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*** * * WARNING * * ***

In order to prevent electric shock, do not remove cover.

No user-serviceable parts inside, Refer servicing to qualified service personal.

1. SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.

Examples : RF converters, tuner units, antenna selection switches, RF cables, noise-blocking capacitors, noise-blocking filters, etc.

2. Use specified internal Wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
3. Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation Tape
 - 2) PVC tubing
 - 3) Spacers (Insulation barriers)
 - 4) Insulation sheets for transistors
 - 5) Plastic screws for fixing micro switches
4. When replacing AC primary side components (transformers, power cords, noise blocking capacitors etc), wrap ends of wires securely about the terminals before soldering.
5. Make sure that wires do not contact heat-generating parts (heat sinks, oxide metal film resistors, fusible resistors, etc.)
6. Check if replaced wires do not contact sharply edged or pointed parts.
7. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into garbage can. Please leave them at an appropriate depot.

WARNING

Before servicing this TV receiver, read the X-RAY RADIATION PRECAUTION, SAFETY INSTRUCTION and PRODUCT SAFETY NOTICE.

X-RAY RADIATION PRECAUTION

1. Excessively high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not exceed the specified limit. The normal value of the high voltage of this TV receiver is 26 kV at zero beam current (minimum brightness).

The high voltage must not exceed 29 kV under an circumstances : Each time when a receiver require servicing, the high voltage should be checked. The reading of the high voltage is recommended to be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.

2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type as specified in the parts list.
3. Some parts in this TV receiver have special safety related characteristics for X-RAY RADIATION protection. For continued safety, the parts replacement should be under taken only after referring the PRODUCUT SAFETY NOTICE.

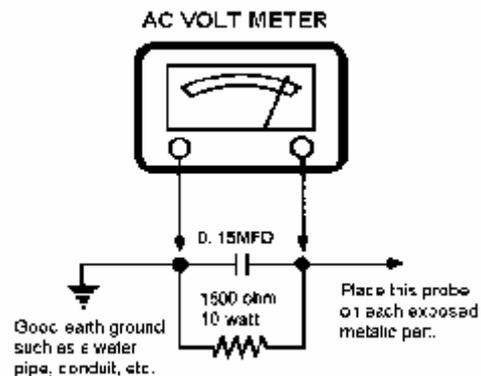
SAFETY INSTRUCTIONS

The service should not be attempted by anyone unfamiliar with the necessary instructions on this TV receiver. The following are the necessary instructions to be observed before servicing.

1. An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.
2. Comply with all caution and safety related provided on the back of the cabinet, inside the cabinet, on the chassis or picture tube.
3. To avoid a shock hazard, always discharge the picture tube's anode to the chassis ground before removing the anode cap.
4. Completely discharge the high potential voltage of the picture tube before handling. The picture tube is a vacuum and if broken, the glass will explode.
5. When replacing a MAIN PCB in the cabinet, always be certain that all protective are installed properly such as control knobs, adjustment covers or shields, barriers isolation resistor networks etc.
6. When servicing is required, observe the original lead dressing. Extra precaution should be given to assure correct lead dressing in the high voltage area.

7. Keep wires away from high voltage or high temperature components.
8. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screw heads, metal overlays, control shafts etc., to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly to the AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5k ohms per volt sensitivity or more in the following manner. Connect a 1.5k ohm 10 watt resistor paralleled by a 0.15uF AC type capacitor, between a good earth ground (water pipe, conductor etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1.5k ohms resistor and 0.15uF capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. The measured Voltage must not exceed 0.3V RMS. This corresponds to 0.5mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch "ON". The resistance should be more than 6M ohms.



PROODUCT SAFETY NOTICE

Many electrical and mechanical parts in this TV receiver have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement part which have these special safety characteristics are identified in this manual and its.

Supplements : Electrical components having such features are identified by shading on the schematic diagram and the part list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have same safety characteristics as specified in the parts list may create shock, fire or other hazards.

2. GENERAL ALIGNMENT

■ CPT MAGNET ADJUSTMENT

CONVERGENCE MAGNET ASSEMBLY POSITIONING

Convergence magnet assembly and rubber wedges need mechanical positioning following figure 1.

