

R3131 Tracking Generator Option 74
Installation Procedure Manual

This manual describes installation procedure of R3131 Option 74.
Its contents are followings,

1. Packing list
2. Tool required
3. Dismantle procedure of R3131
4. Modification procedure
5. Installation procedure
6. Software installation procedure
7. Performance check procedure

PER DIFETTO IF STEP E AMP CAL
SOSTITUIRE R120 DA 300Ω PASSARLA A 470Ω
(VICINO A MAX4106 U105 SCHEDA RF INPUT)
SCHERMATA OK CON ALMENO 4 QUADRETTI DURANTE IL CAL IF

ADVANTEST CORPORATION, JAPAN
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1. Packing list of R3131 option74 package

Please check following contents when open package.

TG Option Accessory List

Accessory Name	Model Number	Qty	Remarks
N-BNC through connector	JUG-201A/U	1	
CABLE	DCB-FF4320X05A	1	
CABLE	DCB-FF9777X01	1	
CABLE	DCB-RR9491X01	1	
CONNECTOR	JCS-BX040PX01	1	
OPTION LABEL	MNS-G5686A	1	
SCREW	YKG-WT4*8	4	

2. Tools required

- 1) 3mm Hexagon wrench
- 2) 4mm Screw driver
- 3) Solder iron
- 4) Pen knife

This chapter describes dismantle procedure for install TG option.

Process numbers such as ①,② are same numbers in drawing.

3-1. Remove blank panel on the Front panel

- ① Remove 4pcs Hexagon head screw from front panel.
(Refer to Fig.1)
- ② Remove front panel by pulling out.
- ③ Remove 2pcs screws on the front block (Refer to Fig.2),
then pull front block off from main frame.

*Caution: Pay attention Bus cable between Mother board and Front block.

- ④ Remove " COVER INPUT HOLE N" on the front panel.
(Refer to Fig.3)
- ⑤ Fix front block back to main frame in process ③.
- ⑥ Fix front frame back to main frame in process ①

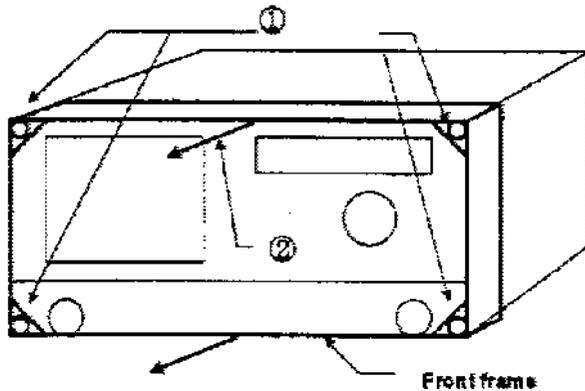


Fig.1

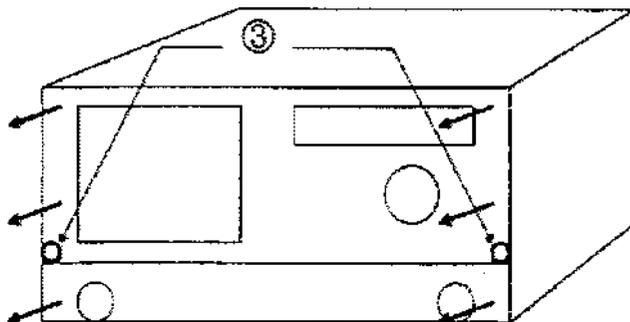


Fig.2

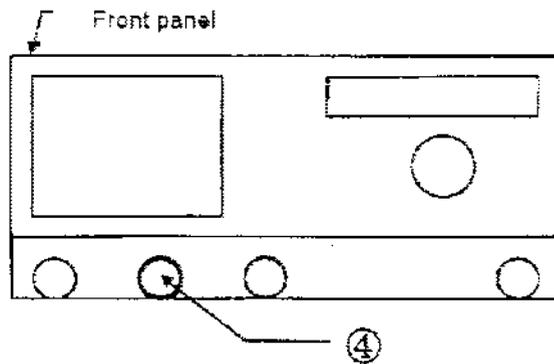


Fig.3

3-2. Remove rear panel

- ① Remove Hexagon nut and washer of EXTERBAL TRIGGER port on the rear panel (Refer to Fig.4)
- ② Remove 2pcs screws for CPU/AD board fixed on the rear panel.(Refer Fig4)
- ③ Remove 2pcs screws for RF block fixed on the rear panel.
- ④ Remove 2pcs screws for Probe power on the rear panel (if installed)
- ⑤ Remove 4pcs Hexagon head screws as shown Fig.5
- ⑥ Pull FRAME REAR off from main frame.(Refer to Fig.5)
- ⑦ Remove REAR PANEL off from main frame.(Refer to Fig.6)
- ⑧ Paste Option label seal on the rear panel.

