

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 ground 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 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.

XRAY SHUTDOWN TEST

Momentarily short test point BL901 to ground. The receiver should lose raster and sound. If receiver does not lose raster and sound, the shutdown circuit should be repaired. To resume normal operation, remove AC power for approximately 30 seconds and then turn the receiver on.

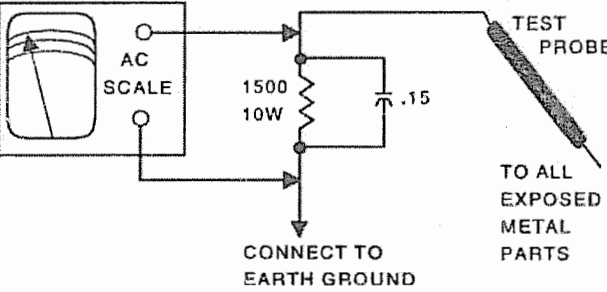
SAFETY CHECKS — FIRE AND SHOCK HAZARD

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

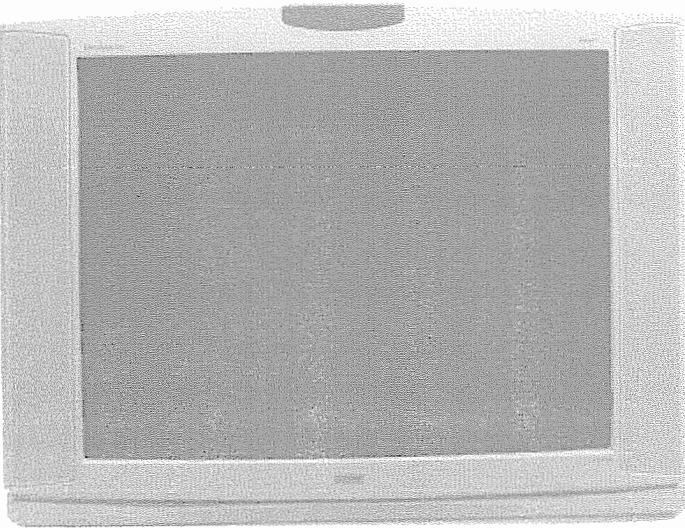
Plug the AC cord directly into an AC outlet. DO NOT use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15μF capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt 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, 500μA. 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.



PHOTOFACT[®] Technical Service Data
SILVER

RCA

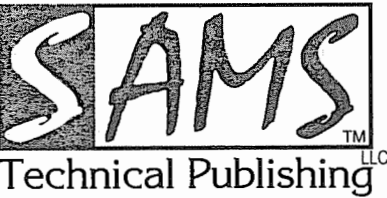
Model MR68TF700TX01 (Chassis ATC113BD1)



Representative Model

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



FEBRUARY 2006 SET 5108

SET 5108

MODEL MR68TF700TX01 (CHASSIS ATC113BD1)

RCA

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For a Complete List of Manuals,
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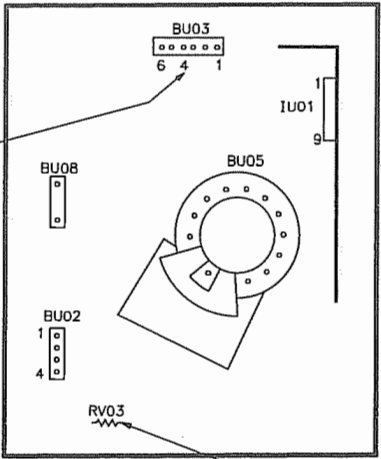
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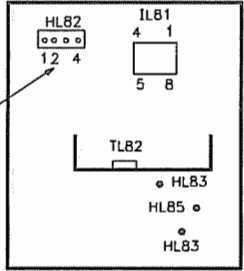
SCHEMATIC COMPONENT LOCATION GUIDE																													
BAV03	B49	CA534	E42	CL20	E19	CR524	C25	CY34	C40	CY574	B58	DR504	A26	IY04	C39	RA505	D45	R1504	C6	RP27	B19	RR522	A27	RV510	E5	RY536	E55	SK14	B25
BAV03	C34	CA535	E42	CL21	E9	CR541	C26	CY35	C36	CY592	B52	DU01	D19	IY06	D34	RA506	D44	R1507	B6	RP28	B19	RR526	B27	RV516	C3	RY537	D24	SK15	B25
BAV03	C34	CA536	C42	CL22	D18	CR563	D24	CY43	B60	CY593	A52	DU02	D19	IY07	D58	RA507	D45	R1508	B1	RP30	C19	RR528	B31	RV518	D5	RY538	D34	SK16	B25
BFA02	B48	CA544	A47	CL23	E12	CR501A	A25	CY500	C50	CY594	D24	DU04	D15	IY08	C58	RA508	D46	R1511	B5	RP31	B19	RR530	C30	RV520	C9	RY539	D35	SP01	B18
BL901	D2	CA545	C47	CL501	E7	CU01	D16	CY501	D58	CY595	D24	DU20	A14	IY09	C51	RA509	D46	R1515	C2	RP32	B17	RR531	B30	RV521	C10	RY540	C34	SP01	B18
BR201	B30	CA546	A45	CL502	E5	CU03	D15	CY502	E58	CY596	C24	DU21	A15	JV544	C10	RA510	D46	R1516	C2	RP331	C22	RR534	A31	RV523	D1	RY541	C35	SP1	A48
BY03	C47	CA547	B45	CL503	E5	CU04	D19	CY503	B51	CY60	A58	DU50	C14	LH10	A2	RA513	E23	R1529	C3	RP332	C22	RR535	A31	RV524	C8	RY542	B52	SP2	B48
BY03	C47	CA552	C46	CL509	E5	CU06	D19	CY505	D33	CY601	C24	DU51	C15	LH11	A2	RA514	E23	R1533	B5	RP333	D22	RR536	B31	RV526	C11	RY543	A51	TA501	E23
BY04	A33	CA553	C46	CL594	D3	CU505	C14	CY507	B35	CY604	C30	DU60	B14	LI01	B3	RA52	C46	R1534	B4	RP340	C23	RR539	A31	RV528	D12	RY544	A55	TA511	B45
BY04	A50	CA57	A47	CL82	E13	CV11	B6	CY508	A50	CY605	C50	DU61	B15	LI03	B5	RA526	B41	R1538	A7	RP350	B22	RR541	A11	RV53	D5	RY545	A56	TI501	B6
BY04	B33	CA58	B47	CL83	E14	CV15	C23	CY509	C35	CY606	C58	DV03	D19	LI06	D23	RA527	B42	R1540	B4	RP360	E21	RR542	A31	RV530	D4	RY546	A55	TI502	B4
BY05	B33	CA60	C46	CL85	E15	CV16	C24	CY51	C60	CY607	D58	DV05	D3	LI07	D23	RA528	B41	R1541	B2	RP361	E21	RR544	D26	RV532	D1	RY547	A57	TI505	A4
BY05	B33	CF02	D6	CL87	D14	CV18	C9	CY511	A35	CY610	E24	DV501	D12	LI08	D23	RA529	B42	R1542	B2	RP363	D22	RR545	D25	RV534	D3	RY548	E52	TI506	A7
BY05	B50	CF04	D8	CL88	E15	CV23	C11	CY513	D51	CY65	B58	DV502	C11	LL01	E7	RA53	C46	R1544	B5	RP38	C20	RR546	D26	RV535	C10	RY549	E52	TL01	E6
BY06	C50	CF05	D7	CL91	E3	CV25	D23	CY514	D51	CY651	D24	DY01	D52	LL01A	A18	RA531	A44	R1550	A3	RP52	C20	RR547	E26	RV539	D2	RY550	B56	TL02	E7
BY06	D57	CF507	E19	CL92	E2	CV26	D5	CY515	D52	CY652	D24	DY02	D52	LL02	E8	RA532	A44	R1551	A3	RP53	D21	RR548	E26	RV541	A12	RY551	B55	TL502	E5
BY06	E57	CF06	E19	CP01	A17	CV27	C11	CY516	D52	CY653	D24	DY03	D51	LL03	D9	RA533	C45	R1552	A4	RP531	C19	RR549	E25	RV542	C12	RY552	C56	TL502A	D3
BY07	D50	CFA01	B47	CP02	A18	CV29	D1	CY517	B50	CY654	E33	DY04	D51	LL04	E7	RA534	C46	R1553	A4	RP54	D20	RR551	D30	RV543	B12	RY553	C55	TL82	E15
CA01	A42	CFA02	A47	CP03	A18	CV30	C24	CY518	D35	CY655	E24	DY05	A51	LL05	D10	RA535	D42	R1560	B5	RP553	D21	RR561	D25	RV546	A12	RY554	C39	TP20	B20
CA02	A43	CFA501	B47	CP04	A18	CV32	C24	CY520	C35	CY698	E51	DY06	B51	LL05	E17	RA536	D42	RL01	D10	RP555	C20	RR563	D26	RV547	C12	RY555	B39	TP22	B19
CA03	B43	CFA502	A47	CP05	A19	CV36	C8	CY522	A52	CY95	D59	DY07	E58	LL06	E9	RA537	C43	RL02	E7	RP556	D21	RR564	D26	RV548	B12	RY556	B39	TP23	B19
CA04	D47	CH507	A1	CP06	A19	CV507	C2	CY523	D52	CY96	C59	DY08	D58	LL07	E9	RA538	A42	RL03	E1	RP558	D20	RR565	E30	RV552	D5	RY557	C39	TP340	C22
CA05	E42	CH510	C31	CP08	A20	CV508	C3	CY524	B52	CY97	C52	DY09	D51	LL70	E15	RA54	B45	RL05	E6	RP559	D20	RR566	B31	RV555	D3	RY558	D39	TP360	E22
CA06	E24	CH511	D31	CP09	B20	CV514	D2	CY525	E52	CY98	D35	DY1	D9	LL81	E15	RA541	B44	RL06	E6	RP56	D20	RR567	C27	RV556	D4	RY559	C39	TP524	B19
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CA09	C42	CH519	A23	CP11	B20	CV517	B7	CY529	C39	DA03	D47	DY11	E58	LP02	A17	RA543	D45	RL10	E4	RP571	D23	RR569	C30	RX01	D37	RY561	C60	TP552	D21
CA10	E43	CH523	C1	CP15	A18	CV519	C9	CY53	B58	DA04	E23	DY12	D58	LP03	A21	RA544	D45	RL18	E1	RP76	E22	RR570	C26	RX02	E37	RY562	C58	TP553	D21
CA14	C23	CH55	A1	CP16	A18	CV520	B9	CY530	B39	DA501	D45	DY13	C51	LP20	B20	RA548	C44	RL19	E1	RP77	E23	RR571	C25	RX501	E37	RY563	C51	TP560	E21
CA16	D44	CH58	A24	CP18	A17	CV521	B9	CY531	D39	DA502	D45	DY16	C31	LP350	B22	RA549	C42	RL20	E10	RP80	A24	RR572	C25	RX502	E37	RY564	A51	TP571	B17
CA19	C44	CI10	D24	CP23	B19	CV522	C7	CY532	C39	DF01	D7	DY17	C31	LP61	B21	RA550	B42	RL22	D18	RP81	A22	RR575	C26	RY500	E55	RY565	B51	TP80	B23
CA20	C42	CI12	B5	CP24	C19	CV523	D24	CY535	C39	DF02	D8	DY501	D46	LP62	B21	RA551	C42	RL23	D18	RP82	B22	RR576	B31	RY501	C50	RY566	B51	TR501	C26
CA21	D42	CI20	D24	CP30	C19	CV524	D24	CY536	A57	DL01	E5	DY502	D46	LP63	B22	RA560	A41	RL24	A16										