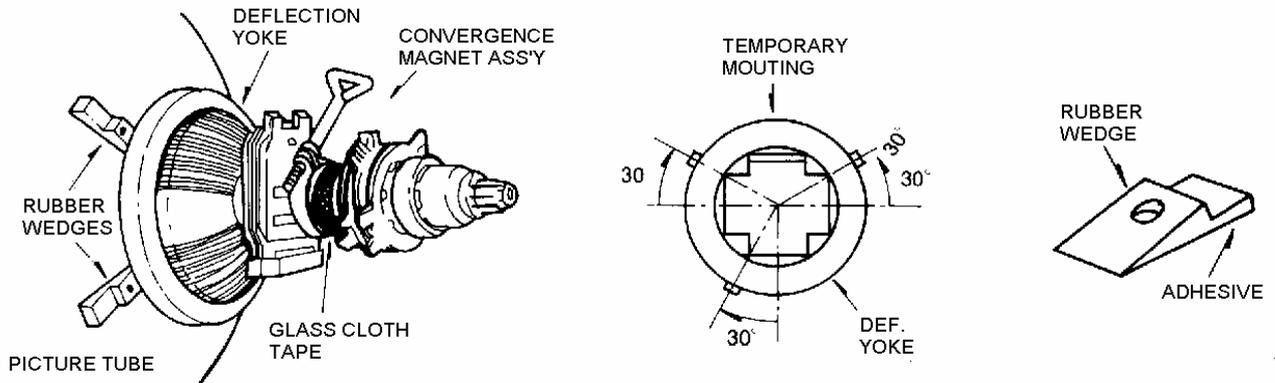


FIG 1 Rubber Wedges Location

COLOR-PURITY-ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least 15 minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS controls to maximum.
3. Adjust RED and BLUE Bias controls to provide only a green raster.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward to provide vertical green belt(zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet(See figure 2) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically.
7. Move, the yoke slowly forward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster by adjusting the BIAS controls.
9. Obtain a white raster, referring to "CTR GRAY SCAL ADJUSTMENT".
10. Proceed with convergence adjustment

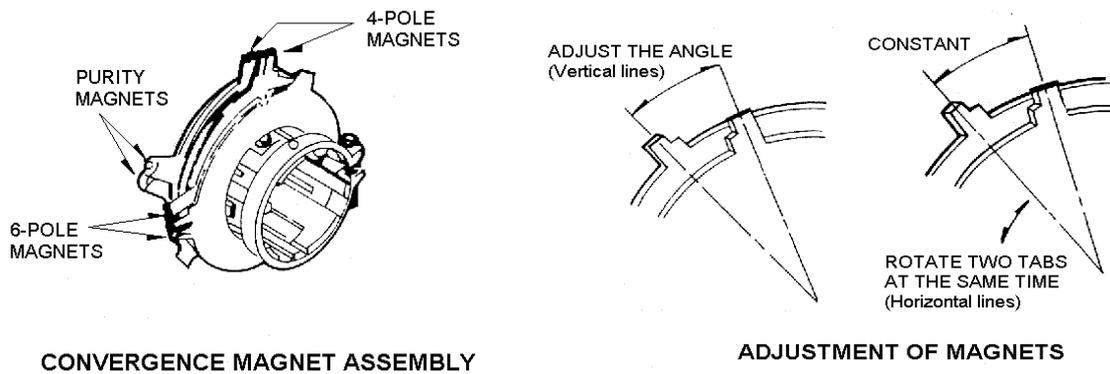


FIG 2

CONVERGENCE ADJUSTMENTS

NOTE : Before attempting any convergence adjustments, the receiver should be operate for at least 15 minutes.

CENTER CONVERGENCE ADJUSTMENT

1. Receiver crosshatch pattern with a color bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 3) and superimpose red and blue vertical lines in the center area of the picture screen.
4. Turn both tabs at the same time keep in their angles constant to superimpose red and blue horizontal lines at the center of the screen. (See figure 4.)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line with green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines
6. Repeat adjustment 3, 4, 5 Keeping in mind red, green and blue moment, because 4-Pole Magnets and 6-Pole Magnets interact and make dot movement complex.

