

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 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.

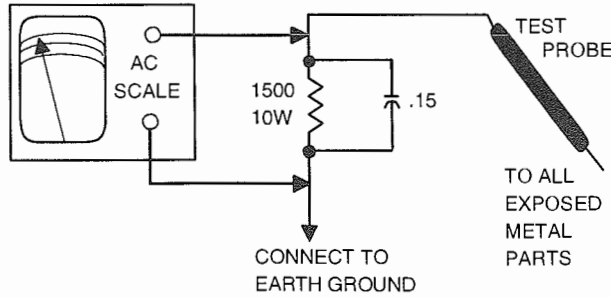
SAFETY CHECKS -- FIRE AND SHOCK HAZARD

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 .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

Set all customer controls for normal picture. Check for 11.4V at TP653. Using an external power supply, apply 13.8V to TP653. The receiver should shut down. If the receiver fails to shut down, the high voltage shutdown circuit requires repair. To return to normal operation, remove AC power and momentarily place a short between TP651 and TP652. Restore AC power and check receiver for proper operation.

TEST JIG HOOKUP				
Function	Chek-A-Color Adapter No.	PC Board Plug No.	Pin	Color
CRT	B239	P601	1	Red
Yoke	D4137		3	Blue
Yoke Setting	YP1		4	Yellow
Comments	Focus Tap		5	Green

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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PHOTOFACT® Technical Service Data

SET 4217

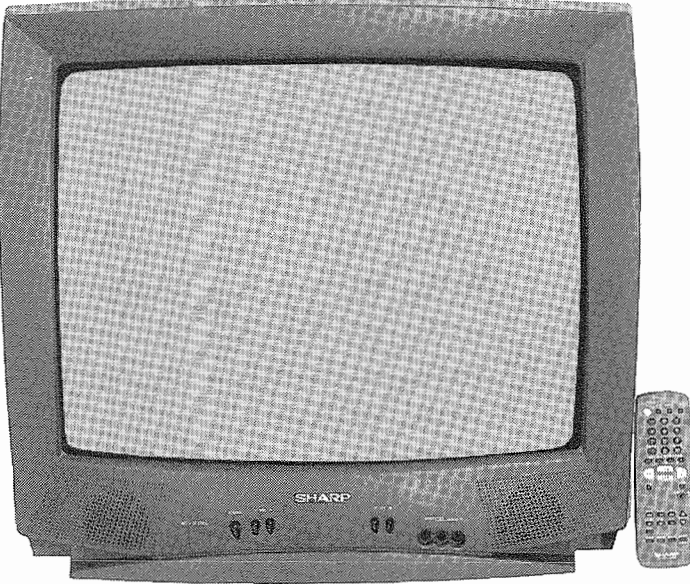
MODELS CL25S18, 25L-S100/S180

SHARP

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SHARP  
Models CL25S18, 25L-S100/S180



Model 25L-S100  
Essential coverage  
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

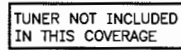


HOWARD W. SAMS & COMPANY

NOVEMBER 1999 SET 4217

For Supplier Address,  
See PHOTOFACT Annual Index

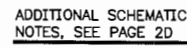
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ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 2D

A PHOTOFACT STANDARD NOTATION SCHEMATIC  
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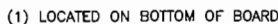
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### A PHOTOFACT STANDARD NOTATION SCHEMATIC

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(1) LOCATED ON BOTTOM OF BOARD



ACC701	A17	C706	C206	C3019	B29	IC3001	A30	R404	B6	R801	C12	R2043	C26
C51	C1	C707	B21	C3020	C29	J1001	C5	R405	B6	R802	A12	R2044	C27
C53	C2	C708	B19	C3021	B29	J1002	B29	R406	B6	R803	A12	R2045	C27
C54	C1	C709	C19	C3022	B29	J1003	C29	R407	B6	R804	A12	R2046	A26
C55	A1	C710	C20	CF301	A3	L201	B2	R408	B7	R805	A12	R2047	B27
C103	D19	C717	A19	CF401	B5	L202	A3	R409	D11	R806	B9	R2048	B27
C201	B1	C718	A20	CF631	D3	L301	B4	R410	B12	R807	B9	R2060	B27
C202	B2	C722	B18	CF2040	E25	L302	A6	R411	B3	R808	B9	R2061	B27
C203	B2	C723	B24	D51	C1	L401	B5	R412	D2	R851	A14	R2062	C25
C204	C3	C725	A24	D52	C2	L402	B6	R413	A13	R852	A14	R2063	D26
C205	B3	C726	B22	D53	B1	L403	B6	R414	C13	R853	A14	R2064	D25
C206	D24	C727	B22	D103	D19	L404	B6	R415	B13	R855	A15	R2067	E27
C207	D24	C729	C22	D401	D11	L421	A10	R421	A9	R856	A15	R2068	D27
C208	C11	C730	B22	D402	D11	L672	D7	R422	A10	R857	A15	R2070	D27
C209	B11	C731	C23	D454	E11	L701	A17	R423	A10	R858	A16	R2071	E27
C210	B2	C732	C22	D455	D12	L702	A18	R424	A10	R859	C14	R2101	B27
C301	A3	C741	B22	D456	E12	L703	A18	R451	E11	R860	C14	R2102	B27
C302	B4	C742	B22	D457	E12	L705	B23	R452	E11	R861	C14	R2201	C26
C303	A6	C753	D19	D458	E11	L729	C23	R453	E11	R863	C15	R2202	C25
C307	A5	C755	C23	D459	E11	L851	E24	R454	E11	R864	C15	R2203	C25
C308	B6	C772	D18	D501	D23	L2040	E26	R456	D12	R865	C15	R2211	C26
C309	C22	C801	C12	D510	D4	PR701	A18	R458	E12	R866	C15	R2212	C25
C313	C24	C802	C12	D621	E1	Q201	B1	R501	D22	R867	B14	R2213	C25
C351	B31	C803	B13	D622	E22	Q301	A7	R510	D4	R868	B14	R2401	C27
C353	A30	C804	B11	D651	E2	Q401	B4	R511	D5	R869	B14	R2402	B27
C354	A31	C805	B12	D652	D2	Q402	B5	R512	D5	R871	B15	R2403	B27
C355	B30	C806	B12	D653	D2	Q403	B6	R513	D5	R872	B15	R2404	D27
C356	C31	C807	B9	D654	D2	Q421	A10	R514	D4	R873	B15	R2501	B25
C358	B24	C808	B9	D701	A19	Q451	E12	R519	D6	R874	B15	R2503	B25
C359	B31	C851	B14	D702	A19	Q601	E4	R520	D6	R881	C13	R2504	B25
C401	B6	C852	C14	D703	A19	Q602	E6	R523	D6	R882	C13	R2505	B25
C402	B6	C853	B14	D704	A19	Q751	E17	R524	D7	R883	C14	R2506	B25
C403	B7	C854	D16	D705	C19	Q851	A14	R526	D6	R884	C14	R2507	B26
C404	C23	C883	C14	D706	C19	Q852	A15	R551	D4	R895	C15	R2508	B25
C405	C12	C901	C31	D707	C19	Q853	C14	R552	D3	R901	C22	R2509	B25
C406	C12	C902	C24	D708	B20	Q854	C15	R553	D3	R903	C31	R2601	A25
C408	B13	C903	E31	D709	A22	Q855	B14	R554	D4	R904	C31	R3001	A29
C409	B3	C908	A30	D712	B22	Q856	B15	R604	E				

