

PHOTOFACT® Technical Service Data

SET 3624

MODEL E09305WHF24 (CHASSIS TX826JD)

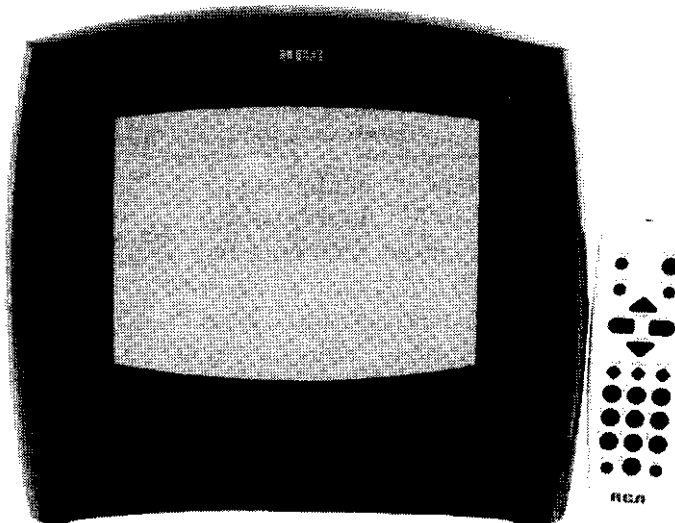
RCA

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RCA

Model E09305WHF24 (Chassis TX826JD)



**Essential coverage
for servicing a television receiver...**

- Schematics
- Component locations
- Parts list

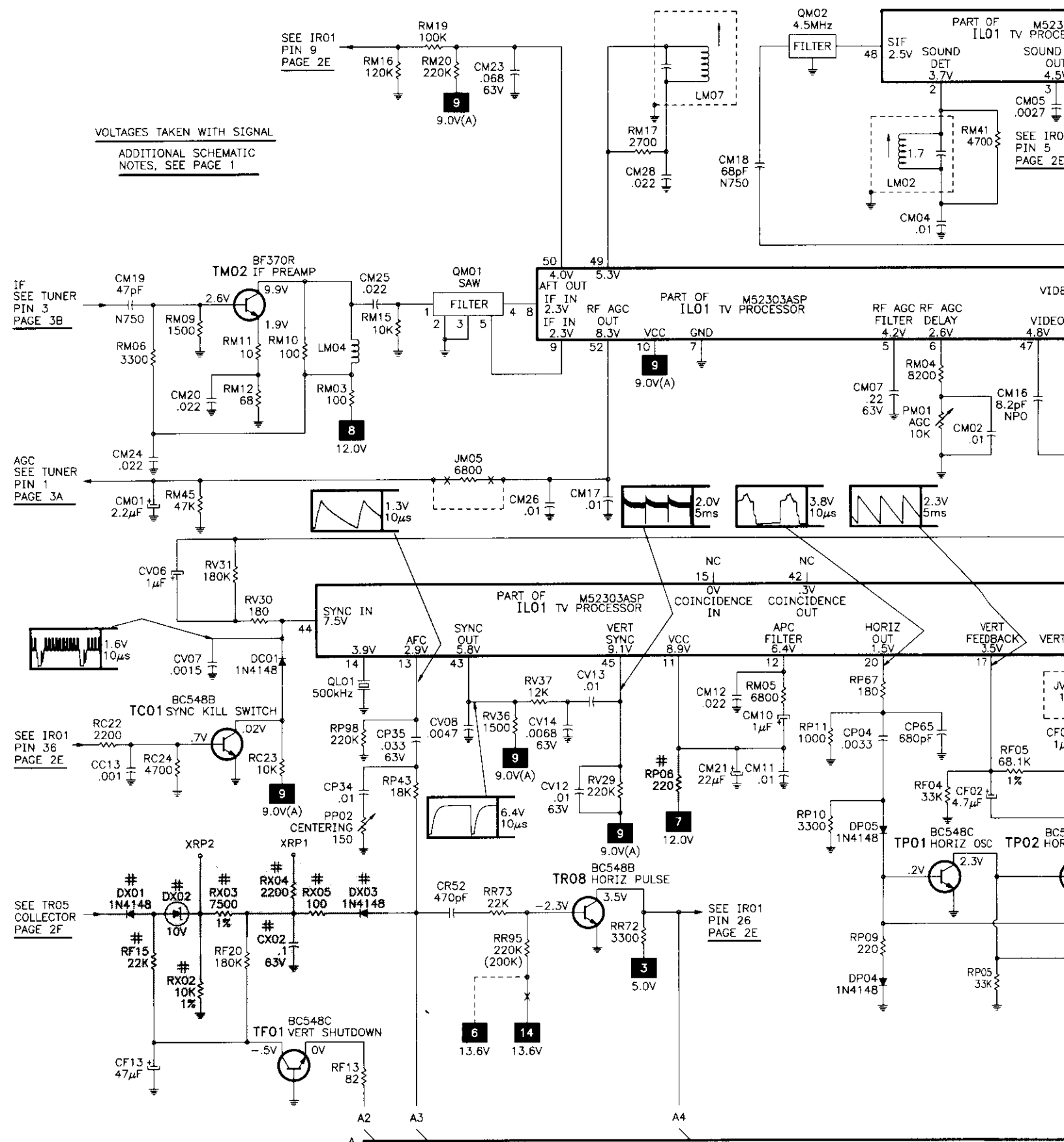
Coverage includes this additional model and chassis:

MODEL	CHASSIS
E09305WHC24	TX826JD

MARCH 1996 SET 3624

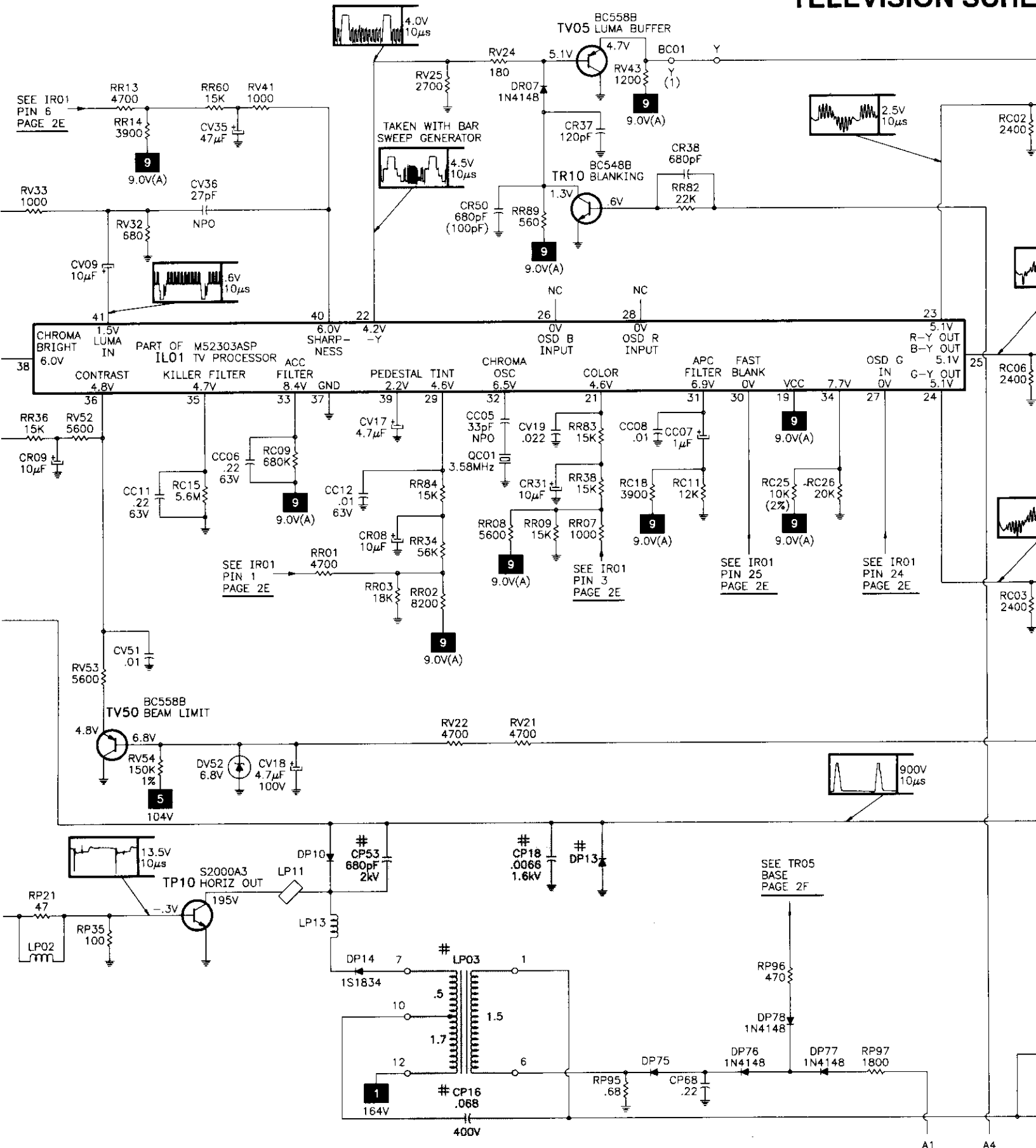
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VOLTAGES TAKEN WITH SIGNAL
ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 1

