-1000, 3442-425, 3441-1L (CM)

P228 J246  
 P228 J246  
 巴拿馬製 S16.

1	1	CHAD
2	6	TRP+
3	2	TRP-
4	7	EP+
5	3	EP-
6	8	TRC+
7	4	TRC-
8	9	RPC+
9	5	RPC-
10	N.C.	N.C.

A 3 4 5 1 2 3 4 5	B 3 4 5 1 2 3 4 5	C 3 4 5 1 2 3 4 5	D 3 4 5 1 2 3 4 5	E 3 4 5 1 2 3 4 5	F 3 4 5 1 2 3 4 5	G 3 4 5 1 2 3 4 5	H 3 4 5 1 2 3 4 5	I 3 4 5 1 2 3 4 5	J 3 4 5 1 2 3 4 5	REVISED SHEET	
										1/1	
MODEL NAME (CO-UTM) 24-6-85 L-CABLE - 175 DRAWING NO. 306 MC 314394											

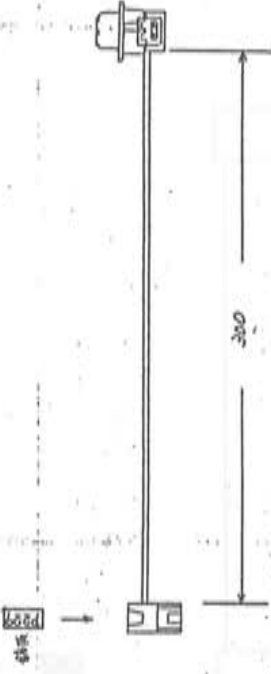
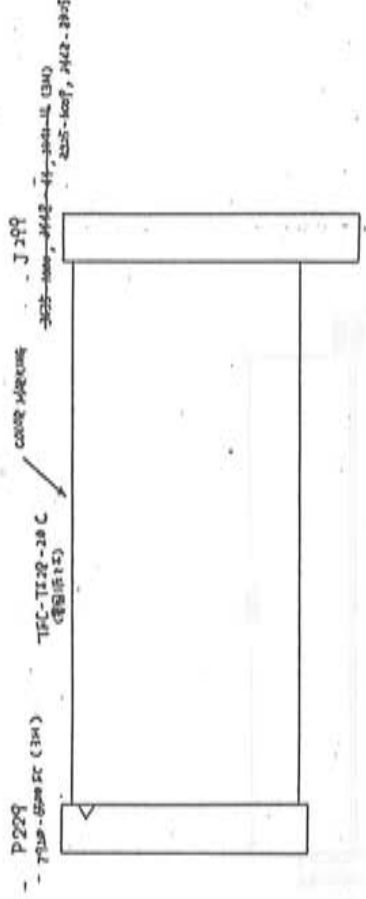


K 1 2 3 4 5 L M N O P Q R S T U V W X Y Z

PIU 山.

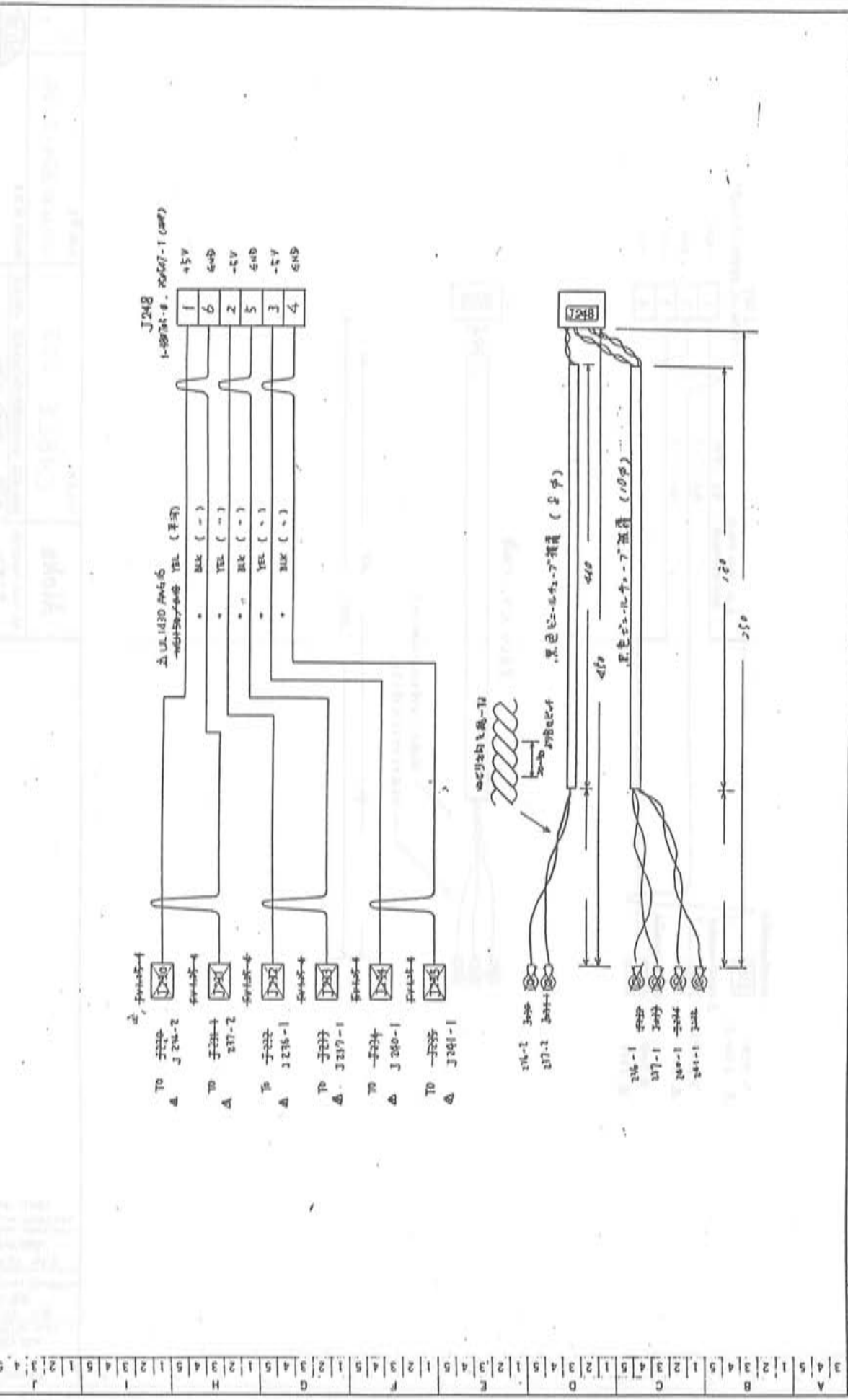
参考表

P229 J267
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5 3
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7 4
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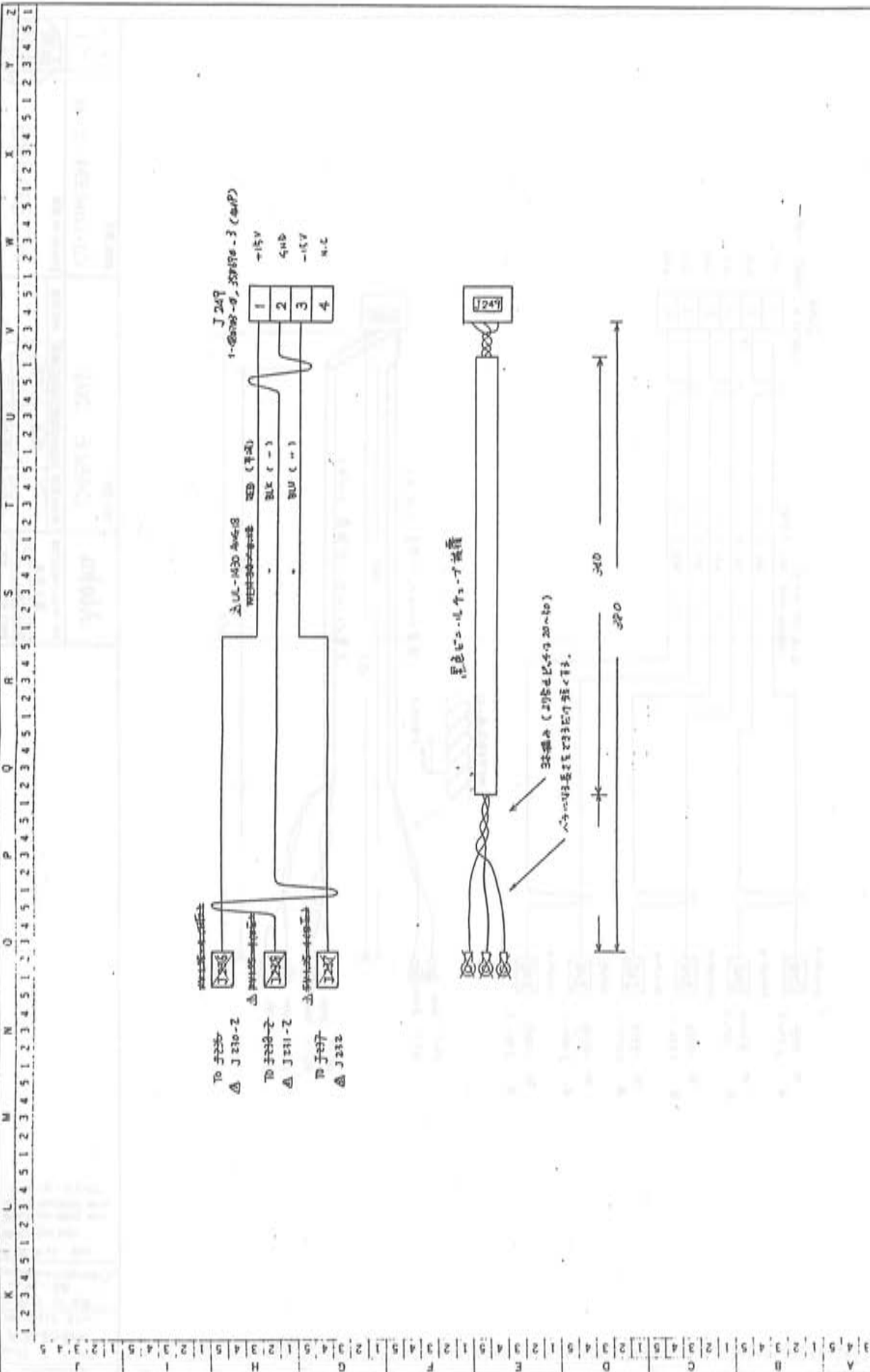


REVISIONS 変更  
 △ 訂正 06.21.91  
 設計 山本 隆太郎  
 11-2043 4.1

<b>Aloka</b> 3RD ANGLE PROJECTION 第三角法 SCALE 比率 UNITS 單位 MM	MODEL 名 <b>CABLE 207</b>	MODEL 名 <b>CO-UJM324-H-03</b> DRAWING NO. 図番 <b>MC 314395</b>	1/1
	DRAWING 図 DESIGN 設計 CHECKED 検核 APPR 承認 		



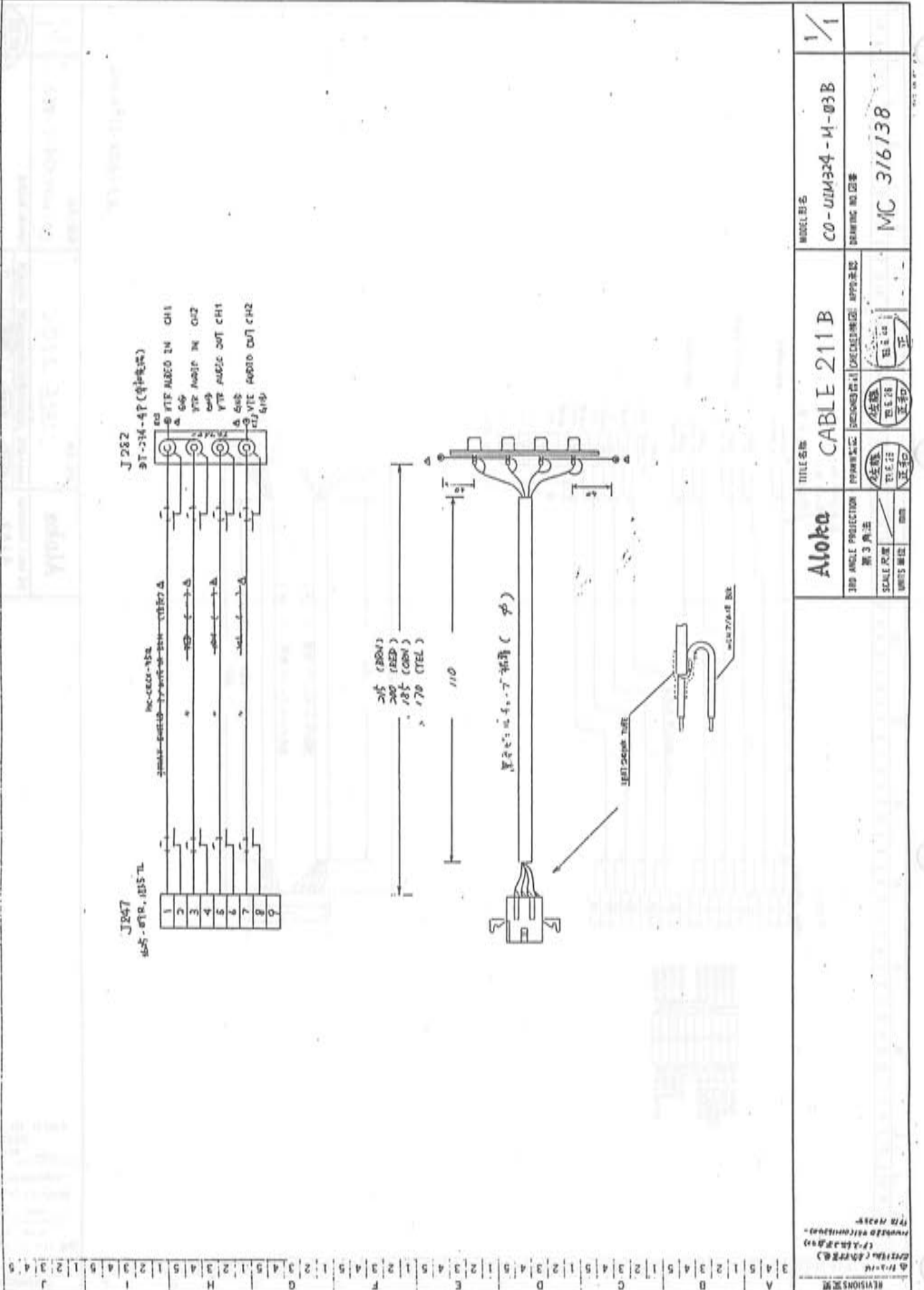
REVISIONS	REV. 12.12.11 REV. 05.12.11 REV. 03.22.11 REV. 01.21.11 REV. 01.21.11 REV. 01.21.11	MODEL NO. CO-UTM324-I-04	TITLE NAME CABLE 208	DATE 11/1
SCALE	1:1	DRAWING NO.	MC 314396	DATE 02.10.11
UNITS	MM	CHECKED	APP. 10/11	DATE 02.10.11
DESIGNED	DESIGNED	CHECKED	APP. 10/11	DATE 02.10.11
DATE	11/1	SCALE	1:1	DATE



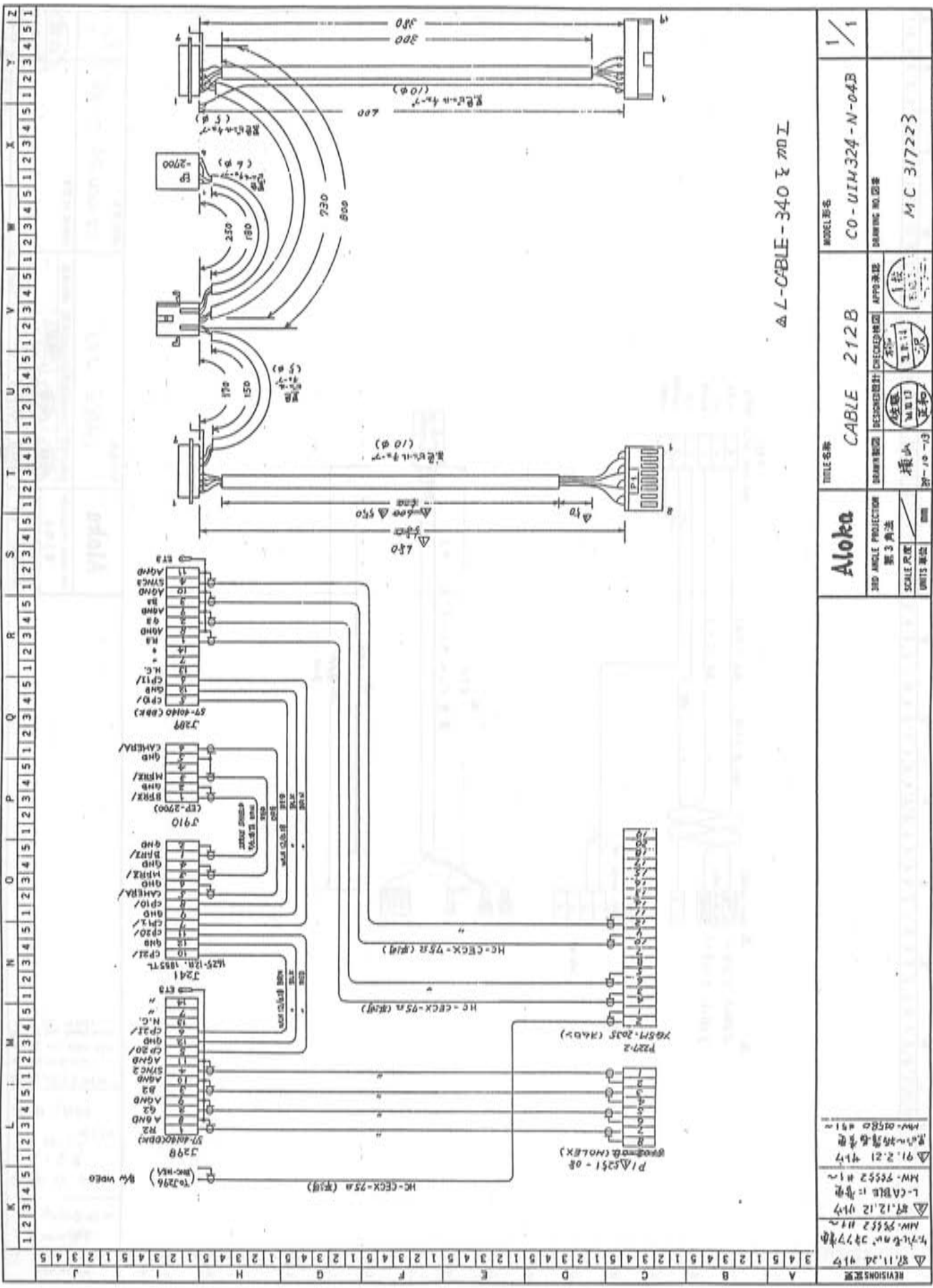
VISIONS 変更 1. 訂正 A 903.22 ± 階 REV. 9552 # 1 A 高橋 8 先生 UL 96012 # 1 (PENDING) △ 92.10.27 訂正 680 EX. CVD 訂正 680 EX. rev. 2007 # 1 # 18-712197		Aloka		TITLE 名称 CABLE 209		MODEL 原番 CO-UIM 324-J-04		1 / 1
3RD ANGLE PROJECTION 第 3 角法 SCALE 原尺 UNIT 単位 mm		DRAWING 図面 DESIGNED 設計 CHECKED 検閲 DATE 日付 REV. 訂正		DRAWING NO. 図番 MC 314397		DRAWING NO. 図番 MC 314397		出回 92.10 7 訂正



K L M N O P Q R S T U V W X Y Z

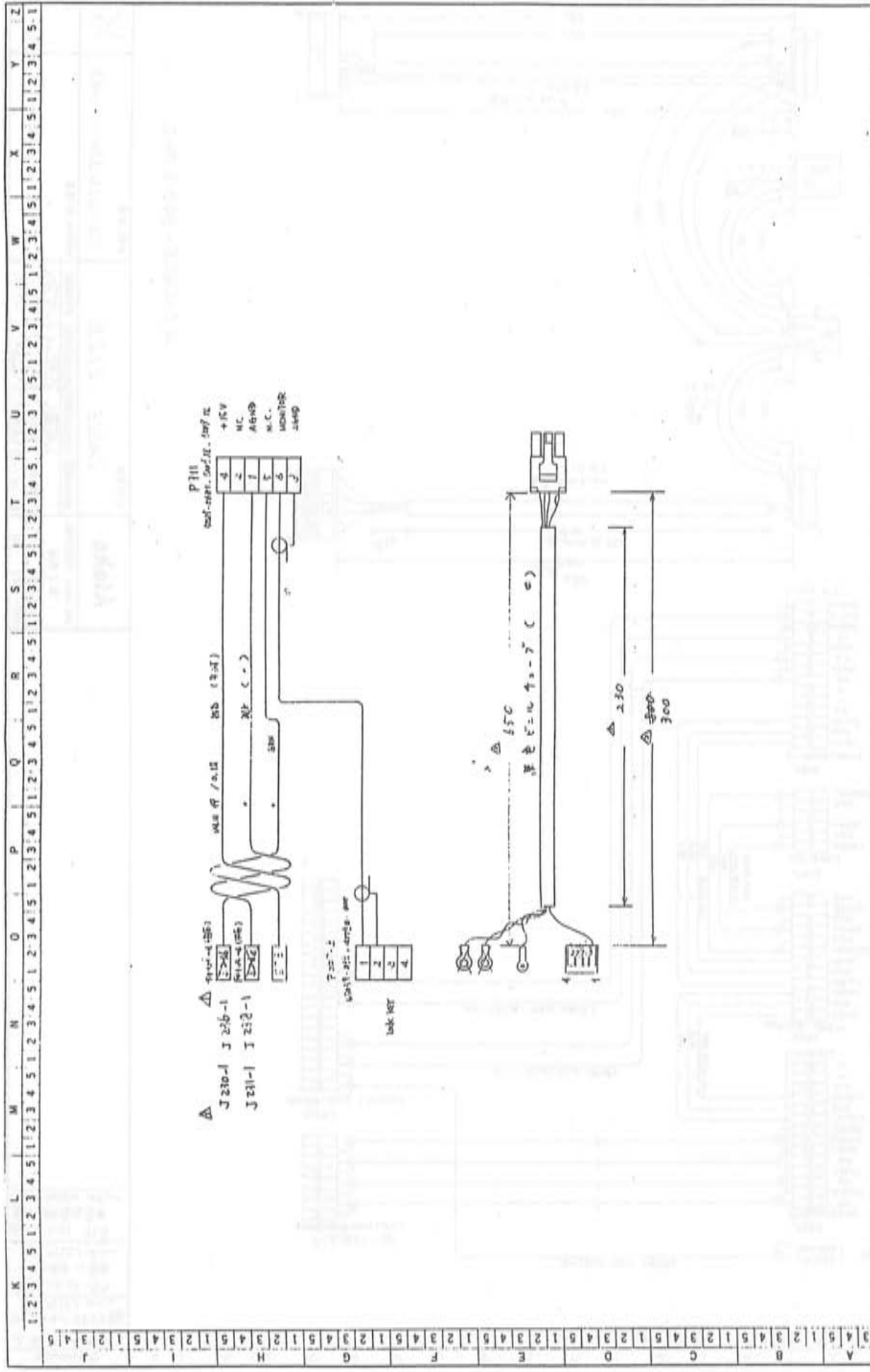


REVISED DRAWING		TITLE NAME		MODEL NAME		DRAWING NO	
Aloka		CABLE 211B		CO-UM34-M-03B		1/1	
3RD ANGLE PROJECTION 第3角法		PROJECTION (CASE)		DRAWING NO		MC 316138	
SCALE 1:1		UNIT: MM		DATE		DRAWN BY	
DATE		DATE		DATE		DATE	



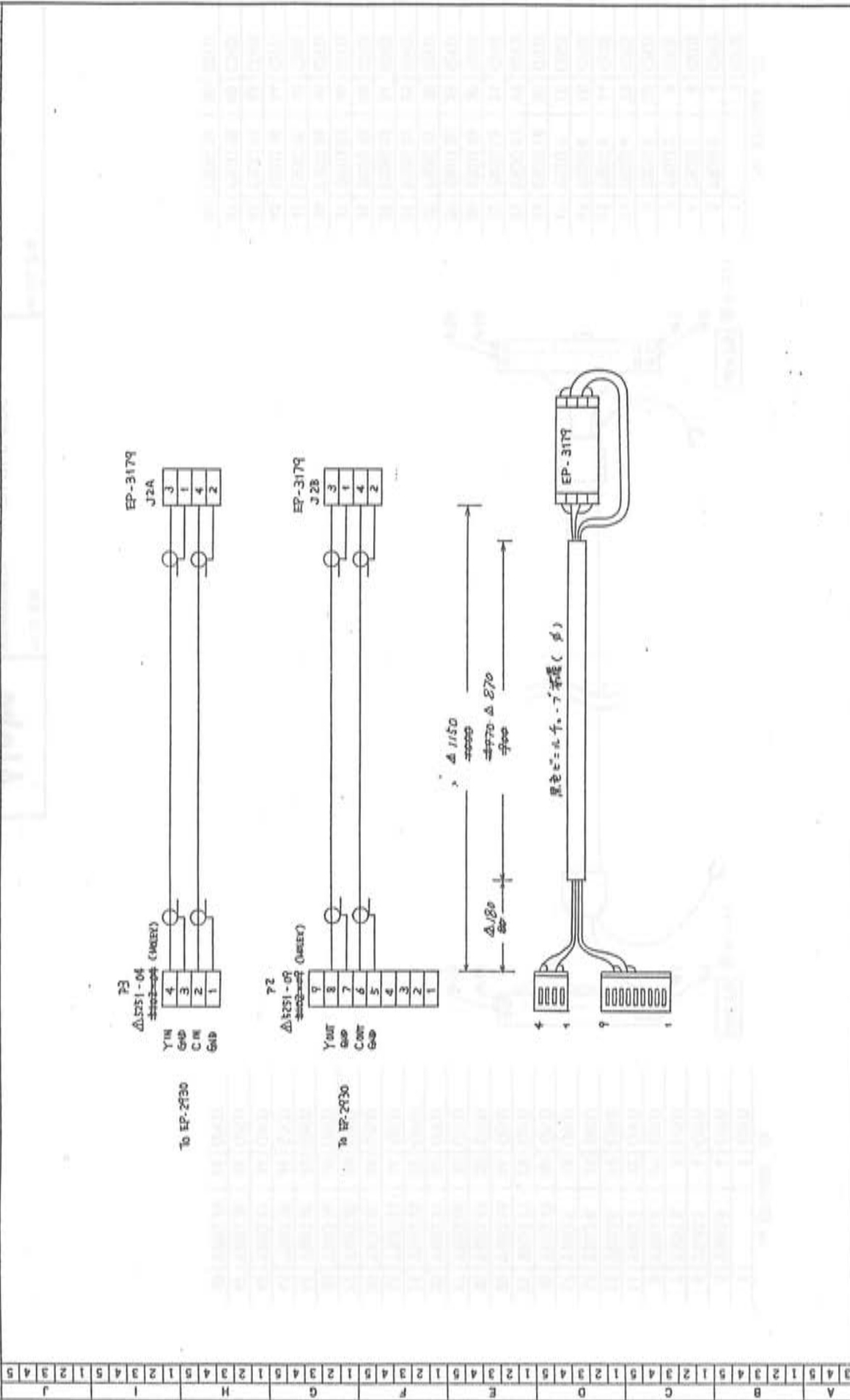
L-CABLE-340 加工

REVISIONS 変更	△ 87.11.24 415	△ 87.12.12 414	MW. 9552 #11	△ 87.12.12 414	L-CABLE 仕様変更	MW. 9552 #11	△ 91.2.21 414	標準品採用	MW. 0550 #51
TITLE 名称	CABLE 212B		MODEL 番号	CO-UM324-N-04B		DRAWING NO. 図番	MC 317223		
3RD ANGLE PROJECTION 第3角法	SCALE 尺度		UNITS 単位		DIM		DATE 10-7-13		
DESIGNED BY 設計者	CHECKED BY 検査者		APPROVED BY 承認者		DRAWING NO. 図番		MODEL 番号		
DESIGNED BY 設計者	CHECKED BY 検査者		APPROVED BY 承認者		DRAWING NO. 図番		MODEL 番号		
DESIGNED BY 設計者	CHECKED BY 検査者		APPROVED BY 承認者		DRAWING NO. 図番		MODEL 番号		



REVISEMENTS			TITLE NAME			MODEL NAME			DRAWING NO. ITEM																				
3	A	1	12	11/2	11/10	ALOKA	300	ANGLE PROJECTION	第3角法	SCALE 1/1	UNITS 毫米	2000	3	X	1	2	3	4	5	6	7	8	9	10	11	12			
2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29			2007.12.29 2007.12.29 2007.12.29 2007.12.29		
CABLE 213												MODEL NAME CO-UM224-2-0E			DRAWING NO. ITEM MS 310.20			1/1 1/1			1/1 1/1			1/1 1/1			1/1 1/1		

K L M N O P Q R S T U V W X Y Z

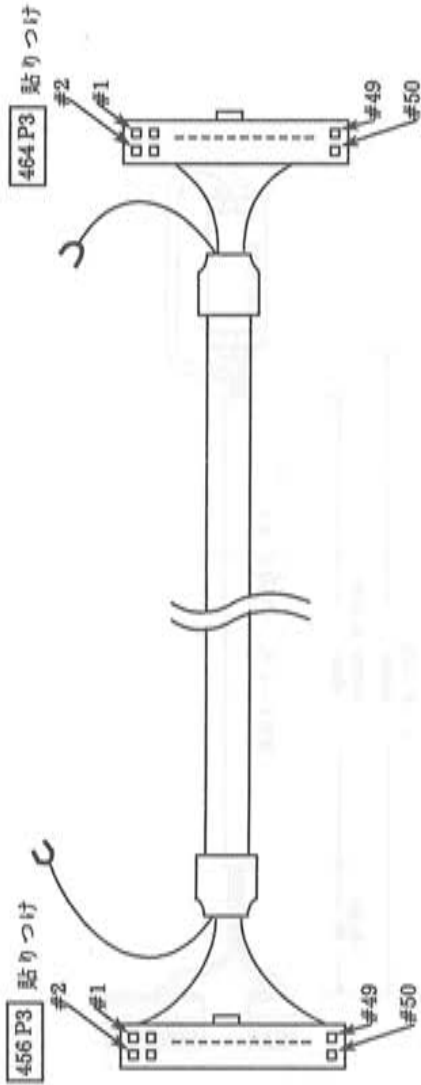


REVIEWS 変更		TITLE 名称 500-620		MODEL 品名	
$\Delta 07.11.24$ 417 MW-9552 #1~ $\Delta 91.2.21$ #17 黒色ニルキケーブル MW-04980 #91~		DRAWING NO. 図番 MC 316141		MODEL NO. 品名 CO-UMH 324-P-05	
3RD ANGLE PROJECTION 第3角法 SCALE 尺法 UNITS 単位 mm		DRAWING NO. 図番 CABLE 214		CHECKED 検出 佐藤 正和	
DESIGNED 設計 佐藤 正和		APPROVED 承認 佐藤 正和		DRAWING NO. 図番 1/1	



to EP-3456 J3

1	2	GND	
3	TRIG 0	4	GND
5	TRIG 1	6	GND
7	TRIG 2	8	GND
9	TRIG 3	10	GND
11	TRIG 4	12	GND
13	TRIG 5	14	GND
15	TRIG 6	16	GND
17	TRIG 7	18	GND
19	TRIG 16	20	GND
21	TRIG 17	22	GND
23	TRIG 18	24	GND
25	TRIG 19	26	GND
27	TRIG 20	28	GND
29	TRIG 21	29	GND
31	TRIG 22	32	GND
33	TRIG 23	34	GND
35	TRIG 32	36	GND
37	TRIG 33	38	GND
39	TRIG 34	40	GND
41	TRIG 35	42	GND
43	TRIG 36	44	GND
45	TRIG 37	46	GND
47	TRIG 38	48	GND
49	TRIG 39	50	GND



to EP-3464 J3

1	2	GND	
3	TRIG 0	4	GND
5	TRIG 1	6	GND
7	TRIG 2	8	GND
9	TRIG 3	10	GND
11	TRIG 4	12	GND
13	TRIG 5	14	GND
15	TRIG 6	16	GND
17	TRIG 7	18	GND
19	TRIG 16	20	GND
21	TRIG 17	22	GND
23	TRIG 18	24	GND
25	TRIG 19	26	GND
27	TRIG 20	28	GND
29	TRIG 21	29	GND
31	TRIG 22	32	GND
33	TRIG 23	34	GND
35	TRIG 32	36	GND
37	TRIG 33	38	GND
39	TRIG 34	40	GND
41	TRIG 35	42	GND
43	TRIG 36	44	GND
45	TRIG 37	46	GND
47	TRIG 38	48	GND
49	TRIG 39	50	GND

**Aloka**

TITLE 名称

SSD-680EXSTD

CABLE 600

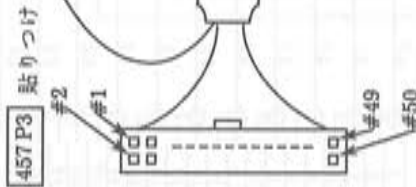
MODEL 形名

L-CABLE-392

1/1

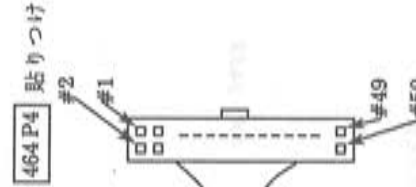
to EP-3457 J3

1	2	GND	
3	TRIG 8	4	GND
5	TRIG 9	6	GND
7	TRIG 10	8	GND
9	TRIG 11	10	GND
11	TRIG 12	12	GND
13	TRIG 13	14	GND
15	TRIG 14	16	GND
17	TRIG 15	18	GND
19	TRIG 24	20	GND
21	TRIG 25	22	GND
23	TRIG 26	24	GND
25	TRIG 27	26	GND
27	TRIG 28	28	GND
29	TRIG 29	29	GND
31	TRIG 30	32	GND
33	TRIG 31	34	GND
35	TRIG 40	36	GND
37	TRIG 41	38	GND
39	TRIG 42	40	GND
41	TRIG 43	42	GND
43	TRIG 44	44	GND
45	TRIG 45	46	GND
47	TRIG 46	48	GND
49	TRIG 47	50	GND



to EP-3464 J4

1	2	GND	
3	TRIG 8	4	GND
5	TRIG 9	6	GND
7	TRIG 10	8	GND
9	TRIG 11	10	GND
11	TRIG 12	12	GND
13	TRIG 13	14	GND
15	TRIG 14	16	GND
17	TRIG 15	18	GND
19	TRIG 24	20	GND
21	TRIG 25	22	GND
23	TRIG 26	24	GND
25	TRIG 27	26	GND
27	TRIG 28	28	GND
29	TRIG 29	29	GND
31	TRIG 30	32	GND
33	TRIG 31	34	GND
35	TRIG 40	36	GND
37	TRIG 41	38	GND
39	TRIG 42	40	GND
41	TRIG 43	42	GND
43	TRIG 44	44	GND
45	TRIG 45	46	GND
47	TRIG 46	48	GND
49	TRIG 47	50	GND



**Aloka**

TITLE 名称

SSD-680EXSTD

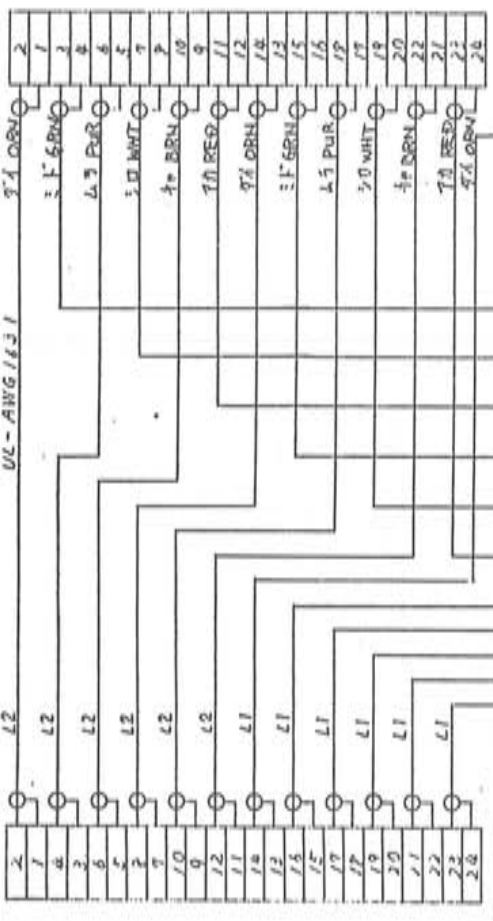
CABLE 601

MODEL 形名

L-CABLE-392

1/1

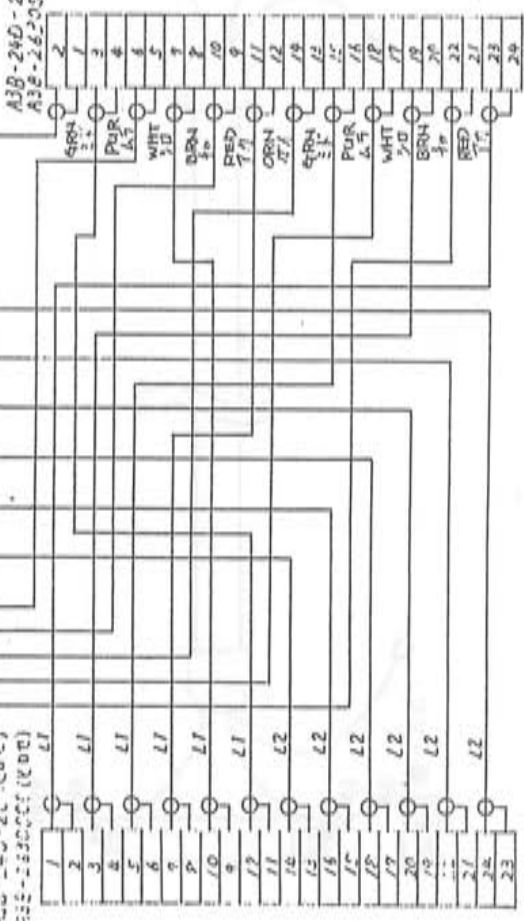
A35-245-2C (LDC)  
A38-26205CC (LDC)



EP-3455 P6

26	
1 GND	2 REC0
3 GND	4 REC1
5 GND	6 REC2
7 GND	8 REC3
9 GND	10 REC4
11 GND	12 REC5
13 GND	14 REC6
15 GND	16 REC7
17 REC8	18 GND
19 REC9	20 GND
21 REC10	22 GND
23 REC11	24 GND

A35-245-2C (LDC)  
A38-26205CC (LDC)

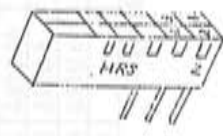


EP-3458 P4

24	
1 REC12	2 GND
3 REC13	4 GND
5 REC14	6 GND
7 REC15	8 GND
9 GND	10 REC16
11 GND	12 REC17
13 GND	14 REC18
15 GND	16 REC19
17 GND	18 REC20
19 GND	20 REC21
21 GND	22 REC22
23 GND	24 REC23

4-7 凡は全  
UL-AWG1631  
L1=520-20-0  
L2=430+20-0  
注) 4-7 凡は全は  
和国標準

AWG番号は下記に示す



REGIONS / 地区

**Aloka**

TEL 名称: CBL 602

MODEL 名: CO-GEU64-A05

DRIVING 駆動電圧: MC 325008

SCALE 縮尺: 1/2

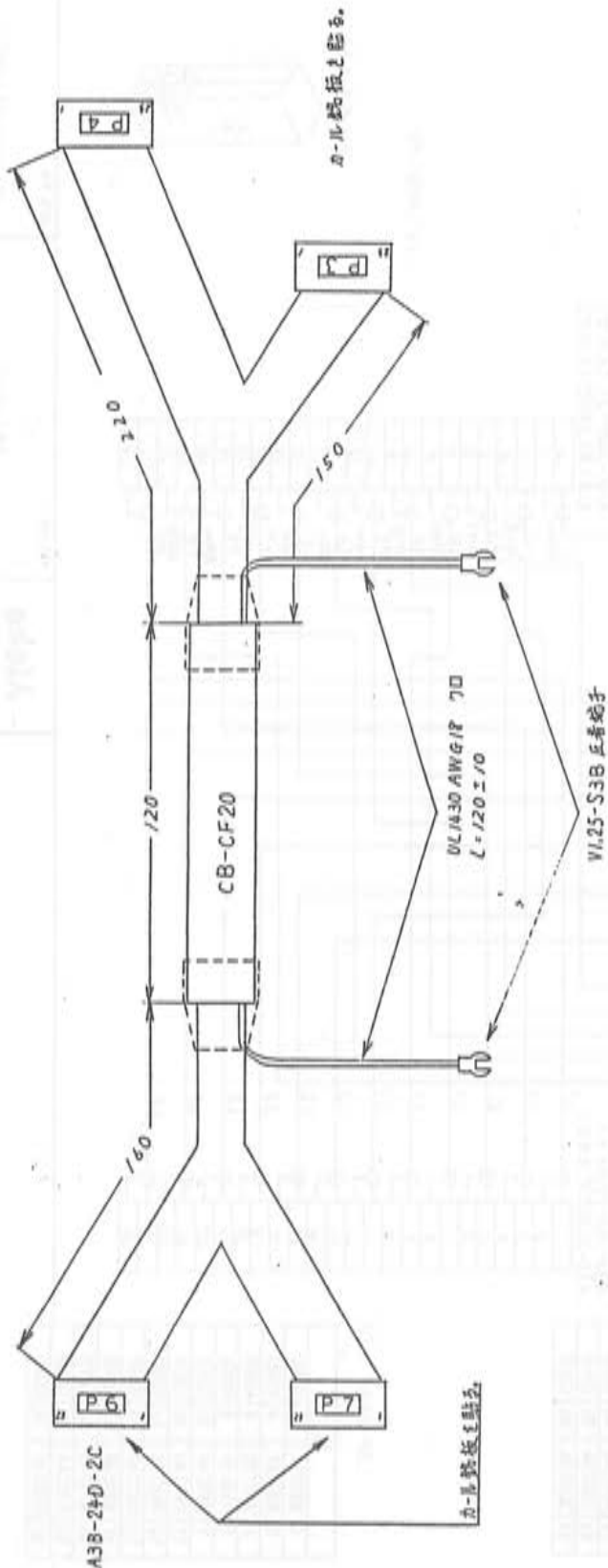
WIRE 線径: 0.8mm

WIRE 線径: 0.8mm

WIRE 線径: 0.8mm

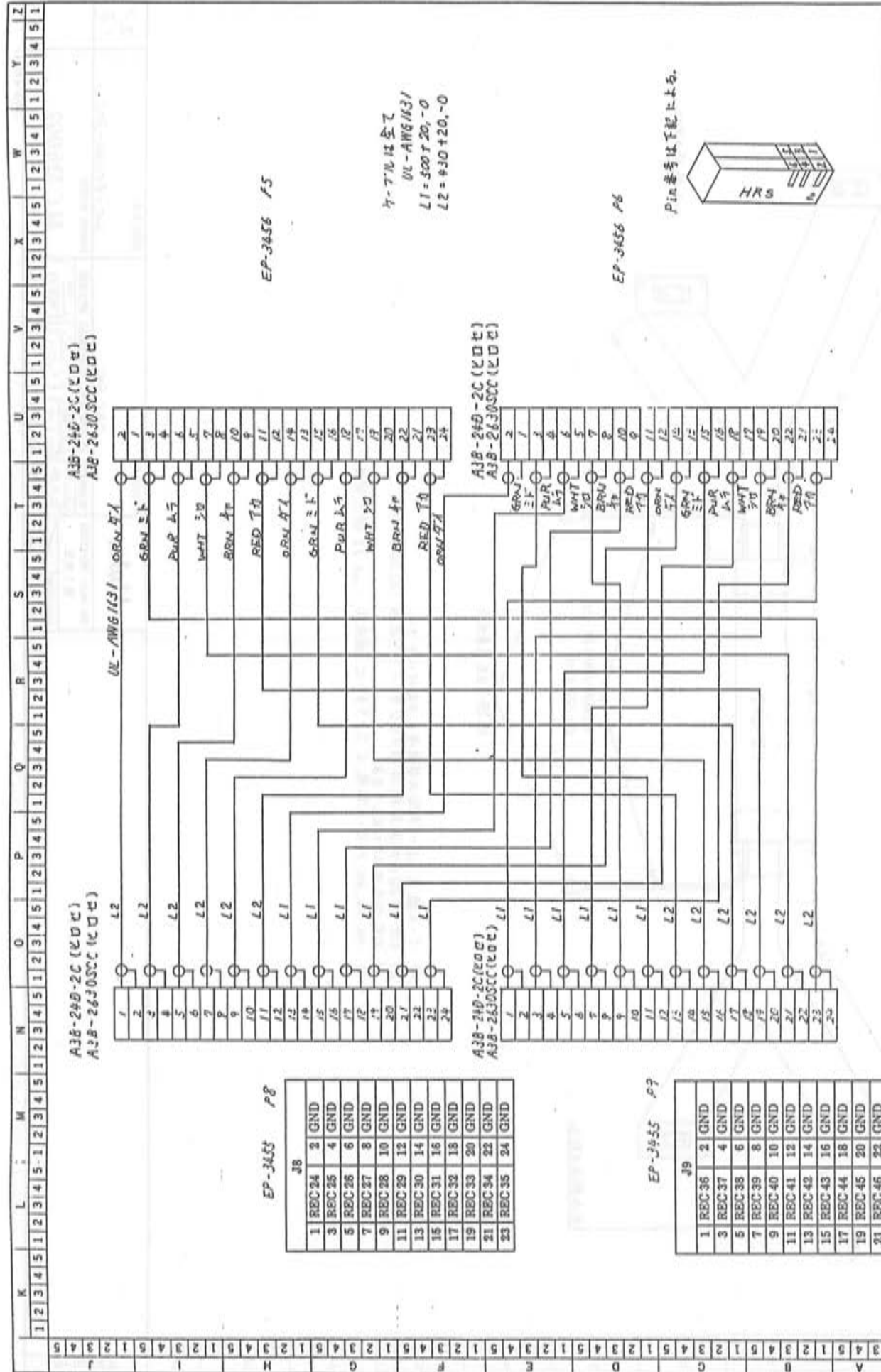
WIRE 線径: 0.8mm

K L M N O P Q R S T U V W X Y Z  
 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1



- 1) 1-又線は CB-CF20 自導電布に平田村川電工。
- 2) CB-CF20 自導電処理は 18mm ピッチに 1mm を使用 (約 30mm X 2)
- 3) 上記寸法は 1mm の単位で寸法。
- 4) P3, P4, P6, P7 のカル基板は 1mm のピッチに貼る。

REVIEWS 変更		TITLE 名称		MODEL 名称		DRAWING NO. 図番	
A	3	Aloka		CBL 602		CO-REVIEW-A05	
B	4	3RD ANGLE PROJECTION 第3角法		DESIGNED BY 設計者 CHECKED BY 検査者		DRAWING NO. 図番 MC 326069	
C	5	SCALE 尺度		DATE 日付 1985.05.13		DRAWING NO. 図番 MC 326069	
D	6	UNITS 単位		DATE 日付 1985.05.13		DRAWING NO. 図番 MC 326069	
E	7					DRAWING NO. 図番 MC 326069	
F	8					DRAWING NO. 図番 MC 326069	
G	9					DRAWING NO. 図番 MC 326069	
H	10					DRAWING NO. 図番 MC 326069	
I	11					DRAWING NO. 図番 MC 326069	
J	12					DRAWING NO. 図番 MC 326069	
	13					DRAWING NO. 図番 MC 326069	
	14					DRAWING NO. 図番 MC 326069	
	15					DRAWING NO. 図番 MC 326069	
	16					DRAWING NO. 図番 MC 326069	
	17					DRAWING NO. 図番 MC 326069	
	18					DRAWING NO. 図番 MC 326069	
	19					DRAWING NO. 図番 MC 326069	
	20					DRAWING NO. 図番 MC 326069	
	21					DRAWING NO. 図番 MC 326069	
	22					DRAWING NO. 図番 MC 326069	
	23					DRAWING NO. 図番 MC 326069	
	24					DRAWING NO. 図番 MC 326069	
	25					DRAWING NO. 図番 MC 326069	
	26					DRAWING NO. 図番 MC 326069	
	27					DRAWING NO. 図番 MC 326069	
	28					DRAWING NO. 図番 MC 326069	
	29					DRAWING NO. 図番 MC 326069	
	30					DRAWING NO. 図番 MC 326069	

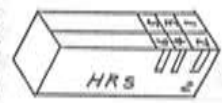


EP-3456 P5

4-7Lは全乙  
UL-AWG131  
L1 = 500T20, -0  
L2 = #30 +20, -0

EP-3456 P6

Pin番号は下記による。



EP-3455 P8

J8	
1 REC24	2 GND
3 REC25	4 GND
5 REC26	6 GND
7 REC27	8 GND
9 REC28	10 GND
11 REC29	12 GND
13 REC30	14 GND
15 REC31	16 GND
17 REC32	18 GND
19 REC33	20 GND
21 REC34	22 GND
23 REC35	24 GND

EP-3455 P9

J9	
1 REC36	2 GND
3 REC37	4 GND
5 REC38	6 GND
7 REC39	8 GND
9 REC40	10 GND
11 REC41	12 GND
13 REC42	14 GND
15 REC43	16 GND
17 REC44	18 GND
19 REC45	20 GND
21 REC46	22 GND
23 REC47	24 GND

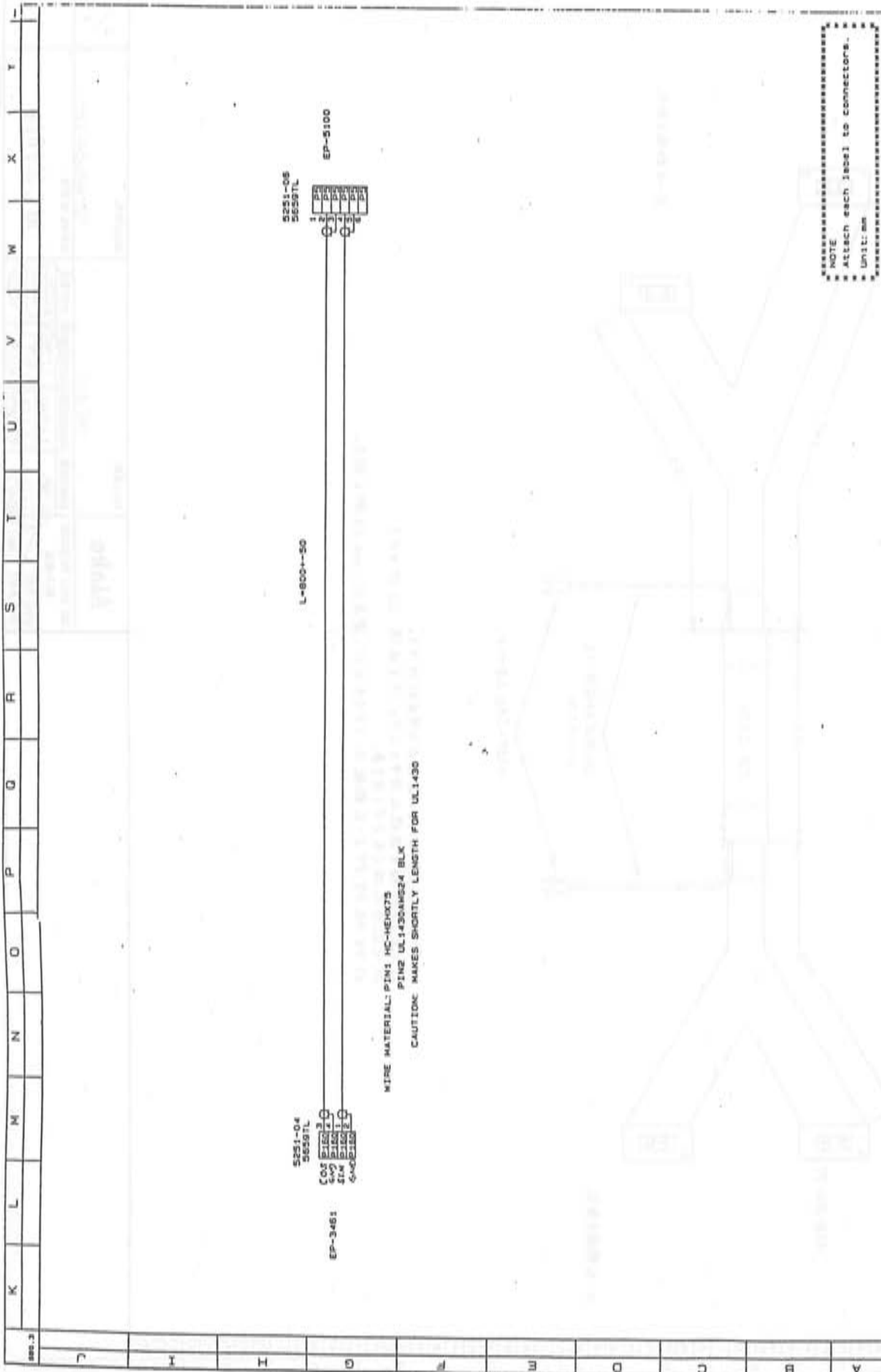
1/2

Aloka

DRIVE MODE	DRIVE MODE	DRIVE MODE
20.0.25	20.0.25	20.0.25
面発	面発	面発
面発	面発	面発
面発	面発	面発

MODEL NO.  
CP-6E014-6D5  
DRAWING NO.  
MC320070

										K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z					
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1
										<p>1) 下ノス線はCB-CF20の巻電布に平田所けする。  2) CB-CF20 端ネ処理は18中とシキ-丁を使用 (約30mm)  3) 上記寸法はカ-ル鋸板を貼る。  4) P5, P6, P8, P9 カ-ル鋸板は「ネケタ」カ-ル鋸板は「and 23」側に貼る。</p>																				
REVIEWS 変更										TITLE 名称										MODEL 型号										
A										Aloka										CB-GEUBO-EG										
B										3RD ANGLE PROJECTION 第3角法										DRAWING NO. 図番 MC 326071										
C										SCALE 尺規										DRAWING DATE 図日 1971.12.15										
D										UNITS 単位										DRAWING NO. 図番 MC 326071										
E										DESIGNED BY 設計者 CBL 603										DRAWING DATE 図日 1971.12.15										
F										CHECKED BY 検査者										DRAWING NO. 図番 MC 326071										
G										APPROVED BY 承認者										DRAWING NO. 図番 MC 326071										
H										DATE 日付										DRAWING NO. 図番 MC 326071										
I										SCALE 尺規										DRAWING NO. 図番 MC 326071										
J										UNITS 単位										DRAWING NO. 図番 MC 326071										



NOTE  
 Attach each label to connectors.  
 Unit: mm

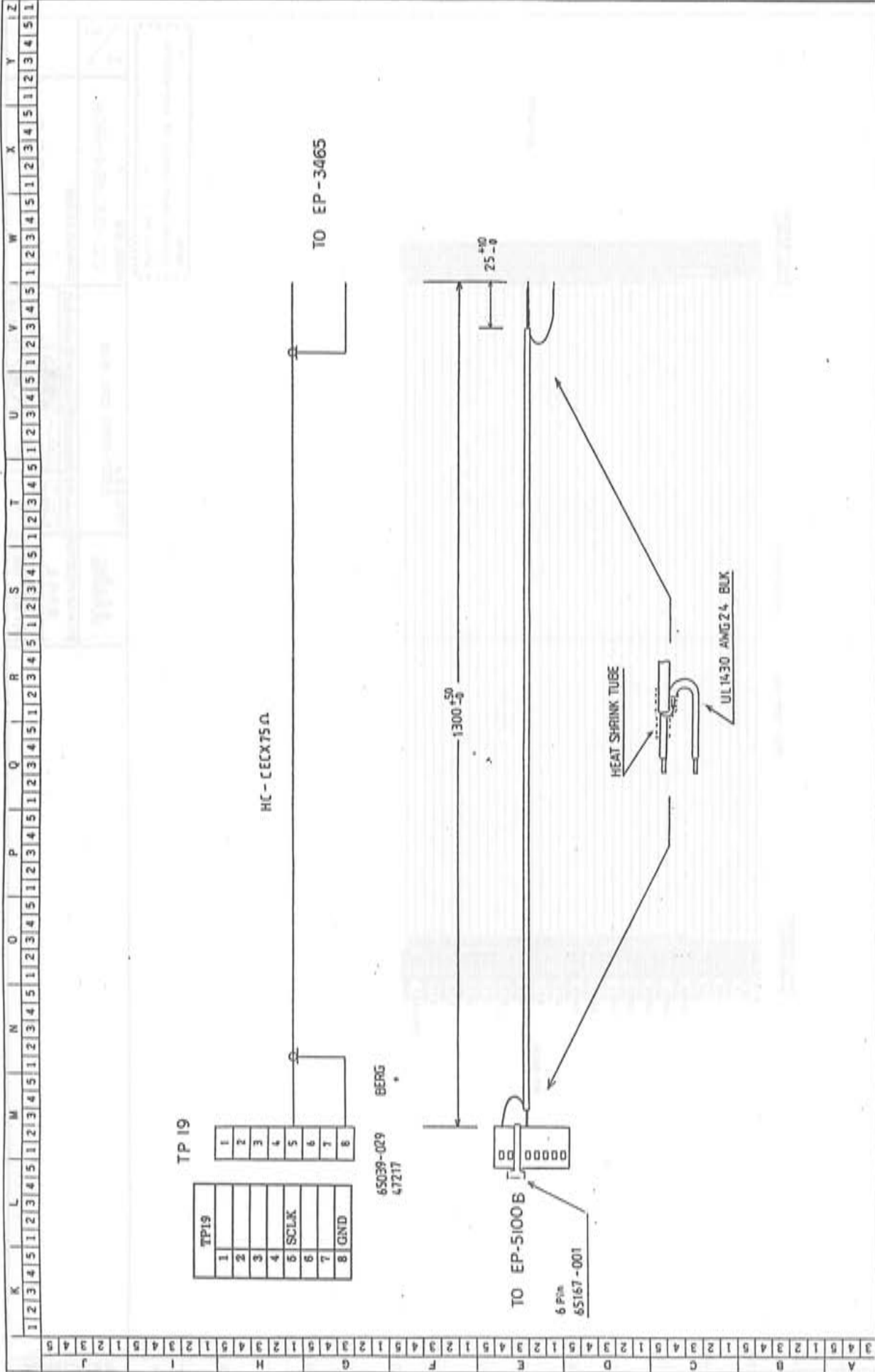
REVISIONS	MODEL #		TITLE #		DRAWING NO.	
1 / 1	CO-GEU64-F05		CBL507		DRAWING NO. 65	
	入札		入札		MC325886	
	3-1-16		3-1-16			
	UNIT		UNIT			
	SCALE		SCALE			
	第3角法		第3角法			
	3D ANGLE PROJECTION		3D ANGLE PROJECTION			
	A100kg		A100kg			

REV. 1	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
<div style="display: flex; justify-content: space-between;"> <div> <p>3417-85005C 3448-3040J</p> <p>R-R E1A0 1 GND E1A0 2 TX E1A0 4 GND E1A0 5 GND E1A0 6 EN E1A0 7 GND E1A0 8 GND E1A0 9 ADR1 E1A0 10 GND E1A0 11 ADR2 E1A0 12 ADR3 E1A0 13 ADR4 E1A0 14 ADR5 E1A0 15 GND E1A0 16 ADR6 E1A0 17 GND E1A0 18 GND E1A0 19 GND E1A0 20 GND E1A0 21 GND E1A0 22 GND E1A0 23 GND E1A0 24 GND E1A0 25 GND E1A0 26 GND E1A0 27 GND E1A0 28 GND E1A0 29 GND E1A0 30 GND E1A0 31 GND E1A0 32 GND E1A0 33 GND E1A0 34 GND E1A0 35 GND E1A0 36 GND E1A0 37 GND E1A0 38 GND E1A0 39 GND E1A0 40 GND E1A0 41 GND E1A0 42 GND E1A0 43 GND E1A0 44 GND E1A0 45</p> </div> <div> <p>3417-85005C 3448-3040J</p> <p>TFC-TS28-40C</p> <p>1-200-50-0</p> </div> <div> <p>EP-3525</p> <p>EP-3265</p> </div> </div>															

NOTE  
 \* ATTACH EACH LABEL TO CONNECTORS.  
 \* UNIT: MM

REVISED 1	MODEL #	CO-GEU64-G04	1 / 1
30 ANGLE PROJECTION R 3 A Z	TITLE #	SSD-680 CBL 608	DRAWING NO. 88
SCALE	DATE	入札	MC 25878
UNIT	ITEM		





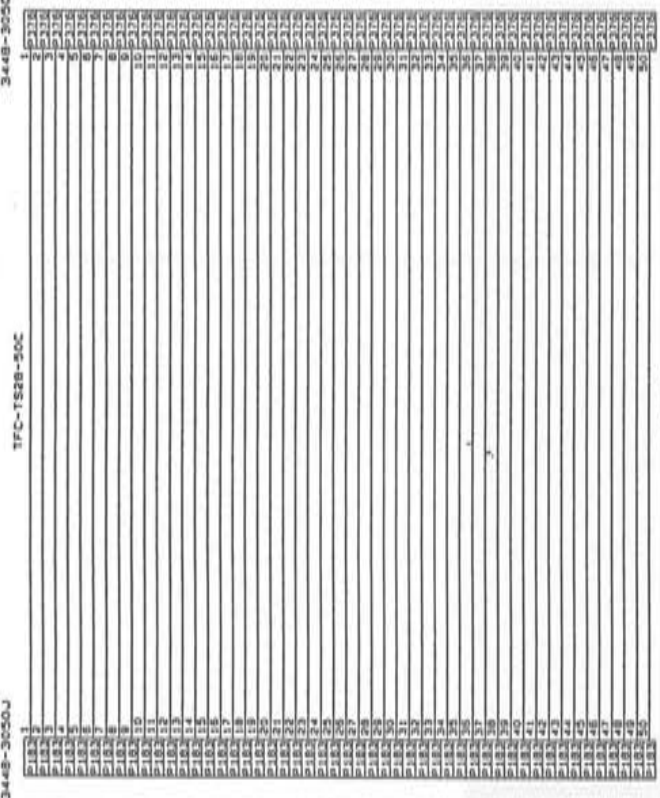
REVIEWS 変更		Aloka		TITLE 名称 SSD-680 Ver.60		MODEL 型号	
		3RD ANGLE PROJECTION 第3角法		CABLE 609		C0-GEU64-H04	
SCALE 尺规		UNITS 单位		DRAWING NO. 図番		MARKING NO. 印字	
				CHECKED BY 検査者		32.8.15	
				DRAWN BY 製図者		MC 326067	
				APPROVED BY 承認者			
				DATE 日期			