**MODELS CL25S18, 25L-S100/S180**

**F**



## 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 26kV to 27.5kV.

### B+ CHECK

Tune in a picture. Connect voltmeter to the cathode of D709 and ground. Check for 120V ±1V.

### COLOR PURITY / CONVERGENCE

The CRT and yoke are bonded. Adjustment is not recommended.

### ENTERING SERVICE MODE

Service mode adjustments are required when IC201 and IC2101 are replaced. If CRT is replaced perform only adjustments relating to the picture tube. If IC3001 is replaced perform adjustments relating to audio only.

Turn on receiver and use reset function in the video adjustment menu to ensure that customer controls are in their proper reset position. Remove AC power. Press and hold the channel up and volume up buttons on the receiver while restoring AC power. The service mode will now be displayed.

When in the service mode a letter S with a number is displayed in the upper left part of the screen and a data number is displayed in the upper center part of the screen. The channel number is displayed in the upper right part of the screen. The S number is the service number and it is changed by pressing the channel up / down buttons on the receiver or remote transmitter. The on-set data value 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

Turn off the power or unplug the receiver to exit service mode.

### RESETTING TO INITIAL VALUES

The initial values are written to IC2101 by entering the service mode and pressing the channel up and down buttons on the receiver for more than two seconds.

### 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.

### CAPTION POSITION

Enter the service mode and select service number S18. A black text box appears on screen. Adjust data value to center text box.

### 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 for 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 S04 and adjust the data value to obtain .26V 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.

### MTS ADJUSTMENTS

#### MTS Level

Connect an MTS/TV stereo generator to the antenna input jack. Select pilot, 300Hz audio frequency, and right modulating signal. Enter the service mode and select M01. Connect an oscilloscope to pin 39 of IC3001. Adjust the data value for 1.4Vp-p.

#### Stereo VCO

Disconnect the antenna. Connect a 100µF 50V electrolytic capacitor to pin 14 of IC3001 and ground. Enter the service mode and select M02. Connect a frequency counter to pin 39 of IC3001. Adjust the data value for 62.94kHz ± 750Hz.

#### Separation

Connect an MTS/TV stereo generator to the antenna input jack. Select pilot, 300Hz audio frequency, and right modulating signal. Enter the service mode and select M04. Connect an oscilloscope to pin 40 of IC3001. Adjust the data value for minimum amplitude of the waveform. Select 8kHz audio frequency on the generator. Select M05 and adjust the data value for minimum amplitude of the waveform.

#### Filter

Connect an MTS/TV stereo generator to the antenna input jack. Select pilot, 300Hz audio frequency, and L-R modulating signal. Enter the service, select M03 and set data value to 00. Increase the data value until OK appears on-screen. Note the data value. Increase the data value until OK disappears from the screen. Note the data value. Set the data value to the average of the noted data values.