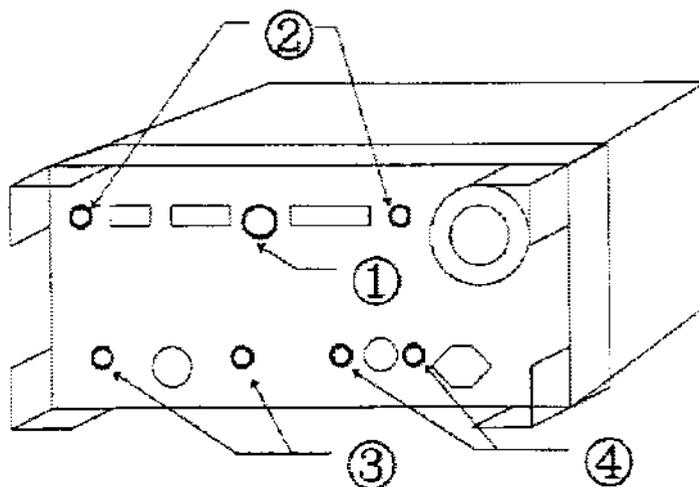


Fig.4

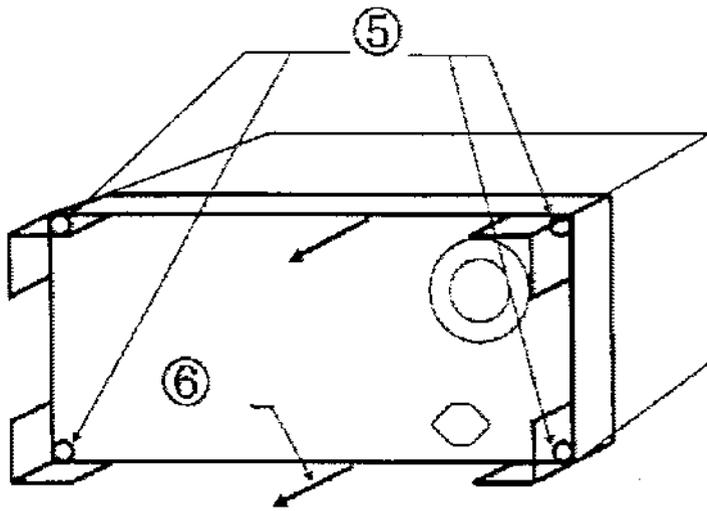


Fig.5

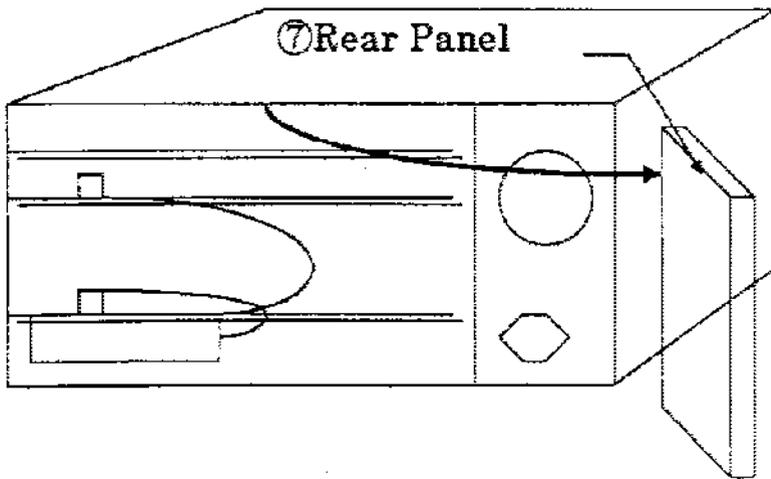


Fig.6

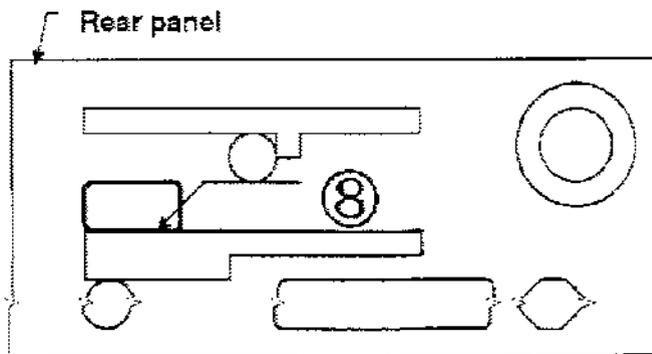


Fig.7

3-3. Remove RF block and CPU/AD board

- ① Remove 12pcs screws on bottom of chase.(Refer to Fig.8)
- ② Remove case below RF block.(Refer to Fig.9)
- ③ Remove UM-UM cable between IF block and RF block.
(Refer to Fig.9)
- ④ Pull RF block off from main frame.(Refer to Fig.9)
- ⑤ Pull CPU/AD board off from main frame.(Refer to Fig.9)