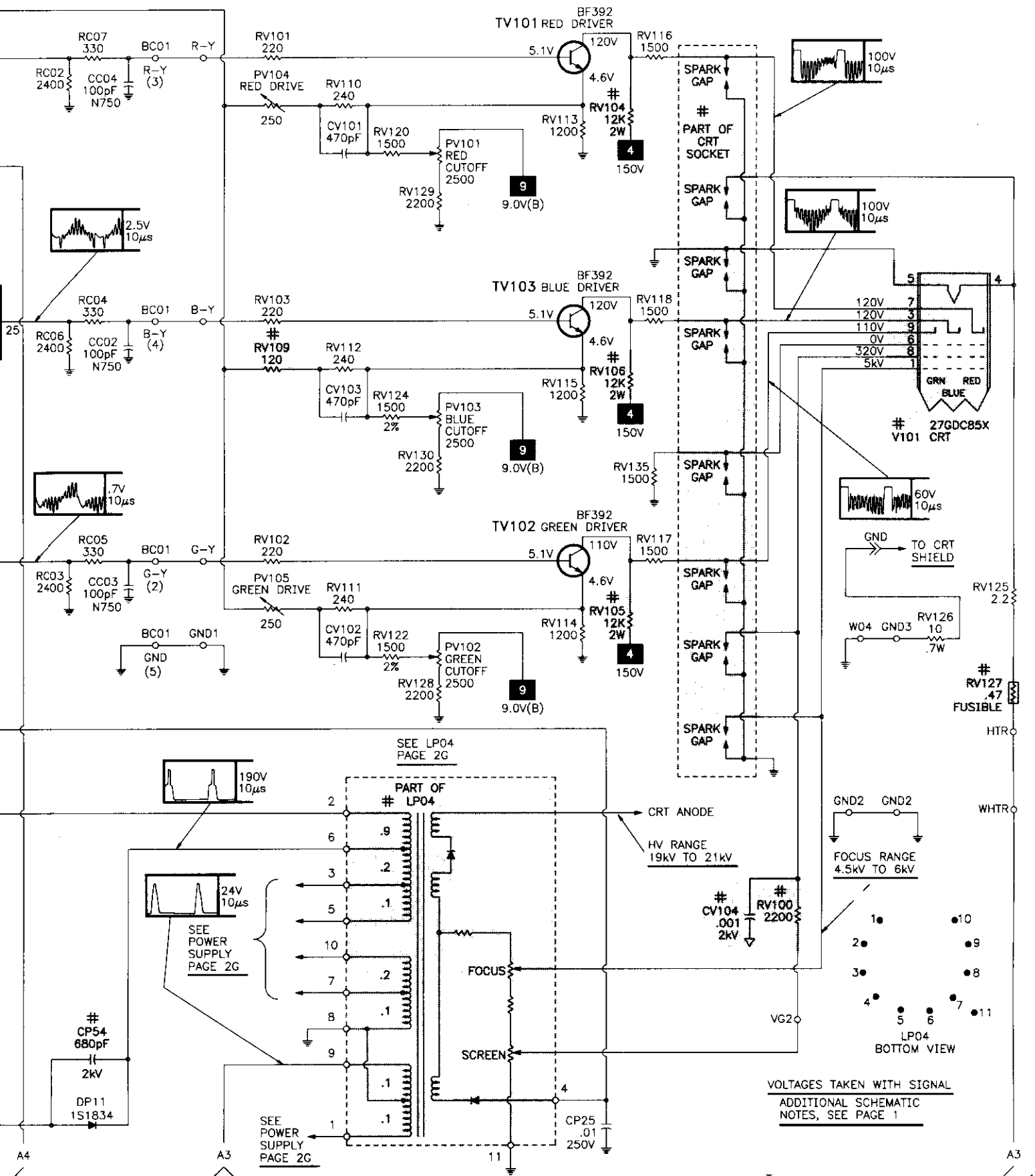


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TELEVISION SCHE



SCHEMATIC continued

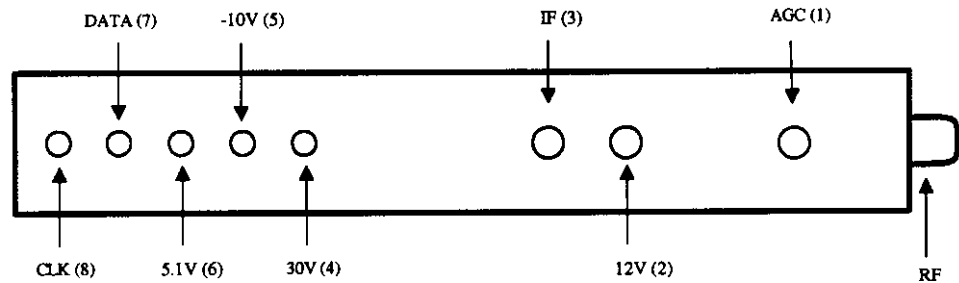


TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
AGC (1)	7.1V	7.2V	7.2V
12V (2)	12.0V	12.0V	12.0V
IF (3)	0V	0V	0V
30V (4)	33.3V	33.4V	33.4V
-10V (5)	-11.8V	-5.9V	-11.8V
5.1V (6)	5.0V	5.0V	5.0V
DATA (7)	5.0V	5.0V	5.0V
CLK (8)	5.0V	5.0V	5.0V

NOTE: VHF Low Band voltages taken on channel 2.
VHF High Band voltages taken on channel 7.
UHF Band voltages taken on channel 14.

TUNER TERMINAL GUIDE



[illegible]

The schematic diagram illustrates the IF section of a radio receiver, featuring three main functional blocks: II01 MIXER/OSC, II06 TUNER CONTROL, and II02 PLL. The circuit is populated with various passive components including capacitors (CH), resistors (RH, RI), and inductors (LH). Key components include the TH80 IF AMP, TI15 V/U RF SWITCH, TI14 V/U RF SWITCH, TI13 V/U RF SWITCH, and TI02 PLL. The diagram also shows power supply connections for 30V, 12V, and -10V, with references to other pages (2A, 2F) for additional details. The components are labeled with their values and part numbers, such as CH10 22pF, RH15 10, and LH14 100pF.

