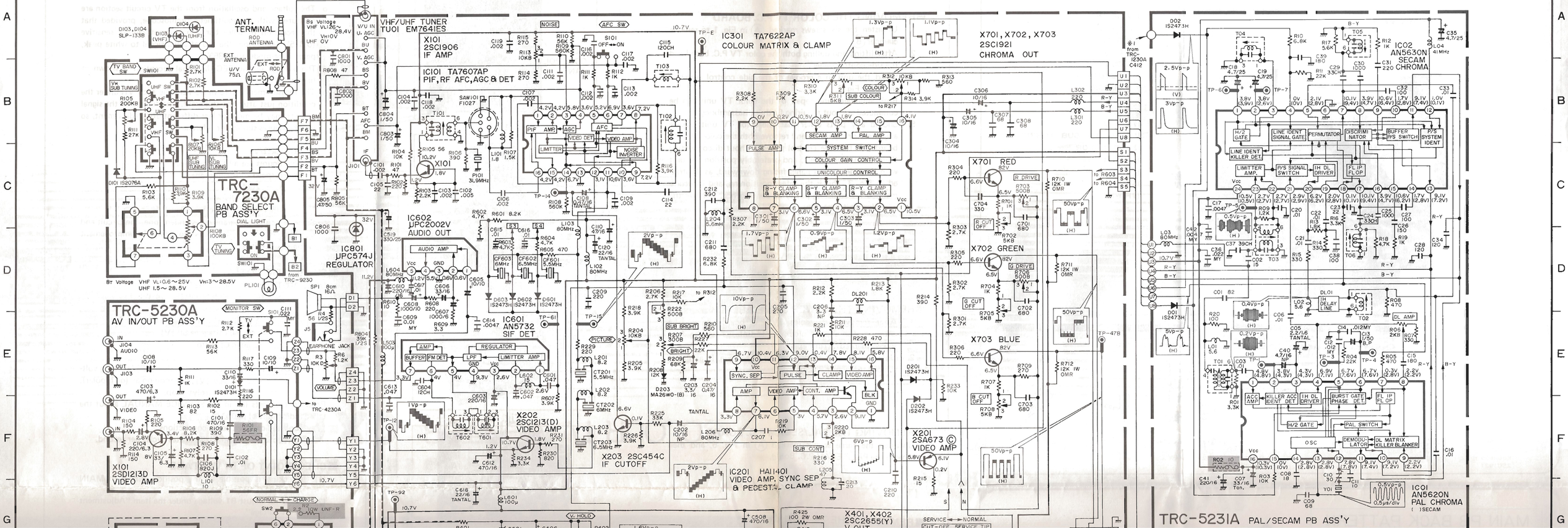
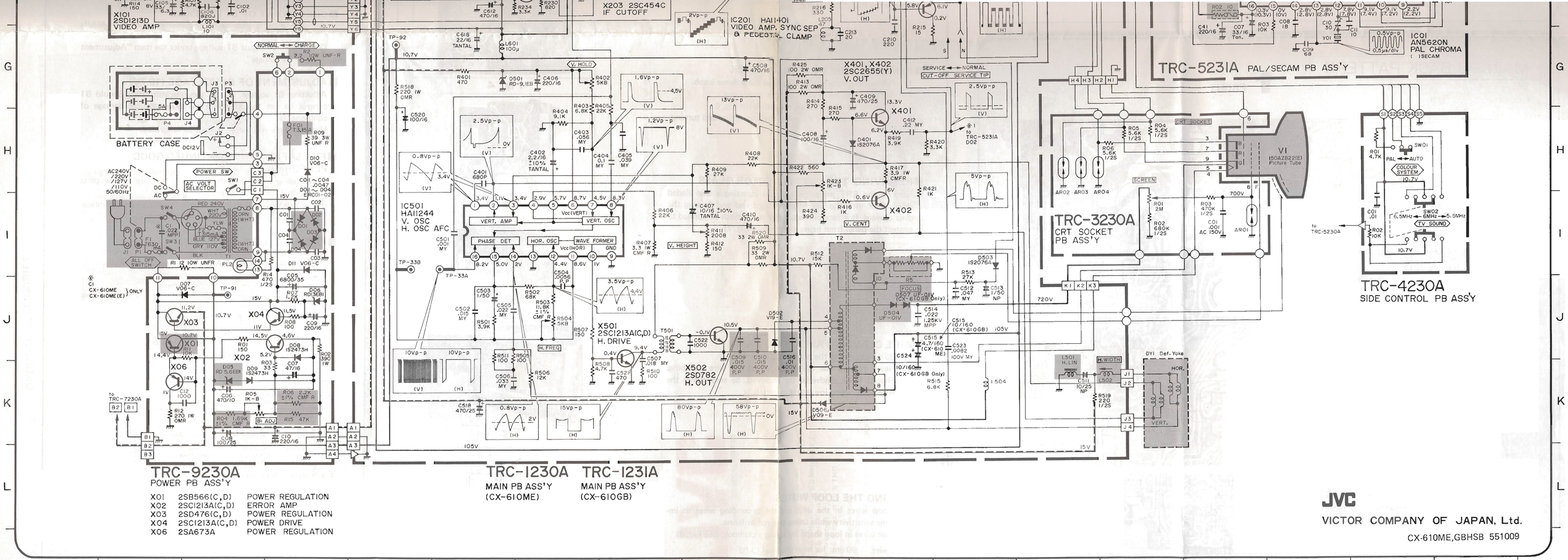
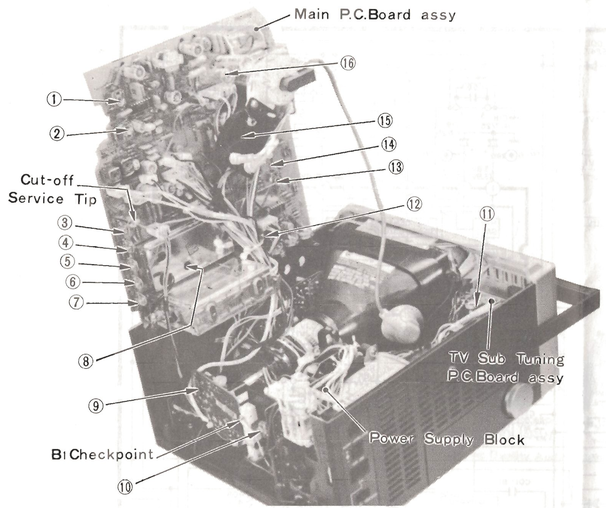
JVC MODEL CX-610ME CX-610GB SCHEMATIC DIAGRAM