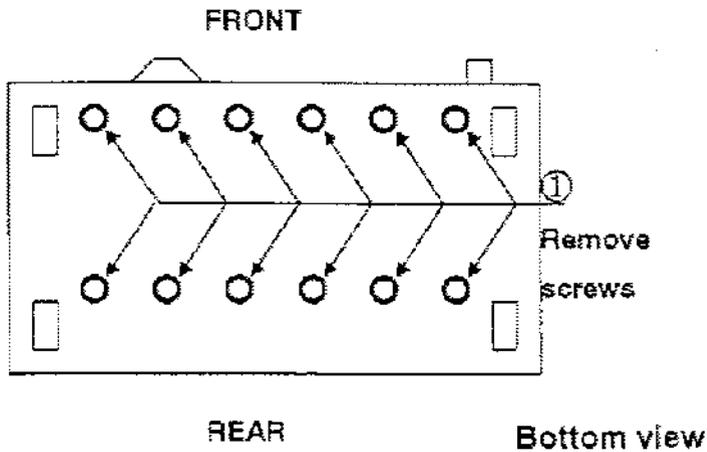


Fig.8

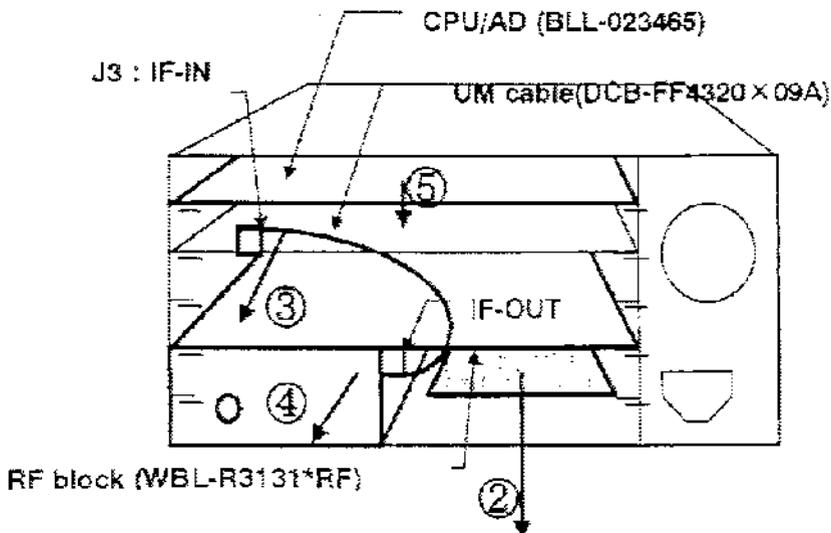


Fig.9

4. Modification

This chapter describes modification procedure for CPU/AD board and RF I/O board.

It needs to apply this modification for serial number 71780001 ~81780670.

4-1. Modification for CPU/AD

4-1-1. Procedure

- 1) Solder jumper referring Fig.11
- 2) Cut copper pattern referring Fig.11
- 3) End