SAFETY PRECAUTIONS

SERVICE WARNING

Only qualified service technicians who are familiar with safety checks and guidelines should perform service work. Before replacing parts, disconnect power source to protect electrostatically sensitive parts. Do not attempt to modify any circuit unless so recommended by the manufacturer. When servicing the receiver, use an isolation transformer between the line cord and power receptacle.

SERVICING THE HIGH VOLTAGE AND CRT

Use **EXTREME CAUTION** when servicing the high voltage circuits. To discharge static high voltage, connect a 10K ohms resistor in series with a test lead between the receiver and CRT anode lead. **DO NOT** lift the CRT by the neck. Always wear shatterproof goggles when handling the CRT to protect eyes in case of implosion.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering X-ray radiation. In solid-state receivers and monitors, the CRT is the only potential source of X-rays. Keep an accurate high voltage meter available at all times. Check meter calibration periodically. Whenever servicing a receiver, check the high voltage at various brightness levels to be sure it is regulating properly. Keep high voltage at rated value, **NO HIGHER**. Excessive high voltage may cause X-ray radiation or failure of associated components. **DO NOT** depend on protection circuits to keep voltage at rated value. When troubleshooting a receiver with excessive high voltage, avoid close contact with the CRT. **DO NOT** operate the receiver longer than necessary. To locate the cause of excessive high voltage, use a variable AC transformer to regulate voltage. In present receivers, many electrical and mechanical components have safety related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For **SAFETY**, use only equivalent replacement parts when replacing these components.

GENERAL GUIDELINES

Perform a final **SAFETY CHECK** before returning receiver to customer. Check repaired area for poorly soldered connections, and check entire circuit board for solder splashes. Check inner board wiring for pinched wires or wires contacting any high wattage resistors. Check that all control knobs, shields, covers, grounds, and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.

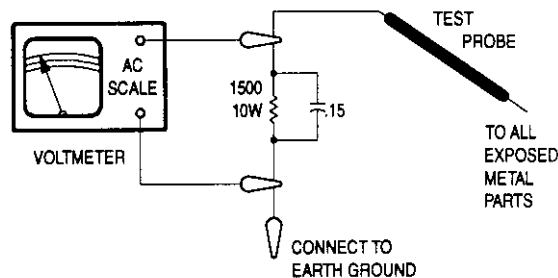
SAFETY CHECKS – FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 1M ohms and 5.2M ohms. Parts without a return path must measure infinity.

Hot Leakage Current Check

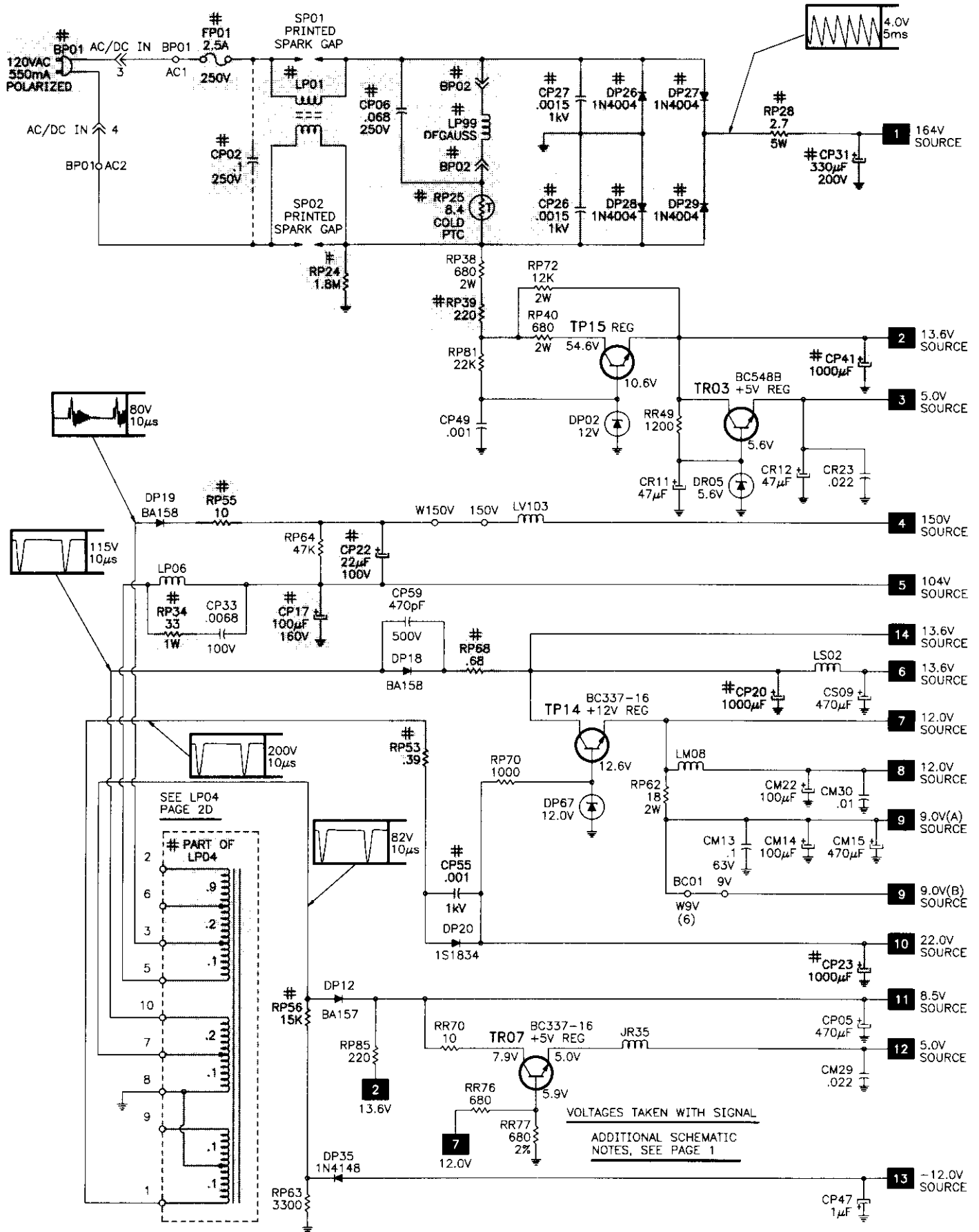
Plug the AC cord directly into an AC outlet. **DO NOT** use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15 μ F capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point. Voltage measurements should not exceed .75VAC, 500 μ A. Any value exceeding this limit constitutes a potential shock hazard and must be corrected. If the AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.



HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC. Connect a jumper wire to XRP1 and XRP2. The set should go into shutdown, losing picture and sound. If set does not go into shutdown the shutdown circuit requires repair. To resume normal operation, remove jumper wire.

POWER SUPPLY SCHEMATIC



MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# BP01	Line Cord	226566	AC, Polarized
# ES01	Jack	198802	Earphone
# FP01	Fuse	198605	2.5Amp, 250V, Slow Blow
IK01	Receiver	225032	Remote
QC01	Filter	198630	3.58MHz
QL01	Crystal	198633	500kHz
QM01	Filter	210250	SAW
QM02	Filter	210239	4.5MHz
QR01	Filter	210549	8MHz
QV01	Filter	205431	4.5MHz
SP1	Speaker	-	1.5" X 3.75", 16 Ohm, 4W
	Speaker	198787	16 Ohm, 2W
SW01	Switch	216098	Power
SW02	Switch	216098	Volume Up
SW03	Switch	216098	Volume Down
SW04	Switch	216098	Channel Up
SW05	Switch	216098	Channel Down
SW06	Switch	216098	Menu
# V101	CRT	27GDC85X	-
	Adapter	193983	Antenna 75 To 300 Ohms
#	Connector	200489	Antenna
	PC Board (1)	225476	CRT
	PC Board (1)	228974	Headphone/Control
#	Socket	224146	CRT
	Transmitter	228007	Remote (CRK10GW1)
	Tuner (1)	223080	UHF/VHF (MTP-M-4006)
	Wedges	161019	Yoke Positioning (3 Used)

For SAFETY use only equivalent replacement part.

(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.

PARTS LIST continued

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY1	Yoke Horiz 2.7mH Vert 28.5mH	198776
JR35	100 μ H	220641
LM02	Sound Detector	198613
LM03	Video Detector	206385
LM04	.82 μ H	198615
LM07	AFT	210787
LM08	47 μ H	198617
# LP01	-	228335
LP02	6 μ H	198619
# LP03	Switch Mode	224231
# LP04 (1)	Horizontal Output	198621
# LP05	112 μ H	198623
LP06	50 μ H	198624
LP11	Ferrite Bead	224167
LP12	Ferrite Bead	224167
LP13	6 μ H	198619
# LP99	Degaussing	198785
LR01	35 μ H	205430
LS02	47 μ H	198617
LT01	Ferrite Bead	220643
LV01	1.5 μ H	198783
LV02	12 μ H	198782
LV103	150 μ H	210247
# TS01A	Earphone	198801
VV01	Delay Line	198753

For SAFETY use only equivalent replacement part.

(1) Focus and screen controls are part of LP04.