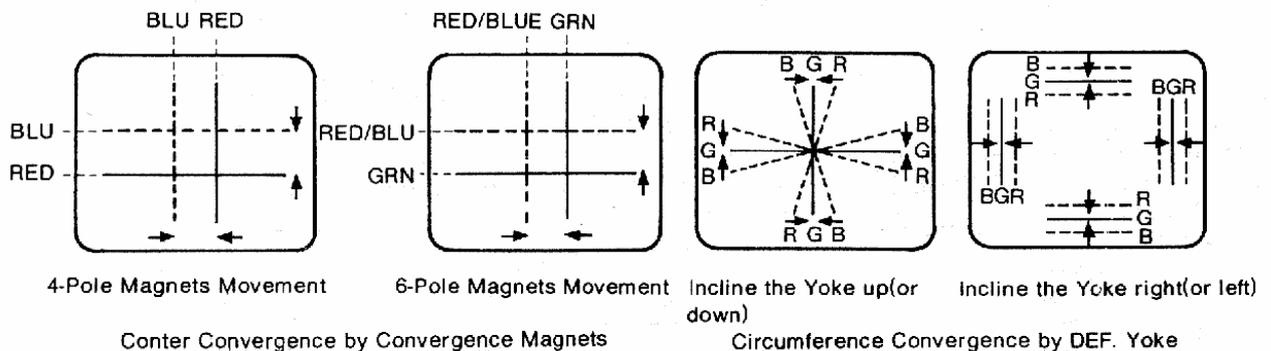


FIG 3

FIG 4

CIRCUMFERENCE CONVERGENCE ADJUSTMENT

NOTE : This adjustment requires Rubber Wedge Kit.

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Place a wedge as shown in figure (1) temporarily.
(Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference.(See figure 4) Push the mounted wedge into the space between picture tube and the yoke to hold the yoke temporarily.
4. Place other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference.(See figure 4).
6. Hold the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedges, recheck overall convergence.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After placing three wedges, recheck overall convergence. Tighten the screw firmly to hold the yoke tightly in place.
9. Stick 3 adhesive tapes on wedges as shown in figure 1.

■ **CHASSIS ADJUSTMENT MANUAL**

How to enter the service the service mode using the user remote control

Push buttons of remote control in sequences as follows

‘DISPLAY’-‘MUTE’-‘SLEEP’-‘FUSSY’

1.HEAT RUN(AUTO POWER ON MODE) : F4

- It need in assembly line during heat run that protect to auto power off after no signal 15 minutes and auto power on for input power of sets on/off by line condition which sometimes line power connection of palette with main power line would be badly contacted by shaking during the sets through on assembly lines.
- Heat run function is operated by pressing the F4 key.
- To cancel this function press the F4 key one more or power on/off.
- It must be canceled before final output.

2-1. V-SIZE ADJUSTMENT.

- Select the V-SIZE by pressing CH UP/DOWN key
- Adjust the V-SIZE by pressing VOL UP/DOWN key for approximately one-half inch over scan at top and bottom of picture screen.

2-2. V-CENTER ADJUSTMENT.

- Select the V-CENTER by pressing CH UP/DOWN key.
- Adjust V-CENTER so that the vertical center of the picture may be coincident with the mechanical center of CRT.

2-3. H-CENTER ADJUSTMENT.

- Select the H-CENTER by pressing CH UP/DOWN key.
- Adjust the H-CENTER by pressing VOL UP/DOWN key to be coincident with screen center and mechanical center.

2-4. V-LIN ADJUSTMENT.

- Adjust vertical linearity by pressing VOL UP/DOWN key.

3. SCREEN ADJUSTMENT(F3)

- Receive the video no signal.
- Select the SERVICE mode by pressing CH UP/DOWN key.
- Make the horizontal line by pressing VOL UP/DOWN key.
- Adjust the SCREEN , till horizontal line is just disappeared.