PLACEMENT CHART

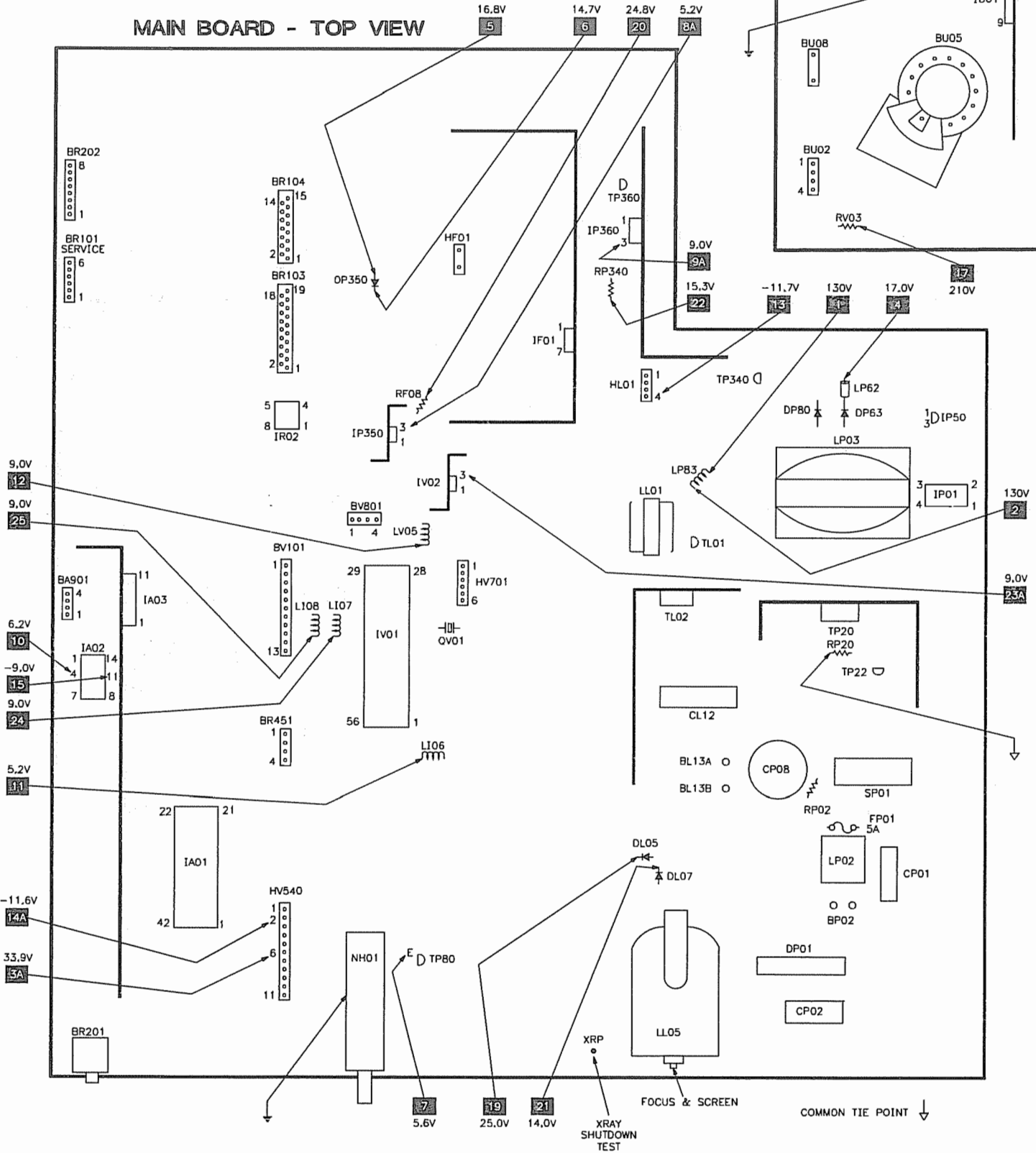
CRT BOARD



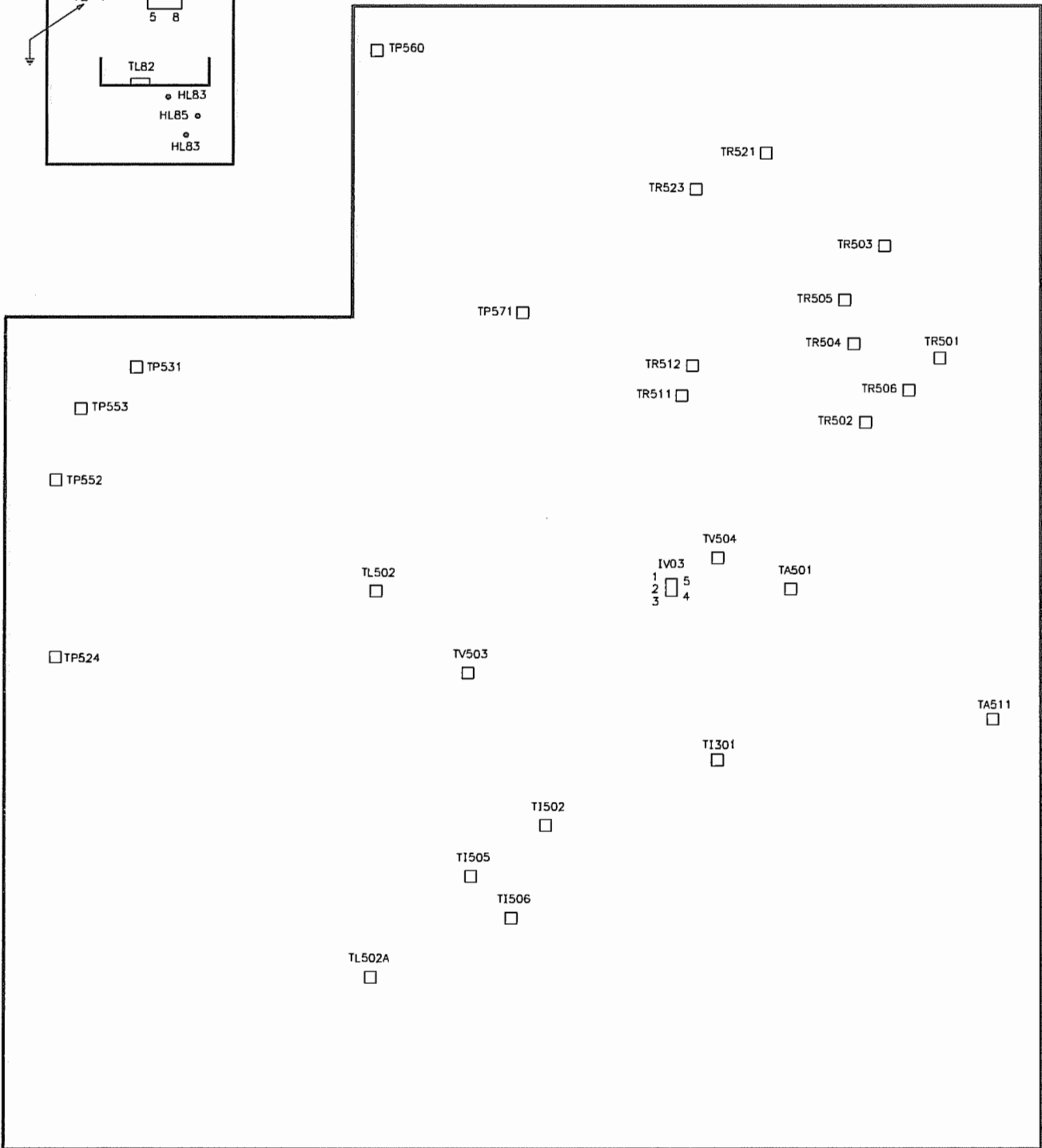
PINCUSHION BOARD



MAIN BOARD - TOP VIEW



MAIN BOARD - BOTTOM VIEW

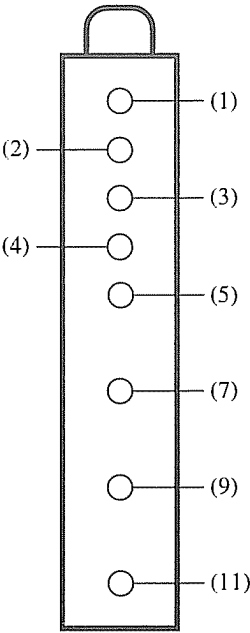


TUNER VOLTAGE CHART

TUNER TERMINAL GUIDE

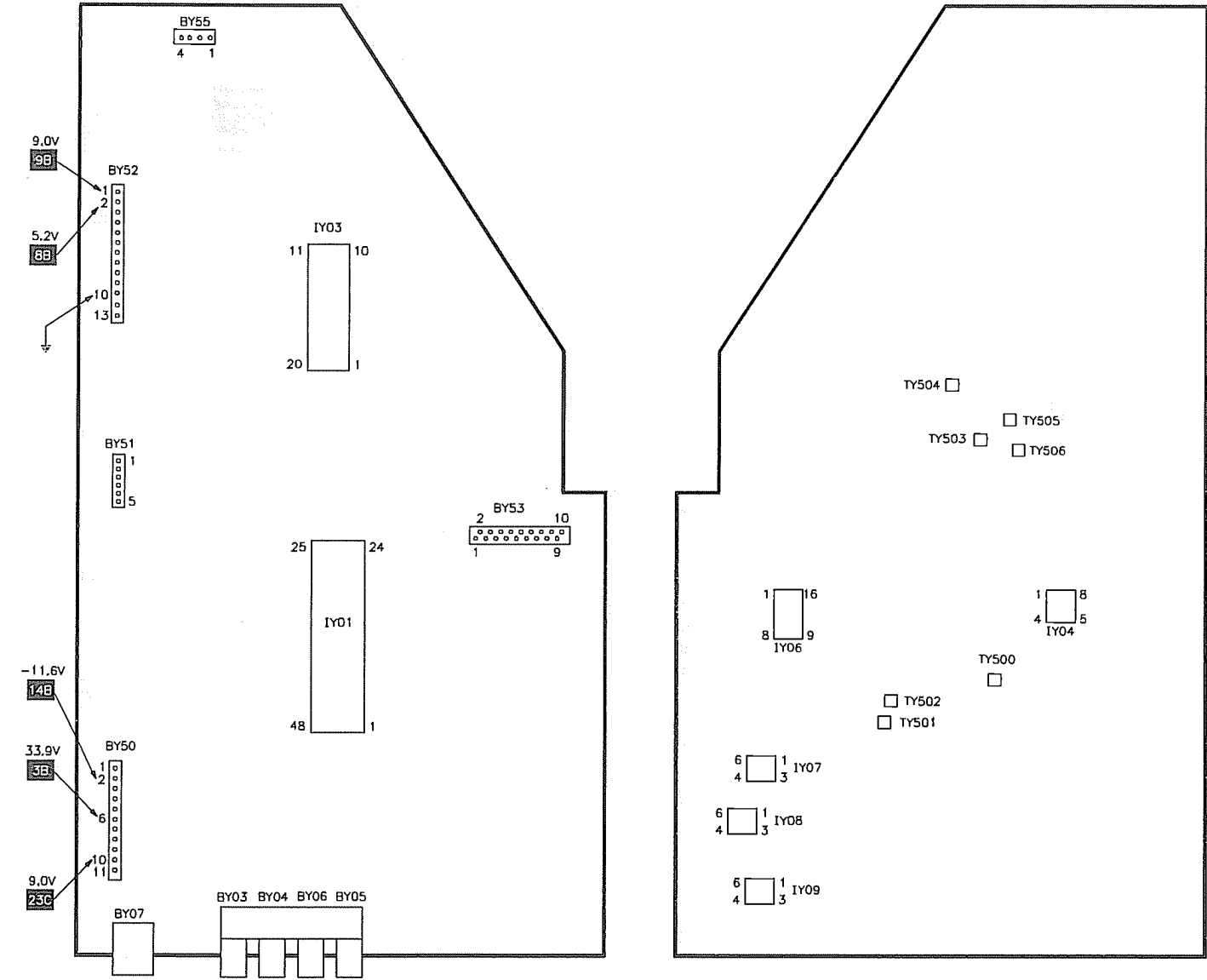
Pin	VHF Low Band	VHF High Band	UHF Band
(1) AGC	2.5V	2.5V	3.0V
(2) TU	1.6V	4.5V	5.5V
(3) ADRS	1.3V	1.3V	1.3V
(4) CLOCK	5.1V	5.1V	5.1V
(5) DATA	5.1V	5.1V	5.1V
(7) 5V	5.5V	5.5V	5.5V
(9) +32V	33.9V	33.9V	33.9V
(11) IF	0V	0V	0V

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



VIDEO/COMB FILTER BOARD - TOP VIEW

VIDEO/COMB FILTER BOARD - BOTTOM VIEW



ERROR CODES CHART

Error Code DEC	HEX	Error Location	Condition Indicated
0	00	No error code	-
3	03	12.0V run fault	12.0V source is failing.
8	08	T4 Chip	X-ray protection caused high voltage shutdown.
9	09	T4 Chip (POR)	Power supply problem at (POR) power on reset.
10	0A	F2 PIP module error (POR)	Power supply problem at (POR) power on reset/PIP.
11	0B	Stereo decoder (POR)	Power supply problem at reset/Stereo decoder.
16	10	Run IIC Bus held low	Run IIC clock or data held low.
18	12	Standby IIC Bus held low	Standby IIC clock or data held low.
44	2C	F2 PIP module error	F2PIP fails to acknowledge.
176	B0	Stereo decoder	Stereo decoder fails to acknowledge.
180	B4	Three Line Comb Filter	Comb Filter fails to acknowledge.
144	90	Video Matrix Switch	Video Matrix Switch fails to acknowledge.
196	C4	Main tuner PLL/DAC	Main tuner PLL IC fails to acknowledge.
198	C6	Main tuner PLL/DAC	Main tuner DAC IC fails to acknowledge.