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
PF01	500 Vertical Size	198627	-
PM01	10K AGC	198628	-
# PP01	1000 B+	198629	-
PP02	150 Centering	225631	-
PV101	2500 Red Cutoff	216051	-
PV102	2500 Green Cutoff	216051	-
PV103	2500 Blue Cutoff	216051	-
PV104	250 Red Drive	216052	-
PV105	250 Green Drive	216052	-
RC25	10K 5% 1/4W	-	QW310
	10K 2% 1/4W	829310	QW310
# RF01	2.7 5% 1/2W	198648	HW2D7
RF05	68.1K 1% .16W	198790	-
# RF15	22K 5% .16W	198714	-
# RP06	220 5% 1/4W	209917	QW122
# RP07	6810 1% .16W	220649	-
# RP08	107K 1% .4W	224232	-
RP12	82.5K 1% .16W	220651	-
# RP18	8200 5% 1/4W	175366	QW282
# RP19	9100 5% 1/4W	829291	QW291
# RP23	5.6 5% 2W	220652	2W5D6
# RP24	1.8M 10% 1/2W	220333	HW518
# RP25	8.4 Cold PTC	198688	-
# RP28	2.7 10% 5W Wirewound	220653	5W2D7
# RP32	1000 10% 1/2W	206386	HW210
# RP34	33 5% 1W	198695	1W033
# RP39	220 5% .43W	220656	-
# RP53	.39 5% 1/4W	198701	-
# RP55	10 5% .35W	210185	-
# RP56	15K 5% 1/4W	198703	QW315
# RP59	100 5% .16W	198660	-
# RP61	3300 5% .16W	198638	-
# RP68	.68 5% .4W	216049	-
RR11	1500 5% 1/4W	-	QW215
	1500 2% 1/4W	829215	QW215
RR37, 39	10K 5% 1/4W	-	QW310
	10K 2% 1/4W	829310	QW310
RR64, 65, 67	10K 5% 1/4W	-	QW310
	10K 2% 1/4W	829310	QW310
RR77	680 2% .16W	220665	-
# RS07	270 5% 1/4W	220648	QW127
RV54	150K 1% 1/4W	227625	-
# RV100	2200 5% 1/2W	176632	HW222
# RV104, 05, 06	12K 5% 2W	183193	2W312
# RV109	120 5% 1/4W	210196	QW112
RV122, 24	1500 2% 1/4W	829215	QW215
# RV127	.47 5% 1/2W Fusible	210248	-
# RX02	10K 1% 1/4W	198739	-
# RX03	7500 1% 1/2W	198741	-
# RX04	2200 5% .16W	198698	-
# RX05	100 5% .16W	198660	-
# RY01	2200 5% 1/2W	176632	HW222

For SAFETY use only equivalent replacement part.

SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
TP12	BC548C	198746	NTE199*	ECG199*	SK3245*
TP13	BD434	220673	NTE153	ECG153	SK3274
TP14	BC337-16	216099	NTE123AP*	ECG123AP*	SK3854*
TP15	-	198752	-	-	-
TR03	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TR04, 05	BC548C	198746	NTE199*	ECG199*	SK3245*
TR07	BC337-16	216099	NTE123AP*	ECG123AP*	SK3854*
TR08, 10, 12	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TS02	BC548A	220674	NTE199*	ECG199*	SK3245*
TS03	BC337-16	216099	NTE123AP*	ECG123AP*	SK3854*
TS04	BC327-25	220675	NTE298	ECG298	SK3450
TS05	BC548A	220674	NTE199*	ECG199*	SK3245*
TV04, 05, 50	BC558B	198745	NTE159*	ECG159*	SK3466*
TV101, 02, 03	BF392	198763	NTE287	ECG287	SK3433

* Lead configuration may vary from original.

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
CC02, 03, 04	100pF 5% 50V N750	198579
CC05	33pF 5% 50V NPO	210153
# CF01	470μF 20% 25V	220623
CM16	8.2pF 10% 50V NPO	202047
CM18	68pF 5% 50V N750	198554
CM19	47pF 5% 50V N750	198555
# CP02	.1 20% 250V	220625
# CP06	.068 20% 250V	220627
# CP16	.068 10% 400V	225439
# CP17	100μF 20% 160V	194728
# CP18	.0066 1.6kV	198562
# CP20	1000μF 20% 16V	185862
# CP22	22μF 20% 100V	210156
# CP23	1000μF 20% 25V	190721
# CP26, 27	.0015 10% 1kV	198565
# CP31	330μF 20% 200V	182286
# CP40	.36 5% 250V	198567
# CP41	1000μF 20% 25V	190721
# CP53, 54	680pF +50% -20% 2kV	225440
# CP55	.001 +50% -20% 1kV	198570
CS02	390pF 5% 50V N750	220630
# CS06	.1 10% 63V	220631
CV36	27pF 5% 50V NPO	220634
# CV104	.001 +50% -20% 2kV	198806
# CX02	.1 10% 63V	198551

For SAFETY use only equivalent replacement part.

CABINET PARTS

Item	Mfr. Part No.
Buttons	228965
# Cabinet Front	MK1829
# Cabinet Rear	BK1830

For SAFETY use only equivalent replacement part.

