

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 knobs, shields, covers, grounds, and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by Howard W. Sams & Company as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to Howard W. Sams & Company by the manufacturers of the specific type of replacement part listed.

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A Bell Atlantic Company
2647 Waterfront Parkway East Drive, Suite 100
Indianapolis, IN 46214-2012
Printed in the United States of America 5 4 3 2 1

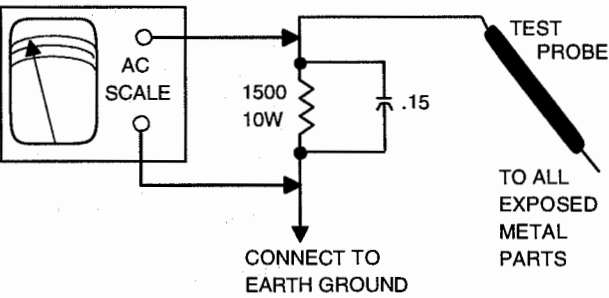
SAFETY CHECKS -- FIRE AND SHOCK HAZARD

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.



HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC. Set all customer controls for normal picture. Check for 21.2V ±1.5V at TP653. If voltage is incorrect, use an external power supply and apply 26.8V to TP653. The receiver should shutdown. If the receiver fails to shutdown, the high voltage shutdown requires repair. To return to normal operation, remove AC power, and momentarily short TP651 and TP652.



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PHOTOFACT® Technical Service Data

SET 3887

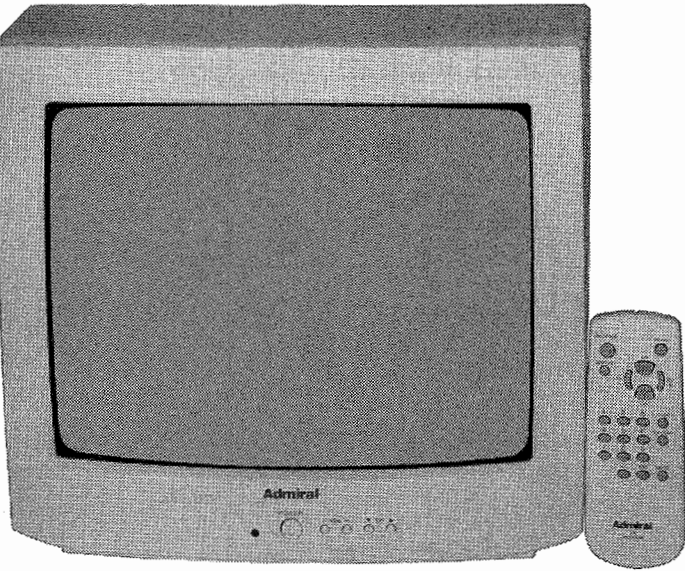
MODELS JSJ-12303C/E/F/G, JSJ-12304C/E/F/G

ADMIRAL

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ADMIRAL
Models JSJ-12303C/E/F/G, JSJ-12304C/E/F/G



Model JSJ-12304G

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



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OCTOBER 1997 SET 3887

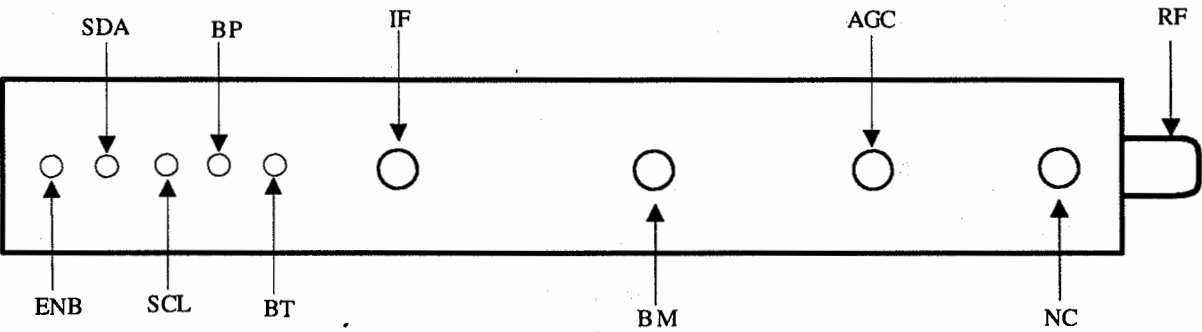
For Supplier Address,
See PHOTOFACT Annual Index

TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
NC	0V	0V	0V
AGC	2.3V	2.3V	2.8V
BM	9.0V	9.0V	9.0V
IF	0V	0V	0V
BT	33.0V	33.0V	33.0V
BP	5.1V	5.1V	5.1V
SCL	4.9V	4.9V	4.9V
SDA	4.9V	4.9V	4.9V
ENB	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.

TUNER TERMINAL GUIDE



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.
Oscilloscope	SC3100
Generators	
RGB	CM2000
Multiburst Signal	VG91
Color Bar	VG91
TV Stereo	VG91
Digital VOM	SC3100
Frequency Meter	SC3100
Hi-Voltage Probe	HP200
Accessory Probes	TP212
Isolation Transformer	PR57
Capacitance Analyzer	LC101, LC102
CRT Analyzer	CR70
AC Leakage Tester	PR57
Inductance Analyzer	LC101, LC102
Flyback Yoke Tester	TVA92
TV Stereo Power Monitor	SR68, PA81
Field Strength Meter	SL750
Transistor Tester	TF46
Video Analyzer	VG91, TVA92

MISCELLANEOUS ADJUSTMENTS

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, color, picture, and screen control to minimum. Connect a high voltage probe to CRT anode. High voltage should measure 24kV to 25kV.

119V ADJUST

Tune in a picture. Connect the ground of the DC voltmeter to the anode of D701 and connect the positive lead to the cathode of D710. Adjust R706 for 118.5V ±1V.

COLOR PURITY

Operate the receiver for 15 minutes. Tune in a green raster. Use a degaussing coil to demagnetize the CRT and mounting brackets. Loosen the deflection yoke clamp screw and slide the deflection yoke backward to obtain a vertical green band. Rotate and spread the purity magnet tabs until the green band is centered on the screen. Move the deflection yoke forward to obtain a uniform green screen.

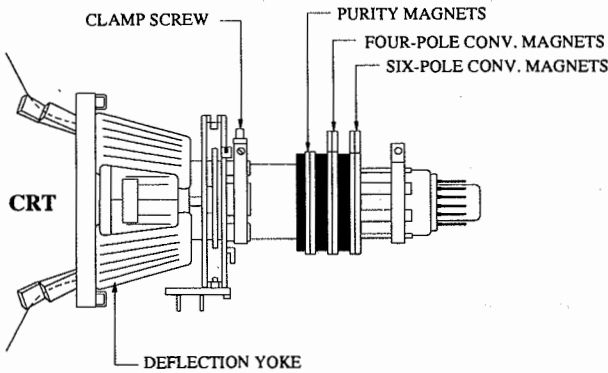
CONVERGENCE

Operate the receiver for 15 minutes. Connect a color bar generator to the antenna terminals and tune in a dot pattern. Adjust the 4-pole magnet tabs to converge the red and blue dots at the center of the screen. Adjust the 6-pole magnet tabs to converge the red/blue dots over the green dots at the center of the screen.

NOTE: Rotate the two tabs of each set of magnets equally and opposite to converge vertically and rotate both tabs in the same direction to converge horizontally. The 4-pole and 6-pole magnets interact, repeat adjustment until center convergence is correct.