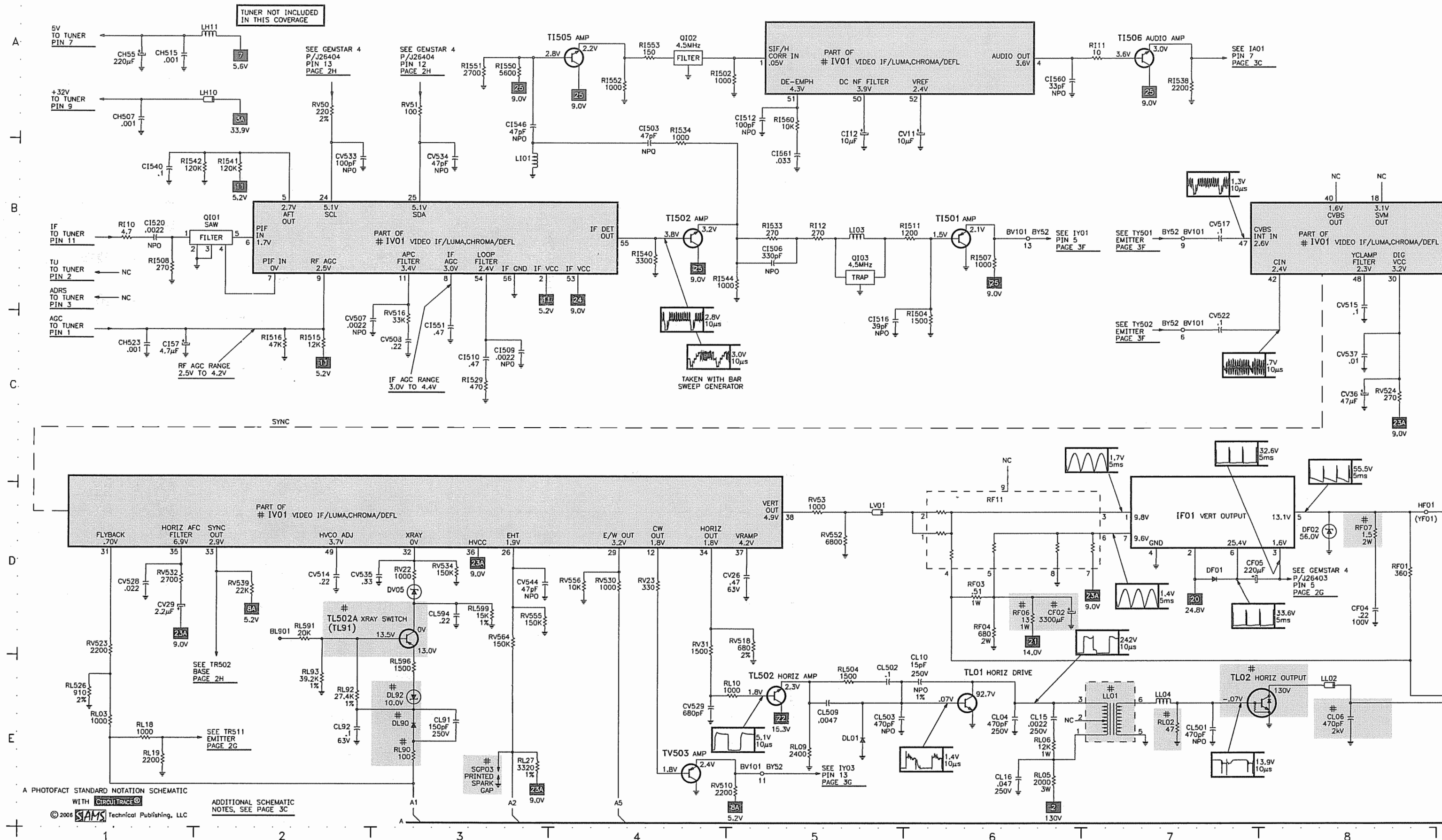
ERROR CODES

If certain failures occur, the matching error codes will be stored in the EEPROM. These error codes will be displayed in parameters 1, 2, and 3. The first failure error code will be stored at parameter 1 and the second failure error code will be stored at parameter 2. Parameter 3 will be updated to display the most recent failure occurred in the chassis. If a failure of a bus IC occurred, the normal acknowledgment checking of that bus will be disabled in the service mode and the address of that IC which failed will be stored in one of the error code parameters. After every repair is done to the chassis it is recommended to check the error code parameters, and reset them back to value 0.

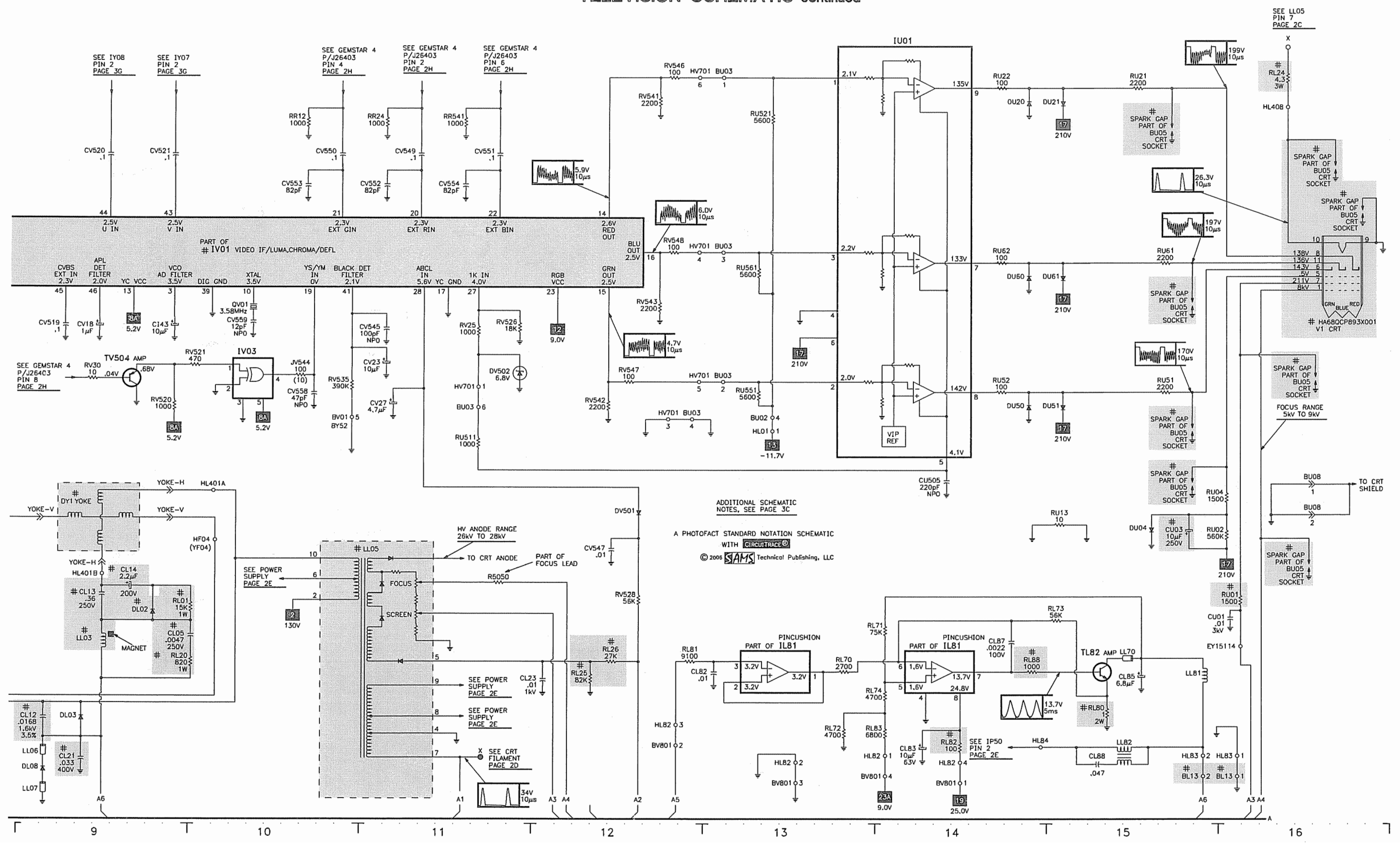
A

TELEVISION SCHEMATIC

E



TELEVISION SCHEMATIC continued



ADDITIONAL SCHEMATIC NOTES, SEE PAGE 3C

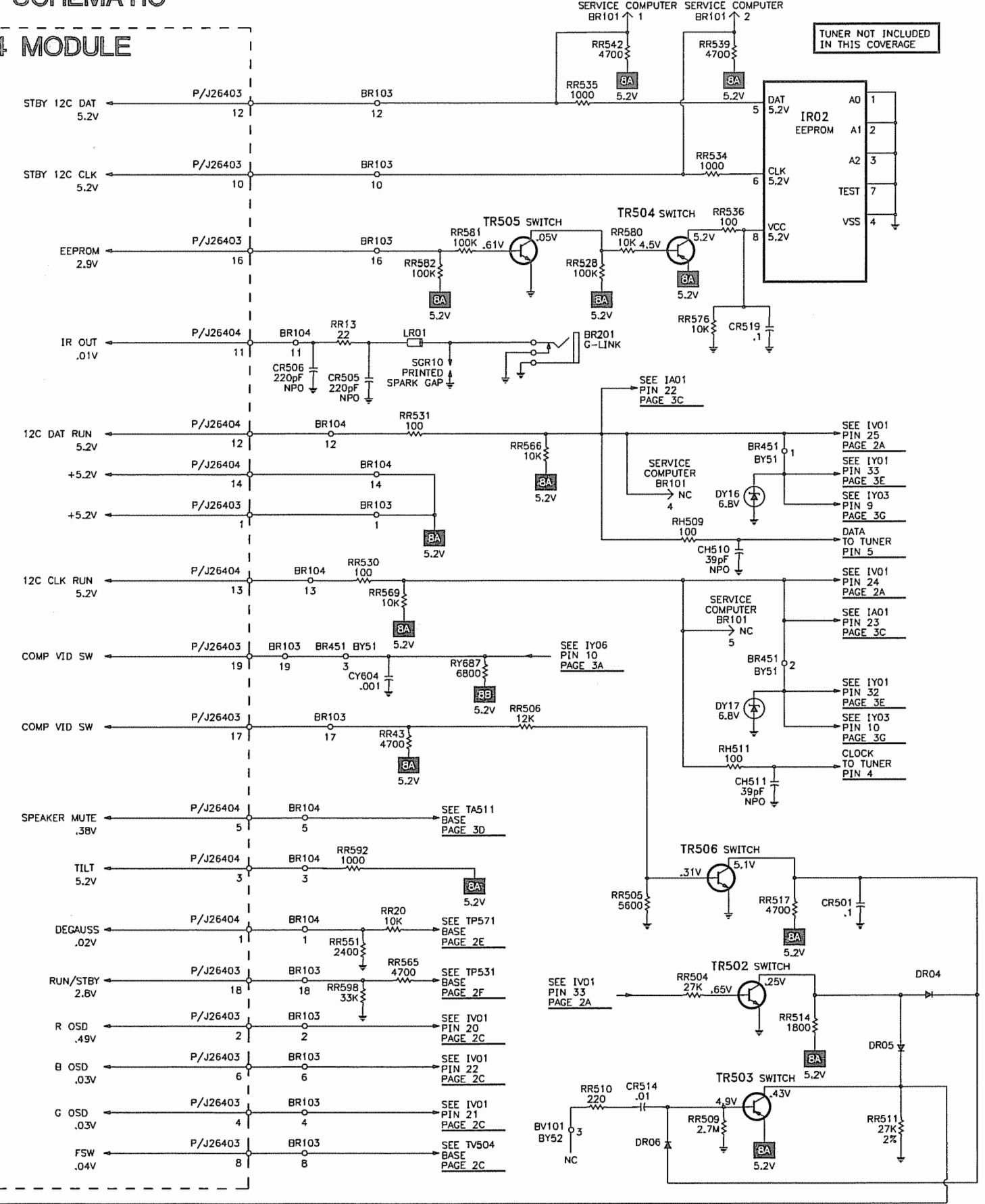
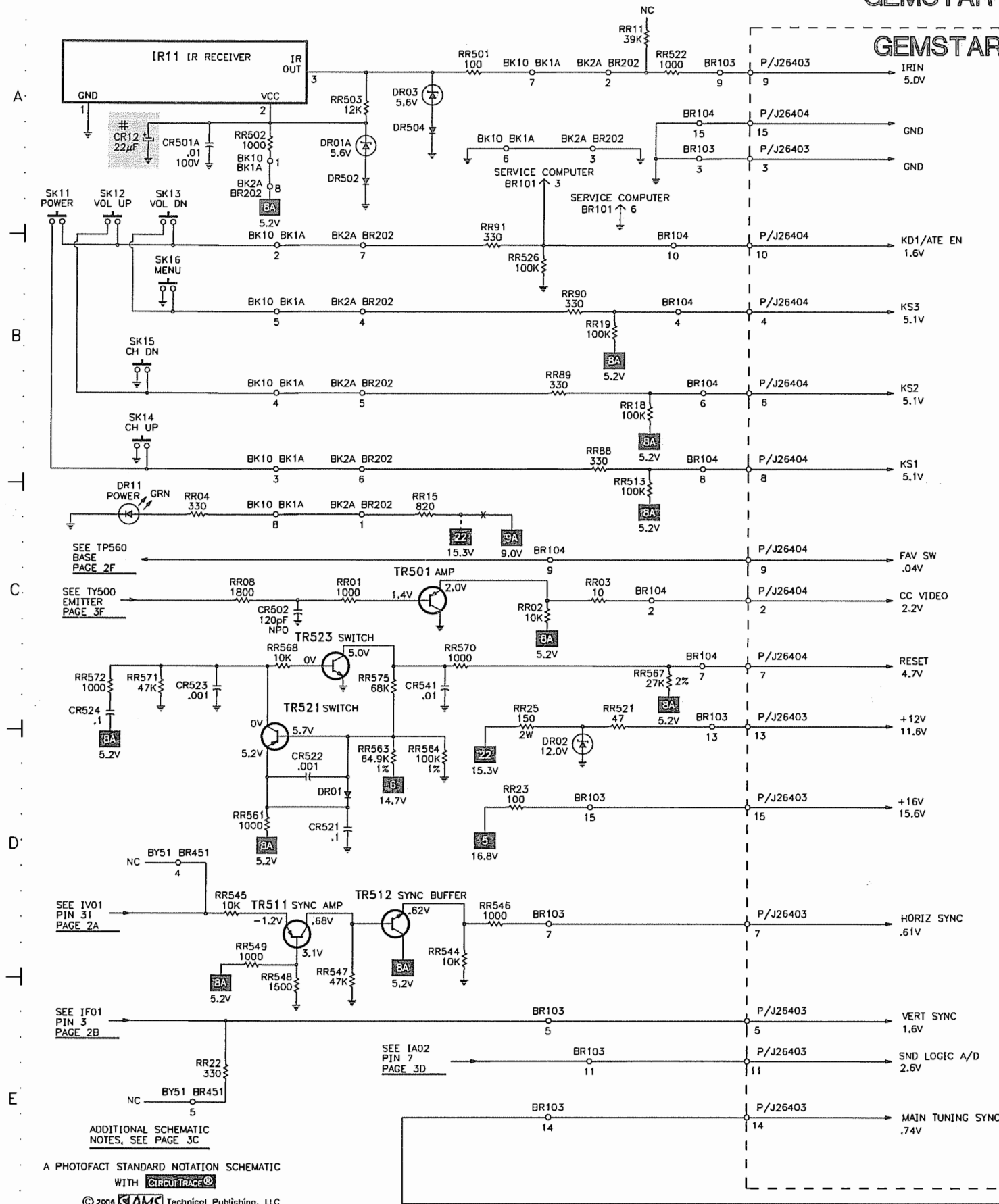
A PHOTOFAC STANDARD NOTATION SCHEMATIC WITH CIRCUITTRACE
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T