4. WHITE BALANCE ADJUSTMENT.(F3)

- Receive a black and white pattern or white balance adjusting pattern.
- Before attempting white balance adjustment, the receiver should be operate for at least 15minites.
- Check the all of position to the reference value (nominal center)
- The reference color of the measurement equipment set to G.
- Adjust the R DC,G DC, G DC at bias mode.
- Adjust the R DRV,B DRV at drive mode.

4-1. WHITE BALANCE ADJUSTMENT FOR DVD MODE .(F1)

- This procedure is need to compensate the W/Balance difference between "TV/VIDEO/S-VHS" mode and "DVD" mode.

- 1) Input the "GREY SCALE PATTERN" signal to both "VIDEO1 or 2" and "DVD" input jack
- 2) Select "DVD" input mode by pressing TV/VIDEO button.
- 3) Select the "B-Y DC LEVEL" or "R-Y DC LEVEL" mode by pressing CH UP/DOWN key in FACTORY1 mode.
- 4) Change both "B-Y DC LEVEL" and "R-Y DC LEVEL" data in order to get the same W/Balance value as that of VIDEO mode.

5 . SUB BRIGHT ADJUSTMENT.

5-1 METHOD 1

- Receive the RETMA PATTERN.
- Select the NORMAL mode in the fuzzy.
- Select the SUB BRIGHT mode by pressing CH UP/DOWN key in FACTORY1 mode.
- Adjust the SUB BRIGHT value before disappeared black 20% level by pressing VOL UP/DOWN key.

5-2 METHOD 2

- Change Mode to VIDEO NO SIGNAL
- Select the NORMAL mode in the fuzzy key.
- Select the SUB BRIGHT mode by pressing CH UP/DOWN key in FACTORY1 mode.
- Adjust the SUB BRIGHT value till disappeared to back screen by pressing VOL UP/DOWN.

6. AGC ADJUSTMENT.(F1 key)

- Receive the RF color bar signal.
- Strength of input signal control 60dBu-63dBu.
- Measure the AGC voltage with scope at tuner AGC pin.
- Select the AGC point less tuner AGC voltage.
- Select the AGC AUTO mode, and then press the vol up/down key
- AGC is arranged automatically and then Confirmation of the strong signal.

7. FOCUS ADJUSTMENT

- .For receive RETMA pattern, press the “ CH “ KEY on the remote control.
- .Adjust the FOCUS VOLUME on the FBT and make the picture on the screen finest.

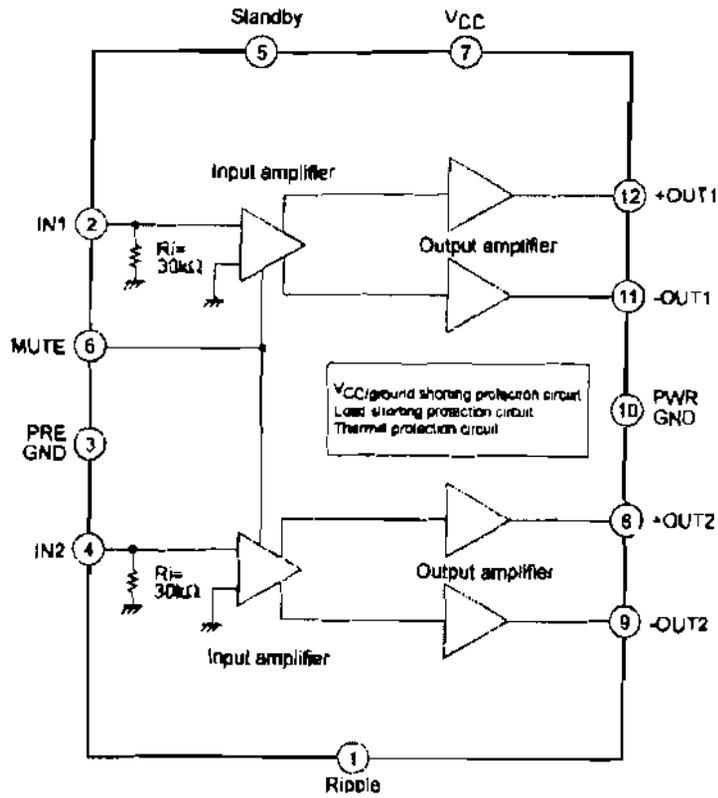
8. USER RESET.