L-915-10-62-A3

K	L	M	N	O	P	Q	R	S	T	U	V	X	Y	Z
C	I	H	G	F	E	D	C	B	A					

3425-55005C  
344B-3050U

3425-55005C  
344B-3050U



J103

+5VA	1	2	+5VA
AI GND	3	4	RES1/2
PC3101	5	6	PC3102
PC3103	7	8	PC3104
PC3105	9	10	PC3106
PC3107	11	12	PC3108
PC3201	13	14	PC3202
PC3203	15	16	PC3204
PC3205	17	18	PC3206
PC3207	19	20	PC3208
PC301	21	22	PC3012
PC303	23	24	81/2
PC3106	25	26	C
LOW/REF	27	28	AI GND
AI GND	29	30	AI GND
PC3101	31	32	PC3102
PC3103	33	34	PC3104
PC3105	35	36	PC3101
PC3402	37	38	PC3403
PC3404	39	40	PC3405
PC3406	41	42	PC3407
PS 1	43	44	PS 1
PS 2	45	46	RES3/4
PC3207	47	48	PC3208
+5VA	49	50	AI GND

#D-3205

#D-3405

\*\*\*\*\*  
NOTE  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

- ◆ Attach each label to connectors.
- ◆ Unit: mm

REVISED	MODEL E-6	CO-GEU64-J05	1/1
DATE	CBL 510 IP-COR	DRAWING NO. 88#	MCJZ5879
DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY
CHECKED BY	CHECKED BY	CHECKED BY	CHECKED BY
DATE	DATE	DATE	DATE
SCALE	SCALE	SCALE	SCALE
UNIT	UNIT	UNIT	UNIT

Q	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

3399-5600SC  
3448-3026J

3399-5600SC  
3448-3026J

1-200--50

TFC-TS28-26C

EP-3525

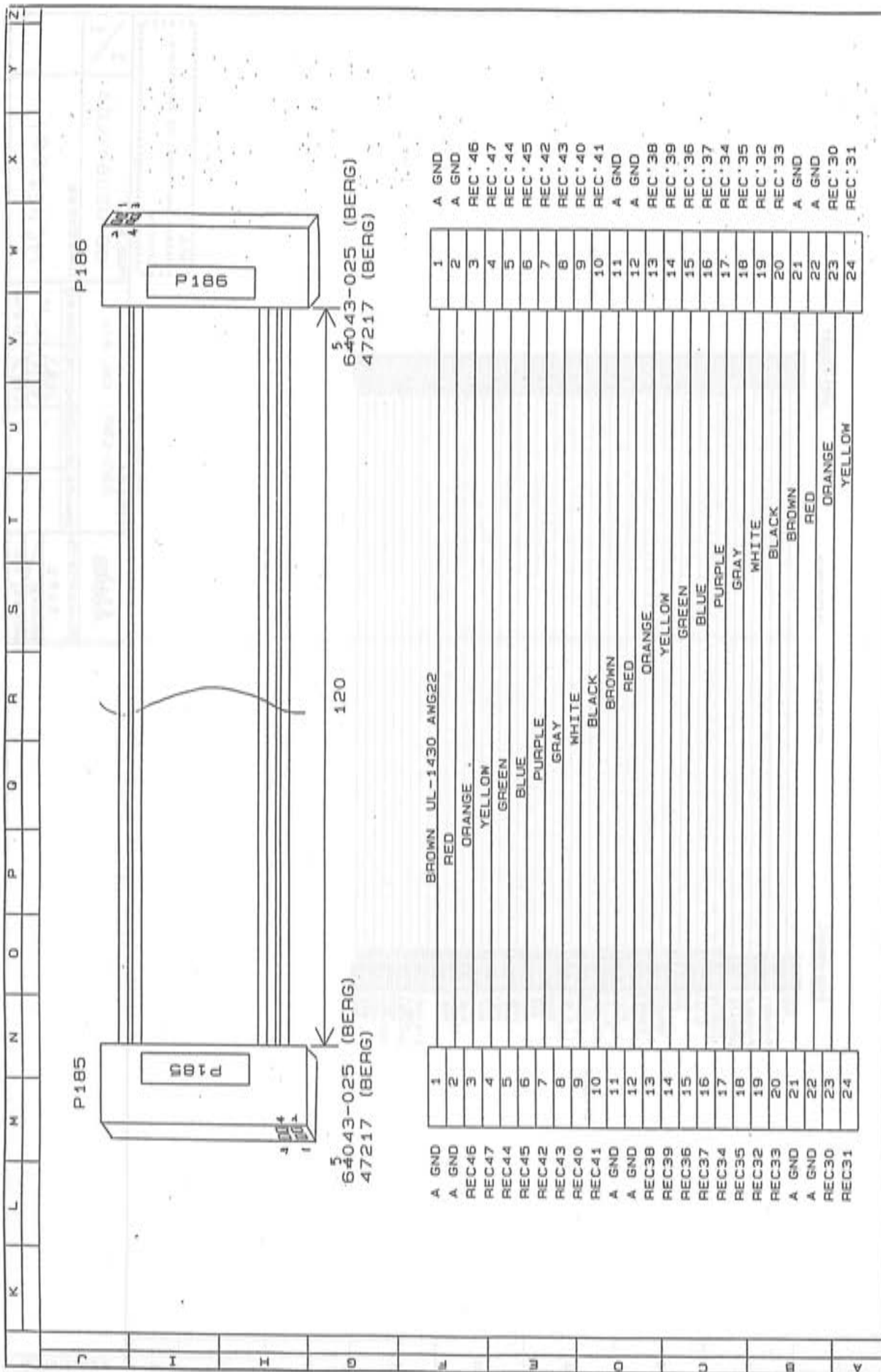
EP-3466

+2VE1123  
+2VE1124  
+2VE1125  
+2VE1126  
+2VE1127  
+2VE1128  
+2VE1129  
+2VE1130  
+2VE1131  
+2VE1132  
+2VE1133  
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+2VE1195  
+2VE1196  
+2VE1197  
+2VE1198  
+2VE1199  
+2VE1200

NOTE  
ATTACH EACH 10003 TO CONNECTORS.  
UNIT: mm

REVISOR	TITLE 611	MODEL 611	MODEL 611	MODEL 611
REVISED	DATE	BY	BY	BY
SCALE	SCALE	SCALE	SCALE	SCALE
UNIT	UNIT	UNIT	UNIT	UNIT
3D	3D	3D	3D	3D
PROJECTION	PROJECTION	PROJECTION	PROJECTION	PROJECTION
DATE	DATE	DATE	DATE	DATE
SCALE	SCALE	SCALE	SCALE	SCALE
UNIT	UNIT	UNIT	UNIT	UNIT
MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.
CO-GEU64-K04	CO-GEU64-K04	CO-GEU64-K04	CO-GEU64-K04	CO-GEU64-K04
DRAWING NO.	DRAWING NO.	DRAWING NO.	DRAWING NO.	DRAWING NO.
MCJZ5-880	MCJZ5-880	MCJZ5-880	MCJZ5-880	MCJZ5-880
1/1	1/1	1/1	1/1	1/1





REVISED	MODEL 名	MODEL NO.	1 / 1
DATE	TITLE 名	CO-GEU64-M01	
SCALE	SSD-680	CABLE 620	DRAWING NO. 番号
UNIT	第 3 月 法	入 工	MCJ25882
SCALE	DRW 名	DES 名	APPRO 名
UNIT	土	土	土
UNIT	底	底	底
UNIT	底	底	底

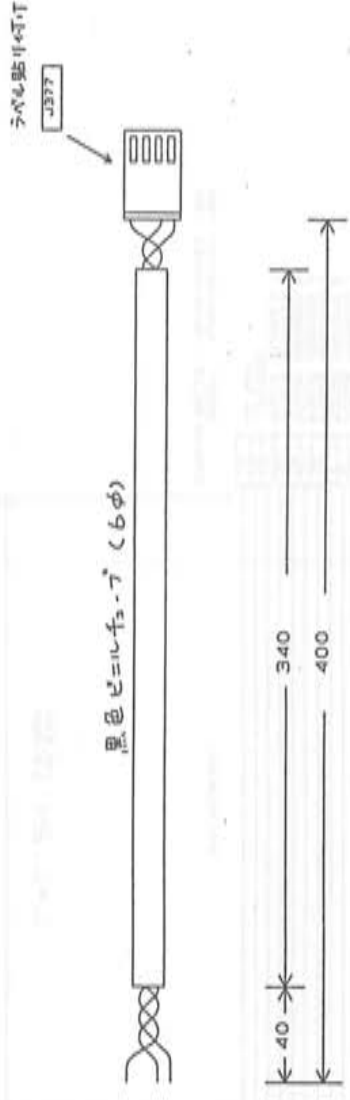
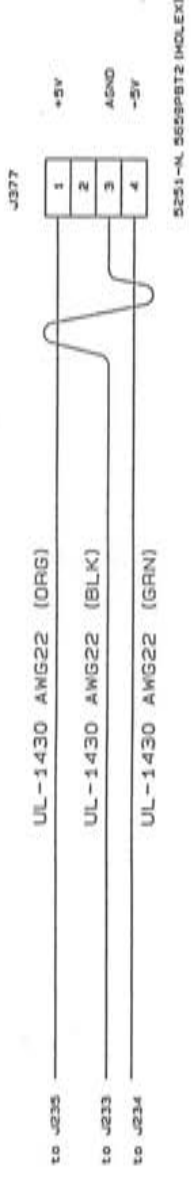
- 1 A GND
- 2 A GND
- 3 REC.46
- 4 REC.47
- 5 REC.44
- 6 REC.45
- 7 REC.42
- 8 REC.43
- 9 REC.40
- 10 REC.41
- 11 A GND
- 12 A GND
- 13 REC.38
- 14 REC.39
- 15 REC.36
- 16 REC.37
- 17 REC.34
- 18 REC.35
- 19 REC.32
- 20 REC.33
- 21 A GND
- 22 A GND
- 23 REC.30
- 24 REC.31

- 1 BROWN UL-1430 ANG22
- 2 RED
- 3 ORANGE
- 4 YELLOW
- 5 GREEN
- 6 BLUE
- 7 PURPLE
- 8 GRAY
- 9 WHITE
- 10 BLACK
- 11 BROWN
- 12 RED
- 13 ORANGE
- 14 YELLOW
- 15 GREEN
- 16 BLUE
- 17 PURPLE
- 18 GRAY
- 19 WHITE
- 20 BLACK
- 21 BROWN
- 22 RED
- 23 ORANGE
- 24 YELLOW

- 1 A GND
- 2 A GND
- 3 REC.46
- 4 REC.47
- 5 REC.44
- 6 REC.45
- 7 REC.42
- 8 REC.43
- 9 REC.40
- 10 REC.41
- 11 A GND
- 12 A GND
- 13 REC.38
- 14 REC.39
- 15 REC.36
- 16 REC.37
- 17 REC.34
- 18 REC.35
- 19 REC.32
- 20 REC.33
- 21 A GND
- 22 A GND
- 23 REC.30
- 24 REC.31

- 1 A GND
- 2 A GND
- 3 REC.46
- 4 REC.47
- 5 REC.44
- 6 REC.45
- 7 REC.42
- 8 REC.43
- 9 REC.40
- 10 REC.41
- 11 A GND
- 12 A GND
- 13 REC.38
- 14 REC.39
- 15 REC.36
- 16 REC.37
- 17 REC.34
- 18 REC.35
- 19 REC.32
- 20 REC.33
- 21 A GND
- 22 A GND
- 23 REC.30
- 24 REC.31

K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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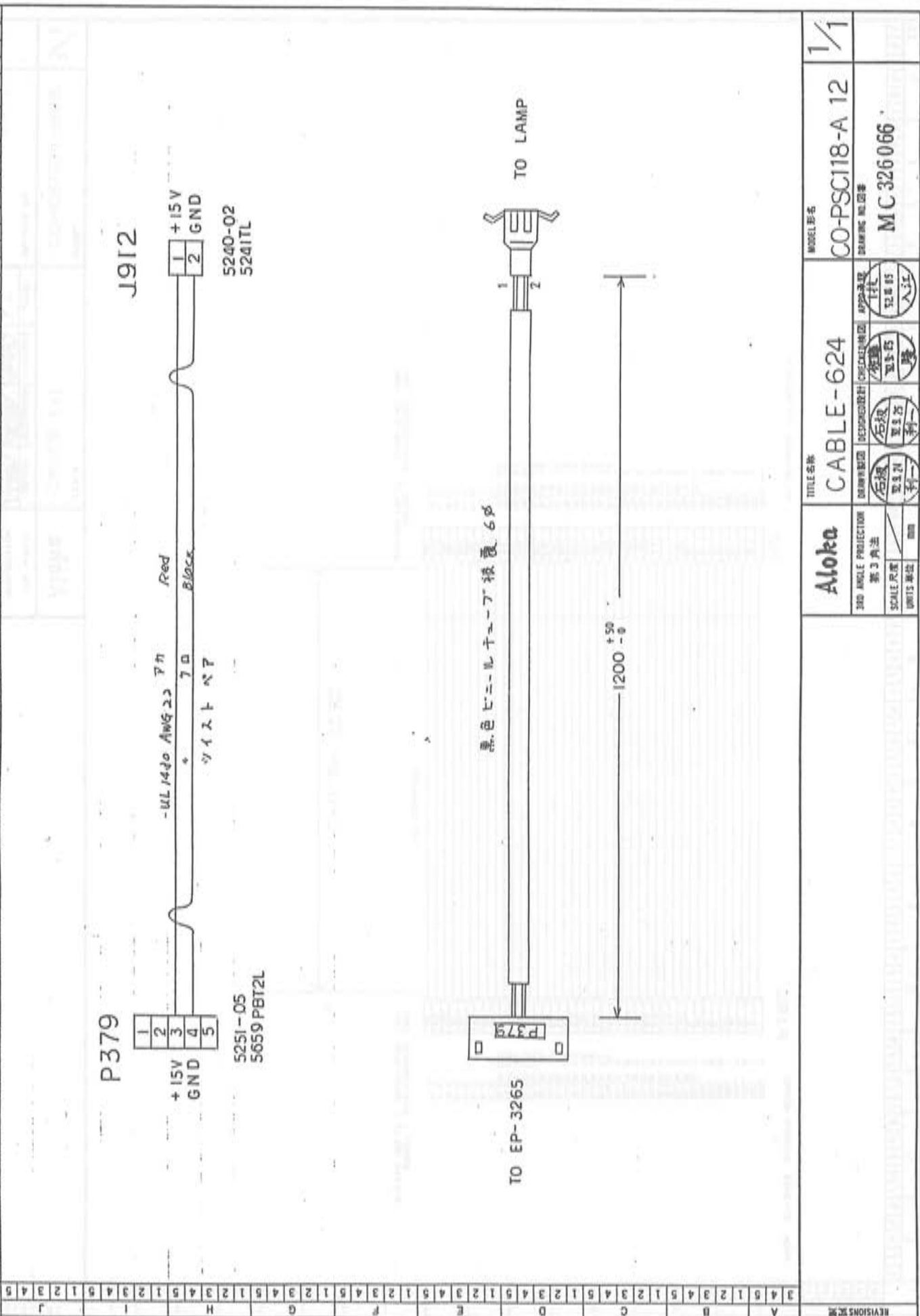
REVISEMENTS	MODEL No	MODEL No	1 / 1
	CABLE 621	CO-UIM-325-A04	
	3D ANGLE PROJECTION	DRAWING NO. 888	
	第3角法	入札	
	SCALE 1:1	MC325-885	
	UNIT 単位		



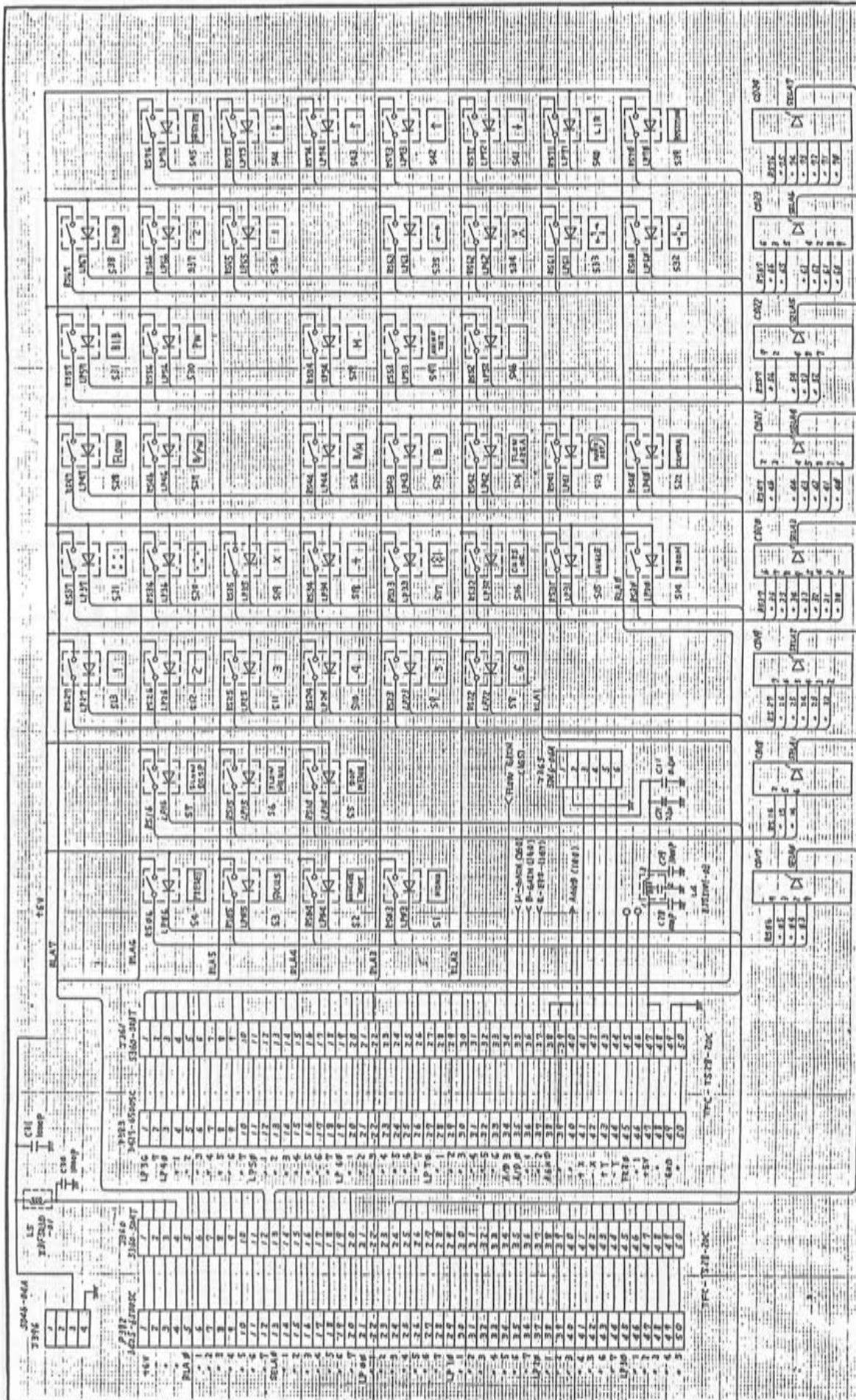




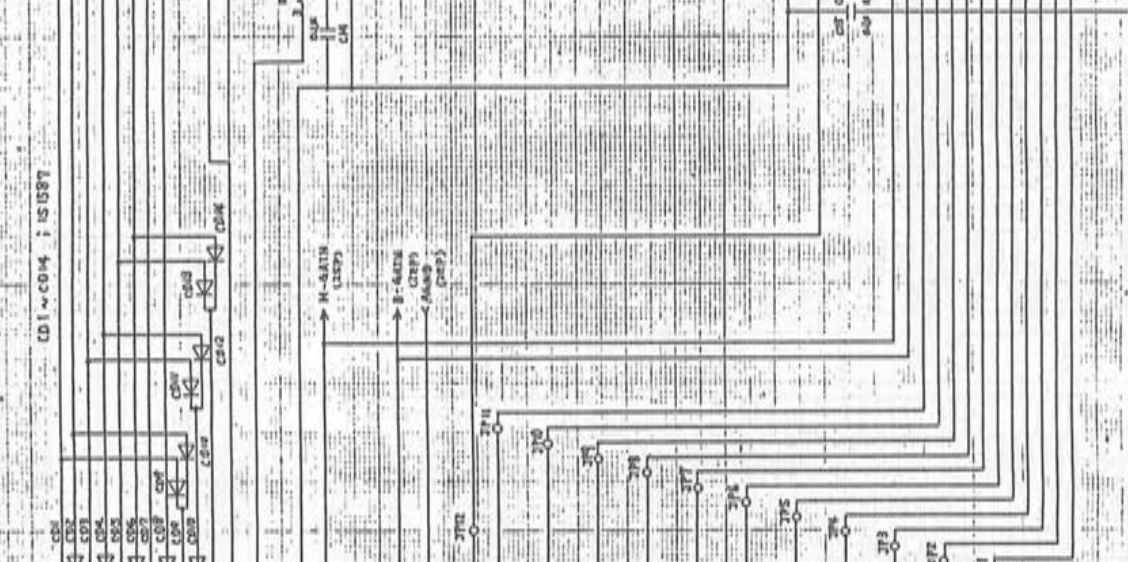
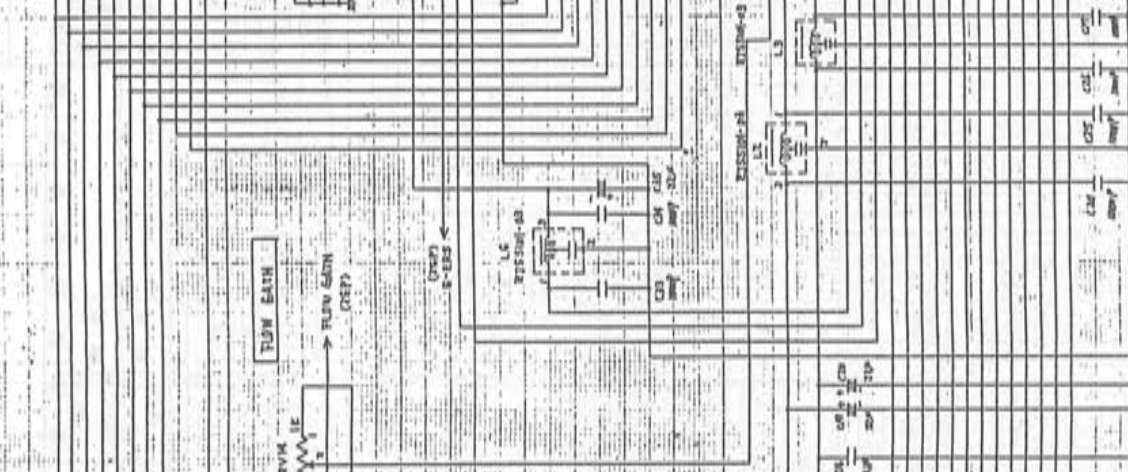
K L I M N O P Q R S T U V W X Y Z



REVIEWS 変更		TITLE 名称		MODEL 型号		DRAWING NO. 図番	
A		Aloka		CABLE-624		CO-PSC118-A 12	
B		3RD ANGLE PROJECTION 第3角法		DESIGNED BY (設計者) 設計		DRAWING NO. 図番	
C		SCALE 尺規		CHECKED BY (検査者) 検査		MC 326066	
D		UNITS 単位		APPROVAL (承認) 承認		L-012-08-01-A1	
E				DATE (日付) 日付			
F				BY (作成) 作成			
G				DATE (日付) 日付			
H				BY (作成) 作成			
I				DATE (日付) 日付			
J				BY (作成) 作成			



受注先	MoBEL	L-KEY-19 本
処理	仕様書 番号	MATN PANEL 1/2
材質	鋼板	
寸法	図面	
製造	和洋工業株式会社	TITLE



受注先	
MODEL	L-KXY-19 本
名称	MAIN PANEL
TITLE	7/2

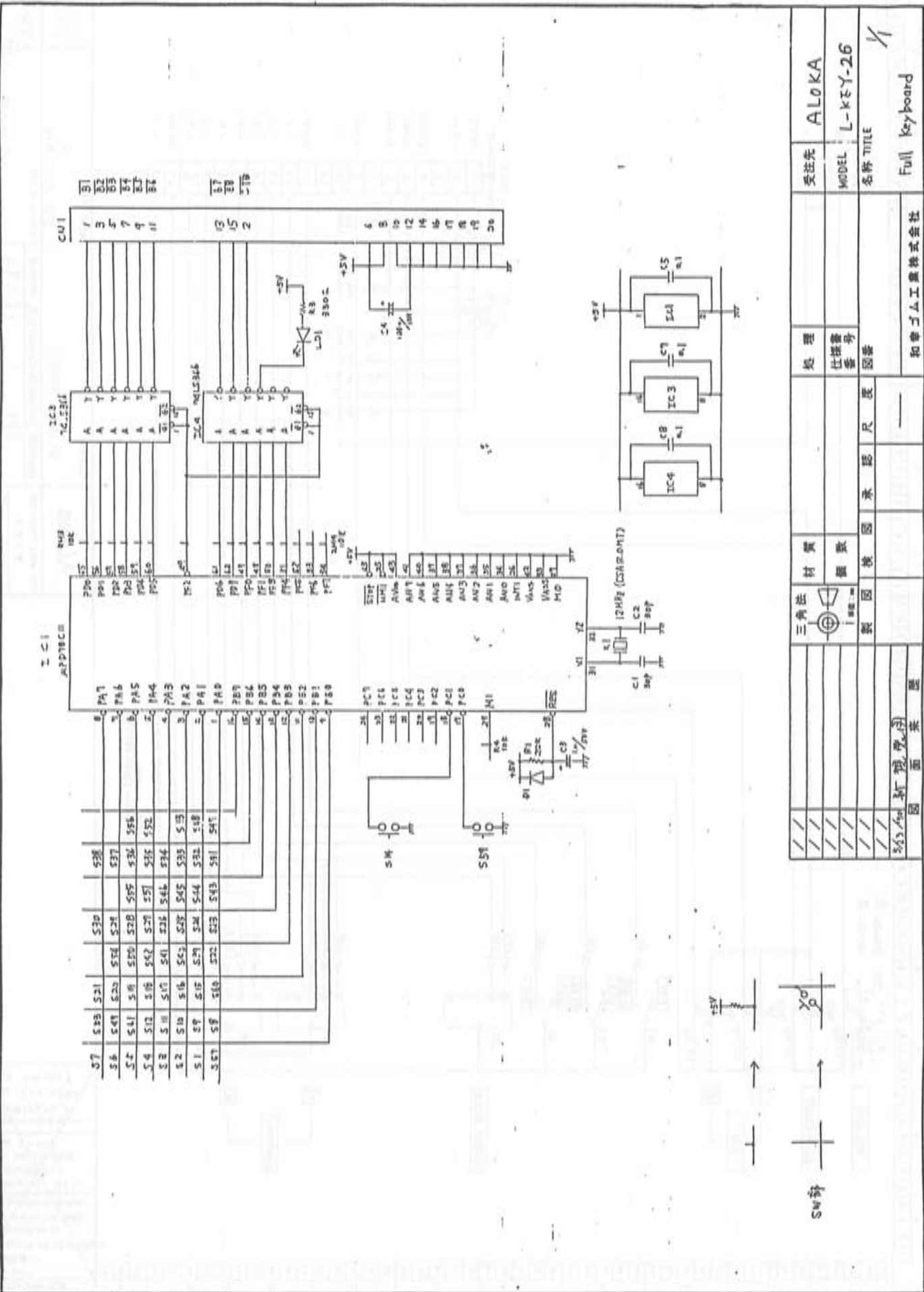
処理	和豊ゴム工業株式会社
仕様書番号	
図番	

承認	
尺寸	
度	

材質	
種類	

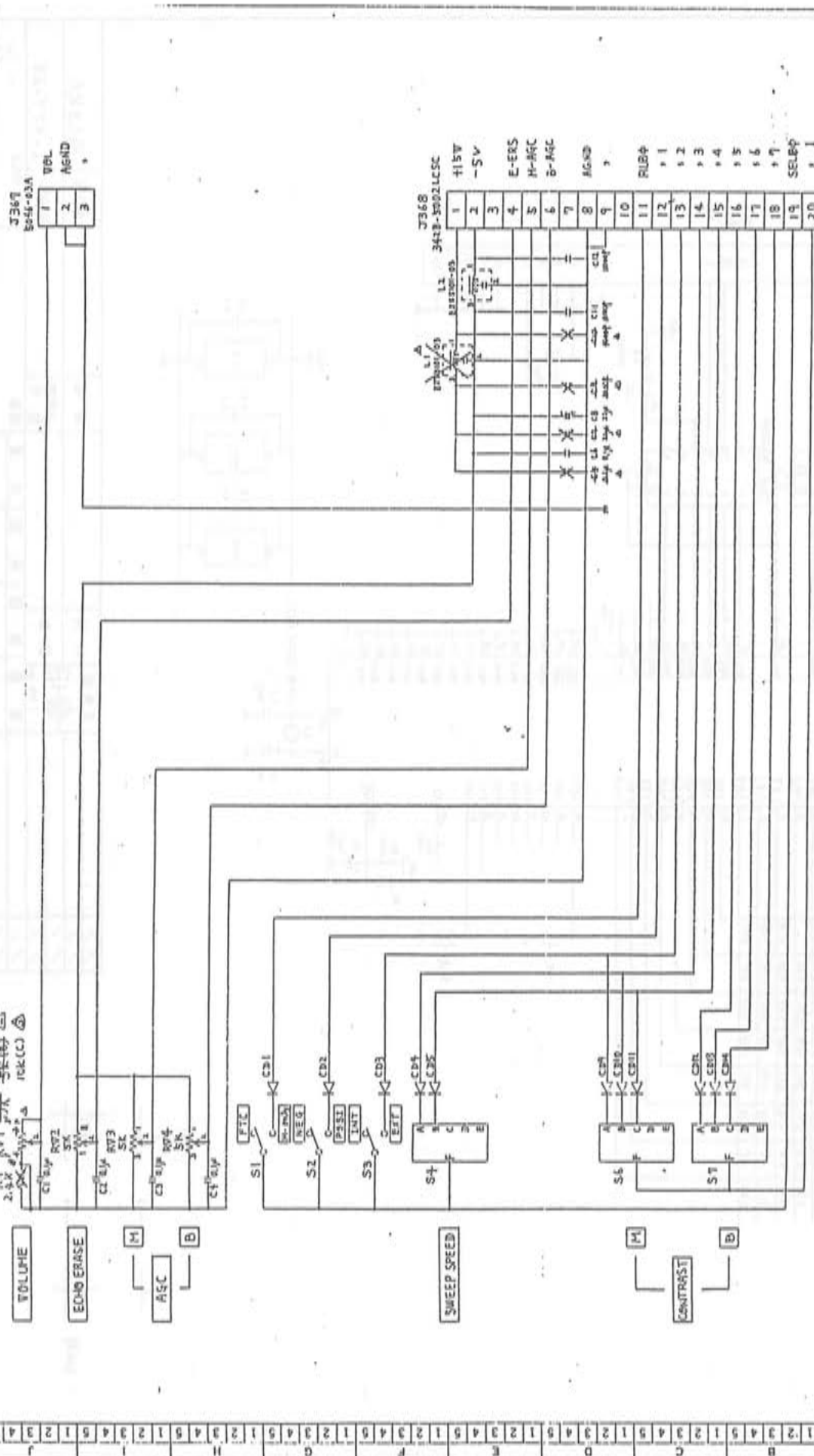
三角法	
図	
換	
図	
承	
認	
尺	
度	

図	面	来	圖
* 2P10-2P13 ; VR-2PCB			



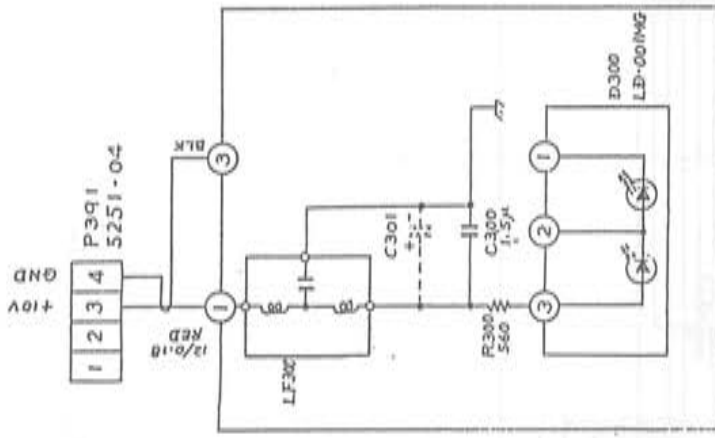
//	//	//	//	三角法	材質	處理	受注先	ALOKA
				○	材類	仕様番号	MODEL	L-KBY-26
//				製図	検図	承認	名称	TITLE
//				図面表頭		Full keyboard		
//				5/31/94 新視度(株)		和華電子工業株式会社		
//				図面承認				

Grid coordinates: A-Y, 1-20



REVISED BY		TITLE		MODEL NO.	
3	4	BLIND PANEL		EP-2512 B-1	
5	6	3RD ANGLE PROJECTION		DRAWING NO. 028	
7	8	第3角法		DATE	
9	10	SCALE		APP. NO.	
11	12	UNITS		CHECKED	
13	14	MM		DATE	
15	16			DATE	
17	18			DATE	
19	20			DATE	

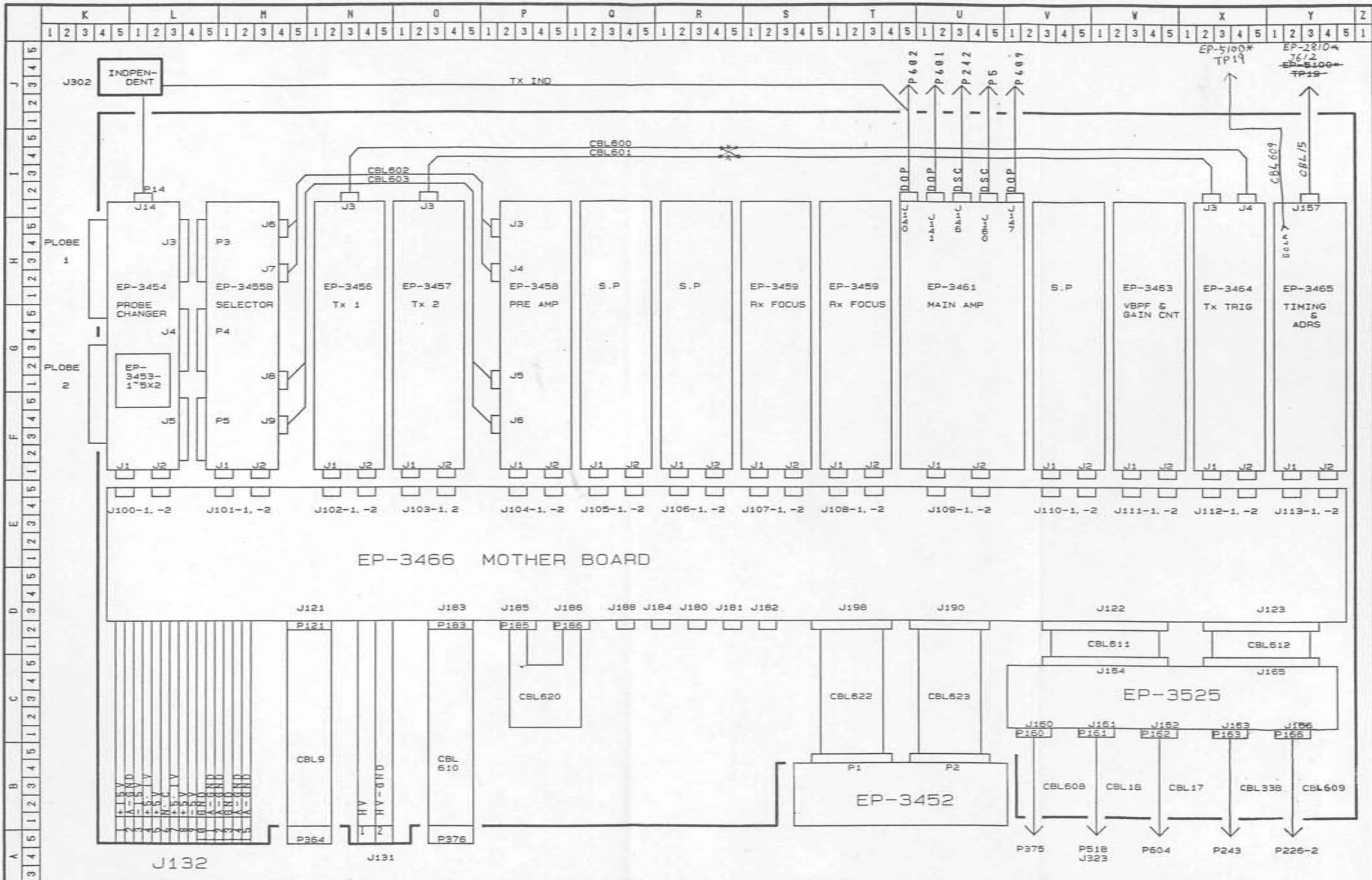
Grid coordinates: K 1-5, L 1-5, M 1-5, N 1-5, O 1-5, P 1-5, Q 1-5, R 1-5, S 1-5, T 1-5, U 1-5, V 1-5, W 1-5, X 1-5, Y 1-5, Z 1-5



NOTE  
C301は取付付かず

REVISEMENTS		Aloka		TITLE 名称		MODEL 型号		1/1	
3	4	5	1	2	3	4	5	1	2
2	3	4	5	1	2	3	4	5	1
1	2	3	4	5	1	2	3	4	5
3RD ANGLE PROJECTION 第3角注		POWER LAMP		DESIGNED BY 设计者		CHECKED BY 检查者		DRAWING NO. 图号	
SCALE 比例		D300 LD-001MG		2/2		2/2		EP-3143	
UNITS 单位		mm		2/2		2/2		MC 316058	





REVISIONS	

7-69

REVISIONS	<b>Aloka</b>		TITLE Tx Rx UNIT		MODEL GEU-64	1/1
	3RD ANGLE PROJECTION	DRAWN 92.11.05	DESIGNED 92.11.05	CHECKED 92.11.06	APPRO 92.11.07	DRAWING NO. MC 326890
	SCALE	mm	mm	mm	mm	mm
	UNITS	mm	mm	mm	mm	mm



Aloka

TITLE 名称 Tx Rx unit  
MOTHER BOARD

MODEL 形名  
EP - 3466 B

1/16

3RD ANGLE PROJECTION  
第3角法  
SCALE 尺度  
UNITS 单位 mm

DRAWN 製図 企画G 92.9.10 近藤  
DESIGNED 設計 企画G 92.9.10 近藤  
CHECKED 検図 92.9.10 本  
APPROVED 承認 1技 92.9.10 入江

DRAWING NO. 図番  
MC 325922

Main grid area containing component callouts and pin configurations for connectors J100 through J106. Each connector has a table with columns for pin number and signal name (e.g., TX1, TX2, TX3, TX4, TX5, TX6, TX7, TX8, TX9, TX10, TX11, TX12, TX13, TX14, TX15, TX16, TX17, TX18, TX19, TX20, TX21, TX22, TX23, TX24, TX25, TX26, TX27, TX28, TX29, TX30, TX31, TX32, TX33, TX34, TX35, TX36, TX37, TX38, TX39, TX40, TX41, TX42, TX43, TX44, TX45, TX46, TX47, TX48, TX49, TX50, TX51, TX52, TX53, TX54, TX55, TX56, TX57, TX58, TX59, TX60, TX61, TX62, TX63, TX64, TX65, TX66, TX67, TX68, TX69, TX70, TX71, TX72, TX73, TX74, TX75, TX76, TX77, TX78, TX79, TX80, TX81, TX82, TX83, TX84, TX85, TX86, TX87, TX88, TX89, TX90, TX91, TX92, TX93, TX94, TX95, TX96, TX97, TX98, TX99, TX100).



REVISIONS 變更	A					B					C					D					E					F					G					H					I					J																																																																																																																																																																																																																																																														
	3	4	5	1	2	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5																																																																																																																																																																																																																																																					
	<table border="0"> <tr> <td colspan="15"> <b>J121</b>            +15V 1 2            STC 1 3 4 STC 2            STC 3 5 6 STC 4            STC 5 7 8 STC 6            STC 7 9 10 STC 8            STC 9 11 12 STC10            STC11 13 14            +V1 15 16 +V1            +V2 17 18 +V2            A GND 19 20 NGAIN            A GND 21 22 BGIN            A GND 23 24 BACC            -5V 25 26 MAGC         </td> <td colspan="15"> <b>J132</b>            +15V 1 2 A GND            -15V 3 4 +5.1V            +5V 5 6            +5.1V 7 8 +5V            -5V 9 10 GND            A GND 11 12 A GND            GND 13 14 A GND            A GND 15         </td> <td colspan="15"> <b>J182</b>            1 2 TX 87            3 4 TX 39            5 6 TX 85            TX 40 7 8 TX 37            TX 86 9 10 A GND            TX 38 11 12 TX 84            A GND 13 14 TX 36            TX 90 15 16 TX 83            TX 48 17 18 TX 35            TX 95 19 20 TX 82            TX 47 21 22 TX 34            TX 94 23 24 TX 81            TX 46 25 26 TX 33            TX 93 27 28 A GND            TX 45 29 30 TX120            A GND 31 32 TX 72            TX 92 33 34 TX 24            TX 44 35 36 TX119            TX 91 37 38 TX 71            TX 43 39 40 TX 23            A GND 41 42 A GND         </td> <td colspan="15"> <b>J185</b>            A GND 1 2 A GND            REC46 3 4 REC47            REC44 5 6 REC45            REC42 7 8 REC43            REC40 9 10 REC41            A GND 11 12 A GND            REC38 13 14 REC39            REC36 15 16 REC37            REC34 17 18 REC35            REC32 19 20 REC33            A GND 21 22 A GND            REC30 23 24 REC31            (65610-2-24)         </td> </tr> <tr> <td colspan="15"> <b>J122</b>            +5.1V 1 2 +5.1V            R-R 3 4 CCB/            GND 5 6 GND            DATA 0 7 8 DATA 1            DATA 2 9 10 DATA 3            DATA 4 11 12 DATA 5            DATA 6 13 14 DATA 7            EN2/ 15 16 EN1/            EN0/ 17 18 EN1/            CPUAV/ 19 20 TRIG OFF            ADRS 3 21 22 ADRS 2            ADRS 1 23 24 ADRS 0            GND 25 26 GND         </td> <td colspan="15"> <b>J180</b>            A GND 1 2 A GND            TX112 3 4 TX104            TX 64 5 6 TX 56            TX 16 7 8 TX 8            TX111 9 10 TX103            TX 63 11 12 TX 55            TX 15 13 14 TX 7            TX110 15 16 TX102            TX 62 17 18 TX 54            TX 14 19 20 TX 6            TX109 21 22 TX101            TX 61 23 24 TX 53            TX 13 25 26 TX 5            A GND 27 28 A GND            A GND 29 30 A GND            TX108 31 32 TX100            TX 60 33 34 TX 52            TX 12 35 36 TX 4            TX107 37 38 TX 99            TX 59 39 40 TX 51            TX 11 41 42 TX 3            TX106 43 44 TX 98            TX 58 45 46 TX 50            TX 10 47 48 TX 2            TX105 49 50 TX 97            TX 57 51 52 TX 49            TX 9 53 54 TX 1            A GND 55 56 A GND         </td> <td colspan="15"> <b>J183</b>            +5VA 1 2 +5VA            AI GND 3 4 PRB1/2            PCD101 5 6 PCD102            PCD103 7 8 PCD104            PCD105 9 10 PCD106            PCD107 11 12 PCD108            PCD201 13 14 PCD202            PCD203 15 16 PCD204            PCD205 17 18 PCD206            PCD207 19 20 PCD208            PC301 21 22 PCD302            PC303 23 24 B1/2            PCD306 25 26 C            LON/OFF 27 28 AI GND            AI GND 29 30 AI GND            PCD301 31 32 PCD302            PCD303 33 34 PCD304            PCD305 35 36 PCD401            PCD402 37 38 PCD403            PCD404 39 40 PCD405            PCD406 41 42 PCD407            PCD408 43 44 PS 1            PS 2 45 46 PRB3/4            PCD307 47 48 PCD308            +5VA 49 50 AI GND         </td> <td colspan="15"> <b>J186</b>            A GND 1 2 A GND            REC 46 3 4 REC 47            REC 44 5 6 REC 45            REC 42 7 8 REC 43            REC 40 9 10 REC 41            A GND 11 12 A GND            REC 38 13 14 REC 39            REC 36 15 16 REC 37            REC 34 17 18 REC 35            REC 32 19 20 REC 33            A GND 21 22 A GND            REC 30 23 24 REC 31            (65610-2-24)         </td> </tr> <tr> <td colspan="15"> <b>J123</b>            GND 1 2 GND            3 4 FR UNBLK            5 6 SP UNBLK            DOT CLK 7 8 DOP RATE            S6 SLC7 9 10 B/D GATE            EN3/ 11 12 D-OFF            GND 13 14 GND            15 16            COLOSER 17 18 ZTRQ            MTI EN/ 19 20 DFZ/            FLWAREA 21 22 B/V EN            DSC-CDN 23 24 DCLR            C-GATE 25 26 C-EN            FLW CT/ 27 28 SCLK            GND 29 30 GND            MA1/ 31 32 MA0/            MA3/ 33 34 MA2/            MA5/ 35 36 MA4/            MA7/ 37 38 MA6/            TRMDND 39 40 MA0/            RNSLCT1 41 42 RNSLCT0            JINSTRY 43 44 USBLK            DP ARYA 45 46 V-CODED            ECO-FRM 47 48 V-CODE1            GND 49 50 GND         </td> <td colspan="15"> <b>J181</b>            TX 90 1 2            TX 42 3 4            TX 89 5 6 TX118            TX 41 7 8 TX 70            A GND 9 10 TX 22            TX 80 11 12 TX117            TX 32 13 14 TX 69            TX 79 15 16 TX 21            TX 31 17 18 A GND            TX 78 19 20 A GND            TX 30 21 22 TX116            TX 77 23 24 TX 68            TX 29 25 26 TX 20            A GND 27 28 TX115            TX 76 29 30 TX 67            TX 28 31 32 TX 19            TX 75 33 34 TX114            TX 27 35 36 TX 66            TX 74 37 38 TX 18            TX 26 39 40 TX113            TX 73 41 42 TX 65            TX 25 43 44 TX 17            A GND 45 46 A GND         </td> <td colspan="15"> <b>J184</b>            AI GND 1 2 AI GND            C 3 4 LON/OFF            PCD302 5 6 PCD301            PCD304 7 8 PCD303            PCD306 9 10 PCD305            PCD308 11 12 PCD307            PCD401 13 14 PCD402            PCD403 15 16 PCD404            PCD405 17 18 PCD406            PCD407 19 20 PCD408            PRB3/4 21 22 PS 2            B/ 23 24 B1/2            AI GND 25 26 +5VA         </td> <td colspan="15"> <b>J187</b>            +5.1V 1 2 GND         </td> <td colspan="15"> <b>J188</b>            +5.1V 1 2 GND            +5V 3 4 A GND         </td> <td colspan="15"> <b>J189</b>            GND 1 2 GND            +5V 3 4 +5V            5 6            FADRS0 7 8 FADRS1            FADRS2 9 10 FADRS3            FADRS4 11 12 FADRS5            FADRS6 13 14 FADRS7            1/5 15 16 USBLK/         </td> </tr> <tr> <td colspan="15"> <b>J131</b>            HV 1 2 A GND         </td> <td colspan="15"> <b>J91</b>            56/40 1 2 GND            NSS         </td> <td colspan="15"> <b>J190</b>            SEL 0 1 2 SEL 1            SEL 2 3 4 SEL 3            SEL 4 5 6 SEL 5            SEL 6 7 8 SEL 7            SLCK 0 9 10 SLCK 1            SLCK 2 11 12 SLCK 3            SLCK 4 13 14 SLCK 5            SLCK 6 15 16 SLCK 7            SLCK 8 17 18 SLCK 9            SLCK10 19 20 SLCK11            SLCK12 21 22 SLCK13            SLCK14 23 24 SLCK15            SLCK16 25 26 SLCK17            SLCK18 27 28 SLCK19            SLCK20 29 30 SLCK21            SLCK22 31 32 SLCK23            33 34            35 36            37 38            39 40         </td> </tr> </table>																																													<b>J121</b> +15V 1 2 STC 1 3 4 STC 2 STC 3 5 6 STC 4 STC 5 7 8 STC 6 STC 7 9 10 STC 8 STC 9 11 12 STC10 STC11 13 14 +V1 15 16 +V1 +V2 17 18 +V2 A GND 19 20 NGAIN A GND 21 22 BGIN A GND 23 24 BACC -5V 25 26 MAGC															<b>J132</b> +15V 1 2 A GND -15V 3 4 +5.1V +5V 5 6 +5.1V 7 8 +5V -5V 9 10 GND A GND 11 12 A GND GND 13 14 A GND A GND 15															<b>J182</b> 1 2 TX 87 3 4 TX 39 5 6 TX 85 TX 40 7 8 TX 37 TX 86 9 10 A GND TX 38 11 12 TX 84 A GND 13 14 TX 36 TX 90 15 16 TX 83 TX 48 17 18 TX 35 TX 95 19 20 TX 82 TX 47 21 22 TX 34 TX 94 23 24 TX 81 TX 46 25 26 TX 33 TX 93 27 28 A GND TX 45 29 30 TX120 A GND 31 32 TX 72 TX 92 33 34 TX 24 TX 44 35 36 TX119 TX 91 37 38 TX 71 TX 43 39 40 TX 23 A GND 41 42 A GND															<b>J185</b> A GND 1 2 A GND REC46 3 4 REC47 REC44 5 6 REC45 REC42 7 8 REC43 REC40 9 10 REC41 A GND 11 12 A GND REC38 13 14 REC39 REC36 15 16 REC37 REC34 17 18 REC35 REC32 19 20 REC33 A GND 21 22 A GND REC30 23 24 REC31 (65610-2-24)															<b>J122</b> +5.1V 1 2 +5.1V R-R 3 4 CCB/ GND 5 6 GND DATA 0 7 8 DATA 1 DATA 2 9 10 DATA 3 DATA 4 11 12 DATA 5 DATA 6 13 14 DATA 7 EN2/ 15 16 EN1/ EN0/ 17 18 EN1/ CPUAV/ 19 20 TRIG OFF ADRS 3 21 22 ADRS 2 ADRS 1 23 24 ADRS 0 GND 25 26 GND															<b>J180</b> A GND 1 2 A GND TX112 3 4 TX104 TX 64 5 6 TX 56 TX 16 7 8 TX 8 TX111 9 10 TX103 TX 63 11 12 TX 55 TX 15 13 14 TX 7 TX110 15 16 TX102 TX 62 17 18 TX 54 TX 14 19 20 TX 6 TX109 21 22 TX101 TX 61 23 24 TX 53 TX 13 25 26 TX 5 A GND 27 28 A GND A GND 29 30 A GND TX108 31 32 TX100 TX 60 33 34 TX 52 TX 12 35 36 TX 4 TX107 37 38 TX 99 TX 59 39 40 TX 51 TX 11 41 42 TX 3 TX106 43 44 TX 98 TX 58 45 46 TX 50 TX 10 47 48 TX 2 TX105 49 50 TX 97 TX 57 51 52 TX 49 TX 9 53 54 TX 1 A GND 55 56 A GND															<b>J183</b> +5VA 1 2 +5VA AI GND 3 4 PRB1/2 PCD101 5 6 PCD102 PCD103 7 8 PCD104 PCD105 9 10 PCD106 PCD107 11 12 PCD108 PCD201 13 14 PCD202 PCD203 15 16 PCD204 PCD205 17 18 PCD206 PCD207 19 20 PCD208 PC301 21 22 PCD302 PC303 23 24 B1/2 PCD306 25 26 C LON/OFF 27 28 AI GND AI GND 29 30 AI GND PCD301 31 32 PCD302 PCD303 33 34 PCD304 PCD305 35 36 PCD401 PCD402 37 38 PCD403 PCD404 39 40 PCD405 PCD406 41 42 PCD407 PCD408 43 44 PS 1 PS 2 45 46 PRB3/4 PCD307 47 48 PCD308 +5VA 49 50 AI GND															<b>J186</b> A GND 1 2 A GND REC 46 3 4 REC 47 REC 44 5 6 REC 45 REC 42 7 8 REC 43 REC 40 9 10 REC 41 A GND 11 12 A GND REC 38 13 14 REC 39 REC 36 15 16 REC 37 REC 34 17 18 REC 35 REC 32 19 20 REC 33 A GND 21 22 A GND REC 30 23 24 REC 31 (65610-2-24)															<b>J123</b> GND 1 2 GND 3 4 FR UNBLK 5 6 SP UNBLK DOT CLK 7 8 DOP RATE S6 SLC7 9 10 B/D GATE EN3/ 11 12 D-OFF GND 13 14 GND 15 16 COLOSER 17 18 ZTRQ MTI EN/ 19 20 DFZ/ FLWAREA 21 22 B/V EN DSC-CDN 23 24 DCLR C-GATE 25 26 C-EN FLW CT/ 27 28 SCLK GND 29 30 GND MA1/ 31 32 MA0/ MA3/ 33 34 MA2/ MA5/ 35 36 MA4/ MA7/ 37 38 MA6/ TRMDND 39 40 MA0/ RNSLCT1 41 42 RNSLCT0 JINSTRY 43 44 USBLK DP ARYA 45 46 V-CODED ECO-FRM 47 48 V-CODE1 GND 49 50 GND															<b>J181</b> TX 90 1 2 TX 42 3 4 TX 89 5 6 TX118 TX 41 7 8 TX 70 A GND 9 10 TX 22 TX 80 11 12 TX117 TX 32 13 14 TX 69 TX 79 15 16 TX 21 TX 31 17 18 A GND TX 78 19 20 A GND TX 30 21 22 TX116 TX 77 23 24 TX 68 TX 29 25 26 TX 20 A GND 27 28 TX115 TX 76 29 30 TX 67 TX 28 31 32 TX 19 TX 75 33 34 TX114 TX 27 35 36 TX 66 TX 74 37 38 TX 18 TX 26 39 40 TX113 TX 73 41 42 TX 65 TX 25 43 44 TX 17 A GND 45 46 A GND															<b>J184</b> AI GND 1 2 AI GND C 3 4 LON/OFF PCD302 5 6 PCD301 PCD304 7 8 PCD303 PCD306 9 10 PCD305 PCD308 11 12 PCD307 PCD401 13 14 PCD402 PCD403 15 16 PCD404 PCD405 17 18 PCD406 PCD407 19 20 PCD408 PRB3/4 21 22 PS 2 B/ 23 24 B1/2 AI GND 25 26 +5VA															<b>J187</b> +5.1V 1 2 GND															<b>J188</b> +5.1V 1 2 GND +5V 3 4 A GND															<b>J189</b> GND 1 2 GND +5V 3 4 +5V 5 6 FADRS0 7 8 FADRS1 FADRS2 9 10 FADRS3 FADRS4 11 12 FADRS5 FADRS6 13 14 FADRS7 1/5 15 16 USBLK/															<b>J131</b> HV 1 2 A GND															<b>J91</b> 56/40 1 2 GND NSS															<b>J190</b> SEL 0 1 2 SEL 1 SEL 2 3 4 SEL 3 SEL 4 5 6 SEL 5 SEL 6 7 8 SEL 7 SLCK 0 9 10 SLCK 1 SLCK 2 11 12 SLCK 3 SLCK 4 13 14 SLCK 5 SLCK 6 15 16 SLCK 7 SLCK 8 17 18 SLCK 9 SLCK10 19 20 SLCK11 SLCK12 21 22 SLCK13 SLCK14 23 24 SLCK15 SLCK16 25 26 SLCK17 SLCK18 27 28 SLCK19 SLCK20 29 30 SLCK21 SLCK22 31 32 SLCK23 33 34 35 36 37 38 39 40														
<b>J121</b> +15V 1 2 STC 1 3 4 STC 2 STC 3 5 6 STC 4 STC 5 7 8 STC 6 STC 7 9 10 STC 8 STC 9 11 12 STC10 STC11 13 14 +V1 15 16 +V1 +V2 17 18 +V2 A GND 19 20 NGAIN A GND 21 22 BGIN A GND 23 24 BACC -5V 25 26 MAGC															<b>J132</b> +15V 1 2 A GND -15V 3 4 +5.1V +5V 5 6 +5.1V 7 8 +5V -5V 9 10 GND A GND 11 12 A GND GND 13 14 A GND A GND 15															<b>J182</b> 1 2 TX 87 3 4 TX 39 5 6 TX 85 TX 40 7 8 TX 37 TX 86 9 10 A GND TX 38 11 12 TX 84 A GND 13 14 TX 36 TX 90 15 16 TX 83 TX 48 17 18 TX 35 TX 95 19 20 TX 82 TX 47 21 22 TX 34 TX 94 23 24 TX 81 TX 46 25 26 TX 33 TX 93 27 28 A GND TX 45 29 30 TX120 A GND 31 32 TX 72 TX 92 33 34 TX 24 TX 44 35 36 TX119 TX 91 37 38 TX 71 TX 43 39 40 TX 23 A GND 41 42 A GND															<b>J185</b> A GND 1 2 A GND REC46 3 4 REC47 REC44 5 6 REC45 REC42 7 8 REC43 REC40 9 10 REC41 A GND 11 12 A GND REC38 13 14 REC39 REC36 15 16 REC37 REC34 17 18 REC35 REC32 19 20 REC33 A GND 21 22 A GND REC30 23 24 REC31 (65610-2-24)																																																																																																																																																																																																																																																															
<b>J122</b> +5.1V 1 2 +5.1V R-R 3 4 CCB/ GND 5 6 GND DATA 0 7 8 DATA 1 DATA 2 9 10 DATA 3 DATA 4 11 12 DATA 5 DATA 6 13 14 DATA 7 EN2/ 15 16 EN1/ EN0/ 17 18 EN1/ CPUAV/ 19 20 TRIG OFF ADRS 3 21 22 ADRS 2 ADRS 1 23 24 ADRS 0 GND 25 26 GND															<b>J180</b> A GND 1 2 A GND TX112 3 4 TX104 TX 64 5 6 TX 56 TX 16 7 8 TX 8 TX111 9 10 TX103 TX 63 11 12 TX 55 TX 15 13 14 TX 7 TX110 15 16 TX102 TX 62 17 18 TX 54 TX 14 19 20 TX 6 TX109 21 22 TX101 TX 61 23 24 TX 53 TX 13 25 26 TX 5 A GND 27 28 A GND A GND 29 30 A GND TX108 31 32 TX100 TX 60 33 34 TX 52 TX 12 35 36 TX 4 TX107 37 38 TX 99 TX 59 39 40 TX 51 TX 11 41 42 TX 3 TX106 43 44 TX 98 TX 58 45 46 TX 50 TX 10 47 48 TX 2 TX105 49 50 TX 97 TX 57 51 52 TX 49 TX 9 53 54 TX 1 A GND 55 56 A GND															<b>J183</b> +5VA 1 2 +5VA AI GND 3 4 PRB1/2 PCD101 5 6 PCD102 PCD103 7 8 PCD104 PCD105 9 10 PCD106 PCD107 11 12 PCD108 PCD201 13 14 PCD202 PCD203 15 16 PCD204 PCD205 17 18 PCD206 PCD207 19 20 PCD208 PC301 21 22 PCD302 PC303 23 24 B1/2 PCD306 25 26 C LON/OFF 27 28 AI GND AI GND 29 30 AI GND PCD301 31 32 PCD302 PCD303 33 34 PCD304 PCD305 35 36 PCD401 PCD402 37 38 PCD403 PCD404 39 40 PCD405 PCD406 41 42 PCD407 PCD408 43 44 PS 1 PS 2 45 46 PRB3/4 PCD307 47 48 PCD308 +5VA 49 50 AI GND															<b>J186</b> A GND 1 2 A GND REC 46 3 4 REC 47 REC 44 5 6 REC 45 REC 42 7 8 REC 43 REC 40 9 10 REC 41 A GND 11 12 A GND REC 38 13 14 REC 39 REC 36 15 16 REC 37 REC 34 17 18 REC 35 REC 32 19 20 REC 33 A GND 21 22 A GND REC 30 23 24 REC 31 (65610-2-24)																																																																																																																																																																																																																																																															
<b>J123</b> GND 1 2 GND 3 4 FR UNBLK 5 6 SP UNBLK DOT CLK 7 8 DOP RATE S6 SLC7 9 10 B/D GATE EN3/ 11 12 D-OFF GND 13 14 GND 15 16 COLOSER 17 18 ZTRQ MTI EN/ 19 20 DFZ/ FLWAREA 21 22 B/V EN DSC-CDN 23 24 DCLR C-GATE 25 26 C-EN FLW CT/ 27 28 SCLK GND 29 30 GND MA1/ 31 32 MA0/ MA3/ 33 34 MA2/ MA5/ 35 36 MA4/ MA7/ 37 38 MA6/ TRMDND 39 40 MA0/ RNSLCT1 41 42 RNSLCT0 JINSTRY 43 44 USBLK DP ARYA 45 46 V-CODED ECO-FRM 47 48 V-CODE1 GND 49 50 GND															<b>J181</b> TX 90 1 2 TX 42 3 4 TX 89 5 6 TX118 TX 41 7 8 TX 70 A GND 9 10 TX 22 TX 80 11 12 TX117 TX 32 13 14 TX 69 TX 79 15 16 TX 21 TX 31 17 18 A GND TX 78 19 20 A GND TX 30 21 22 TX116 TX 77 23 24 TX 68 TX 29 25 26 TX 20 A GND 27 28 TX115 TX 76 29 30 TX 67 TX 28 31 32 TX 19 TX 75 33 34 TX114 TX 27 35 36 TX 66 TX 74 37 38 TX 18 TX 26 39 40 TX113 TX 73 41 42 TX 65 TX 25 43 44 TX 17 A GND 45 46 A GND															<b>J184</b> AI GND 1 2 AI GND C 3 4 LON/OFF PCD302 5 6 PCD301 PCD304 7 8 PCD303 PCD306 9 10 PCD305 PCD308 11 12 PCD307 PCD401 13 14 PCD402 PCD403 15 16 PCD404 PCD405 17 18 PCD406 PCD407 19 20 PCD408 PRB3/4 21 22 PS 2 B/ 23 24 B1/2 AI GND 25 26 +5VA															<b>J187</b> +5.1V 1 2 GND															<b>J188</b> +5.1V 1 2 GND +5V 3 4 A GND															<b>J189</b> GND 1 2 GND +5V 3 4 +5V 5 6 FADRS0 7 8 FADRS1 FADRS2 9 10 FADRS3 FADRS4 11 12 FADRS5 FADRS6 13 14 FADRS7 1/5 15 16 USBLK/																																																																																																																																																																																																																																	
<b>J131</b> HV 1 2 A GND															<b>J91</b> 56/40 1 2 GND NSS															<b>J190</b> SEL 0 1 2 SEL 1 SEL 2 3 4 SEL 3 SEL 4 5 6 SEL 5 SEL 6 7 8 SEL 7 SLCK 0 9 10 SLCK 1 SLCK 2 11 12 SLCK 3 SLCK 4 13 14 SLCK 5 SLCK 6 15 16 SLCK 7 SLCK 8 17 18 SLCK 9 SLCK10 19 20 SLCK11 SLCK12 21 22 SLCK13 SLCK14 23 24 SLCK15 SLCK16 25 26 SLCK17 SLCK18 27 28 SLCK19 SLCK20 29 30 SLCK21 SLCK22 31 32 SLCK23 33 34 35 36 37 38 39 40																																																																																																																																																																																																																																																																														

| **Alaska**   300 WAVE PROTECTION   MC 3 號   SCALE 1/10   DIMS 單位: MM | **MOTHER BOARD**   TITLE: TA Pa unit   MODEL: B-6   PARTING NO: 288   MC 325924 | **3/16** |