### SERVICE MODE ADJUSTMENT CHART

Service No.	Service Adjustment	Data Value Range	Initial Data Value	On-Set Data Value	Notes
S01	Sub Picture	00-7F	55	46	Set brightness to minimum, picture to maximum. Adjust for normal contrast range.
S02	Sub Tint	00-7F	46	3C	Adjust for normal flesh tones.
S03	Sub Color	00-7F	32	34	Adjust for normal color level.
S04	Sub Brightness	00-7F	40	50	Adjust for normal brightness level.
S05	Sharpness	00-3F	24	28	Adjust for proper sharpness of screen. Center of range is 28.
S06	Vertical Phase	00-07	00	00	Must be set to 00.
S07	Horizontal Phase	00-1F	12	13	Adjust for best horizontal centering on screen.
S08	RF AGC	00-3F	23	2C	00 produces black raster.
S09	Vertical Size	00-3F	20	1B	Adjust for proper vertical size with best linearity.
S10	VCO	00-7F	2C	2A	-
S11	Red Cutoff	00-FF	00	0E	-
S12	Green Cutoff	00-FF	00	09	-
S13	Blue Cutoff	00-FF	00	00	-
S14	Green Gain	00-FF	7F	6A	-
S15	Blue Gain	00-FF	7F	7C	-
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. Center of range is 20.
S18	Caption Position	00-7F	17	20	Adjust to center the black box on the screen.
S19	Y-Mute	00, 01, 03	00	00	00= Normal, 01= No Y, and 03= Vertical Collapse.
S20	Energy Save Offset	00-3F	20	23	Must be set to 23.
S21	D. D. E. Offset	00-1F	03	03	Must be set to 03.
S22	OSD Setup	00-03	00	00	Must be set to 00.
S23	Tuner Setup	00, 01	00	00	Must be set to 00.
OP	Option (Set to each model)	00-FF	30	26	Use 26 for model 25L-S100, 3E for models CL25S18 and 25L-S180.
M01	MTS Level	00-0F	0A	06	-
M02	Stereo VCO	00-3F	20	23	-
M03	Filter	00-3F	1C	1D	-
M04	Low Separation	00-3F	20	2B	-
M05	High Separation	00-3F	1B	0D	-

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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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)
- Terrell & Nobis (TNI Electronics)
  - Sencore, Inc.

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

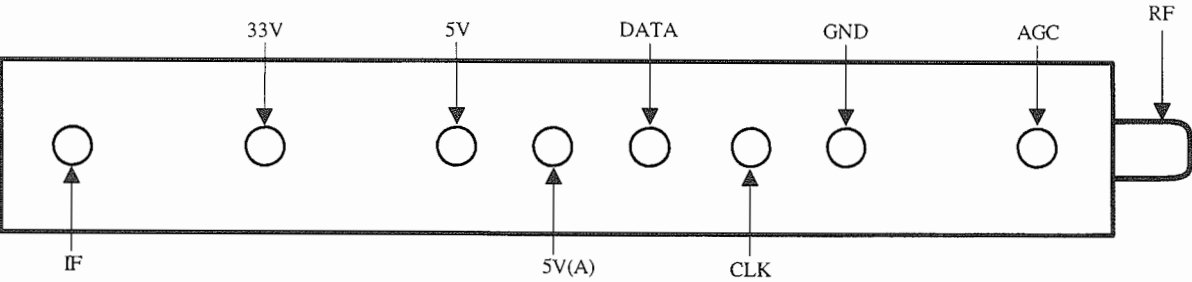
TUNER INFORMATION

TUNER VOLTAGE CHART

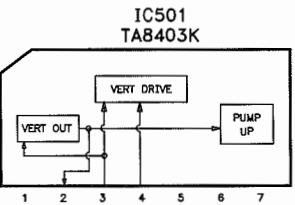
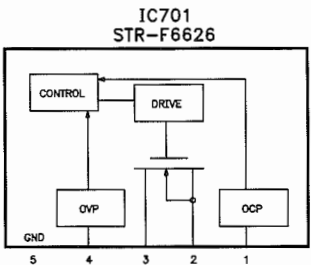
Pin	VHF Low Band	VHF High Band	UHF Band
AGC	4.4V	4.1V	3.3V
GND	0V	0V	0V
CLK	4.6V	4.6V	4.6V
DATA	4.6V	4.6V	4.6V
5V(A)	5.0V	5.0V	5.0V
5V	5.1V	5.1V	5.1V
33V	31.6V	31.6V	31.6V
IF	0V	0V	0V

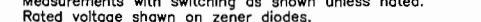
NOTE: VHF Low Band voltages taken on channel 2.  
VHF High Band voltages taken on channel 7.  
UHF Band voltages taken on channel 14.