GEMSTAR 4 SCHEMATIC

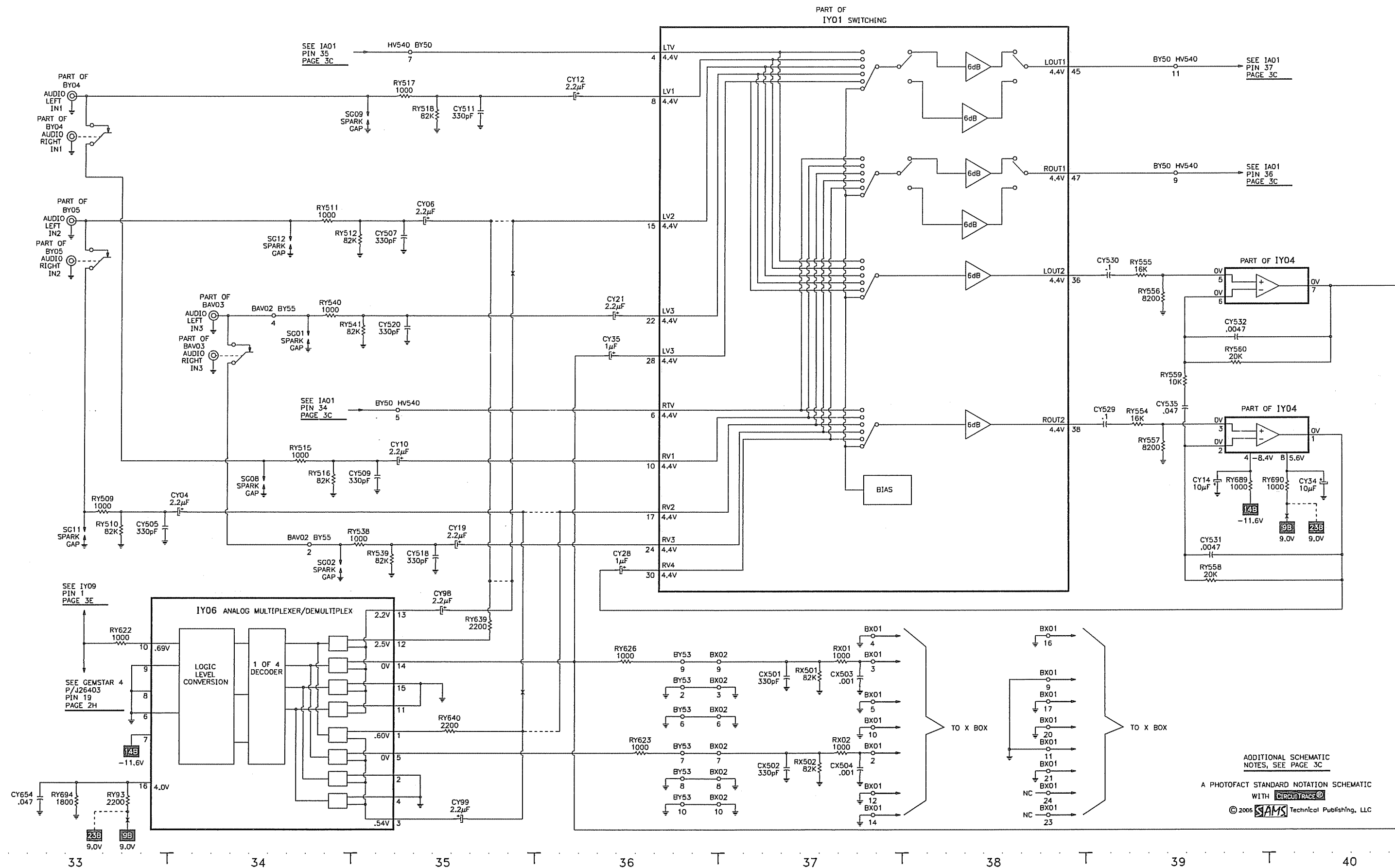
GEMSTAR 4 MODULE



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RCA
MODEL MR68TF700TX01 (CHASSIS ATC113BD1)

AUDIO SWITCHING SCHEMATIC

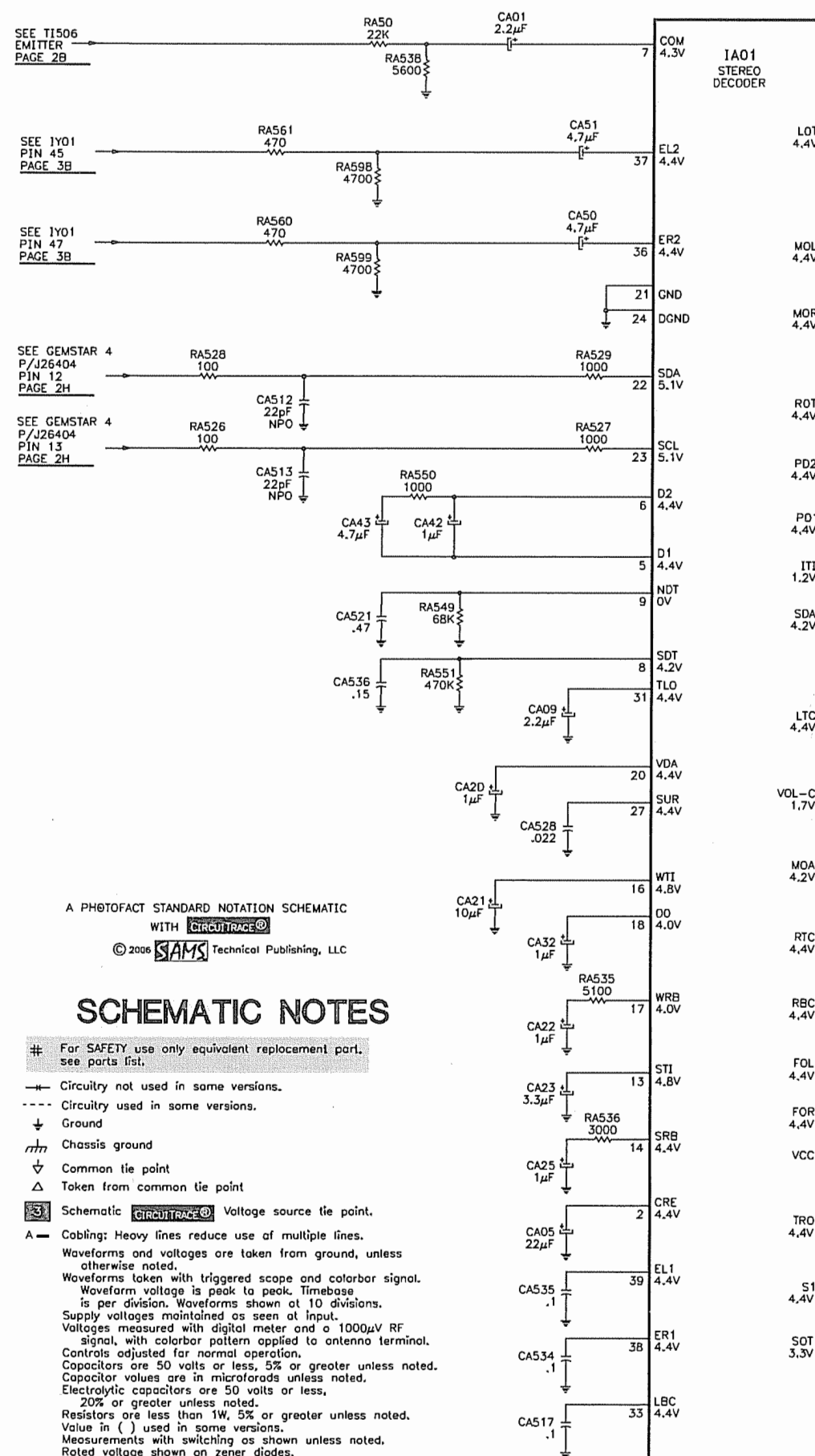


ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 3C

A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CircuitTrace**

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AUDIO SCHEMATIC



SCHEMATIC NOTES

For SAFETY use only equivalent replacement part.
see parts list.

→ Circuitry not used in same versions.

--- Circuitry used in some versions.

↓ Ground

 Chassis ground

Common tie point

△ Token from commo

 Schematic Voltage source tie point.

A — Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless

Waveforms taken with triggered scope and colorbar signal

Waveform voltage is peak to peak. Timebase

is per division. Waveforms shown at 10 divisions.
Supply voltages maintained as seen at input.

Voltagages measured with digital meter and a $1000\mu\text{V}$ RF signal with colorbar pattern applied to antenna terminals.

signal, with colorbar pattern applied to antenna terminals.
Controls adjusted for normal operation.

Capacitors are 50 volts or less, 5% or greater unless not
Capacitor values are in microfarads unless noted.

Electrolytic capacitors are 50 volts or less, 20% or greater, unless noted.

