

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.

TEST JIG HOOKUP				
Function	Chek-A-Color Adapter No.	PC Board Plug No.	Pin	Color
CRT	B239	YOKE-H	E4401	Red
Yoke	D4124		E4402	Blue
Yoke Setting	YP1A	YOKE-V	E4501	Green
Comments	Focus Tap		E4502	Yellow

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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SAFETY CHECKS – FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

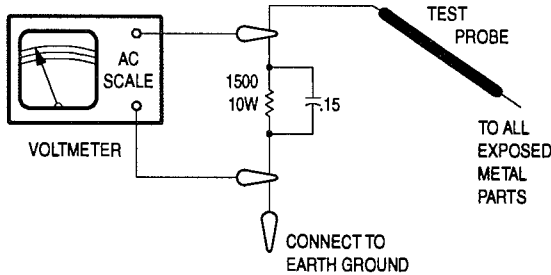
Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with 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.

GENERAL GUIDELINES

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



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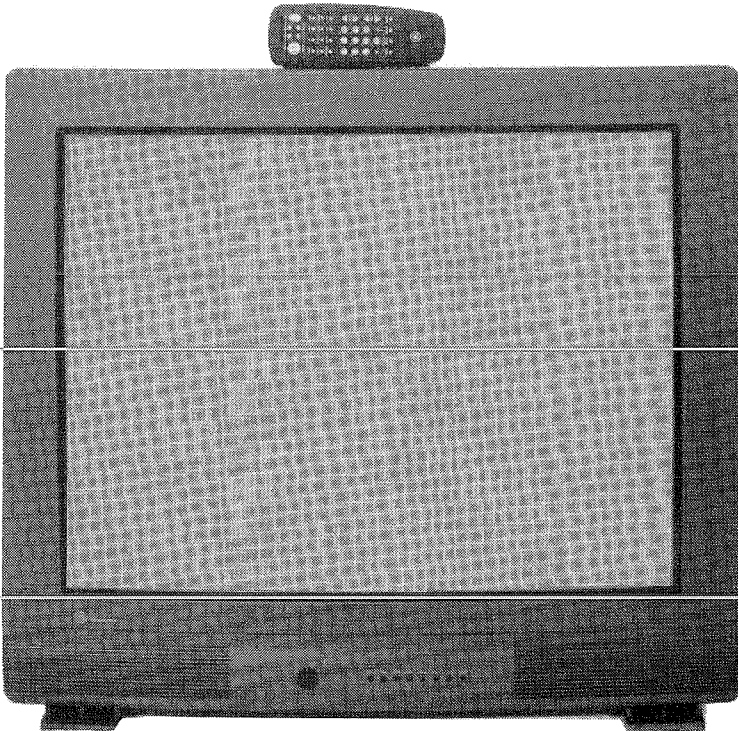
SET 3385

MODELS 35GT681FM1/JX1 (CHASSIS CTC169BD5)

GE

INDEX	
IC Functions	1
Important Parts Information	4
Miscellaneous Adjustments	1
New Circuit	1
Parts List	4, 5, 6
Placement Chart	4
Safety Precautions	1
Schematics	
Audio	3
CRT	2
Power Supply	2
Remote Transmitter (CRK59C)	4
System Control	3
Television	2
Tuner (MTP-M-2016-01)	1
Video Switching/Comb Filter	
/Black Stretch	3
Schematic Notes	1
Stereo Adjustments	1
Test Equipment	6
Test Jig Hookup	1
Tuner Information	1

GE
Models 35GT681FM1/JX1 (Chassis CTC169BD5)



Model 35GT681FM1

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

Coverage includes these additional models and chassis:

MODEL	CHASSIS
35GT680NM1	CTC169BD2
35GT680NX1	CTC169BD2

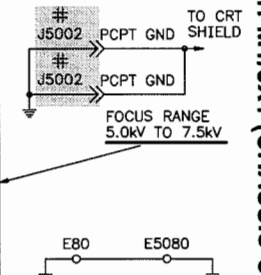
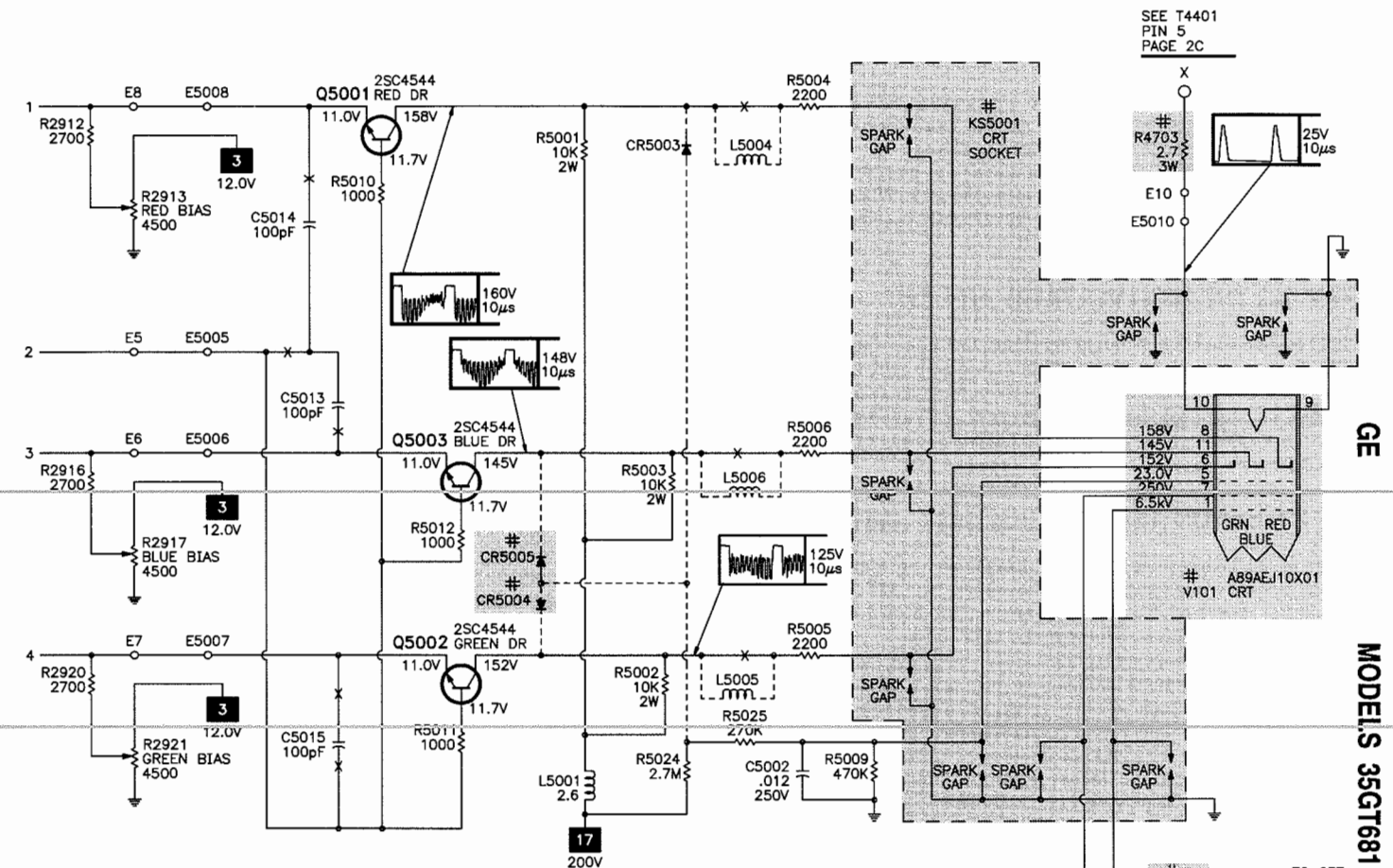