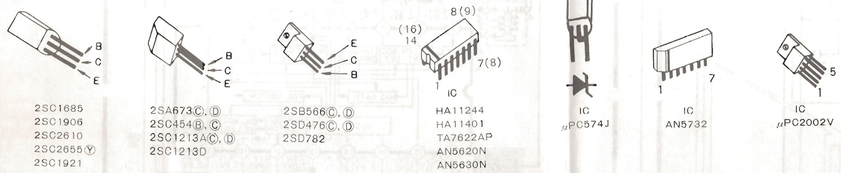

X101
2SD1213D
VIDEO AMP
X203 2SC454C
IF CUTOFF
IC201 HA11401
VIDEO AMP. SYNC SEP
& PEDESTAL CLAMP
IC01
AN5620N
PAL CHROMA
SECAM
TRC-5231A PAL/SECAM PB ASS'Y
BATTERY CASE
NORMAL ⇄ CHARGE
POWER SW
AC VOLT SELECTOR
ALL OFF SWITCH
IC501
HA11244
V. OSC
H. OSC AFC
VERT. AMP
VERT. OSC
PHASE DET
HOR. OSC
WAVE FORMER
X501
2SC1213A(C,D)
H. DRIVE
X502
2SD782
H. OUT
X401, X402
2SC2655(Y)
V. OUT
V. HOLD
V. HEIGHT
V. CENT
H. FREQ
H. WIDTH
H. LIN
FOCUS
SERVICE ⇄ NORMAL
CUT-OFF SERVICE TIP
CRT SOCKET
SCREEN
V1
150AZB22(E)
Picture Tube
TRC-3230A
CRT SOCKET
PB ASS'Y
TRC-4230A
SIDE CONTROL PB ASS'Y
COLOUR SYSTEM
TV SOUND
DY1 Def. Yoke
HOR.
VERT.
TRC-9230A
POWER PB ASS'Y
TRC-1230A
MAIN PB ASS'Y
(CX-610ME)
TRC-1231A
MAIN PB ASS'Y
(CX-610GB)
X01 2SB566(C,D) POWER REGULATION
X02 2SC1213A(C,D) ERROR AMP
X03 2SD476(C,D) POWER REGULATION
X04 2SC1213A(C,D) POWER DRIVE
X06 2SA673A POWER REGULATION
JVC
VICTOR COMPANY OF JAPAN, Ltd.
CX-610ME,GBHSB 551009