TUNER TERMINAL GUIDE



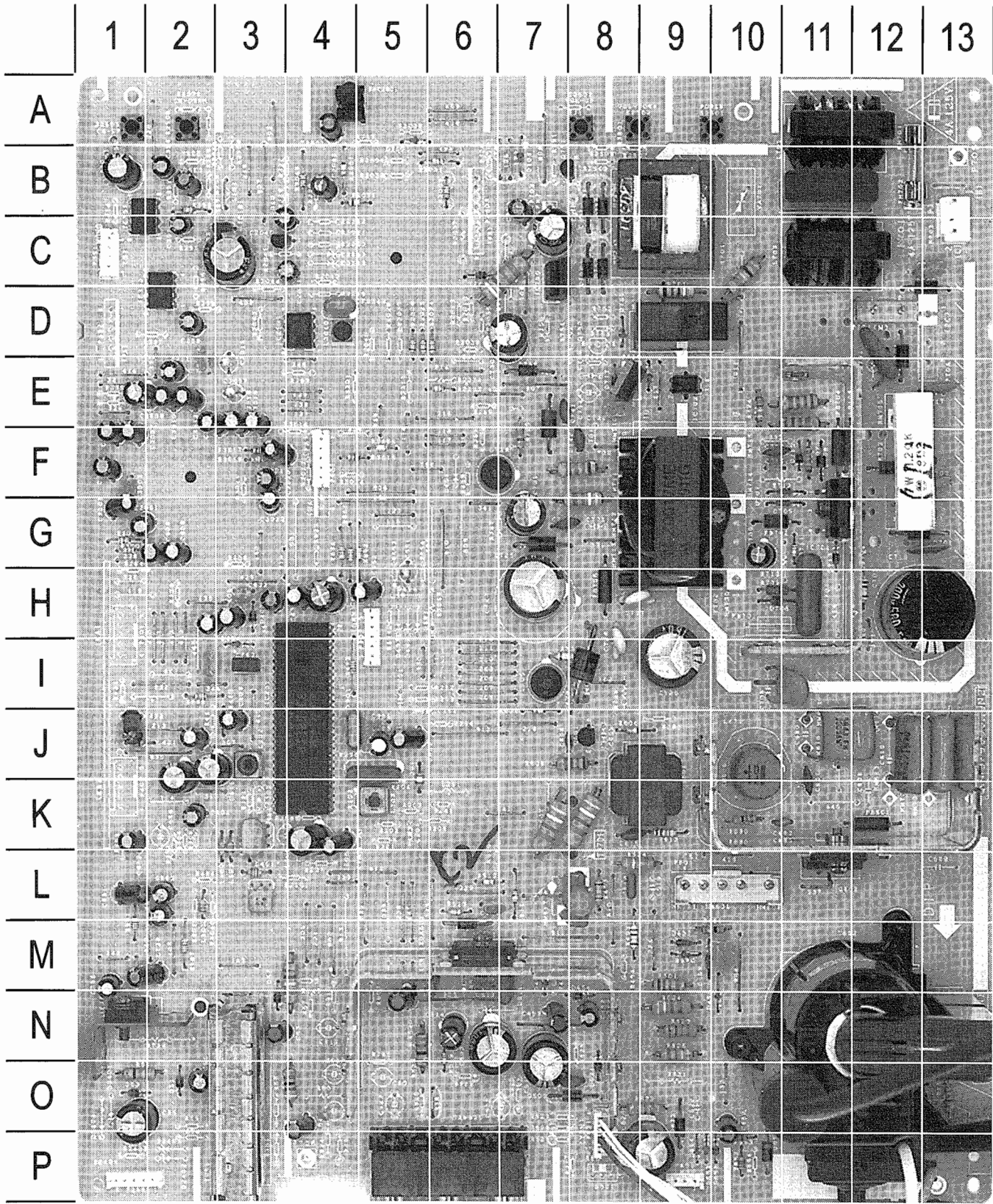
IC FUNCTIONS







MAIN BOARD - TOP VIEW



MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE									
C51	O2	C708	F10	D402	H3	L302	K5	R701	D9
C53	N3	C709	G10	D454	N8	L401	L3	R702	F12
C54	P4	C710	F10	D455	M7	L402	K3	R704	H12
C55	O1	C717	E13	D456	M9	L403	K3	R705	E11
C103	C3	C718	G13	D457	M9	L404	K3	R706	E11
C205	K4	C722	E8	D458	M9	L421	J1	R707	F11
C206	K4	C723	H7	D459	N10	L672	J10	R709	H10
C208	J5	C725	I9	D501	O8	L701	A11	R710	H11
C309	J2	C726	H8	D510	M6	L702	C11	R711	G11
C313	L2	C727	H8	D621	O8	L705	I7	R715	C10
C351	C2	C729	M1	D622	O9	L729	F6	R723	G8
C354	B2	C730	D7	D651	P10	L2040	D4	R724	E10
C356	B2	C731	G7	D652	P10	P351	C1	R725	F7
C358	B1	C732	G7	D653	P9	P601	L10	R727	M2
C359	D2	C741	E7	D654	P9	P621	P8	R728	C7
C404	K2	C742	F8	D701	G12	P651	P9	R734	I7
C405	H3	C753	B7	D702	C13	P701	D12	R737	F8
C406	H2	C755	M1	D703	E12	P703	B13	R808	I2
C408	J3	C772	C7	D704	D12	P901	F4	R951	M1
C409	J2	C801	J5	D705	G11	P903	I5	R961	G4
C410	I2	C802	J5	D706	H10	P2401	P2	R962	G5
C411	J2	C908	G2	D707	F11	PR701	D12	R2001	B6
C422	J1	C909	G2	D708	F11	Q601	J8	R2009	B6
C451	M10	C951	L1	D709	I8	Q602	L11	R2024	D6
C452	N8	C952	K1	D712	E7	Q751	B7	R2025	D5
C453	N7	C955	L2	D713	G11	R51	O1	R2026	D5
C501	O8	C2040	C3	D715	F11	R52	M4	R2032	E6
C502	N6	C2041	C4	D716	E9	R53	O4	R2046	B4
C510	M7	C2062	B4	D717	E8	R353	B2	R2064	F5
C511	M6	C2601	A4	D725	G7	R410	J3	R2071	B4
C512	L6	C3001	G1	D751	B8	R412	I4	R2601	B4
C513	M6	C3003	F1	D752	C8	R451	M10	R3001	G1
C514	N6	C3004	F1	D753	C8	R452	M8	R3002	G1
C515	N5	C3005	G1	D754	B8	R453	L8	R3015	F4
C516	M5	C3006	F1	D755	D8	R501	M9	R3017	F3
C517	O7	C3007	F1	D756	E7	R511	L7	R3018	F3
C518	L8	C3009	E1	D2001	A5	R512	L6	RMC2601	A4
C551	H5	C3010	E2	D2011	C6	R513	L6	RY701	D8
C552	H5	C3011	E2	F701	B12	R519	N6	S2501	A10
C606	J7	C3012	E2	FB601	K12	R523	N5	S2502	A9
C607	K11	C3014	E2	FB702	G10	R524	L8	S2503	A8
C610	J12	C3015	E3	FB704	F11	R604	K8	S2504	A2
C611	J13	C3016	E2	FB706	H8	R605	J7	S2505	A1
C615	K8	C3017	E3	IC101	C3	R606	J8	SF201	J5
C623	P9	C3018	E3	IC201	K4	R607	K7	T601	J9
C631	H4	C3019	E3	IC351	C2	R609	J8	T602	O12
C632	H3	C3020	F3	IC352	D2	R610	K9	T701	B9
C633	H4	C3021	F3	IC501	M6	R611	L8	T702	G9
C652	O10	C3022	G3	IC701	F11	R622	O9	TAN921	P6
C653	H3	CF301	K3	IC702	E9	R623	N9	TP651	P9
C680	J11	CF401	L3	IC703	E8	R624	N9	TP652	P9
C682	K11	CF631	I3	IC750	C7	R626	N9	TP653	P9
C701	B11	CF2040	D4	IC751	N1	R627	P8	TU51	P3
C702	F13	D51	O2	IC2040	C3	R634	G4	X801	J4
C703	C13	D52	N3	IC2101	D4	R651	O13		
C705	H13	D53	O1	L201	J5	R652	P10		
C706	I11	D103	B7	L202	J3	R653	P10		
C707	H11	D401	I3	L301	L2	R690	K10		