Tune in a crosshatch pattern and remove the rubber wedges between the deflection yoke and the CRT. Tilt the deflection yoke up or down to converge the vertical lines at top and bottom of screen and the horizontal lines at the right and left sides of the screen. Tilt the deflection yoke right or left to converge horizontal lines at top and bottom of screen and the vertical lines at the right and left sides of the screen. Repeat convergence procedure if necessary to obtain best overall convergence. Apply adhesive to wedges and carefully replace on the CRT.

CRT NECK ASSEMBLY



ENTERING SERVICE MODE

Turn on receiver and use reset function in the video adjustment menu to ensure that customer controls are in their proper reset position. Momentarily short test point TP2001 to test point TP2002 to enter the service mode.

NOTE: Shorting test points TP2001 and TP2002 causes the receiver to toggle between service and normal modes.

When in the service mode a letter S with a number and a letter D with a number is displayed in the lower right part of the screen. The S number is the service adjustment and it is changed by pressing the channel up / down buttons on the receiver or remote transmitter. The D number is the present data value of the service adjustment and it can be changed by pressing the volume up / down buttons on the receiver or remote transmitter. For a complete listing of the service adjustments, refer to the "Service Mode Adjustment Chart".

EXIT SERVICE MODE

To exit service mode when finished making adjustments, turn off the power or unplug the set.

RF AGC

Tune in a picture. Enter the service mode and select service number S08. Set the data value to a point where no snow (noise) appears in picture. Exit the service mode to select another channel. Check all channels for proper operation.

VCO

Connect a digital voltmeter to pin 44 of IC201 and ground. Tune in a local channel. Enter the service mode and select service number S10. Set the data value to obtain 2.2V on the digital voltmeter.

WHITE BALANCE

Operate the receiver for 15 minutes. Enter the service mode and select service number S03. Set the data value to 00. Set brightness for a visible raster. Alternately adjust data value of S14 and S15 until a good gray scale with normal white is obtained. Select service number S03. Set the data value to achieve normal color level.

GRAY SCALE

Connect a digital voltmeter between TP852 and TP853 on the CRT board. Tune in an active channel. Set color, brightness, and picture to minimum. Enter the service mode and select service number S03. Set the data value to 00. Select service number S08. Set the data value to 00. Select service number S04. Set the data value to obtain .17V on the digital voltmeter. Adjust screen control, if necessary, to obtain a barely visible raster. Adjust service numbers S11, S12, S13, for a good gray scale with normal white at high and low brightness. Set color to midrange. Adjust screen control for normal brightness. Perform RF AGC adjustment. Select service number S03. Set the data value to achieve normal color level.

RESETTING TO INITIAL VALUES

The initial values are written to IC2701 by pressing the channel up and down buttons for more than two seconds.

SERVICE MODE ADJUSTMENTS

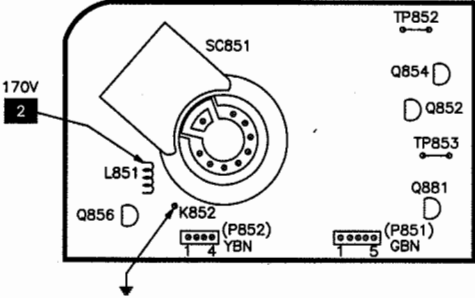
These adjustments are required to be performed when IC2701 or IC201 is replaced. Adjust the items related to the CRT when the CRT is replaced .

SERVICE MODE ADJUSTMENT CHART					
Service No.	Adjustment	Data Range	Data Initial Value	Data On-Set Value	Notes
S00	Default	-	-	-	
S01	Sub Picture	00-7F	55	5D	Set brightness to minimum, picture to maximum. Adust for normal contrast range.
S02	Sub Tint	00-7F	46	41	Adjust for normal flesh tones.
S03	Sub Color	00-7F	32	35	Adjust for normal color level.
S04	Sub Brightness	00-7F	40	4D	Adjust for normal brightness level.
S05	Sharpness	00-3F	24	27	Adjust for proper sharpness of screen. Must be set to 27.
S06	Vertical Phase	00-07	00	03	Must be set to 00.
S07	Horizontal Position	00-1F	12	14	Adjust for best horizontal centering on screen.
S08	RF AGC	00-3F	23	22	00 produces black raster.
S09	Vertical Size	00-3F	20	1B	Adjust for proper vertical size with best linearity.
S10	VCO	00-7F	3C	1A	-
S11	Red Cutoff	00-FF	00	0C	-
S12	Green Cutoff	00-FF	00	00	-
S13	Blue Cutoff	00-FF	00	21	-
S14	Green Gain	00-FF	7F	8C	-
S15	Blue Gain	00-FF	7F	6B	-
S16	3.58MHz Trap	00-01	00	00	00 = On, 01 = Off. Must be set to 00.
S17	Balance	00-3F	20	20	Adjust for proper audio balance. Must be set to 20.
S18	Caption Position	00-7F	17	18	Adjust to center the black box on the screen.

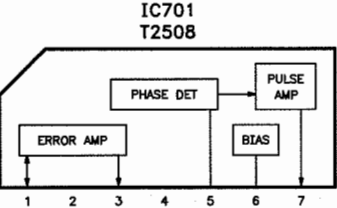
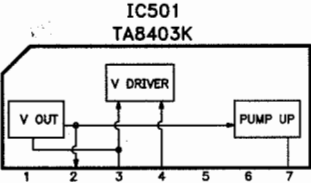
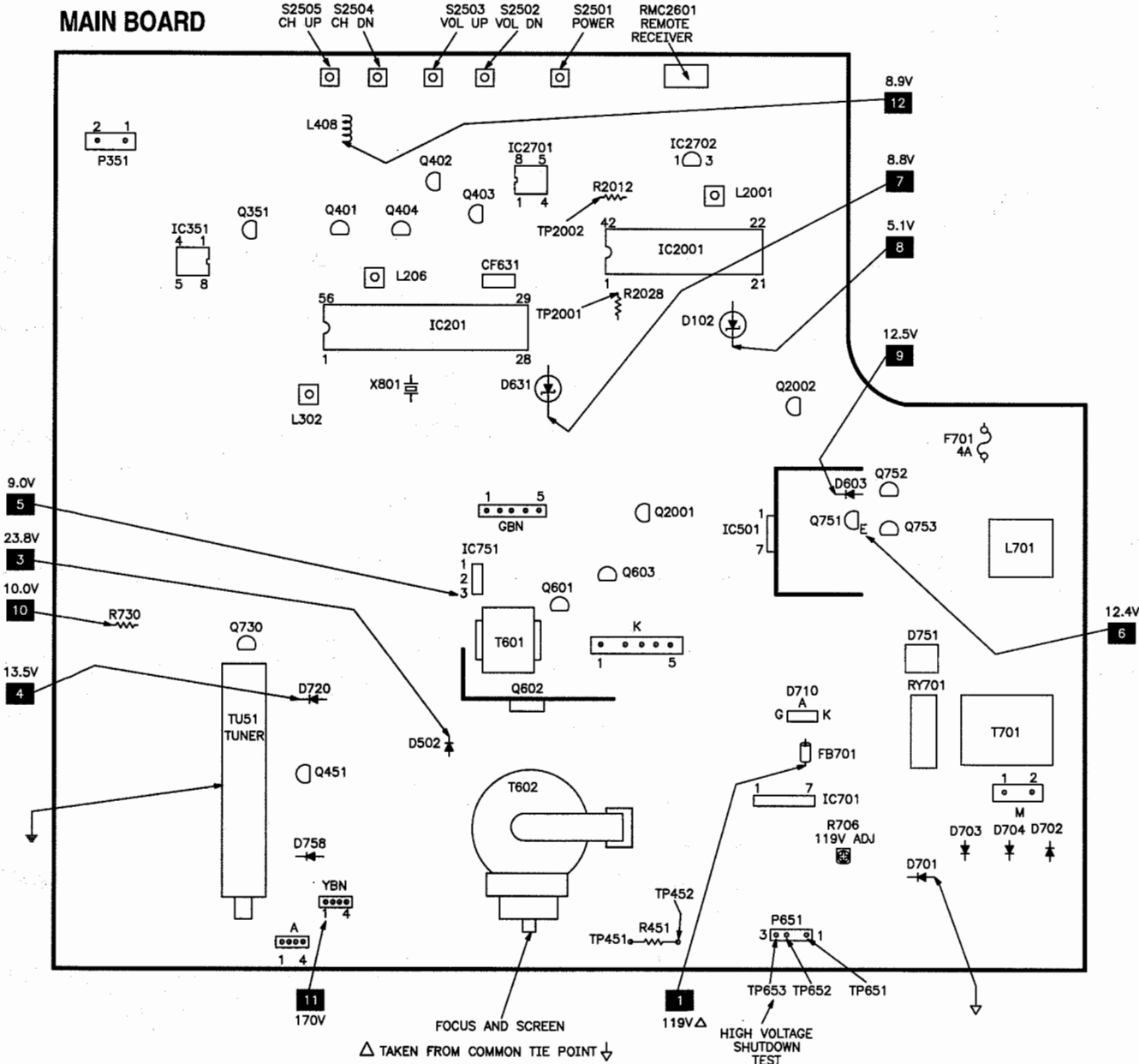
PLACEMENT CHART