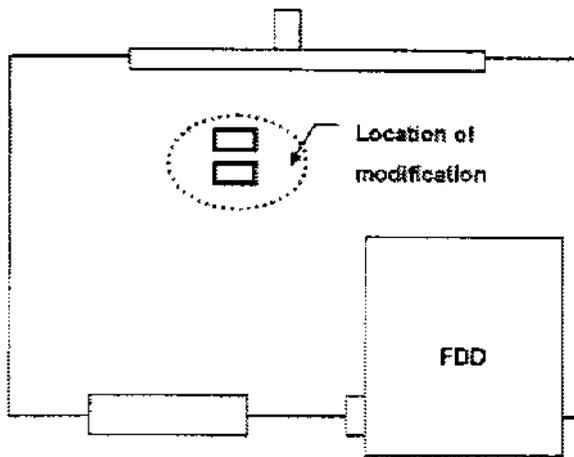


Fig.10 Top view of CPU/AD

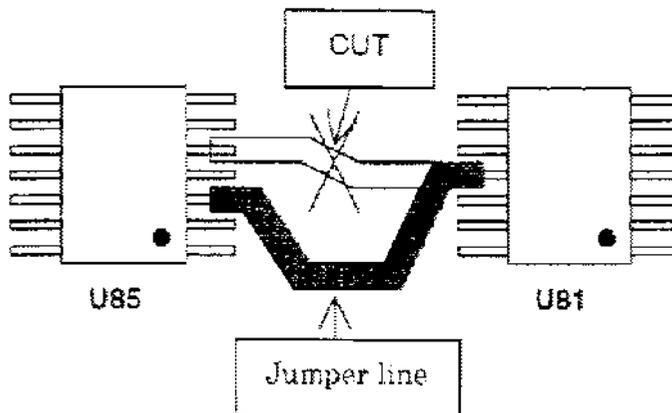


Fig.11 View of modification

4-2. RF I/O modification

There are 3 categories of modification by serial number.

① Serial Number 71780001~71780050

Change the connector J5 from JCS-AV040PX to JCS-BX040PX01.

② Serial Number 71780051~81870150

Install connector JCS-BX040PX01 at J5 on RF I/O board.

③ Serial Number 81870151~81870670

It's not required any modification.

4-2-1. Procedure for category ①

1) Remove J5 connector JCS-AV040PX by disordering.

Refer to Fig 12 to find location of J5 on RF I/O board.

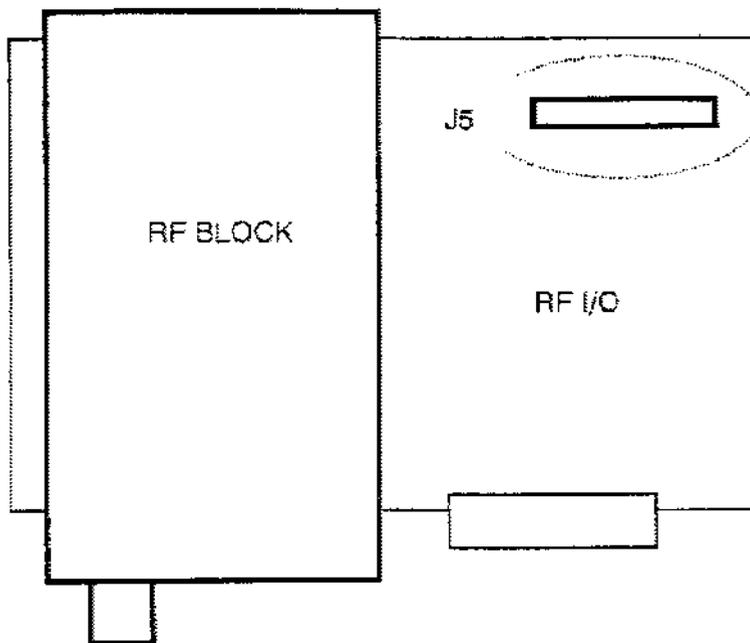


Fig.12

2) Install JCS-AV040PX01 at J5 on RF I/O board.

It needs to apply for category ①,②

Refer to Fig.13 for confirmation of

- 1) both of connector shape of JCS-AV040PX01 and JCS-BX040PX01.
- 2) installation direction of connector JCS-BX040PX01 to J5.

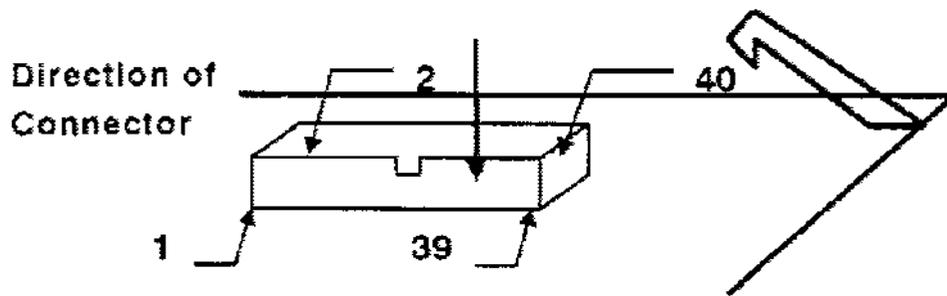
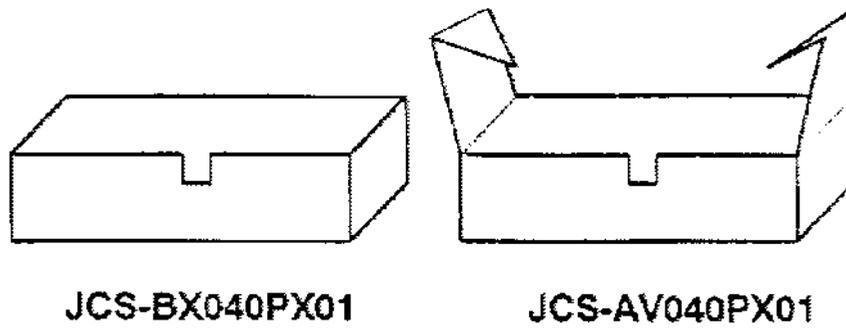


Fig.13

3) End.