PARTS LIST

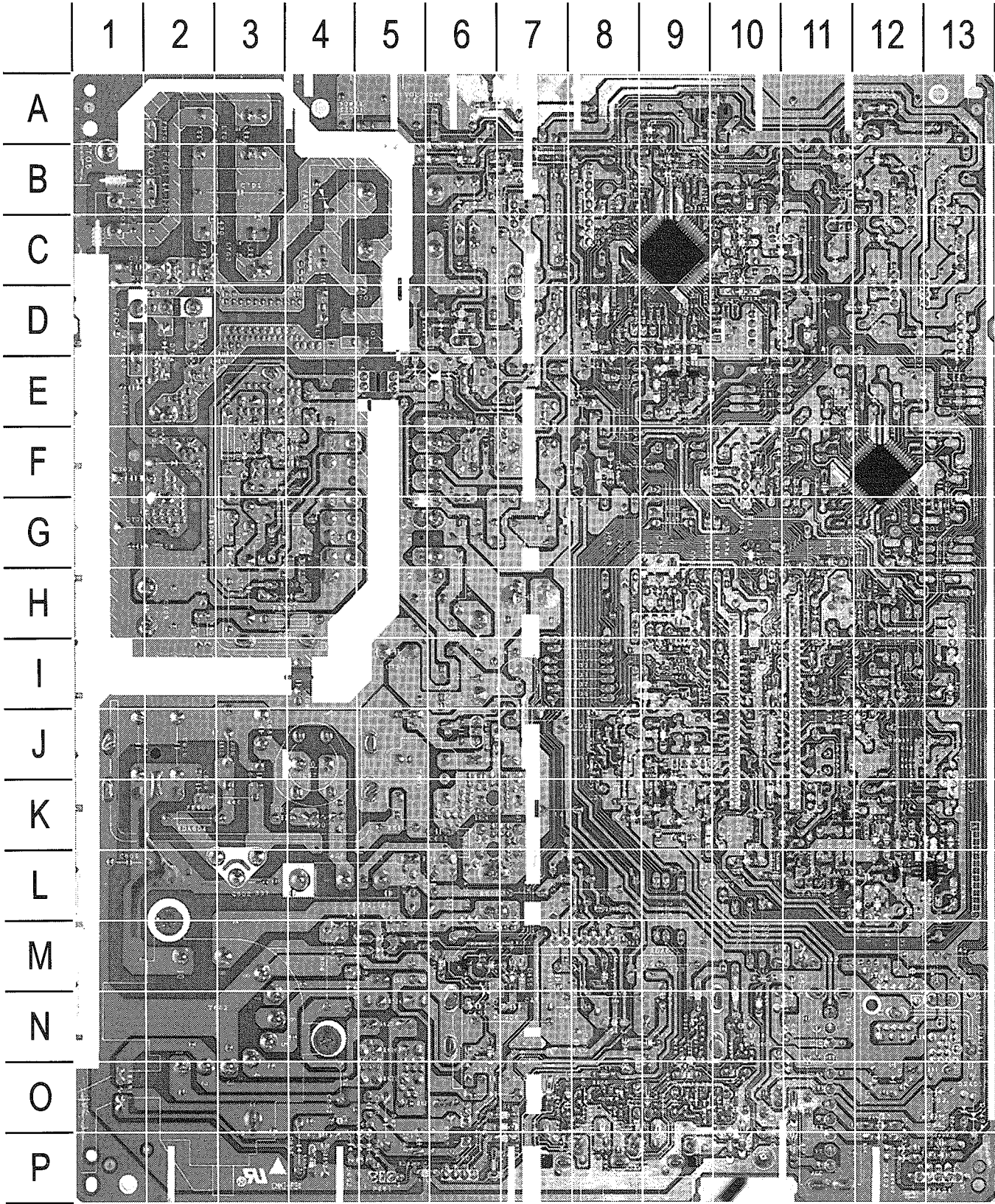
SEMICONDUCTORS				
(Select the replacement that gives the best results.)				
Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.
D51	-	RH-EX0611GEZZ	ECG135A	-
D52	-	RH-EX0673GEZZ	-	-
D53	-	RH-EX0611GEZZ	ECG135A	-
D103	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
D401	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
D402	-	RH-EX0604GEZZ	-	-
D454	-	RH-EX0611GEZZ	ECG135A	-
D455, 56	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
D457, 58	-	RH-EX0217CEZZ	ECG5023A	NTE5023A
D459	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
# D501	-	RH-DX0131CEZZ	ECG552	NTE552
# D510	-	RH-DX0441CEZZ	-	-
D621	-	RH-EX0631GEZZ	-	-
# D622, 51	-	RH-DX0131CEZZ	ECG552	NTE552
# D652	-	RH-EX1313CEZZ	-	-
# D653, 54	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
# D701 Thru				
# D704	-	RH-DX0154CEZZ	ECG552	NTE552
D705	1SS82	VHD1SS82///1A	ECG552	NTE552
D706	-	RH-DX0066GEZZ	-	-
D707	1SS82	VHD1SS82///1A	ECG552	NTE552
D708	-	RH-DX0066GEZZ	-	-
# D709	-	RH-DX0229CEZZ	ECG506	NTE506
# D712	-	RH-DX0407CEZZ	-	-
D713	-	RH-EX0673GEZZ	-	-
D715	-	RH-EX0610GEZZ	-	-
D716	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
D717	-	RH-EX0650GEZZ	-	-
# D725	-	RH-DX0407CEZZ	-	-
# D751 Thru				
# D754	-	RH-DX0441CEZZ	-	-
D755	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
# D756	-	RH-DX0441CEZZ	-	-
D881, 82, 84	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0045GEZZ	ECG519	NTE519
D2001	1SS119	VHD1SS119//-1	ECG519	NTE519
	-	RH-DX0475CEZZ	-	-
D2011	-	RH-EX0611GEZZ	ECG135A	-
IC101	KIA78S05P	VHiKA78S05P-1	-	-
# IC201	TA1268AN	RH-iX3253CEZZ	-	-
IC351, 52	AN7511	VHiAN7511//-1	-	-
# IC501	TA8403K	VHiTA8403K/-1	-	-
# IC701	STR-F6626	VHiSTRF66261E	-	-
# IC702	PC817	RH-FX0034CEZZ	ECG3098	NTE3098
# For SAFETY use only equivalent replacement part.				