IC FUNCTIONS

CRT BOARD



MAIN BOARD



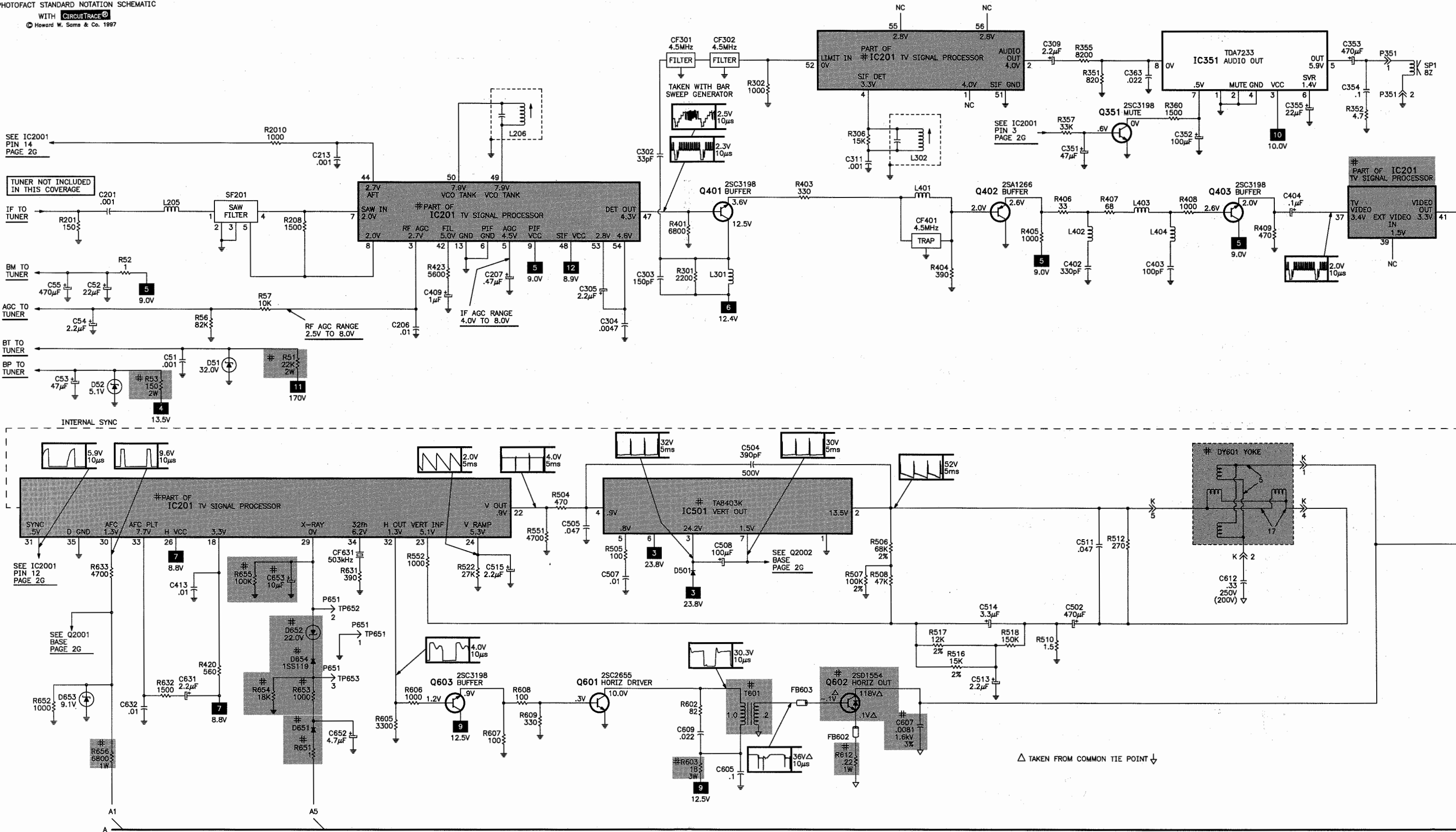
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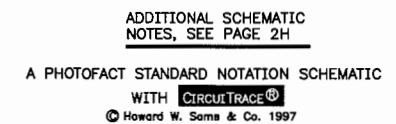
MODELS JSJ-12303C/E/F/G, JSJ-12304C/E/F/G