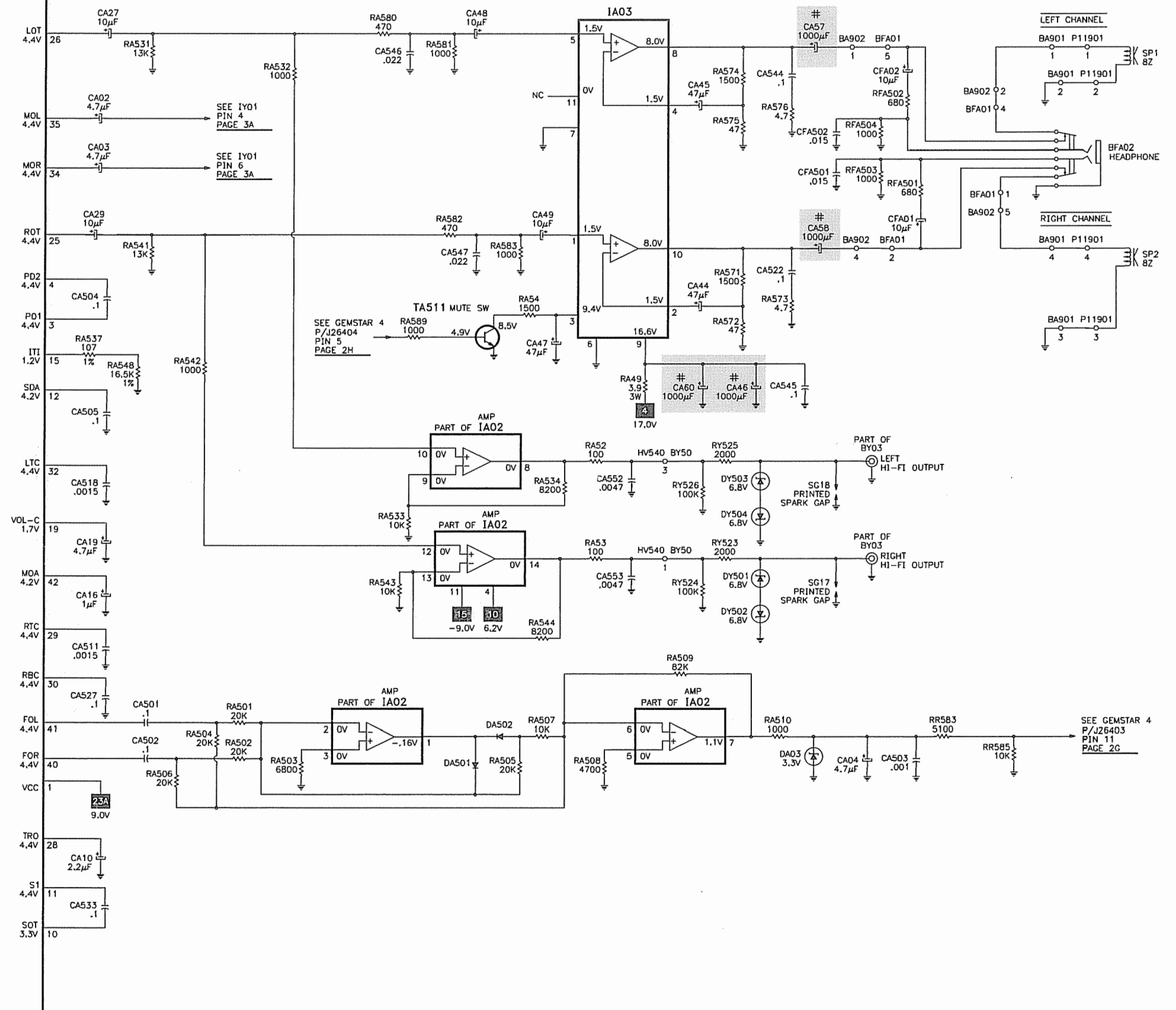
Resistors are less than 1W, 5% or greater unless noted.

Value in () used in some versions.
Measurements with switching as shown unless noted.

Measurements with switching as shown unless noted.
 Roted voltage shown on zener diodes.

.....

41 T



VIDEO SWITCHING / COMB FILTER SCHEMATIC

SEE T1501
EMITTER
PAGE 2B

PART OF
BY04

VIDEO
IN1

SG10
SPARK
GAP

RY514
75

RY513
220

CY508
.33

DY05
6.8V

RY564
100

CY569
47pF
NPO

LY07
2.4V

TY503 AMP
4.2V

RY573
560

RY566
390

RY570
470

CY593
.33

RY543
100

CY522
.47

RY544
1000

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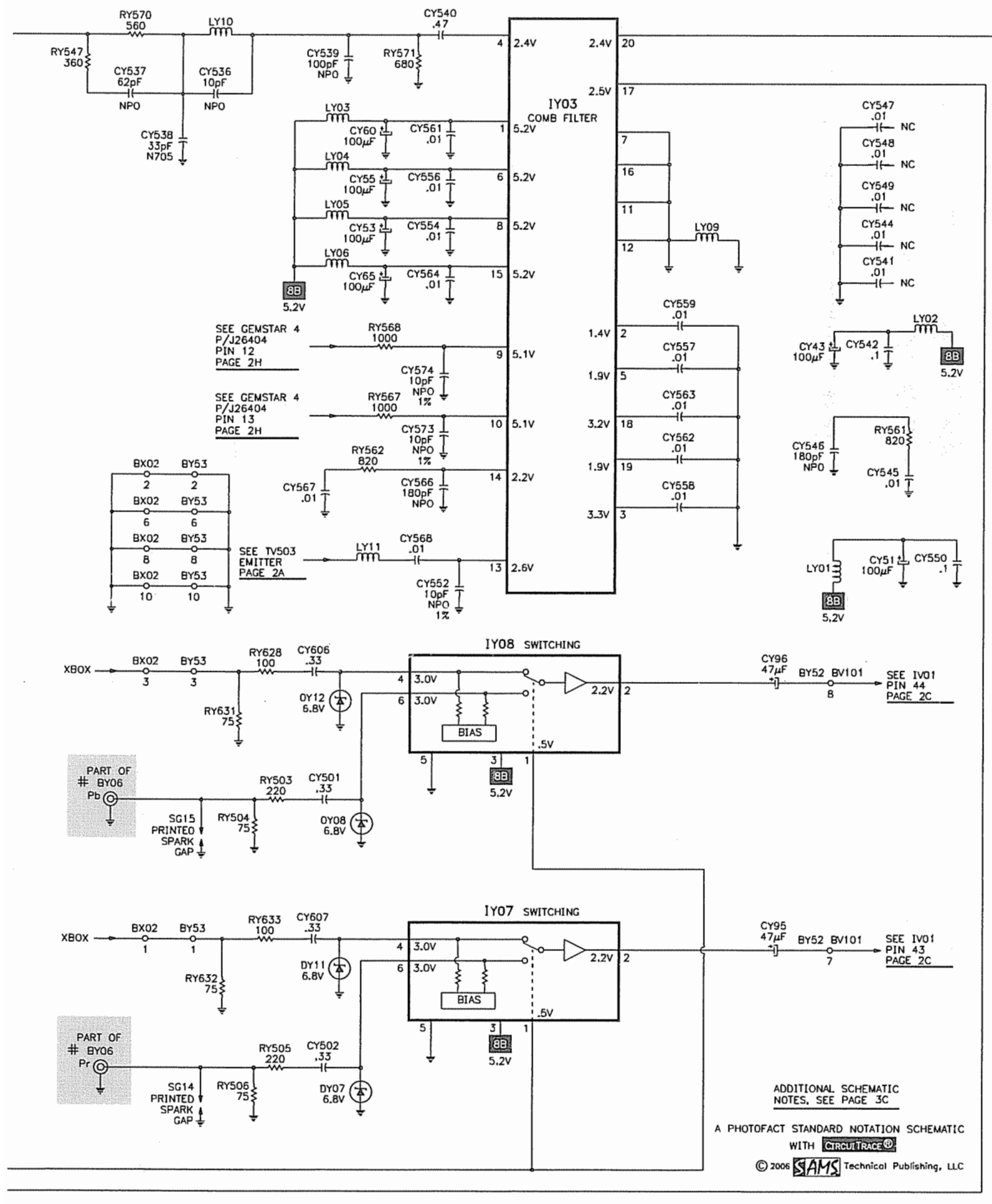
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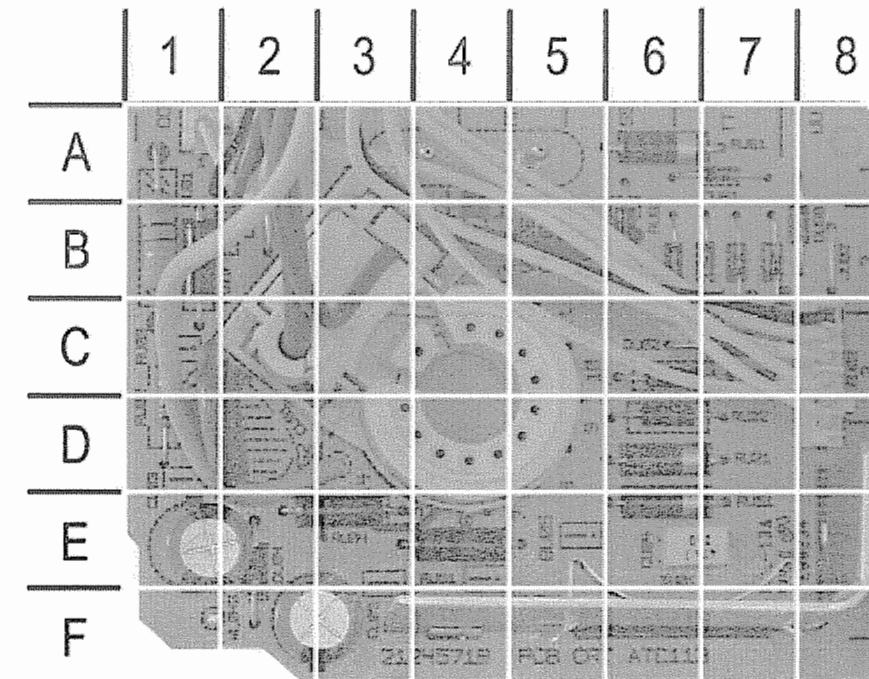
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COMB FILTER SCHEMATIC continued



CRT BOARD



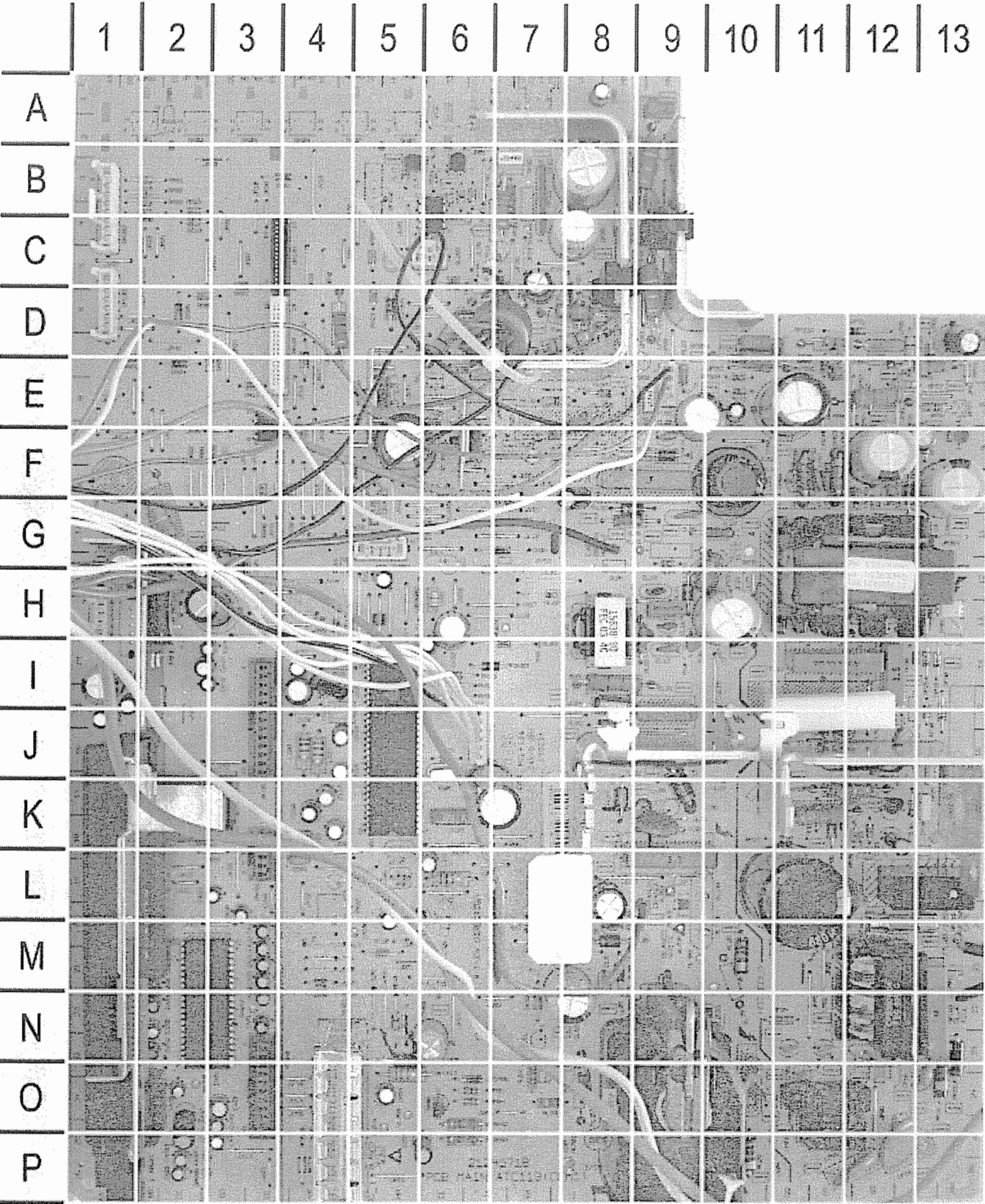
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CRT BOARD, GRIDTRACE LOCATION GUIDE