SEMICONDUCTORS continued				
(Select the replacement that gives the best results.)				
Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.
# IC703	SE120N	VHiSE120N//-1	-	-
# IC750	KIA7809PI	VHiKA7809Pi-1	ECG1966	NTE1966
# IC751	KIA7809PI	VHiKA7809Pi-1	ECG1966	NTE1966
IC951	MM1111XFBE	VHiMM1111XF1E	-	-
	MM1111XF	-	-	-
IC2001	TMPA8701CMF142	RH-iX3256CEZZ	-	-
IC2040	KIA7045P	VHiKiA7045P-1	-	-
IC2101	ST24C01-6	-	-	-
	M24C01B	-	-	-
	M24C01-BN6	VHiM24C01B/-1	-	-
IC3001	CXA2074Q	VHiCXA2074Q-1	-	-
Q201	2SC2735	VS2SC2735//1E	ECG2402	NTE2402
Q301	2SD601AR	VS2SD601AR/-1	ECG2408	NTE2408
	2SC2412	VS2SC2412-C-1	ECG2408	NTE2408
Q401	2SD601AR	VS2SD601AR/-1	ECG2408	NTE2408
	2SC2412	VS2SC2412-C-1	ECG2408	NTE2408
Q402	2SB709AR	VS2SB709AR/-1	ECG2409	NTE2409
Q403	2SD601AR	VS2SD601AR/-1	ECG2408	NTE2408
	2SC2412	VS2SC2412-C-1	ECG2408	NTE2408
Q421, 51	2SB709AR	VS2SB709AR/-1	ECG2409	NTE2409
Q601	2SC2482	VS2SC2482//-1	ECG399	NTE399
# Q602	2SD2539	VS2SD2539//1E	ECG2353	-
Q751	2SC3198(Y)	VS2SC3198-Y-1	ECG85	NTE85
Q851	2SC3198(Y)	VS2SC3198-Y-1	ECG85	NTE85
Q852	2SC3789	VS2SC3789//2E	ECG157	NTE157
Q853	2SC3198(Y)	VS2SC3198-Y-1	ECG85	NTE85
Q854	2SC3789	VS2SC3789//2E	ECG157	NTE157
Q855	2SC3198(Y)	VS2SC3198-Y-1	ECG85	NTE85
Q856	2SC3789	VS2SC3789//2E	ECG157	NTE157
Q881	2SA1266	VS2SA1266-Y-1	ECG290A	NTE290A
Q901 Thru				
Q904 (1)	2SD601AR	VS2SD601AR/-1	ECG2408	NTE2408
	2SC2412	VS2SC2412-C-1	ECG2408	NTE2408
Q2060	2SD601AR	VS2SD601AR/-1	ECG2408	NTE2408
	2SC2412	VS2SC2412-C-1	ECG2408	NTE2408
Q2201, 11	2SD601AR	VS2SD601AR/-1	ECG2408	NTE2408
	2SC2412	VS2SC2412-C-1	ECG2408	NTE2408
# For SAFETY use only equivalent replacement part.				
(1) Used in models CL25S18 and 25L-S180.				