TELEVISION SCHEMATIC

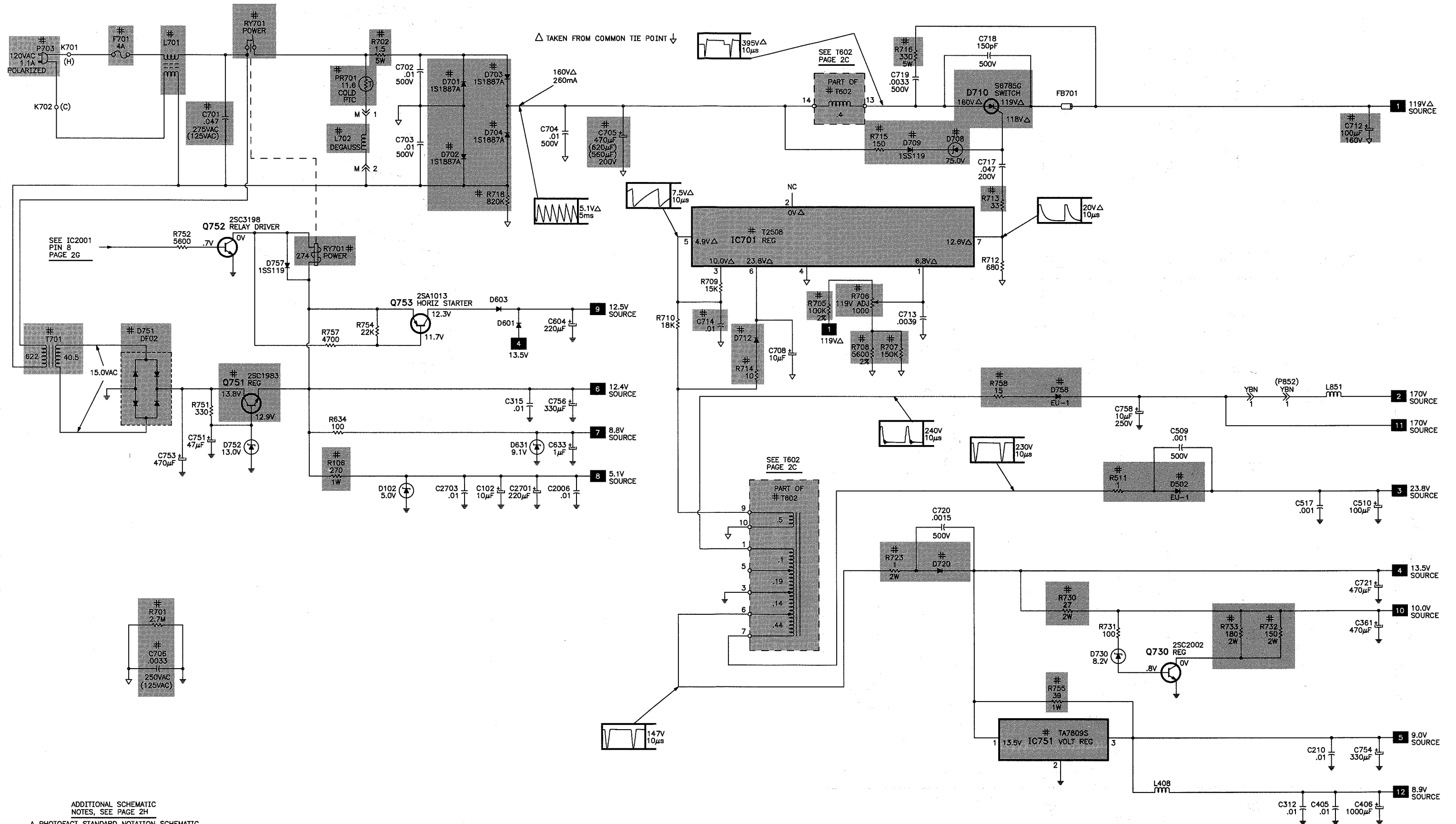
ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2H

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
WITH CIRCUITTRACE[®]
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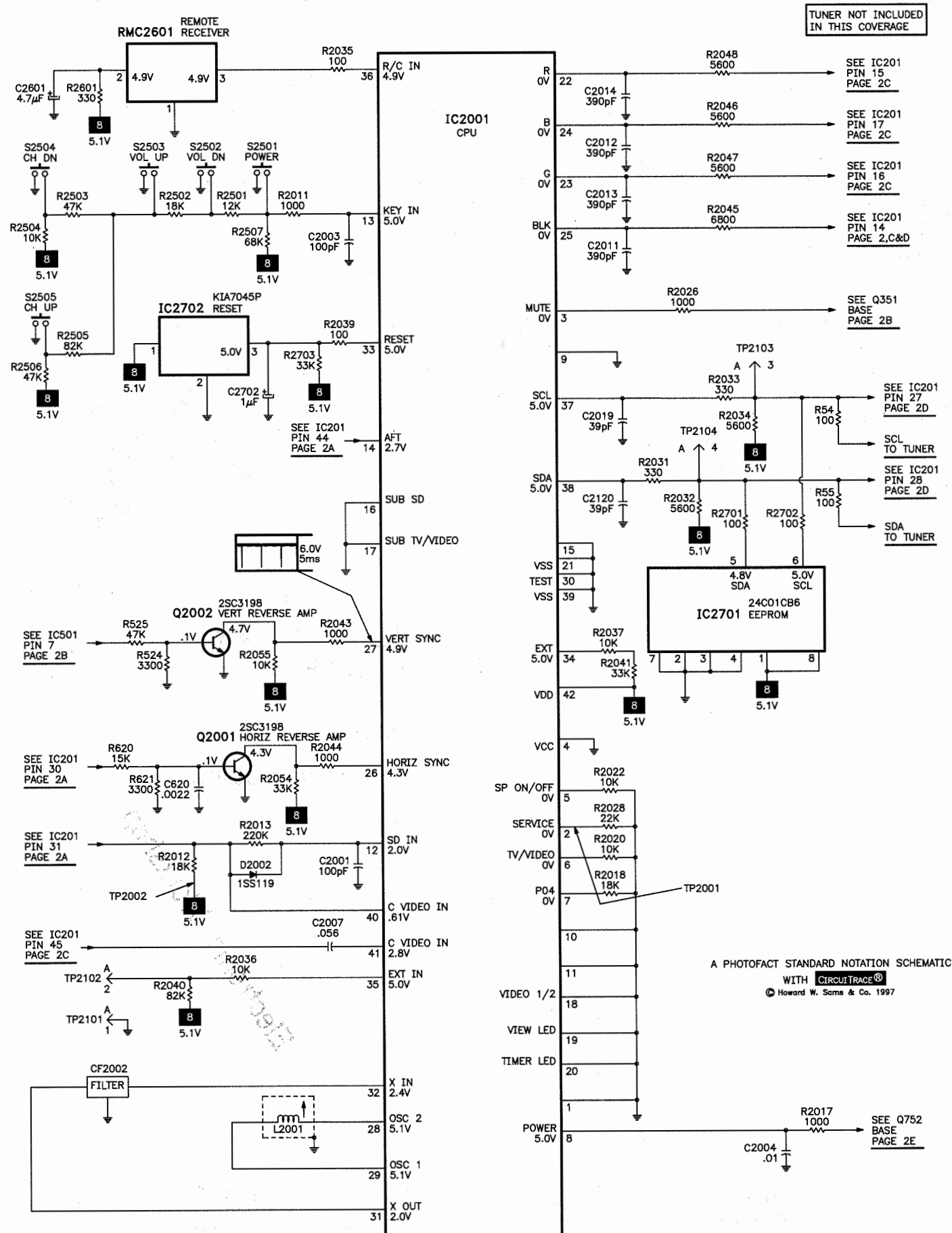




POWER SUPPLY SCHEMATIC



SYSTEM CONTROL SCHEMATIC



G

SCHEMATIC NOTES

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

✕ Circuitry not used in some versions.

--- Circuitry used in some versions.

⏏ Ground

⏏ Chassis ground

▽ Common tie point

△ Taken from common tie point

3 Schematic CIRCUITTRACE®: Voltage source tie point.

A Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless noted otherwise.

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.

Voltages measured with digital meter and a 1000µV RF signal, with colorbar pattern, applied to antenna terminals.

Controls adjusted for normal operation.

Capacitors are 50 volts or less, 5% or greater unless noted.

Electrolytic capacitors are 50 volts or less,

20% or greater unless noted.

Resistors are 1/2W or less, 5% or greater unless noted.

Value in () used in some versions.