NO. 1	EP-3452	EP-3455	EP-3456	EP-3457	EP-3458	EP-3459	EP-3460	EP-3461	EP-3462	EP-3463	EP-3464	EP-3465	J180	J181	J182	J183	J184	J185	J186	J187	J188	J189
A	PROBE CH SELECTOR	TI 1	TI 2	PREAMP	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2	RI ROCS2
B	J-100	J-101	J-102	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101	J-101
C	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181	J181
D	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182	J182
E	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183	J183
F	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184	J184
G	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185	J185
H	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186	J186
I	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187	J187
J	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188	J188
K	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189	J189
L	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190	J190
M	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191	J191
N	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192	J192
O	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193	J193
P	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194	J194
Q	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195	J195
R	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196	J196
S	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197	J197
T	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198	J198
U	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199	J199
V	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200	J200
W	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201	J201
X	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202	J202
Y	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203	J203
Z	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204	J204

3 1	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2
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REVIEWS 変更

MODEL NO. EP - 3466 B

DRAWING NO. MC 325925

DATE 4/16

300 ANGLE PROJECTION 第三角注

SCALE 比例 1:1

UNITS 单位 mm

Aloka

MOTHER BOARD

DESIGNER 设计者 田中 隆夫

CHECKER 检查者 田中 隆夫

DATE 4/16

SCALE 比例 1:1

UNITS 单位 mm











1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5

A	NO.6	EP-3452	EP-3455	EP-3456	EP-3457	EP-3458	EP-3460	EP-3460	EP-3461	EP-3461	EP-3462	EP-3462	EP-3463	EP-3464	EP-3465	J183	J183	J185	J185	J186	J186	J187	J187	J188	J188	J189	J189
B	PROBE ON SELECTOR	TL 1	TL 2	PREAMP	TL 1	PREAMP	EP-3460	EP-3460	EP-3461	EP-3461	EP-3462	EP-3462	EP-3463	EP-3464	EP-3465	J180	J181	J182	J182	J185	J186	J187	J187	J188	J188	J189	J189
C	S I G	J-100	J-101	J-102	J-103	J-104	J-105	J-106	J-107	J-108	J-109	J-110	J-111	J-112	J-113	J180	J181	J182	J185	J186	J187	J187	J188	J188	J189	J189	
D	PC101	K3														5	6										
E	PC102	B4														7	8										
F	PC103	B4														9	10										
G	PC104	B5														11	12										
H	PC105	B5														13	14										
I	PC106	B6														15	16										
J	PC107	B6														17	18										
K	PC108	B7														19	20										
L	PC201	B7														21	22										
M	PC202	B8														23	24										
N	PC203	B8														25	26										
O	PC204	B9														27	28										
P	PC205	B9														29	30										
Q	PC206	B10														31	32										
R	PC207	B10														33	34										
S	PC208	B11														35	36										
T	PC209	B11														37	38										
U	PC300															39	40										
V	PC301															41	42										
W	PC302															43	44										
X	PC303															45	46										
Y	PC304															47	48										
Z	PC305															49	50										

ALOKA REVISIONS SHEET

MODEL NAME: EP-3466B 9/16

TITLE NAME: MOTHER BOARD

DR. NAME: Tc & Rc unit

3RD ANGLE PROJECTION 第三角法

SCALE: 1:1

UNITS: DIMENSION

REVISION NO.	DATE	DESCRIPTION
1	92.9.17	改裝
2	92.9.18	改裝
3	92.9.18	改裝
4	92.9.18	改裝
5	92.9.18	改裝

DRAWING NO: MC 325930









K L M N O P Q R S T U V W X Y Z  
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NO.	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP	TX	EP																																																																												
TX 28	289	EP-3452	TX 1	284	EP-3456	TX 2	284	EP-3457	TX 1	284	EP-3458	TX 2	284	EP-3459	TX 1	284	EP-3460	TX 2	284	EP-3461	TX 1	284	EP-3462	TX 2	284	EP-3463	TX 1	284	EP-3464	TX 2	284	EP-3465	TX 1	284	EP-3466	TX 2	284	EP-3467	TX 1	284	EP-3468	TX 2	284	EP-3469	TX 1	284	EP-3470	TX 2	284																																																																									
TX 29	286		TX 2	284		TX 3	284		TX 4	284		TX 5	284		TX 6	284		TX 7	284		TX 8	284		TX 9	284		TX 10	284		TX 11	284		TX 12	284		TX 13	284		TX 14	284		TX 15	284		TX 16	284		TX 17	284		TX 18	284		TX 19	284																																																																			
TX 30	284		TX 31	284		TX 32	284		TX 33	284		TX 34	284		TX 35	284		TX 36	284		TX 37	284		TX 38	284		TX 39	284		TX 40	284		TX 41	284		TX 42	284		TX 43	284		TX 44	284		TX 45	284		TX 46	284		TX 47	284		TX 48	284		TX 49	284		TX 50	284		TX 51	284		TX 52	284		TX 53	284		TX 54	284		TX 55	284		TX 56	284		TX 57	284		TX 58	284		TX 59	284		TX 60	284		TX 61	284		TX 62	284		TX 63	284		TX 64	284		TX 65	284		TX 66	284		TX 67	284		TX 68	284		TX 69	284		TX 70	284	

REVISED 1983

**Aloka**

3RD ANGLE PROJECTION  
第三角法

SCALE 尺度  
UNITS 单位

TITLE 标题  
MOTHER BOARD

MODEL 型号  
EP-3466B

DRAWING NO 图号  
MC 325935

DATE 日期  
14/16



K L M N O P Q R S T U V W X Y Z  
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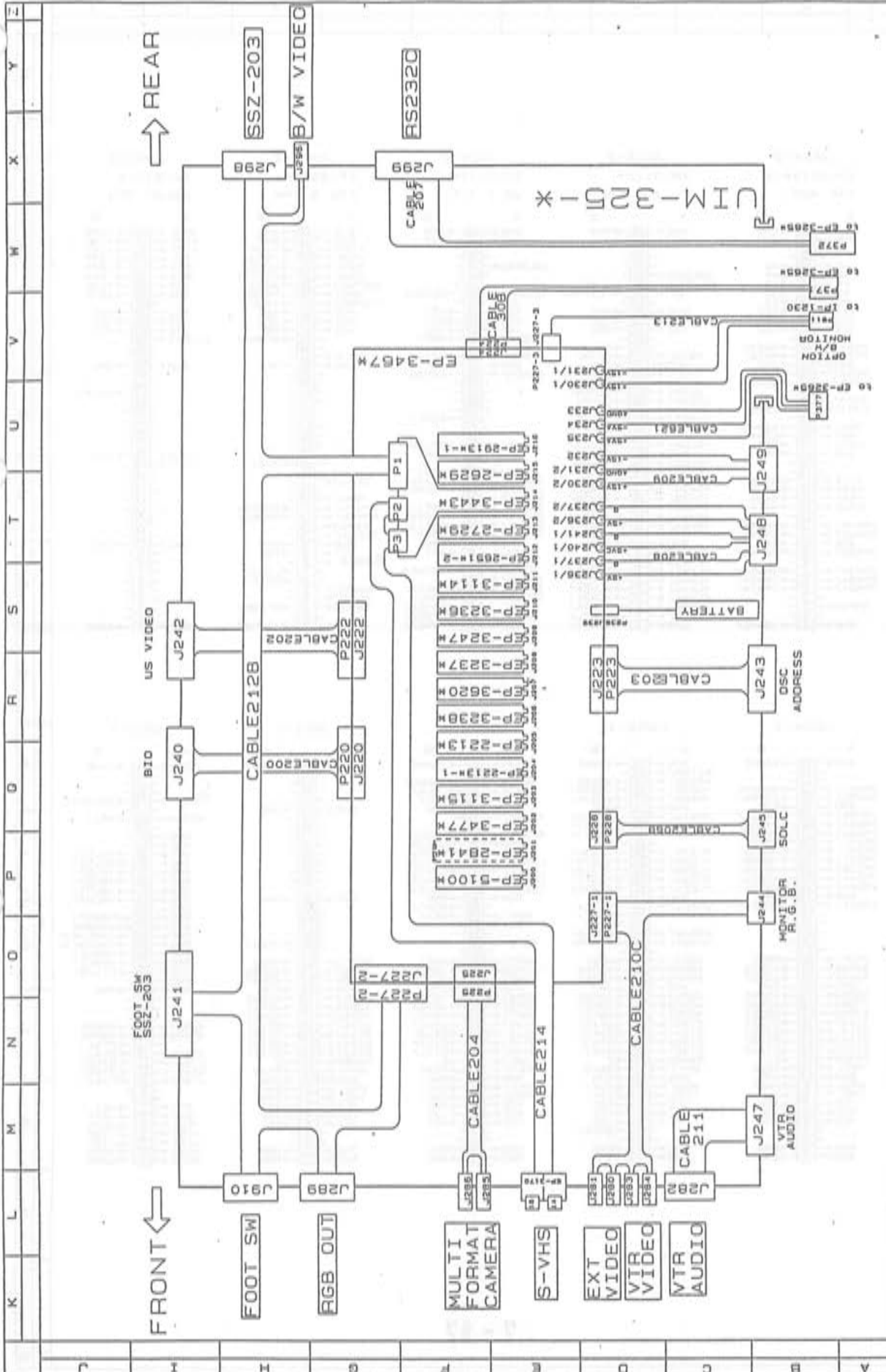
NO. 13	EP-3453	EP-3455	EP-3456	EP-3458	EP-3460	EP-3460	EP-3460	EP-3460	EP-3461	EP-3462	EP-3463	EP-3464	EP-3465	EP-3466	EP-3466	EP-3466	EP-3466	EP-3466	EP-3466
S.I.G.	J-100	J-101	J-102	J-104	J-105	J-105	J-105	J-105	J-108	J-110	J-111	J-112	J-113	J-114	J-114	J-114	J-114	J-114	J-114
TH14	2418	2818	287																
TH15	247	287	284																
TH16	244	284	1842																
TH17	1842	1839																	
TH18	1839	1836																	
TH19	1836	1833																	
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REVISIONS R.M. 498074  
 49 18-M2197

<b>Aloka</b> 3ND ANGLE PROJECTION 第3角法 SCALE R.M. UNITS METR.	TITLE BLOCK	MODEL NO. 6	16/16
	<b>MOTHER BOARD</b> DEPARTMENT: TEL. 0204 DIVISION: TEL. 9111 CHECKED: TEL. 9111 APPROVED: TEL. 9111 DRAWING NO. 498 <b>MC 3-5937</b>		

L. 910 4 83





A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
REVISIONS																										
TITLE & MODEL NO.		SSD-680EX DSC UNIT SCHEMATIC DIAGRAM																					MODEL NO. <b>UIM-325</b>		DRAWING NO. & DATE 1/1	
DRAWN BY		SSD 680EX DSC UNIT																					CHECKED BY		DATE	
SCALE		1:1																					UNIT		MM	
APPROVED BY		Aloka																					DATE		1983.11	
UNIT NO.		HC326720																					DRAWING NO. & DATE		1/1	

REVISIONS 変更

92.10.6 訂正  
 20-4002 100-2042101  
 STD Rev. 140781

92.10.29 訂正  
 49-1A2 訂正  
 92.11.5 訂正  
 49-1A2 訂正

20-4002 100-2042101  
 20-510 Rev. 2007 訂正  
 100-112-H2177  
 92.1.26 訂正  
 20-510 EXT VPO 訂正  
 "C" 訂正  
 100-510 Rev. 2007 訂正  
 20-510 Rev. 2007 訂正  
 100-176-M2261

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<p><b>J204-2                                  J203-2                                  J202-2                                  J201-2                                  J200-2</b></p> <p>EP-2213H-1                                  EP-3115H                                  EP-3477H                                  EP-2841H                                  EP-5100H</p> <p>VAR. MEM.                                  C-LINE BUFFER                                  US I.T.F.                                  ECG &amp; PPM                                  COLOR CFM</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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VRM0B	58	VRM0B	58	VRM0B	58	VRM0B	58	VRM0B	58	VRM0B	58																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0A	59	VRM0A	59	VRM0A	59	VRM0A	59	VRM0A	59	VRM0A	59																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0B	60	VRM0B	60	VRM0B	60	VRM0B	60	VRM0B	60	VRM0B	60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0A	61	VRM0A	61	VRM0A	61	VRM0A	61	VRM0A	61	VRM0A	61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0B	62	VRM0B	62	VRM0B	62	VRM0B	62	VRM0B	62	VRM0B	62																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0A	63	VRM0A	63	VRM0A	63	VRM0A	63	VRM0A	63	VRM0A	63																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0B	64	VRM0B	64	VRM0B	64	VRM0B	64	VRM0B	64	VRM0B	64																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0A	65	VRM0A	65	VRM0A	65	VRM0A	65	VRM0A	65	VRM0A	65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0B	66	VRM0B	66	VRM0B	66	VRM0B	66	VRM0B	66	VRM0B	66																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0A	67	VRM0A	67	VRM0A	67	VRM0A	67	VRM0A	67	VRM0A	67																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0B	68	VRM0B	68	VRM0B	68	VRM0B	68	VRM0B	68	VRM0B	68																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0A	69	VRM0A	69	VRM0A	69	VRM0A	69	VRM0A	69	VRM0A	69																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
VRM0B	70	VRM0B	70	VRM0B	70	VRM0B	70	VRM0B	70	VRM0B	70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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300 MAG PROJECTION

MOORE

SCALE 1:50

DATE 92.10.29

DESIGNED BY 森下 邦夫

CHECKED BY 森下 邦夫

TITLE 名称

SIGNAL LIST

EP-3467B,C

MODEL 54

MC 326799

1/6

J209-2		J208-2		J207-2		J206-2		J205-2	
EP-3247H		EP-3237H		EP-3220H		EP-3238H		EP-2213H	
B/W MEM.		B/W CINE MEM.		TIMING		COL. CINE MEM.		VEL. MEM.	
A	B	A	B	A	B	A	B	A	B
GND	23	GND	23	GND	23	GND	23	GND	23
GND	44	GND	44	GND	44	GND	44	GND	44
	45		45		45		45		45
	46		46		46		46		46
AB	47	AB	47	AB	47	AB	47	AB	47
MWE6	40	MWE7	40	MWE6	40	MWE7	40	MWE6	40
MWE4	39	MWE5	39	MWE4	39	MWE5	39	MWE4	39
MWE2	38	MWE3	38	MWE2	38	MWE3	39	MWE2	38
MWE0	37	MWE1	37	MWE0	37	MWE1	37	MWE0	37
VCC	36	VCC	36	VCC	36	VCC	36	VCC	36
VCC	35	VCC	35	VCC	35	VCC	35	VCC	35
VCC	34	VCC	34	VCC	34	VCC	34	VCC	34
CAS3	33	CAS4	33	CAS3	33	CAS4	33	CAS3	33
CAS1	32	CAS2	32	CAS1	32	CAS2	32	CAS1	32
RASA	31	OE	31	RASA	31	OE	31	RASA	31
GND	30	GND	30	GND	30	GND	30	GND	30
A8	29	A7	29	RASA	28	HASB	28	A8	29
A4	28	AB	28	CAV	28	OE	28	A4	28
A3	27	A3	27	WRTA	27	WRTB	27	A3	27
A0	26	A1	26	RHW	26	CLRM	26	A0	26
HA2B	25	HA3B	25	HSC	25	BITMD	25	HA2B	25
HA0B	24	HA3B	24	HASB	24	HA3B	24	HA0B	24
HA2A	23	HA1A	23	HA0B	23	HA1B	23	HA2A	23
HA0A	22	HA1A	22	HA2A	22	HA3A	22	HA0A	22
	21	HA1A	21	HA0A	21	HA1A	21		21
GND	20	GND	20	GND	20	GND	20	GND	20
DAV	19	DAV	19	HSMEN	19	STR	19	DAV	19
	18		18		17	VSMAR	17		18
G4B	16	G5B	16	VLOAD	16			VRW4B	16
G2B	15	G3B	15	CVGRY	15			VRW2B	15
G0B	14	G1B	14					VRW0B	14
G4A	13	G5A	13	FIELD	13			VRW4A	13
G2A	12	G3A	12	VUB	12			VRW2A	12
G0A	11	G1A	11	VD	11	VRST	11	VRW0A	11
GND	10	GND	10	GND	10	GND	10	GND	10
SWD4B	9	SWD5B	9	HRST	9	SWD4B	9	VLW4B	9
SWD2B	8	SWD3B	8	CMPBK	8	SWD2B	8	VLW2B	8
SWD0B	7	SWD1B	7	HD	7	SWD0B	7	VLW0B	7
SWD4A	6	SWD5A	6	COLBK	6	VLTHRU	6	VLW4A	6
SWD2A	5	SWD3A	5	HGRAY	5	B/WBK	5	VLW2A	5
SWD0A	4	SWD1A	4	UJMO	4	DLCHK	4	VLW0A	4
SHFEN	3	LSR	3	HCLK	3	MEMD	3	SHFEN	3
GND	2	GND	2	VTRON	2			GND	2
	1	12MHZ	1		1	12MHZ	1		1

J209-1		J208-1		J207-1		J206-1		J205-1	
A	B	A	B	A	B	A	B	A	B
GND	45	GND	45	GND	45	GND	45	GND	45
	44		44	YADRO	44	CINSEL	44		44
	43		43	DAVID4	43	DAVID5	43	VLW0A	43
	42		42	DAVID2	42	DAVID3	42	VLW0B	42
	41		41	DAVID0	41	DAVID1	41	GND	40
CINVID	40	GND	40	GND	40	GND	40	GND	40
MVID4	39	MVID5	39	MVID4	39	MVID5	39	VLW0D	39
MVID2	38	MVID3	38	MVID2	38	MVID3	38	VLW0C	38
MVID0	37	MVID1	37	MVID0	37	MVID1	37	VLW0E	37
SVID4	36	SVID5	36	SVID4	36	SVID5	36	VLW0F	36
SVID2	35	SVID3	35	SVID2	35	SVID3	35	VLW0G	35
SVID0	34	SVID1	34	SVID0	34	SVID1	34	VLW0H	34
BOFF	33	CLRM	33	VLW0B	33	VLW0C	33	VLW0I	33
B/WINH	32	GND	32	GND	32	GND	32	VLW0J	32
GND	31	GND	31	BOMAR	31	BOMAR	31	VLW0K	31
DMAR0	30	BOMAR	30	DMAR0	30	CLRM	30	VLW0L	30
	29	BOMAR	29	CINVID	29	BITMD	29	VLW0M	29
ROHST	28	VLW0B	28	VLW0C	28	VLW0D	28	VLW0N	28
	27	VLW0C	27	VLW0D	27	VLW0E	27	VLW0O	27
HRGT	26	CBWVG	26	HRGT	26	HRDY	26	VLW0P	26
HRDY	25	HRDY	25	ADRS8	25	ADRS9	25	VLW0Q	25
ADRS8	24	ADRS9	24	ADRS6	24	ADRS7	24	VLW0R	24
ADRS6	23	ADRS7	23	GND	23	GND	23	VLW0S	23
ADRS4	19	ADRS5	19	ADRS4	19	ADRS5	19	VLW0T	19
ADRS2	18	ADRS3	18	ADRS2	18	ADRS3	18	VLW0U	18
ADRS0	17	ADRS1	17	ADRS0	17	ADRS1	17	VLW0V	17
DTA8	16	DTA7	16	DTA8	16	DTA7	16	VLW0W	16
DTA4	15	DTA3	15	DTA4	15	DTA3	15	VLW0X	15
DTA2	14	DTA1	14	DTA2	14	DTA1	14	VLW0Y	14
DTA0	13	DTA1	13	DTA0	13	DTA1	13	VLW0Z	13
RAMEN	12	E	12	RAMEN	12	E	12	VLW1A	12
RST	11	READ	11	RST	11	READ	11	VLW1B	11
GND	10	GND	10	GND	10	GND	10	VLW1C	10
HRQ	9	HAK	9	HRQ	9	HAK	9	VLW1D	9
IRQ	8	IAK	8	IRQ	8	IAK	8	VLW1E	8
VCC	7	VCC	7	VCC	7	VCC	7	VLW1F	7
VCC	6	VCC	6	VCC	6	VCC	6	VLW1G	6
VCC	5	VCC	5	VCC	5	VCC	5	VLW1H	5
GND	4	GND	4	GND	4	GND	4	VLW1I	4
GND	3	GND	3	GND	3	GND	3	VLW1J	3
GND	2	GND	2	GND	2	GND	2	VLW1K	2
GND	1	GND	1	GND	1	GND	1	VLW1L	1

3RD FLOOR PROJECTION CHAMBER DESIGNATED BY EXPLODED VIEW LIST

SCALE: 1/100

UNIT: MM

DATE: 2003.05.25

DRWG. NO. 858

MODEL: B.5

EP-3467B,C

MC 326800

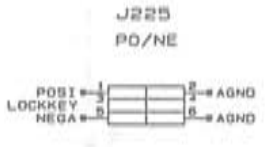
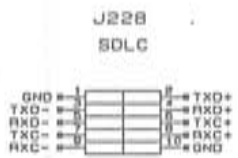
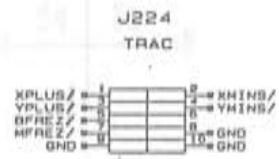
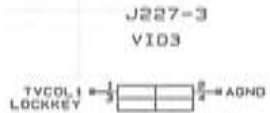
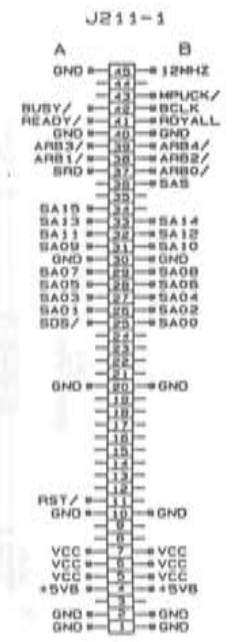
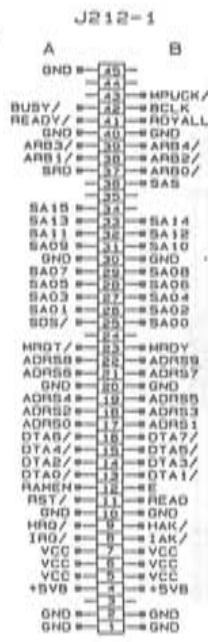
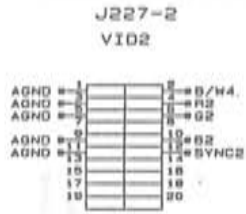
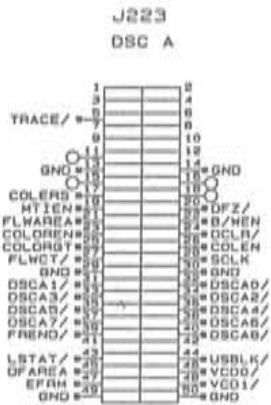
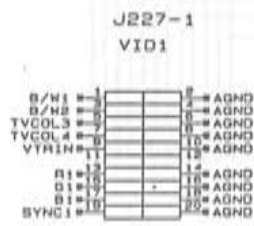
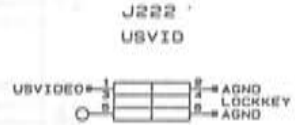
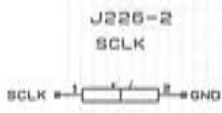
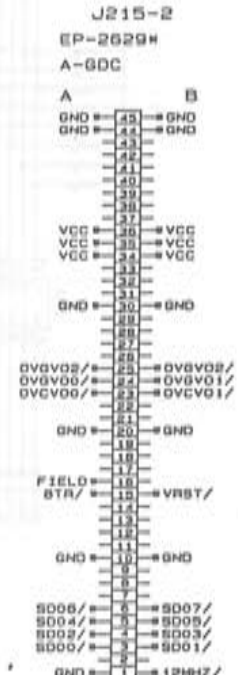
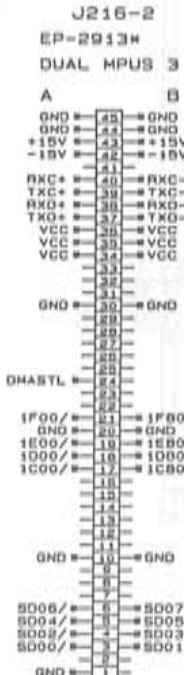
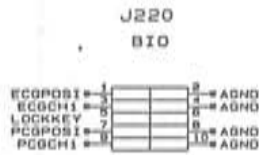
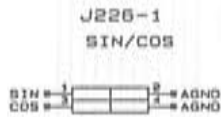
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△ 92.1.26 11-7  
 △ 92.1.26 11-7  
 "c" 11-7

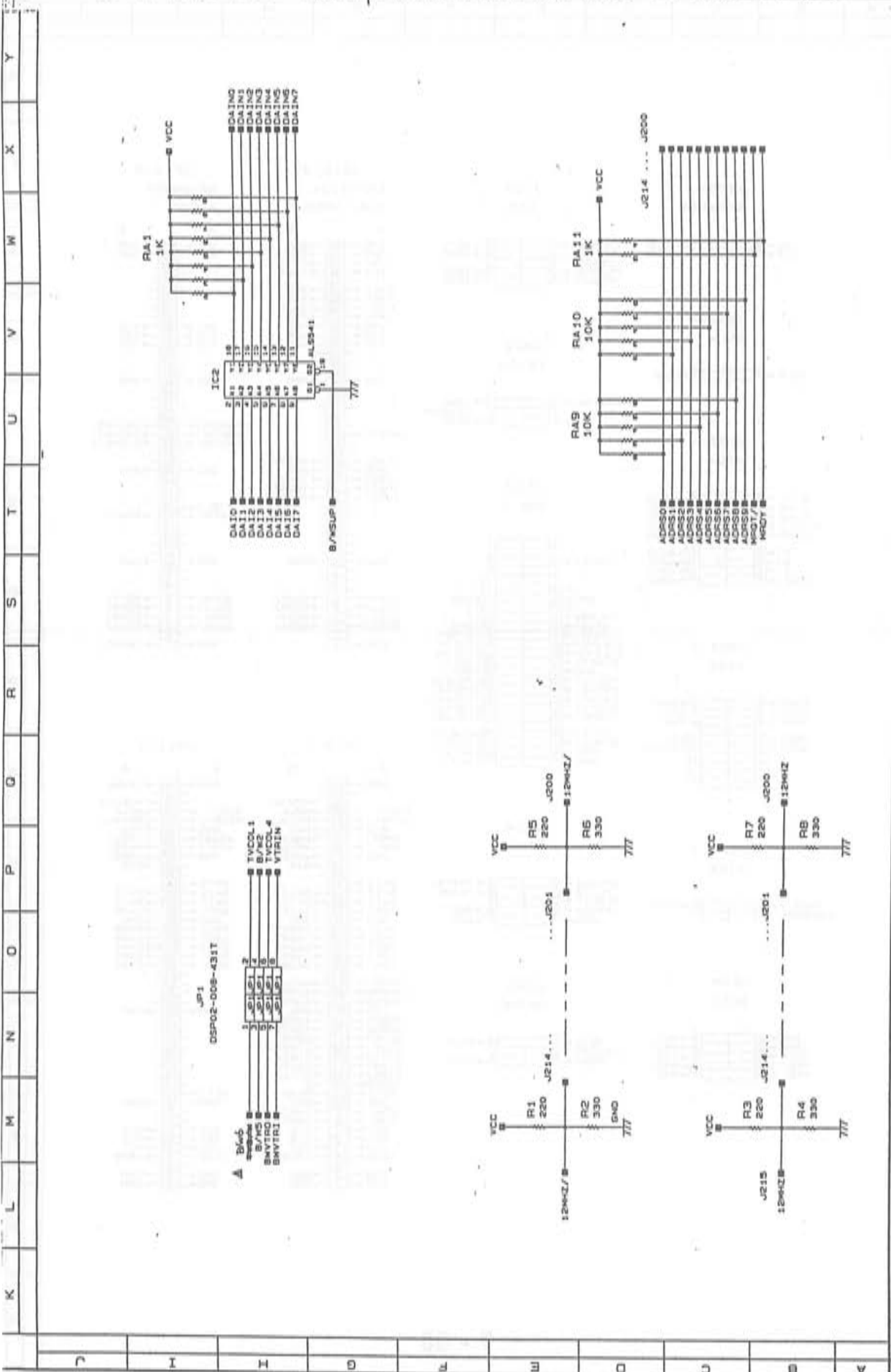
REVISED 変更		A	B	C	D	E	F	G	H	I	J
		<b>J214-2</b> EP-3443H VIDEO I.T.F.		<b>J213-2</b> EP-2729H B/W A/D O/A		<b>J212-2</b> EP-2851H COLOR O/A		<b>J211-2</b> EP-3114H C-POST PROCESS		<b>J210-2</b> EP-3236H ADDRESS	
		<b>A</b> GND #45 → GND GND #44 → GND +15V #43 → +15V -15V #42 → -15V AGND #41 → AGND AGND #40 → USVIDEO AGND #39 → POST AGND #38 → TVB/W AGND #37 → HESA VCC #36 → VCC VCC #35 → VCC VCC #34 → VCC AGND #33 → ORGB AGND #32 → ORGB AGND #31 → ORGR GND #30 → GND AGND #29 → VTRIN AGND #28 → TVB/W AGND #27 → BYNC2 AGND #26 → B2 AGND #25 → B2 AGND #24 → R2 AGND #23 → BYNC1 AGND #22 → B1 AGND #21 → B1 GND #20 → GND AGND #19 → R1 AGND #18 → TVCOL4 AGND #17 → TVCOL3 AGND #16 → TVCOL1 AGND #15 → B/W2 AGND #14 → B/W1 GND #13 → B/W1 GND #12 → B/W1 GND #11 → GND GND #10 → GND GND #9 → GND +5VA #8 → +5VA -5VA #7 → -5VA GND #6 → GND GND #5 → GND GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → 12MHZ/		<b>A</b> GND #45 → GND GND #44 → GND +15V #43 → +15V -15V #42 → -15V AGND #41 → AGND AGND #40 → USVIDEO POST #39 → AGND AGND #38 → TVB/W HESA #37 → AGND VCC #36 → VCC VCC #35 → VCC VCC #34 → VCC B/W2 #33 → B/W2 B/W1 #32 → B/WTRQ B/W1 #31 → B/WTR1 GND #30 → GND DA16 #29 → DA17 DA14 #28 → DA15 DA13 #27 → DA13 DA10 #26 → DA11 DA10 #25 → DA11 DAVID4 #24 → DAVID5 DAVID3 #23 → DAVID3 DAVID2 #22 → DAVID1 IFOD #21 → GND GND #20 → GND ADD4 #19 → ADD5 ADD3 #18 → ADD3 ADD0 #17 → ADD1 LDLB #16 → GND CMPBK #15 → VUB HGRAY #14 → VGRAY/ CMPBY #13 → G/WBK/ EERAS #12 → B/WBK/ GND #11 → OVLY/ GND #10 → GND PPH #9 → HD/ ENBSY #8 → LTHRU/ +5VA #7 → -5VA SWPON #6 → FEHD/ LDLB #5 → SWPON/ GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → 12MHZ/		<b>A</b> GND #45 → GND GND #44 → GND +15V #43 → +15V -15V #42 → -15V AGND #41 → AGND AGND #40 → ORGB AGND #39 → ORGB AGND #38 → ORGR +5VA #37 → -5VA VCC #36 → VCC VCC #35 → VCC VCC #34 → VCC GND #33 → GND GND #32 → GND GND #31 → GND GND #30 → GND UIMS #29 → CVGRY/ HGRAY #28 → HGRAY/ GND #27 → GND DA16 #26 → DA17 DA14 #25 → DA15 DA13 #24 → DA13 DA10 #23 → DA11 DA10 #22 → DA11 GND #21 → GND GND #20 → GND VGRAY #19 → GND DA16 #18 → DA17 DA14 #17 → DA15 DA13 #16 → DA13 DA10 #15 → DA11 DA10 #14 → DA11 BVID5 #13 → BVID5/ BVID4 #12 → BVID3/ BVID2 #11 → BVID1/ GND #10 → GND GND #9 → GND GND #8 → GND GND #7 → GND GND #6 → GND GND #5 → GND GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → 12MHZ/		<b>A</b> GND #45 → GND GND #44 → GND GND #43 → GND GND #42 → GND DAVID4 #41 → DAVID5 DAVID2 #40 → DAVID3 DAVID0 #39 → DAVID1 COLBK #38 → H/BSL* VCC #37 → VCC VCC #36 → VCC VCC #35 → VCC VCC #34 → VCC ENBSY #33 → VTRON/ FEHD #32 → VRST/ HCLK #31 → HEND/ GND #30 → GND GND #29 → GND GND #28 → GND GND #27 → GND GND #26 → GND GND #25 → GND GND #24 → GND GND #23 → GND GND #22 → GND GND #21 → GND YADRO #20 → HSHEN/ LTHRU #19 → VUB CVGRY #18 → HD CMPBK #17 → VLAD/ HGRAY #16 → HRST/ BVID5 #15 → BV1D7/ BVID4 #14 → BV1D5/ BVID2 #13 → BV1D3/ BVID0 #12 → BV1D1/ GND #11 → GND GND #10 → GND GVID5 #9 → GV1D7/ GVID4 #8 → GV1D5/ GVID2 #7 → GV1D3/ GVID0 #6 → GV1D1/ RVID5 #5 → RV1D7/ RVID4 #4 → RV1D5/ RVID2 #3 → RV1D3/ RVID0 #2 → RV1D1/ GND #1 → 12MHZ/		<b>A</b> GND #45 → GND GND #44 → GND VRST #43 → CAB CAS #42 → CAB CA3 #41 → CA4 ER #40 → CA2 CA0 #39 → CA1 VCC #38 → VCC VCC #37 → VCC VCC #36 → VCC WRTA #35 → WRTB/ BELB #34 → FRASB ROENBL #33 → ADRLT GND #32 → GND AB #29 → A7 A4 #28 → A5 A2 #27 → A3 A0 #26 → A1 MA2B #25 → MA3B MA0B #24 → MA1B MA3A #23 → MA3A MA2A #22 → MA1A FIFTY #21 → FIK518 GND #20 → GND ADD4 #19 → ADD5 ADD3 #18 → ADD3 ADD0 #17 → ADD1 G4B #16 → G5B/ G2B #15 → G3B/ G0B #14 → G1B/ G4A #13 → G5A/ G2A #12 → G3A/ G0A #11 → G1A/ GND #10 → GND HRST #9 → HBC/ CLRM #8 → HSC/ BITMD #7 → RHW/ VLOAD #6 → VSMAN/ CLRLB #5 → OFSCR/ CLRLB #4 → DLHCR/ SHPEN #3 → LSR/ YADRO #2 → FREZ/ GND #1 → 12MHZ/	

REVISED 変更		A	B	C	D	E	F	G	H	I	J
		<b>J214-1</b>		<b>J213-1</b>		<b>J212-1</b>		<b>J211-1</b>		<b>J210-1</b>	
		<b>A</b> GND #45 → 12MHZ GND #44 → GND GND #43 → GND GND #42 → GND GND #41 → GND GND #40 → GND BTR #39 → VD/ HD #38 → GND DELCMPB #37 → RELAY/ GND #36 → GND GND #35 → GND GND #34 → GND GND #33 → GND GND #32 → GND GND #31 → GND GND #30 → GND GND #29 → GND GND #28 → GND GND #27 → GND GND #26 → GND GND #25 → GND GND #24 → GND GND #23 → GND GND #22 → GND GND #21 → GND GND #20 → GND GND #19 → GND GND #18 → GND GND #17 → GND GND #16 → GND GND #15 → GND GND #14 → GND GND #13 → GND GND #12 → GND GND #11 → GND GND #10 → GND GND #9 → GND GND #8 → GND GND #7 → GND GND #6 → GND GND #5 → GND GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → GND		<b>A</b> GND #45 → 12MHZ GND #44 → GND GND #43 → GND GND #42 → GND GND #41 → GND GND #40 → GND BON #39 → DFARE GND #38 → GND GND #37 → GND GND #36 → GND GND #35 → GND GND #34 → GND GND #33 → GND GND #32 → GND GND #31 → GND GND #30 → GND GND #29 → GND GND #28 → GND GND #27 → GND GND #26 → GND GND #25 → GND GND #24 → GND GND #23 → GND GND #22 → GND GND #21 → GND GND #20 → GND GND #19 → GND GND #18 → GND GND #17 → GND GND #16 → GND GND #15 → GND GND #14 → GND GND #13 → GND GND #12 → GND GND #11 → GND GND #10 → GND GND #9 → GND GND #8 → GND GND #7 → GND GND #6 → GND GND #5 → GND GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → GND		<b>A</b> GND #45 → 12MHZ GVID5 #44 → GV1D7/ GVID4 #43 → GV1D5/ GVID2 #42 → GV1D3/ GVID0 #41 → GV1D1/ GND #40 → GND RVID5 #39 → RV1D7/ RVID4 #38 → RV1D5/ RVID2 #37 → RV1D3/ RVID0 #36 → RV1D1/ DELCMPB #35 → GND CMPBY #34 → CMPBK/ OVLV #33 → COLC/ PALETTE #32 → GND GND #31 → GND GND #30 → GND GND #29 → GND GND #28 → GND OVCCV0 #27 → GND OVCCV1 #26 → GND OVCCV2 #25 → OVCCV0/ OVCCV3 #24 → OVCCV1/ GND #23 → GND HRDT #22 → HRDY ADDR5 #21 → ADDR5 ADDR4 #20 → ADDR4 ADDR3 #19 → ADDR3 ADDR2 #18 → ADDR3 ADDR1 #17 → ADDR1 DTAB #16 → DTAB7/ DTAB #15 → DTAB7/ DTAB #14 → DTAB7/ DTAB #13 → DTAB7/ DTAB #12 → DTAB7/ DTAB #11 → DTAB7/ DTAB #10 → DTAB7/ DTAB #9 → DTAB7/ DTAB #8 → DTAB7/ DTAB #7 → DTAB7/ DTAB #6 → DTAB7/ DTAB #5 → DTAB7/ DTAB #4 → DTAB7/ DTAB #3 → DTAB7/ DTAB #2 → DTAB7/ DTAB #1 → DTAB7/ RAMEN #12 → E RST #11 → READ GND #10 → GND HRD #9 → HAK/ IRD #8 → IAK/ VCC #7 → VCC VCC #6 → VCC VCC #5 → VCC GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → GND		<b>A</b> GND #45 → 12MHZ RELAY #44 → FIXB12 VRMD4 #43 → VRMD5/ VRMD3 #42 → VRMD3/ VRMD0 #41 → VRMD1/ GND #40 → GND VRSD4 #39 → VRSD5/ VRSD3 #38 → VRSD3/ VRSD0 #37 → VRSD1/ VLMD4 #36 → VLMD5/ VLMD2 #35 → VLMD3/ VLMD0 #34 → VLMD1/ VLS04 #33 → VLS05/ VLS02 #32 → VLS03/ VLS00 #31 → VLS01/ GND #30 → GND GND #29 → GND GND #28 → GND GND #27 → GND GND #26 → GND GND #25 → GND GND #24 → GND GND #23 → GND GND #22 → GND GND #21 → GND GND #20 → GND GND #19 → GND GND #18 → GND GND #17 → GND GND #16 → GND GND #15 → GND GND #14 → GND GND #13 → GND GND #12 → GND GND #11 → GND GND #10 → GND GND #9 → GND GND #8 → GND GND #7 → GND GND #6 → GND GND #5 → GND GND #4 → GND GND #3 → GND GND #2 → GND GND #1 → GND		<b>A</b> GND #45 → 12MHZ CB8 #44 → B1THP/ SWPON #43 → SWPON/ LFN #42 → LFN/ HEND #41 → HEND/ GND #40 → GND XCONT #39 → YCONT/ LEH #38 → ICB0/ LADR3 #37 → LADR3/ LADR0 #36 → LADR1/ LDAT6 #35 → LDAT7/ LDAT4 #34 → LDAT5/ LDAT2 #33 → LDAT3/ LDAT0 #32 → LDAT1/ E20 #31 → F80/ GND #30 → GND GND #29 → GND E10 #28 → E18/ GND #27 → GND BDMA3 #26 → BDMA4/ BDMA1 #25 → BDMA2/ RDMA7 #24 → RDMA7/ RDMA3 #23 → RDMA3/ HRDT #22 → HRDY ADDR5 #21 → ADDR5 ADDR4 #20 → ADDR4 ADDR3 #19 → ADDR3 ADDR2 #18 → ADDR3 ADDR1 #17 → ADDR1 DTAB #16 → DTAB7/ DTAB #15 → DTAB7/ DTAB #14 → DTAB7/ DTAB #13 → DTAB7/ DTAB #12 → DTAB7/ DTAB #11 → DTAB7/ DTAB #10 → DTAB7/ DTAB #9 → DTAB7/ DTAB #8 → DTAB7/ DTAB #7 → DTAB7/ DTAB #6 → DTAB7/ DTAB #5 → DTAB7/ DTAB #4 → DTAB7/ DTAB #3 → DTAB7/ DTAB #2 → DTAB7/ DTAB #1 → DTAB7/ RAMEN #12 → E RST #11 → READ GND #10 → GND HRD #9 → HAK/ IRD #8 → IAK/ VCC #7 → VCC VCC #6 → VCC VCC #5 → VCC IDDB #4 → IDDB/ GND #3 → GND GND #2 → GND GND #1 → GND	

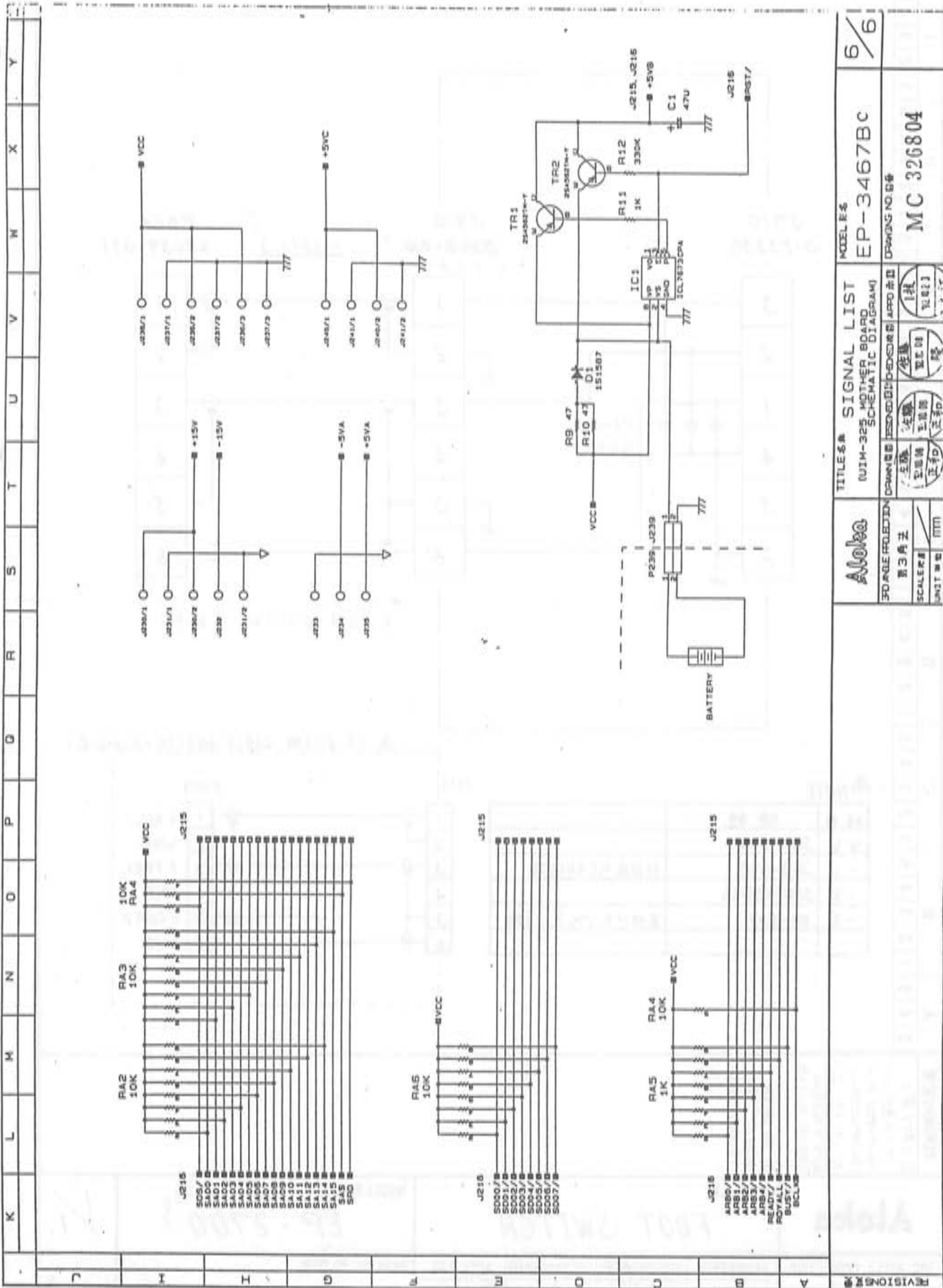
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 SCALE 1:1  
 UNIT mm  
 TITLE 4.4 SIGNAL LIST  
 (UIM-325 MOTHER BOARD SCHEMATIC DIAGRAM)  
 MODEL 4.4 EP-3467B/C  
 DRAWING NO. 4.4 MC 326801  
 3/6



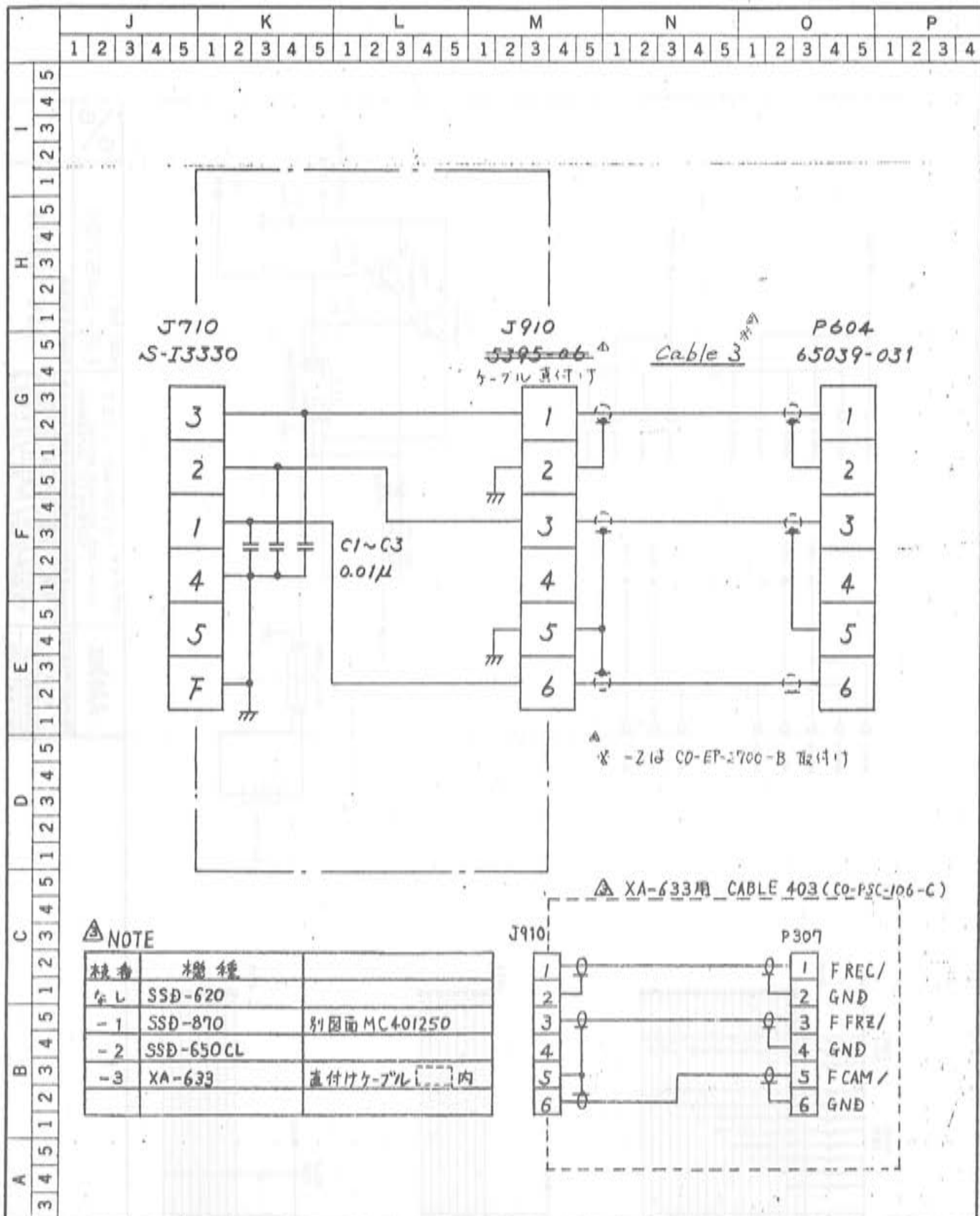
DATE 93.4.23	SCALE 1:1	UNIT MM	DRWG NO. 326802
<b>Alotop</b>			
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(UIM-325 MOTHER BOARD SCHEMATIC DIAGRAM)			
MODEL 機號 EP-3467B,C			
DRAWING NO. 圖號 MC 326802			
3D 立體圖 2D 平面圖 1 比例 1:1			4/6



REVISIONS	REV	DATE	BY	CHK	APP	DESCRIPTION
1						
7 - 91						
Aloha		TITLE 68 SIGNAL LIST			MOELES	
3D ANGLE PROJECTION		IUTM-325 MOTHER BOARD			EP-3467B.C	
SCALES		SIGNAL LIST			DRAWING NO. 68	
UNIT		SIGNAL LIST			MC 326803	
UNIT		SIGNAL LIST			5/6	

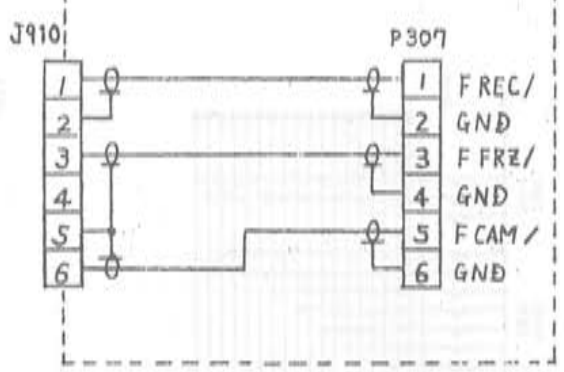


REVISEMENTS	TITLE: SIGNAL LIST		MODEL: EP-3467BC	6/6
	NIM-32 MOTHER BOARD SCHEMATIC DIAGRAM		DRAWING NO. 046	MC 326804
3D ANGLE PROJECTION	DRAWING	ISSUED	DESIGNED	APPROVED
SCALE: 1:1	DATE: 1988.12.15	BY: [Signature]	CHECKED: [Signature]	APPROVED: [Signature]
UNIT: MM				



NOTE

検査	機種	
なし	SSD-620	
-1	SSD-870	別図面 MC40125D
-2	SSD-650CL	
-3	XA-633	直付けケーブル内



REVISIONS 変更  
 △コネクタ廃止  
 4-17 追加  
 Mu-EP05 中  
 (30 200/220) ~  
 97.10.20.12  
 △200 追加  
 (95.06.21.12)

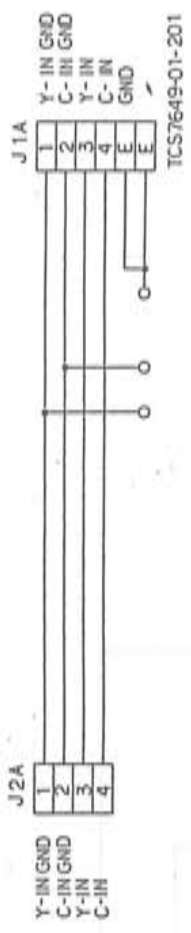
△'88.08.18  
 NOTE  
 -3, XA-633 廃止  
 山下

Aloka	TITLE 名称	MODEL 形名	
	FOOT SWITCH	EP-2700 <sup>△-3</sup> -2	1/1

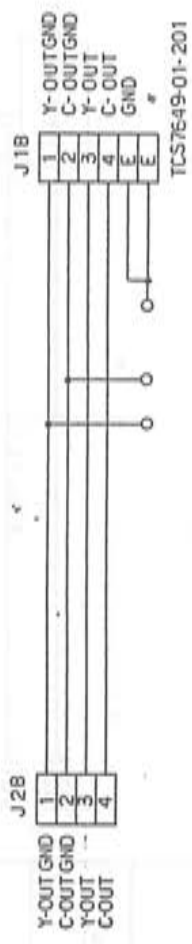
3RD ANGLE PROJECTION 第3角法	DRAWN 製図 渡辺	DESIGNED 設計 62.4.26 正	CHECKED 検図 62.4.23 下	APPD 承認 62.8.21	DRAWING NO. 図番 7-93 MC401133	8.7.13
SCALE 尺度 UNITS 単位	mm	62.4.28				



	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2
3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4
4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
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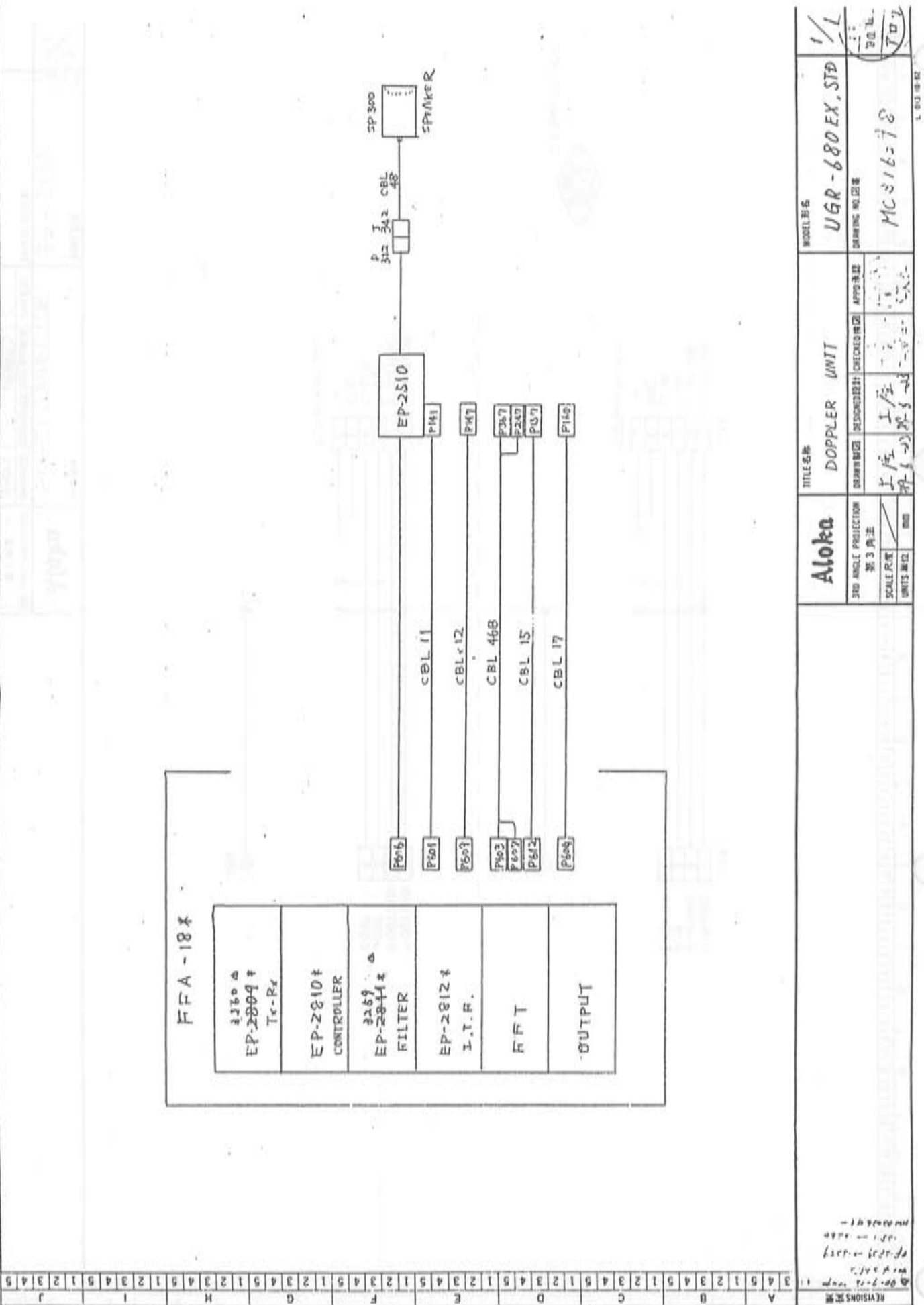


TCS7649-01-201

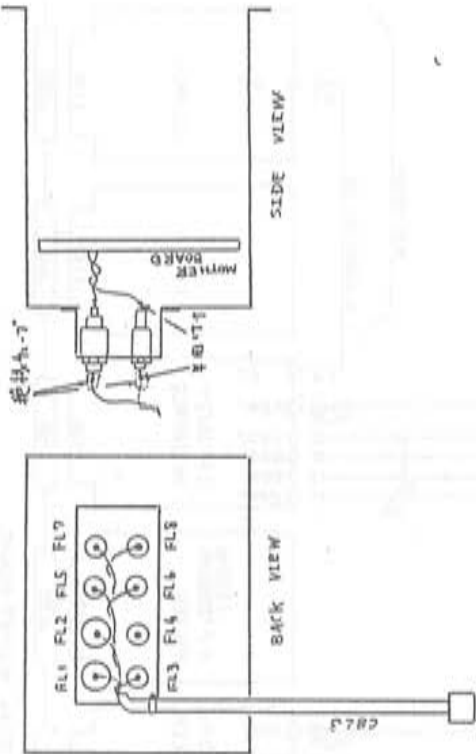
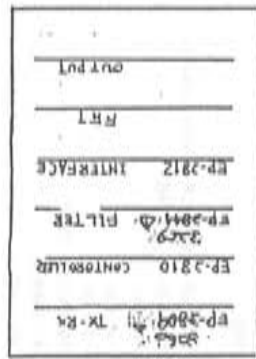
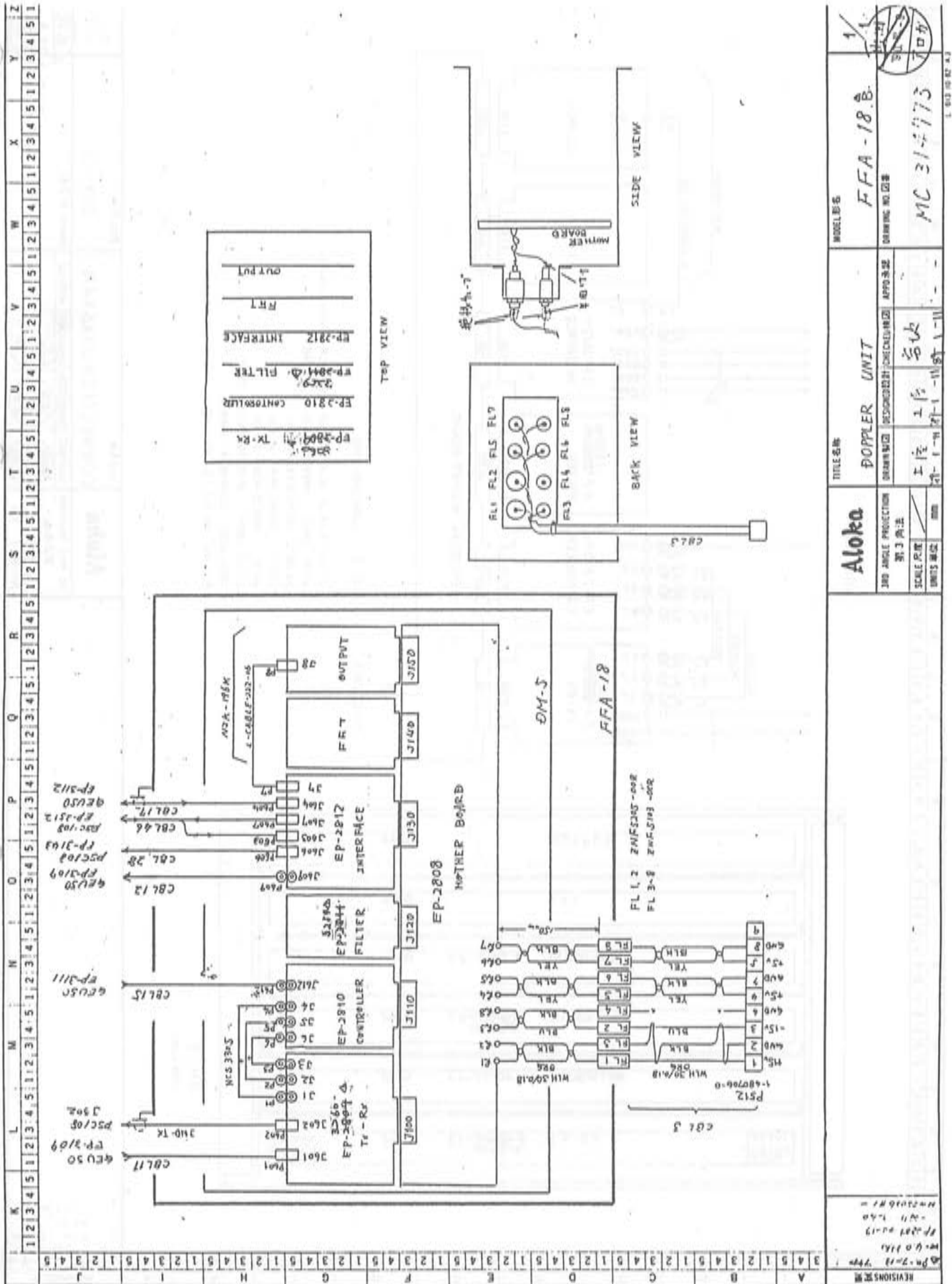