MAIN ADJUSTMENTS LOCATION



① V.HEIGHT
② H.FREQ
③ G.DRIVE
④ R.DRIVE
⑤ G.CUTOFF
⑥ R.CUTOFF
⑦ B.CUTOFF
⑧ NOISE
⑨ SCREEN
⑩ B_1 ADJ.
⑪ V_L/V_H/UHF SUB TUNING
⑫ SUB COLOR
⑬ SUB CONT.
⑭ V.CENTER
⑮ FOCUS
⑯ H.WIDTH

BASING OF TRANSISTORS AND ICs



MAIN PB BACK PATTERN

HOW TO REMOVE FOR SERVICE

■REMOVING THE COLOR TV P.C. BOARD

1. Unfasten the six screws marked Ⓐ in Fig. 1 to remove clamper Ⓑ.
2. After lifting and pulling both the color TV P.C. board and the side control panel.
3. Stand the unit in a groove of the side control panel as shown in Fig. 2.
4. Both alignment and repair of the color TV unit can be conducted without requiring further disassembling.
5. Should any parts other than the color TV unit require alignment or repair, lift and remove both the color TV P.C. board and the side control panel (without disconnecting them from each other), and preferably position the unit with the side control panel facing downward, as illustrated in Fig. 3. This is the safest positioning, and is recommended for adjusting purity or convergence. Remove the wire clamps if necessary.

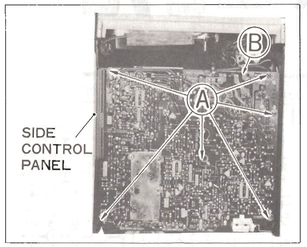


Fig. 1

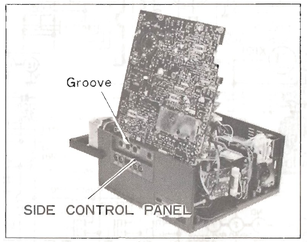


Fig. 2

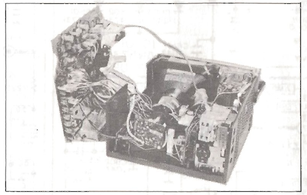


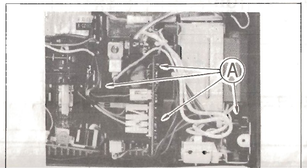
Fig. 3

■REMOVING THE POWER SUPPLY BLOCK

1. After removing the color TV P.C. board, remove the entire power supply block while unfastening the four screws marked Ⓐ in Fig. 4.
2. Unfasten the four screws marked Ⓐ in Fig. 5, and then remove the power P.C. board.

■REMOVING THE PAL/SECAM P.C. BOARD

Unfasten the three screws marked Ⓐ in Fig. 6, and then remove the PAL/SECAM P.C. Board.