COILS & TRANSFORMERS			
Item No.	Function/Rating		Mfr. Part No.
# DY601 (1)	Yoke	Horiz 1.15mH Vert 19.0mH	RCiLH0117MEZZ
	Yoke		RCiLH0118MEZZ
FB601	Ferrite Bead		RBLN-0047CEZZ
FB702	Ferrite Bead		RBLN-0036CEZZ
FB704, 06	Ferrite Bead		RBLN-0037CEZZ
L201	1.2μH		VP-XF1R2K0000
L202	VCO		RCiLi0588CEZZ
L301	8.2μH		VP-XF8R2K0000
L302	SIF		RCiLi0613CEZZ
L401	6.8μH		VP-XF6R8K0000
L402	3.3μH		VP-XF3R3K0000
L403, 04	8.2μH		VP-XF8R2K0000
L421	68μH		VP-XF680K0000
L672	Horizontal Linearity		RCiLZ0101MEZZ
# L701, 02	Line Filter		RCiLF0025PEZZ
# L703	Degaussing		RCiLG0036MEZZ
L705	-		RCiLP0179CEZZ
L729	-		RCiLP0179CEZZ
L851	82μH		VP-MK820K0000
L2040	Oscillator		RCiLB0159CEZZ
T601	Horizontal Driver		RTRNZ0057PEZZ
# T602 (2)	Horizontal Output		RTRNF0037MEZZ
# T701	Power		RTRNP0543CEZZ
# T702	SMT		RTRNZ0017MEZZ
# For SAFETY use only equivalent replacement part.			
(1) Bonded to CRT.			
(2) Focus and screen controls are part of T602.			



MAIN BOARD - BOTTOM VIEW



MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

C201	K8	C3013	E12	R357	D12	R801	J9	R2068	B9
C202	K9	IC951	L13	R358	B12	R802	J10	R2070	B9
C203	J9	IC2001	C9	R401	J10	R803	I9	R2101	D10
C204	K9	IC3001	F12	R402	L11	R804	I9	R2102	D10
C207	J10	Q201	K9	R403	L11	R805	I9	R2201	E10
C209	J10	Q301	L12	R404	L12	R806	J10	R2202	E9
C210	J10	Q401	L11	R405	L12	R807	J11	R2203	M8
C301	K11	Q402	L11	R406	L11	R924	P10	R2211	E9
C302	L12	Q403	K11	R407	K11	R925	O7	R2212	E9
C303	K11	Q421	J12	R408	K12	R926	O9	R2213	E9
C307	K10	Q451	M6	R409	G11	R952	K13	R2401	P13
C308	K9	Q2060	E11	R411	J12	R2002	B9	R2402	P12
C353	B12	Q2201	E9	R413	I10	R2004	B9	R2403	P13
C355	D12	Q2211	E9	R414	I9	R2006	D8	R2404	P13
C401	K12	R54	P12	R415	I10	R2008	A9	R2501	B5
C402	L11	R55	P12	R421	I13	R2010	D8	R2503	A12
C403	I11	R56	O11	R422	J12	R2012	B8	R2504	B11
C412	J10	R57	N10	R423	J12	R2020	C8	R2505	A12
C413	I10	R201	K9	R424	J13	R2022	E8	R2506	B11
C414	I11	R202	K9	R454	M6	R2027	D9	R2507	B5
C421	J12	R203	K9	R456	B6	R2028	E9	R2508	B6
C803	J10	R204	J9	R458	M7	R2029	D9	R2509	B6
C804	I9	R205	J9	R510	L7	R2030	D8	R3003	G13
C805	I9	R206	K8	R514	M8	R2035	D8	R3004	G13
C806	I9	R207	L10	R520	N9	R2040	D9	R3005	F12
C807	J2	R208	J9	R526	O7	R2041	C10	R3007	E12
C808	J2	R301	L12	R551	I10	R2042	C10	R3008	E11
C954	L12	R302	K10	R552	I10	R2043	D10	R3010	E11
C2001	B8	R303	K9	R553	H9	R2044	D11	R3011	F11
C2002	B8	R304	L12	R554	H9	R2045	D10	R3012	F10
C2060	C10	R305	K12	R625	N6	R2047	C10	R3013	F10
C2061	E11	R306	K12	R631	I11	R2048	C10	R3014	F10
C2201	E9	R351	C12	R632	I10	R2060	C10	R3016	F10
C2211	E9	R352	B12	R633	G10	R2061	C10		
C2602	A9	R354	B12	R654	P4	R2062	C10		
C3002	G12	R355	D12	R655	G11	R2063	D11		
C3008	F12	R356	D12	R751	B7	R2067	B9		

SHARP

MODELS CL25S18, 25L-S100/S180

PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# PR701	3.1 Cold PTC	RMPTP0092CEZZ	-
# R51	150 5% 1W	VRS-RG3AB151J	1W115
# R52	12K 5% 2W	VRS-RG3DB123J	2W312
# R53	47 5% 1W	VRS-RG3AB470J	1W047
# R451	10K 5% 1/2W	VRS-RG2HC103J	HW310
# R501	.56 5% 2W	VRN-RL3ABR56J	2WD56
R511	100K 2% 1/8W	VRD-RA2BE104G	EW410
R512	120K 2% 1/8W	VRD-RA2BE124G	EW412
R519	12K 2% 1/8W	VRD-RA2BE123G	EW312
# R524	390 5% 1W	VRS-RG3AB391J	1W139
# R604, 07	3900 5% 3W	VRS-RG3LB392J	3W239
# R609	5600 5% 1W	VRS-RG3AB562J	1W256
# R611	3.3 10% 7W	VRS-KA3NG3R3K	-
# R622	.33 5% 1W	VRN-RL3ABR33J	1WD33
# R623	2.7 5% 1W	VRN-RL3AB2R7J	1W2D7
# R624	3300 5% 2W	VRS-RG3DB332J	2W233
# R626	3.3 5% 1W	VRN-RL3AB3R3J	1W3D3
# R651	27 5% 1/2W	VRS-RG2HC270J	HW027
# R652	10K 1% 1/8W	VRN-RA2BK103F	-
# R653	8200 1% 1/8W	VRN-RA2BK822F	-
# R654	180K 5% 1/8W	VRD-MN2BE184J	EW418
# R655	100K 5% 1/16W	VRS-CY1JF104J	-
# R701	3.9M 20% 1/2W	RR-HZ0048CEZZ	HW539
# R702	1.2 10% 7W Wirewound	VRW-KQ3NC1R2K	-
# R705	.22 5% 2W	VRN-RL3DBR22J	2WD22
# R706	.27 5% 2W	VRN-RL3DBR27J	2WD27
# R709	1 5% 1/4W	VRN-GA2EB1R0J	QW1D0
# R715	15K 5% 2W	VRS-RG3DB153J	2W315
# R723	.39 5% 2W	VRN-RL3DBR39J	2WD39
# R728	4.7 5% 3W	VRN-RL3LB4R7J	1W4D7
# R737	.56 5% 2W	VRN-RL3DBR56J	2WD56
# R857, 65, 73	12K 5% 3W	VRS-VV3LB123J	3W312