REVISEMENTS		Aloka		S(Y-C) CONNECTOR		MODEL 名称		EP-3179	
3D ANGLE PROJECTION 第三角注		SCALE 尺规		UNITS 单位		DESIGNER 设计		DRAWING 图号	
1:1		mm		S		MC317241		1/1	

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<b>Alaka</b> 3RD ANGLE PROJECTION 第3角法 SCALE RATIO UNITS UNIT		TITLE & No. <b>DOPPLER UNIT</b>		MODEL No. <b>UGR-680EX STD</b>
DRAWING NO. 1234 DESIGNED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]		MODEL No. <b>UGR-680EX STD</b>		DRAWING NO. 1234 <b>MC 516-78</b>
REVISIONS 変更 1. 1000 2. 1000 3. 1000 4. 1000		1000 1000 1000 1000		1000 1000 1000 1000



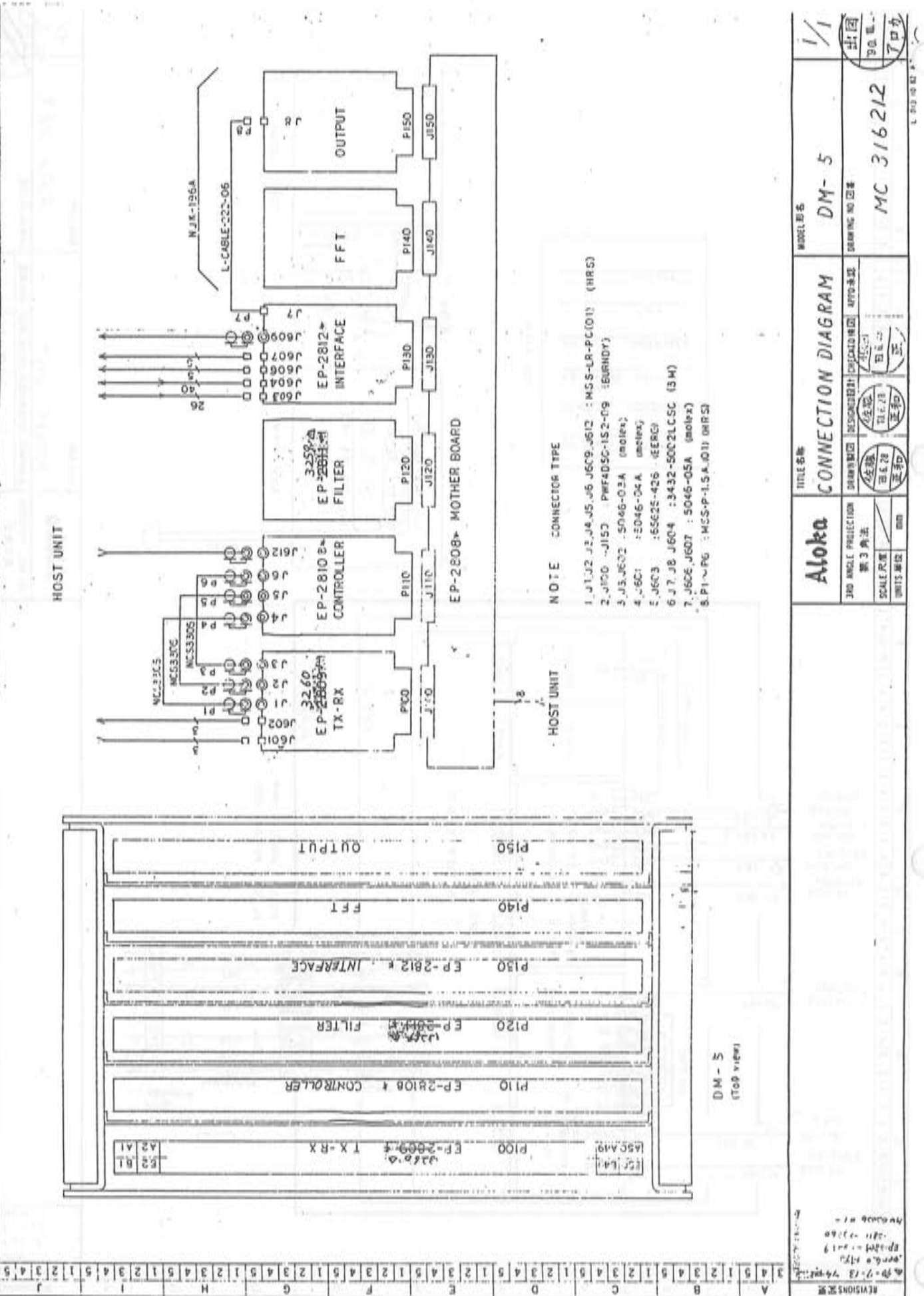
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			REV. NO.	DATE	DESCRIPTION										
REV. 19-7-73		REV. 20-11-73	REV. 21-7-73	REV. 21-12-73	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74
REV. 22-1-74		REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74
REV. 22-1-74		REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74	REV. 22-1-74

REV. NO.		REV. 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25									
REV. 22-1-74		REV. 22-1-74									
REV. 22-1-74		REV. 22-1-74									

REV. NO.		REV. 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25									
REV. 22-1-74		REV. 22-1-74									
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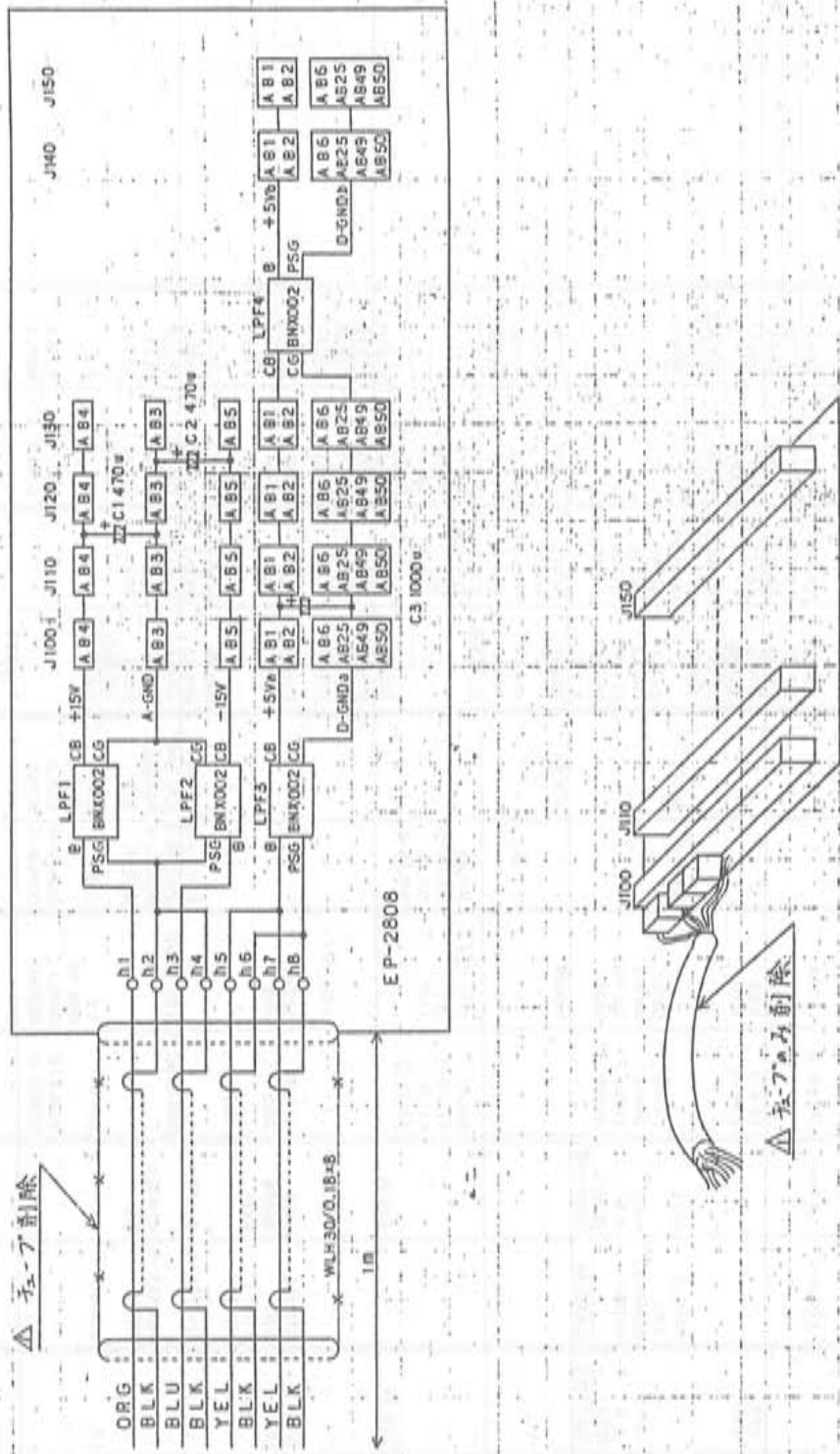
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REV. 22-1-74		REV. 22-1-74									
REV. 22-1-74		REV. 22-1-74									

K 1 2 3 4 5 L M N O P Q R S T U V W X Y Z



REVIZIONS 変更		A 97-7-13 74mm		EP-2810-1170		EP-2810-1170		90 品		1/1 出図	
TITLE 名称		Aloka		3RD ANGLE PROJECTION 第三角法		SCALE 尺度		UNIT 單位		MODEL 型号	
DRAWING NO 図番		CONNECTION DIAGRAM		DESIGNER 設計者		CHECKER 検査者		DRAWING NO 図番		DM-5	
DESIGNER 設計者		CHECKER 検査者		DRAWING NO 図番		SCALE 尺度		UNIT 單位		MC 316212	
DESIGNER 設計者		CHECKER 検査者		DRAWING NO 図番		SCALE 尺度		UNIT 單位		70 品	
DESIGNER 設計者		CHECKER 検査者		DRAWING NO 図番		SCALE 尺度		UNIT 單位		70 品	

Grid coordinates: K 1 2 3 4 5, L 1 2 3 4 5, M 1 2 3 4 5, N 1 2 3 4 5, O 1 2 3 4 5, P 1 2 3 4 5, Q 1 2 3 4 5, R 1 2 3 4 5, S 1 2 3 4 5, T 1 2 3 4 5, U 1 2 3 4 5, V 1 2 3 4 5, W 1 2 3 4 5, X 1 2 3 4 5, Y 1 2 3 4 5



REVISIONS 変更	△ 88.12.6 土表	MV-80708 ~ % 8148820 ~ D3-H8477 板厚 7.6 板寸 板-7 削除	Aloka				TITLE 名称 DOPLER UNIT MOTHER BOARD				MODEL 番号 EP-2808	1/4
			3D ANGLE PROJECTION 第 3 角法				SCALE 尺度 UNIT 单位				DESIGNING 設計者 MC312588	
			CHECKED 検出				APPROVED					
			DRAWING 図面				CHECKED 検出					
			DATE 日付 83.11.23				DRAWING 図面					
			SCALE 尺度 UNIT 单位				DRAWING 図面					
			DATE 日付 88.11.14				DRAWING 図面					
			DATE 日付 88.11.14				DRAWING 図面					

K		L		M		N		O		P		Q		R		S		T		U		V		W		X		Y		Z	
1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5	
J100		J110		J120		EP-2810		EP-2812		EP-2812		J130		FFT		J140		OUTPUT		J150		Pin									
NO.		NO.		NO.		NO.		NO.		NO.		NO.		NO.		NO.		NO.		NO.		NO.									
1	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
2																															
3	+5V8																														
4	+5V8																														
5	A-GND																														
6	+15V																														
7	-15V																														
8	D-GND2																														
9																															
10																															
11	HFA-G																														
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REVISIONS 頁數	SCALE: 1:100 UNIT: MM	3RD ANGLE PROJECTION 第三角法	<b>Aloka</b>	TYPE CODE: DOPPLER UNIT <b>MOTHER BOARD</b>	MODEL NO. G. <b>EP-2808</b>	2/4
DATE: 2008/3/28	SCALE: 1:100 UNIT: MM	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28
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DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28
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DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28
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DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28
DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28	DATE: 2008/3/28

PC-UNIT NAME	TX & RX	Cont-roller	Filter	Inter-face	FFT	Out-Put	PC-UNIT NAME	TX & RX	Cont-roller	Filter	Inter-face	FFT	Out-Put
EP-2808	3260 2810	2810	3259 2811	2812	—	—	EP-2808	3260 2810	2810	3259 2811	2812	—	—
SIGNAL	100	110		130	140	150	SIGNAL	100	110	120	130	140	150
AMP					B28	A12	DTB-30					A30	A30
AMPOE												B30	B30
BPOS 0												A31	A31
1					A39	A39						B31	B31
2					B39	B39						A32	A32
3					A40	A40						B32	B32
4					B40	B40						A33	A33
5					A41	A41						B33	B33
6					B41	B41							
B/D		B43		B45			ECG-SYNC		B41	B41	B41		
B/D-G		A43		A43			ECG-SYNC-G		A41	A41	A41		
C-8	B45	B45	B45	B45	B45	B45	ENV 10					A8	A8
C-8-G	A45	A45	A45	A45	A45	A45	11					B8	B8
							12					A9	A9
							13					B9	B9
							14					A10	A10
							15					B10	B10
							16					A11	A11
							17					B11	B11
COUNT					A21	A21							
CW RELAY	A20	A20					FFT-CLK		B26	B26		B25	B25
CW /	A16	A16										B14	B14
DATA 0			A16		A16								
1			B16		B16		FFA STA/						
2			A17		A17								
3			B17		B17								
4			A18		A18		HPA	B11					
5			B18		B18		HPA-G	A11					
6			A19		A19								
7			B19		B19		HPB	B12					
							HPB-G	A12					
DOPLA		B47	B47	B47	B47	B47							
DOPLA-G		A47	A47	A47	A47	A47	INTITE					B21	B21
DOPLB		B48	B48	B48	B48	B48	INTPOW					B15	B15
DOPLB-G		A48	A48	A48	A48	A48	INT OUT /					A44	A44
DSAMPLE /	A17	A17											
D-OFF	B40	B40											
D-OFF-G	A40	A40											

<b>Aloka</b> 3RD ANGLE PROJECTION 第三角法 SCALE 1:1 UNITS: MM		DOPPLER UNIT <b>MOTHER BOARD</b>		WHEELS <b>EP-2808</b>	
3RD ANGLE PROJECTION 第三角法 SCALE 1:1 UNITS: MM		DRAWING NO. 311 311 11/11/88		DRAWING NO. 288 <b>MC312590</b>	

PC-UNIT NAME	TX ERX	Cont-roller	Filter	Inter-face	FFT	Out-put	PC-UNIT NAME	TX ERX	Cont-roller	Filter	Inter-face	FFT	Out-put
EP-3260 3259 2810	100	2810	3259 2810	2812	—	—	SIGNAL J	100	2810	3259 2810	2812	—	—
SIGNAL	100	110	120	130	140	150	SCLK	B35	B35	B35	B35	140	150
LPCLK	B8	B8	B8			B35	SD1	B36	A36				B35
LPCLK-G	A8	A8	A8				SD2	A36					
MCLK					A23	A23	SD3	B36				A36	
MCLK-E					B23	B23	SD4					B36	A36
MCLK/					A24	A24	SDRTN	B36				A35	B36
MCLK-E/					B24	B24	STROBE	A35				A35	B36
MUTE	A38	A38	A38				SIEN					A14	A14
MATCH/	A18	A18					TEST/	B19	B19				
MCKSEL	B42	B42	B42	B42			TESTTYPE	B20	B20				
MCKSEL-G	A42	A42	A42	A42			TXD	A37	A37				A37
RATE	B15	B15	B15	B15			TXON-OFF/	B33	B33				
RATE-G	A15	A15	A15	A15			VTRON	B21	B21				
READCP					B13	B13	VTXIN	B30	B30				
R/T					B27	B27	WES/					B22	B22
REJ 0					A42	A42	XMIT	B17	B17				
1					B42	B42	XYZ					A20	A20
2					A43	A43							
3					B43	B43							
RESET					A13	A13							
RPLYA	A28	A28	A28	A28									
RPLYA-G	A29	A29	A29	A29									
RPLYB	A26	A26	A26	A26									
RPLYB-G	A27	A27	A27	A27									
RST	B18	B18	B18	B18									
RUNON					B46	B46							
RXD													B37

MODEL 56  
EP-2808  
4/4

WORLD 56  
EP-2808  
MC312591

DATE: 11/28/81

TIME: 11:41

BY: [Signature]

NO. 28

MC312591

Alaska

PRODUCTION

DATE: 11/28/81

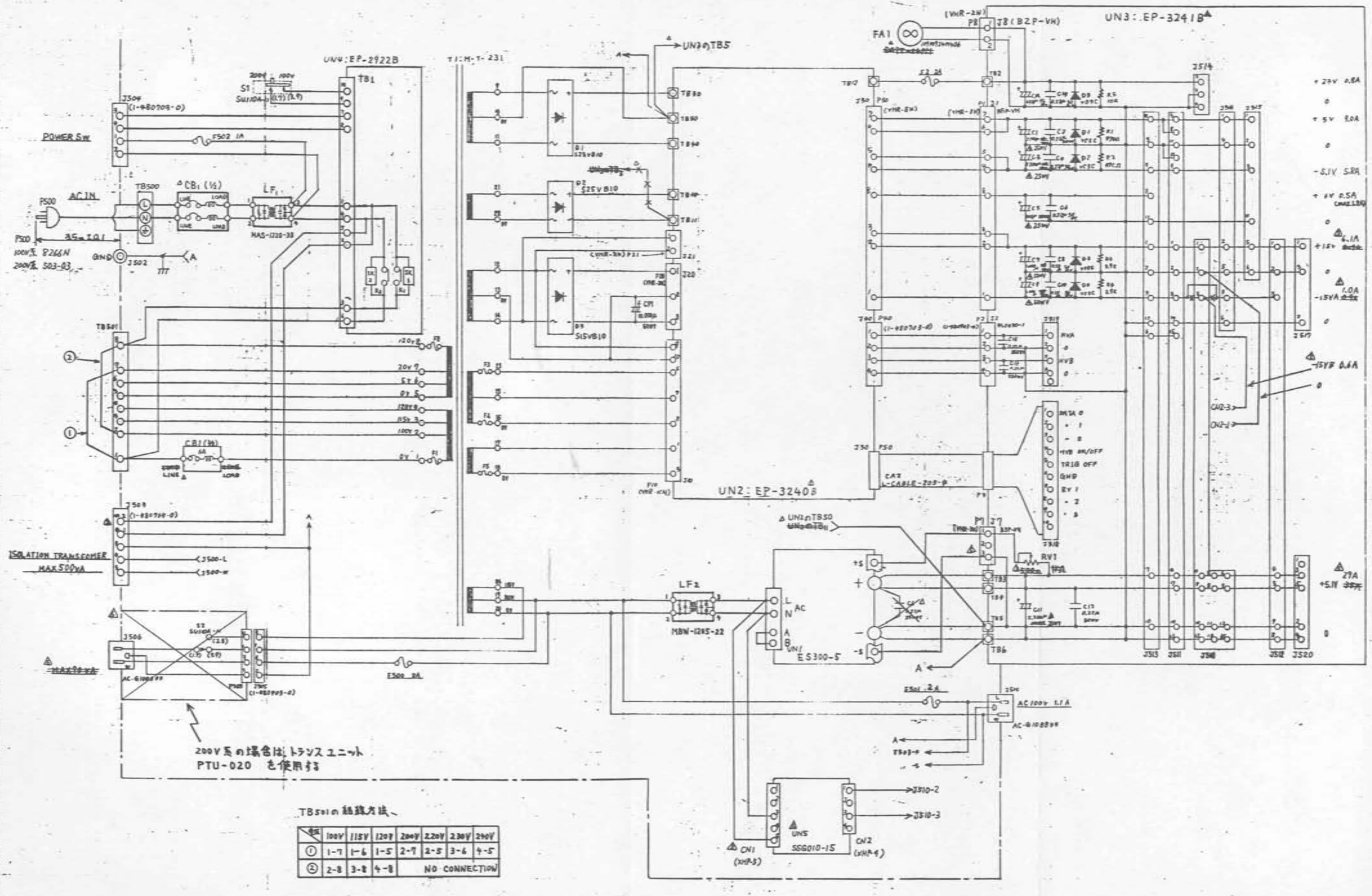
TIME: 11:41

BY: [Signature]

NO. 28

MC312591





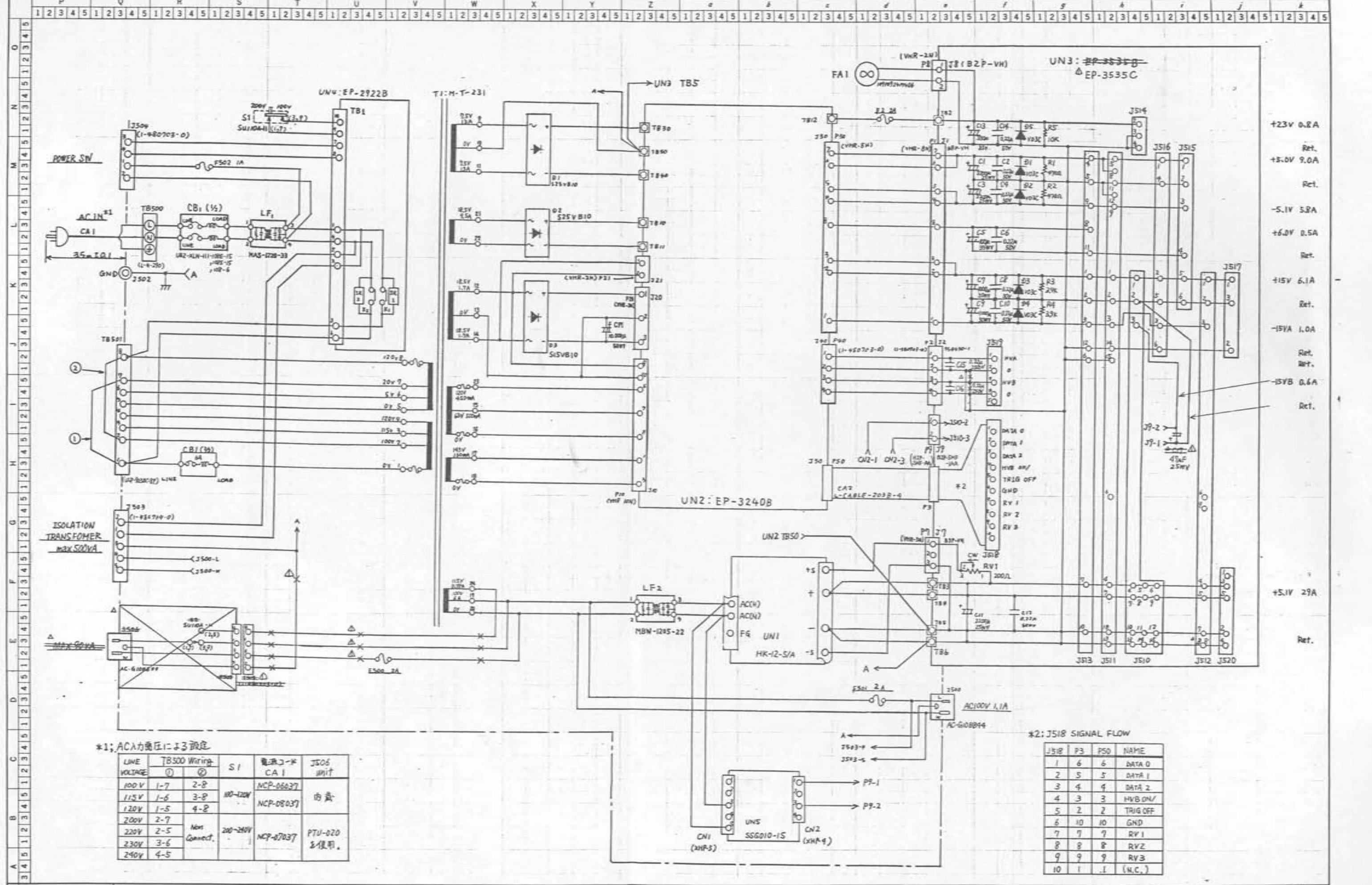
200V 系の場合は、トランスユニット PTU-020 を使用する

TB5の接続方法

電圧	100V	115V	120V	200V	220V	230V	240V
①	1-7	1-6	1-5	2-7	2-5	3-4	4-5
②	2-8	3-8	4-8	NO CONNECTION			

- ① PS-1165
- ② PS-1165
- ③ PS-1165
- ④ PS-1165
- ⑤ PS-1165
- ⑥ PS-1165
- ⑦ PS-1165
- ⑧ PS-1165
- ⑨ PS-1165
- ⑩ PS-1165
- ⑪ PS-1165
- ⑫ PS-1165
- ⑬ PS-1165
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- ㊺ PS-1165

<b>Aloka</b> TITLE 名称 <b>Power Supply Unit</b>		MODEL 型番 <b>PSU-S680B</b>	
3RD ANGLE PROJECTION 第三角法	DRAWING 図面 DESIGNED 設計 CHECKED 検査 APPROVED 承認	DRAWING NO. 図番 <b>MC202192</b>	SCALE 尺度 UNITS 単位
1/1		1/1	



- +23V 0.2A
- Ret.
- +5.0V 9.0A
- Ret.
- 5.1V 5.8A
- +6.0V 0.5A
- Ret.
- +15V 6.1A
- Ret.
- 15V 1.0A
- Ret.
- 15V 0.6A
- Ret.
- +5.1V 29A
- Ret.

\*1; AC入力電圧による設定

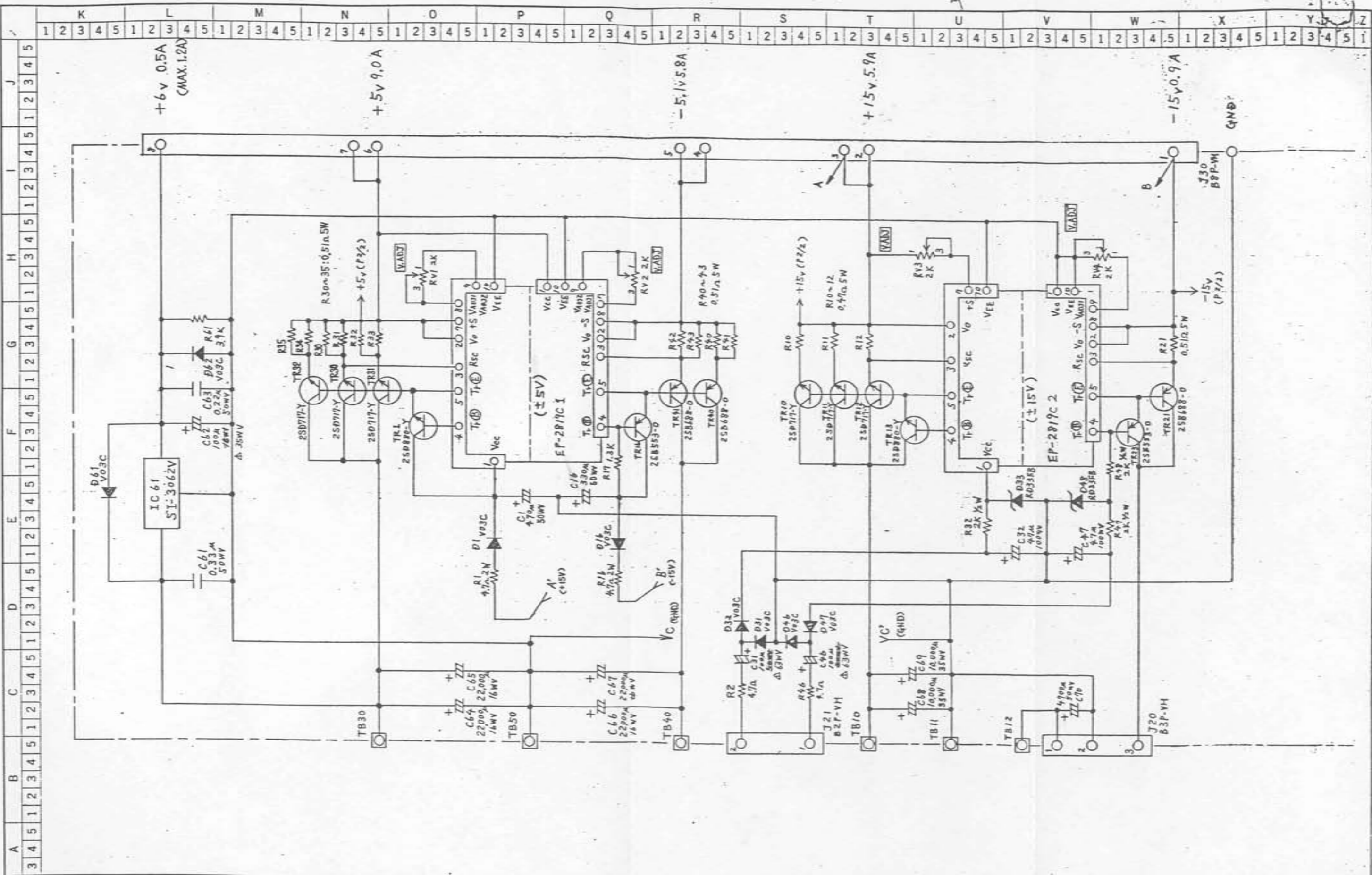
LINE VOLTAGE	TBS00 Wiring	S1	電圧コーナ CA1	J506 Unit
100V	1-7 2-8	100-120V	NCP-06037	内蔵
115V	1-6 3-8	100-120V	NCP-08037	
120V	1-5 4-8		NCP-08037	
200V	2-7	200-240V	NCP-07037	PTU-020 21使用.
220V	2-5			
230V	3-6			
240V	4-5			

\*2: J518 SIGNAL FLOW

J518	P3	P50	NAME
1	6	6	DATA 0
2	5	5	DATA 1
3	4	4	DATA 2
4	3	3	HVB ON/
5	2	2	TRIG OFF
6	10	10	GND
7	7	7	RV 1
8	8	8	RV 2
9	9	9	RV 3
10	1	1	(N.C.)

REVISIONS  
 Δ22.11.25 高橋  
 PW-367 (2007001)~  
 PS-647  
 Δ22.11.5 高橋  
 PW-02 (202001)~  
 PW-391 (202001)~  
 PS-140.5

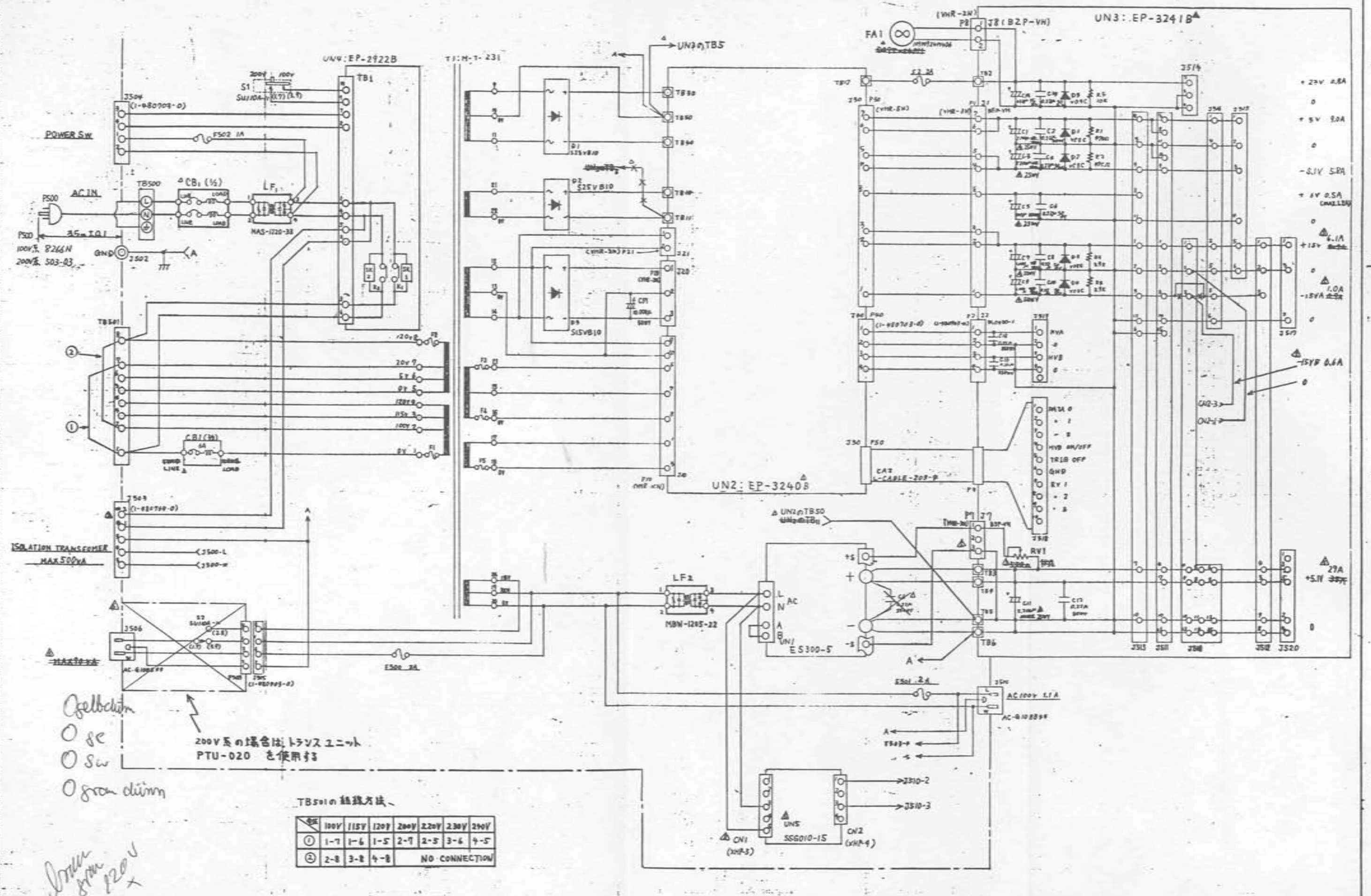
Aloka	TITLE名称	Power Supply Unit			MODEL名称	PSU-S680C
	3RD ANGLE PROJECTION 第3角法	DRWING M7G 92.8.24	DESIGNED M7G 92.8.24	CHECKED M7G 92.8.24	APPROVED M7G 92.8.24	DRAWING NO.図番
SCALE尺度						
UNITS単位						



REVISIONS 変更  
 Δ90.7.24 高橋 研一  
 PW-245 1945001  
 PS-1165  
 Δ91.7.3 高橋  
 PW-245 1945001  
 PS-1239

1-104

Aloka		TITLE 名称 UN2 Low Voltage Circuit		MODEL 形名 EP-3240B	1/2
3RD ANGLE PROJECTION 第3角法	DRAWN 製図 八木 裕	DESIGNED 設計	CHECKED 検図	APPD 承認 南76 Yuda 90.4.4	
SCALE 尺度	UNITS 単位	90-3.30	-	-	



Gelbclim  
 ○ se  
 ○ sw  
 ○ green climm

200V系の場合はトランスユニット  
 PTU-020 を使用する

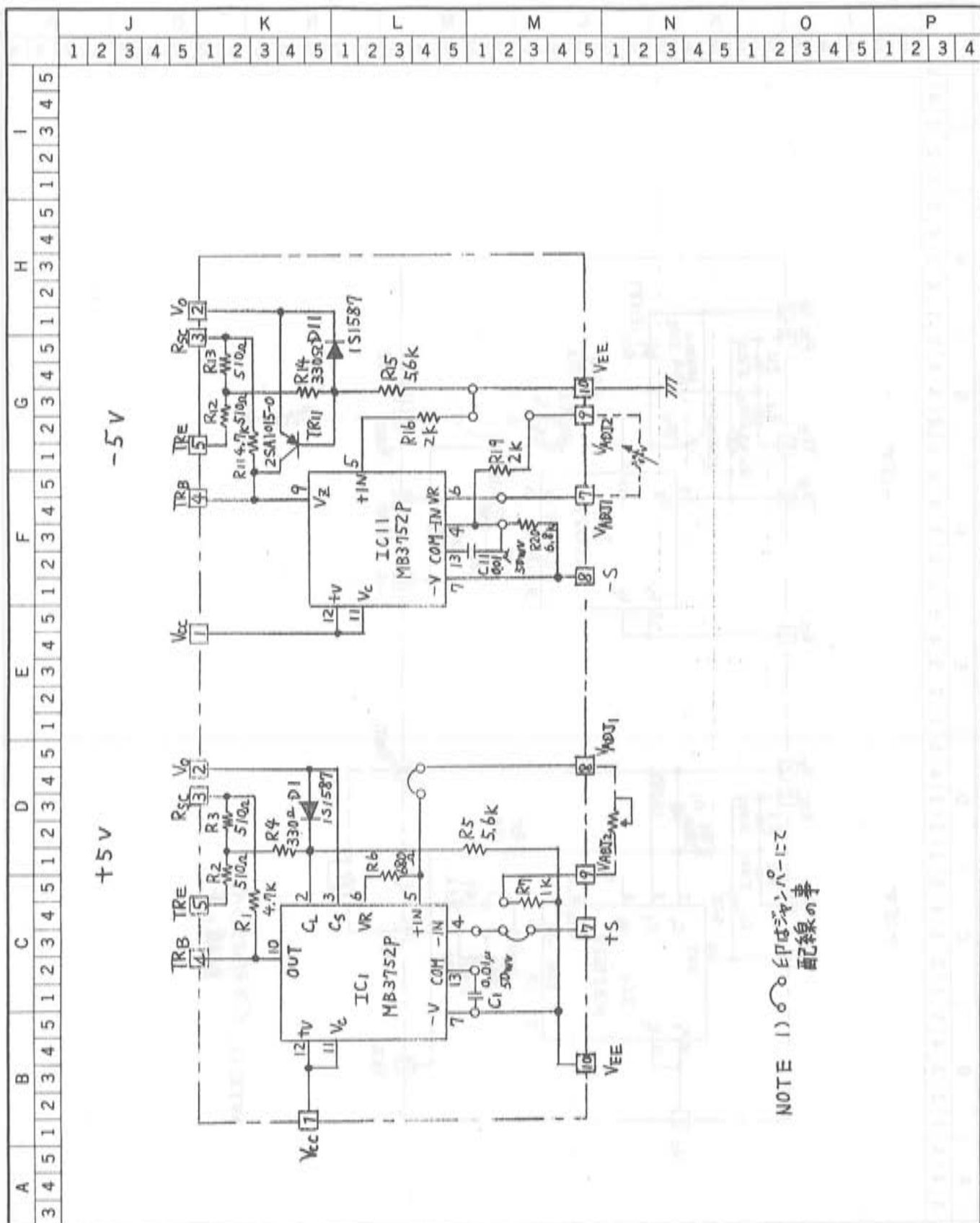
TB501の組線方法

	100V	115V	120V	200V	220V	230V	240V
①	1-7	1-6	1-5	2-7	2-5	3-4	4-5
②	2-8	3-8	4-8	NO CONNECTION			

*Don't touch*

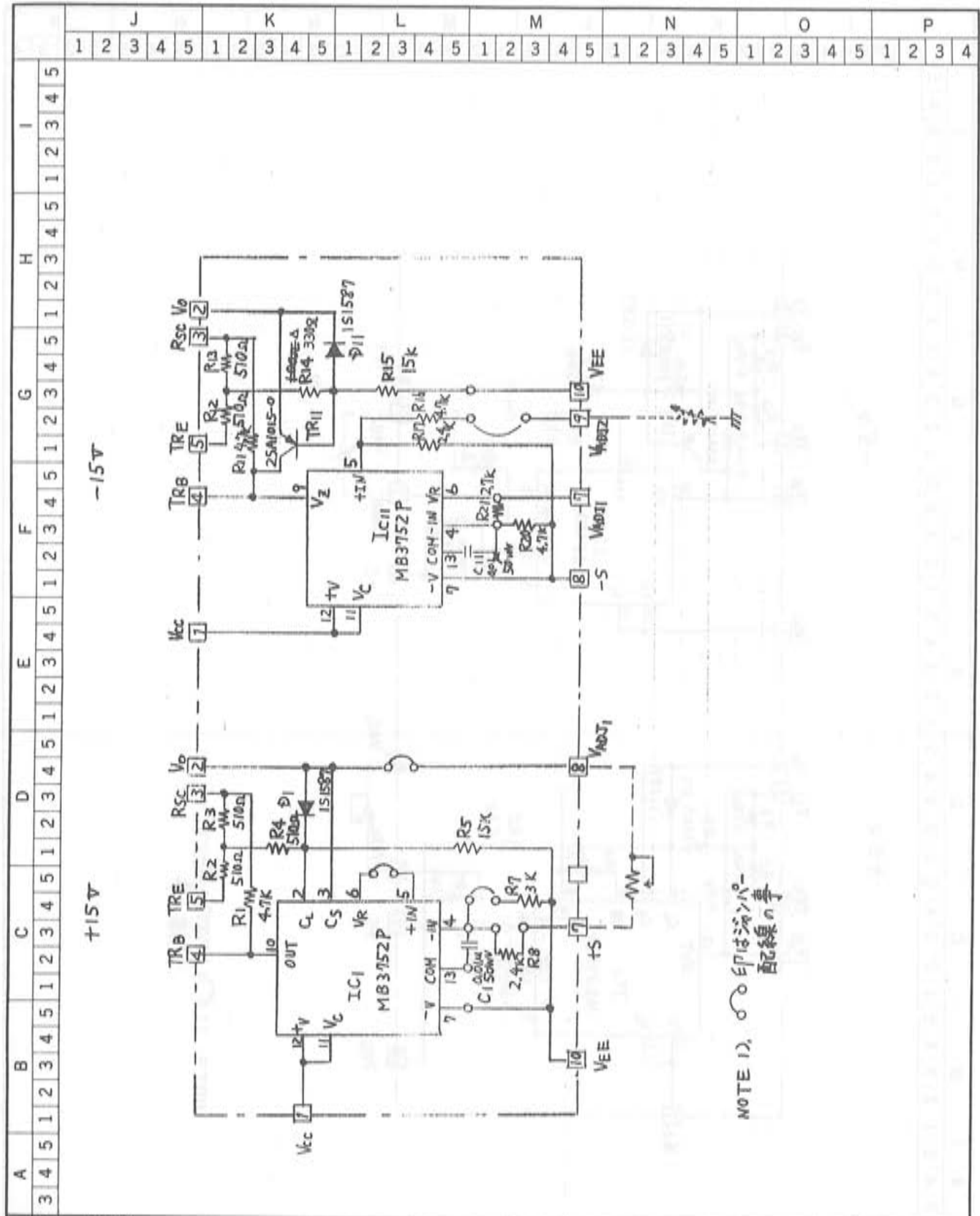
- ① PS-1165
- ② PS-1165
- ③ PS-1165
- ④ PS-1165
- ⑤ PS-1165
- ⑥ PS-1165
- ⑦ PS-1165
- ⑧ PS-1165
- ⑨ PS-1165
- ⑩ PS-1165
- ⑪ PS-1165
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- ㊿ PS-1165

<b>Aloka</b>	TITLE 名称 Power Supply Unit	MODEL 型号 PSU-S680B	1/1
3RD ANGLE PROJECTION 第3角法	DRAWN 図面 DESIGNED 設計 CHECKED 検閲	DESIGNED 設計 CHECKED 検閲	DRAWING NO. 図番 MC202192
SCALE 尺度 UNITS 単位	1:1 mm	DATE 日期 70.9.4	DRAWING NO. 図番 MC202192



NOTE 1) 〇印はジャンパーにて  
配線の事

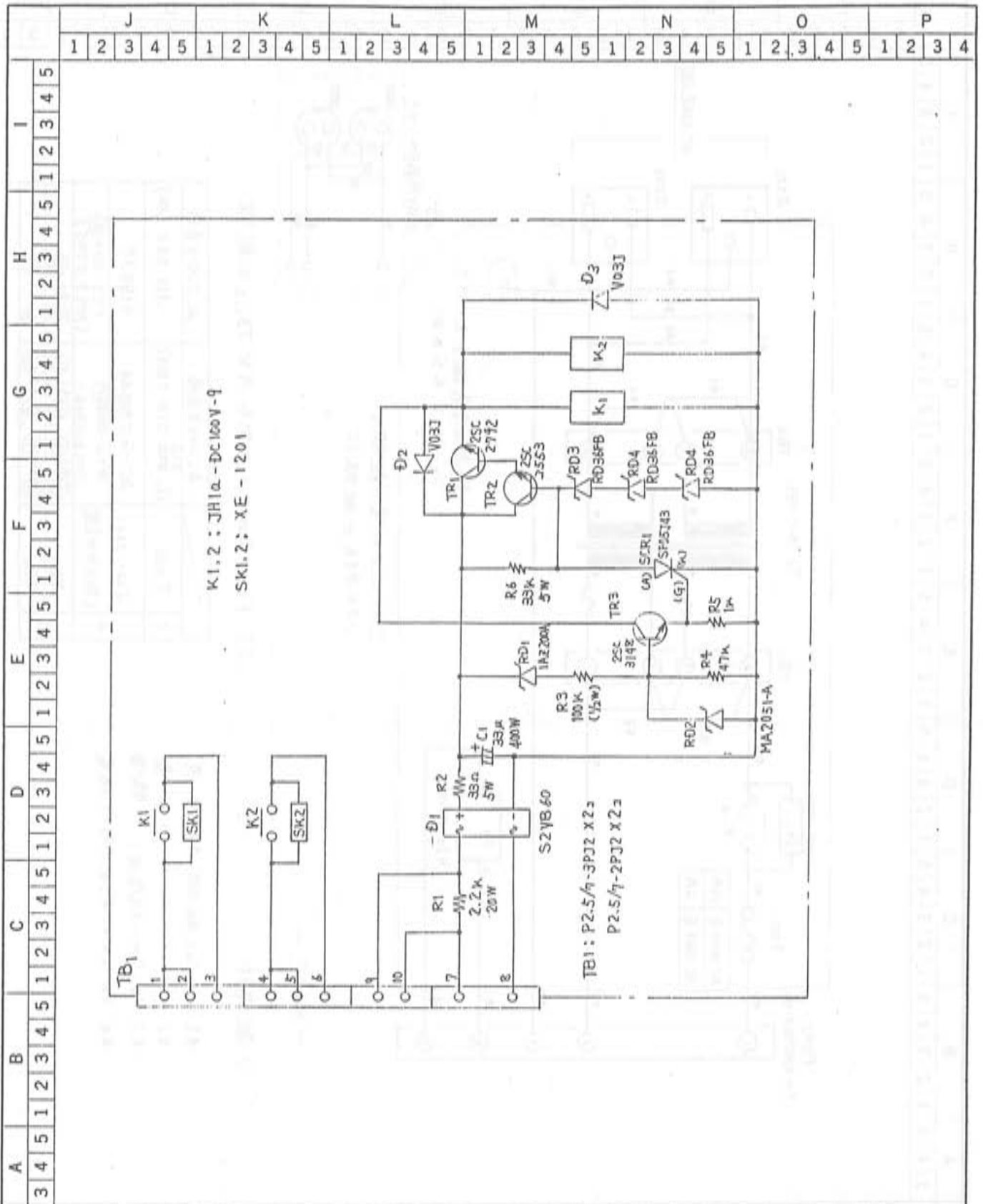
REVISIONS 変更		TITLE 名称		MODEL 形名	
Aloka		±5V Control Unit.		EP-2819C1	
3RD ANGLE PROJECTION 第3角法		DRAWN 製図	DESIGNED 設計	CHECKED 検図	APPD 承認
SCALE 尺度		八不指		7-106	
UNITS 単位		mm			
		DRAWING NO. 図番		MC-401441	



NOTE 1) 〇印は電源配線の事

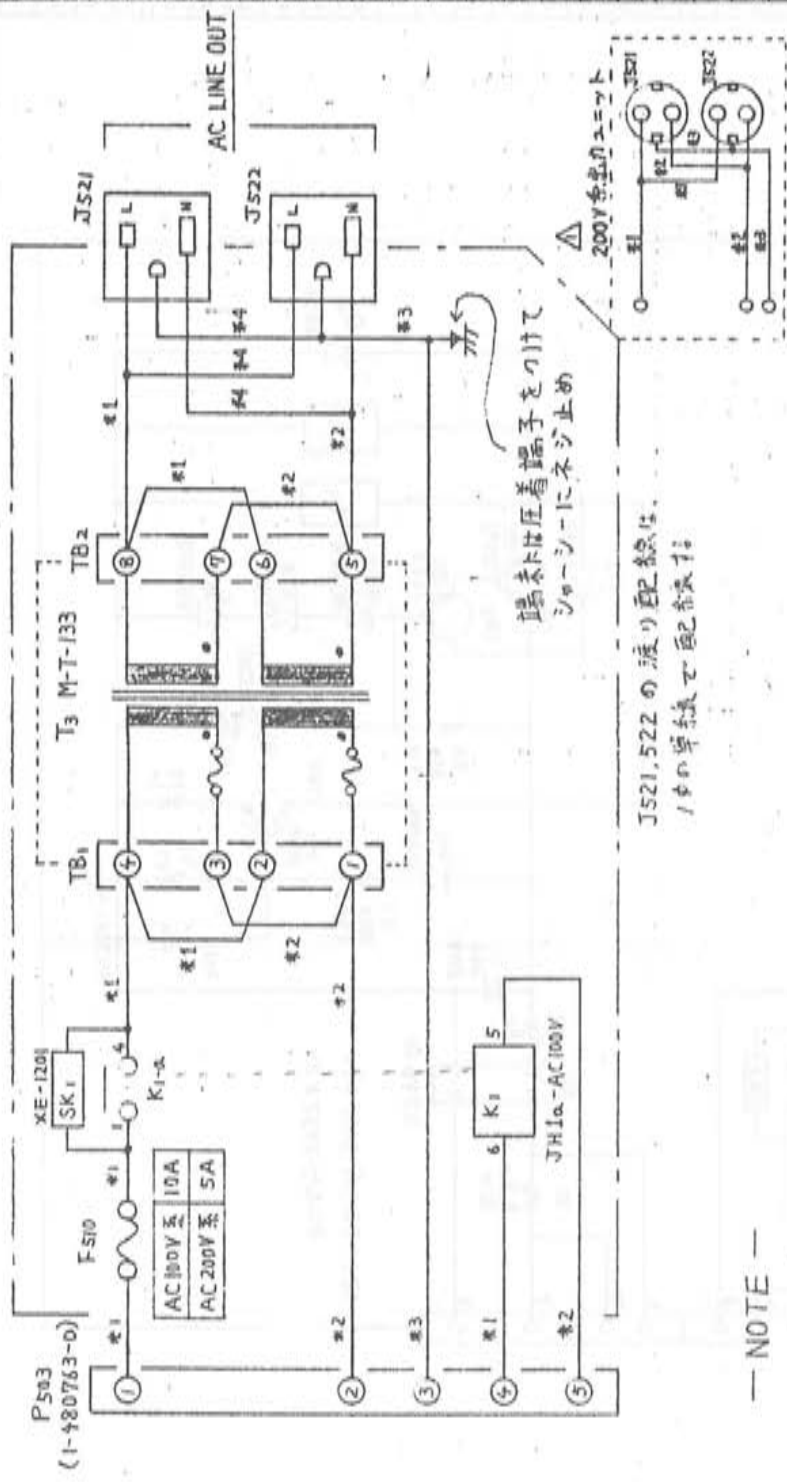
REVISIONS 変更  
 498.8.31 改訂工事  
 PM-122 巻1  
 R14 を 330Ω に変更  
 PS-501 参照

Aloka	TITLE 名称 ±15V Control Unit				MODEL 形名 EP-2819C2	1/1
	3RD ANGLE PROJECTION 第3角法	DRAWN 製図 八不橋	DESIGNED 設計	CHECKED 検図	APPD 承認 7/10 A. A.	
SCALE 尺度	9c-3-30 - - 7-107					
UNITS 単位	mm					



REVISIONS 変更

	TITLE 名称 入力リレー回路 Input Relay circuit			MODEL 形名 EP-2922B	
	1RD-ANGLE PROJECTION 第一角法	DRAWN 製図 DESIGNED 設計 CHECKED 検図 APPD 承認	7-108	DRAWING NO. 図番 MC401413	
SCALE 縮尺 UNITS 単位 mm					



2) F510, J521, 522 の形名及び TB1, 2 の配線

	AC 100V 系用	AC 200V 系用
1 F510	△ 324 334 010 (10A)	313 005 (5A)
2 J521, 522 (取り付け金具)	AC-G10BB44	418037
3 TB1	PTU-004(5) (MH310704)	PTU-004(6) (MH310705)
	① ② ③, ④ ⑤ ⑥ ⑦, ⑧	① ② ③, ④ ⑤ ⑥ ⑦ ⑧

— NOTE —

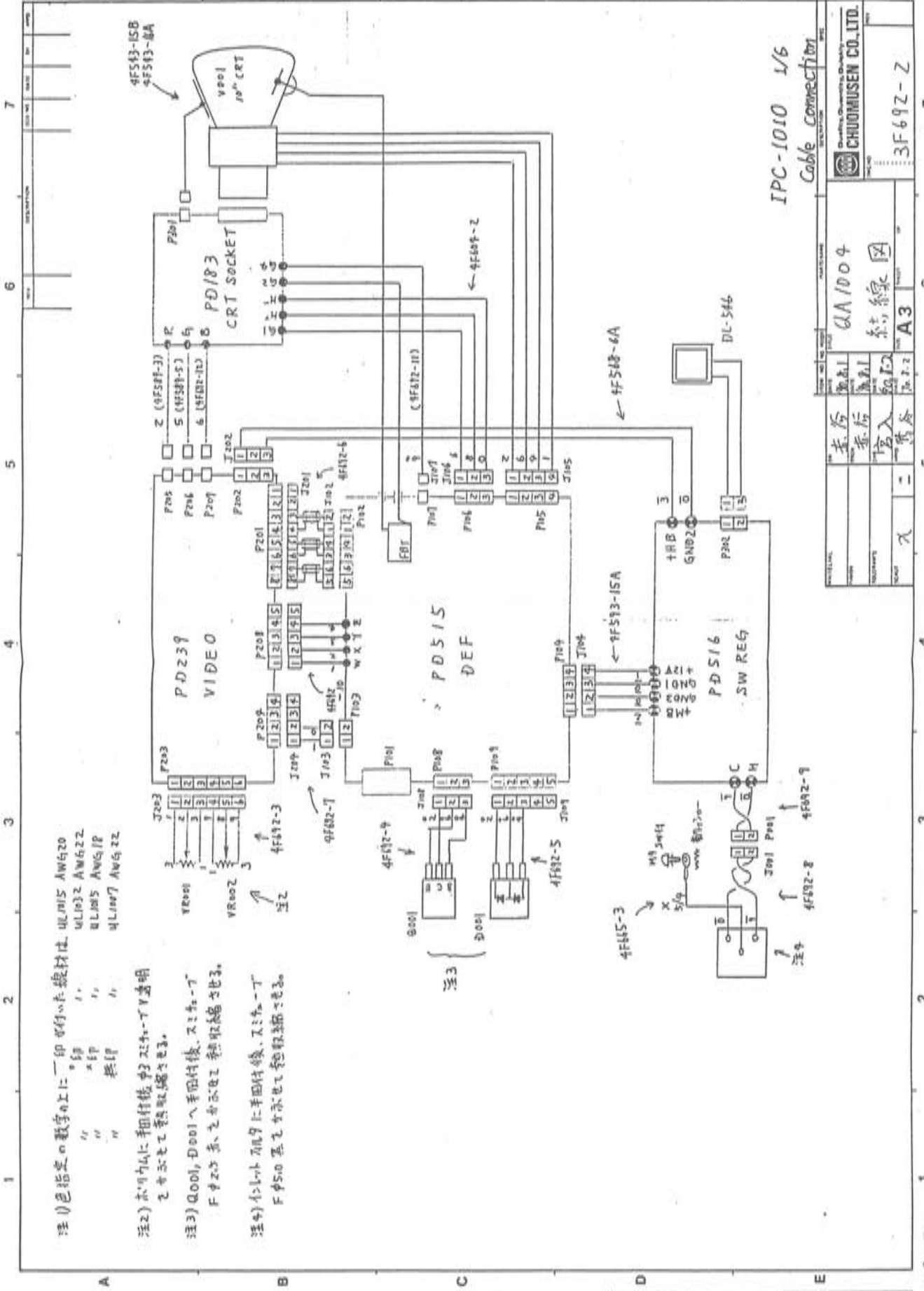
1) 配線材

- \*1 UL Cat No. 1015 AWG 18 茶 青
- \*2 “ “ “ “ 緑/黄
- \*3 WL2H-50/0.18
- \*4 1φ ストック線にケーブル被覆

REVISIONS 変更  
△ 61.3.25 仕様  
③ PS-828 参照

Aloka	TITLE 名称 TRANSFORMER UNIT				MODEL 形名 PTU-004
	3RD ANGLE PROJECTION 第3角法	DRAWN 製図	DESIGNED 設計	CHECKED 検図	APPD 承認
SCALE 尺度					DRAWING NO. 図番 MC 401028
UNITS 単位	mm				





注1) 色指定の数字の上に「印」の付いた線材は、使用S AWG20  
 UL1032 AWG22  
 UL1005 AWG18  
 UL1007 AWG22

注2) 本図中に「印」の付いた線材は、V線明  
 電線として取扱ってください。

注3) D001, D001へ半田付後、スリット  
 Fの端子系、電線が電圧を吸収する  
 注4) 本図に示した端子は半田付後、スリット  
 Fの端子系、電線が電圧を吸収する

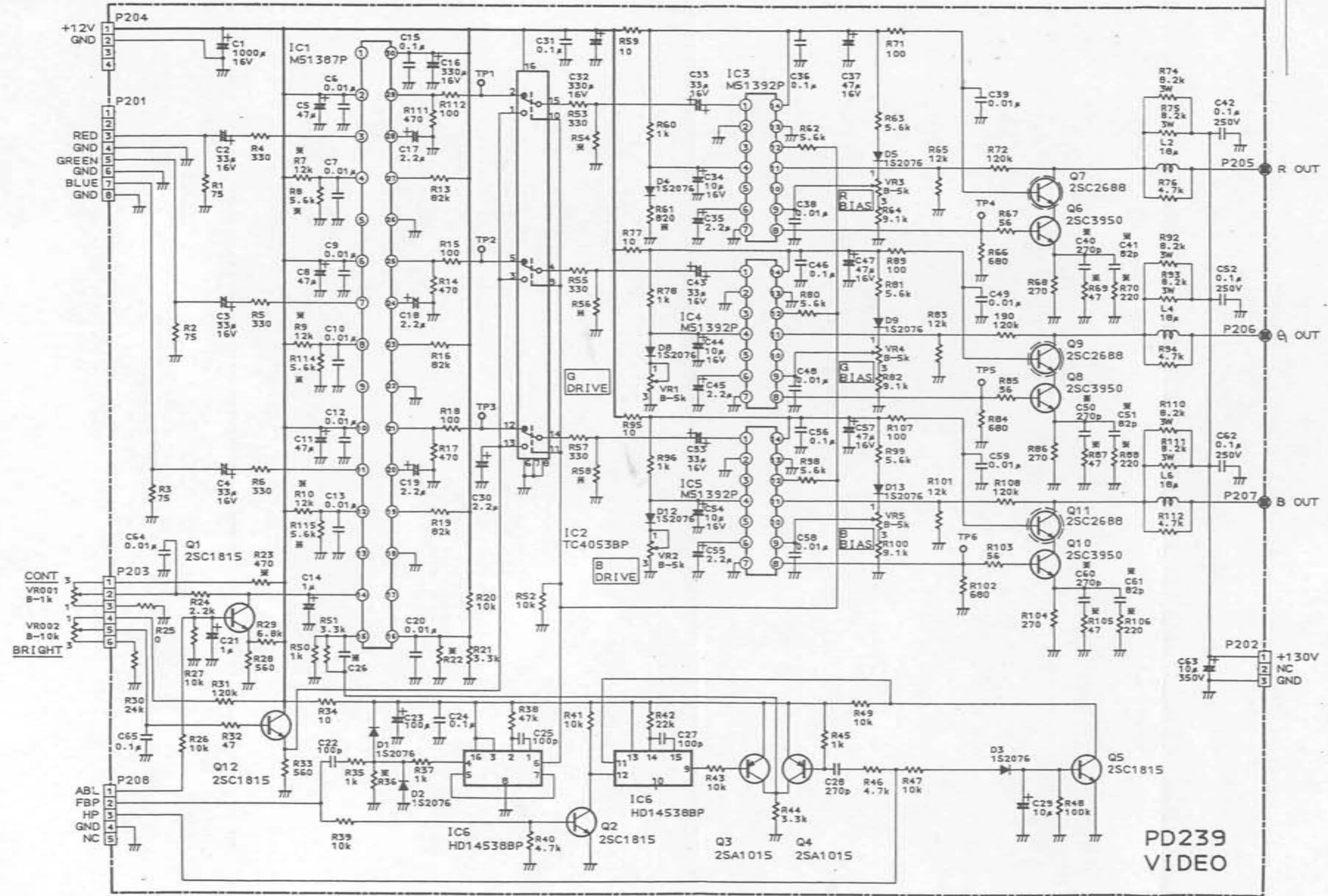
IPC-1010 1/6

Cable connection

品名	GA1004
メーカー	株式会社 結線図
納入先	5012
納入日	7.7.2
納入場所	A3
納入品番	3F692-Z



REV	DESCRIPTION	ECO. NO.	DATE	BY	APPO.
A	CHG: R63, R64 etc		92.6.17	J.A.	