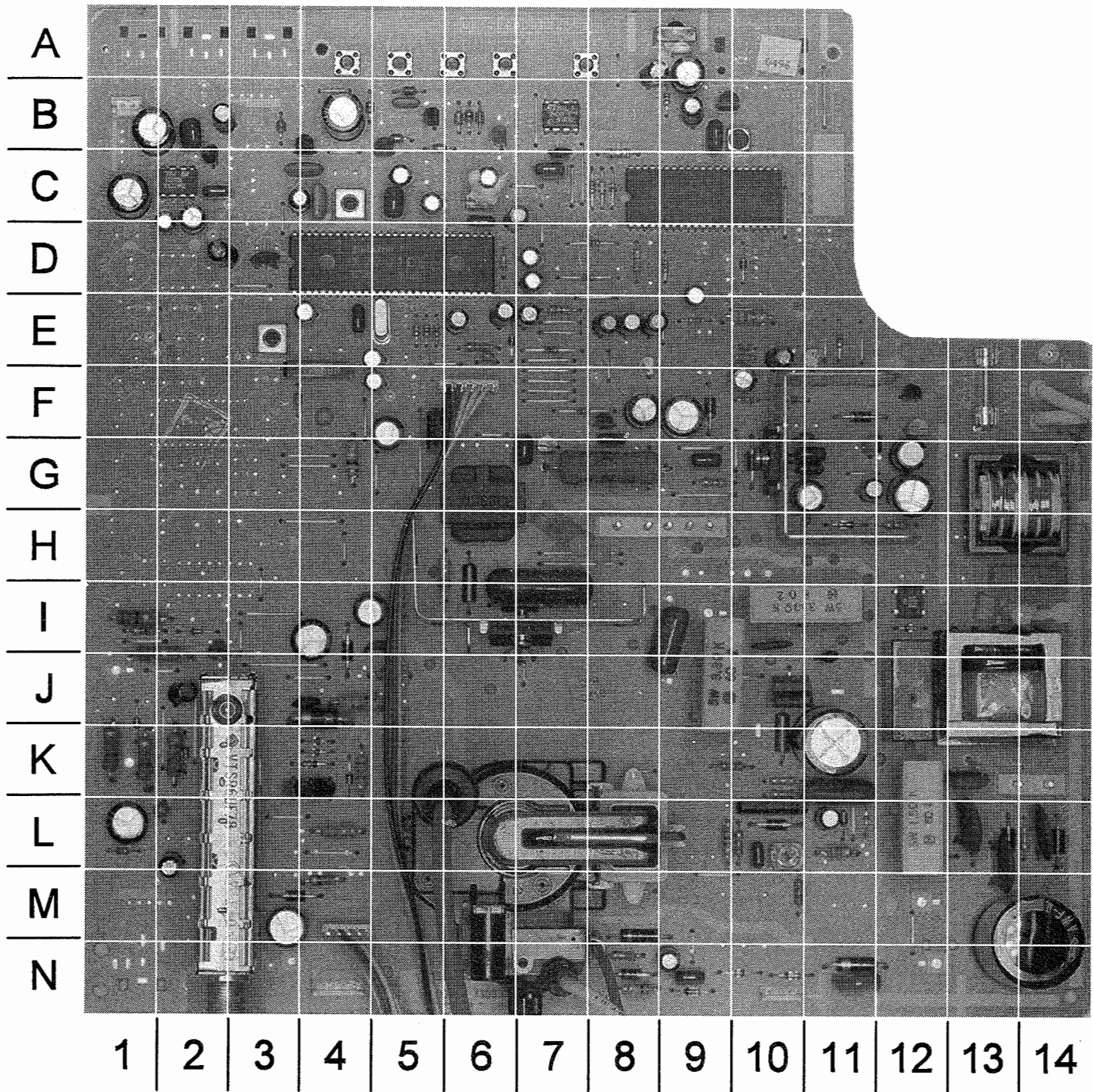
Measurements with switching as shown, unless noted.

Rated voltage shown on zener diodes.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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MAIN BOARD - TOP VIEW

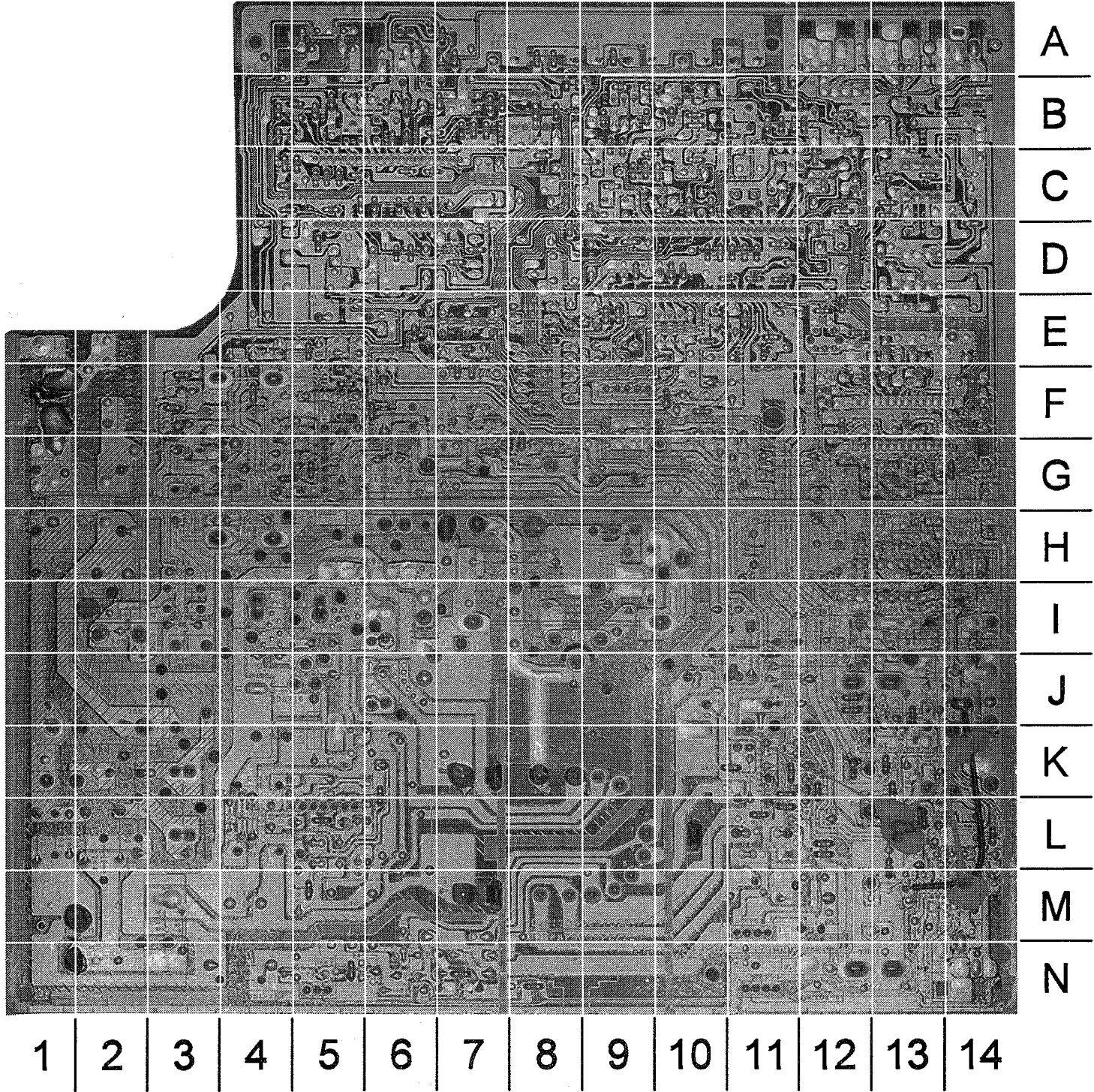



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MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