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OCTOBER 1994 SET 3385

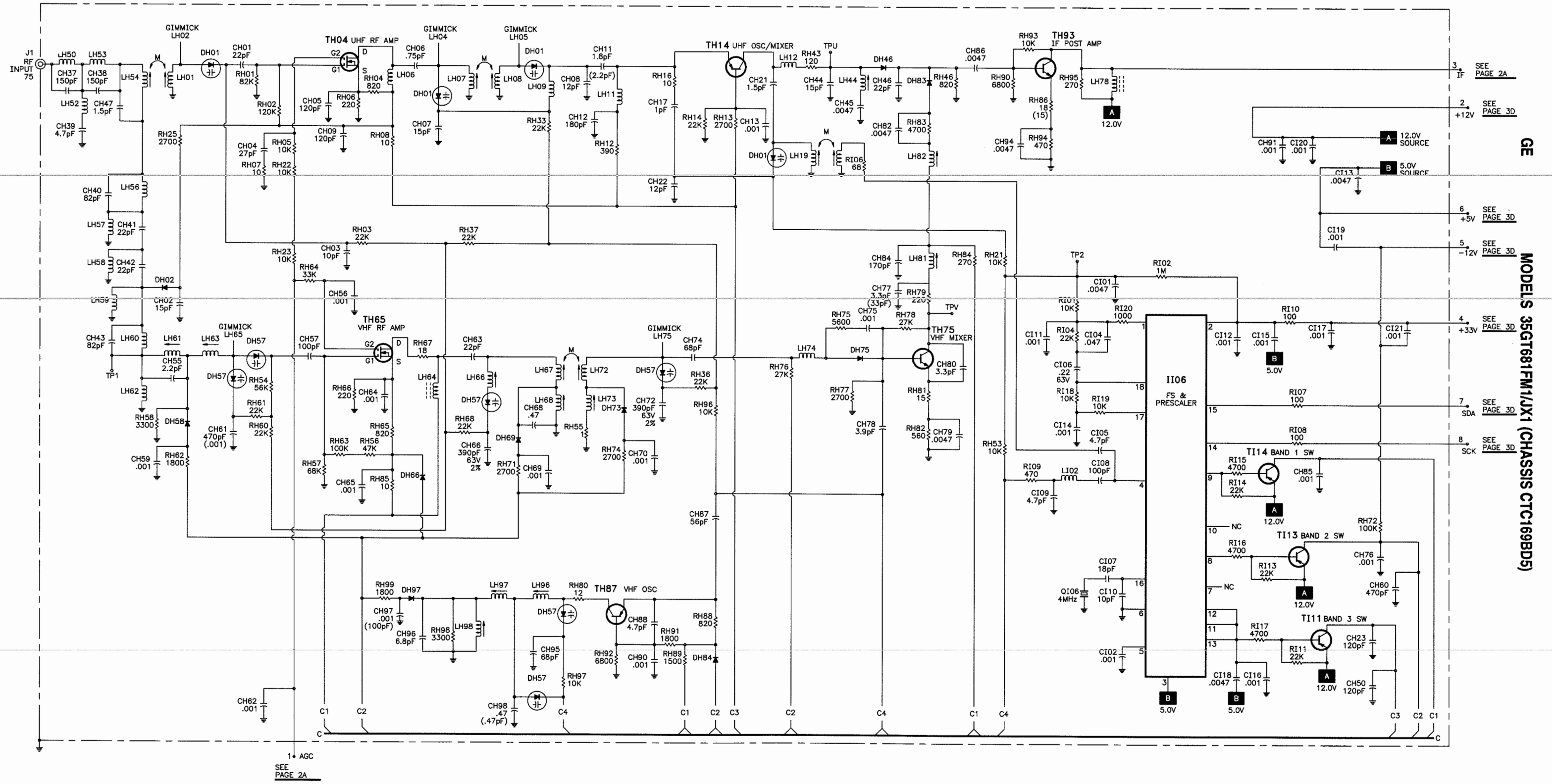
For Supplier Address,
See PHOTOFACT Annual Index

CRT SCHEMATIC



A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE®**
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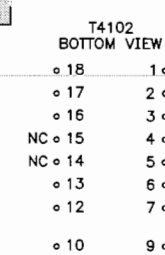
TUNER (MTP-M-2016-01) SCHEMATIC



G

H

△ TAKEN FROM COMMON TIE POINT ↓



MISCELLANEOUS ADJUSTMENTS

PRETUNING

To accomplish on screen adjustments, repeatedly press the menu button to highlight the desired menu, and then press the + button. Press the menu button to highlight the function that is to be adjusted. Press the + or - button to adjust the selected function. The on screen menu disappears in a few seconds if the + or - button is not pressed.

B+ STANDBY

Tune in a picture. Set brightness, contrast, and color to minimum. Connect a voltmeter to TP4101 (cathode of CR4116). With 120VAC line input, adjust R4113 for 140VDC ±.5VDC.

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 must measure 27.5kV to 29.5kV. High voltage must never exceed 30kV.

HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC to set, turn set on, and adjust brightness and contrast to maximum. Short XRP-1 to XRP-2. The set should shutdown and then cycle on and off. If the set does shutdown and then cycle on and off then the shutdown circuit requires repair. To resume normal operation, remove short from XRP-1 and XRP-2.

RF AGC

NOTE: R2311 should not require adjustment unless the tuner, U1001, or R2311 has been replaced. If adjustment of R2311 is required, tune in the weakest local station. Adjust R2311 fully counterclockwise, and then clockwise for best picture. Check all other available channels for proper adjustment.

CONTRAST PRESET

Tune in a crosshatch pattern. Set brightness and color to minimum, contrast to midrange. Adjust R2730 to a point where highlights are visible.

TINT PRESET

Tune in an active channel. Adjust R2816 for proper flesh tones..

HORIZONTAL PHASE

Adjust R4306 to center the picture horizontally.

PINCUSHION

Tune in a crosshatch pattern. Adjust R4805 for straight vertical lines at the top and bottom of the screen. Adjust R4802 for a slight overscan.

SUB BRIGHTNESS

Tune in a crosshatch pattern. Set contrast, brightness, and color to minimum. Adjust R3346 for faintly visible highlights. Set contrast, brightness, and color to maximum. Check for blooming, readjust if necessary.