- NOTES
- All capacitors are 50WV unless otherwise noted. Unit is in FARAD (F).
  - All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
  - Components marked with M are subject to change without notice.
  - Semiconductors may be changed for equivalent ones.

IPC-1010 2/6  
Video circuit

7-111

MATERIAL	DATE	ITEM NO.	NO. RECD	TITLE	PARTS NAME	DESCRIPTION	SPEC
DR	92.6.17			K. Fukuda	QA1004,-01	VIDEO	
DSGN	92.6.17			J. Akatani	VIDEO		
CHK	92.6.18			T. Koyama	CIRCUIT DIAGRAM		
APPO	92.6.18			M. Inamura			

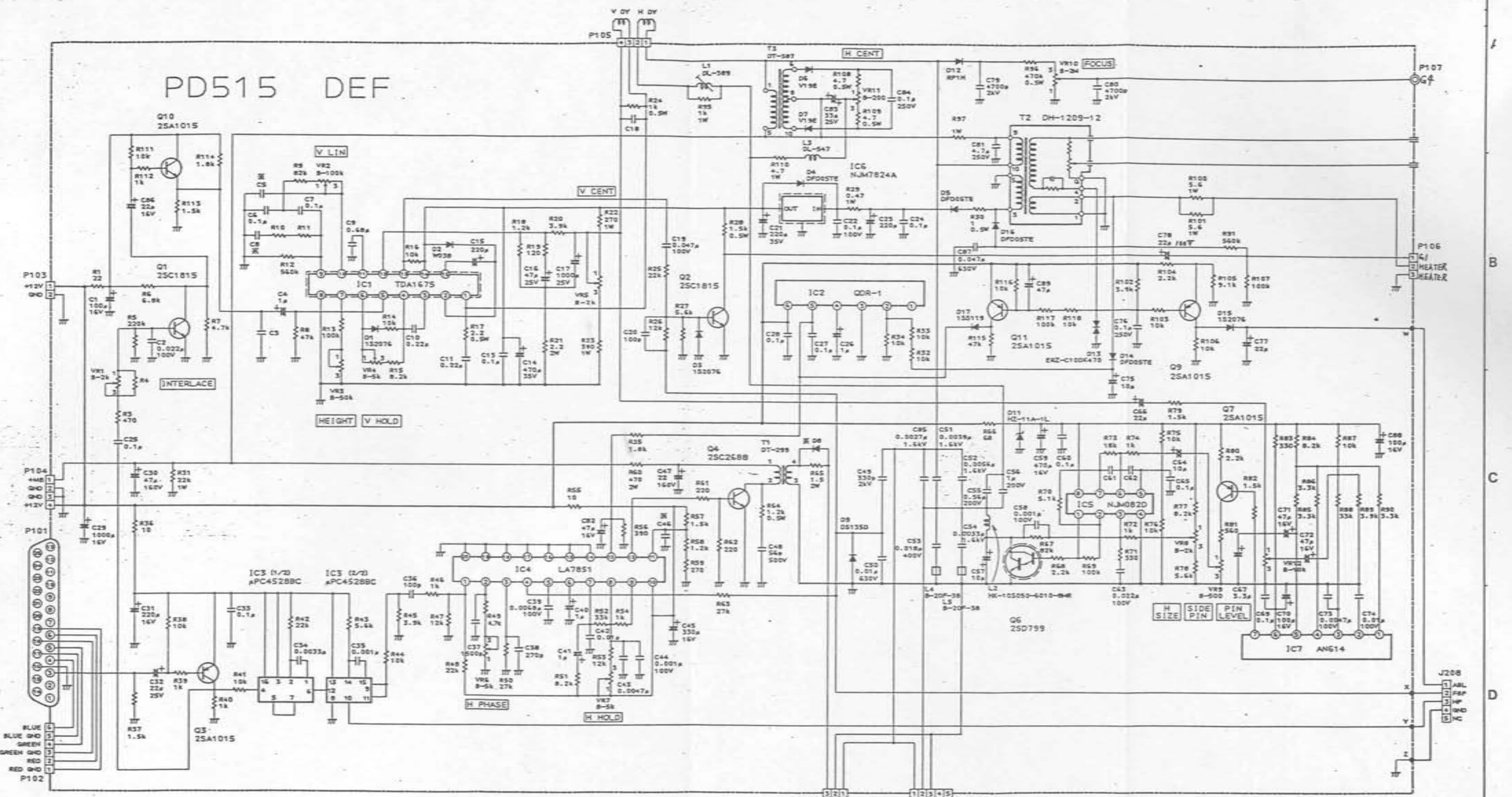
SCALE	A 3	SHEET	1	OF	1
E: 3A692-202					



CHUOMUSEN CO., LTD.  
3A692-202

REV	DESCRIPTION	ECO. NO.	DATE	BY	APPD
6	ADD: Q11, D17, R105, R116, R117, etc.	EC 1592	12.9.21	J.A	

# PD515 DEF



- NOTES**
1. All capacitors are 50WV unless otherwise noted. Unit is in FARAD (F).
  2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
  3. Components marked with Ⓜ are subject to change without notice.
  4. Semiconductors may be changed for equivalent ones.
  5. Ⓜ: Fixed Metal Film Resistor.

7-112

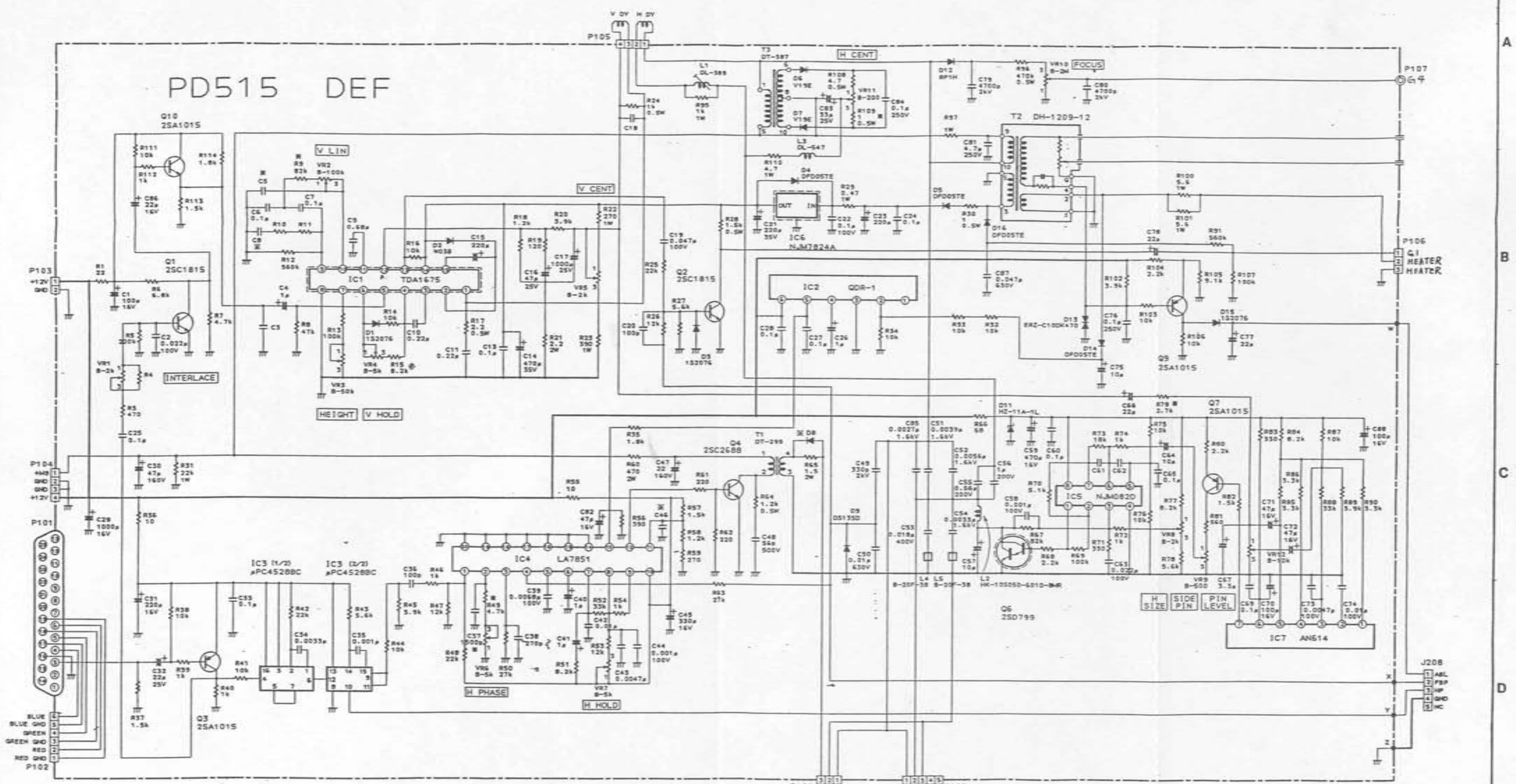
IPC-1010 3/6  
DEF circuit for NTSC

MATERIAL	DR	DATE	ITEM NO.	NO. REQD.	PART NAME	DESCRIPTION	SPEC
	J. Kobayashi	12.4.21			QA1004	DEF	
	J. Kobayashi	12.4.21			CIRCUIT DIAGRAM		
	T. Kobayashi	12.4.21					
		12.4.22					

SCALE	A2	SHEET	OF	
E 2A692-201				B

# PD515 DEF



- NOTES**
1. All capacitors are 50WV unless otherwise noted. Unit is in FARAD (F).
  2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
  3. Components marked with ✕ are subject to change without notice.
  4. Semiconductors may be changed for equivalent ones.
  5. (M): Fixed Metal Film Resistor

IPC-1010 4/6  
DEF circuit for PAL

7-113

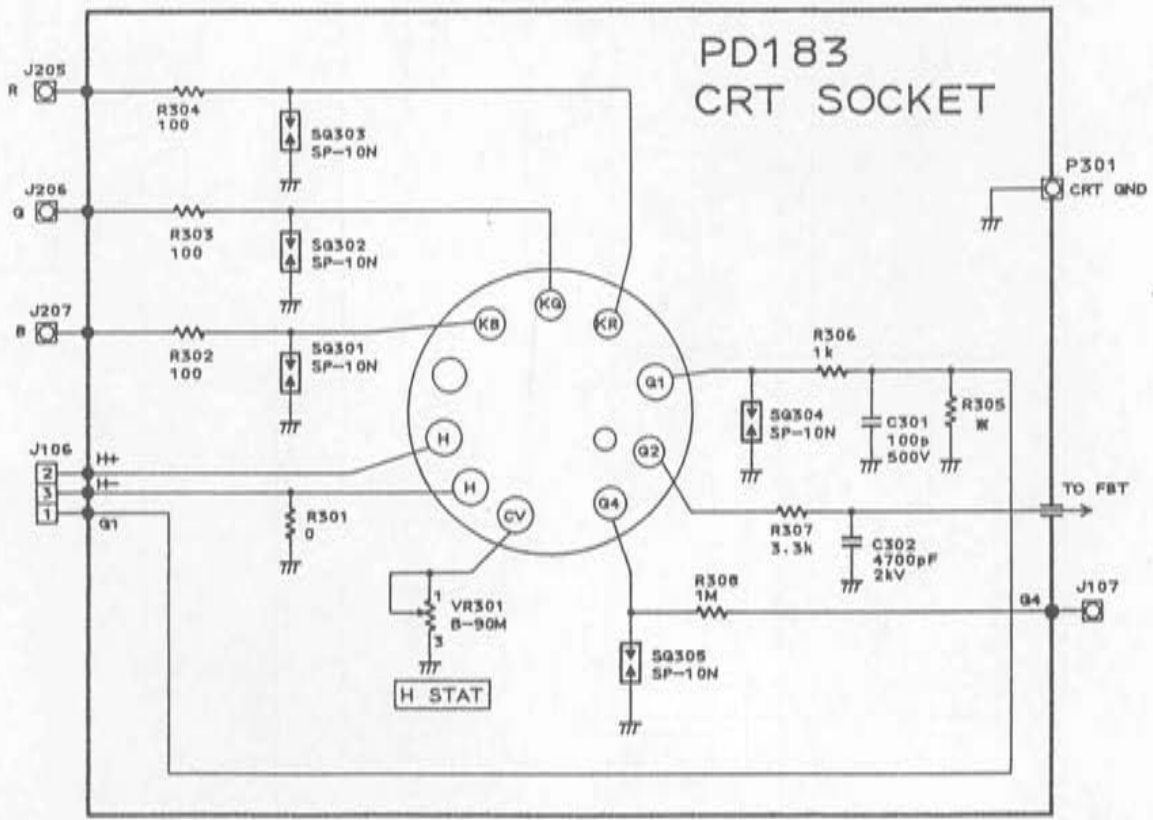
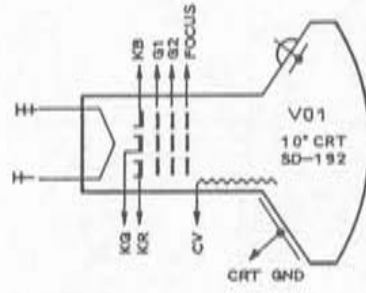
MATERIAL	DATE	ITEM NO.	NO. REV.	TITLE	PART NAME	DESCRIPTION	SPEC.
					QA1004-01	DEF	
					CIRCUIT DIAGRAM		
					A2		

<p>3Q CHUOMUSEN CO., LTD.</p>	<p>REV. NO. E</p> <p>DATE 70.11.6</p> <p>DATE 70.11.6</p> <p>DATE 70.11.6</p> <p>DATE 70.11.6</p>
-----------------------------------	---

E: 2A692-205

REV	DESCRIPTION	ECO. NO	DATE	BY	APPD



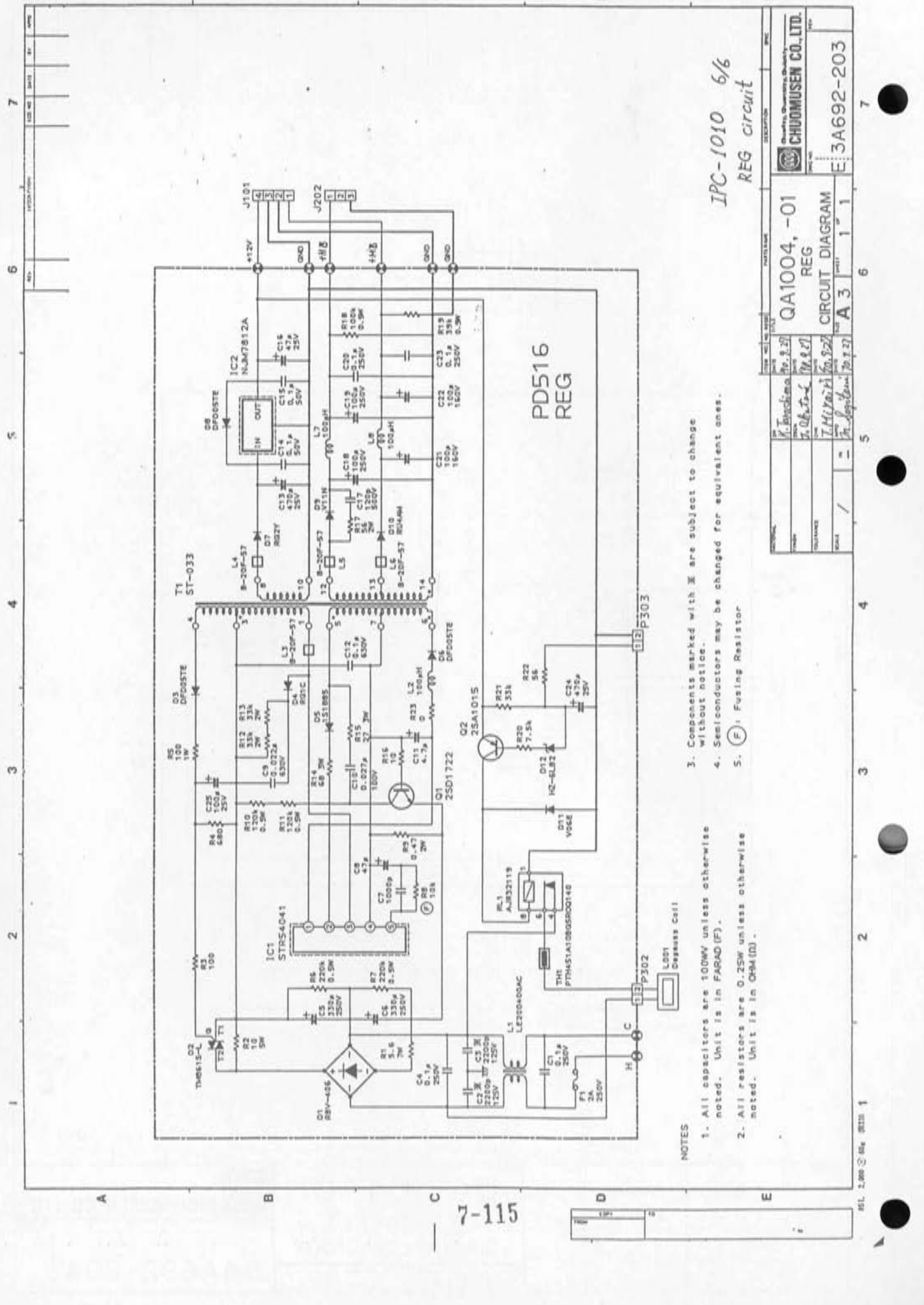
NOTES

1. All resistors are 0.5W unless otherwise noted. Unit is in OHM ( $\Omega$ ).
2. Components marked with \* are subject to change without notice.
3. Semiconductors may be changed for equivalent ones.

IPC-1010 5/6  
CRT socket circuit

MATERIAL	OR	DATE	TITLE	DESCRIPTION	SPEC
	K. Takahima	90.10.1	QA1004,-01	<b>CHUOMUSEN CO., LTD.</b>	
FINISH	OSGN	DATE	CRT SOCKET		DWG NO.
TOLERANCE	CHK	DATE	CIRCUIT DIAGRAM		REV
SCALE	APPD	DATE	7-114	E 4A692-204	
	M. Sanitani	90.10.3			

404  
 404  
 TO



- NOTES
1. All capacitors are 100WV unless otherwise noted. Unit is in FARAD (F).
  2. All resistors are 0.25W unless otherwise noted. Unit is in Ohm (Ω).
  3. Components marked with X are subject to change without notice.
  4. Semiconductors may be changed for equivalent ones.
  5. (F) : Fusing Resistor

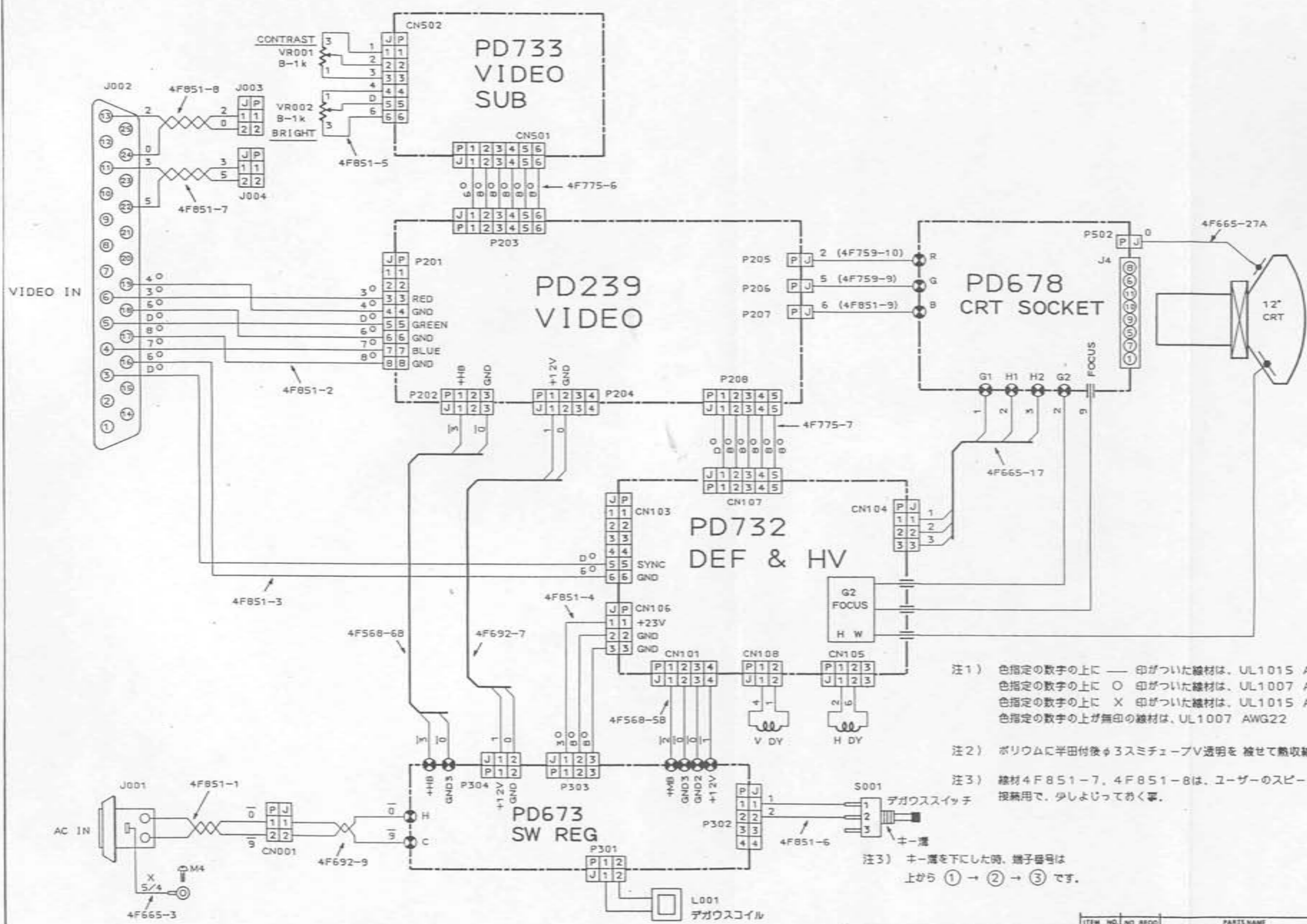
IPC-1010 6/6  
REG circuit

REV	DATE	BY	CHK
1	20.8.27		
2	20.8.27		
3	20.9.22		
4	20.9.27		

QA1004, -01  
REG  
CIRCUIT DIAGRAM

CHODIMUSEN CO., LTD.

E3A692-203



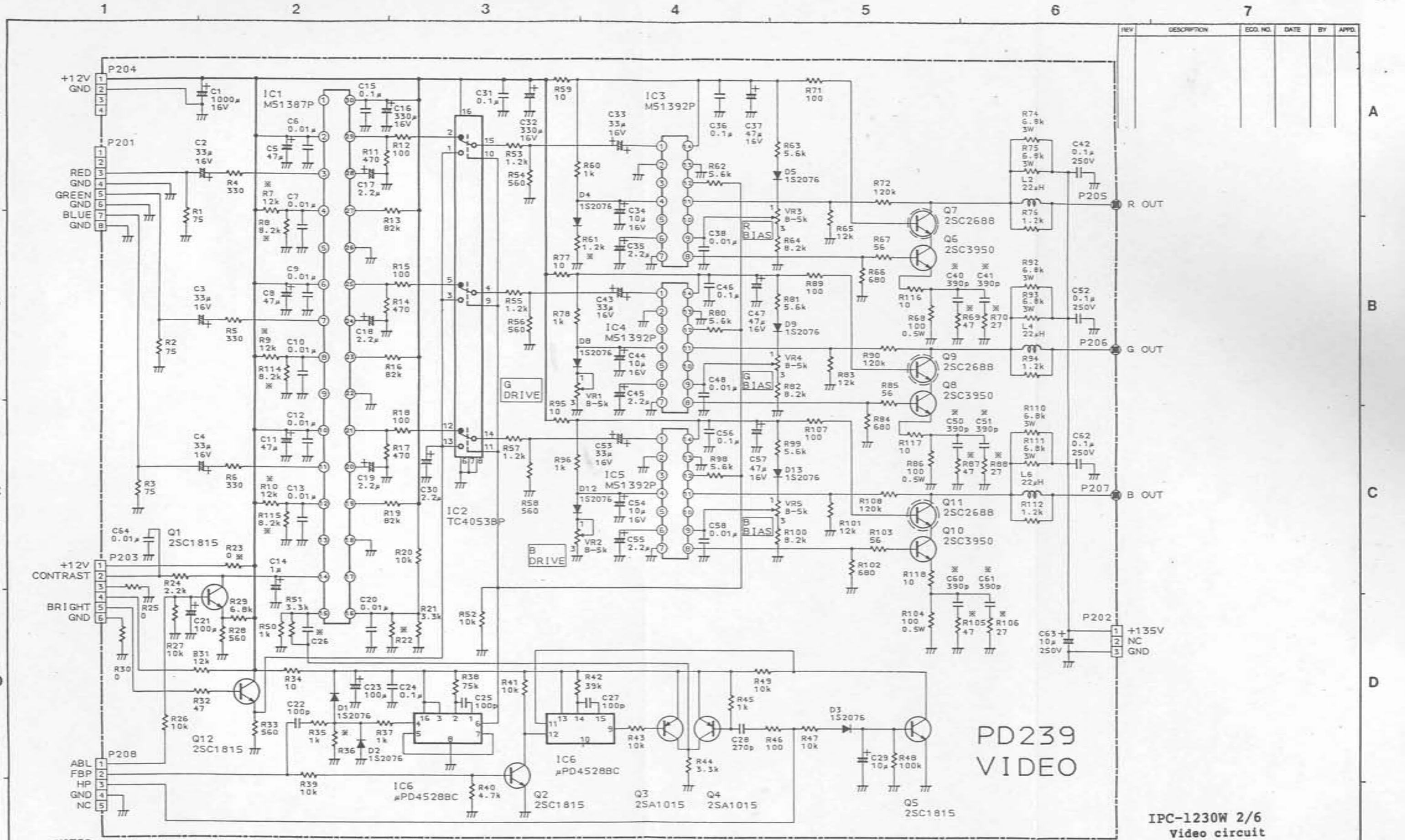
- 注1) 色指定の数字の上に — 印がついた線材は、UL1015 AWG20  
 色指定の数字の上に O 印がついた線材は、UL1007 AWG26  
 色指定の数字の上に X 印がついた線材は、UL1015 AWG18  
 色指定の数字の上が無印の線材は、UL1007 AWG22
- 注2) ポリウムに半田付後φ3スミチューブV透明を被せて熱収縮させる。
- 注3) 線材4F851-7、4F851-8は、ユーザーのスピーカ  
 接続用で、少しよじっておく事。
- 注3) デガウススイッチ  
 キー連
- 注3) キー連を下にした時、端子番号は  
 上から ① → ② → ③ です。

IPC-1230W 1/6  
 Cable connection

7-116

MATERIAL	DR	DATE	ITEM NO.	NO. REQD.	PARTS NAME	DESCRIPTION	SPEC.
FINISH	DESIGN	DATE	QA1214			Quality, Quantity, Quickly	
TOLERANCE	CHEK	DATE	CONNECTION DIAGRAM			<b>CHUOMUSEN CO., LTD.</b>	
SCALE	APPD.	DATE	A 3	SHEET 1 OF 1		DWG NO.	REV
						E 3A851-401	





REV	DESCRIPTION	ECO. NO.	DATE	BY	APPD.

- NOTES
1. All capacitors are Unit is in FARAD (F). 50WV unless otherwise noted.
  2. All resistors are Unit is in OHM (Ω). 0.25W unless otherwise noted.
  3. Components marked with ✕ are subject to change without notice.
  4. Semiconductors may be changed for equivalent ones.

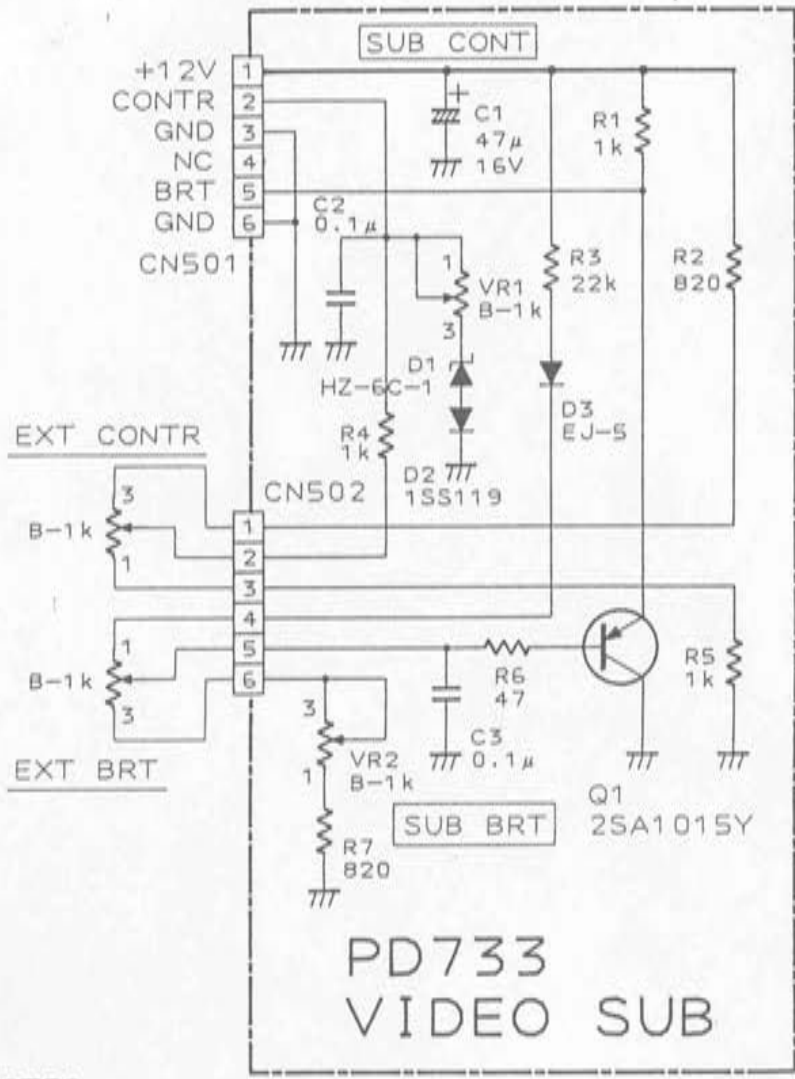
7-117

PD239  
VIDEO

IPC-1230W 2/6  
Video circuit

MATERIAL	DR	DATE	ITEM NO.	NO	REQD	PARTS NAME	DESCRIPTION	SPC
	T. Kobayashi	92.7.15				QA1214	Quality, Quantity, Quickly	
	J. Ohno	92.7.15				VIDEO	<b>CHUOMUSEN CO., LTD.</b>	
	R. Tanemura	92.7.15				CIRCUIT DIAGRAM		
	M. Matsuda	92.7.16						

REV	DESCRIPTION	ECO. NO	DATE	BY	APP'D



PD733  
VIDEO SUB

NOTES

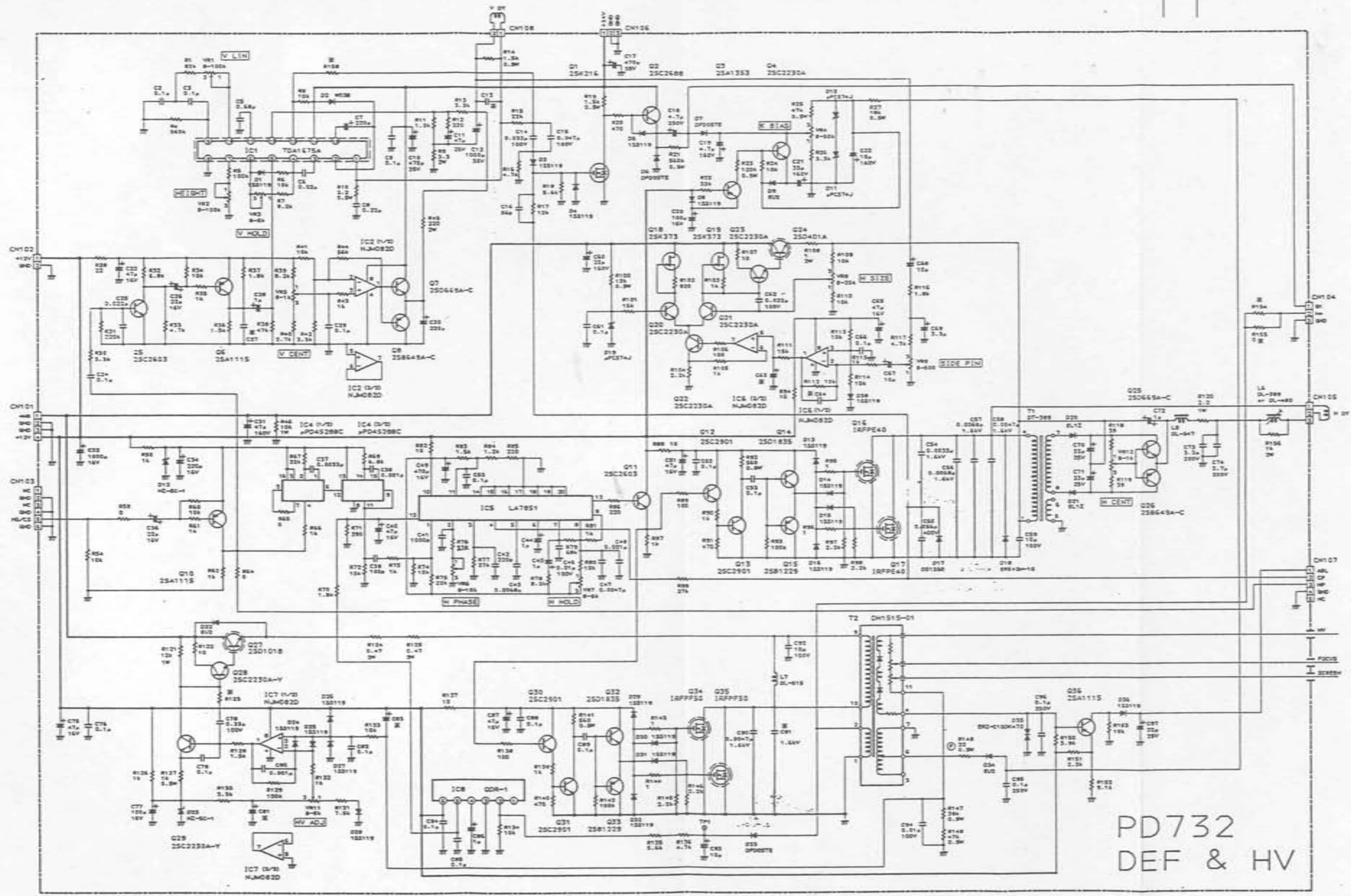
1. All capacitors are 50WV unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM ( $\Omega$ ).
3. Semiconductors may be changed for equivalent ones.

7-118

IPC-1230W 3/6  
Video sub circuit

MATERIAL	DATE	NO REQD	PART NAME	DESCRIPTION	SPEC
	T. Kobayashi 92.7.15		QA1214	Quality, Quantity, Quickly	
FINISH	T. Akutani 92.7.15		VIDEO SUB	<b>CHUOMUSEN CO., LTD.</b>	
TOLERANCE	R. Tsunemi 92.7.15		CIRCUIT DIAGRAM	DWG NO.	
SCALE 1	m. maruta 92.7.16		A4	E 4A851-203	

REV	DESCRIPTION	ECO NO.	DATE	BY	APPD
A	CHG: R110, R76, VR2, VR8		92.9.3	J.A	



PD732  
DEF & HV

- NOTES
1. All capacitors are 50WV unless otherwise noted. Unit is in FARAD (F).
  2. All resistors are 0.25W unless otherwise noted. Unit is in OHM ( $\Omega$ ).
  3. Components marked with  $\times$  are subject to change without notice.
  4. Semiconductors may be changed for equivalent ones.
  5.  $\text{\textcircled{F}}$  : Fuse Resistor

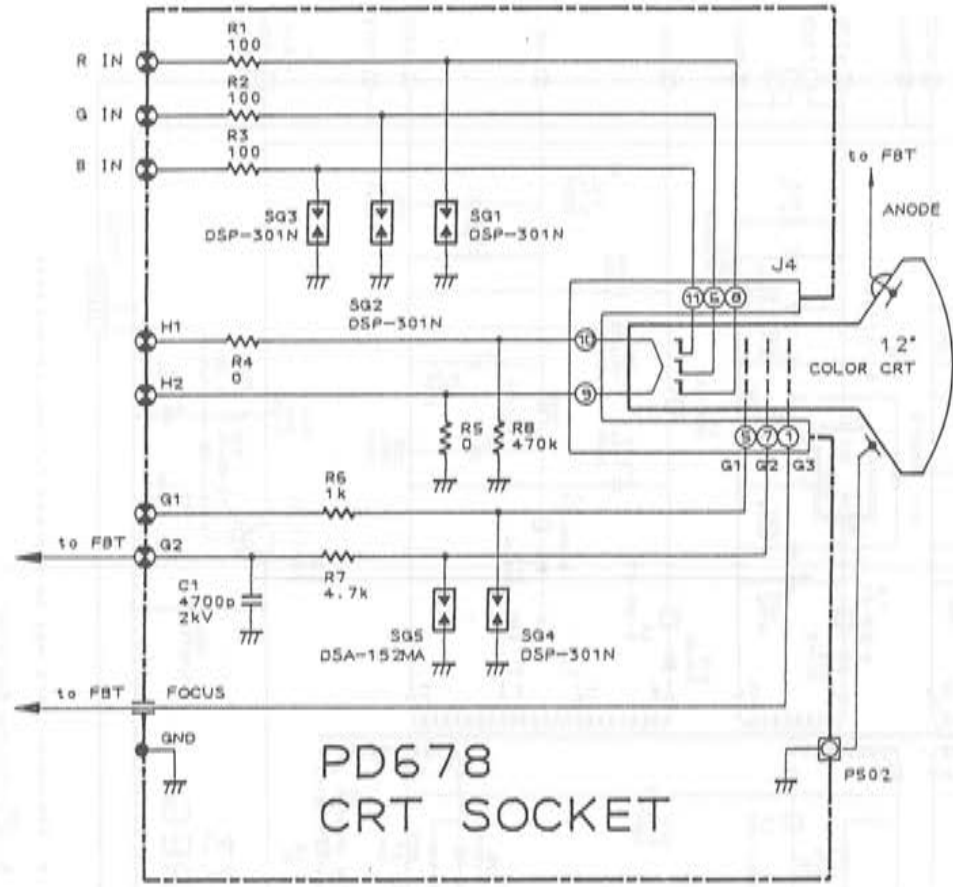
IPC-1230W 4/6  
DEF & HV circuit

7-119

MATERIAL	DR	DATE	ITEM NO.	NO. REQD.	PART NAME	DESCRIPTION	SPEC.
	J. Kobayashi	92.9.2	QA1214		DEF & HV		
	J. Oketani	92.9.2			CIRCUIT DIAGRAM		
	T.F. Jimoto	92.9.3					
	m. m. m. m. m.	92.9.4					
SCALE /			A2		SHEET OF		E: 2A851-201



REV	DESCRIPTION	ECO NO	DATE	BY	APPD




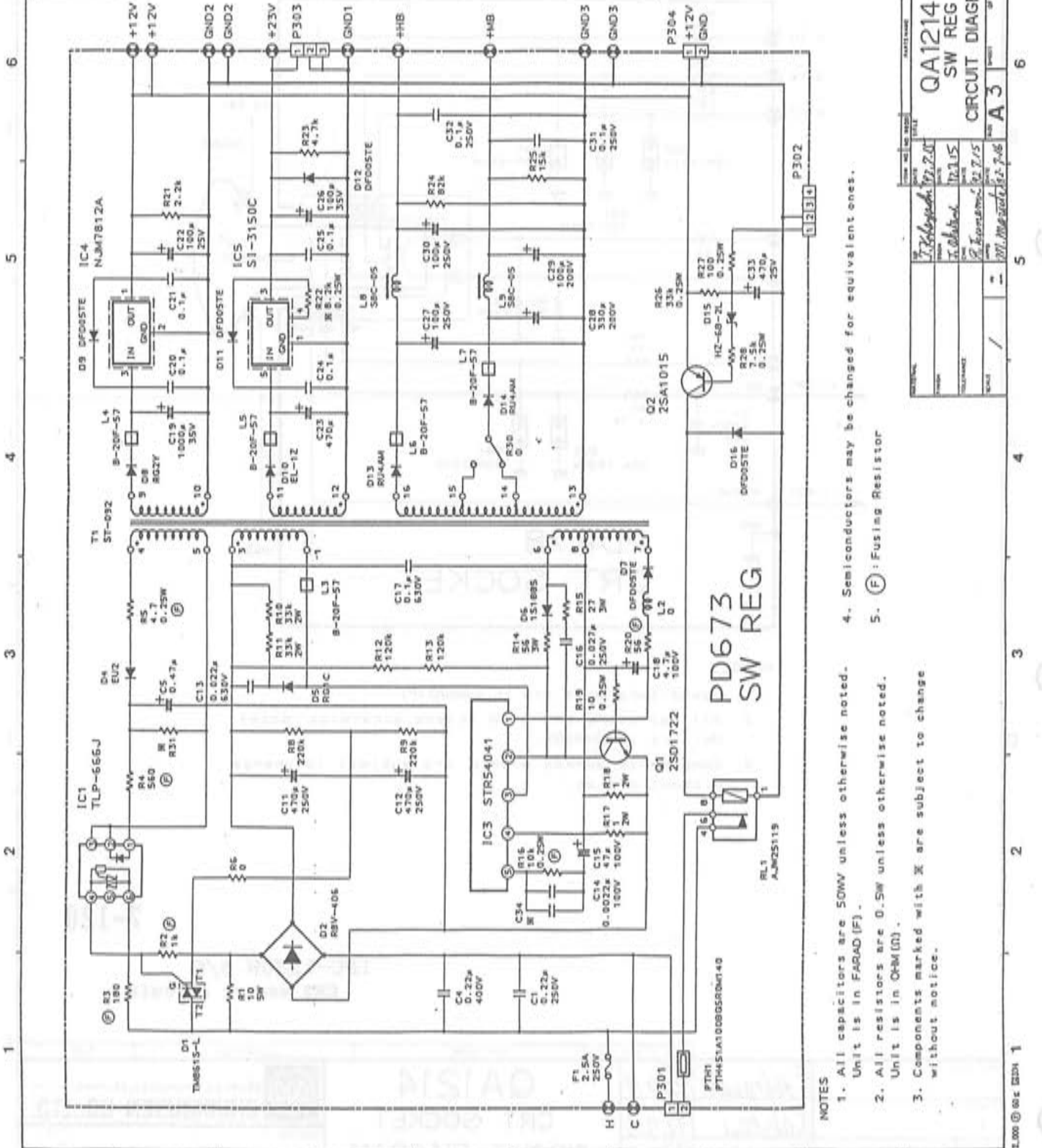
NOTES

1. Capacitors Unit are in FARAD (F).
2. All resistors are 0.5W unless otherwise noted. Unit is in OHM ( $\Omega$ ).
3. Components marked with \* are subject to change without notice.

7-120

IPC-1230W 5/6  
CRT socket circuit

MATERIAL	DR	DATE	TITLE	PART NAME	DESCRIPTION	QFC
	J. Kobayashi	92.7.15	QA1214	CRT SOCKET	 <b>CHUOMUSEN CO., LTD.</b>	
FINISH	J. Akutani	92.7.15	CRT SOCKET	CIRCUIT DIAGRAM		DWG NO
TOLERANCE	CHK	DATE				
SCALE	APPD	DATE				
1	m. maruti	92.7.16	A4	SHEET OF	E 4A851-205	



**NOTES**

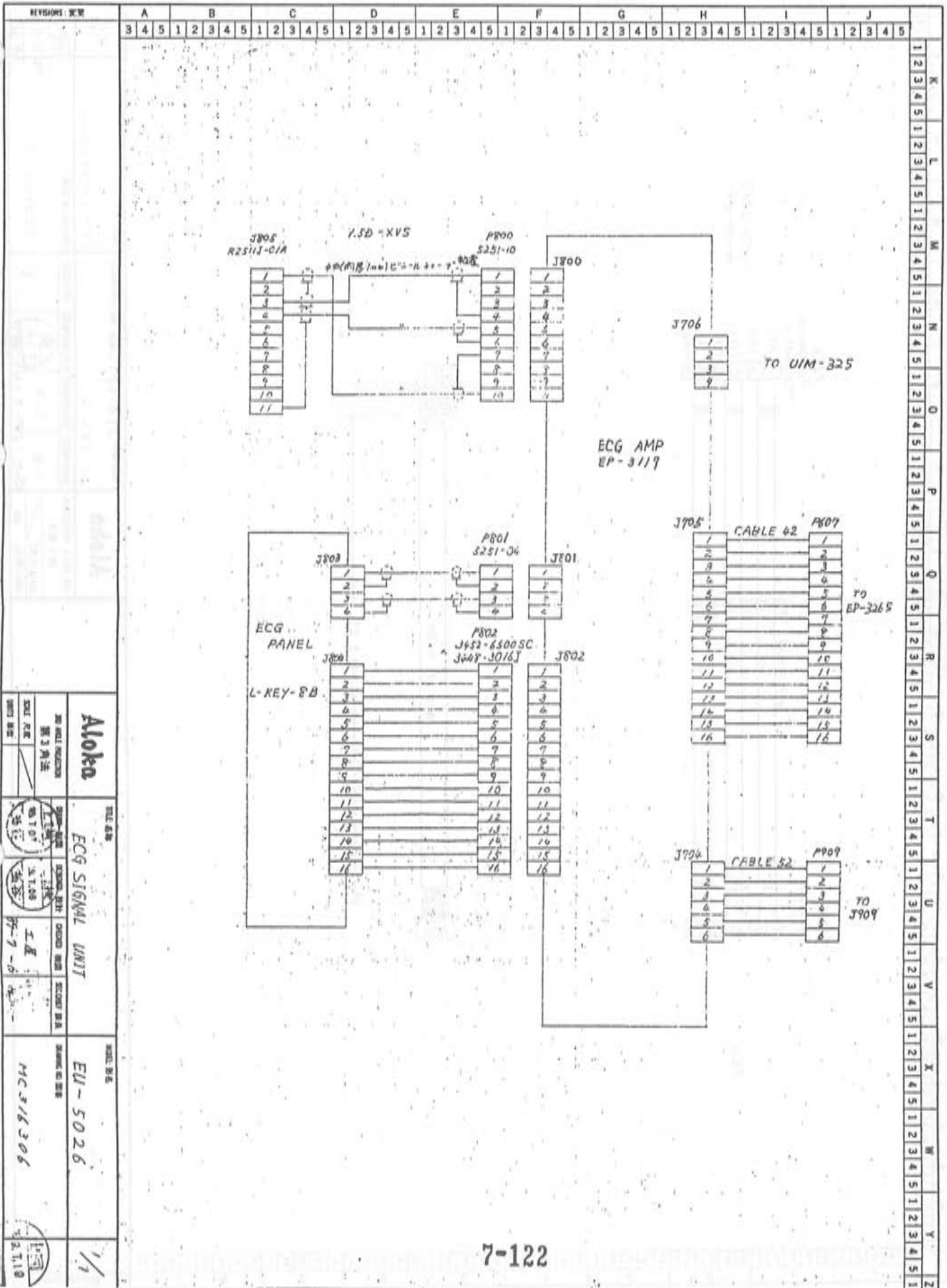
1. All capacitors are 50WV unless otherwise noted. Unit is in FARAD [F].
2. All resistors are 0.5W unless otherwise noted. Unit is in OHM [Ω].
3. Components marked with X are subject to change without notice.
4. Semiconductor may be changed for equivalent ones.
5. (F): Fusing Resistor

QUALITY ASSURANCE DEPARTMENT  
CHUOMUSEN CO., LTD.

QA1214  
SW REG  
CIRCUIT DIAGRAM

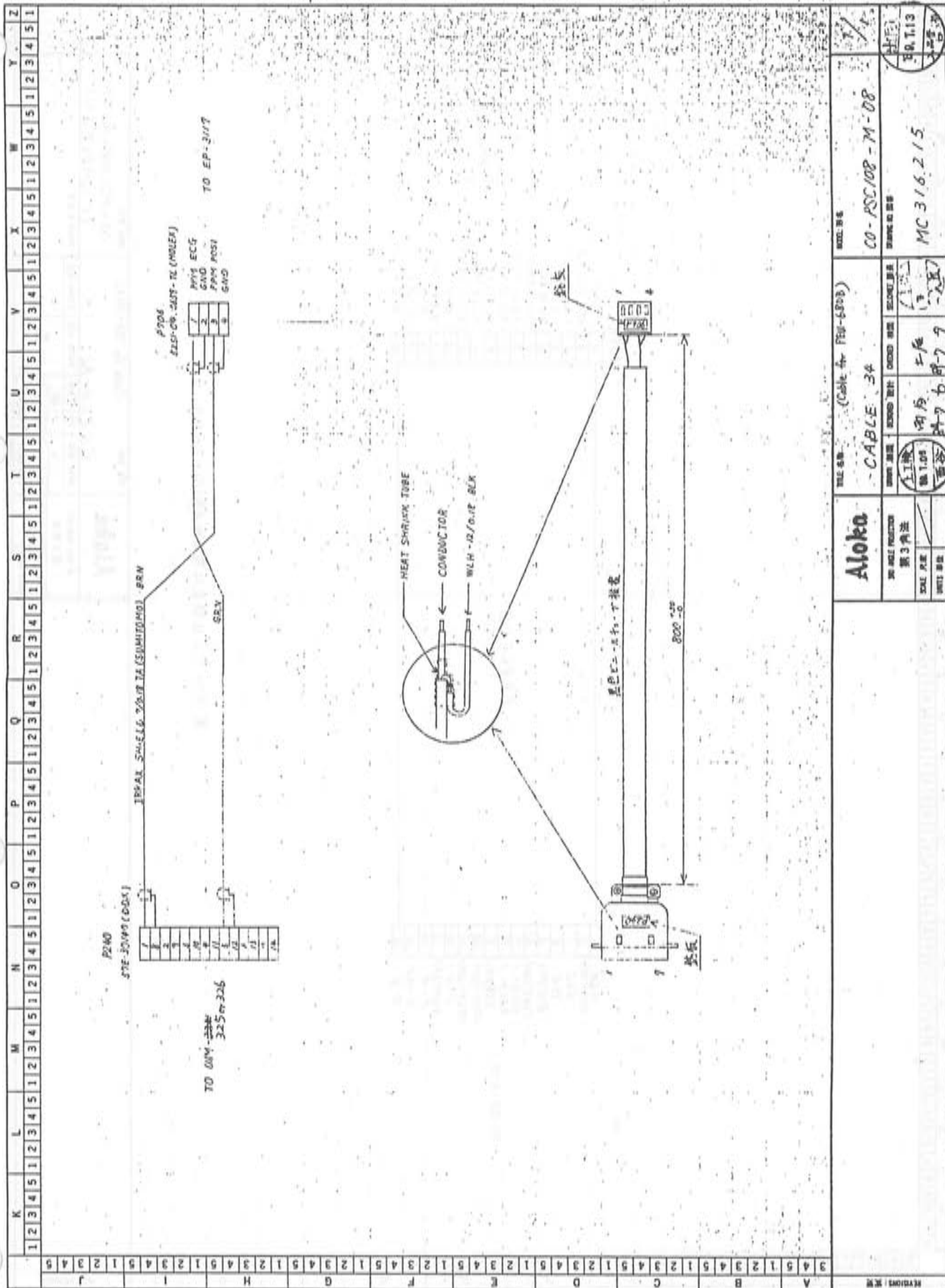
REV. 1  
REV. 2  
REV. 3  
REV. 4  
REV. 5

DATE: 6/6  
BY: [ ]



REVISED: 8/57		Aloka		TEL. 638	
NO. AND LOCATION OF THIS DRAWING		ECG SIGNAL UNIT		MODEL NO.	
DRAWN BY		CHECKED BY		EU-5026	
DATE		DATE		MC-316306	
BY		BY		1/1	
APPROVED BY		APPROVED BY		12.1.18	





REV. NO.	REV. NO.	REV. NO.	REV. NO.
1	1	1	1
DATE	DATE	DATE	DATE
1968.11.13	1968.11.13	1968.11.13	1968.11.13
BY	BY	BY	BY
MC 316.215	MC 316.215	MC 316.215	MC 316.215
NO.	NO.	NO.	NO.
CO-PSC108-M-08	CO-PSC108-M-08	CO-PSC108-M-08	CO-PSC108-M-08

Aloko		CABLE 34	
NO. HOLE POSITION	NO. HOLE POSITION	NO. HOLE POSITION	NO. HOLE POSITION
第3孔注	第3孔注	第3孔注	第3孔注
SCALE 1:1	SCALE 1:1	SCALE 1:1	SCALE 1:1
DATE	DATE	DATE	DATE
1968.11.13	1968.11.13	1968.11.13	1968.11.13
BY	BY	BY	BY
MC 316.215	MC 316.215	MC 316.215	MC 316.215



	K		L		M		N		O		P		Q		R		S		T		U		V		W		X		Y		Z									
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

J705

- 1 GND
- 2 ECG SW1
- 3 GND
- 4 D-G
- 5 ECG SW1
- 6 SYNC SW1
- 7 ROLY +1
- 8 ROLY -1
- 9 ECG LPI
- 10 ROLY LPI
- 11 ROLY LPI
- 12 D-G
- 13 SYNC LPI
- 14 R-R
- 15 R-R
- 16 D-G

TO EP-SMT

P37X

- 1 GND
- 2 ECG FCCI
- 3 TAD
- 4 D-G
- 5 ECG SW1
- 6 SYNC SW1
- 7 ROLY +1
- 8 ROLY -1
- 9 ECG LPI
- 10 ROLY LPI
- 11 ROLY LPI
- 12 C-G
- 13 SYNC LPI
- 14 R-R
- 15 R-R
- 16 D-G

L-CABLE 2/5

TO EP-3265

※ 本ケーブルは諸元仕様の為標準仕様品の記載です。

<b>Aloka</b> 第三角注 第3角注 第3角注		MODEL NO. <b>CABLE 42</b>	MODEL NO. <b>CO-PSC108-K-04</b> <b>(L-CABLE 2/5)</b>
10 PIN POSITION 10 PIN POSITION 10 PIN POSITION	10 PIN POSITION 10 PIN POSITION 10 PIN POSITION	10 PIN POSITION 10 PIN POSITION 10 PIN POSITION	10 PIN POSITION 10 PIN POSITION 10 PIN POSITION
SCALE 1:5 SCALE 1:5 SCALE 1:5	SCALE 1:5 SCALE 1:5 SCALE 1:5	SCALE 1:5 SCALE 1:5 SCALE 1:5	SCALE 1:5 SCALE 1:5 SCALE 1:5
UNIT 1/2 UNIT 1/2 UNIT 1/2		UNIT 1/2 UNIT 1/2 UNIT 1/2	UNIT 1/2 UNIT 1/2 UNIT 1/2

3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5

K L M N O P Q R S T U V X Y Z

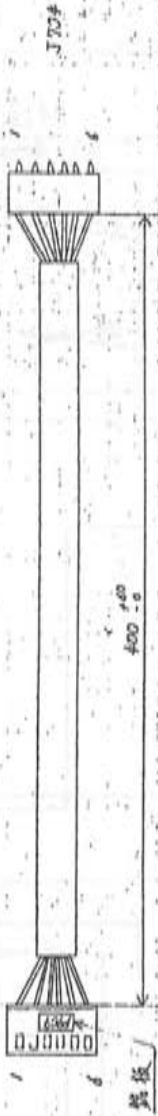
3020-06 (MOLEX)  
3020PSTL (MOLEX)

1	15V	1	15V
2	GN0	2	GN0
3	15V	3	15V
4	GN0	4	GN0
5	15V	5	15V
6	GN0	6	GN0

WLH-10/0.15 ~EL

TO J69

TO EP-3117



**Aloka**

TEL NO (Cable for PEU-6808)

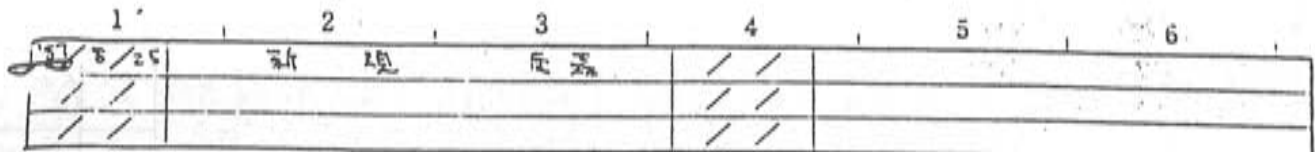
MODEL NO

NO. IN THE PRODUCTION	DRAWING NO.	ENGINEER'S SIGNATURE	DESIGNED DATE	DESIGNED NAME
第3角注				
SCALE	DATE			
	15:08			

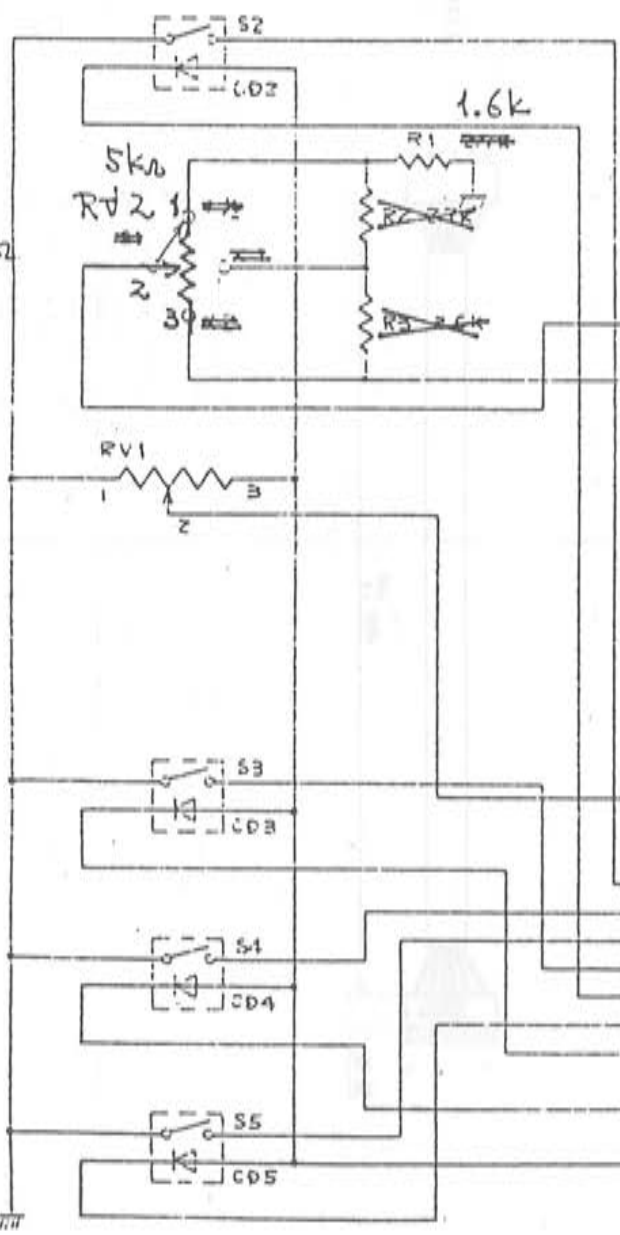
CABLE 52

CO-PEU680-A-02

MC 315...