BU02	A2	DU21	B6	RU51	E6
BU03	D8	DU50	B7	RU52	C6
BU05	C4	DU51	B6	RU61	A6
BU08	A4	DU60	B7	RU62	B6
CU01	D1	DU61	A7	RU511*	E6
CU03	E1	IU01	F7	RU521*	F7
CU04	E6	RU01	E4	RU551*	F7
CU06	F3	RU02	D1	RU561*	F8
CU505*	E6	RU03	B1		
DU01	B1	RU04	E3		
DU02	C7	RU13	B1		
DU04	E2	RU21	D6		
DU20	B7	RU22	D6		

* Located on bottom of board.

MAIN BOARD - TOP VIEW



MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

BA901	H1	CI57	P6	CV16	H5	IA01	N3	RF03	B7	RP80	E12
BR101	D1	CL04	H9	CV18	J4	IA02	K1	RF04	D8	RP81	E13
BR103	E3	CL05	G9	CV23	J4	IA03	H2	RF06	D7	RP82	O6
BR104	C3	CL06	K9	CV25	K7	IF01	C8	RF07	B7	RP83	P6
BR201	P1	CL07	M8	CV26	J4	IP01	H13	RF08	D6	RP84	O6
BR202	C1	CL09	M8	CV27	I1	IP50	F13	RF09	D8	RP85	O6
BR451	K3	CL10	H9	CV29	I4	IP350	F6	RF11	C7	RP331	D11
BV101	I3	CL12	L9	CV30	I4	IP360	C9	RI10	N5	RP332	D11
BV801	G5	CL13	F9	CV32	H6	IR02	E7	RI11	M5	RP333	E10
CA01	N3	CL14	G8	CV36	I4	IV01	K5	RI12	L4	RP340	D9
CA02	P2	CL15	I9	DA03	K1	IV02	F6	RL01	G8	RP350	E10
CA03	P2	CL16	H9	DA04	G3	LH10	O5	RL02	J8	RP360	A8
CA04	K1	CL18	N8	DF01	D8	LH11	O5	RL03	I7	RP361	A8
CA05	O3	CL19	E9	DF02	D8	LI01	L5	RL05	I8	RP363	B9
CA06	K1	CL20	L8	DL01	H9	LI03	K4	RL06	H9	RR01	D1
CA09	N2	CL21	J9	DL02	G8	LI06	L6	RL09	G9	RR02	D2
CA10	M2	CL22	F9	DL03	K9	LI07	J4	RL10	H7	RR03	C3
CA14	P2	CL23	O10	DL05	M8	LI08	J4	RL18	D7	RR08	F3
CA16	O2	CL91	E9	DL06	F9	LL01	H8	RL19	D6	RR11	A6
CA19	M1	CL92	E9	DL07	M8	LL02	K8	RL20	G10	RR12	E3
CA20	L3	CP01	N13	DL08	K9	LL03	F10	RL22	O8	RR13	O1
CA21	M3	CP02	P11	DL90	E8	LL04	I8	RL23	E9	RR15	A8
CA22	M3	CP03	N11	DL92	N7	LL05	O9	RL24	E8	RR18	B2
CA23	N3	CP04	O12	DP01	O11	LL06	K9	RL25	P10	RR19	C2
CA25	M3	CP05	O11	DP06	K11	LL07	J9	RL26	M10	RR20	D6
CA27	M2	CP06	O11	DP22	K12	LP02	N12	RL27	H5	RR22	G5
CA29	M2	CP08	L11	DP26	I13	LP03	H12	RL90	E7	RR23	D5
CA32	L3	CP09	J12	DP30	I13	LP20	J12	RL92	O7	RR24	F4
CA42	O3	CP10	I12	DP31	K12	LP61	F11	RL93	O7	RR25	D4
CA43	P3	CP11	I11	DP40	I13	LP62	F11	RP02	L12	RR43	C5
CA44	J1	CP15	O12	DP57	E12	LP63	E11	RP03	J12	RR88	B2
CA45	I1	CP16	O12	DP63	F11	LP81	F11	RP04	N11	RR89	B2
CA46	H2	CP18	O13	DP71	D12	LP82	F11	RP05	K11	RR90	B2
CA47	I2	CP23	L12	DP75	F12	LP83	H10	RP06	K11	RR91	B2
CA48	I2	CP24	J13	DP80	F11	LP85	D12	RP15	O13	RV22	H4
CA49	I2	CP30	K13	DP85	D13	LP350	D6	RP16	O13	RV23	J6
CA50	M2	CP63	F12	DP86	O6	LR01	O1	RP20	K12	RV25	I6
CA51	M2	CP64	F12	DP350	D5	LV01	H5	RP21	K12	RV30	F4
CA57	I1	CP65	F13	DR01	B4	LV05	H6	RP23	K12	RV31	H4
CA58	G1	CP66	E11	DR02	E4	NH01	O4	RP25	J12	RV50	I6
CA60	G2	CP75	F12	DR04	E2	QI01	K6	RP27	K11	RV51	I6
CF02	B8	CP76	F13	DR05	E3	QI02	L5	RP28	K12	RV53	I4
CF04	B7	CP80	E11	DR06	D2	QI03	L4	RP30	J13	SP01	L13
CF05	C7	CP83	H10	DV03	I7	QV01	J6	RP31	J12	TL01	H9
CF06	C8	CP85	D13	DV05	G7	RA11	K1	RP32	C6	TL02	J9
CH55	O5	CP86	D12	FP01	M12	RA12	K12	RP38	I12	TP20	J12
CH58	N6	CP87	F11	FP341	D10	RA49	G2	RP52	G12	TP22	K12
CI10	M5	CP340	E10	FP360	A9	RA50	M5	RP53	E10	TP80	O6
CI12	K4	CP350	F5	HF01	C7	RA52	M4	RP54	E13	TP340	D11
CI20	K4	CR02	A8	HL01	E9	RA53	M4	RP56	E12	TP360	B9
CI41	L5	CV11	K4	HV540	N3	RA54	J1	RP76	F13		
CI43	L6	CV15	F7	HV701	J6	RF01	C7	RP77	D10		

MAIN BOARD - BOTTOM VIEW



MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

CA501	N13	CL502	H5	CV552	I9	RA575	I13	RR511	C12	RV526	I9
CA502	N13	CL503	H5	CV553	I9	RA576	I13	RR513	B12	RV528	H9
CA503	K13	CL509	G5	CV554	I9	RA580	J12	RR514	E12	RV530	I10
CA504	N11	CL594	M7	CV558	J8	RA581	J12	RR517	E12	RV532	I10
CA505	M11	CP522	K2	CV559	J8	RA582	I12	RR521	D10	RV534	I9
CA511	M12	CP526	I1	DA501	K13	RA583	I12	RR522	E10	RV535	J10
CA512	M12	CP531	H2	DA502	K13	RA589	J13	RR526	C11	RV539	E12
CA513	M12	CP540	I1	DV501	I8	RA598	N13	RR528	D12	RV541	J9
CA514	N11	CP550	F1	DV502	J8	RA599	N13	RR530	B11	RV542	J9
CA517	N12	CP580	O8	IV03	G10	RH509	O10	RR531	B11	RV543	J9
CA518	N12	CP581	O8	JV544	H10	RH511	O10	RR534	E11	RV546	J8
CA521	N11	CR501	E12	RA501	N13	RI502	K9	RR535	D11	RV547	J8
CA522	H12	CR502	E13	RA502	N13	RI504	K11	RR536	F11	RV548	J8
CA527	M12	CR505	O13	RA503	K13	RI507	J11	RR539	D12	RV552	H9
CA528	M12	CR506	O13	RA504	N13	RI508	K8	RR541	E11	RV555	H9
CA533	N11	CR511	A6	RA505	K13	RI511	K11	RR542	D12	RV556	I9
CA534	N12	CR514	D12	RA506	N13	RI515	L8	RR544	E10	RV564	H9
CA535	N12	CR519	F11	RA507	K13	RI516	M8	RR545	D9	RY628	L1
CA536	N11	CR521	B10	RA508	K13	RI529	K10	RR546	E10	TA501	G11
CA544	I13	CR522	B10	RA509	L13	RI533	L9	RR547	E10	TA511	J13
CA545	H12	CR523	B11	RA510	K13	RI534	L9	RR548	E9	TI501	J11
CA546	H12	CR524	B10	RA513	H11	RI538	M9	RR549	D9	TI502	L10
CA547	I12	CR541	C10	RA514	G11	RI540	K9	RR551	F9	TI505	L9
CA552	N11	CR563	F9	RA526	M12	RI541	K9	RR561	B10	TI506	M9
CA553	N11	CV507	J9	RA527	M12	RI542	K9	RR563	B10	TL502	G5
CF507	C6	CV508	J9	RA528	M12	RI544	K9	RR564	B11	TL502A	N7
CH507	O10	CV514	K9	RA529	M12	RI550	L9	RR565	D11	TP524	J2
CH510	O10	CV515	J9	RA531	M12	RI551	L9	RR566	B12	TP531	D3
CH511	P10	CV517	J10	RA532	M12	RI552	L9	RR567	C9	TP552	E1
CH515	O10	CV519	J9	RA533	L12	RI553	L9	RR568	B10	TP553	D2
CH519	N9	CV520	J10	RA534	K12	RI560	K10	RR569	B12	TP560	A6
CH523	P10	CV521	J10	RA535	M11	RL504	G5	RR570	C10	TP571	D7
CI503	L9	CV522	J10	RA536	M11	RL526	H9	RR571	B11	TR501	E13
CI506	K9	CV523	G10	RA537	M11	RL591	O7	RR572	B11	TR502	E12
CI509	K10	CV524	J9	RA538	L9	RL596	N7	RR575	B10	TR503	C12
CI510	K10	CV527	I9	RA541	M13	RL599	M7	RR576	F11	TR504	D12
CI512	K10	CV528	I9	RA542	M13	RP531	H2	RR580	D12	TR505	D12
CI516	K11	CV529	H10	RA543	L12	RP553	E3	RR581	D11	TR506	E12
CI519	K9	CV531	I9	RA544	L12	RP555	H1	RR582	D12	TR511	D9
CI520	M9	CV533	I9	RA548	M11	RP556	D3	RR583	D10	TR512	D9
CI530	L9	CV534	I9	RA549	N11	RP558	E1	RR585	E10	TR521	B10
CI540	K9	CV535	I9	RA550	O11	RP559	E1	RR598	D11	TR523	B10
CI542	K9	CV537	I9	RA551	N11	RP562	B5	RV510	I11	TV503	J8
CI546	L9	CV544	I9	RA560	P11	RP571	A6	RV516	J9	TV504	G10
CI550	J11	CV545	J9	RA561	P11	RR504	E12	RV518	I9		
CI551	K9	CV547	H9	RA571	H12	RR505	E13	RV520	G10		
CI560	M9	CV549	J8	RA572	J13	RR506	E12	RV521	G10		
CI561	K10	CV550	I8	RA573	G12	RR509	C12	RV523	I10		
CL501	J6	CV551	I8	RA574	I13	RR510	D12	RV524	I10		

MISCELLANEOUS ADJUSTMENTS

NOTE: All procedures require an antenna connected and power applied to the set.