■REMOVING THE TV TUNING BLOCK

■NOTE:

- o The measuring is made as in connection with an AC source.
- o The voltage and oscillation from the TV circuit section are measured with the multimeter/oscilloscope, provided that the reception of color bar signals is sufficiently sensitive (0.825V Vp-p from the top of sync. signal to white peak, percentage modulation 85%).
  The voltage during SECAM signal reception is shown in brackets ( ).
- o The measurements were made with the each VR under the condition just after the shipment. The figures of the signal circuits may be more or less different after adjustment, so use the figures simply for reference.
  Multimeter used
  DC 20kΩ/V
  Give figures are all DC voltages.
  Sweep speed of oscilloscope:
  H → 20μS/div.
  V → 5mS/div.
  Other →sweep speed specified
- o Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

■SCHEMATIC NOTES

UNLESS OTHERWISE SPECIFIED

Resistance: [Ω] (K→KΩ, M→MΩ), 1/4[W]
carbon resistor

Capacitance: 1 or higher→[pF], less than 1 →[μF]
working voltage → 50 [V]
ceramic capacitor

Inductance: [μH]

ELECTROLYTIC CAP.: capacitance value [μF]/working voltage [V], NP→non-polar (or bipolar), electrolytic cap.

Refer to the parts list in the SERVICE MANUAL about the tailed indications of parts.

⊙ symbols indicate test point-connections.

⊥ indicates chassis ground. Hz indicates cycles per second.

■CHECKPOINT OF B1 VOLTAGE

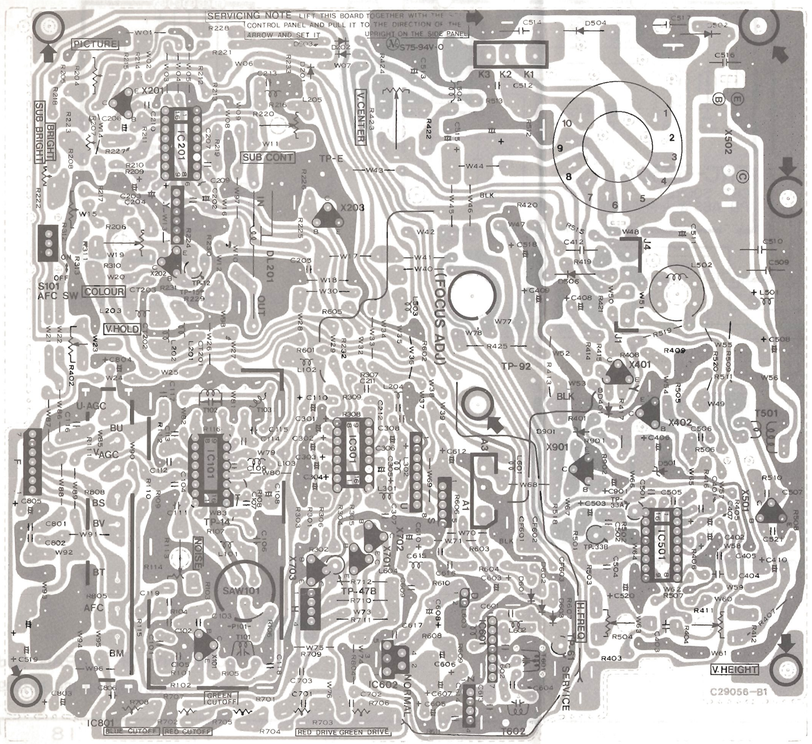
(1) Checking is possible at the position shown in MAIN ADJUSTMENTS LOCATION.

(2) Check or adjust B1 voltage under the item "Adjustment of B1 voltage".

2SC2655(Y)	2SC1213D	AN5620N
2SC1921		AN5630N

MAIN PB BACK PATTERN

FRONT



remove the PAL/SECAM P.C. Board.

■REMOVING THE TV TUNING BLOCK

1. Pull out both the tuning knob and the volume knob.
2. Remove both the speaker and the anode cap.
3. Unfasten the three screws marked (B) in Fig. 6.
4. Remove the entire TV tuning block by lifting and turning.

■REMOVING THE CRT PROTECTOR GLASS

Remove the CRT protector glass by inserting a thin-bladed screwdriver into the notch on its right end and forcing the glass upward. It is recommended that waste cloth be applied to protect the panel from being damage (see Fig. 7).

■WIRE CLAMPING AND TYING BAND

1. Be sure to clamp the wire.
2. Never remove the tying band used for wire clamping. Should it be inadvertently removed, be sure clamp the wire again, using insulating material.