5. Installation procedure.

5-1. TG block installation procedure

After modification is completed, install TG block.

Refer to Fig.14, Process number such as ①, ② are same as number of Fig.14

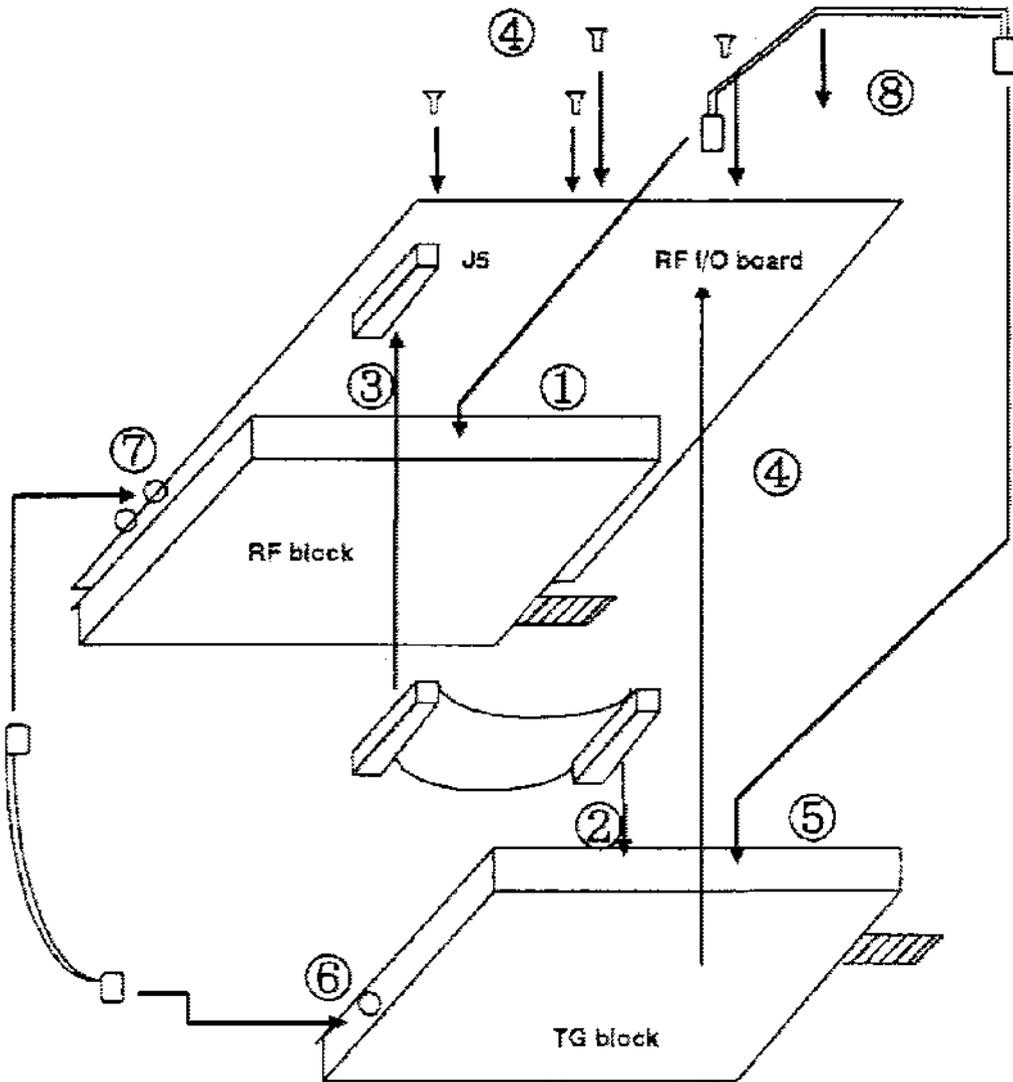


Fig.14

- ① Remove cap of 1st Local output then connects Semi-rigid cable.
- ② Connect Flat cable(DCB-RR9491X01) at J300 of TG CONT Board (BLG-023612).
- ③ Connect Flat cable to J5 on RF I/O board.
- ④ Install TG BLOCK to RF I/O block(Cemus screw 4x8;4pcs supplied as accessory)
- ⑤ Connect Semi-rigid cable to TG block.
- ⑥ Connect UM-cable (DCB-FF4320X05) to TG block.
- ⑦ UM-cable to J12 on RF I/O board.
- ⑧ Bend center of Semi-rigid cable to below around 1cm to make a clearance for avoiding short circuit.