A	N-4	C756	G-12	L301	B-3	R716	I-11
C52	L-2	C758	M-3	L302	E-3	R717	J-9
C53	J-2	C801	E-4	L401	B-5	R718	L-14
C54	L-2	C802	F-5	L402	B-6	R720	L-4
C55	L-1	C805	E-8	L403	B-6	R723	J-4
C102	D-9	C806	E-8	L404	B-6	R730	I-1
C207	E-4	C807	E-8	L406	B-5	R731	I-1
C211	E-5	C2007	C-7	L407	B-5	R732	K-1
C304	D-3	C2601	A-8	L408	B-4	R733	I-2
C305	C-3	C2701	A-9	L701	G-13	R751	H-12
C309	D-2	C2702	B-9	L2001	B-10	R755	G-4
C351	B-2	C2703	C-7	M	K-14	R758	M-4
C352	C-2	CF301	C-4	P351	B-1	R2010	D-8
C353	B-1	CF302	C-4	P651	N-10	R2011	C-8
C354	B-2	CF401	B-5	PR701	K-13	R2012	C-8
C355	C-2	CF631	C-6	Q351	C-2	R2013	C-8
C361	C-1	CF2002	B-9	Q401	B-4	R2017	D-9
C363	C-2	D51	K-2	Q402	B-5	R2026	D-8
C404	C-6	D52	J-1	Q403	B-6	R2028	D-8
C406	B-4	D102	D-10	Q404	B-5	R2036	B-9
C408	C-5	D401	K-4	Q451	K-3	R2054	E-9
C409	C-5	D402	K-4	Q601	G-7	R2055	E-11
C410	C-5	D454	N-9	Q602	I-7	RMC2601	A-9
C411	D-7	D455	K-4	Q603	F-8	RY701	J-12
C412	D-7	D501	G-10	Q730	I-2	S2501	A-7
C451	N-9	D502	I-4	Q751	G-11	S2502	A-6
C454	K-4	D601	F-9	Q752	F-12	S2503	A-6
C502	F-9	D603	F-11	Q753	F-12	S2504	A-5
C504	F-11	D631	E-6	Q2001	E-8	S2505	A-4
C505	G-11	D651	N-8	Q2002	E-11	SF201	F-4
C507	G-11	D652	N-10	R51	K-2	T601	G-6
C508	G-11	D653	K-4	R53	K-1	T602	L-7
C509	I-5	D654	N-10	R57	L-1	T701	J-13
C510	I-4	D701	L-12	R106	E-10	TP451	N-8
C511	G-9	D702	L-14	R415	E-5	TP452	N-8
C513	E-10	D703	L-13	R417	E-5	TP651	N-10
C514	F-10	D704	L-13	R419	E-5	TP652	N-10
C515	E-6	D708	L-11	R420	E-6	TP653	N-10
C551	E-6	D709	L-11	R451	N-8	TP2001	D-8
C604	F-8	D710	J-10	R453	M-8	TP2002	C-8
C605	G-7	D712	L-10	R506	F-10	TP2101	N-4
C607	I-7	D720	J-4	R507	F-10	TP2102	N-4
C609	F-8	D730	I-2	R510	G-8	TP2103	N-4
C612	I-9	D751	I-12	R511	J-5	TP2104	N-4
C631	E-7	D752	H-11	R512	G-9	TU51	L-2
C632	C-6	D757	I-12	R516	E-10	X801	E-5
C633	E-6	D758	M-3	R517	E-10	YBN	M-4
C652	N-9	D2002	C-8	R552	E-7		
C653	C-7	F701	F-13	R602	G-8		
C701	H-14	FB602	I-7	R603	G-8		
C702	L-13	FB603	H-6	R606	F-7		
C703	L-14	FB701	K-10	R612	H-6		
C704	L-13	FH701	E-13	R632	D-6		
C705	M-14	FH702	F-13	R634	E-7		
C706	N-11	GBN	F-6	R651	N-8		
C708	L-11	IC201	D-5	R656	K-4		
C712	K-11	IC351	C-2	R701	N-11		
C714	L-10	IC501	G-10	R702	L-12		
C717	K-11	IC701	L-10	R705	K-10		
C718	I-11	IC751	F-5	R706	L-10		
C719	I-10	IC2001	C-9	R708	M-10		
C720	J-4	IC2701	B-7	R710	L-10		
C721	I-4	IC2702	B-9	R712	K-10		
C751	G-11	K	H-9	R713	K-10		
C753	G-12	L205	F-3	R714	L-9		
C754	F-5	L206	C-4	R715	L-11		

MAIN BOARD - BOTTOM VIEW



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MAIN BOARD - BOTTOM VIEW, GRIDTRACE
LOCATION GUIDE

C51	J-13	R452	N-8	R2702	B-7
C201	K-12	R454	L-12	R2703	B-6
C206	D-11	R455	L-11		
C210	D-11	R456	K-11		
C212	D-11	R457	L-11		
C213	D-13	R458	L-12		
C302	C-12	R504	F-6		
C303	B-12	R505	G-5		
C311	E-12	R508	F-5		
C312	D-11	R518	F-5		
C315	B-11	R522	D-9		
C402	B-9	R524	E-5		
C403	B-9	R525	F-4		
C405	D-11	R551	D-10		
C413	D-10	R605	D-9		
C419	B-10	R607	G-8		
C420	C-10	R608	G-7		
C421	C-9	R609	G-8		
C517	G-4	R620	E-7		
C620	F-7	R621	F-7		
C713	K-6	R631	C-9		
C803	E-10	R633	D-8		
C2001	D-6	R652	K-11		
C2003	C-6	R653	N-7		
C2004	C-6	R654	N-5		
C2006	B-7	R655	C-9		
C2011	C-5	R707	M-5		
C2012	C-5	R709	L-5		
C2013	C-5	R752	F-3		
C2014	C-5	R754	F-3		
C2019	C-6	R757	F-3		
C2120	C-6	R801	E-10		
R52	L-13	R951	E-9		
R54	J-12	R952	E-9		
R55	J-12	R2018	C-6		
R56	L-13	R2020	D-7		
R201	K-13	R2022	C-6		
R208	E-11	R2031	B-6		
R209	E-11	R2032	B-7		
R301	B-11	R2033	B-7		
R302	D-11	R2034	B-7		
R306	E-12	R2035	B-7		
R351	C-13	R2037	B-6		
R352	B-13	R2039	B-6		
R355	C-13	R2040	A-7		
R357	B-12	R2041	B-6		
R360	C-13	R2043	B-5		
R401	D-11	R2044	C-5		
R403	B-11	R2045	B-5		
R404	B-10	R2046	B-5		
R405	B-9	R2047	B-4		
R406	B-9	R2048	C-4		
R407	B-9	R2050	B-5		
R408	B-9	R2051	B-4		
R409	C-9	R2052	B-4		
R410	C-10	R2053	C-4		
R412	C-10	R2501	A-8		
R413	K-11	R2502	A-8		
R414	B-10	R2503	A-9		
R416	B-11	R2504	B-8		
R418	C-9	R2505	A-10		
R423	C-10	R2506	B-8		
R439	D-10	R2507	C-8		
R440	C-10	R2601	A-7		
R441	C-9	R2701	B-7		

PARTS LIST

Important Parts Information

- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- Where items may be replaced with equivalent parts, several alternates are shown from participating vendors.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

Obtaining Parts

Many of these parts are available from your local Sams authorized distributor or the manufacturer of the equipment. Call Sams for the name of your nearest distributor:

800-428-7267

Or consult the Sams *Annual Index* for the address of the original equipment manufacturer.

Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors. Consult the Sams *Annual Index* for their current address.