RV12YN  
1555KΩ



J803

Pin No.	信号名
4	
5	ECG SENSE
2	
1	ECG

J804

Pin No.	信号名
1	GND
2	ECG POSI
3	GND
4	GND
5	ECG SW /
6	SYNC SW /
7	RDLY → /
8	RDLY ← /
9	ECG LP /
10	RDLY → LP /
11	RDLY ← LP /
12	GND
13	SYNC LP /
14	GND
15	5V
16	GND

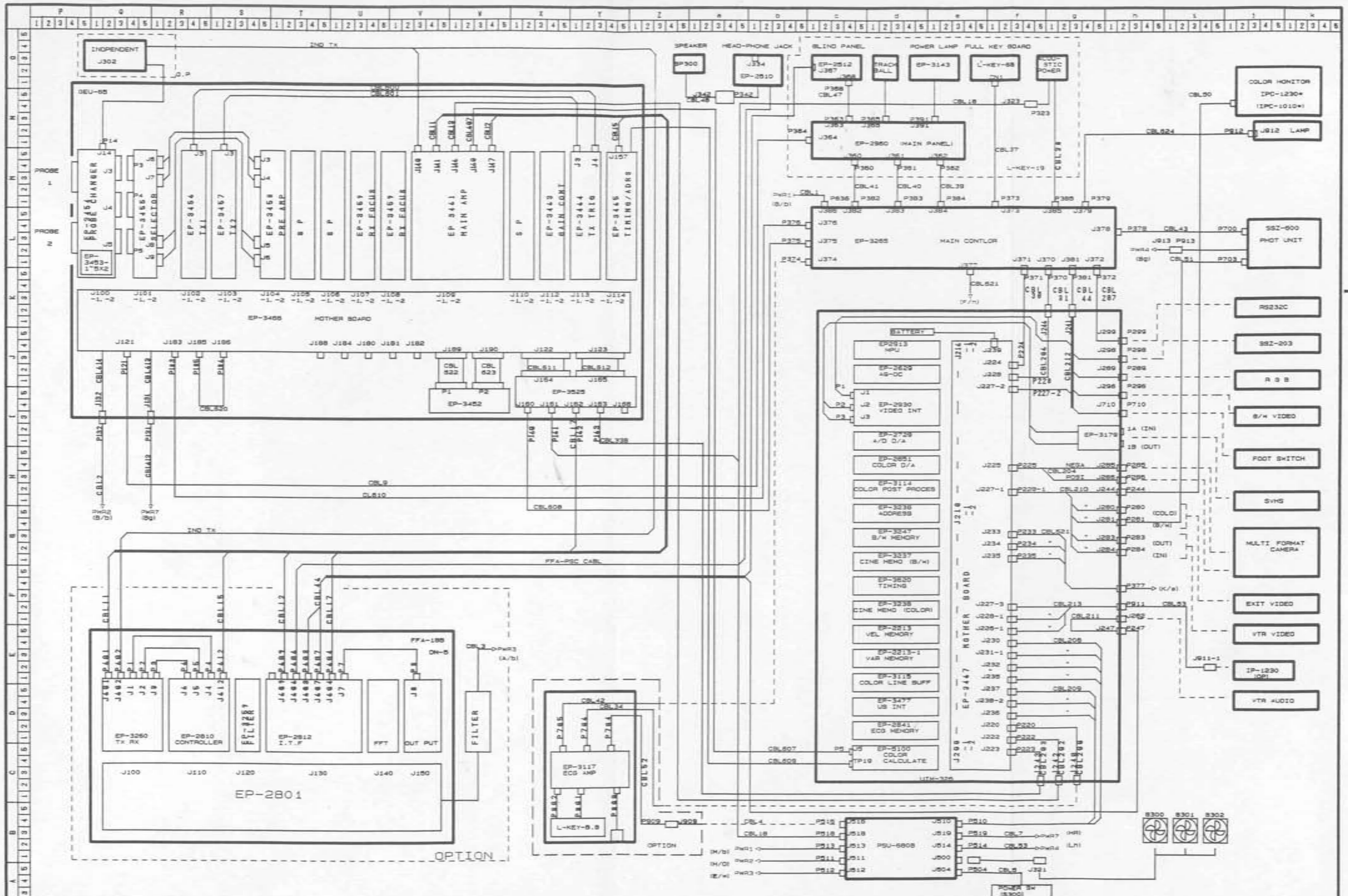


材 質 \_\_\_\_\_ 処 理 \_\_\_\_\_ 受注先 ALOKA

製 図 検 図 承 認 尺 度 \_\_\_\_\_ 仕 様 書 番 号 \_\_\_\_\_ 受注先 図 番 \_\_\_\_\_

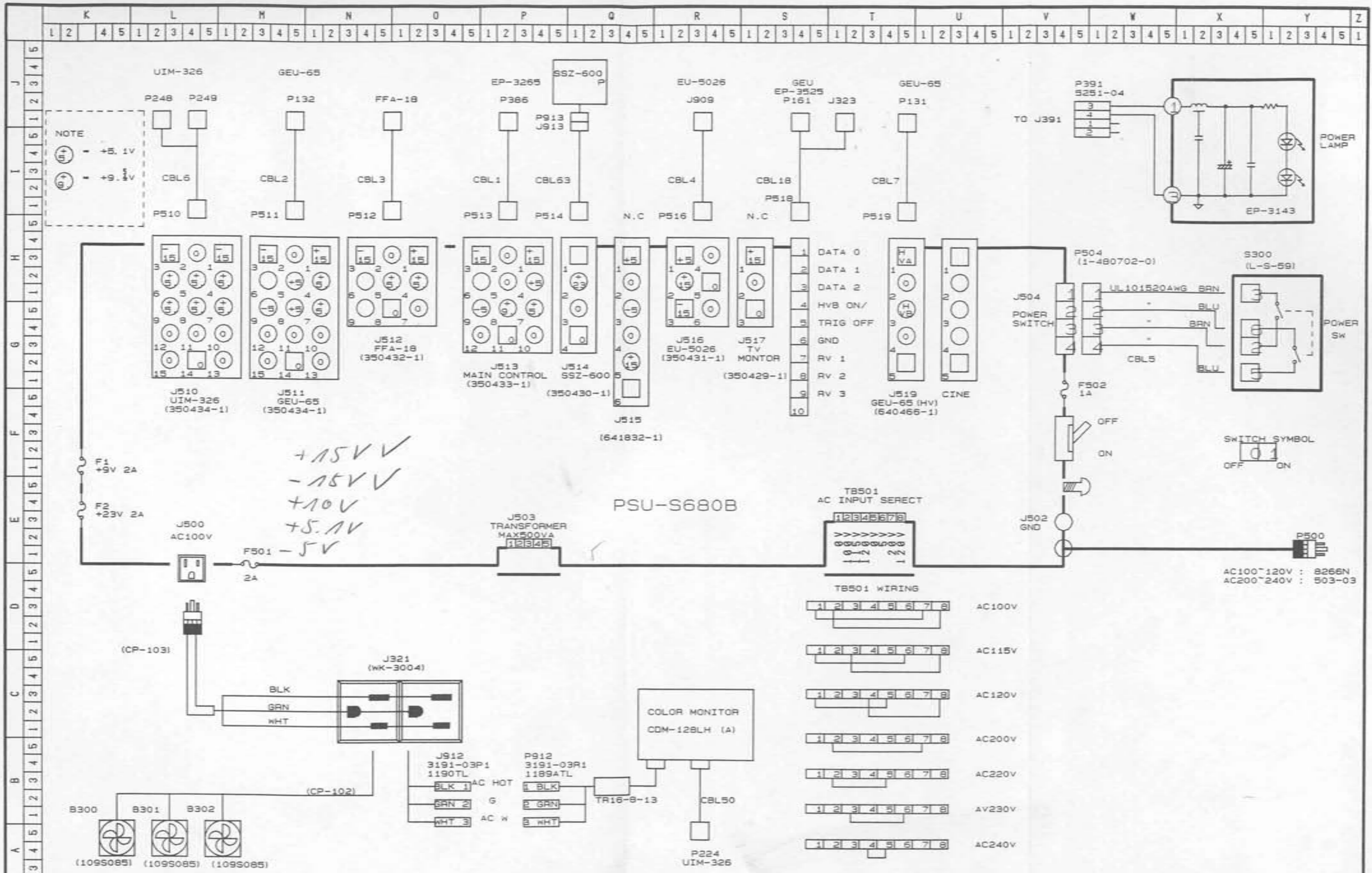
名 称 7口 (7線)  
L-KEY-3B

7-127



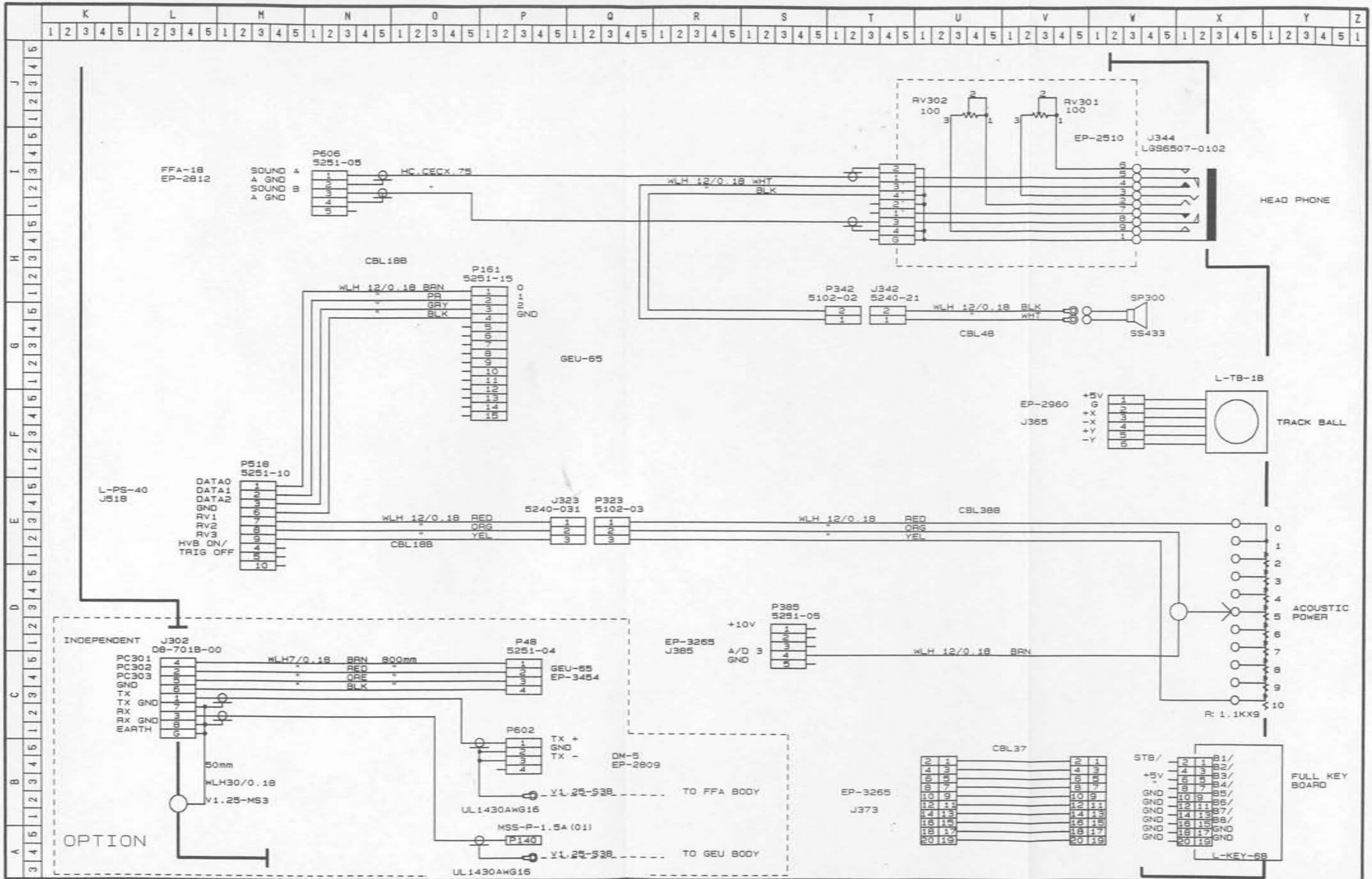
7-128

<b>Aloka</b> 3RD ANGLE PROJECTION SCALE UNIT: mm		TITLE: 350-680 STD CABLE CONNECTION MODEL: PSC-120 DRAWING NO.: MC 327-19	1/4
--	--	--	-----



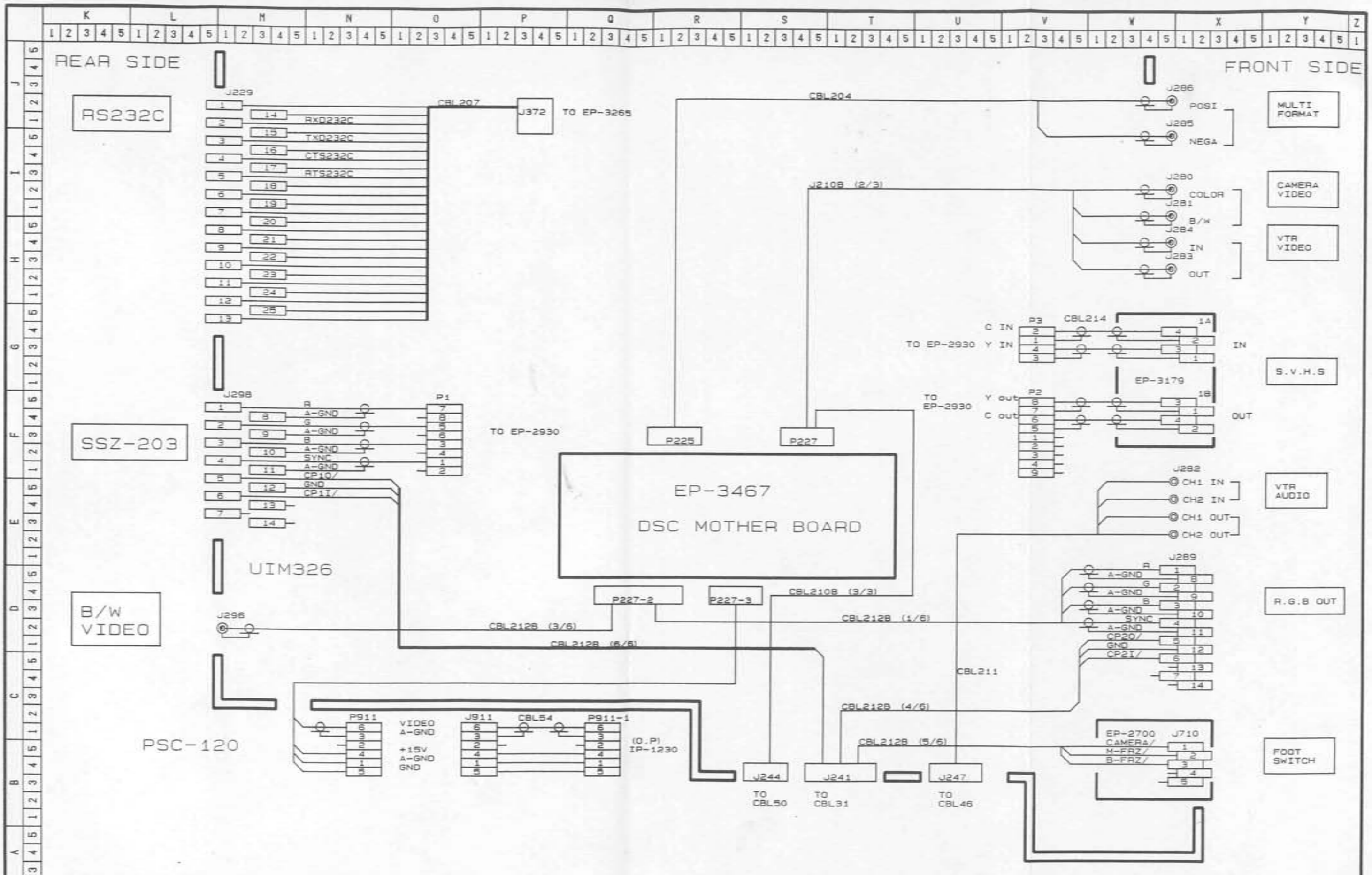
REVISIONS	7-129		<b>Aloka</b>		TITLE SSD-680STD CABLE CONNECTION		MODEL PSC-120		2/4		
	3RD ANGLE PROJECTION		DRAWN	DESIGNED	CHECKED	APPROVED	DRAWING NO.				
	SCALE		DRAWN		DESIGNED		CHECKED		APPROVED		
	UNITS		DRAWN		DESIGNED		CHECKED		APPROVED		

MC 327150

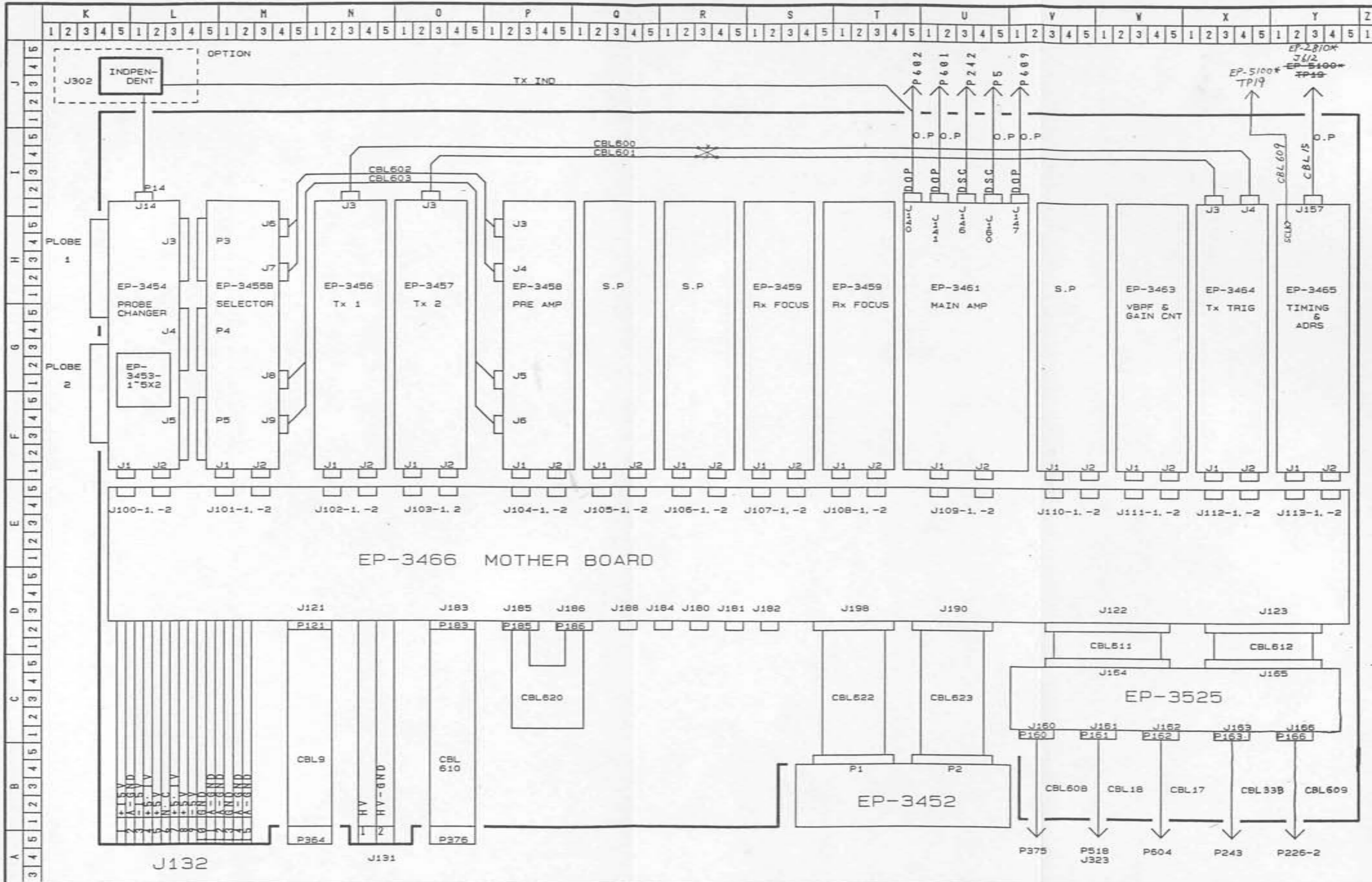


REVISIONS	7-130

<b>Aloka</b>	TITLE SSD-680 STD				MODEL PSC-120		3/4	
	CABLE CONNECTION				DRAWING NO.			
	3RD ANGLE PROJECTION	DRAWN <i>[Signature]</i>	DESIGNED <i>[Signature]</i>	CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	MC 327151		
	SCALE UNITS	mm						



REVISIONS	7-131		<b>Aloka</b>				TITLE SSD-660STD		MODEL PSC-120		4/4
	3RD ANGLE PROJECTION		DRAWN	DESIGNED	CHECKED	APPD	DRAWING NO.				
	SCALE						MC 327152				
	UNITS		mm								

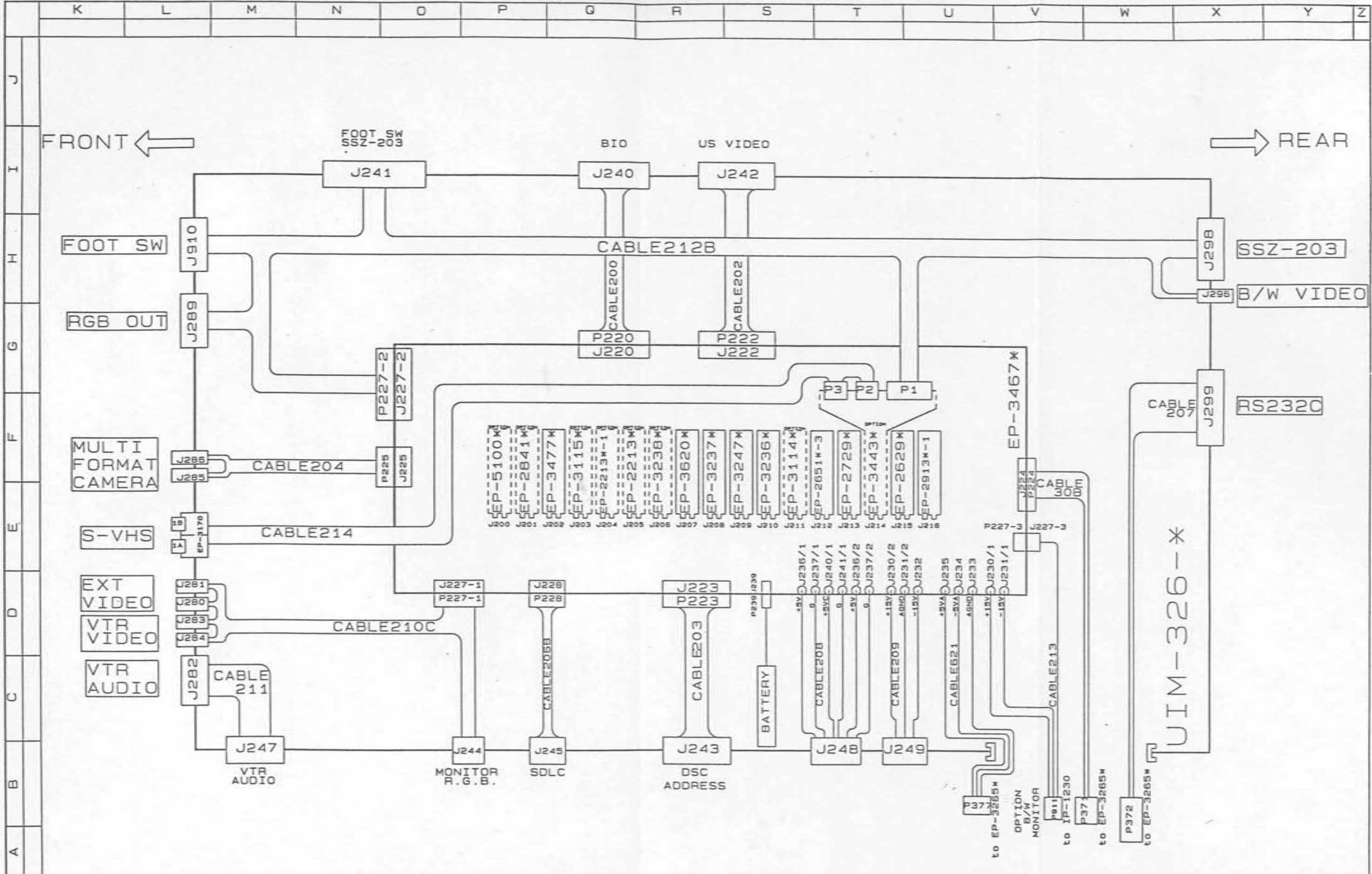


REVISIONS	3	4	5	1	2	3	4	5
	2	3	4	5	1	2	3	4
	1	2	3	4	5	1	2	3
	1	2	3	4	5	1	2	3
	1	2	3	4	5	1	2	3

7-132

<b>Aloka</b>		TITLE Tx Rx UNIT				MODEL GEU-65		1/1
		3RD ANGLE PROJECTION	DRAWN P.I. 92.11.05	DESIGNED S.H. 92.11.05	CHECKED 企画G 92.11.06	APPRO I 92.11.07	DRAWING NO.	
SCALE						DRAWING NO. <b>MC 326891</b>		
UNITS mm								



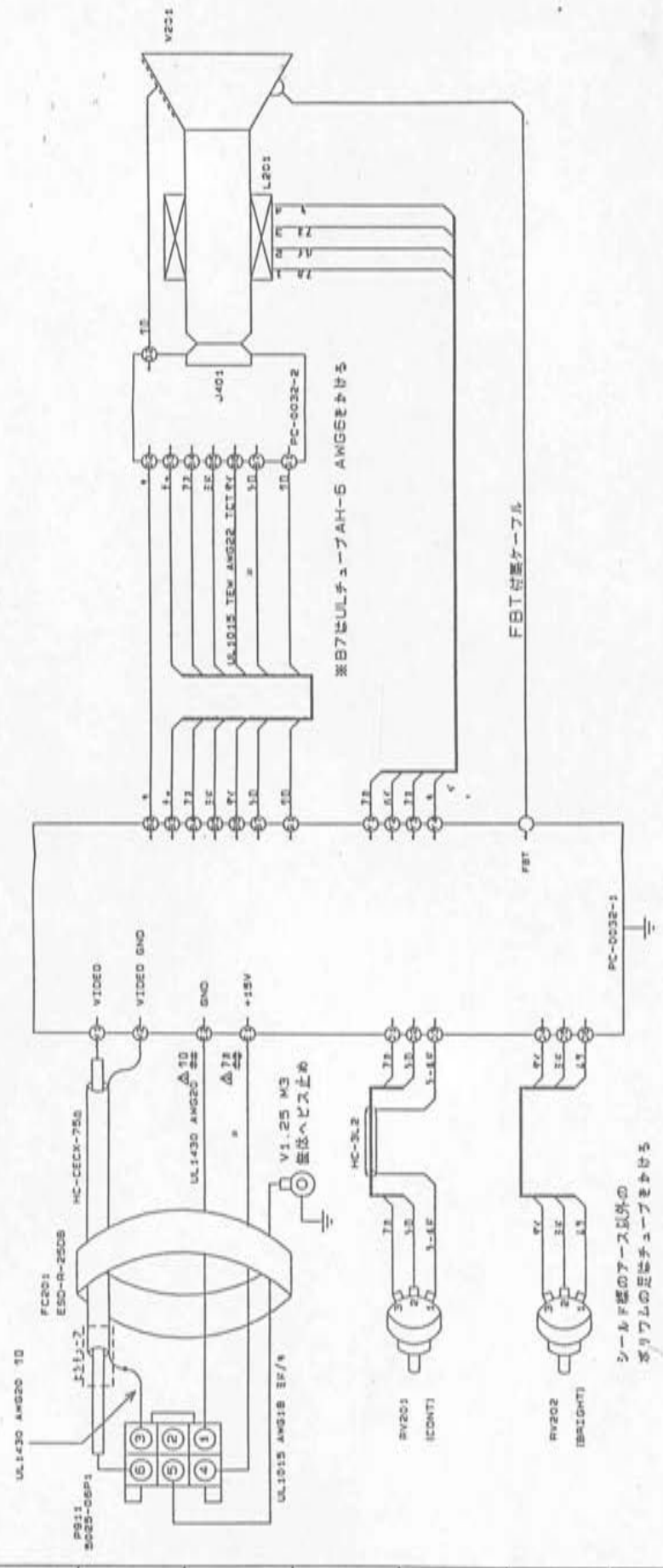


REVISIONS 変更

7-133

	TITLE 名称 SSD-680STD DSC UNIT SCHEMATIC DIAGRAM		MODEL 型号 UIM-326		1/1	
	DRAWN 製図 村田 豊	DESIGNED 設計 玉澤 正和	CHECKED 検図 梅澤 隆	APPRO 承認 1技 32位31	DRAWING NO. 図番 MC326721	
	3RD ANGLE PROJECTION 第3角法	SCALES 尺度 1:1	UNIT 単位 mm			
						7-133

K L M N O P Q R S T U V W X Y Z



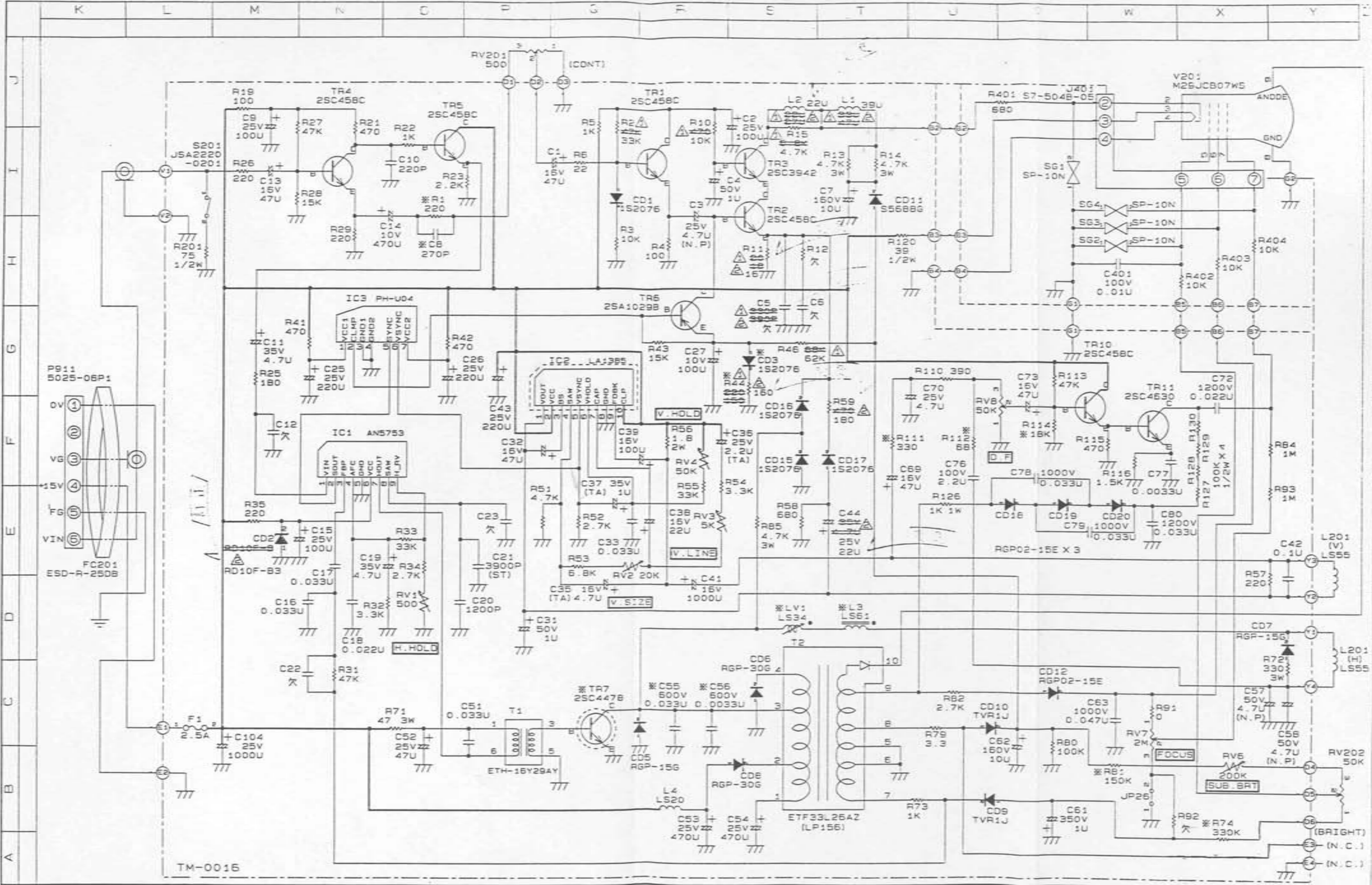
※B7はULチューブAH-5 AWGSEをかける

シールドのアース以外の  
ボリワムの足はチューブをかける

※ 指示なき場合は UL1007 TR-64 AWG22 TCT

REVISION 2	REV. 1	DATE	NO. 2040941
A	191.09.13		
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			
N			
O			
P			
Q			
R			
S			
T			
U			
V			
W			
X			
Y			
Z			

MODEL NO.	IP-1230C-TH
DRAWING NO.	MB00-IP-1230C
TITLE	配線図
SCALE	1/1
UNIT	MM
DATE	1982.09.13
DESIGNER	Y. SAKAI
CHECKER	T. YAMAMOTO
APPROVED	



REVISIONS 變更

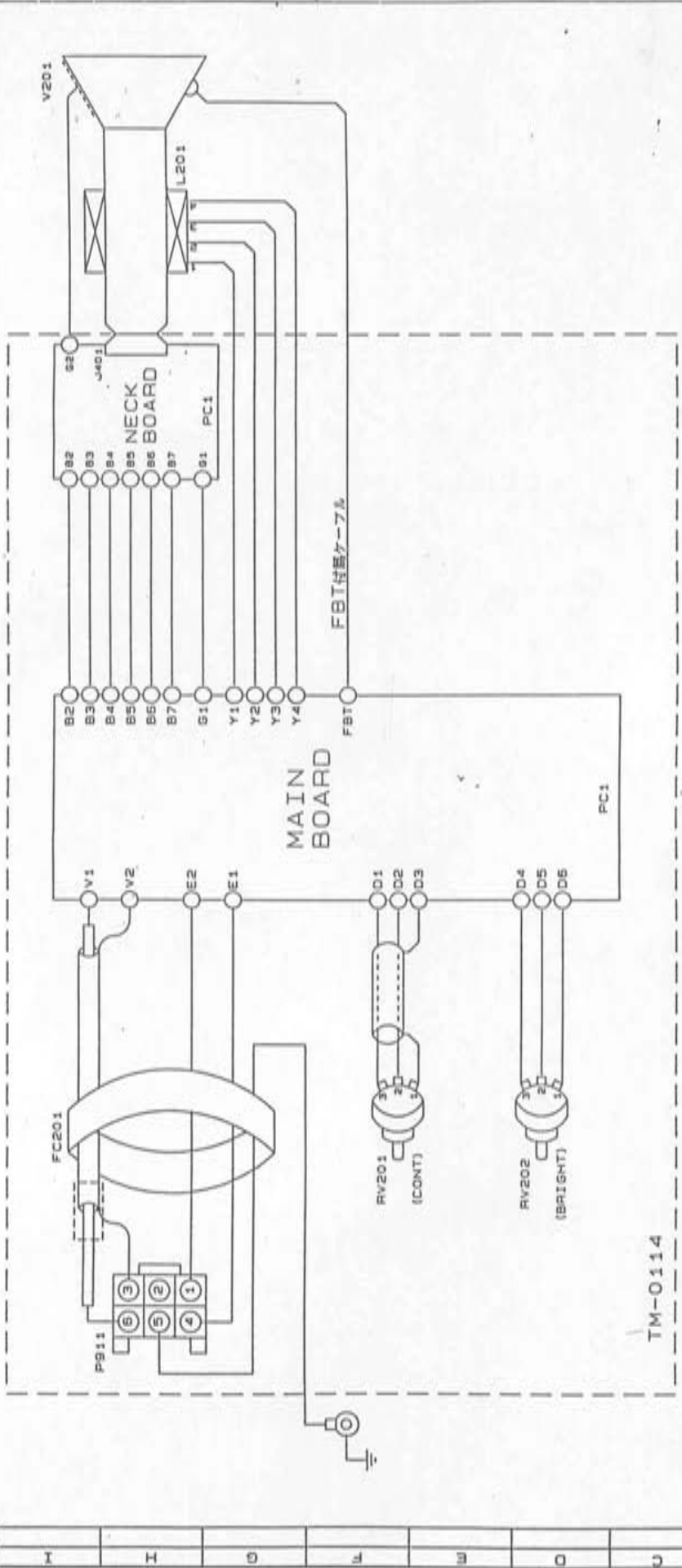
92.06.12 變更  
 C5 330P → 390P  
 L1 33U → 47U  
 L2 22U → 27U  
 R2 47K → 33K  
 R10 470 → 10K  
 R11 20 → 18  
 R15 6.8K → 4.7K  
 R44 220 → 150  
 R45 68K → 52K  
 MM-4838#1- (MW-22557)

92.07.30 變更  
 C5 390P → 次  
 C44 4.7U/35V → 22U/25V  
 L1 47U → 39U  
 L2 27U → 22U  
 R11 18 → 16  
 R44 150 → 160  
 R59 470 → 180  
 CD2 訂正 RD10F-B  
 → RD10F-B3  
 MM-4889#1- (MW-23026)

7-135

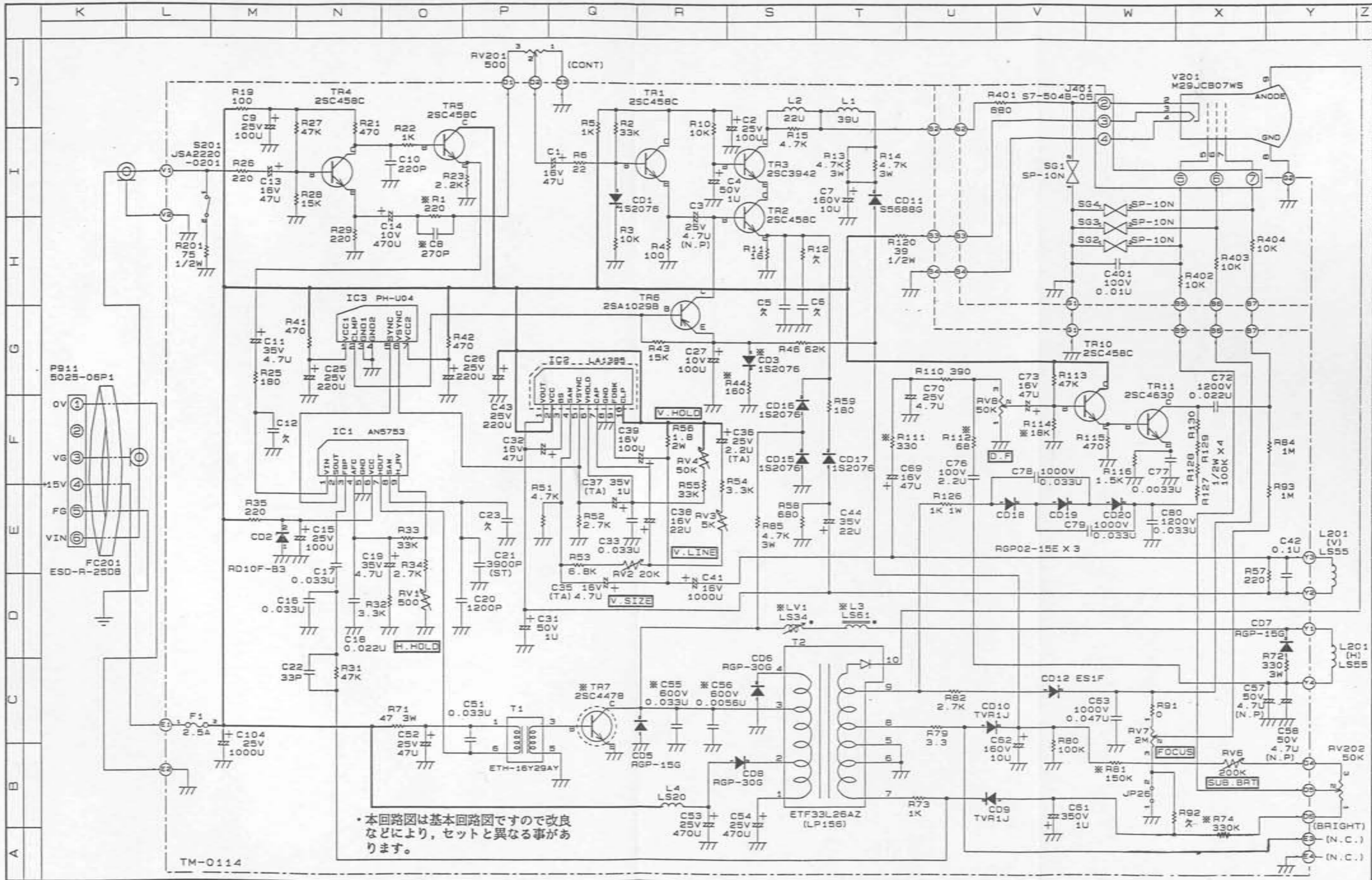
Aloka	TITLE 名稱	12" TV MONITOR	MODEL 型號	IP-1230C-TH	1/1
	3D ANGLE PROJECTION 第三角法	DRAWN 製圖	DESIGNED 設計	CHECKED 檢核	APPROVED 承認
SCALES 尺碼	高 1:1	中 1:1	邊 1:1	龍 1:1	MD00-TM-0016
UNIT 單位	mm	mm	mm	mm	

K L M N O P Q R S T U V W X Y Z



・本図は基本回路図です。改良  
などにより、セットと異なる部が  
あります。

REVISIONS	MODEL No		DRAWING NO. 88	
A	IP-1230CV-TH		MD00-IP-1230CV	
B	CABLE CONNECTION		DRAWING NO. 88	
C	TITLE No		DRAWING NO. 88	
D	DRAWN BY		CHECKED BY	
E	DESIGNED BY		APPROVED BY	
F	DATE		DATE	
G	SCALE		SCALE	
H	UNIT		UNIT	
I	30° ANGLE PROJECTION		30° ANGLE PROJECTION	
J	FIRST ANGLE		FIRST ANGLE	
K	SCALE 1:1		SCALE 1:1	
L	UNIT mm		UNIT mm	



・本回路図は基本回路図ですので改良  
 などにより、セットと異なる事が  
 あります。

TM-0114

REVISIONS 変更	Aloka		TITLE 名称		MODEL 形名		1 / 1		
	12" CRT MONITOR		IP-1230CV-TH						
	DRAWN 製図		DESIGNED 設計		CHECKED 検図			DRAWING NO. 図番	
	第3角法		高		高			高	
	SCALER 度		電.07.23		電.07.23			電.07.24	
UNIT 単位		mm		橋		橋			
7-137		MD00-TM-0114							

## 8-1 Introduction

This trouble shooting makes integral part of the Service Manual. And it has been prepared for the persistent purpose of providing for repairing guidelines.

What has been described herein, moreover, is subject to the prerequisite for a repair to be made by replacing a PCB.

## 8-2 Precautions

To prevent a new problem (secondary disaster) from taking place in the process of trouble shooting as described herein, every engineer concerned should duly take the following precautions:

- (1) Never remove any part from the electric system, including PCB, probe, cable, etc., before powering off the equipment.
- (2) Do not proceed to a disassembly of equipment without observing the established disassembly procedure. Be careful enough for wrongly disassembling the equipment would damage or break it down.
- (3) To make certain of a voltage and/or a signal waveform, it is necessary to thoroughly know the specification and handling procedure relating to a measuring instrument employed.
- (4) To ground a measuring instrument probe or the like, it is naturally necessary to know where a signal to determine is grounded. Before using the instrument, moreover, make certain for which the grounding terminal is intended, analog, digital, alternating current, direct current, high voltage or low voltage.

●Caution● Failure to ground properly might result in an incapability of observing an accurate voltage or waveform or in a probability of burning out the measuring instrument or ultrasound diagnostic equipment or both.

- (5) Do not fit a measuring instrument probe or the like to a measuring point before turning off the ultrasound diagnostic equipment.

●Caution● To determine an especially high voltage, it might rupture a circuit in the ultrasound diagnostic equipment. Besides, it might endanger a engineer or engineers concerned.

- (6) To replace or repair a PCB, make certain of its compatibility, etc, in accordance with the "History of SSD-2000".  
If a wrong ROM should be mounted on a PCB, employ the ROM originally employed in the user's equipment or select an appropriate one in accordance with the History.

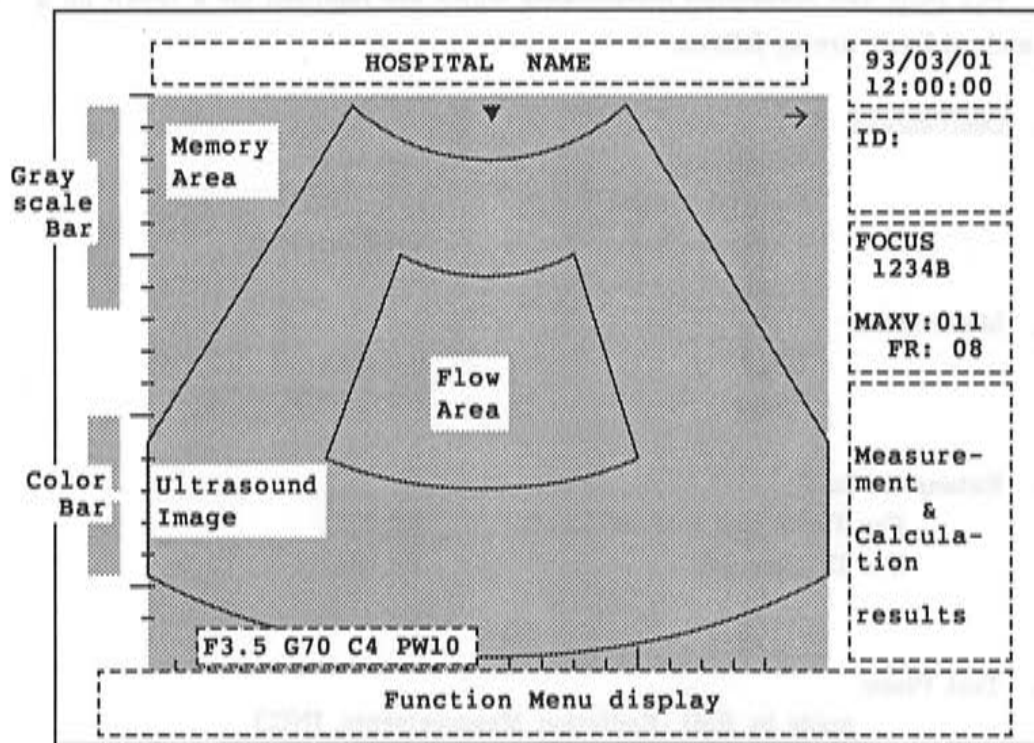
●Caution● If an incompatible PCB should be inserted into the equipment, there are possibilities that the equipment may be burnt out. If such incompatible PCB should remain inserted in the equipment after completion of a repair, moreover, it should be fully noted that another problem may take place newly.

- (7) Without definitively knowing that failure has taken place, do not unnecessarily change any controls and/or switches on a PCB from their original settings.  
To determine whether or not a problem is the failure, see Section 10 "Performance Check."  
If a readjustment is required, see Section 9 "Alignment Procedure."

●Caution● An unnecessary change of controls' or switches' settings might bring about a new problem, probably making the equipment unrepairable.

- (8) While you are shooting trouble in accordance with the present procedure, it may be necessary to consult with Technical Support. In such a case, provide at least the following information:

- i) Equipment model number,
- ii) Equipment serial number,
- iii) History of equipment (repairs and/or modifications so far made), and software version, and
- iv) Specific problem situations (Send a photo or photos.)



To give an explanation about the situations of a problem, it is necessary to clarify to which it relates out of the elements composing the scene, while referring to the illustration given above. Related component elements may be roughly classified as follows:

- Ultrasound Image : An ultrasound tomographic image; its contour varies with an image mode, a probe, etc.
- Memory Area : A full size of memory required to display an ultrasound image
- Gray Scale Bar : An indicator of image gradients; its pattern varies with a setting of enhancement, gamma or the like
- Character : A component of the text relating to a hospital name, ID, automatic display, etc.
- Graphic : A component of scale marks, active marks, body marks, etc.
- Flow Area : Color image display area.
- Color Bar : It shows the color coding corresponded to velocity and variance information.



## 8-3 Tools and Measuring Instruments Required

The tools and measuring instruments which are required for a repair on a standard basis are as follows:

## 1. Oscilloscope

Sensitivity : 5mV/div.  
 Frequency band : DC~50MHz  
 Maximum input voltage : 400V or more

## 2. Multi Meter

Class : 0.5 class  
 Range : ACV, DCV, DCA,  $\Omega$

## 3. Extension Card

For Tx/Rx unit and DSC unit : EP-2351  
 For Doppler unit : EP-0847-2

## 4. Test Piece:

made by RMI (Radiation Measurements, INC.)  
 RMI-412

## 5. Probe

Convex : UST-959-3.5 (Standard probe)

## 6. ECG (EKG) Simulator

(Only when optional ECG signal display unit PEU-680B is connected.)

EKG-101 (made by Fukuda Electronics)

## 8-4 (this clause have been deleted on Version 3.)

( this is free page. )

8-4

A variety of functions are to be set in a single processing unit (CPU). Some settings may be manually entered by the user while others are automatically set by the system. Various settings and their functions are described below in the user manual. A performance-oriented problem is given while using a...

8-5-1 Automatically Setting After Forwarding On

At the same time when the system is powered on, the CPU starts into the INITIAL SET mode. It receives and checks in order to loading an information from the main, the system console and following steps from an operation point of view.



8-5-2 Setting Switches on the PCB

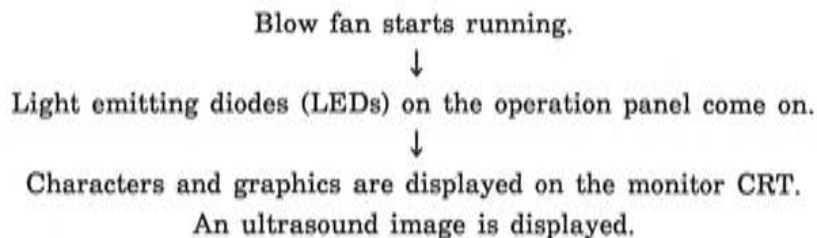
The PCB is provided with the switches to initialize the equipment and to make it applicable to a diversity of applications. (Some set of the switches is not required, the equipment will not start operation for the case. In a new problem, should any of the settings have been manually changed, they are setting the switches all over again with reference to the user manual.

## 8-5 Information

A variety of functions are to be set in a micro processing unit (MPU). Some settings may be externally entered by the user while others cannot be established by anyone other than an authorized service personnel. Various settings and their changing methods are described herein so that the user may not mistake a performance-associated problem for failure while making a repair.

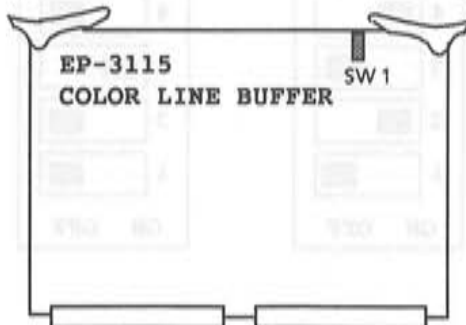
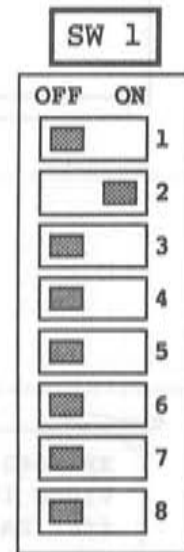
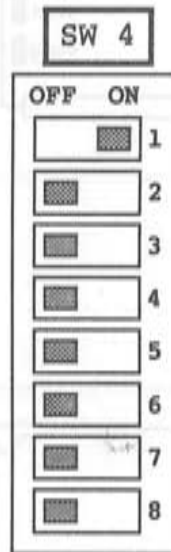
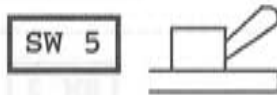
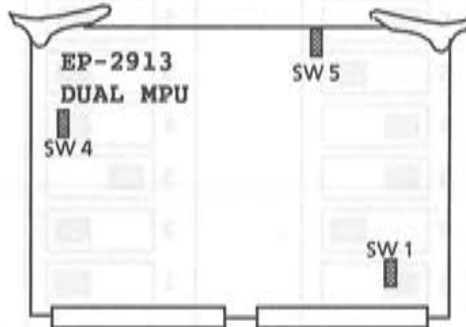
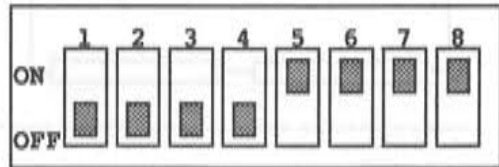
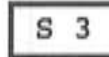
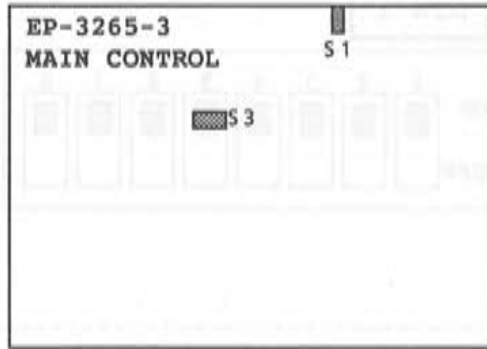
### 8-5-1 Automatically Setting after Powering On

At the same time when the system is powered on, the CPU enters into the INITIAL SET mode. To prepare and display an image by sending an ultrasound from that mode, the system executes the following steps from an appearance point of view:

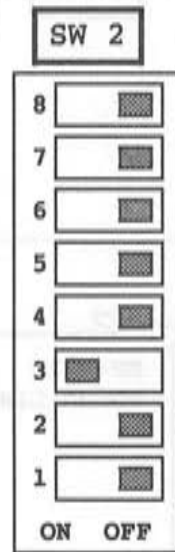
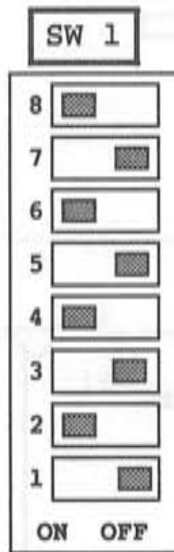
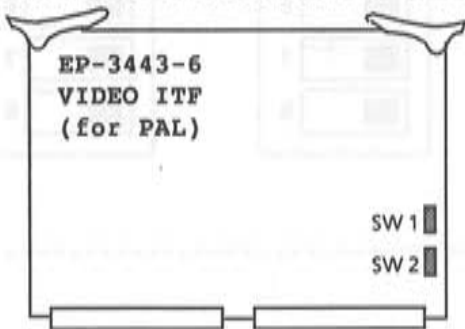
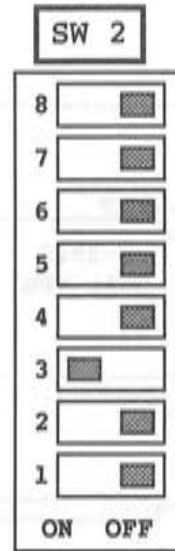
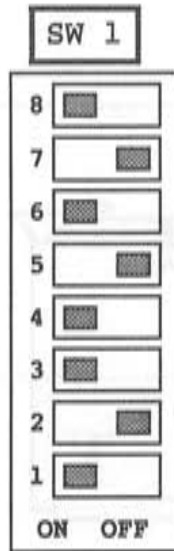
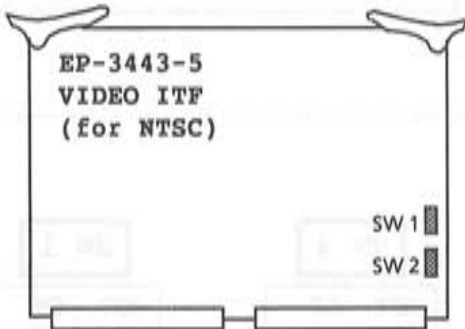
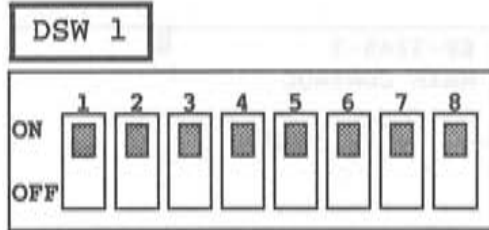
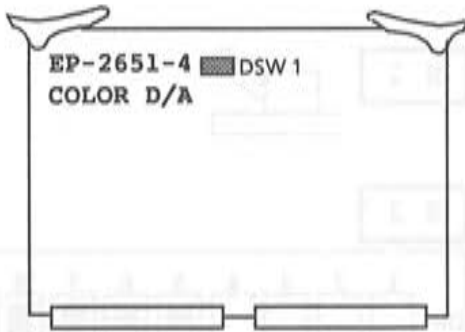


### 8-5-2 Setting Switches on the PCB

The PCB is provided with the switches to initialize the equipment and to make it applicable to a diversity of specifications. Unless any of the switches is set as specified, the equipment will not only malfunction but also may invite a new problem. Should any of the settings have been inevitably changed, carry out setting the switches all over again with reference to the next page.



SECTION 8 TROUBLE SHOOTING



## 8-5-3 Usage of the Functions to be Set by the User

Those functions which the user may set as enumerated below are stored in internal memory (random access memory : RAM) as backed up with a battery. In normal use, the memory data so backed up will never disappear. Nevertheless, there are possibilities that the information in memory may be erased as a result of repairing and/or modification. Whenever such repairing or modification may be expected, it is necessary to write down the backup information in the form of a memorandum and to set it all over again after completion of such repair or modification.

How to set each backup function is described below for your reference. For details relating to the method, see the operation manual attached to the equipment.

○Reference○ The batteries are mounted on MAIN CONTROL board EP-3265 and the chassis of DSC unit UIM-325.

- ① How to set a hospital name:
  - 1 Press the **MENU** switch.
  - 2 Press the **Next** three times to shift the page. Then, select the **HOSP**.
  - 3 Enter a hospital name through the keyboard.
  - 4 Press a function switch covering the **Set** feature.
  
- ② How to set a date and time:
  - 1 Press the **MENU** switch.
  - 2 Press the **Next** three times to shift the page. Then, select the **DATE**.
  - 3 To set a time, select the **TIME**. To set a date, select the **DATE**.
  - 4 Enter a correct time or date through the keyboard.
  - 5 Press a function switch covering the **Set** feature.  
Selecting the **FORMAT** will allow you to alter the form in which a date is displayed.
  
- ③ How to preset:
  - 1 Press the **PRESET** switch.
  - 2 Select Preset number to be set, by function switch.
  - 3 Press a function switch covering the **MODIFI** feature.
  - 4 Select item to be set (MODE / IMAGE / PW / FLOW / MEAS / OB.PROG / ANNOTAT), by function switch.  
Text is displayed on the screen.
  - 5 Change the setting by the trackball and function switches.  
(Refer to Operator's Manual for details.)

#### 8-5-4 Resetting the Backup Memory (RAM):

A backup feature is available to normally store the user's settings. In normal use, it will not be necessary to erase all the information so stored. It is necessary, however, to reset the backup memory in any of the following events:

● Caution ●

- (1) "How to reset back up RAM" described in the next page is the method to shorten directry between the pin for voltage supply and GND pin of RAM IC.

There is the other method that erase the contents in PRESET by software from panel operation . Refer to Section 3 for details.

- (2) Resetting the backup memory will erase presettings, hospital name and so on.

To set them all over again after resetting the memory, it is necessary to record the set information by the use of a printer, such as "Echo Copier" or the like, or to copy the set information in the "Preset Record Sheet" described in 8-5-9.

Do not use the customer's printer, meanwhile, before obtaining consent to do so.

- 1) When the software has been altered for an upgrade or for any other reason.  
→ Reset the backup RAM by software referring Section 3.
- 2) When an unnecessary (abnormal) character or characters or code or codes is displayed in the data which have been set by the user.  
→ Reset the backup RAM by software referring Section 3.  
When the reset by software is not effective, reset the backup RAMs according to the next page.
- 3) When the system fails to start up even if the equipment is powered on.  
→ Reset the backup RAMs according to the next page.  
Under such a circumstance, resetting the backup memory is a mere provisional action consistently. To make a substantial repair, refer to 8-5-7. In such a situation, moreover, it is impossible to store the set information, such as presettings, etc.

How to reset back up RAM

1. RAM on EP-3265 MAIN CONTROL board

*Platine  
under the  
Tastatur →*

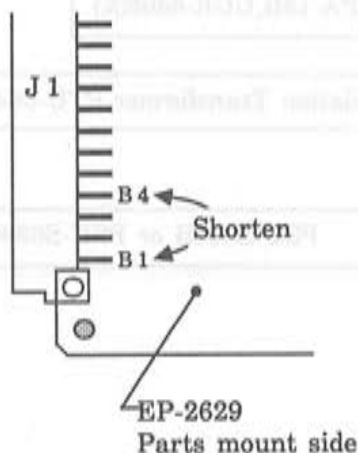


Erase the data of backed up RAM according to followings.

- (1) Turn the power switch off.
- (2) Open the operation panel. (referring "Disassembling Procedure")
- (3) Shorten between 14 pin and 28 pin of IC5M for a few seconds.
- (4) Close the operation panel. *→ Presets*

2. RAM on EP-2629 AGD board

*D14 Rack  
→*

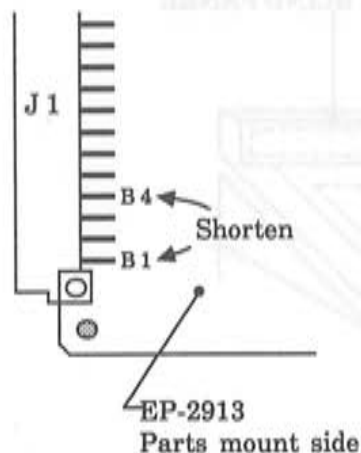


Erase the data of backed up RAM according to followings.

- (1) Turn the power switch off.
- (2) Open the rear cover of main body.
- (3) Remove the cover of UIM-325.
- (4) Release EP-2629 from PCB lack.
- (5) Shorten between B1 pin and B4 pin of J1 on EP-2629 for a few seconds. (Date and Time data is erased.) *→ Daten / Uhrzeit*
- (6) Get back EP-2629 to UIM-325.
- (7) Assemble the cover of UIM-325.
- (8) Assemble the rear cover of main body.

3. RAM on EP-2913 DUAL MPU board

*D14 Rack  
→*



Erase the data of backed up RAM according to followings.