COMB FILTER

Tune in a color bar pattern. Connect an oscilloscope to pin 7 of U2601. Alternately adjust R2603, and L2601, until the level of chroma burst is at minimum.

CHROMA FILTER

Tune in a color bar pattern. Adjust R2802 for the proper color display and clean transition between bars.

COLOR TEMPERATURE

Tune in a crosshatch pattern. Set color, contrast, R2913, R2917, R2921, and screen control to minimum. Set R2926, R2928, and brightness to midrange. Obtain a service line by shorting the collector of Q4505 to ground. Advance screen control until a line of one predominate color is just visible. Adjust R2913, R2917, and R2921 to obtain a white line. Set brightness and contrast to maximum. Adjust R2926 and R2928 for best black and white picture. Check tracking at low and high brightness.

SYNC LEVEL

Tune in a color bar signal. Connect an oscilloscope to the emitter of Q6423. Adjust R6448 for 5.0Vp-p.

CONVERGENCE/ PURITY

The deflection yoke is bonded to the CRT. Purity and convergence adjustments are not required.

STEREO ADJUSTMENTS

NOTE: Adjustments were made using a TV/stereo generator connected to the antenna terminals. Set receiver to stereo mode.

Wide Band Audio Level

Select 300Hz audio frequency and L+R modulating signal. Connect oscilloscope to TP1205. Adjust R1204 for .3V p-p.

Stereo/SAP Filter

Select SAP, 1kHz audio frequency, and L+R modulating signal. Connect oscilloscope to pin 3 of U1600. Adjust R1604 for minimum indication.

Stereo VCO

Select pilot, 1kHz audio frequency, and L+R modulating signal. Connect a digital voltmeter to pin 42 of U1600. Adjust R1616 for 1.35V.

Baseband LPF

Remove power to set, and unsolder jumper wire JW212. Connect an audio generator to TP212. Apply AC power, and set the frequency on audio generator for 15734Hz. Short pin 39 and pin 40 of U1600. Connect oscilloscope to pin 39 of U1600. Adjust R1606 for minimum response. Return JW212 to circuit.

Separation

Select pilot, 300Hz audio frequency, and right modulating signal on generator. Connect an oscilloscope to pin 35 of U1600, adjust R1609 for minimum. Change audio frequency to 8kHz. Adjust R1611 for minimum. Repeat until no further decrease is obtained.

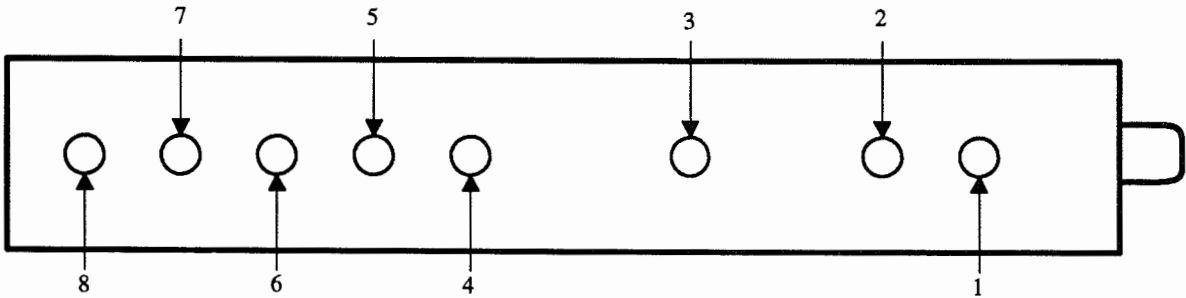
NEW CIRCUIT

The vertical reset pulse from pin 29 of U1001 turns on Q4505 which allows C4518 and C4519 to discharge thru R4504 and resets Q4506. When Q4505 is turned off, C4518 and C4519 charge thru R4507. R4522 adjusts the amount of voltage to C4518 and C4519. This causes a vertical ramp signal to be applied to pin 3 of U4501. Current for vertical deflection is supplied from pins 2 and 3 of T4401. During horizontal retrace, pin 2 of T4401 is more positive than pin 3 of T4401 which causes upward deflection. During horizontal trace, pin 2 of T4401 is more negative than pin 3 of T4401 which causes downward deflection. The net current is controlled by the on and off time of SCR501. U4501 controls the on and off time of SCR501. A horizontal ramp signal is applied to pin 2 of U4501. When the voltage at pin 3 of U4501 exceeds the voltage at pin 2 of U4501, SCR501 is turned on which allows negative current flow thru the yoke.

TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
1 (AGC)	7.8V	4.3V	5.7V
2 (+12V)	12.0V	12.0V	12.0V
3 (IF)	11.8V	11.8V	11.8V
4 (+33V)	33.2V	33.2V	33.2V
5 (-12V)	-12.7V	-10.6V	-12.8V
6 (+5V)	4.9V	4.9V	4.9V
7 (SDA)	4.9V	4.9V	4.9V
8 (SCK)	4.9V	4.9V	4.9V
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



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

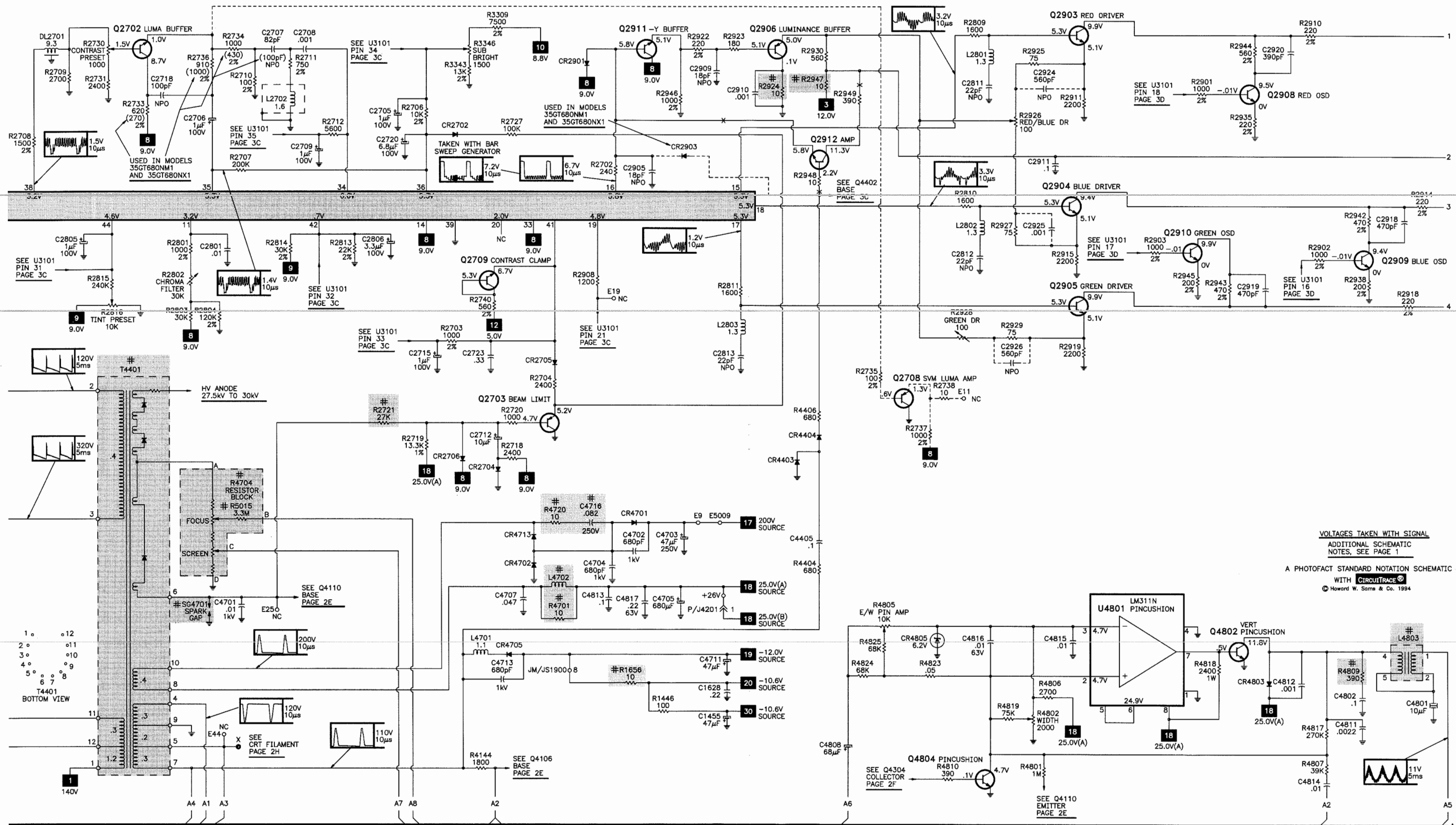
⏏ Common tie point

△ Taken from common tie point

3 Schematic CIRCUITRACE®: Voltage source tie point.

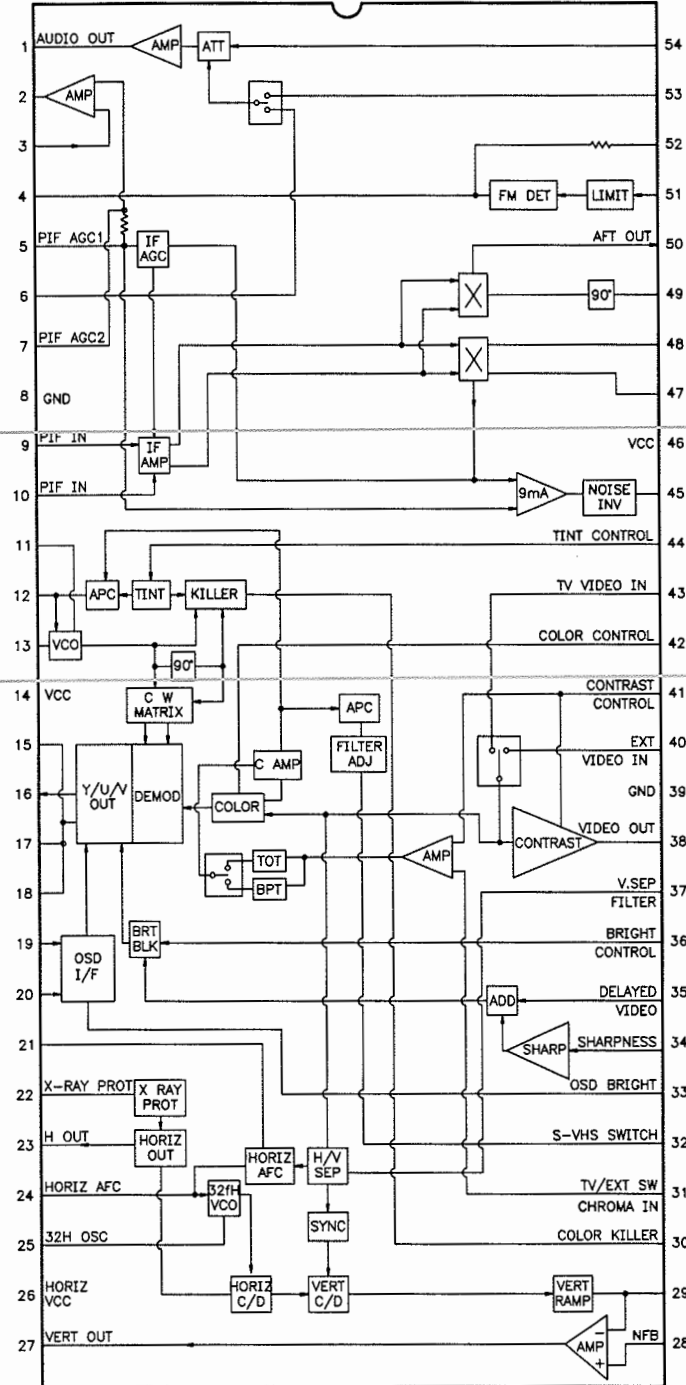
A — Cabling: Heavy lines reduce use of multiple lines.

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 terminal.
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.