SEMICONDUCTORS

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
DC01	1N4148	198589	NTE519	ECG519	SK3100
DF04	-	198597	NTE116	ECG116	SK3313
DK31	1N4148	198589	NTE519	ECG519	SK3100
DM03	-	198600	-	-	-
DP02	-	220637	-	-	-
DP04, 05	1N4148	198589	NTE519	ECG519	SK3100
# DP06	-	223083	-	-	-
DP10	-	225441	-	-	-
DP11	1S1834	210226	NTE552	ECG552	SK9000
DP12	BA157	198590	NTE558	ECG558	SK3998
# DP13	-	198596	-	-	-
DP14	1S1834	210226	NTE552	ECG552	SK9000
DP15, 16	-	198597	NTE116	ECG116	SK3313
DP18	1S1834	210226	NTE552	ECG552	SK9000
	BA158	198598	NTE558	ECG558	SK3998
DP19	BA158	198598	NTE558	ECG558	SK3998
DP20	1S1834	210226	NTE552	ECG552	SK9000
DP21	-	198597	NTE116	ECG116	SK3313
# DP26 Thru					
# DP29	1N4004	209919	NTE116	ECG116	SK3312
DP35, 37	1N4148	198589	NTE519	ECG519	SK3100
DP46, 54	1N4148	198589	NTE519	ECG519	SK3100
DP67	-	220637	-	-	-
DP75	-	198590	NTE580	ECG580	-
DP76, 77, 78	1N4148	198589	NTE519	ECG519	SK3100
DR02	1N4148	198589	NTE519	ECG519	SK3100
DR04	-	220638	-	-	-
DR05	-	220639	-	-	-
DR06, 07	1N4148	198589	NTE519	ECG519	SK3100
DT01, 02	1N4148	198589	NTE519	ECG519	SK3100
DV52	-	220638	-	-	-
# DX01	1N4148	198589	NTE519	ECG519	SK3100
# DX02	-	159429	NTE5019T1	ECG5019T1	SK9970
# DX03	1N4148	198589	NTE519	ECG519	SK3100
IF01	LA7830	188086	NTE1773	ECG1773	SK9752
IL01	M52303ASP	210543	-	-	-
IR01	ST6497BB1/BHS	227722	-	-	-
TC01	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TF01	BC548C	198746	NTE199*	ECG199*	SK3245*
TJ04	BC558B	198745	NTE159*	ECG159*	SK3466*
TM02	BF370R	206017	-	-	-
TP01	BC548C	198746	NTE199*	ECG199*	SK3245*
TP02	BC558C	198747	NTE159*	ECG159*	SK3466*
# TP03	BC548C	198746	NTE199*	ECG199*	SK3245*
TP04	BC558C	198747	NTE159*	ECG159*	SK3466*
TP05, 06	BC548C	198746	NTE199*	ECG199*	SK3245*
TP09	BC337-16	216099	NTE123AP*	ECG123AP*	SK3854*
TP10	S2000A3	198794	-	-	-
	S2000AF	227518	-	ECG2354%	-
TP11	BC558C	198747	NTE159*	ECG159*	SK3466*

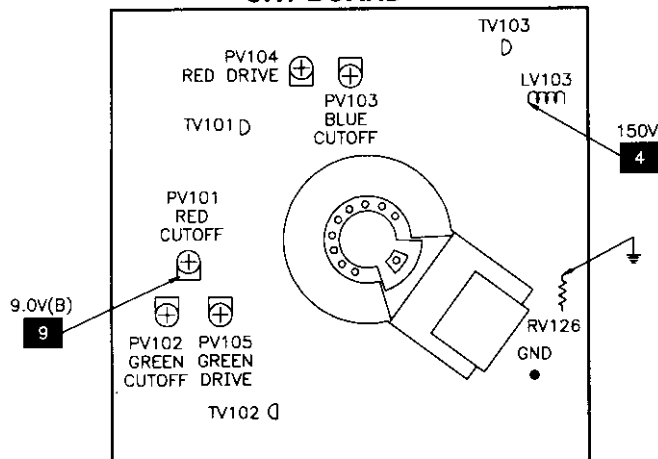
For SAFETY use only equivalent replacement part.

* Lead configuration may vary from original.

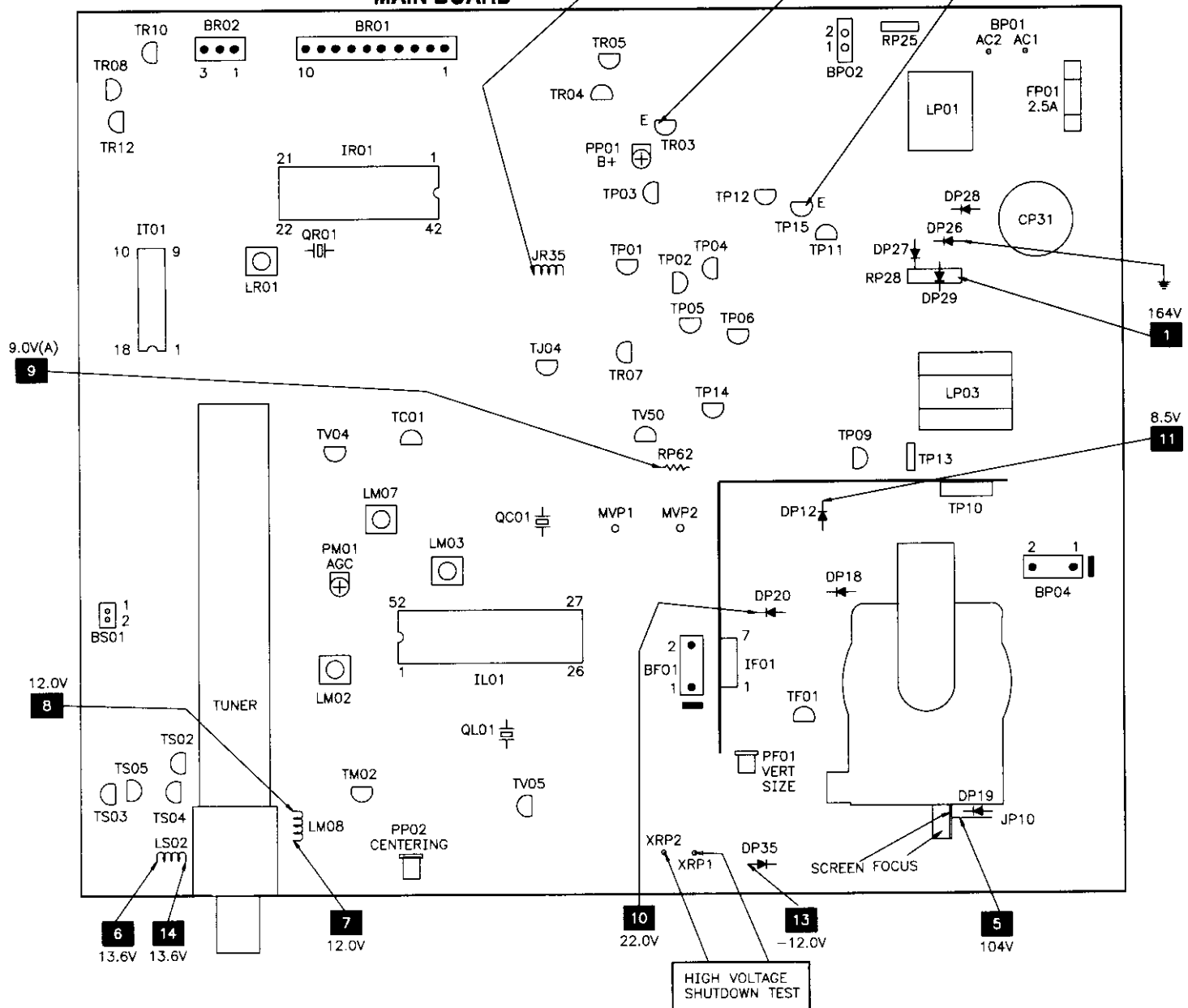
% Use Insulating hardware supplied with replacement.