End.

5-2. RF block installation procedure to main frame.

Refer to Fig.15.

Process number such as ①, ② are same as number of Fig.15.

- ① Push RF block into main frame.
- ② Connect UM cable between IF board and RF block.
- ③ Screw back 12pcs screws on bottom of chassis.(Refer to Fig.16)
- ④ Push CPU/AD (BLL-023465) board into main frame.

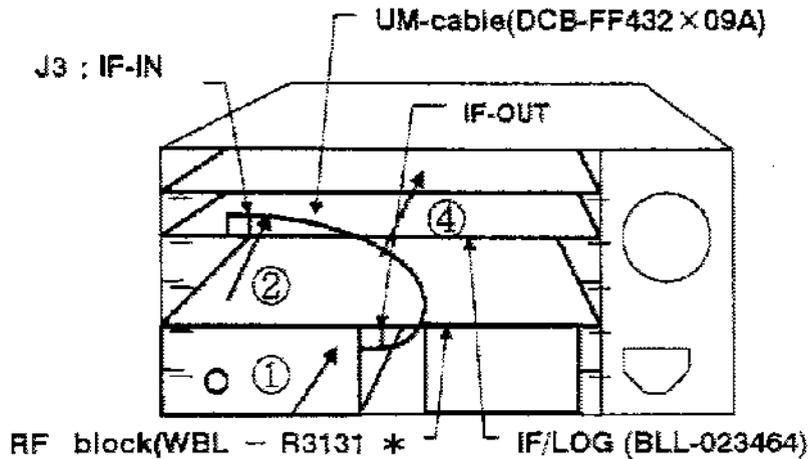


Fig.15

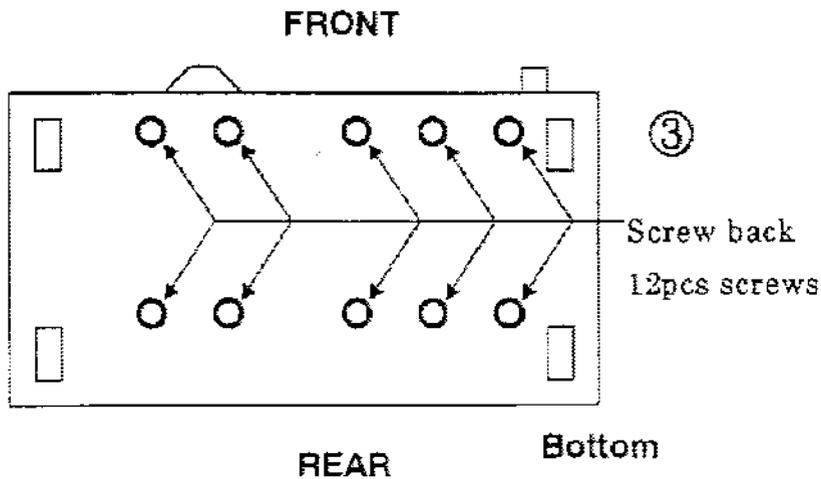


Fig.16

5-3. Fix rear panel back to main frame.

Refer to Fig.15.

Process number such as ①,② are same as number of Fig.17,18,19.

- ① Install rear panel to main frame.
- ② Install "FRAME REAR" to main frame.(Refer to Fig.18)
- ③ Screw FRAME REAR back to main frame by 4pcs Hexagon head screws
- ④ Fix Hexagon nut and washer back on EXTERNAL TRIGGER terminal on the rear panel. (Refer to Fig.19)
- ⑤ Screw CPU/AD board back on the rear panel.
- ⑥ Screw RF block back on the rear panel.
- ⑦ Screw Probe power back on the rear panel.(If it installed)