# For SAFETY use only equivalent replacement part.

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C551	2.2µF 10% 16V Tantalum	VCSATA1CE225K
# C610, 11	.0072 5% 1.6kV	VCFPVC3CA722H
# C701	.22 250VAC	RC-FZ017SCEZZ
	.047 250VAC	RC-FZ012SGEZZ
C702, 03	.01 250VAC	RC-KZ0029CEZZ
# C705	560µF 200V	RC-EZ0800CEZZ
# C706	.0033 250VAC	RC-KZ0092GEZZ
C707	.0022 1.6kV	VCFPVC3CA222H
# C723	100µF 160V	RC-EZ0724CEZZ
# C725	220µF 160V	RC-EZ0809CEZZ
C726, 27	560pF 10% 2kV	RC-KZ0338CEZZ
# C730, 31	1000µF 16V	RC-EZ0385CEZZ
C854	.001 10% 2kV	RC-KZ0024CEZZ
C3001, 10, 12	4.7µF 50V NP	VCE9GA1HW475M
C3015	3.3µF 10% 16V Tantalum	VCSATA1CE335K
C3016	4.7µF 20% 50V NP	VCE9GA1HW475M
C3017	10µF 10% 16V Tantalum	VCSATA1CE106K

# For SAFETY use only equivalent replacement part.

CABINET PARTS

Item	Mfr. Part No.
<b>Models CL25S18 and 25L-S180</b>	
Badge	HBDGB3009MESA
Button Assembly - Channel Up/Down	JBTN-1104MEKA
Button Assembly - Power, Volume Up/Down	JBTN-1103MEKA
Cabinet Front Assembly	CCABA1299MES1
Cabinet Rear	GCABB1147MEKA
IR Window	COVA1038MEKA
<b>Model 25L-S100</b>	
Badge	HBDGB3009MESA
Button Assembly - Channel Up/Down	JBTN-1104MEKA
Button Assembly - Power, Volume Up/Down	JBTN-1103MEKA
Cabinet Front Assembly	CCABA1298MES1
Cabinet Rear	GCABB1146MEKA
IR Window	COVA1038MEKA

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# ACC701	Line Cord	QACCD3065CESA	AC, Polarized
CF301	Filter	RFiLC0029TAZZ	4.5MHz
CF401	Trap	RFiLC0013CEZZ	4.5MHz
CF631	Filter	RFiLA0034CEZZ	503kHz
CF2040	Filter	RFiLC0121GEZZ	-
# F701	Fuse	QFS-B4023CEZZ	4Amp, 125V, Slow Blow
	Fuse	QFS-B4021CEZZ	4Amp, 125V, Slow Blow
J1001	Jack	QJAKE0053GEZZ	Front Video Input
J1002	Jack	QJAKE0055GEZZ	Front Audio Input Left
J1003	Jack	QJAKE0059GEZZ	Front Audio Input Right
RMC2601	Receiver	RRMCU0235CEZZ	Remote
# RY701	Relay	RRLYJ0081CEZZ	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	QSOCV0937CEZZ	CRT
SF201	Filter	RFiLC0405CEZZ	SAW
SP1, 2	Speaker	VSP0080PBL4YS	3" Round, 32 Ohms, 2W
TAN921 (1)	Jack	QTANJ0323CEZZ	Assembly
TAN921 (2)	Jack	QTANJ0523CEZZ	Assembly
# TU51 (3)	Tuner	VTU115B8035AT	UHF/VHF, B8035AT-AM
	Tuner	VTUVTST5UF78/	UHF/VHF
# V101	CRT	VB63AFW32X/*S	A63AFW32X
	CRT	VB63AHC26X/*S	A63AHC26X
X801	Crystal	RCRSB0205CEZZ	3.58MHz
	Crystal	RCRSB0001PEZZ	3.58MHz
	Fuse Holder	QFSHD1013CEZZ	For F701
	Fuse Holder	QFSHD1014CEZZ	For F701
	Magnet	PMAGF3003CEZZ	Assembly
	PC Board	DUNTK9510WEK1	CRT
	PC Board	DUNTK9310WEK1	Front AV Unit
	PC Board (1)	DUNTK9806WEK2	Main
	PC Board (2)	DUNTK9806WEK3	Main
	Transmitter (1)	RRMCG1324CESA	Remote
	Transmitter (2)	RRMCG1395CESA	Remote

# For SAFETY use only equivalent replacement part.

(1) Used in model 25L-S100.

(2) Used in models CL25S18 and 25L-S180.

(3) Contact TNi Electronics for replacement; order by part number on tuner.

SHARP

MODELS CL25S18, 25L-S100/S180