PLACEMENT CHART

CRT BOARD



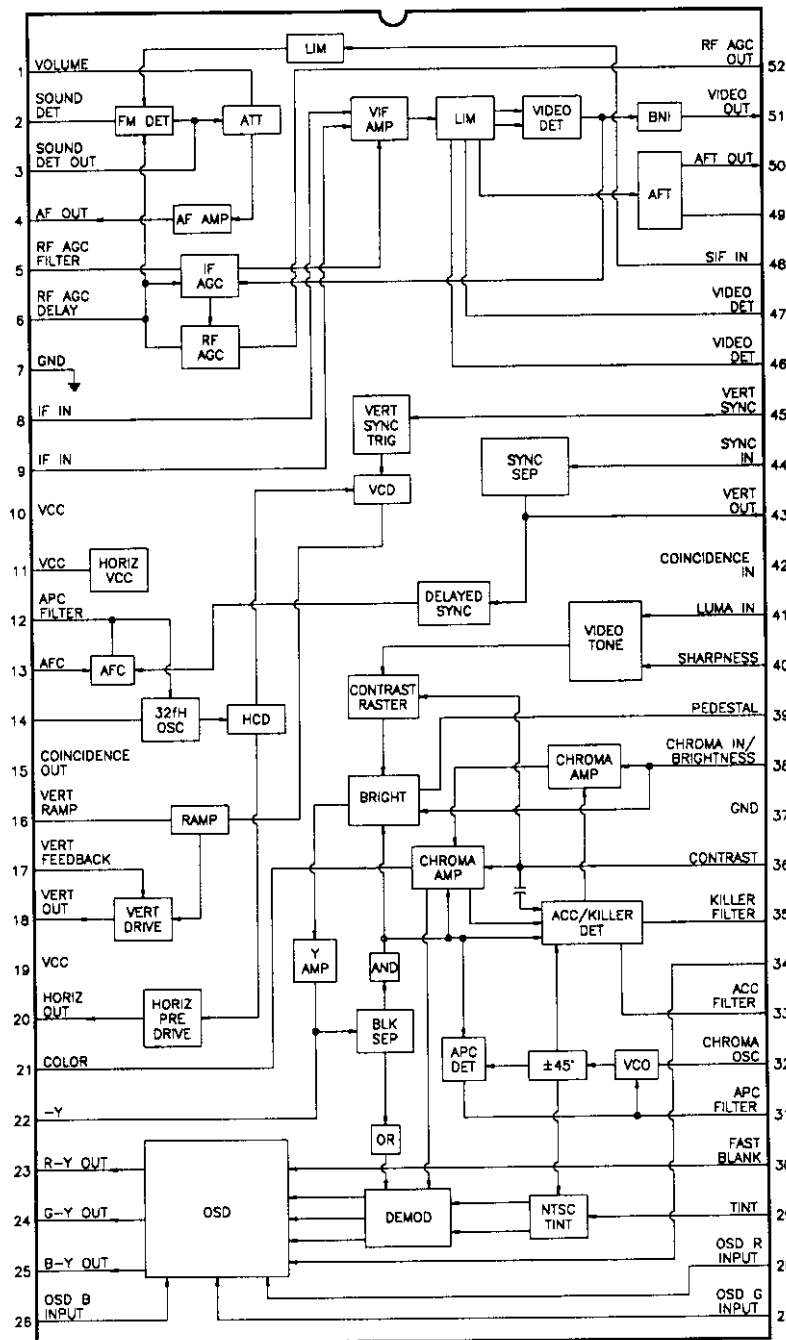
MAIN BOARD



RCA

MODEL E09305WHF24 (CHASSIS TX826JD)

IL01
M52303ASP



IF01
LA7830