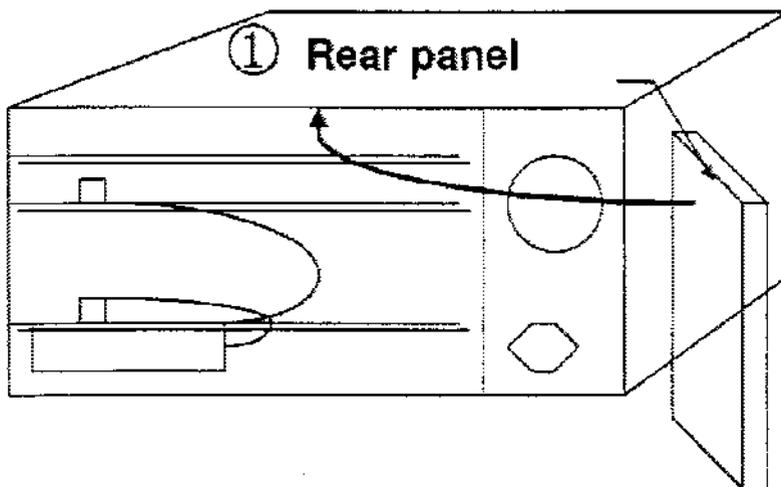


Fig.17

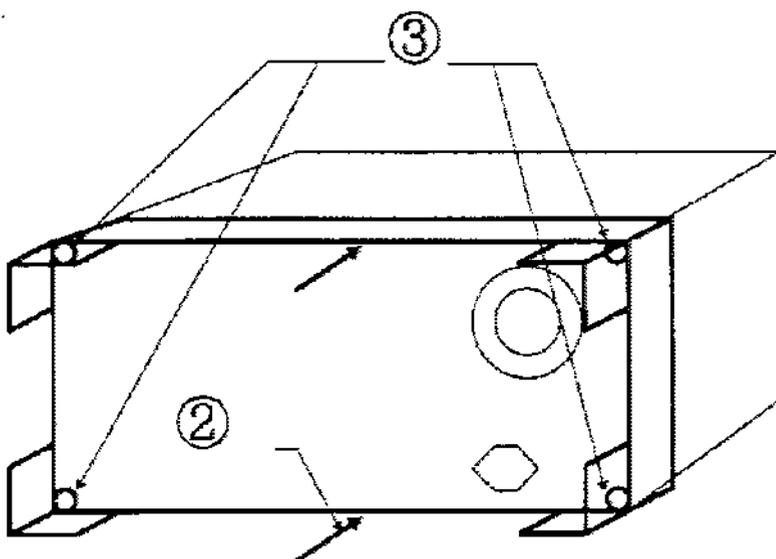


Fig.18

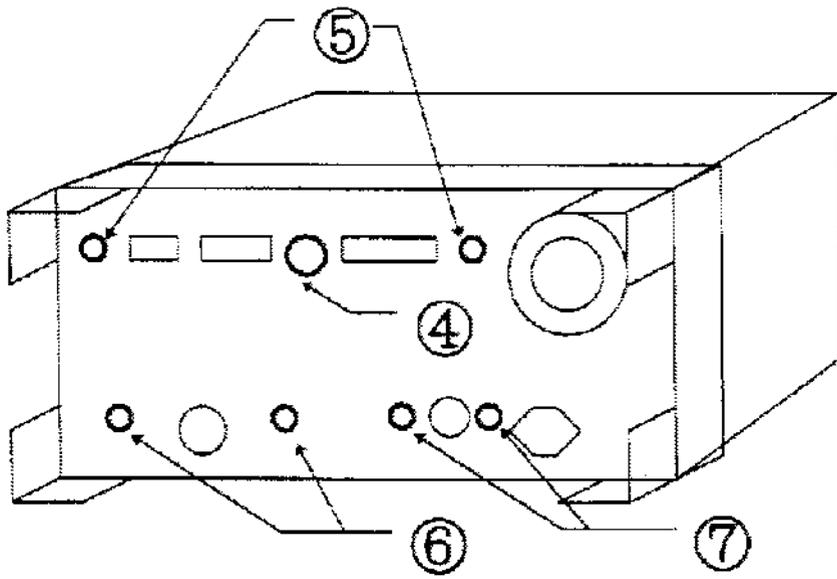


Fig.19

End.

6. Software installation procedure.

After installation is completed, it requires to install software version B00 or later.

6-1. Firmware installation procedure

- ① Insert installation floppy disk to floppy disk drive.
- ② Power switch to ON.
- ③ Wait till "EJECT MEDIA & REBOOT" displayed on the display.
It will be taken 2min.approx.
- ④ Eject floppy disk from floppy disk drive.
- ⑤ Power switch to OFF
- ⑥ Power switch to ON.

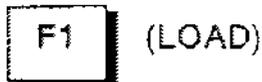
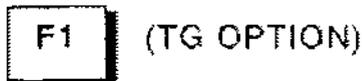
6-2. Option installation procedure

- ① Setting of R3131

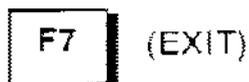
Operate as follows,



Password



Confirm "LOADING..." display disappear.



- ② Power switch to OFF
- ③ Power switch to ON.
- ④ Press **TG** switch on the front panel, then confirm

TG menu on the display.