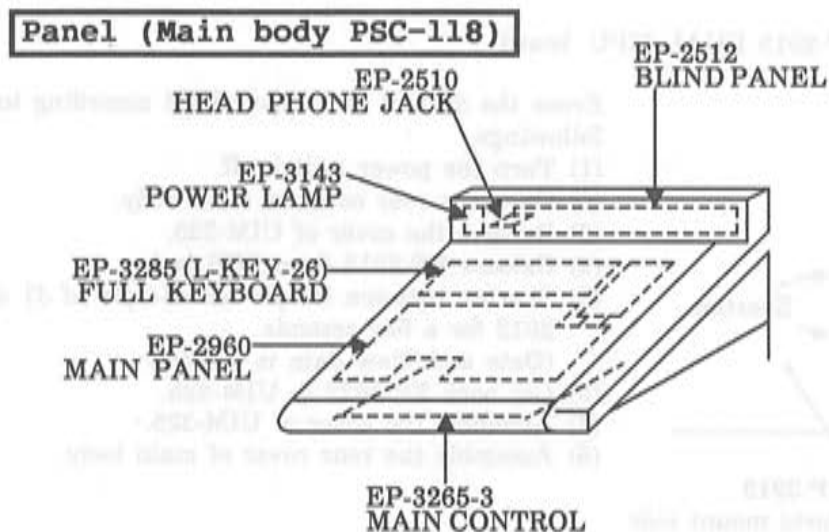
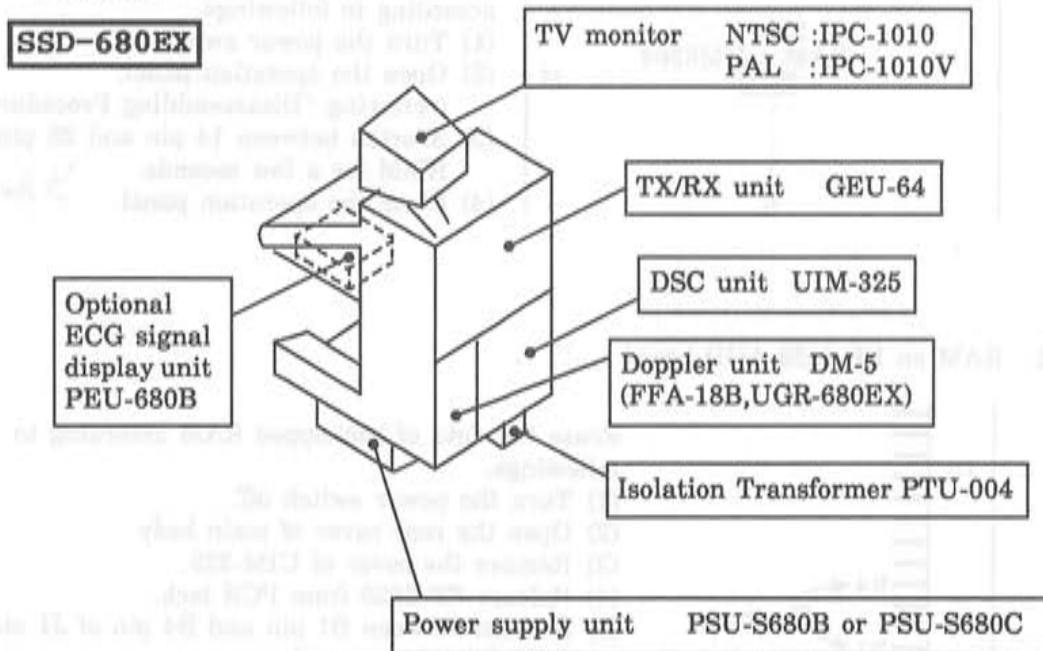
- (1) Turn the power switch off.
- (2) Open the rear cover of main body.
- (3) Remove the cover of UIM-325.
- (4) Release EP-2913 from PCB lack.
- (5) Shorten between B1 pin and B4 pin of J1 on EP-2913 for a few seconds. (Date and Time data is erased.)
- (6) Get back EP-2629 to UIM-325.
- (7) Assemble the cover of UIM-325.
- (8) Assemble the rear cover of main body.

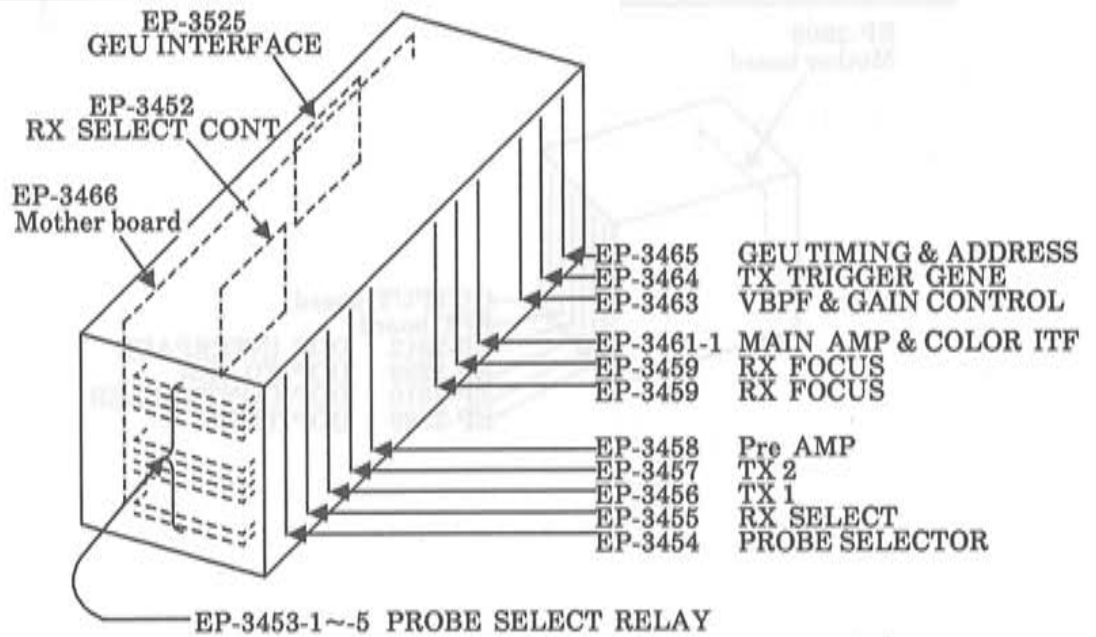
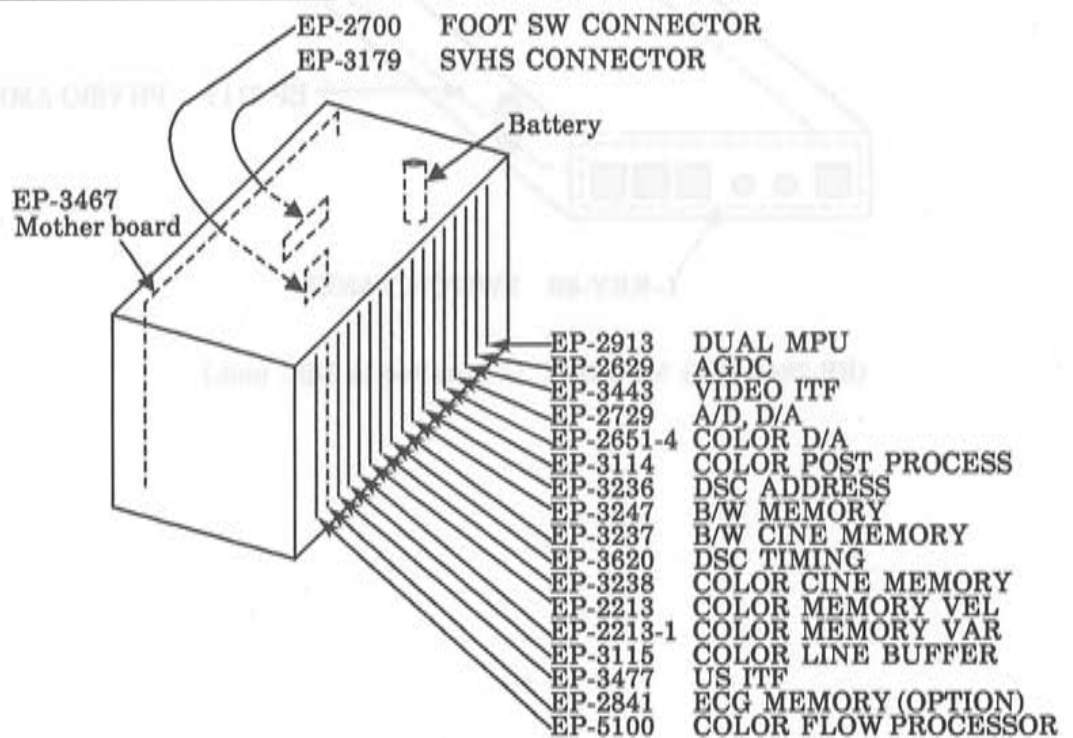
*P1  
↓  
P3  
↓  
P2*



8-5-5 PCB Arrangement

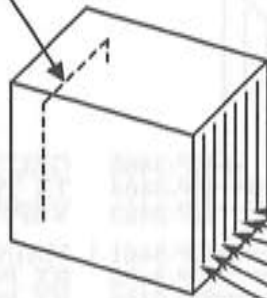
An arrangement of all the units and PCBs employed is given on the followings.



**TX/RX unit GEU-64****DSC unit UIM-325**

**Doppler unit DM-5**

EP-2808  
Mother board



OUTPUT board

FFT board

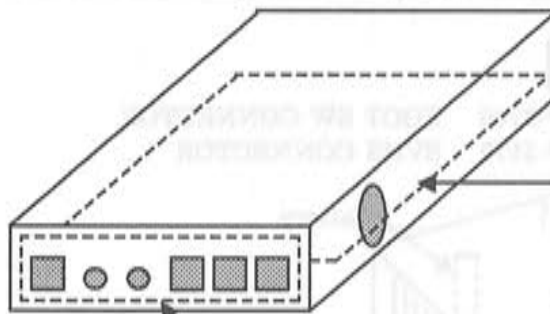
EP-2812 DOP INTERFACE

EP-3259 DOP FILTER

EP-2810 DOP CONTROLLER

EP-3260 DOP TXRX

**Optional ECG signal display unit PEU-680B**



EP-3117 PHYSIO AMP

L-KEY-8B SWITCH PANEL

(EP-2841 ECG MEMORY is installed in DSC unit.)

## 8-5-6 Arrangement of ROMs

An arrangement of the ROMs (read only memory) and PALs (programmable array logic), both mounted on a PCB, is illustrated below. It should be noted that a change in artwork of the PCB might lead to an arrangement different from the illustrated one under any PCB version other than specified in the figure.

The following ROMs are used in the equipment whose

H (Hardware version) : 11

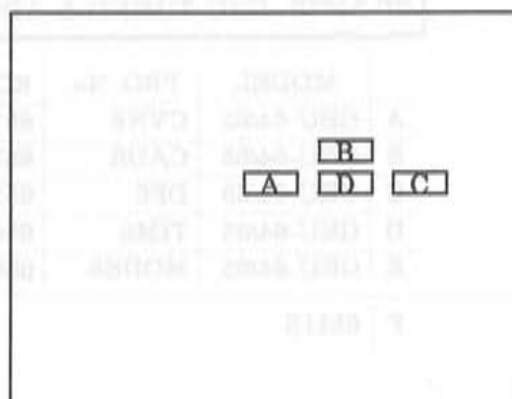
S (Software version) : 6

K (Modification record) : 3 only.

(H, S, and K are indicated in the history record label on the rear panel of equipment.)

EP-3265B-3	MAIN CONTROL
------------	--------------

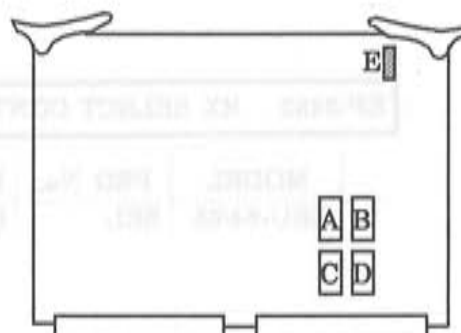
	MODEL	PRO. No.	ROM No.
A	MO680-1	6.0	1
B	MO680-1	6.0	2
C	MO680-1	6.0	3
D	MO680-1	6.0	4



EP-3459B	RX FOCUS
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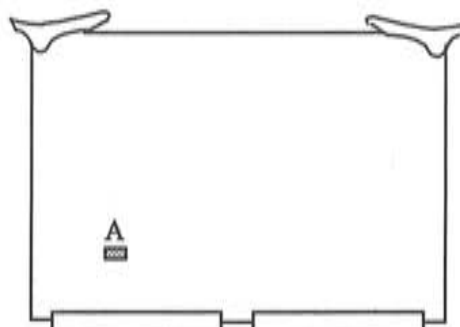
	MODEL	PRO. No.	ROM No.
A	GEU-64/65	RXROT	5907C
B	GEU-64/65	MASK	5905C
C	GEU-64/65	RXDLY2	5907B
D	GEU-64/65	OFFSET	5905B

E : 594H



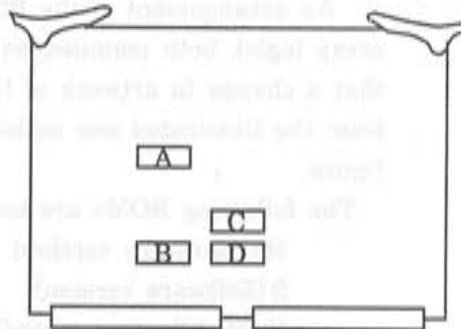
EP-3463	VBPF & GAIN CONTROL
---------	---------------------

A : 6312B



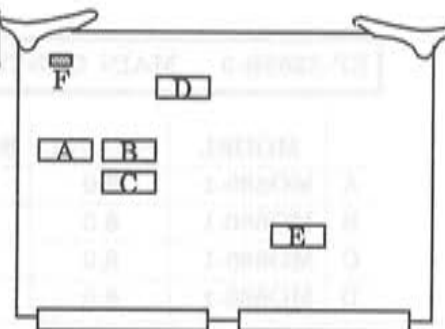
**EP-3464B TX TRIGGER GENE**

	MODEL	PRO. No.	ROM No.
A	GEU-64/65	LCDLY1	6406H
B	GEU-64/65	GEUAD2	6406C
C	GEU-64/65	EMASK	6405E
D	GEU-64/65	TXROT	6405C



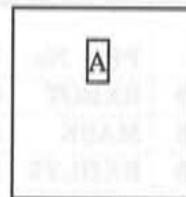
**EP-3465B GEU TIMING & ADDRESS**

	MODEL	PRO. No.	ROM No.
A	GEU-64/65	CVN6	6511L
B	GEU-64/65	CADR	6510L
C	GEU-64/65	DF6	6510J
D	GEU-64/65	TIM6	6508P
E	GEU-64/65	MODE6	6504F
F	6511S		



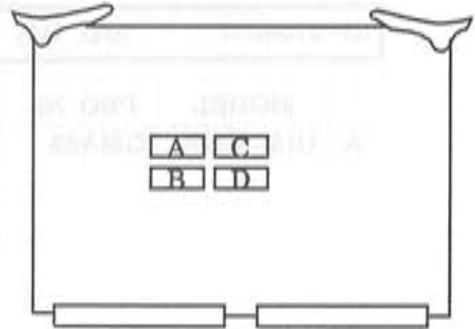
**EP-3452 RX SELECT CONT**

	MODEL	PRO. No.	ROM No.
A	GEU-64/65	SEL	5203C



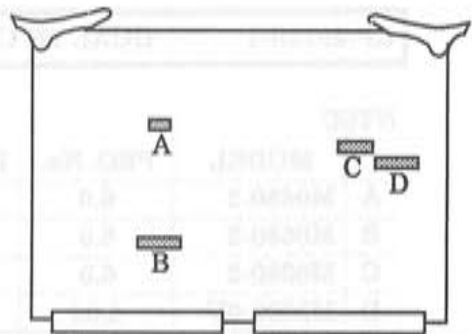
## EP-3247B B/W MEMORY

	MODEL	PRO. No.	ROM No.
A	UIM-325/6	BUD1	4713E
B	UIM-325/6	BUD2	4713D
C	UIM-325/6	BUD1	4711E
D	UIM-325/6	BUD2	4711D



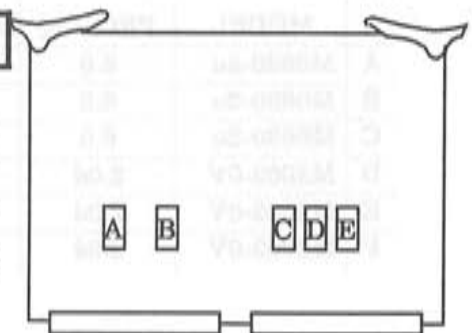
## EP-3236E DSC ADDRESS

A	368L
B	368D
C	362KA
D	361JA



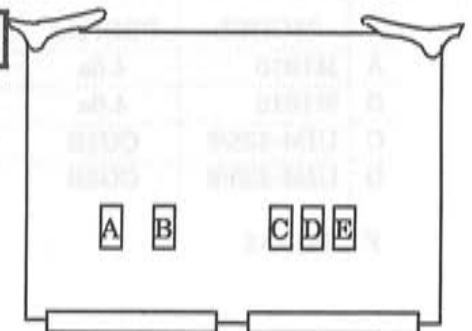
## EP-3620-1 DSC TIMING (for NTSC)

	MODEL	PRO. No.	ROM No.
A	UIM-325/6	VTM	2015C
B	UIM-325/6	HTM	2012C
C	UIM-325/6	HIP	207D
D	UIM-325/6	LEP	205D
E	UIM-325/6	REP	204D



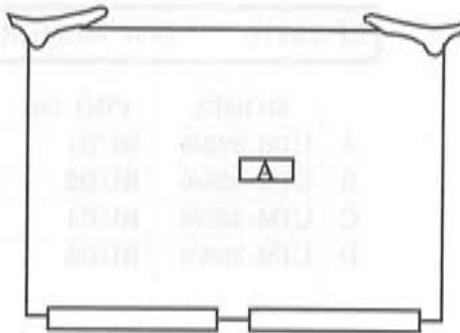
## EP-3620-2 DSC TIMING (for PAL)

	MODEL	PRO. No.	ROM No.
A	UIM-325/6	VTM	2015C
B	UIM-325/6	PHTM	2012C
C	UIM-325/6	HIP	207D
D	UIM-325/6	LEP	205D
E	UIM-325/6	REP	204D



EP-2729H-7 A/D, D/A

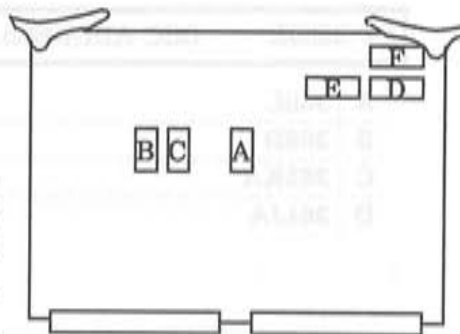
	MODEL	PRO. No.	ROM No.
A	UIM-325/6	GMA68	295H



EP-2913B-1 DUAL MPU

NTSC

	MODEL	PRO. No.	ROM No.
A	M0680-2	6.0	1
B	M0680-2	6.0	2
C	M0680-2	6.0	3
D	M3002-0U	4.0d	1
E	M3002-0U	4.0d	2
F	M3002-0U	4.0d	3

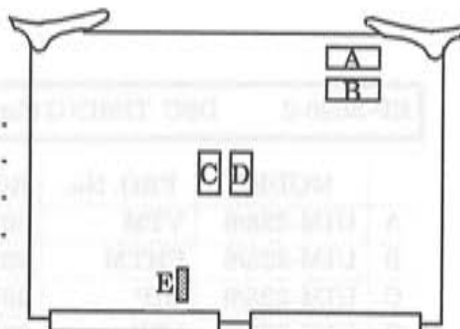


PAL

	MODEL	PRO. No.	ROM No.
A	M0680-2u	6.0	1
B	M0680-2u	6.0	2
C	M0680-2u	6.0	3
D	M3002-0V	2.0d	1
E	M3002-0V	2.0d	2
F	M3002-0V	2.0d	3

EP-2629D AGDC

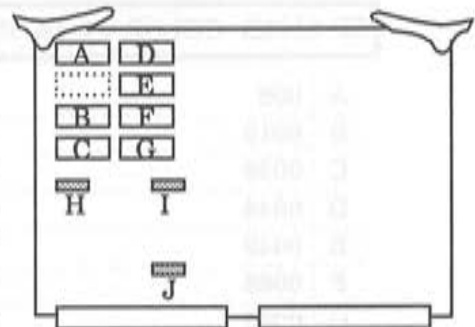
	MODEL	PRO. No.	ROM No.
A	M1010	4.0a	1
B	M1010	4.0a	2
C	UIM-325/6	CG1B	2911D
D	UIM-325/6	CG2B	299D
F	2912A2		



EP-3477B-1	US ITF (for NTSC)
------------	-------------------

	MODEL	PRO. No.	ROM No.
A	UIM-325/6	OFS	778Q
B	UIM-325/6	CY <sub>0</sub> L	778L
C	UIM-325/6	X <sub>0</sub> L	778J
D	UIM-325/6	MDXY	776Q
E	UIM-325/6	CDXY	776N
F	UIM-325/6	CY <sub>0</sub> H	776L
G	UIM-325/6	X <sub>0</sub> H	776J

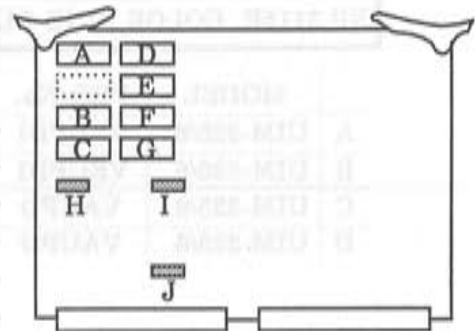
H	778G
I	776G
J	776B



EP-3477B-2	US ITF (for PAL)
------------	------------------

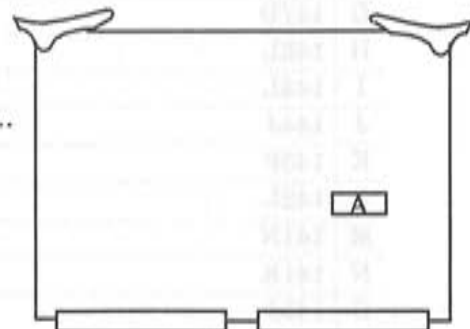
	MODEL	PRO. No.	ROM No.
A	UIM-325/6	POFS	778Q
B	UIM-325/6	CY <sub>0</sub> L	778L
C	UIM-325/6	PX <sub>0</sub> L	778J
D	UIM-325/6	PMDXY	776Q
E	UIM-325/6	PCDXY	776N
F	UIM-325/6	CY <sub>0</sub> H	776L
G	UIM-325/6	PX <sub>0</sub> H	776J

H	778G
I	776G
J	776B



EP-2651E-4	COLOR D/A
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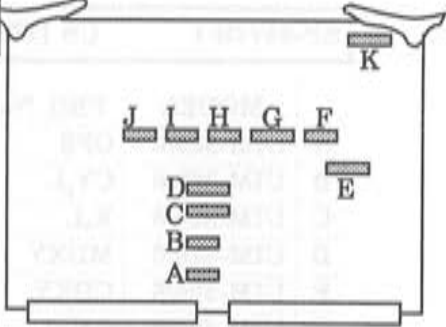
	MODEL	PRO. No.	ROM No.
A	UIM-325/6	COLMD	512D





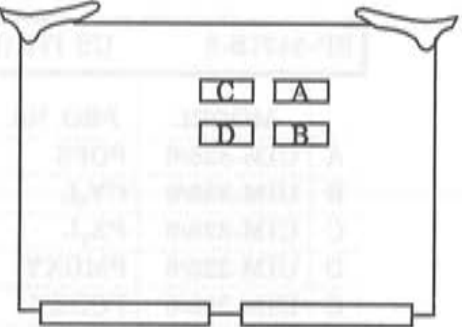
**EP-5100B COLOR FLOW PROCESSOR**

A	008
B	0019
C	0038
D	0044
E	0049
F	0068
G	0069
H	0070
I	0071
J	0072
K	00117



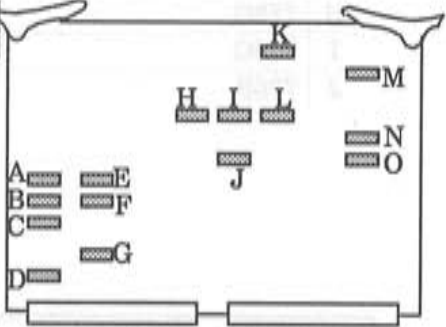
**EP-3115E COLOR LINE BUFFER**

	MODEL	PRO. No.	ROM No.
A	UIM-325/6	VEUPD1	153J
B	UIM-325/6	VEUPD1	153G
C	UIM-325/6	VAUPD	155J
D	UIM-325/6	VAUPD	155G



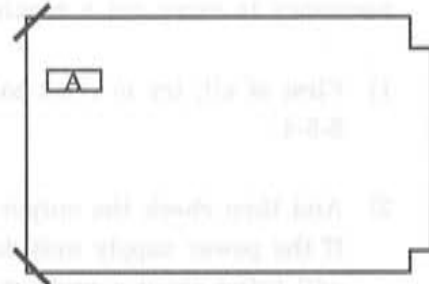
**EP-3114E COLOR POST PROCESS**

A	148H
B	148G
C	148F
D	148C
E	147H
F	147G
G	147D
H	145L
I	144L
J	144J
K	143P
L	143L
M	141N
N	141K
O	141J

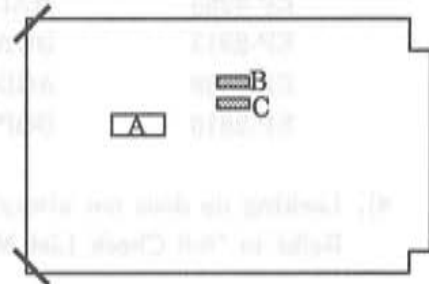


**EP-2810B-3 DOP CONTROLLER**

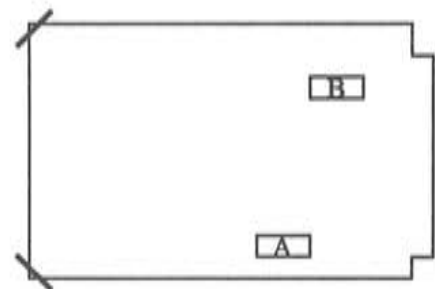
	MODEL	PRO. No.	ROM No.
A	M-2006	1.0	1

**EP-3259C DOP FILTER**

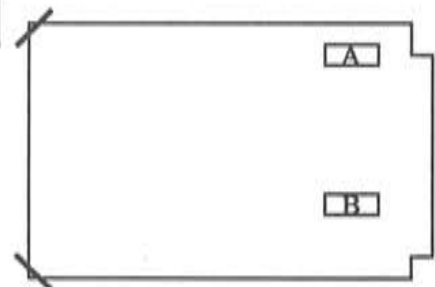
	MODEL	PRO. No.	ROM No.
A	DM 2-AGC	V1.0	114G
B	T112D		
C	C113D		

**CDC-522A FFT board (NJK-196A)**

A	DZMD 124
B	DZMD 125

**CDG-266A1 OUTPUT board (NJK-196A)**

A	DZMD 126
B	DZMD 127A



8-5-7 Correction for the Fail to Start or Locking up

If the system should fail to start up or does start up and lock up, it is necessary to carry out a repair operation while referring to the following items.

- 1) First of all, try to reset backup memory according to the method described in 8-5-4.
- 2) And then check the output voltage from power supply unit referring to 8-5-8. If the power supply unit does not supply +5V or supply abnormal voltage, it will bring about a problem affecting the entirety of the system.
- 3) The following PCBs are equipped with a CPU.
 

EP-3265	MAIN CONTROL
EP-2913	DUAL MPU
EP-2629	AGDC
EP-2810	DOP CONTROLLER
- 4) Locking up does not always caused by the PCB equipped with a CPU. Refer to "8-6 Check List Map" for details.

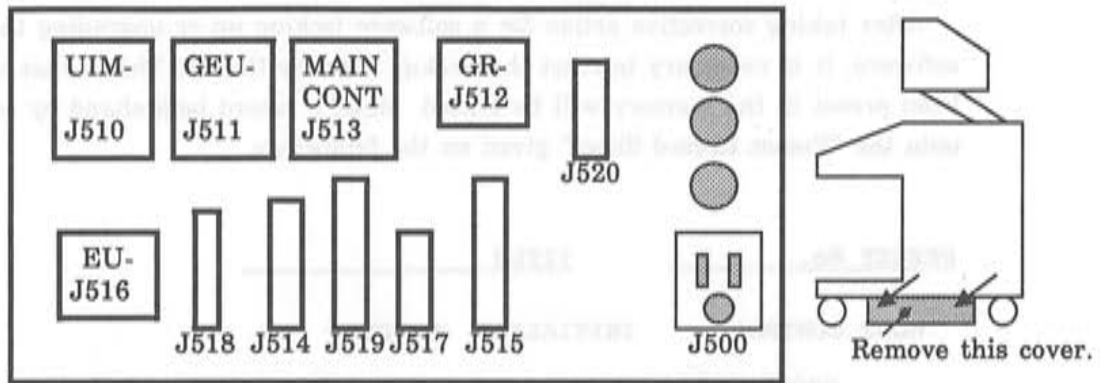


Diagram 1: EP-3265 MAIN CONTROL PCB



Diagram 2: EP-2913 DUAL MPU PCB

8-5-8 Power supply unit output connector list



3	-15VB	A.GND	+15.0V	1
	+5.1V	+5.1V	+5.1V	
	+5.1V	+5.1V	+5.1V	
	D.GND	D.GND	D.GND	
15	D.GND	D.GND	D.GND	13

J510

3	-15VA	A.GND	+15.0V	1
	nc	+5.0V	+5.1V	
	-5.1V	+5.0V	+5.1V	
	A.GND	A.GND	D.GND	
15	A.GND	A.GND	D.GND	13

J511

3	-15VA	A.GND	+15.0V	1
	A.GND	A.GND	+5.0V	
	-5.1V	+6.0V	+5.1V	
12	A.GND	A.GND	D.GND	10

J513

3	-15VA	A.GND	+15.0V	1
	nc	+5.1V	+5.1V	
9	nc	D.GND	D.GND	7

J512

3	-15VA	+15.0V	+5.0V	1
6	A.GND	A.GND	A.GND	4

J516

nc: No connection

DATA-0	1
DATA-1	
DATA-2	
ON/OFF	
TRIG OFF	
A.GND	
RV-1	
RV-2	
RV-3	
nc	10

J518

HV-A	1
A.GND	
HV-B	
A.GND	
nc	5

J519

+15.0V	1	+5.0V	1	nc	1
A.GND		A.GND		D.GND	
A.GND	3	-5.1V		+5.1V	
		A.GND		D.GND	
		+15.0V		+5.1V	5
		A.GND	6		

J517                      J515                      J519

J517, J515, and J519 are not used in the standard SSD-680EX.

## 8-5-9 Preset Record Sheet

After taking corrective action for a software locking up or upgrading the software, it is necessary to reset the backup memory (RAM). Then, what has been preset in the memory will be erased. Make a record beforehand by copying onto the "Preset Record Sheet" given on the followings.

<u>PRESET No.</u>	<u>TITLE</u>				
<b>MODE CONTROL</b>		<b>INITIALIZE PROGRAM</b>			
PROBE CODE	[ ]	[ ]	[ ]	[ ]	[ ]
MODE	B	B/B	B/M	B/PH	FLOW
MULTI IMAGE	2B	3B	4B		
MAGNIFICATION	X0.7	X1	X1.5	X2	
IMAGE DIRECT	↑	↓	→	←	
ANNOTATION	ABDOM	OB/GY	PV	OTHER	
BODY MARK	ABDOM	OB/GY	HEAD	BREAST	
PUNCT. GUIDE	OFF	ON			
CHAR. DISPLAY	OFF	ON			
CAMERA	B/W	COLOR			
STORE MEMORY	ON	OFF			
<b>IMAGE CONTROL</b>		<b>INITIALIZE PROGRAM</b>			
VIEW GAMMA	A	B	STD		
PHOTO GAMMA	A	B	C		
FRAME CORR	OFF	LOW	HIGH		
PRE PROCESS	OFF	LOW	MID	HIGH	
POST PROCESS	LINEAR	SLOPE1	SLOPE2	SLOPE3	
		[ , ]	[ , ]	[ , ]	
FOCUS B	1	2	3	4	BROAD
FOCUS M	1	2	3	4	
<b>PW CONTROL</b>		<b>INITIALIZE PROGRAM</b>			
VEL. RANGE		2KHZ	4KHZ	6KHZ	8KHZ
FILTER	50HZ	100HZ	200HZ	400HZ	800HZ
SAMPLE VOLUME	1mm	2mm	3mm	5mm	10mm
PRE COMP	LOW	MID1	MID2	HIGH	
REJECT	[ /14]				
BASE LINE	LOW	MIDL	CENT	MIDH	HIGH
INVERT	NORM	INVERT.			
UNIT	M/S	CM/S	KHZ		

FLOW CONTROL      LARG V, SMALL V, PV, THYROID, CARDIO  
 INITIALIZE PROGRAM

COLOR DISPLAY	V/VAR1	V/VAR2	VAR	V-ENH1	V-ENH2
VEL. RANGE	0.5KHZ	1KHZ	2KHZ	4KHZ	6KHZ
FILTER	LOW	MID1	MID2	HIGH	
COL AVERAGE	LOW	MID	HIGH	HORI	
COL REJECT	[ /32]				
DISPLAY AREA	WIDE	MID1	MID2	NARR	
AREA LOCK	OFF	ON			
COLOR EDGE	COL-CUT [ /63]		WHT-CUT [ /63]		
FLOW ENHANC	LOW2	LOW1	STD	HIGH1	HIGH2
FRAME CORR	OFF	LOW	MID	HIGH	
FOCUS	1	2	3	4	BROAD
COL POLARITY	NORMAL	INVERT			
SPACIAL FILT	OFF	LOW	MID	HIGH	
LINE DENSITY	LOW	HIGH			
APPLICATION	ABDOMEN	CARDIO			

MEAS CONTROL      INITIALIZE PROGRAM

B MODE	DIST, AREA-T, AREA-E, VOL, OB, HIST, RATIO, %STEN				
PRIORITY	[ ]				
PAGE1	[ ]	[ ]	[ ]	[ ]	
PAGE2	[ ]	[ ]	[ ]	[ ]	
M MODE	DIST, %STEN, RATIO, M-RATE, POMBO, TEICH				
PRIORITY	[ ]				
PAGE1	[ ]	[ ]	[ ]	[ ]	
PAGE2	[ ]	[ ]	[ ]	[ ]	
PW MODE	VEL, F-VOL, AVERG, ACCEL, PUL-IND, POU-IND, RATIO, P-GRAD				
PRIORITY	[ ]				
PAGE1	[ ]	[ ]	[ ]	[ ]	
PAGE2	[ ]	[ ]	[ ]	[ ]	

OB\_PROG Common to PRESET 1~5.  
 (Different setting in each PRESET is not possible.)

OB-PROGRAM  
 FETAL WEIGHT CALCULATION  
 1 TOKYO UNIV./OSAKA UNIV.  
 2 MADLOCK/SHEPARD

OB REPORT PROGRAM  
 GESTATIONAL TABLE      DIMENSION  
 1      (      )      HC : [      ]  
 2      (      )      AC : [      ]  
 3      (      )      USR1 : [      ]  
 4      (      )      USR2 : [      ]  
 5      (      )  
 6      (      )  
 RATIOS  
 1 N/D      ]  
   N: [      ]  
   D: [      ]  
 2 N/D      ]  
   N: [      ]  
   D: [      ]

TABLE NO. :  
 PARAMETER : [      ]  
 DIMENSION :  
 BASED ON : [      ]  
 W    2d      cm      W    2d      cm  
 1  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9  
 10  
 11  
 12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21

( ) TABLE NO. [ ]  
PARAMETER : [ ]  
DIMENSION : [ ]  
BASED ON : [ ]

M	±d	cm	M	±d	cm
1			22		
2			23		
3			24		
4			25		
5			26		
6			27		
7			28		
8			29		
9			30		
10			31		
11			32		
12			33		
13			34		
14			35		
15			36		
16			37		
17			38		
18			39		
19			40		
20			41		
21			42		

( ) TABLE NO. [ ]  
PARAMETER : [ ]  
DIMENSION : [ ]  
BASED ON : [ ]

M	±d	cm	M	±d	cm
1			22		
2			23		
3			24		
4			25		
5			26		
6			27		
7			28		
8			29		
9			30		
10			31		
11			32		
12			33		
13			34		
14			35		
15			36		
16			37		
17			38		
18			39		
19			40		
20			41		
21			42		

( ) TABLE NO. [ ]  
PARAMETER : [ ]  
DIMENSION : [ ]  
BASED ON : [ ]

M	±d	cm	M	±d	cm
1			22		
2			23		
3			24		
4			25		
5			26		
6			27		
7			28		
8			29		
9			30		
10			31		
11			32		
12			33		
13			34		
14			35		
15			36		
16			37		
17			38		
18			39		
19			40		
20			41		
21			42		



SECTION 8 TROUBLE SHOOTING

ANNOTATION Common to PRESET 1~5.  
 (Different setting in each PRESET is not possible.)

ABDOM1	[	]	[	]	[	]	[	]	[	]
ABDOM2	[	]	[	]	[	]	[	]	[	]
OB/GY1	[	]	[	]	[	]	[	]	[	]
OB/GY2	[	]	[	]	[	]	[	]	[	]
PV1	[	]	[	]	[	]	[	]	[	]
PV2	[	]	[	]	[	]	[	]	[	]
OTHER1	[	]	[	]	[	]	[	]	[	]
OTHER2	[	]	[	]	[	]	[	]	[	]

## 8-6 Check List Map

This "check list map" provides you with the data, based on which you may assume a PCB or unit considered to have caused the equipment failure. It comprises the following information:

- **Phenomenon Code :** General failure phenomena have been classified into codes. A failure is related with the "map" through each of the codes.
- **Map :** This is a table showing the relations of a "Code" given in the "Phenomenon Codes, that is, a failure phenomenon, with the PCB or unit assumed to cause that failure.

## 8-6-1 Phenomenon Code

The general failure phenomena envisaged herein are roughly classified as described below while being coded with two alphabetical characters:

<u>Failure Phenomenon</u>	<u>Code</u>
Failure relating to an ultrasound image	US
Failure relating to a character or graphic displayed	CG
Failure relating to timing and monitoring	TM
Failure relating to general operations and functions	FU
Failure relating to power supplies, records, switches and/or controls	PM
Failure relating to a physiological signals	PH
Failure relating to Doppler	DP
Failure relating to color displays	CD

Shown from the next page and on is a summary of the failure phenomena by alphabetical code as referred to above.

## UltraSound image

Code		Aply	Problems
item	div.		
US-1	1	<input type="radio"/>	Ultrasound image is not all displayed.
	2	<input type="radio"/>	Ultrasound image is not all displayed in a particular MODE.
	3	<input type="radio"/>	Ultrasound image is not all displayed only for LINEAR (or CONVEX ).
	4		Ultrasound image is not all displayed only for MECHANICAL SCANNER.
	5		Ultrasound image is not all displayed only for PHASED ARRAY.
	6	<input type="radio"/>	Only particular Ultrasound image is not displayed in multiples Ultrasound image displays.
US-2	1	<input type="radio"/>	Display of Ultrasound image area become white.
US-3	1	<input type="radio"/>	Unnecessary dots or lines are displayed in Ultrasound image area.
	2	<input type="radio"/>	Regular horizontal or vertical stripes are displayed in Ultrasound image area .
US-4	1	<input type="radio"/>	Lacks of ECHO are displayed in LINEAR ( or CONVEX ).
	2		Lacks of ECHO are displayed in MECHANICAL SCANNER.
	3		Lacks of ECHO are displayed in PHASED ARRAY.
US-5	1	<input type="radio"/>	Noises are seen on the Ultrasound image in LINEAR ( or CONVEX )
	2		Noises are seen on the Ultrasound image in MECHANICAL SCANNER.
	3		Noises are seen on the Ultrasound image in PHASED ARRAY.
	4	<input type="radio"/>	Noises are seen on the Ultrasound image in all Ultrasound images.
US-6	1	<input type="radio"/>	Sensitivity of Ultrasound image is low in LINEAR ( or CONVEX ).
	2		Sensitivity of Ultrasound image is low in MECHANICAL SCANNER.
	3		Sensitivity of Ultrasound image is low in PHASED ARRAY.
	4	<input type="radio"/>	Sensitivity of Ultrasound image is low in all Ultrasound images.
US-7	1	<input type="radio"/>	Same as depth band is difference brightness in Ultrasound image.
US-8	1	<input type="radio"/>	Image varies as if enhanced, without gradation.
	2	<input type="radio"/>	Ultrasound image becomes moire in MECHANICAL SCANNER, PHASED ARRAY, CONVEX.
US-9	1	<input type="radio"/>	Form of Ultrasound image is abnormally displayed.
US-10	1	<input type="radio"/>	Unnecessary multiples of Ultrasound image are displayed in LINEAR ( or CONVEX ).
	2		Unnecessary multiples of Ultrasound image are displayed in MECHANICAL SCANNER.
	3		Unnecessary multiples of Ultrasound image are displayed in PHASED ARRAY.
	4	<input type="radio"/>	Unnecessary multiples of Ultrasound image are displayed in all Ultrasound images.

○:Marked items are effective on this system.

## Characters &amp; Graphics

Code		Aply	Problems
item	div.		
CG-1	1	<input type="radio"/>	Characters are displayed in the entire screen.
CG-2	1	<input type="radio"/>	Only Caliper, Graphic are not displayed.
	2	<input type="radio"/>	Only Caliper, Graphic are abnormally displayed.
CG-3	1	<input type="radio"/>	The entire screen become white.
	2	<input type="radio"/>	Unnecessary dots or stripes are displayed in all or parts of image.
CG-4	1	<input type="radio"/>	TIME and DATE are abnormally displayed.
CG-5	1	<input type="radio"/>	Characters are not displayed, key in cannot be made.
	2	<input type="radio"/>	Characters are abnormally displayed.
CG-6	1	<input type="radio"/>	Measured value is not correct.

:Marked items are effective on this system.

## Timing &amp; Monitor

Code		Aply	Problems
item	div.		
TM-1	1	<input type="radio"/>	All images are not displayed in any Monitor.
	2	<input type="radio"/>	Image is not displayed in a particular Monitor.
TM-2	1	<input type="radio"/>	All Image are not synchronized in any Monitor.
	2	<input type="radio"/>	Image is not synchronized in a particular Monitor.
TM-3	1	<input type="radio"/>	Entire image shake. Abnormality is seen when brightness varies in any Monitor.
	2	<input type="radio"/>	Entire image shake in a particular Monitor. Abnormality is seen.

:Marked items are effective on this system.

## FUnctions

Code		Aply	Problems
item	div		
FU-1	1	<input type="radio"/>	System locks up, or panel information is not accepted.
	2		The ERROR messages are shown on the monitor.

○:Marked items are effective on this system.

## Power supply, Memorize (record), Switch &amp; Controls

Code		Aply	Problems
item	div.		
PM-1	1	<input type="radio"/>	Power output is not present, or abnormally outputted.
PM-2	1	<input type="radio"/>	Switches and/or Controls are inoperative.
	2	<input type="radio"/>	Switches and/or Controls are abnormally operated.
	3	<input type="radio"/>	Camera shutter (or printing) is inoperative.
PM-3	1	<input type="radio"/>	Photographed picture is not normal (Monitor is normal).
	2	<input type="radio"/>	Played back image is abnormally displayed (usual image is normal).
PM-4	1		All images are not recorded in Recorder ( Recorder is normal ).
	2		All images are not recorded in Recorder ( Recorder is abnormal ).
	3		Image is abnormally recorded in Recorder ( Recorder is normal ).
	4		Image is abnormally recorded in Recorder ( Recorder is abnormal ).

○:Marked items are effective on this system.

## PHysiological Signal

Code		Aply	Problems
item	div.		
PH-1	1	<input type="radio"/>	ECG (EKG) waveform is not displayed.
	2	<input type="radio"/>	ECG (EKG) waveform is abnormally displayed or sensitivity is low.
	3	<input type="radio"/>	ECG (EKG) waveform is abnormally displayed in a particular Mode, or not displayed.
	4	<input type="radio"/>	ECG (EKG) Synchronization is not correctly operated.
PH-2	1		PULSE waveform is not displayed.
	2		PULSE waveform is abnormally displayed, or sensitivity is low.
PH-3	1		PCG waveform is not displayed.
	2		PCG waveform is abnormally displayed, or sensitivity is low.

○:Marked items are effective on this system.

## DoPpler

Code		Aply	Problems
item	div.		
DP-1	1	<input type="radio"/>	Doppler image is not displayed.
	2	<input type="radio"/>	Doppler image is not displayed in a particular Mode.
	3	<input type="radio"/>	Doppler image is not displayed in a particular Probe.
	4	<input type="radio"/>	Doppler image is not displayed either PW or CW.
DP-2	1	<input type="radio"/>	Doppler image is abnormally displayed.
	2	<input type="radio"/>	Doppler image is abnormally displayed in a particular Mode.
	3	<input type="radio"/>	Doppler image is abnormally displayed in a particular Probe.
	4	<input type="radio"/>	Doppler image is abnormally displayed either PW or CW.
DP-3	1	<input type="radio"/>	Mirror or Side band noise appear on image or a large amount of noise.
	2	<input type="radio"/>	Mirror or Side band appear in a particular Mode, or a large amount of noise.
	3	<input type="radio"/>	Mirror or Side band appear in a particular Probe, or a large amount of noise.
	4	<input type="radio"/>	Mirror or Side band appear either PW or CW.
DP-4	1	<input type="radio"/>	Sensitivity of Doppler image is low.
	2	<input type="radio"/>	Sensitivity of Doppler image is low in a particular Mode.
	3	<input type="radio"/>	Sensitivity of Doppler image is low in a particular Probe.
	4	<input type="radio"/>	Sensitivity of Doppler image is low either PW or CW.
DP-5	1	<input type="radio"/>	Doppler sound is low or not outputted.
DP-6	1		Doppler PPM is not displayed.
	2		Doppler PPM is abnormally displayed.

:Marked items are effective on this system.

## Color Display

Code		Apply	Problems
item	div.		
CD-1	1	<input type="radio"/>	Color is not displayed in Ultrasound image area.
	2	<input type="radio"/>	Color is not displayed in Ultrasound image area in a particular Mode.
	3	<input type="radio"/>	Color is not displayed in Ultrasound image area in a particular Probe.
CD-2	1	<input type="radio"/>	Color noises are seen in Ultrasound image area, or a large amount of noises are seen.
	2	<input type="radio"/>	Noises are seen in Ultrasound image in a particular Mode.
	3	<input type="radio"/>	Noises are seen in Ultrasound image in a particular Probe.
CD-3	1	<input type="radio"/>	Color is abnormally displayed in Ultrasound image area.
	2	<input type="radio"/>	Color is abnormally displayed in Ultrasound image area in a particular Mode.
	3	<input type="radio"/>	Color is abnormally displayed in Ultrasound image area in a particular Probe.
CD-4	1	<input type="radio"/>	Color is abnormally displayed in Playback mode.
CD-5	1	<input type="radio"/>	Color is not displayed entire image, or abnormally displayed.

:Marked items are effective on this system.



8-6-2 Map

Concerning the typical failure phenomena identified by "Phenomenon Codes," those PCBs or units which may be deemed to have caused such phenomena are shown below. This map has phenomena classified by "failure code." A PCB or unit assumed to be causative of the related phenomenon is marked with a "check code" for your referring to the "Check Procedure".

Phenomenon Code	Failure Code	Check Code	PCB/Unit
CD-1	1	1	PCB 101
	2	2	PCB 102
	3	3	PCB 103
CD-2	1	1	PCB 201
	2	2	PCB 202
	3	3	PCB 203
CD-3	1	1	PCB 301
	2	2	PCB 302
	3	3	PCB 303
CD-4	1	1	PCB 401
	2	2	PCB 402
	3	3	PCB 403
CD-5	1	1	PCB 501
	2	2	PCB 502
	3	3	PCB 503

○ Marked items are effective on this system.

Check List	Problem Code	US-1				US-2		US-3		US-4	US-5		US-6		US-7
		Item	Code	1	2	3	6	1	1	2	1	1	4	1	4
Operation	A1	●		●									●	●	
External Noise	A2										●	●			
Power Supply (PSU-S680*)	A3	●		●									●	●	
Probe	A4	●		●					●		●	●			
TV Monitor	A5														
EP-3265 Main Control	B1														
EP-2960 Main Panel	B2														
L-KEY-26 Full keyboard	B3														
EP-2512 Blind Panel	B4														
EP-3466 (GEU) Mother Board	C1														
EP-3452 Rx Select Cont	C2									●					
EP-3453-1~5 Probe Select Relay	C3														
EP-3454 Probe Selector	C4														
EP-3455 RX SELECT	C5									●					
EP-3456 TX 1	C6									●					
EP-3457 TX 2	C7									●					
EP-3458 Pre Amp	C8									●					
EP-3459 Rx Focus	C9														
EP-3461 Main Amp & Color ITF	C10	●		●			●				●	●	●	●	
EP-3463 VBPF & Gain Control	C11	●		●											●
EP-3464 Tx Trigger Gene	C12	●		●											
EP-3465 GEU Timing & Address	C13	●	●	●	●					●					
EP-3525 GEU Interface	C14	●	●	●	●										
EP-3467 (DSC) Mother Board	D1														
EP-3247 B/W Memory	D2	●	●	●	●			●	●						
EP-3236 DSC Address	D3	●	●	●	●			●	●						
EP-3620 DSC Timing	D4	●	●	●	●			●	●						
EP-2729 A/D, D/A	D5	●		●			●								
EP-2913 Dual MPU	D6														
EP-2629 AGDC	D7														
EP-3477 US ITF	D8	●	●	●	●										
EP-2651 Color D/A	D9														
EP-3237 B/W Cine Memory	D10	●	●	●	●			●	●						
EP-5100 Color Flow Processor	D11														
EP-3115 Color Line Buffer	D12														
EP-3114 Color Post Process	D13														
EP-2213 Color Memory VEL	D14														
EP-2213 -1 Color Memory VAR	D15														
EP-3238 Color Cine Memory	D16														
EP-3443 Video ITF	D17														
FFA-18* Doppler unit	E1														
EP-3117 Physio Amp	F1														
EP-2841 ECG Memory	F2														
SSZ-700/203 Color printer/camera	G1														
VTR	G3														

SECTION 8 TROUBLE SHOOTING

Check List Item	Problem Code Code	US-8		US-9	US-10		CG-1	CG-2		CG-3		CG-4	CG-5		CG-6
		1	2	1	1	4	1	1	2	1	2	1	1	2	1
Operation	A1	●													
External Noise	A2														
Power Supply (PSU-S680*)	A3														
Probe	A4														
TV Monitor	A5														
EP-3265 Main Control	B1														
EP-2960 Main Panel	B2														
L-KEY-26 Full keyboard	B3												●		
EP-2512 Blind Panel	B4														
EP-3466 (GEU) Mother Board	C1														
EP-3452 Rx Select Cont	C2														
EP-3453-1~5 Probe Select Relay	C3														
EP-3454 Probe Selector	C4														
EP-3455 RX SELECT	C5														
EP-3456 TX 1	C6														
EP-3457 TX 2	C7														
EP-3458 Pre Amp	C8														
EP-3459 Rx Focus	C9														
EP-3461 Main Amp & Color ITF	C10														
EP-3463 VBPF & Gain Control	C11														
EP-3464 Tx Trigger Gene	C12														
EP-3465 GEU Timing & Address	C13			●											
EP-3525 GEU Interface	C14			●											
EP-3467 (DSC) Mother Board	D1														
EP-3247 B/W Memory	D2	●	●												
EP-3236 DSC Address	D3			●	●	●									
EP-3620 DSC Timing	D4	●	●							●					
EP-2729 A/D, D/A	D5	●								●					
EP-2913 Dual MPU	D6						●								●
EP-2629 AGDC	D7						●	●	●	●	●	●	●	●	
EP-3477 USITF	D8			●	●	●									
EP-2651 Color D/A	D9									●	●				
EP-3237 B/W Cine Memory	D10	●	●												
EP-5100 Color Flow Processor	D11														
EP-3115 Color Line Buffer	D12														
EP-3114 Color Post Process	D13														
EP-2213 Color Memory VEL	D14														
EP-2213-1 Color Memory VAR	D15														
EP-3238 Color Cine Memory	D16														
EP-3443 Video ITF	D17									●					
FFA-18* Doppler unit	E1														
EP-3117 Physio Amp	F1														
EP-2841 ECG Memory	F2														
SSZ-700/203 Color printer/camera	G1														
VTR	G3														

Check List Item	Problem Code Code	TM-1		TM-2		TM-3		FU-1	PM-1	PM-2			PM-3	
		1	2	1	2	1	2	1	1	1	2	3	1	2
Operation	A1	●												
External Noise	A2													
Power Supply (PSU-S680*)	A3	●						●	●					
Probe	A4													
TV Monitor	A5		●		●		●							
EP-3265 Main Control	B1							●		●	●	●		
EP-2960 Main Panel	B2									●	●	●		
L-KEY-26 Full keyboard	B3													
EP-2512 Blind Panel	B4									●	●			
EP-3466 (GEU) Mother Board	C1													
EP-3452 Rx Select Cont	C2													
EP-3453-1~5 Probe Select Relay	C3													
EP-3454 Probe Selector	C4													
EP-3455 RX SELECT	C5													
EP-3456 TX 1	C6													
EP-3457 TX 2	C7													
EP-3458 Pre Amp	C8													
EP-3459 Rx Focus	C9													
EP-3461 Main Amp & Color ITF	C10													
EP-3463 VBPF & Gain Control	C11													
EP-3464 Tx Trigger Gene	C12													
EP-3465 GEU Timing & Address	C13													
EP-3525 GEU Interface	C14													
EP-3467 (DSC) Mother Board	D1													
EP-3247 B/W Memory	D2													
EP-3236 DSC Address	D3													
EP-3620 DSC Timing	D4	●		●				●						
EP-2729 A/D, D/A	D5												●	●
EP-2913 Dual MPU	D6							●						
EP-2629 AGDC	D7							●						
EP-3477 US ITF	D8													
EP-2651 Color D/A	D9			●		●								
EP-3237 B/W Cine Memory	D10													
EP-5100 Color Flow Processor	D11													
EP-3115 Color Line Buffer	D12													
EP-3114 Color Post Process	D13													
EP-2213 Color Memory VEL	D14													
EP-2213 -1 Color Memory VAR	D15													
EP-3238 Color Cine Memory	D16													
EP-3443 Video ITF	D17	●		●		●							●	●
FFA-18* Doppler unit	E1													
EP-3117 Physio Amp	F1													
EP-2841 ECG Memory	F2													
SSZ-700/203 Color printer/camera	G1													●
VTR	G3													●

SECTION 8 TROUBLE SHOOTING

Check List	Problem Code	PH-1			
		1	2	3	4
Item	Code				
Operation	A1				
External Noise	A2				
Power Supply (PSU-S680*)	A3				
Probe	A4				
TV Monitor	A5				
EP-3265 Main Control	B1				●
EP-2960 Main Panel	B2				
L-KEY-26 Full keyboard	B3				
EP-2512 Blind Panel	B4				
EP-3466 (GEU) Mother Board	C1				
EP-3452 Rx Select Cont	C2				
EP-3453-1~5 Probe Select Relay	C3				
EP-3454 Probe Selector	C4				
EP-3455 RX SELECT	C5				
EP-3456 TX 1	C6				
EP-3457 TX 2	C7				
EP-3458 Pre Amp	C8				
EP-3459 Rx Focus	C9				
EP-3461 Main Amp & Color ITF	C10				
EP-3463 VBPF & Gain Control	C11				
EP-3464 Tx Trigger Gene	C12				
EP-3465 GEU Timing & Address	C13				●
EP-3525 GEU Interface	C14				●
EP-3467 (DSC) Mother Board	D1				
EP-3247 B/W Memory	D2				
EP-3236 DSC Address	D3				
EP-3620 DSC Timing	D4				
EP-2729 A/D, D/A	D5				
EP-2913 Dual MPU	D6				
EP-2629 AGDC	D7				
EP-3477 US ITF	D8				
EP-2651 Color D/A	D9				
EP-3237 B/W Cine Memory	D10				
EP-5100 Color Flow Processor	D11				
EP-3115 Color Line Buffer	D12				
EP-3114 Color Post Process	D13				
EP-2213 Color Memory VEL	D14				
EP-2213-1 Color Memory VAR	D15				
EP-3238 Color Cine Memory	D16				
EP-3443 Video ITF	D17				
FFA-18* Doppler unit	E1				
EP-3117 Physio Amp	F1	●	●	●	●
EP-2841 ECG Memory	F2			●	
SSZ-700/203 Color printer/camera	G1				
VTR	G3				

Check List	Problem Code	DP-1				DP-2				DP-3				DP-4				DP-5
		Code	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Operation	A1																	
External Noise	A2																	
Power Supply (PSU-S680*)	A3																	
Probe	A4																	
TV Monitor	A5																	
EP-3265 Main Control	B1			●				●										
EP-2960 Main Panel	B2																	
L-KEY-26 Full keyboard	B3																	
EP-2512 Blind Panel	B4																	
EP-3466 (GEU) Mother Board	C1																	
EP-3452 Rx Select Cont	C2																	
EP-3453-1~5 Probe Select Relay	C3																	
EP-3454 Probe Selector	C4																	
EP-3455 RX SELECT	C5																	
EP-3456 TX 1	C6																	
EP-3457 TX 2	C7																	
EP-3458 Pre Amp	C8																	
EP-3459 Rx Focus	C9																	
EP-3461 Main Amp & Color ITF	C10	●						●										
EP-3463 VBPF & Gain Control	C11																	
EP-3464 Tx Trigger Gene	C12																	
EP-3465 GEU Timing & Address	C13	●	●			●			●								●	
EP-3525 GEU Interface	C14	●																
EP-3467 (DSC) Mother Board	D1																	
EP-3247 B/W Memory	D2																	
EP-3236 DSC Address	D3																	
EP-3620 DSC Timing	D4																	
EP-2729 A/D, D/A	D5																	
EP-2913 Dual MPU	D6																	
EP-2629 AGDC	D7																	
EP-3477 US ITF	D8																	
EP-2651 Color D/A	D9																	
EP-3237 B/W Cine Memory	D10																	
EP-5100 Color Flow Processor	D11																	
EP-3115 Color Line Buffer	D12																	
EP-3114 Color Post Process	D13																	
EP-2213 Color Memory VEL	D14																	
EP-2213 -1 Color Memory VAR	D15																	
EP-3238 Color Cine Memory	D16																	
EP-3443 Video ITF	D17																	
FFA-18* Doppler unit	E1	●				●		●			●	●	●	●	●	●	●	●
EP-3117 Physio Amp	F1																	
EP-2841 ECG Memory	F2																	
SSZ-700/203 Color printer/camera	G1																	
VTR	G3																	

SECTION 8 TROUBLE SHOOTING

Check List	Problem Code	CD-1		CD-2		CD-3		CD-4	CD-5
		Code	1	3	1	3	1	3	1
Operation	A1								
External Noise	A2								
Power Supply (PSU-S680*)	A3								
Probe	A4								
TV Monitor	A5								
EP-3265 Main Control	B1								
EP-2960 Main Panel	B2								
L-KEY-26 Full keyboard	B3								
EP-2512 Blind Panel	B4								
EP-3466 (GEU) Mother Board	C1								
EP-3452 Rx Select Cont	C2								
EP-3453-1~5 Probe Select Relay	C3								
EP-3454 Probe Selector	C4								
EP-3455 RX SELECT	C5								
EP-3456 TX 1	C6								
EP-3457 TX 2	C7								
EP-3458 Pre Amp	C8								
EP-3459 Rx Focus	C9								
EP-3461 Main Amp & Color ITF	C10	●	●	●	●	●			
EP-3463 VBPF & Gain Control	C11								
EP-3464 Tx Trigger Gene	C12								
EP-3465 GEU Timing & Address	C13								
EP-3525 GEU Interface	C14								
EP-3467 (DSC) Mother Board	D1								
EP-3247 B/W Memory	D2								
EP-3236 DSC Address	D3								
EP-3620 DSC Timing	D4								
EP-2729 A/D, D/A	D5								
EP-2913 Dual MPU	D6								
EP-2629 AGDC	D7								
EP-3477 US ITF	D8								
EP-2651 Color D/A	D9	●				●			●
EP-3237 B/W Cine Memory	D10								
EP-5100 Color Flow Processor	D11	●	●	●		●	●		
EP-3115 Color Line Buffer	D12	●				●			
EP-3114 Color Post Process	D13	●				●			
EP-2213 Color Memory VEL	D14					●			
EP-2213-1 Color Memory VAR	D15					●			
EP-3238 Color Cine Memory	D16	●				●			
EP-3443 Video ITF	D17							●	●
FFA-18* Doppler unit	E1								
EP-3117 Physio Amp	F1								
EP-2841 ECG Memory	F2								
SSZ-700/203 Color printer/camera	G1								
VTR	G3							●	

## 8 - 7 Waveform for troubleshooting

It described the waveforms form next page for the reference to judgment of defective PCB on the trouble shooting.

However, the specified waveforms have been selected to be signified to show with the consideration of specification of measuring equipment and characteristic of signals.

**● Caution ●**

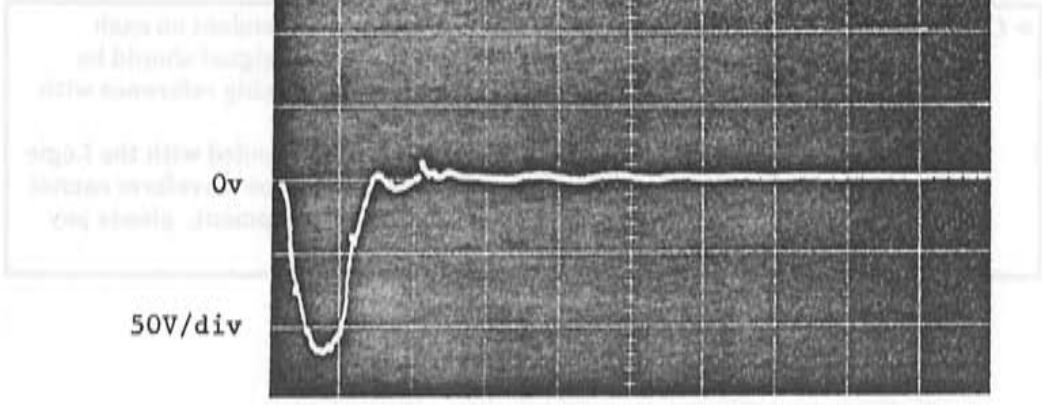
Since the connector pin numbers are dependent on each PCBs, the pin numbers are shown for each signal should be changed to those suited to each PCB by making reference with "Section 6 PCB Block diagram".

The specified wave informs have been recoded with the Logic Analyzer and its printer. Because, the same waveform cannot be always taken with your measuring equipment, please pay attention.