■SETTING THE LOOP WIRES

Two loop wires in the unit are the grounding wires to improve the sensitivity while using the rod antenna.
Set these wires in loop shape by using a clamper. (see Fig. 8)

Short wire 90 cm: for high channel (3 ft)
Long wire 120 cm: for low channel (4 ft)

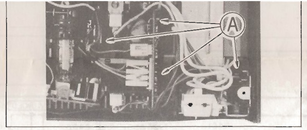


Fig. 4

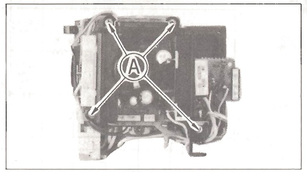


Fig. 5

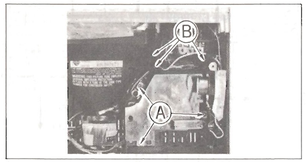


Fig. 6

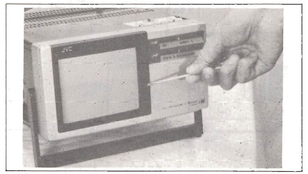


Fig. 7

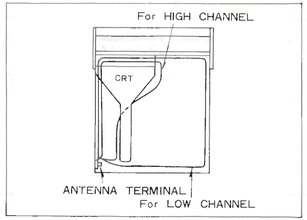


Fig. 8

■CHECKPOINT OF B1 VOLTAGE

(1) Checking is possible at the position shown in MAIN ADJUSTMENTS LOCATION.
(2) Check or adjust B1 voltage under the item "Adjustment of B1 voltage".

■ADJUSTMENT OF B1 VOLTAGE (10.7V)

Adjusting B1 voltage, use an accurate voltmeter. Should B1 control be set too high, it may cause possible damage of components.
Using a simple volt meter, it must be calibrated.

■FOR SAFETY AND CONTINUED GOOD PERFORMANCE

- o Replacing Fuse and shaded parts, be sure to use parts specified for safety purposes.
- o For maximum reliability and performance, all other replacement parts should be identical to those specified.

■PARTS NO. LIST (SHADED PARTS IN THE SCHEMATIC DIAGRAM)

Symbol No.	Parts No.	Parts Name
TRC-1230A (MAIN PCB ASS'Y) (CX-610ME)		
C509	AX49316-153	PP Capacitor
C510	AX49316-153	"
C516	AX49316-103	"
L501	A76245	Linearity Coil
L502	A75759	Width Coil
D504	UF-01V	Si Diode
R606	QRZ0054-101M	Fusible Resistor
TRC-3230A (CRT SOCKET PCB ASS'Y)		
	A76121	CRT Socket
TRC-5230A (AV IN/OUT PCB ASS'Y)		
R101	QRZ0054-560M	Fusible Resistor
TRC-5231A (PAL/SECAM PCB ASS'Y)		
R02	QRZ0054-100M	Fusible Resistor
TRC-9230A (POWER PCB ASS'Y)		
R04	QRV141F-1691	CMF Resistor
R06	QRV141F-2201	"
R15	QRD142J-473S	Corbon Resistor
F01	QMF51A2-3R15S	Fuse
D01~04	ERC01-02E	Si Diode
D05	RD5.6E(B1)	Zener Diode
X01	2SB566(C,D)	Si Transistor
OUTSIDE OF THE PCBs ASS'Y		
V1	150AZB23(E)	Picture Tube
DY1	C29125-V	Def. Yoke
T1	C39422-NA or C39422-MA	Power Transformer
T2	C29102-A	Flyback Transformer
R05	C30336-B	Focus Resistor
R2	ORF105K-2R2	UNF Resistor
SW3	QES2135-002	Seesaw Switch
SW4	QSR0074-010	Rotary Switch
F1	QMF51A2-R63S	Fuse (T630mA)
F2	QMF51A2-R315S	Fuse (T315mA)
P1	AX49432	AC Socket
	QMP3958-250R	Power Code (for ME)
	QMP9017-013TR	" (for GB)

TRC-1231A (CX-610GB)	
D507	UF-01V Si Diode addition