- Custom Components Corporation (Chek-A-Color)
- NTE Electronics, Inc. (NTE)
- Philips ECG Company (ECG)
- PTS Electronics Corporation (PTS)
- Sencore, Inc.
- Terrell & Nobis (TNI Electronics)
- Thomson Consumer Electronics, Inc. (SK, TCE)

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.
D51	-	RH-EX0701GEZZ	-	-	-
D52	-	RH-EX0612GEZZ	-	-	-
D102	-	RH-EX0611GEZZ	-	-	-
D401	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D402	-	RH-EX0092CEZZ	NTE5006A	ECG5006A	SK3A6
D454	-	RH-EX0103CEZZ	NTE5011A	ECG5011A	SK5A6
D455	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D501	-	RH-DX0441CEZZ	-	-	-
	-	RH-DX0110CEZZ	NTE116	ECG116	SK3312
# D502	EU-1	RH-DX0131CEZZ	NTE552	ECG552	SK9000
D601, 03	-	RH-DX0441CEZZ	-	-	-
	-	RH-DX0110CEZZ	NTE116	ECG116	SK3312
D631	-	RH-EX0630GEZZ	-	-	-
# D651	-	RH-DX0131CEZZ	NTE552	ECG552	SK9000
# D652	-	RH-EX0091CEZZ	NTE5030A	ECG5030A	SK22A
D653	-	RH-EX0631GEZZ	-	-	-
# D654	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
# D701 Thru					
# D704	1S1887A	RH-DX0154CEZZ	NTE552	ECG552	SK9000
# D708	-	RH-EX0238CEZZ	NTE5093A	ECG5093A	-
# D709	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
# D710	S6785G	VHSS6785GLB1E	NTE5424%	ECG5424%	-
# D712	-	RH-DX0131CEZZ	NTE552	ECG552	SK9000
# D720	-	RH-DX0444CEZZ	-	-	-
D730	-	RH-EX0310CEZZ	-	-	-
# D751	DF02	RH-DX0417CEZZ	NTE5332	ECG5332	SK9230
	-	RH-DX0200CEZZ	NTE5332	ECG5332	SK9232
D752	-	RH-EX0019TAZZ	NTE5022A	ECG5022A	SK13A
D757	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
# D758	EU-1	RH-DX0131CEZZ	NTE552	ECG552	SK9000
D881, 82, 85	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D2002	1SS119	VHD1SS119/-1	NTE519	ECG519	SK3100
	-	RH-DX0446CEZZ	-	ECG177	-
	-	RH-DX0045GEZZ	NTE519	ECG519	SK3100
# IC201	-	RH-IX2701CEZZ	-	-	-
IC351	TDA7233	VHiTDA7233/-1	-	-	-
# IC501	TA8403K	VHiTA8403K/-1	-	-	-
# IC701	T2508	RH-IX0137CEZZ	NTE1751	ECG1751	-
# IC751	TA7809S	VHiTA7809S/-1	NTE1966	ECG1966	-
	KIA7809PI	VHiKA7809PI-1	NTE1966	ECG1966	-
IC2001	-	RH-IX2738CEZZ	-	-	-
IC2701	24C01CB6	RH-IX2447CEN1	-	-	-

For SAFETY use only equivalent replacement part.
% Use insulating hardware supplied with replacement.

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.
IC2702	KIA7045P	VHiKIA7045P-1	-	-	-
	PST994C	VHiPST994C/-1	-	-	-
	PST529C2	VHiPST529C2	-	-	-
Q351	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q401	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q402	2SA1266(Y)	VS2SA1266-Y-1	NTE290A	ECG290A	SK9132
	2SA1015(Y)	VS2SA1015Y/-1	NTE290A	ECG290A	SK9132
Q403	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q404	2SA1266(Y)	VS2SA1266-Y-1	NTE290A	ECG290A	SK9132
	2SA1015(Y)	VS2SA1015Y/-1	NTE290A	ECG290A	SK9132
Q451	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q601	2SC2655(Y)	VS2SC2655Y/-1	NTE293	ECG293	SK3849
# Q602	2SD1554	VS2SD1554//1E	NTE2331	ECG2331	SK9422
Q603	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q730	2SC2002(K)	VS2SC2002-K1A	NTE85	ECG85	SK3449
# Q751	2SC1983	VS2SC1983//2	NTE56	ECG56	SK3929
	2SD667D	VS2SD667D//1	NTE382	ECG382	SK9137
Q752	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q753	2SA1013	VS2SA1013//1E	NTE32	ECG32	SK3867A
Q852, 54, 56	2SC2229(O)	VS2SC2229O/1E	NTE399	ECG399	SK3244
Q881	2SA1266(Y)	VS2SA1266-Y-1	NTE290A	ECG290A	SK9132
	2SA1015(Y)	VS2SA1015Y/-1	NTE290A	ECG290A	SK9132
Q2001, 02	2SC3198(Y)	VS2SC3198-Y-1	NTE85	ECG85	SK3124A
	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A

For SAFETY use only equivalent replacement part.

PARTS LIST continued

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C52	22µF 10% 16V Tantalum	VCSATA1CE226K
C515	2.2µF 10% 16V Tantalum	VCSATA1CE225K
# C607	.0081 3% 1.6kV	VCFFPD3CA812H
	.0081 5% 1.6kV	VCFFPD3CA812J
# C653	10µF 20% 16V	VCEAGA1CW106M
# C701	.047 20% 275VAC	-
	.047 +80% -20% 125VAC	RC-FZ004SGEZZ
	.047 +80% -20% 125VAC	RC-QZ005SCEZZ
	.047 +80% -20% 125VAC	RC-FZ002SCEZZ
	.047 +80% -20% 125VAC	RC-FZ0279CEZZ
	.047 +80% -20% 125VAC	RC-FZ027CUMZZ
# C705	470µF +80% -20% 200V	RC-EZ0422CEZZ
	470µF +80% -20% 200V	RC-EZ0522CEZZ
	560µF +80% -20% 200V	RC-EZ0523CEZZ
	620µF +80% -20% 200V	RC-EZ0423CEZZ
# C706	.0033 +80% -20% 250VAC	RC-KZ0311CEZZ
	.0033 +80% -20% 125VAC	RC-KZ0030CEZZ
# C712	100µF +80% -20% 160V	RC-EZ0378CEZZ
# C714	.01 10% 50V	VCQYTA1HM103K
	.01 10% 50V	RC-QZA103TAYK
C854	.01 +80% -20% 250VAC	-
	.01 +80% -20% 1.4kV	RC-KZ0016CEZZ

For SAFETY use only equivalent replacement part.

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# PR701	11.6 Cold PTC	RMPTP0026CEZZ	-
# R51	22K 5% 2W	VRS-VV3DB223J	2W322
# R53	150 5% 2W	VRS-VV3DB151J	2W151
# R106	270 5% 1W	VRS-VV3AB271J	1W127
# R451	10K 5% 1/2W	VRS-SV2HC103J	HW310
# R453	2200 10% 1/2W	VRC-MA2HG222K	HW222
	R506	68K 2% 1/8W	VRD-RA2BE683G
	R507	100K 2% 1/8W	VRD-RA2BE104G
# R511	1 5% 1/2W	VRN-SV2HB1R0J	HW1D0
	R516	15K 2% 1/8W	VRD-RA2BE153G
	R517	12K 2% 1/8W	VRD-RA2BE123G
# R603	18 5% 3W	VRS-SV3LB180J	3W018
# R612	22 5% 1W	VRN-VV3ABR22J	1WD22
# R651	1 5% 1/2W	VRD-RM2HD1R0J	HW1D0
# R653	1000 5% 1/8W	VRD-MN2BE102J	EW210
# R654	18K 5% 1/8W	VRD-MN2BE183J	EW318
# R655	100K 5% 1/8W	VRD-MN2BE104J	EW410
# R656	6800 5% 1W	VRS-VV3AB682J	1W268
# R701	2.7M 10% 1/2W	VRC-UA2HG275K	HW527
	2.7M 10% 1/2W	RR-DZ0047CEZZ	HW527
# R702	1.5 10% 5W Wirewound	VRW-KQ3HC1R5K	5W1D5
# R705	100K 2% 1/4W	VRD-RA2EE104G	QW410
# R706	1000 119V Adjust	RVR-M4328CEZZ	-
# R707	150K 5% 1/8W	VRD-MN2BE154J	EW415

For SAFETY use only equivalent replacement part.