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, contrast, and color to minimum. Connect a high voltage probe to the CRT anode. High voltage should measure 26kV to 28kV.

SUB BRIGHTNESS

NOTE: Turn the TV On for at least 15 minutes for warm up before doing the Sub Brightness adjustment.

Tune in a gray scale bar staircase signal. Access the customer control main menu. Select item # 2 "Picture Quality", select item # 2 "Picture Preset", then select item # 2 "Normal Lighting". This will reset the customer controls. Access the service menu and adjust the Sub Brightness (parameter # 12) so that the first bar on the gray scale signal is black and the rest of the gray scale bars are clearly distinguishable from each other.

SUB CONTRAST

Tune in a gray scale bar staircase signal. Access the customer control main menu. Select item # 2 "Picture Quality", select item # 2 "Picture Preset", then select item # 2 "Normal Lighting". This will reset the customer controls. Access the service menu and adjust the Sub Contrast (parameter # 11) to mid range. Connect an oscilloscope to pin 6 of the CRT socket to measure the Green voltage peak to peak and adjust the Sub Contrast (parameter # 11) to have 109V between the Blanking and the white level. Repeat the process with the scope connected to pin 8 of the CRT socket for the Red and to pin 11 of the CRT socket for the Blue.

COLOR TEMPERATURE

NOTE: Turn the TV On for at least 15 minutes for warm up before doing the color temperature adjustment.

Tune in a gray scale bar staircase signal. Access the customer control main menu. Select item # 2 "Picture Preset", then select item # 2 "Normal Lighting". This will reset the customer controls. Perform the Screen Adjustment procedure. Access the service menu. Adjust RG Drive Gain (parameter # 09) value to 42 and adjust Blue Drive Gain (parameter # 10) value to 42. Adjust Red cutoff (parameter # 06) value to 10. Adjust the Green cutoff value (parameter # 07) and the Blue cutoff value (parameter # 08) for the best gray tone on the first few bars of the signal. The Red cutoff value (parameter # 06) may be readjusted to produce the best picture quality. Adjust the Green Gain (parameter # 09) and the Blue Gain (parameter # 10) for the best white level on the last bars of the signal. Check the low light to high light gray scale tracking. Repeat the procedure, if necessary, to obtain the best performance. Tune in a regular channel and adjust brightness for picture in normal room lighting.

PIP CONTRAST & BRIGHTNESS

Apply a composite video signal to Video 1 Input (BY04). Select Video 1 as the main picture source. Turn on PIP and select Video 1 as the PIP picture. Connect an oscilloscope to pin 11 of the CRT socket to measure the Blue voltage peak to peak. Access the service menu. Adjust the PIP Brightness level (parameter # 41) so that the PIP picture would have the same brightness as the main picture. Adjust the PIP Contrast level (parameter # 34) so that the PIP Contrast would be the same as the main picture contrast.

PIP TINT & SATURATION (COMPOSITE)

Access the customer control main menu. Select item # 2 "Picture Quality", select item # 2 "Picture Preset", then select item # 2 "Normal Lighting". This will reset the customer controls. Select "Auto Color" and then select "Off", to turn the auto color Off. Access the service menu. Apply a color bar signal to Video 1 Input (BY04). Select Video 1 as the main picture source. Turn on PIP and select Video 1 as the PIP picture. Connect an oscilloscope to pin 11 of the CRT socket to measure the Blue voltage peak to peak. Access the service menu. Adjust the PIP CVBS Fine Tint level (parameter # 36) to 128. Adjust the PIP CVBS Coarse Tint level (parameter # 35) to set the amplitude of the Cyan and Magenta bars to be as close as possible to the main picture Cyan and Magenta bars. Adjust the PIP CVBS Saturation level (parameter # 37) to set the amplitude of the Blue bar to be as close as possible to the main picture Blue bar at the Blue cathode, pin 11 of the CRT. Adjust the PIP CVBS Fine Tint level (parameter # 36) to set the amplitude of the Cyan and Magenta bars to be as close as possible to the main picture Cyan and Magenta bars. Repeat the process until no more adjustments needed.

PIP TINT & SATURATION (S-VIDEO)

Access the customer control main menu. Select item # 2 "Picture Quality", select item # 2 "Picture Preset", then select item # 2 "Normal Lighting". This will reset the customer controls. Select "Auto Color" and then select "Off", to turn the auto color Off. Access the service menu. Apply a color bar signal to the S-Video Input (BY07). Select Video 1 as the main picture source. Turn on PIP and select Video 1 as the PIP picture. Connect an oscilloscope to pin 11 of the CRT socket to measure the Blue voltage peak to peak. Access the service menu. Adjust the PIP S-Video Fine Tint level (parameter # 39) to 128. Adjust the PIP S-Video Coarse Tint level (parameter # 38) to set the amplitude of the Cyan and Magenta bars to be as close as possible to the main picture Cyan and Magenta bars. Adjust the PIP S-Video Saturation level (parameter # 40) to set the amplitude of the Blue bar to be as close as possible to the main picture Blue bar. at the Blue cathode, pin 11 of the CRT. Adjust the PIP S-Video Fine Tint level (parameter # 39) to set the amplitude of the Cyan and Magenta bars to be as close as possible to the main picture Cyan and Magenta bars. Repeat the process until no more adjustments needed.

SERVICE MENU

The following adjustment procedures are accessed thru a service menu. To access the service menu, turn the receiver on, press the menu button on the receiver and hold it down while pressing the power button. While holding down the menu button, release the power button and press the volume + button. Release the menu button. The screen will display one line menu, on the left the parameter P0, and on the right the value of that parameter V0. Adjustments are made by selecting the proper parameter and changing the value of that parameter. To change the parameter number use channel up and down buttons on the remote control. To adjust the current value of that parameter use volume + and - buttons on the remote control. To access and change any of the adjustments, the proper parameter pass number must be entered. This information is listed at the beginning of the alignment. When these parameters are modified, the T-Chip and the corresponding EEPROM are updated. All service adjustments are bus controlled, except focus and screen.

NOTE: In order to adjust the RF AGC, audio or video levels, tuner, PIP, or stereo circuits, the Chipper Check hardware and software must be used. This can be purchased from Thomson Electronics. Before making any changes to any of the values, make a record of the On Set values.

Service Adjustment Parameters

Parameter No.	Parameter Name	Value	On Set Range	Value Comment
00	Pass number for service adjustment.	Must set to 76	-	May not advance until value is set to 76.
01	Error Code 1	0	0 - 255	Displays the first error detected. Set to 0 before exiting. See Error Codes Chart.
02	Error Code 2	0	0 - 255	Displays the second error detected. Set to 0 before exiting. See Error Codes Chart.
03	Error Code 3	0	0 - 255	Displays the last error detected. Set to 0 before exiting. See Error Codes Chart.
04	Main RF AGC	30	0 - 63	Tune in a crosshatch pattern, adjust to center the pattern on the screen.
05	AKB OK Status	3	-	This data is for reading only. Do not change.
06	Red Cut-off	14	0 - 31	-
07	Green Cut-off	18	0 - 31	-
08	Blue Cut-off	26	0 - 31	-
09	RG Drive Gain	55	0 - 127	-
10	B Drive Gain	52	0 - 127	-
11	Sub Contrast	11	0 - 15	-
12	Sub Brightness	15	0 - 33	-
13	Sub Color	25	0 - 33	-
14	Sub Tint	16	0 - 33	-
15	Horizontal Position	19	0 - 31	Tune in a crosshatch pattern, adjust to center horizontally.
16	Vertical Phase	3	0 - 7	Tune in a crosshatch pattern, adjust to center vertically.
17	Vertical Size	79	0 - 127	Tune in a crosshatch pattern, adjust for slight vertical overscan.
18	Vertical Centering	25	0 - 63	Tune in a crosshatch pattern, adjust to center vertically (Fine Adjustment).
19	Vertical Linearity	10	0 - 15	Tune in a crosshatch pattern, adjust vertical linearity.
20	VS Correction	10	0 - 15	Tune in a crosshatch pattern, adjust so the boxes at top and bottom have equal size.
21	Horizontal Size	17	0 - 31	Tune in a crosshatch pattern, adjust for slight horizontal overscan.
22	EW Parabola Correction	31	0 - 63	Tune in a crosshatch pattern, adjust for straight vertical lines at the left and the right.
23	EW Trapezium Correction	35	0 - 63	Tune in a crosshatch pattern, adjust for parallel straight vertical lines at the sides.
24	EW Correction Top	13	0 - 31	Tune in a crosshatch pattern, adjust for straight vertical lines at the top corners.
25	EW Correction Bottom	19	0 - 31	Tune in a crosshatch pattern, adjust for straight vertical lines at the bottom corners.
26	RF AGC for 2nd Tuner	16	0 - 31	Activates PIP window. (for sets with PIP.)
27	Audio Input Level	24	0 - 63	-
28	Audio Stereo VCO	43	0 - 63	-
29	Audio Filter Setting	40	0 - 63	-
30	Audio Low Band	21	0 - 63	-
31	Audio High Band	26	0 - 63	-
32	Audio SAP VCO	45	0 - 63	-
33	PIP Comb D/A Level	67	0 - 127	Activates PIP window. (for sets with PIP.)
34	PIP Contrast	100	0 - 127	Activates PIP window. (for sets with PIP.)
35	PIP CVBS Coarse Tint	4	0 - 7	Activates PIP window. (for sets with PIP.)
36	PIP CVBS Fine Tint	135	0 - 255	Activates PIP window. (for sets with PIP.)
37	PIP CVBS Saturation	60	0 - 127	Activates PIP window. (for sets with PIP.)
38	PIP S-Video Coarse Tint	4	0 - 7	Activates PIP window. (for sets with PIP.)
39	PIP S-Video Fine Tint	135	0 - 255	Activates PIP window. (for sets with PIP.)
40	PIP S-Video Saturation	60	0 - 127	Activates PIP window. (for sets with PIP.)
41	PIP Brightness	15	0 - 31	Activates PIP window. (for sets with PIP.)
42	PIP BP Clamp Adjustment	247	-	This data is for reading only. Do not change.
43	Gemstar Horizontal OSD Position	141	73 - 185	-
44	Gemstar Vertical OSD Position	63	10 - 160	-
45	Gemstar PIP Horizontal Position	40	5 - 80	-
46	Gemstar PIP Vertical Position	43	20 - 100	-
47	Gemstar PIP Window Vertical Size	3	0 - 13	-

TEST EQUIPMENT

Test equipment listed by participating manufacturer illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.

Equipment	Sencore No.	Equipment	Sencore No.
Oscilloscope	SC3100	Isolation Transformer	PR570
Generators		Capacitance Analyzer	LC102
RGB	CM2125	CRT Analyzer	CR7000
Multiburst Signal	VG91	AC Leakage Tester	PR570
Color Bar	VG91	Inductance Analyzer	LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3100	Field Strength Meter	SL753
Frequency Meter	SC3100	Transistor Tester	TF46
Hi-Voltage Probe	HP200	Horizontal Analyzer	HA-2500
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

RCA

MODEL MR68TF700TX01 (CHASSIS ATC113BD1)

PARTS LIST

Item No.	Type No.	Mfr. Part No.	NTE Part No.
DA03	-	237523	-
DA04	-	226463	-
DA501, 02	-	248798	-
DF01	-	155276	NTE116
DF02	-	261158	-
DL01	-	176296	NTE552
# DL02	-	140971	NTE558
DL03	-	242907	-
DL05	-	241304	-
DL06	-	176296	NTE552
DL07	-	207878	NTE519
DL08	-	243636	-
# DL90	-	157301	NTE177
# DL92	-	159429	NTE5019T1
# DP01	-	214649	NTE5331
DP06	-	232221	-
DP22	-	198589	NTE519
DP26	-	139706	NTE177
# DP30	-	244224	-
DP31	-	198589	NTE519
DP350	-	155276	NTE116
DP40	-	139706	NTE177
DP57	-	198589	NTE519
DP63	-	258173	-
DP71	-	198589	NTE519
DP75	-	176296	NTE552
DP80	-	243636	-
DP85	-	217306	-
DP86	-	215488	NTE136A
DR01	-	198589	NTE519
DR01A	-	215488	-
DR02	-	220637	NTE142A
DR03	-	215488	NTE136A
DR04, 05, 06	-	198589	NTE519
DR11	-	257862	-
DR502, 04	-	248798	-
DU01, 02	-	244870	-
DU04	-	257783	-
DU20, 21	-	230757	-
DU50, 51	-	230757	-
DU60, 61	-	230757	-
DV03	-	244870	-
DV05	-	198589	NTE519