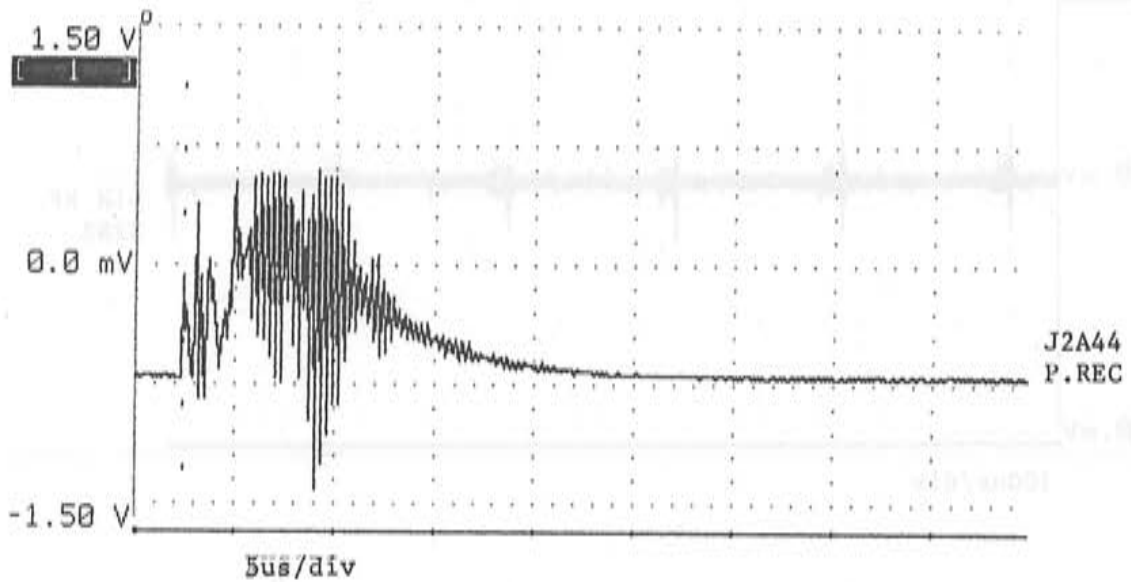
EP-3457 Tx2

Probe : UST-959-3.5  
Mode : M  
Acoustic PW : 10

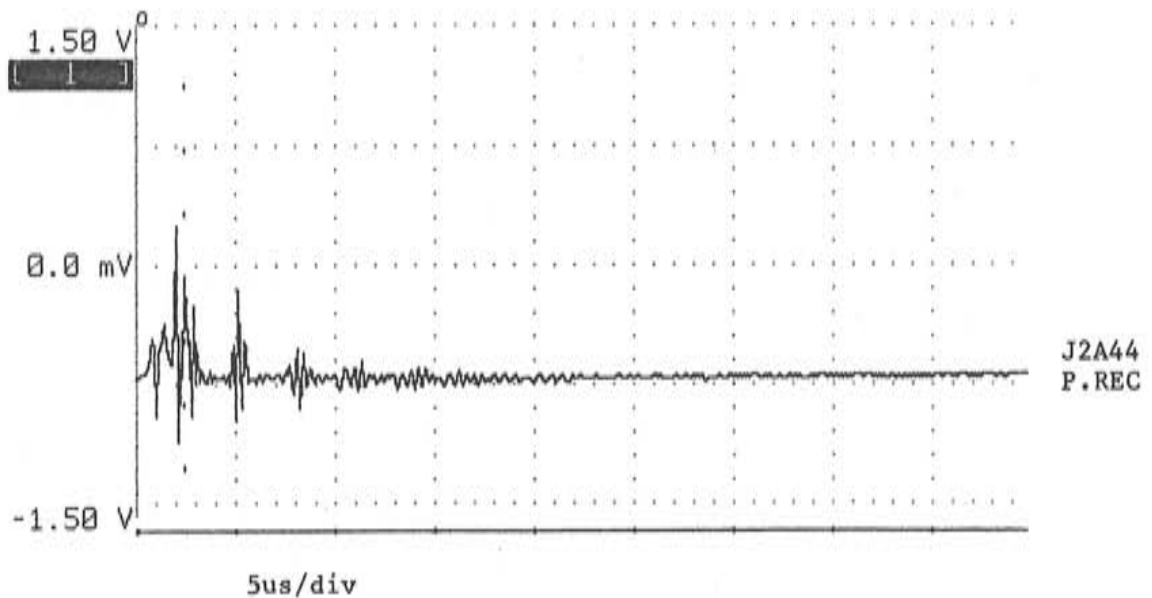


\* The waveform is observed with oscilloscope.

EP-3458      Pre AMP  
Probe        : UST-959-3.5  
Mode         : Dop  
Vel range    : +22 , -22



Probe        : UST-959-3.5  
Mode         : B  
Focus        : 4



Section 8 Troubleshooting

EP-3459

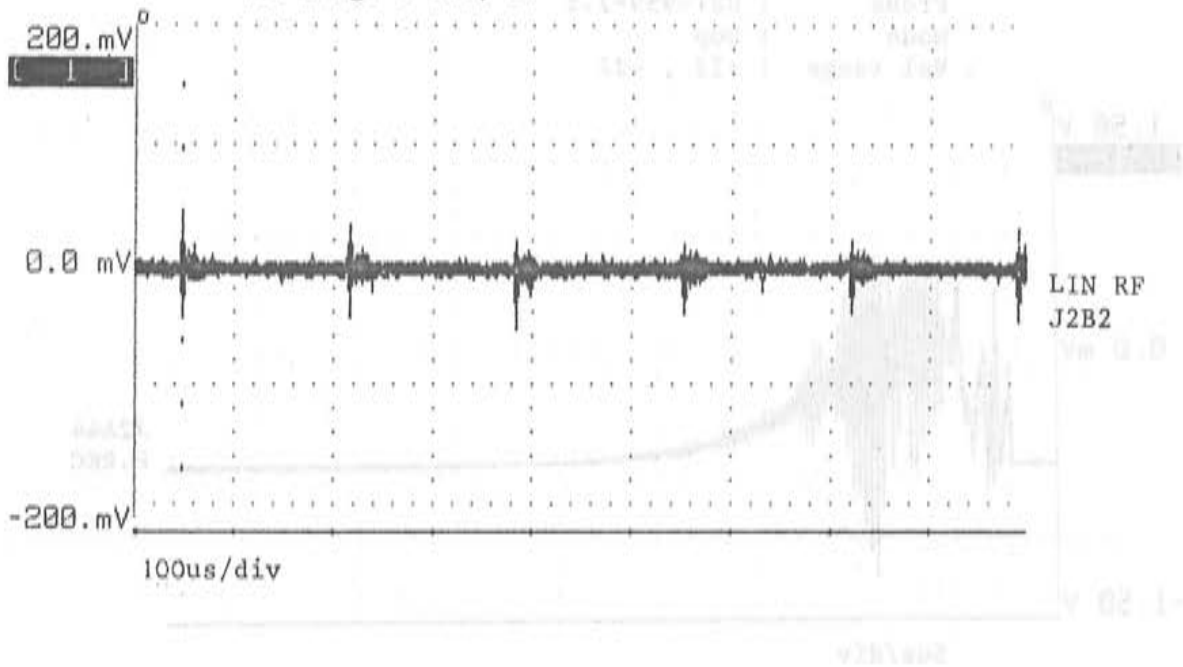
RX FOCUS

Probe : UST-959-3.5

Mag : x1

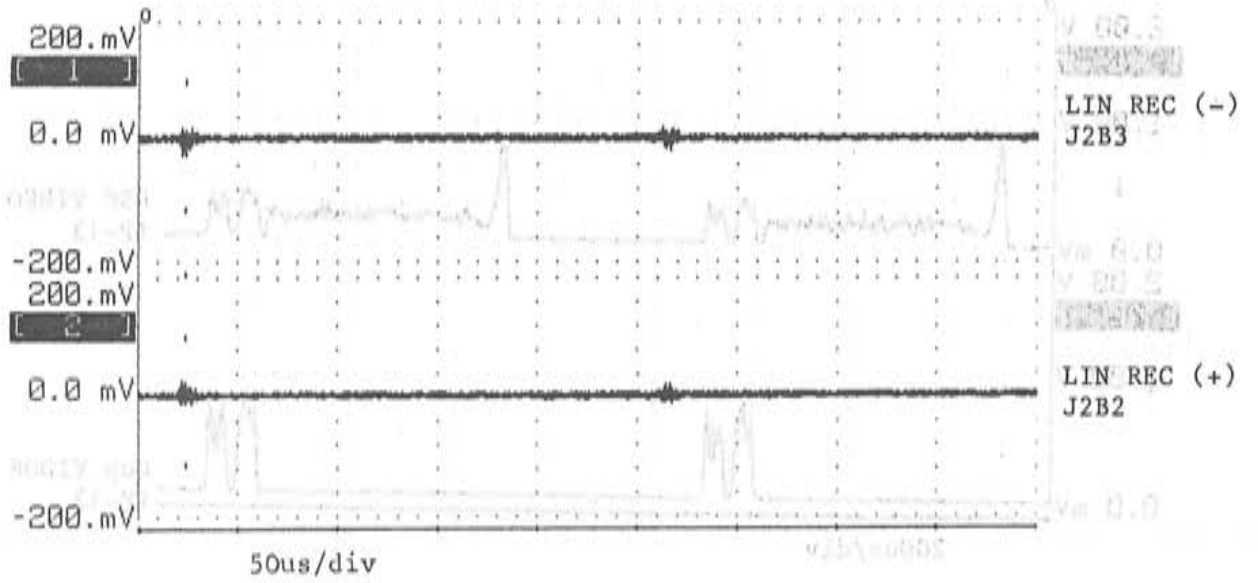
Mode : Dop

Vel range : +66,-64

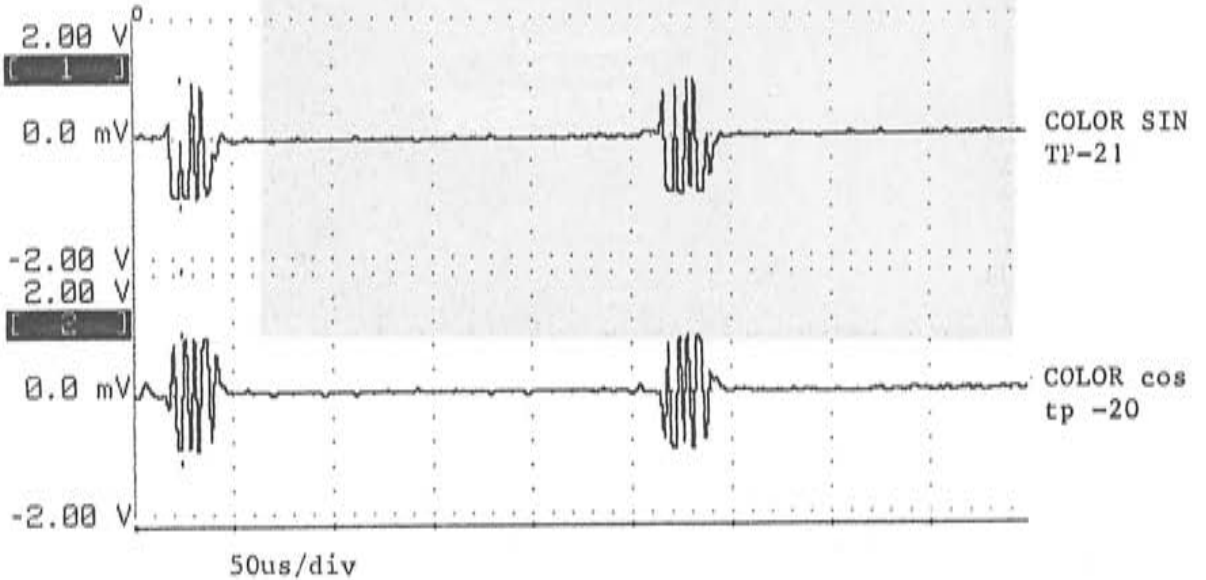


EP-3461 MAIN AMP & COLOR ITF

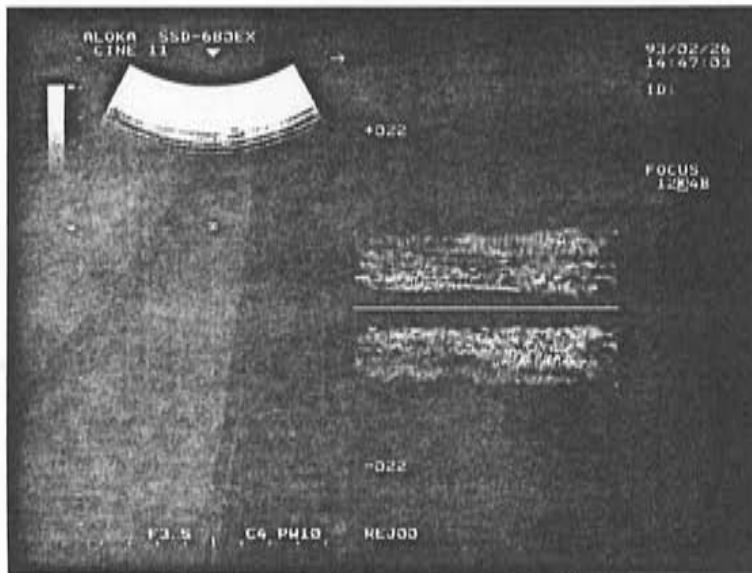
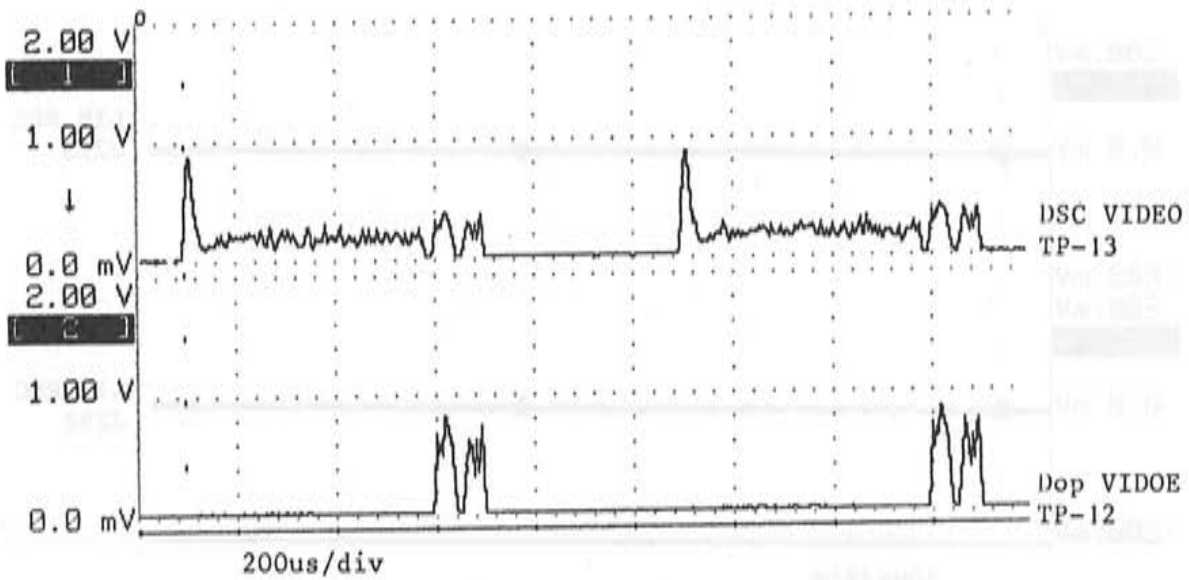
Probe : UST-959-3.5  
 Mode : B/B  
 Mag : X1



Probe : UST-959-3.5  
 MODE : B/FLOW  
 Mag : X1  
 MAX Vel : 11  
 FLOW GAIN : Max



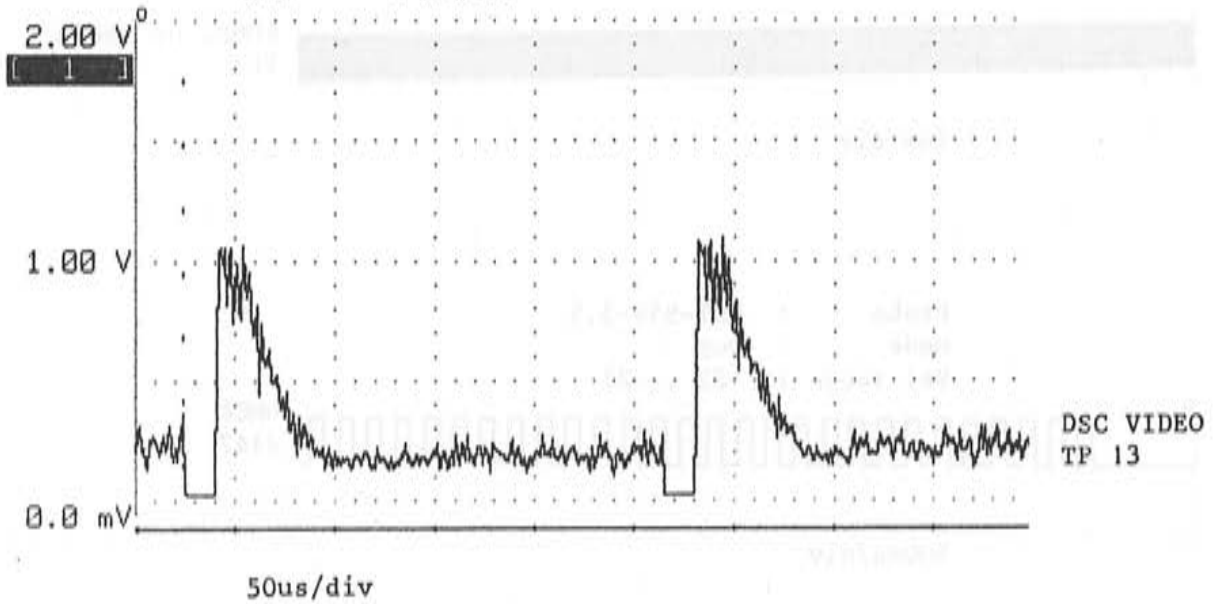
EP-3461 MAIN AMP & COLOR ITF  
Probe : UST-959-3.5  
Mode : B/Dop  
VEL Range : +22 -22  
Dop GAIN : Max



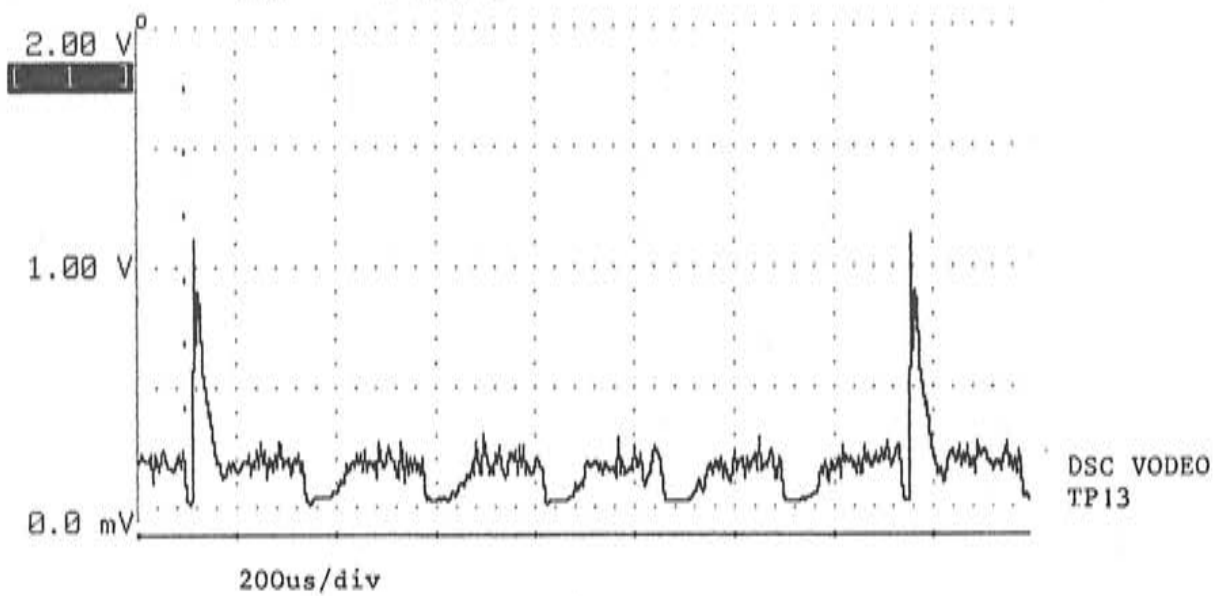
EP-3461

MAIN AMP & COLOR ITF

Probe : UST-959-3.5  
MODE : B  
B GAIN : MAX  
STC : Center



Probe : UST-959-3.5  
MODE : M  
M GAIN : MAX  
STC : Center



Section 8 Troubleshooting

EP-3465 GEU TIMING & ADDRESS

Probe : UST-959-3.5  
Mode : Dop  
Vel range : +22 , -22

40MHz or 56MHz  
T13

2us/div

Probe : UST-959-3.5  
Mode : Dop  
Vel range : +22 , -22

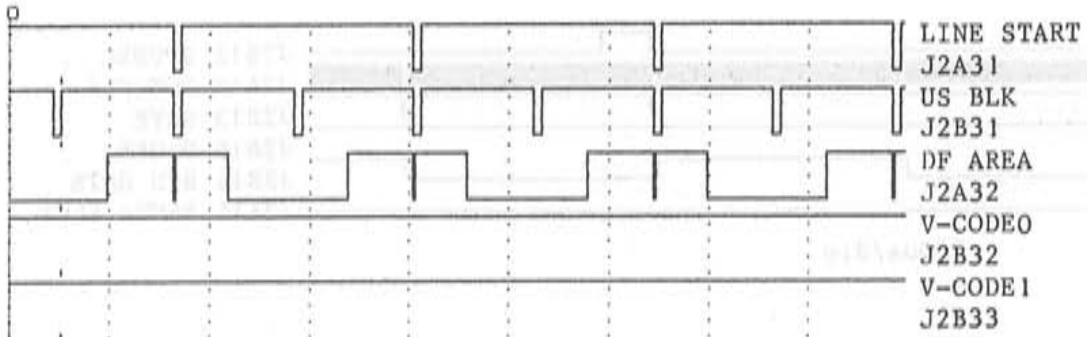
DMCK  
J1A7

500ns/div

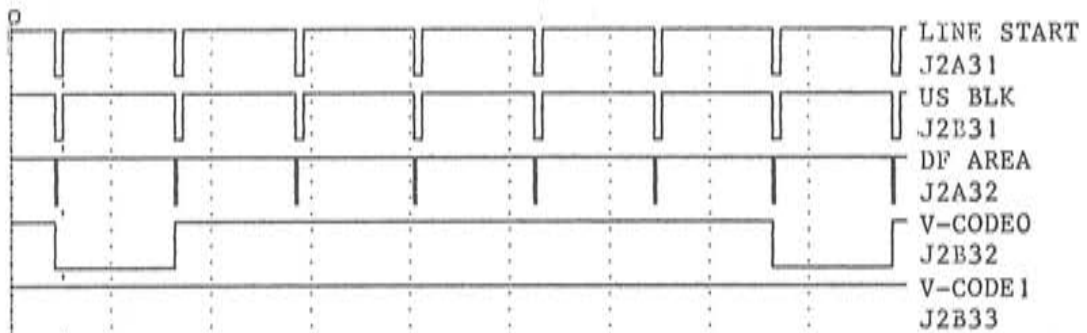
UST-959-3.5 : Dop  
Mode : N  
Vel range : +22 , -22

EP-3465 GEU TIMING & ADDRESS

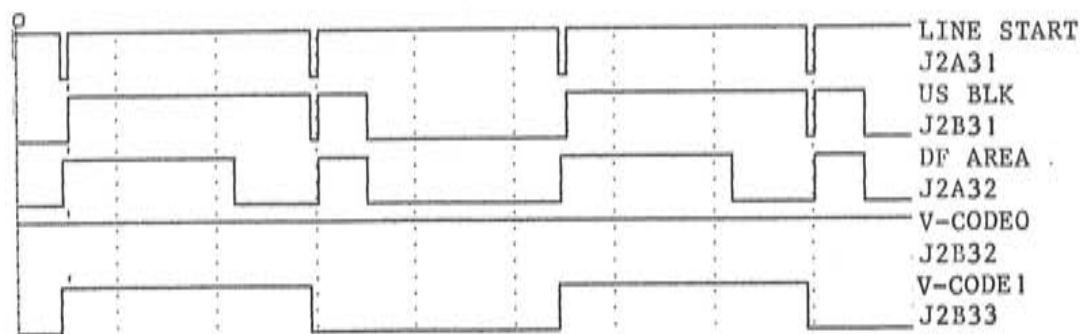
Probe : UST-959-3.5  
 Mag : X1  
 Mode : B  
 Focus : 2 , 4



Mag : X1  
 Mode : B/M  
 Focus : 3



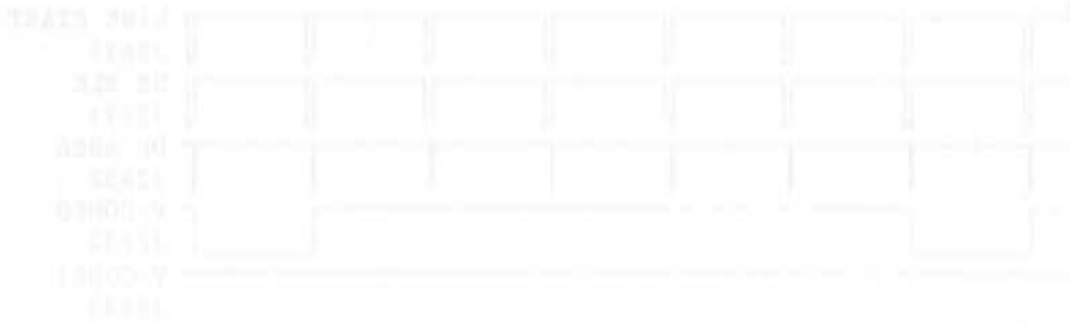
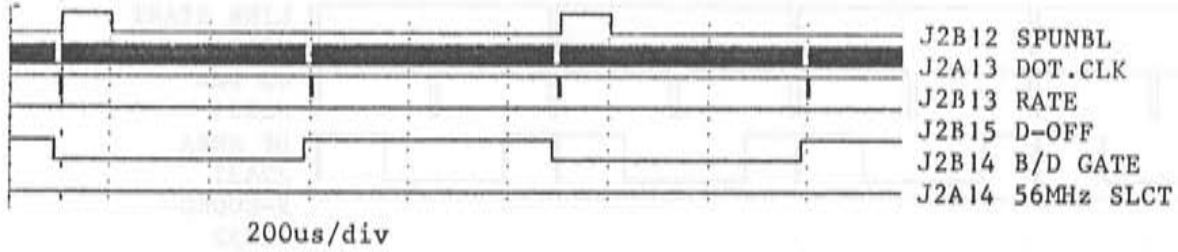
Mag : X1  
 Mode : B/Dop  
 Focus : 3  
 Vel range : +22 , -22





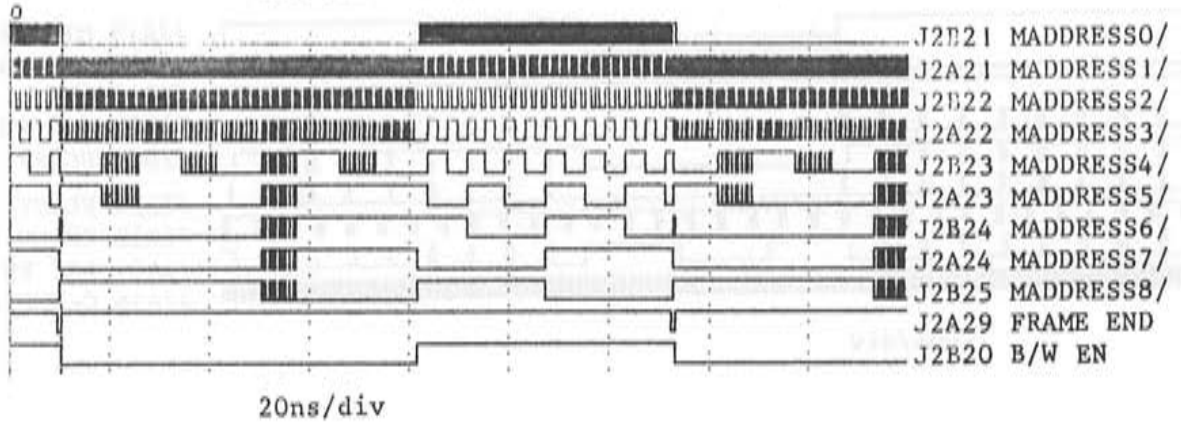
EP-3465 GEU TIMING & ADDRESS

PROBE : UST-959-3.5  
 MODE : B/DOP  
 MAG : X1  
 VEL RANGE : +22 , -22  
 FOCUS : 3



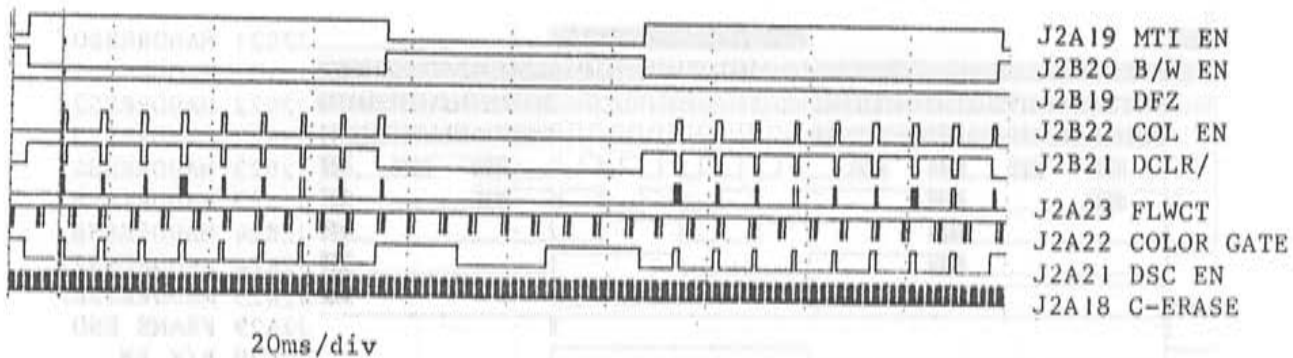
EP-3465 GEU TIMING & ADDRESS

Probe : UST-959-3.5  
 MODE : B/FLOW  
 Mag : X1  
 FOCUS : BROAD  
 Max VEL : 11

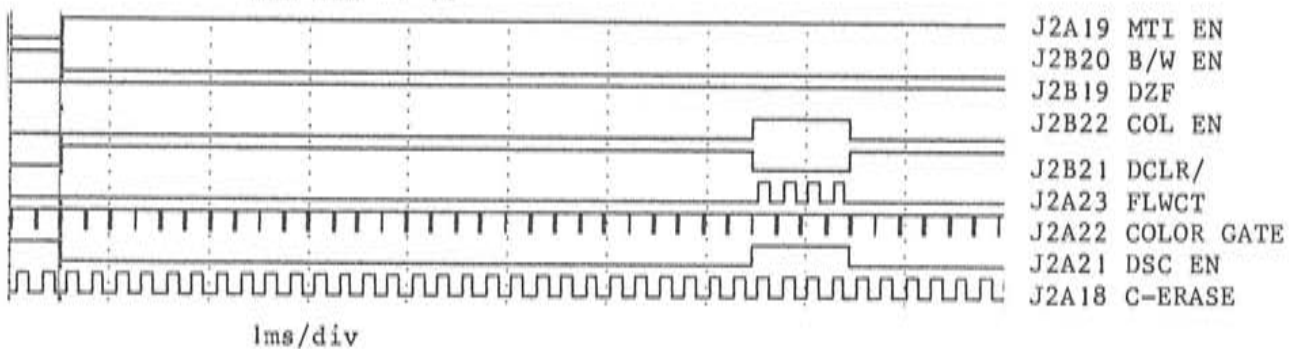


EP-3465 GEU TIMING & ADDRESS

Probe : UST-959-3.5  
 Mode : B/FLOW  
 MAX Vel : 11



Probe : UST-959-3.5  
 Mode : B/FLOW  
 MAX Vel : 11

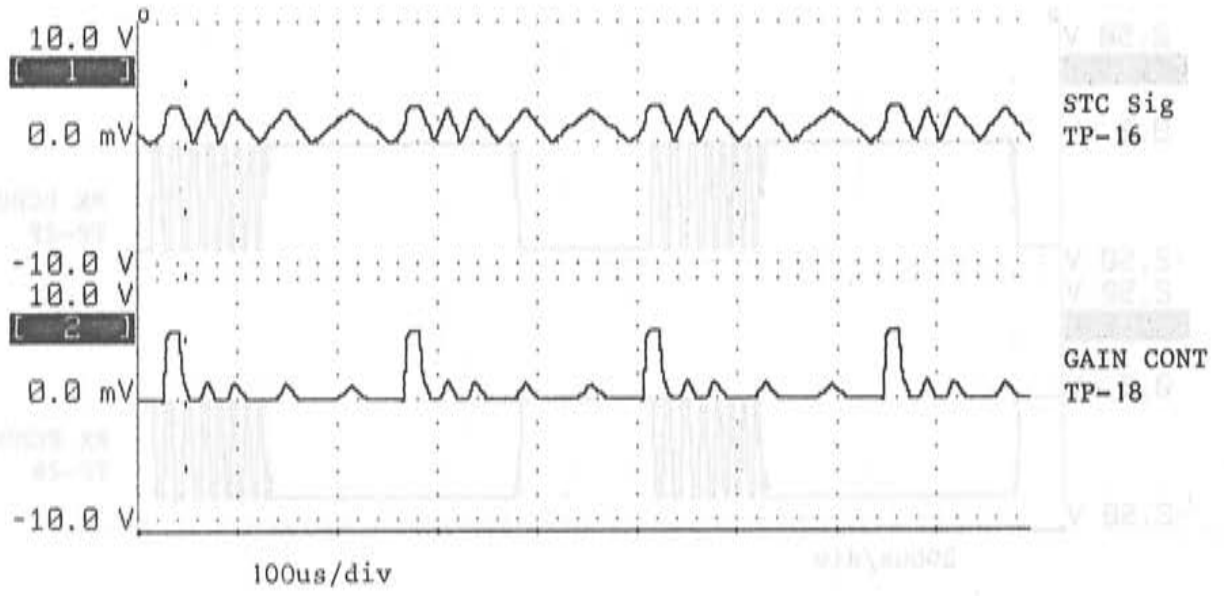


EP-3463

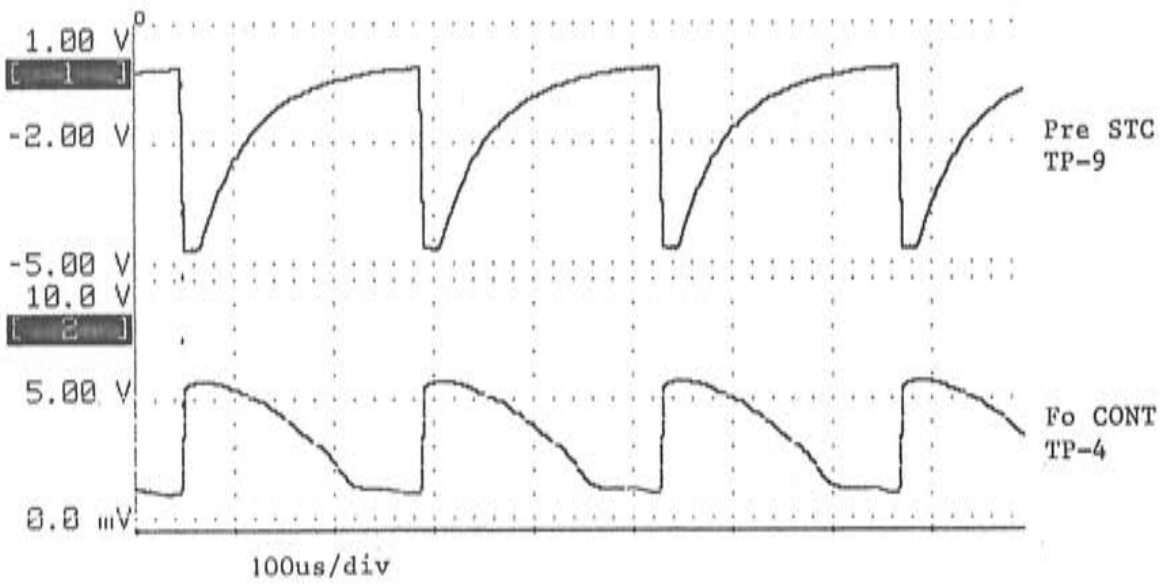
VBPE & GAIN CONTROL

STC setting

Probe : UST-959-3.5  
 Mag : X1  
 Mode : B  
 GAIN : Max

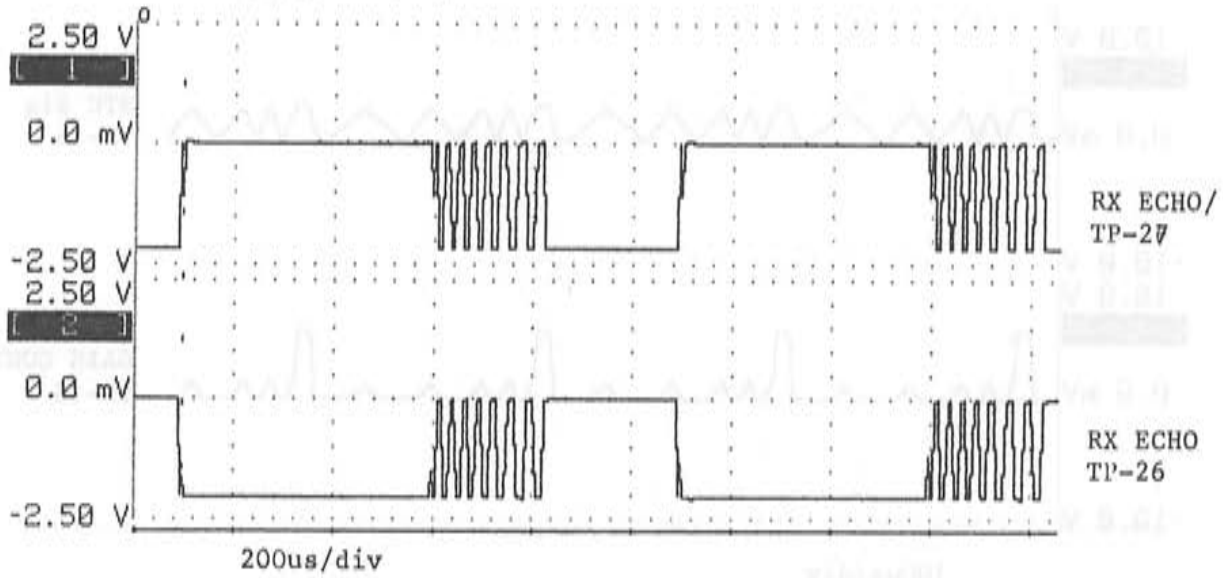


Probe : UST-959-3.5  
 Mag : X1  
 Mode : B  
 Focus : 4



EP-3463 VBPF & GAIN CONTROL

Probe : UST-959-3.5  
Mag : X1  
Mode : B/Dop  
Vel range: +22 , -22  
Focus : 3

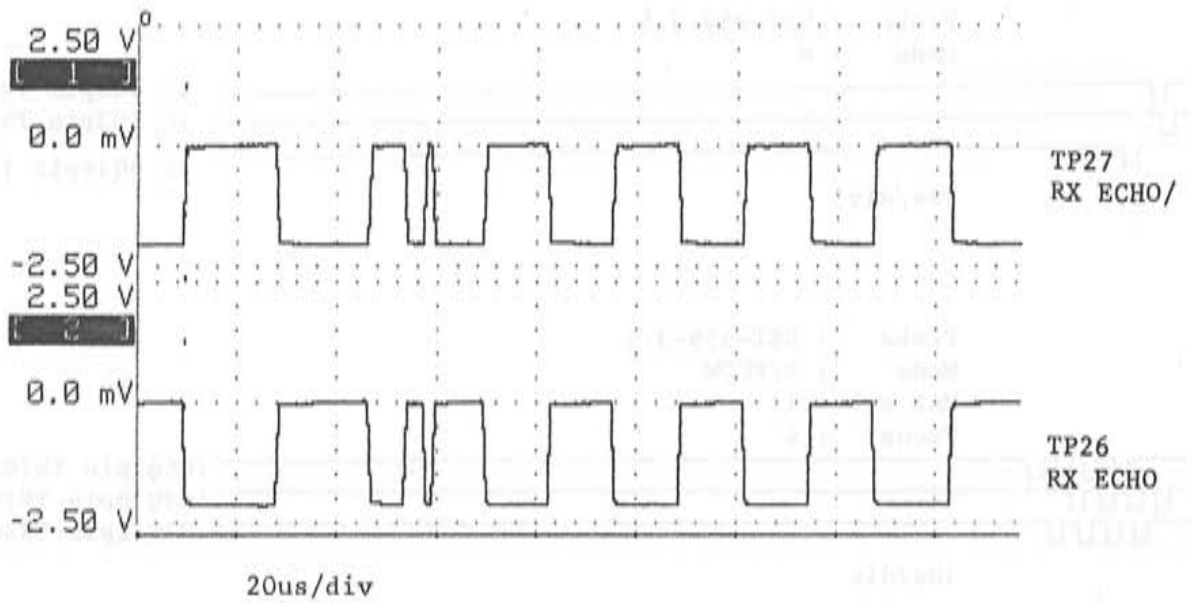


EP-3463 VBPF & GAIN CONTROL

Probe : UST-959-3.5

MODE : B

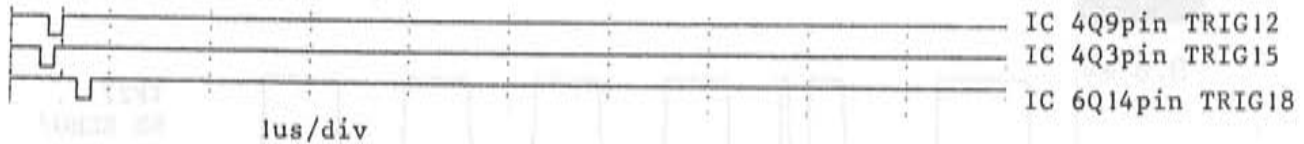
FOCUS : 3



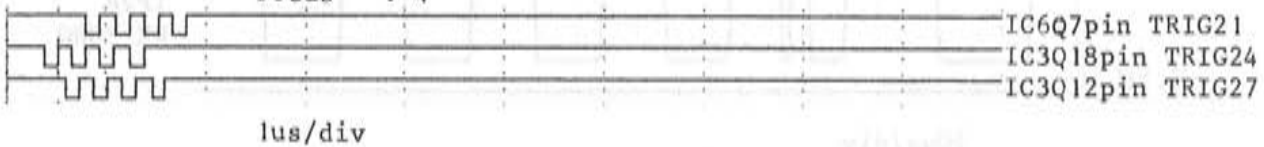
Section 8 Troubleshooting

EP-3464 Tx Trigger GENE

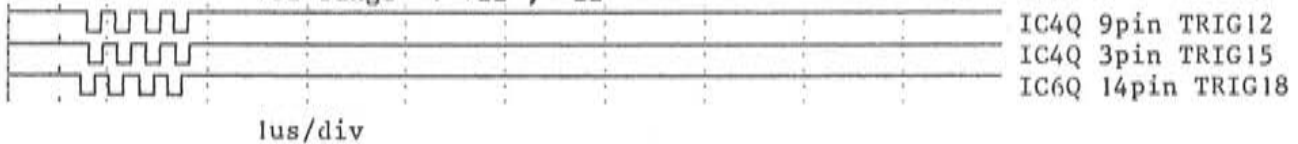
Probe : UST-959-3.5  
Mode : M



Probe : UST-959-3.5  
Mode : B/FLOW  
MAX vel : 11  
Focus : 4



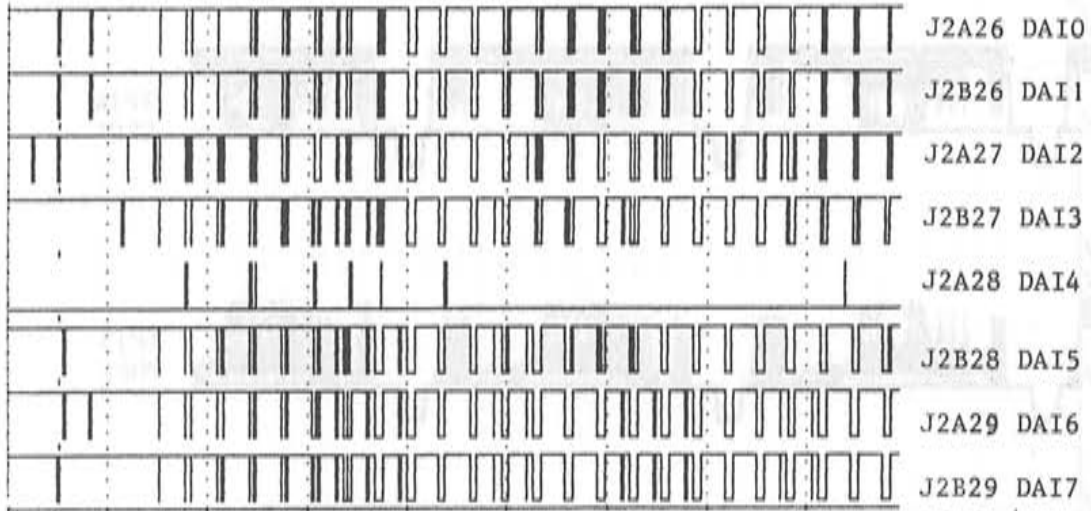
Probe : UST-959-3.5  
Mode : Dop  
Vel range : +22 , -22



EP-2729

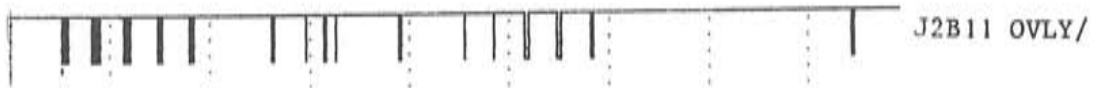
AD/DA

Mode : B  
FOCUS : 2 , 4  
B GAIN : Max  
STC : All STC knobs to max  
Probe : UST-959-3.5



200us/div

Probe : UST-959-3.5  
Mode : B  
FOCUS : 2 , 4



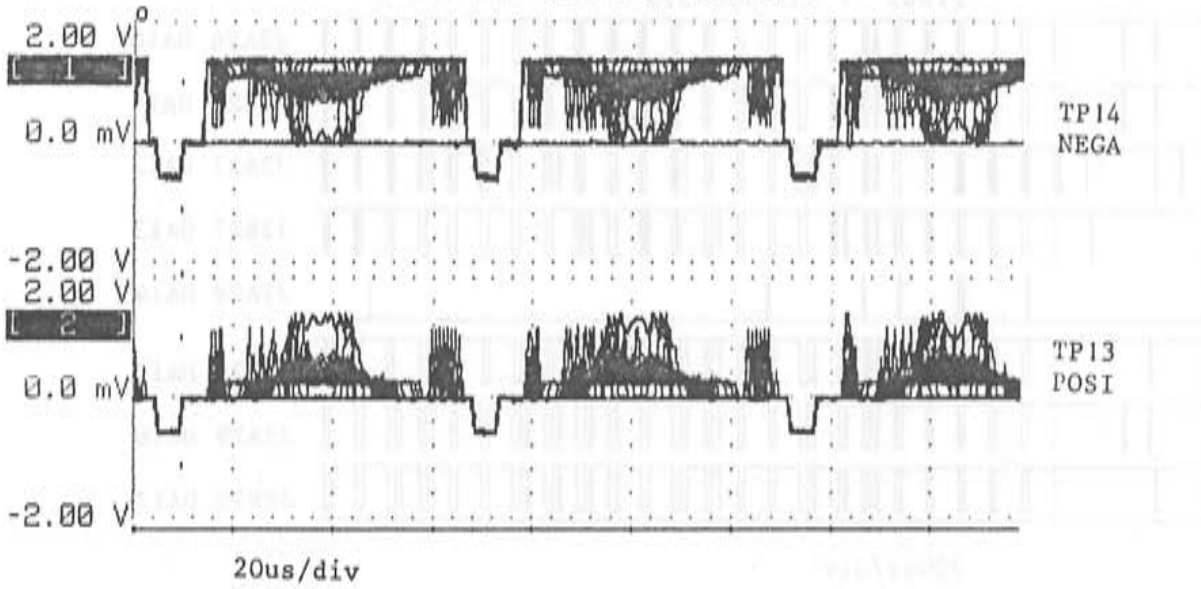
200us/div



Section 8 Troubleshooting

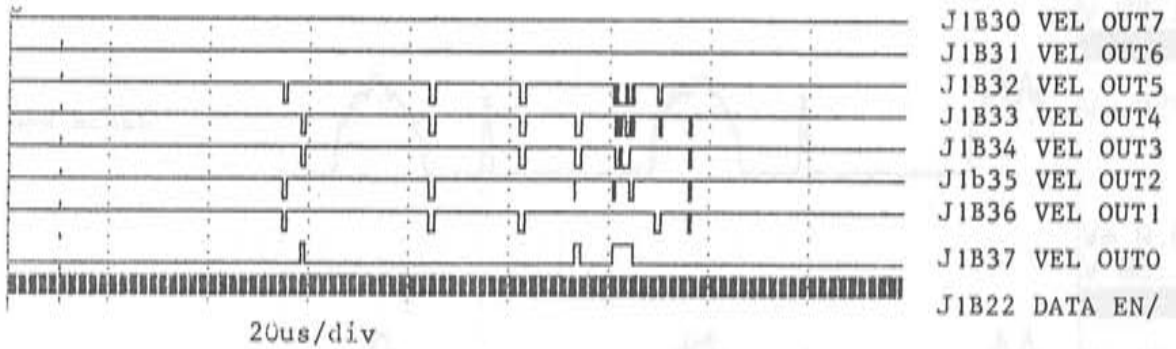
EP-2729 AD/DA

Probe : UST-959-3.5  
MODE : B  
MAG : X1  
B GAIN : Max  
STC : All STC knobes to center

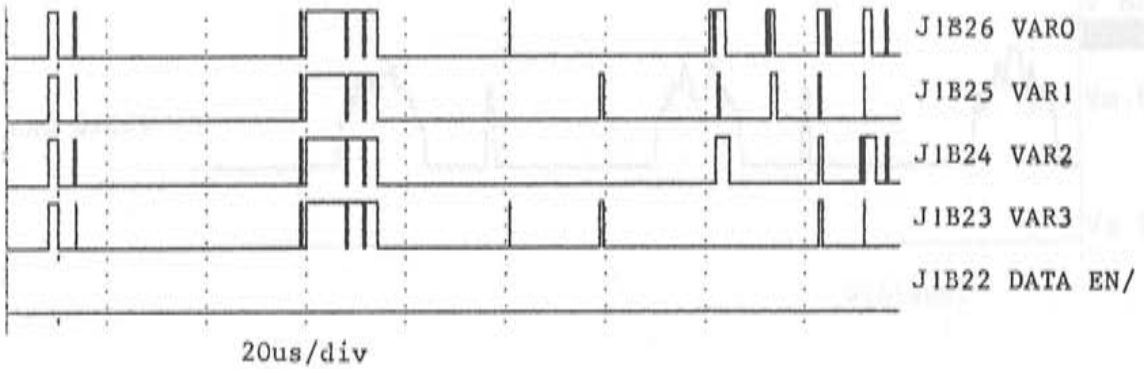


EP-5100 COLOR FLOW PROCESSOR

PROBE : UST-959-3.5  
 MODE : B/FLOW  
 FOCUS : B  
 VEL RANGE : 11  
 FLOW GAIN : Max



PROBE : UST-959-3.5  
 MODE : B/FLOW  
 FOCUS : B  
 VEL RANGE : 11  
 FLOW GAIN : Max



Section 8 Troubleshooting

EP-2651

COLOR D/A

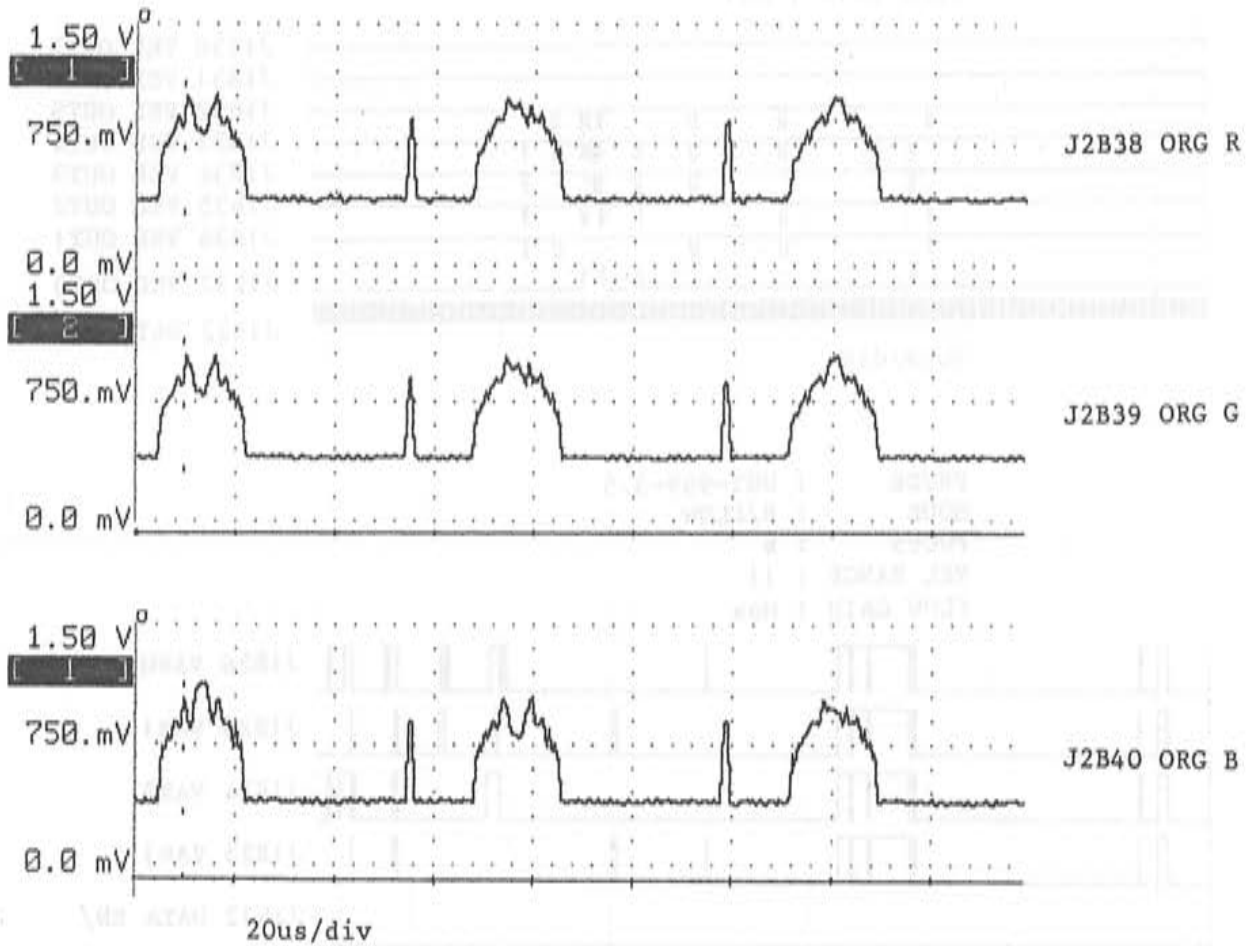
Probe :UST-959-3.5

Mode : B/FLOW

B GAIN : Max

FLOW GAIN : Max

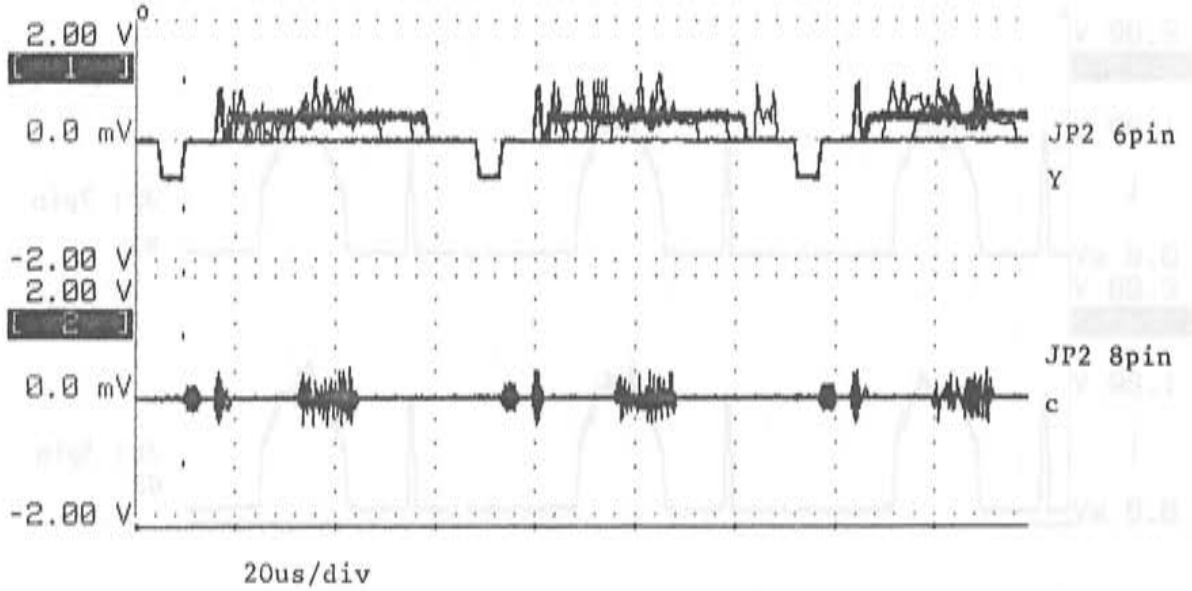
STC : All STC knobes to max



EP-3443

VIDEO ITF

Probe : UST-959-3.5  
MODE : B/FLOW  
B GAIN : MAX  
FLOW GAIN : Max  
STC : All STC knobs to max

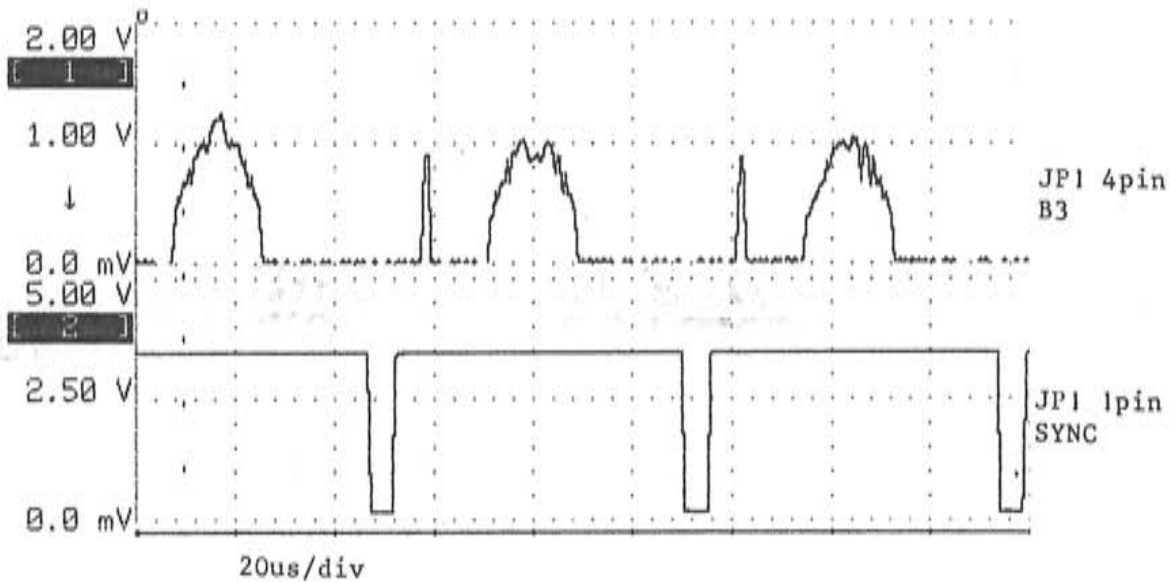
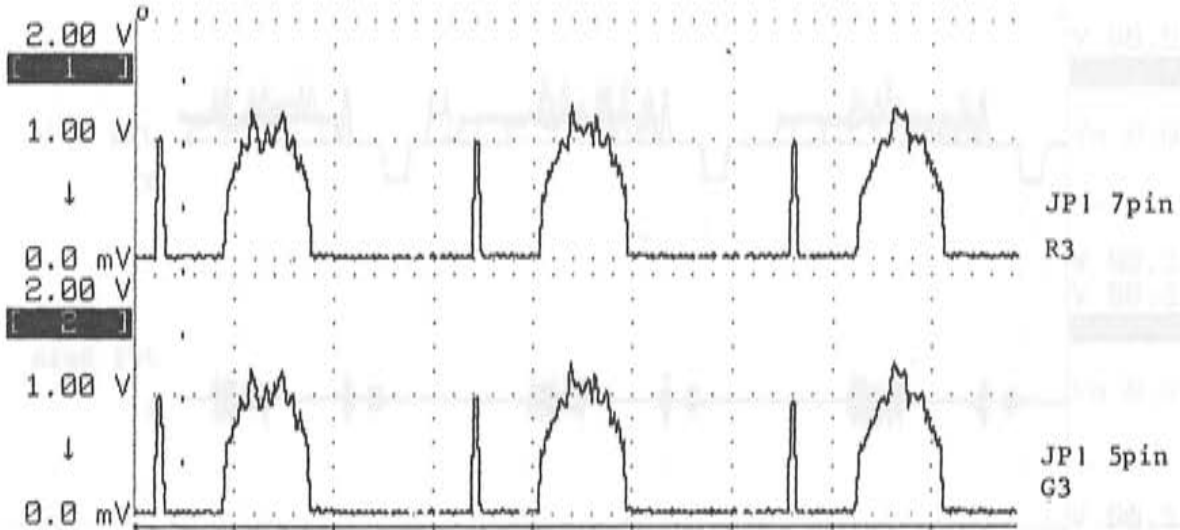


Section 8 Troubleshooting

EP-3443

VIDEO ITF

Probe : UST-959-3.5  
Mode : B/FLOW  
Mag : X1  
Max VEL : 11  
FLOW GAIN : Max  
B Gain : Max  
STC : All STC knobs to max



**SSD-680EX / SSD-680STD SERVICE MANUAL 1/2**

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MN2-0187

**Aloka**



**ALOKA CO.,LTD.**

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FAX : 81-422-48-5058

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