CONTROLS & RESISTORS continued

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R708	5600 2% 1/4W	VRD-RA2EE562G	QW256
# R713	33 5% 1/2W	VRD-RM2HD330J	HW033
# R714	10 5% 1/2W	VRS-SV2HC100J	HW010
# R715	150 5% 1/2W	VRS-SV2HC151J	HW115
# R716	330 10% 5W Wirewound	VRW-KQ3HC331K	5W133
# R717	3.3 10% 5W	VRW-KQ3HC3R3K	5W3D3
# R718	820K 5% 1/2W	VRD-RM2HD824J	HW482
# R720	3.3 5% 1W	VRN-VV3AB3R3J	1W3D3
# R723	1 5% 2W	VRN-VV3DB1R0J	2W1D0
# R730	27 5% 2W	VRS-VV3DB270J	2W027
# R732	150 5% 2W	VRS-VV3DB151J	2W115
# R733	180 5% 2W	VRS-VV3DB181J	2W118
# R755	39 5% 1W	VRS-VV3AB390J	1W039
# R758	15 5% 1/2W	VRS-SV2HC150J	HW015
# R857, 65, 73	12K 5% 1W	VRS-VV3AB123J	1W312

For SAFETY use only equivalent replacement part.

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY601 (4)	Yoke Horiz 3.3mH Vert 30mH	RCiLH0120PEZZ
# DY601 (1)	Yoke	RCiLH0121PEZZ
# DY601 (2)	Yoke	RCiLH0122PEZZ
# DY601 (3)	Yoke	RCiLH0119PEZZ
	FB602, 03 Ferrite Bead	RBLN-0037CEZZ
	FB701 Ferrite Bead	RBLN-0037CEZZ
	L205 1.8µH	VP-XF1R8K0000
	L206 VCO	RCiLi0612CEZZ
		RCiLi0588CEZZ
	L301 8.2µH	VP-XF8R2K0000
	L302 SIF Detector	RCiLi0613CEZZ
		RCiLi0605CEZZ
	L401 12µH	VP-XF120K0000
	L402 3.3µH	VP-XF3R3K0000
	L403 10µH	VP-XF100K0000
	L404 8.2µH	VP-XF8R2K0000
	L406, 07 68µH	VP-XF680K0000
	L408 10µH	VP-XF100K0000
# L701	Line Filter	RCiLF0235CEZZ
	Line Filter	RCiLF0087CEZZ
	Line Filter	RCiLF0289CEZZ
# L702	Degaussing	RCiLG0386PEZZ
	L851 150µH	VP-DF151K0000
	L2001 Oscillator	RCiLB0131CEZZ
# T601	Horizontal Driver	RTRNZ0168CEZZ
# T602 (5)	Horizontal Output	RTRNF0123PEZZ
# T701	Power	RTRNP0518CEZZ

For SAFETY use only equivalent replacement part.

- (1) Used in models JSJ-12303C and JSJ-12304C.
(2) Used in models JSJ-12303E and JSJ-12304E.
(3) Used in models JSJ-12303F and JSJ-12304F.
(4) Used in models JSJ-12303G and JSJ-12304G.
(5) Focus and screen controls are part of T602.

CABINET PARTS

Item	Mfr. Part No.
MODELS JSJ-12303C/E/F/G	
Cabinet Front Assembly	CCABA2351WEV0
Cabinet Rear	GCABB2279PEKA
Pushbutton Assembly	JBTN-0235PESA
MODELS JSJ-12304C/E/F/G	
Cabinet Front Assembly	CCABA2351WEV2
Cabinet Rear	GCABB2279PEKB
Pushbutton Assembly	JBTN-0235PESB
REMOTE TRANSMITTER	
Battery Cover	GCOVA0067PEKA



Created with pride by the employees
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MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
CF301	Filter	RFiLC0029TAZZ	4.5MHz
CF302	Filter	RFiLC0267CEZZ	4.5MHz
	Filter	RFiLC0007PEZZ	4.5MHz
CF401	Trap	RFiLC0013CEZZ	4.5MHz
	Trap	RFiLC0004PEZZ	4.5MHz
CF631	Crystal	RFiLA0034CEZZ	503kHz
CF2002	Filter	RFiLC0121GEZZ	-
# F701	Fuse	QFS-B4023CEZZ	4Amp, 125VAC, Slow Blow
	Fuse	QFS-B4021GEZZ	4Amp, 125VAC, Slow Blow
FH701	Fuse Holder	QFSHD1013CEZZ	For F701
	Fuse Holder	QFSHD1009CEZZ	For F701
FH702	Fuse Holder	QFSHD1014CEZZ	For F701
	Fuse Holder	QFSHD1010CEZZ	
# P703 (5)	Line Cord	QACCD3037CESB	AC, Polarized
# P703 (6)	Line Cord	QACCD3038CESA	AC, Polarized
# P703 (6)	Line Cord	QACCD3037CESA	AC, Polarized
RMC2601	Receiver	RRMCU0224CEZZ	Remote
	Receiver	PRMCU0216CEZZ	Remote
# RY701	Relay	RRLYU0036CEZZ	Power
	Relay	RRLYU0028CEZZ	Power
S2501	Switch	QSW-K0079GEZZ	Power
S2502	Switch	QSW-K0079GEZZ	Volume Down
S2503	Switch	QSW-K0079GEZZ	Volume Up
S2504	Switch	QSW-K0079GEZZ	Channel Down
S2505	Switch	QSW-K0079GEZZ	Channel Up
SC851	Socket	QSOCV0839CEZZ	CRT
	Socket	QSOCV0829CEZZ	CRT
SF201	Filter	RFiLC0345CEZZ	SAW
SP1	Speaker	VSP0080P-H28A	3", 8 Ohms, 2W
	Speaker	VSP0080PBK58A	-
	Speaker	VSP0080PBL08A	-
# TU51 (7)(8)	Tuner	VTUVTSR6UF78/	UHF/VHF, VTSR6UF78
# V101 (4)	CRT	VB37GDA86X/1E	37GDA86X
# V101 (1)	CRT	VB370BVBK1U-S	CPJ370BVBK1U
# V101 (2)	CRT	VB34JLL40X/*S	A34JLL40X
# V101 (3)	CRT	VB34KPU02X/*S	A34KPU02XX
X801	Crystal	RCRSB0001PEZZ	3.58MHz
	Crystal	RCRSB0205CEZZ	3.58MHz
	Adapter	RUNTK0393CEZZ	Antenna
	Antenna	QANTR0018PEZZ	Rod
	Antenna	QANTR0022PEZZ	Rod
	Magnet	PMAGF3022CEZZ	Purity/Convergence
	Magnet	PMAGF3041CEZZ	Purity/Convergence
	PC Board (7)	DUNTK9010WEV1	CRT
	PC Board (7)	DUNTK9009WEV8	Main
	Transmitter (6)	RRMCG1277CESB	Remote
	Transmitter (5)	RRMCG1277CESA	Remote
	Wedges	PSPAG0004PEZZ	Yoke Positioning (3 Used)

For SAFETY use only equivalent replacement part.

- (1) Used in models JSJ-12303C and JSJ-12304C.
(2) Used in models JSJ-12303E and JSJ-12304E.
(3) Used in models JSJ-12303F and JSJ-12304F.
(4) Used in models JSJ-12303G and JSJ-12304G.
(5) Used in models JSJ-12303C/E/F/G.
(6) Used in models JSJ-12304C/E/F/G.
(7) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.
(8) Contact TNI Electronics for replacement; order by part number on tuner.