- It be cleared all user control to initial for all output sets will be same user control condition.
- .It need after final inspection.

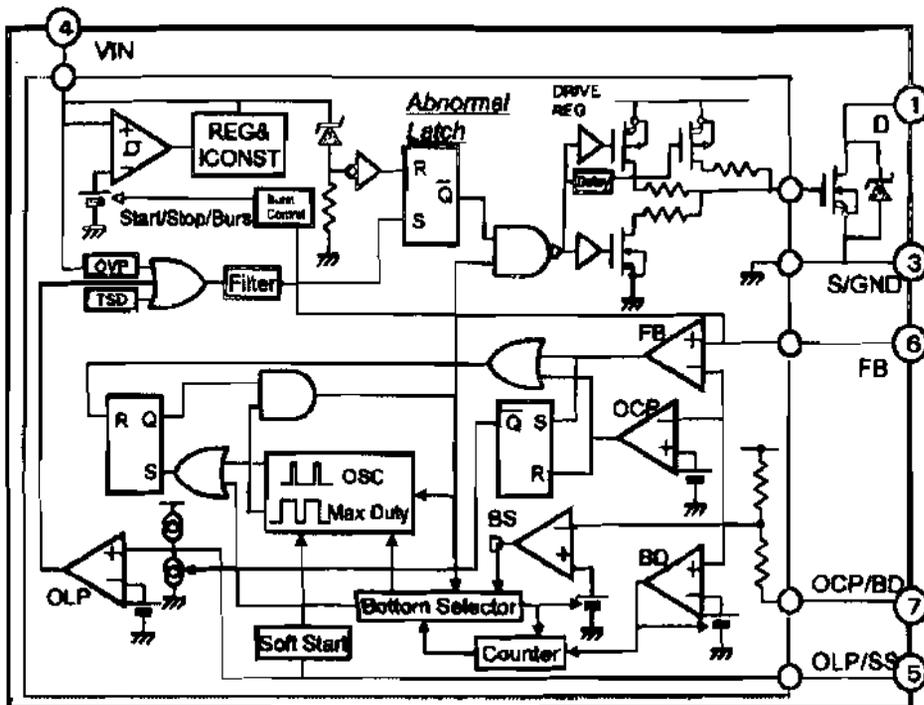
LA76931 Pin Assignment

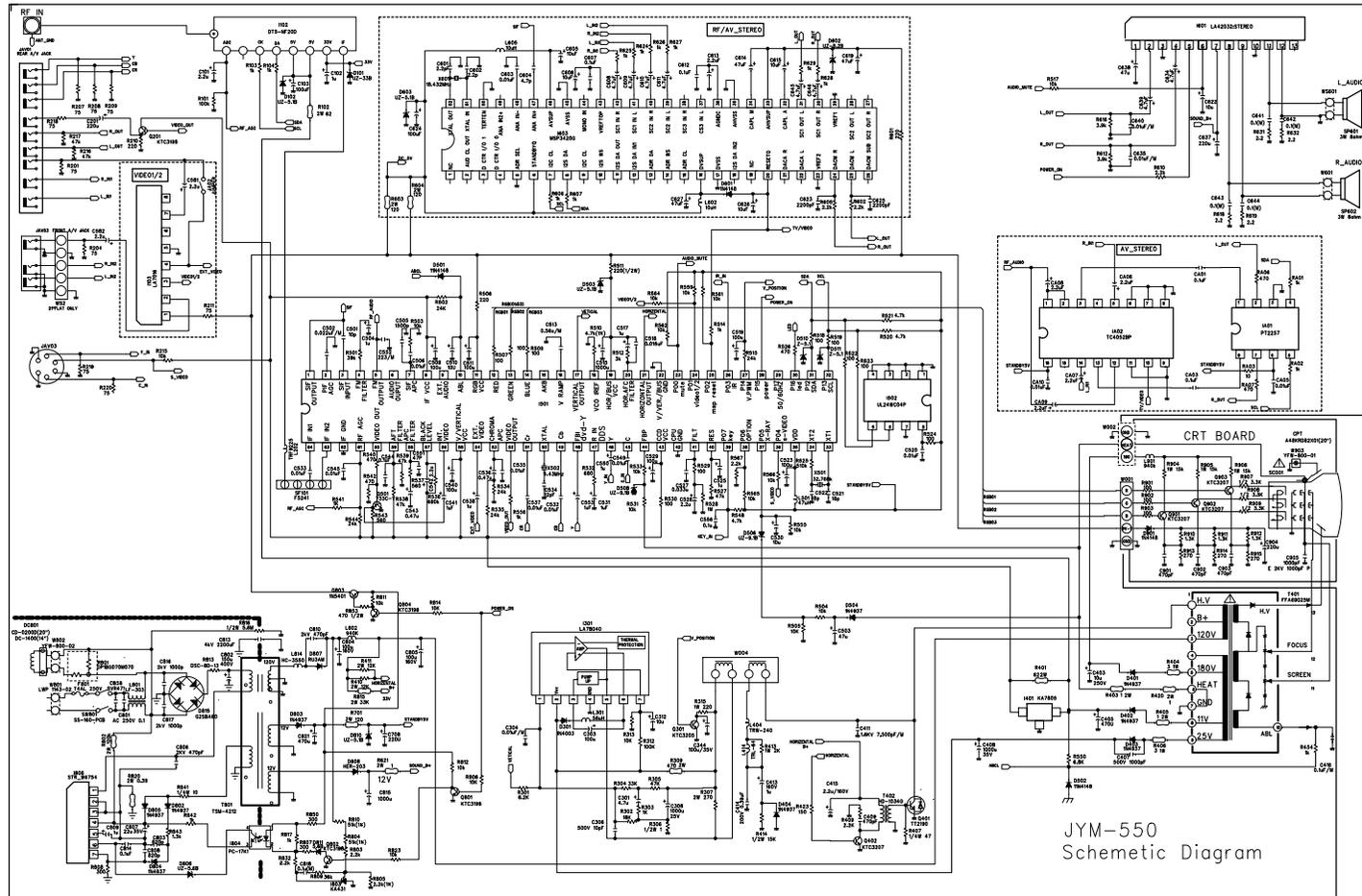
PIN	FUNCTION	PIN	FUNCTION
1	SIF Output	64	PIF Input1
2	PIF AGC	63	PIF Input2
3	SIF Input	62	IF Ground
4	FM Filter	61	RF AGC Output
5	FM Output / Selected Audio Output	60	Video Output
6	Audio Output	59	AFT Filter
7	SIF APC Filter	58	APC Filter
8	IF Vcc	57	Black Level Det. Filter
9	Ext. Audio Input (VM Output:932)	56	Internal Video Input(S-C IN)
10	ABL	55	Video/Vertical Vcc
11	RGB Vcc	54	External Video Input(Y IN)
12	Red Output	53	Chroma APC Filter
13	Green Output	52	Selected Video Output or fsc Output
14	Blue Output	51	SECAM R-Y Input (Cr Input)
15	NC	50	4.43MHz Crystal
16	V Ramp Osc. Capacitor	49	SECAM B-Y Input (Cb Input)
17	Vertical Output	48	DVD-Y
18	VCO IREF	47	C_APC Sens.
19	Horizontal/BUS Vcc	46	YC-Y
20	Horizontal AFC Filter	45	YC-C
21	Horizontal Output	44	Flyback Pulse Input
22	Video/Vertical/BUS Ground	43	CCD Vcc
23	P00/INT0	42	CPU Ground
24	P01/INT1	41	PLL
25	P02	40	Reset
26	P03/INT3	39	P07/AN7
27	P14/PWM1	38	P06/AN6
28	P15/PWM2	37	P05/AN5
29	P17	36	P04/AN4
30	P16/PWM3	35	VDD
31	P12/SDA1	34	XT2
32	P13/SCK1	33	XT1