⑤ Set R3131 as follows,

SHIFT

CONFIG

(RESET)

End.

7. Performance check procedure.

After install software, execute performance check.

7-1. Frequency response check

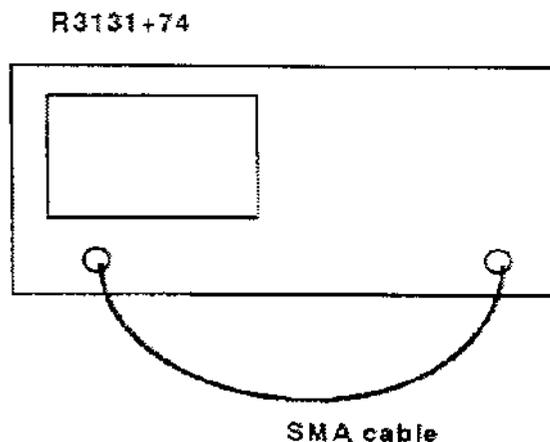


Fig.20

7-1-1. Connection

- ① Connect Input and TG output connector using SMA-SMA cable
Refer to Fig.20.

7-1-2. Setting of R3131

- ① Operate R3131 as follows,



②



7-1-3. Frequency response check.

Confirm wave form displayed refer to Fig.21

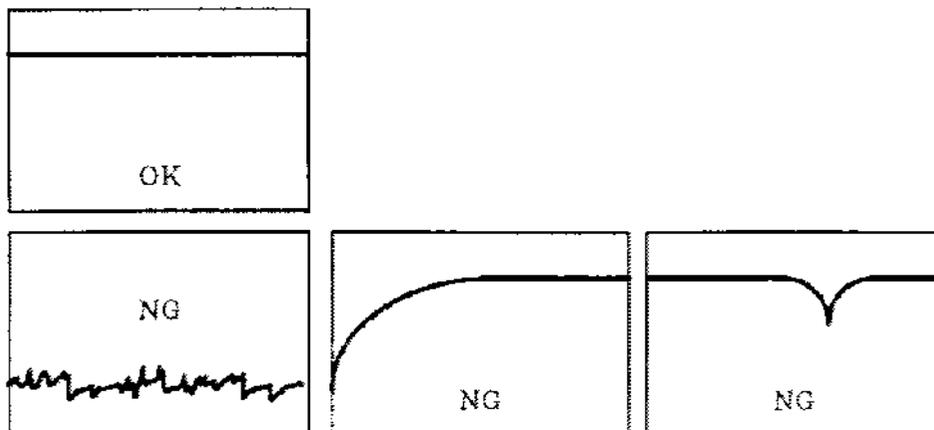


Fig.21

7-1-4. Execute TG CAL.

Operate R3131 as follows,

- ① **TG**
- ② **F5** (Freq. Adj. Auto)
- ③ Confirm No error message displayed and its finish completed.

7-2. Output level switching accuracy.

7-2-1. Operate R3131 as follows,

- ① **SHIFT** **CONFIG** (RESET)
- ② **BW** **F2** (VBW AUTO/MNL)
1 **0** **kHz**
- ③ **TG**
- ④ **F4** (Refline Position) **1** **0** **-dBm**
- ⑤ **F2** (Execute Normalize)
- ⑥ **F1** (TG LEVEL) **0** **dBm**

7-2-2. Output switching accuracy check

Press down arrow key  on the panel for switching output level from 0~59.9dBm.

Then confirms followings,

- ① The waveform displayed change its level by 5dB step.
- ② Ripple found within +/-2.0dB.

7-2-3. Set R3131 to RESET.

Operate R3131 as follows,



END.

1. Please check if the file name of floppy disk is "sys.bin", other name will not be accepted by installer.

2. Insert the floppy disk (sys.bin) to FD drive. Turn on the analyzer.

3. Self-checking of logical hardware will be done, first, then the FD drive will be accessed.

You can see the "Loading FD:/SYS.BIN:" indication on screen left below side.

During this indication, please do not remove the floppy disk.

4. After the completion of loading "Sys.bin", Boot Block and Application Block on flash memory will be erased.

Screen indications are:

Erase Boot Block. and

Erase Application Block.

5. After that, installation of new firmware will be started.

Screen indication is: Update address : 10XX0000

6. During the procedure No. 3-5, please do not turn off the analyzer.

If you turn off, system boot program will be disappeared and the analyzer will never turn on again. In case this happens, installation of maintenance ROM Board is required.

Completion of Installation:

Screen indication is : Eject Media & Reboot.

So, please remove the floppy disk, then turn on the analyzer again.

Check the latest firmware is installed.