Item No.	Type No.	Mfr. Part No.	NTE Part No.
DV501	-	248798	-
DV502	-	232710	-
DY01 Thru			
DY13	-	220638	NTE5014A
DY16, 17	-	220638	NTE5014A
DY501 Thru			
DY504	-	232710	-
IA01	UPC1851BCU	256831	-
IA02	MC3403N	241785	NTE987
IA03	TDA7263	215526	-
IF01	-	232109	NTE1788
IL81	LM358WN	254775	-
# IP01	-	257786	-
IP350	-	241752	-
IP360	-	194567	-
IP50	-	231525	-
IR02	-	258098	-
IU01	-	257787	-
# IV01	-	257841	-
IV02	-	194567	-
IV03	-	257829	-
IY01	CXA2089S	257802	-
IY03	TC90A49P	257833	-
IY04		237474	-
IY06	HEF4052BT	256937	NTE4052BT
IY07, 08	-	257832	-
IY09	-	257831	-
TA501	-	215495	-
TA511	-	206088	NTE2414
TI501	-	219348	NTE2409
TI502, 05, 06	-	219349	NTE2408
TL01	-	146851	NTE287
# TL02	-	237470	-
TL502	-	215495	-
# TL502A	-	147665	NTE159
TL82	-	217309	NTE261
# TL902	-	215496	-
TP20	-	244223	-
TP22	-	232218	-
# TP23	-	147665	NTE159
TP340	-	243955	-
TP360	-	257827	-
# TP524	-	215496	-

PARTS LIST continued

Item No.	Type No.	Mfr. Part No.	NTE Part No.
TP531, 52, 53, 60	-	215495	-
TP571	-	219412	-
TP80	-	177788	NTE31
TR501	-	215496	-
TR502	-	215495	-
TR503, 04	-	215496	-
TR505, 06	-	215495	-
TR511	-	215496	-
TR512	-	215495	-
TR521	-	215496	-
TR523	-	215495	-
TV503, 04	-	215496	-
TY500	-	215495	-
TY501, 02	-	215496	-
TY503, 04	-	215495	-
TY505, 06	-	215496	-

Item No.	Function/Rating	Mfr. Part No.	Notes
BAV03	Jack	257874	Assembly
BFA02	Jack	257785	Headphone
BR201	Socket	251884	G-Link
# BU05	Socket	233120	CRT
BY03	Jack	245283	Assembly
BY04	Jack	239389	Assembly
BY05	Jack	239389	Assembly
# BY06	Jack	257843	Assembly
BY07	Jack	238963	SVHS
# CA46	1000μF 20% 25V	232348	-
CA512, 13	22pF 5% 50V NPO	194903	-
# CA57, 58	1000μF 20% 16V	178835	-
# CA60	1000μF 20% 25V	232348	-
# CF02	3300μF 20% 25V	227913	-
CH510, 11	39pF 5% 50V NPO	202905	-
CH519	100pF 5% 50V NPO	193340	-
# CH58	220μF 20% 50V	243789	-
CI503	47pF 5% 50V NPO	210689	-
CI506	330pF 5% 50V NPO	205227	-
CI509	.0022 5% 50V NPO	232616	-
CI512	100pF 10% 50V NPO	195695	-
CI516	39pF 5% 50V NPO	202905	-
CI520	.0022 5% 50V NPO	232616	-
CI546	47pF 5% 50V NPO	210689	-
CI560	33pF 5% 50V NPO	194911	-
# CL05	.0047 10% 250V	142765	-

Item No.	Function/Rating	Mfr. Part No.	Notes
# CL06	470pF 5% 2kV	227068	-
CL10	15pF 1% 250V NPO	223899	-
# CL12	.0168 3.5% 1.6kV	237355	-
# CL13	.36 5% 250V	198567	-
# CL14	2.2μF 20% 200V	247673	-
# CL21	.033 5% 400V	257784	-
CL22	680pF 20% 1kV	190538	-
CL23	.01 20% 1kV	137583	-
CL501, 03	470pF 5% 50V NPO	214732	-
# CP01	.22 20% 275VAC	-	-
	.22 20% 125VAC	231451	-
# CP02	.1 20% 250VAC	-	-
	.1 20% 125VAC	229322	-
# CP03 Thru			
# CP06	680pF 20% 1kV	190538	-
# CP08	680μF 20% 200V	190560	-
# CP10	.0011 1.6kV	244208	-
# CP11	.0168 1.6kV	237355	-
# CP15, 16	.01 20% 250VAC	252973	-
# CP18	470pF 120VAC	250102	-
# CP350	4700μF 20% 25V	239388	-
CP580	.0022 5% 50V NPO	232616	-
CP63	680pF 20% 1kV	190538	-
# CP64, 65	3300μF 20% 25V	227913	-
CP75	680pF 20% 1kV	190538	-
# CP80	100μF 20% 250V	218374	-
# CP83	33μF 5% 200V	217299	-
# CP85	100μF 20% 63V	237425	-
# CP86	.01 10% 50V	240934	-
CP87	.0022 2kV	227078	-
# CR12	22μF 20% 16V	257794	-
CR502	120pF 5% 50V NPO	194902	-
CR505, 06	220pF 5% 50V NPO	225541	-
CU01	.01 3kV	257795	-
# CU03, 06	10μF 20% 250V	233809	-
CU505	220pF 5% 50V NPO	225541	-
# CV25	1800μF 20% 35V	257826	-
CV507	.0022 5% 50V NPO	232616	-
CV533	100pF 5% 50V NPO	193340	-
CV534, 44	47pF 5% 50V NPO	210689	-
CV545	100pF 5% 50V NPO	193340	-
CV558	47pF 5% 50V NPO	210689	-
CV559	12pF 5% 50V NPO	242262	-
CY525, 26	10pF 1% 50V NPO	197602	-

RCA

MODEL MR68TF700TX01 (CHASSIS ATC113BD1)

PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes
CY536	10pF 1% 50V NPO	197602	-	LY01 Thru			
CY537	62pF 5% 50V NPO	214031	-	LY06	10μH	244900	-
CY538	33pF 5% 50V N705	200546	-	LY07, 08	10μH	248802	-
CY539	100pF 5% 50V NPO	193340	-	LY08	22μH	248802	-
CY546	180pF 5% 50V NPO	211039	-	LY09	Ferrite Bead	235858	-
CY552	10pF 1% 50V NPO	197602	-	LY10	10μH	244900	-
CY566	180pF 5% 50V NPO	211039	-	LY11	22μH	244901	-
CY569 Thru				NH01	Tuner	248782	CTF5800
CY572	47pF 5% 50V NPO	210689	-	# PW20	Line Cord	257849	AC, Polarized
CY573, 74	10pF 1% 50V NPO	197602	-	QI01	Filter	245046	SAW
# DY1 (1)	Yoke	-	Horiz 1.5mH, Vert 20.5mH	QI02	Filter	219313	4.5MHz
# FP01	Fuse	175425	5Amp, 125V	QI03	Trap	219314	4.5MHz
# FP341, 60	Protector	245061	IC	QV01	Crystal	161235	3.58MHz
IR11	Receiver	251320	IR	RA49	3.9 5% 3W	257868	-
LH10	Ferrite Bead	226467	-	RA537	107 1% 1/10W	257790	-
LH11	100μH	160186	-	RA548	16.5K 1% 1/10W	257865	-
LI01	22μH	248802	-	# RF06	13 5% 1W	231508	-
LI03	15μH	197613	-	# RF07	1.5 5% 2W	237441	-
LI06, 07, 08	100μH	160186	-	RF11	Network	215499	-
# LL01	Horizontal Drive	215541	-	# RL01	15K 5% 1W	190557	-
# LL01A	Degaussing	258017	-	# RL02	47 5% 1/2W	241321	-
LL02	Ferrite Bead	161237	-	RL05	2000 5% 3W	251832	-
# LL03	Horizontal Linearity	257157	-	# RL20	820 5% 1W	175349	-
LL04	4μH	215505	-	# RL22	10 20% 1/2W	241261	-
# LL05 (2)	Horizontal Output	257811	-	# RL24	4.3 5% 3W	261409	-
LL06, 07	Ferrite Bead	232765	-	# RL25	82K 10% 1/2W	239116	-
LL70	Ferrite Bead	226467	-	# RL26	27K 10% 1/2W	238958	-
LL81	430μH	258171	-	RL27	3320 1% 1/4W	257867	-
	2700μH	253701	-	RL526	910 2% 1/10W	197627	-
LL82	430μH	258171	-	RL599	15K 1% 1/10W	215198	-
# LP02	Line Filter	190507	-	# RL80	1 5% 2W	257170	-
# LP03	Power	244228	-	# RL82	100 5% 1/4W	198667	-
LP20	Ferrite Bead	226467	-	# RL88	1000 5% 1/4W	237444	-
LP350	27μH	190017	-	# RL90	100 5% 1/4W	198667	-
LP61, 62	Ferrite Bead	237504	-	RL92	27.4K 1% 1/4W	151883	-
LP63	Ferrite Bead	226467	-	RL93	39.2K 1% 1/4W	190469	-
LP81, 82	Ferrite Bead	237504	-	# RP02	PTC	207768	-
LP83	22μH	215504	-	# RP03	160 5% 7W	227958	-
LP85	47μH	244222	-	# RP05	47K 5% 3W	232213	-
LR01	Ferrite Bead	226467	-	# RP06	6800 5% 1/2W	179248	-
LV01	Ferrite Bead	215547	-	# RP15	2.7M 20% 1/2W	217662	-
LV05	180μH	257869	-	# RP16	120K 20% 1/2W	238903	-
				# RP20	.1 5% 3W	244215	-

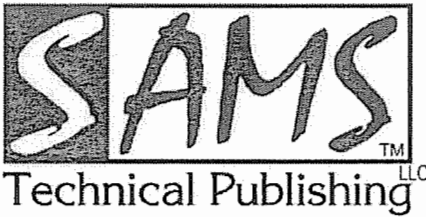
PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes
# RP21	43 5% 1/4W	244214	-
# RP23	2000 5% 1/4W	175321	-
# RP31	750 5% 1/4W	179317	-
RP340	3.9 5% 3W	257868	-
# RP350	3.3 5% 2W	223680	-
RP363	3.9 5% 3W	257868	-
# RP38	68 5% 1/4W	175039	-
RP531	680 2% 1/10W	195939	-
# RP54	2800 .1% 1/4W	244217	-
RP558	37.4K 1% 1/10W	215215	-
# RP56	143K .1% 1/4W	244216	-
RP80	33K 5% 3W	243805	-
RR511	27K 2% 1/10W	205245	-
RR563	64.9K 1% 1/10W	247691	-
RR564	100K 1% 1/10W	215221	-
RR567	27K 2% 1/10W	205245	-
# RU01	1500 20% 1/2W	244871	-
# RU03	100 5% 1/2W	257791	-
RV50	220 2% 1/4W	175324	-
RV518	680 2% 1/10W	195939	-
RY92	220 2% 1/4W	175324	-
SK11	Switch	257860	Power
SK12	Switch	257860	Volume Up
SK13	Switch	257860	Volume Down
SK14	Switch	257860	Channel Up
SK15	Switch	257860	Channel Down
SK16	Switch	257860	Menu
# SP01	Relay	190490	Degaussing
SP1, 2	Speaker	253674	160mm X 80mm, 8 Ohms, 12W
# V1	CRT	6QCP893001	HA68QCP893X001
#	Fuse Holder	176642	For FP01 (2 Used)
#	PC Board	257852	E-W Correction
#	PC Board	258161	Front A/V
#	PC Board	258159	FPA
#	PC Board	258160	FPA Adapter
#	PC Board	257871	Gemstar 4 Module
#	PC Board	257837	Video/Comb Filter
#	PC Board	257851	VPort Adapter
#	Transmitter	257217	Remote

For SAFETY use only equivalent replacement part.
(1) Bonded part of CRT.
(2) Screen and focus controls are part of LL05.

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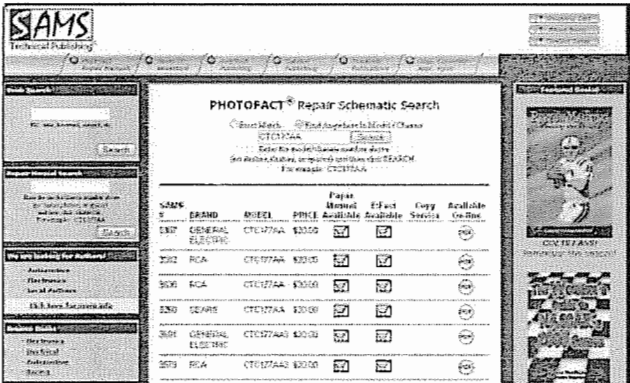


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