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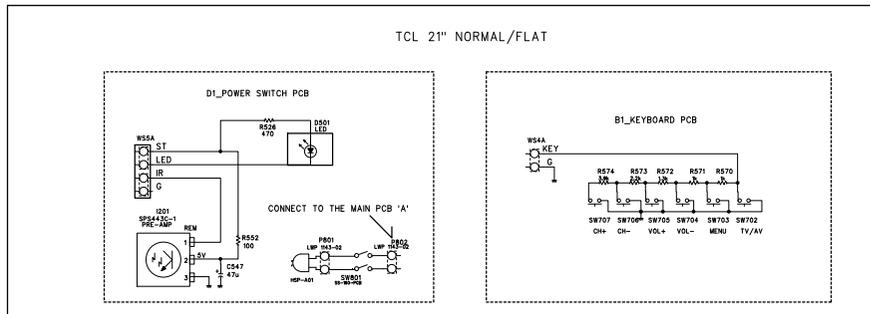
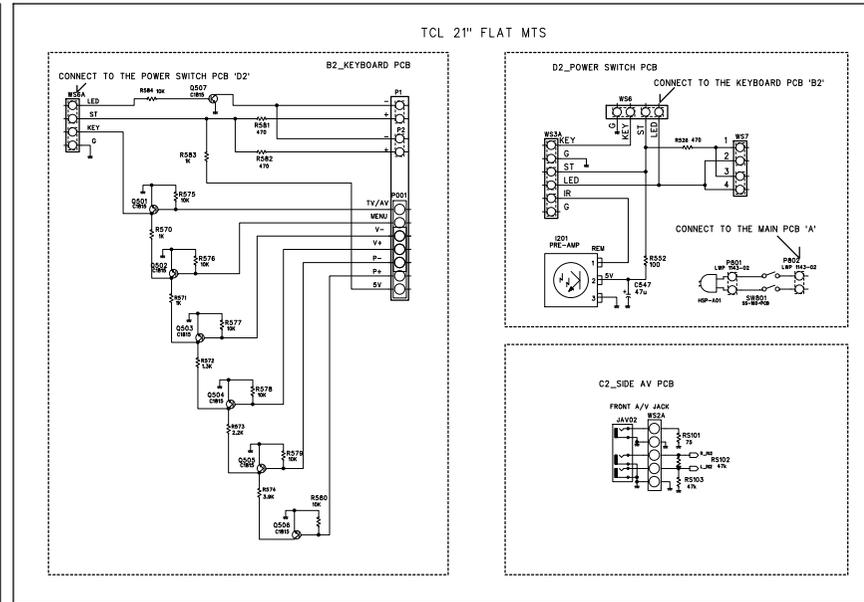
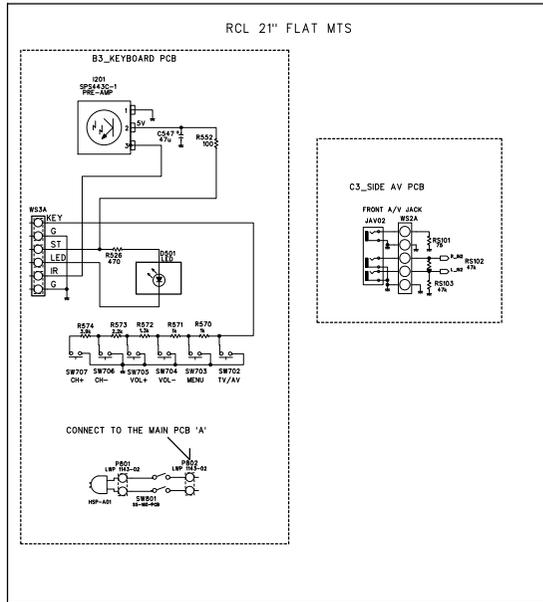


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JYM-550
Schematic Diagram



JYM550-SUB
Schematic Diagram