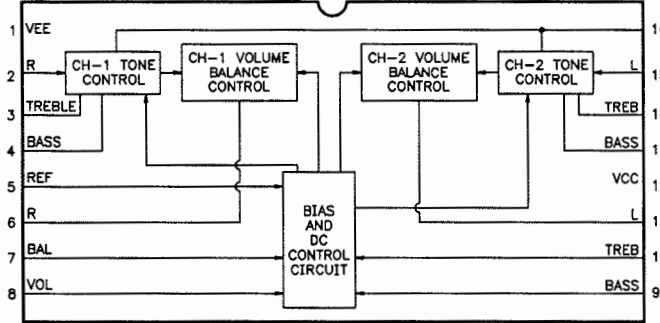


IC FUNCTIONS

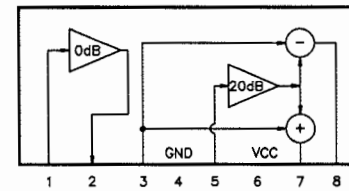
U1001
TA8680N



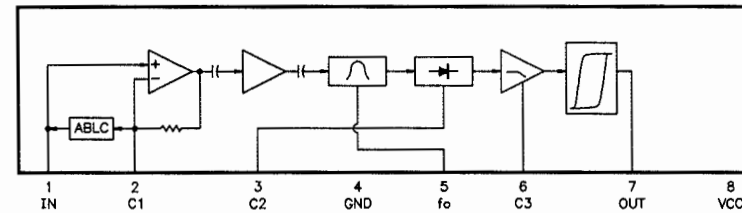
U1501



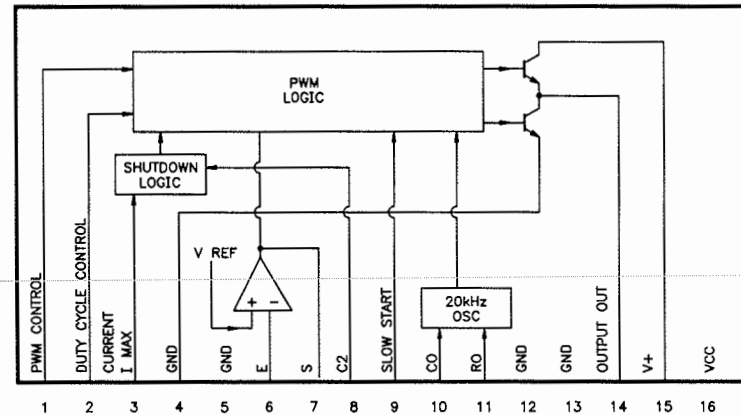
U2601



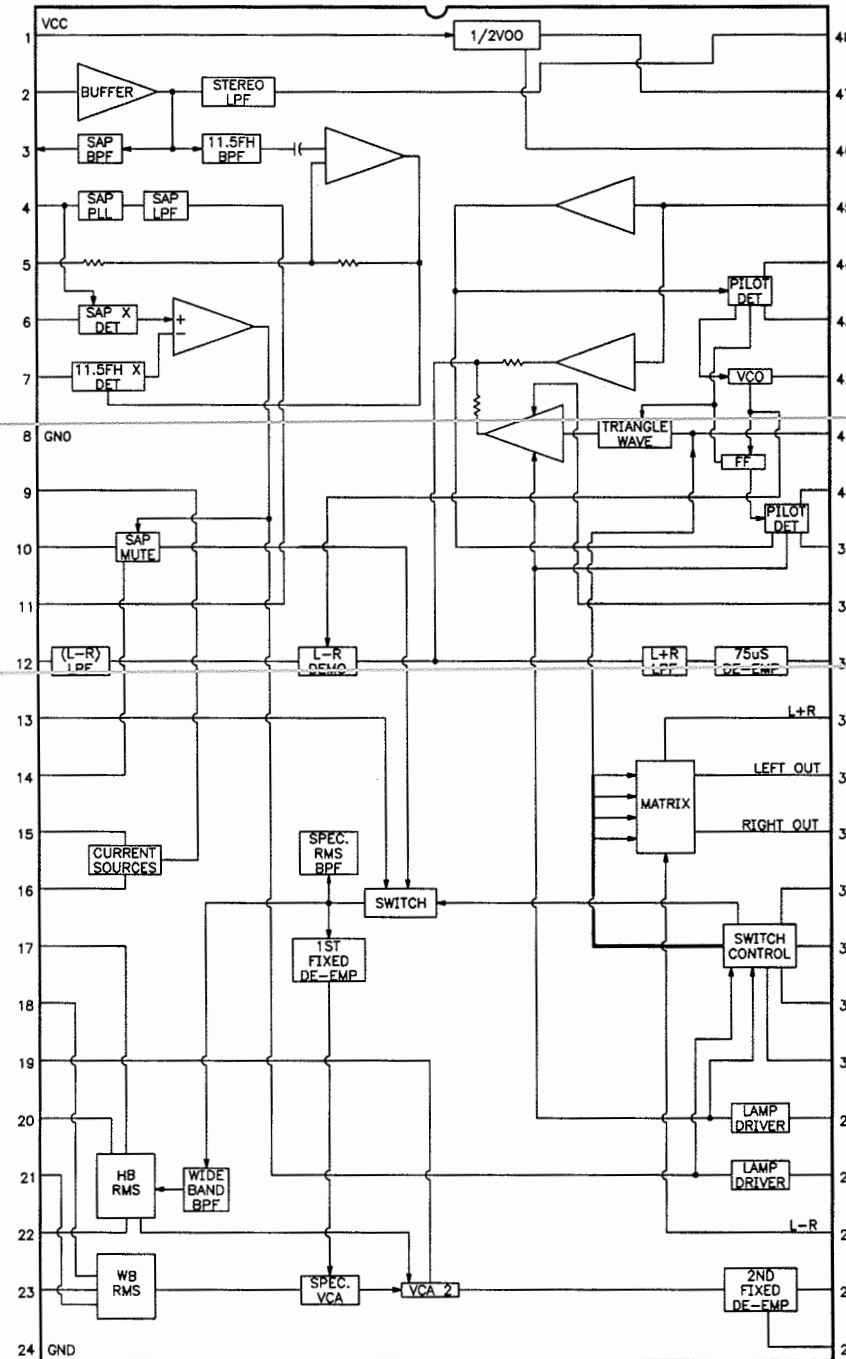
U3401
CX20106A



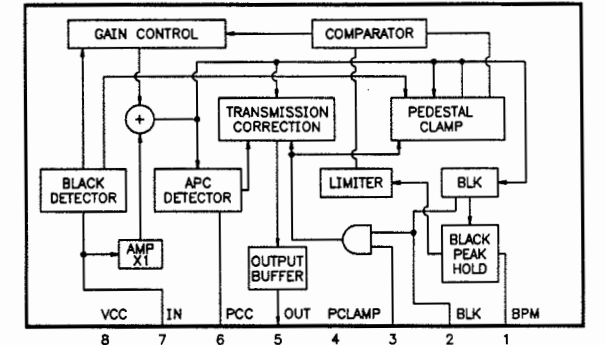
TEA2261
U4101



U1600



U6401
CX20125

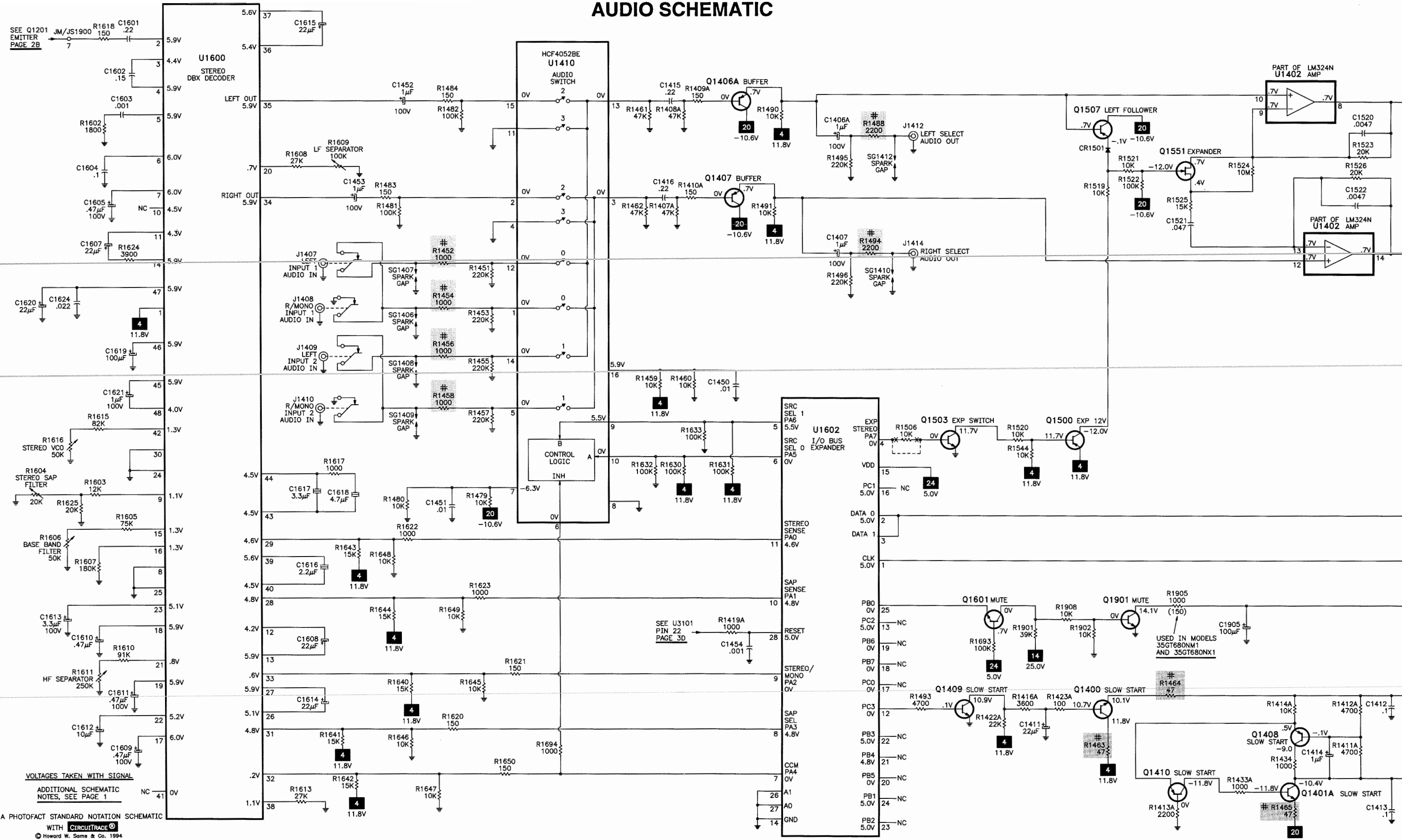


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[illegible]

AUDIO SCHEMATIC



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.
 - Thomson Consumer Electronics, Inc. (SK, TCE)

CABINET PARTS

Item	Mfr. Part No.
# Cabinet Back	BK1380
# Cabinet Mask/Buttons	MK1379
# Cabinet Wrap	210702
# For SAFETY use only equivalent replacement part.	

SEMICONDUCTORS

(Select the replacement that gives the best results.)

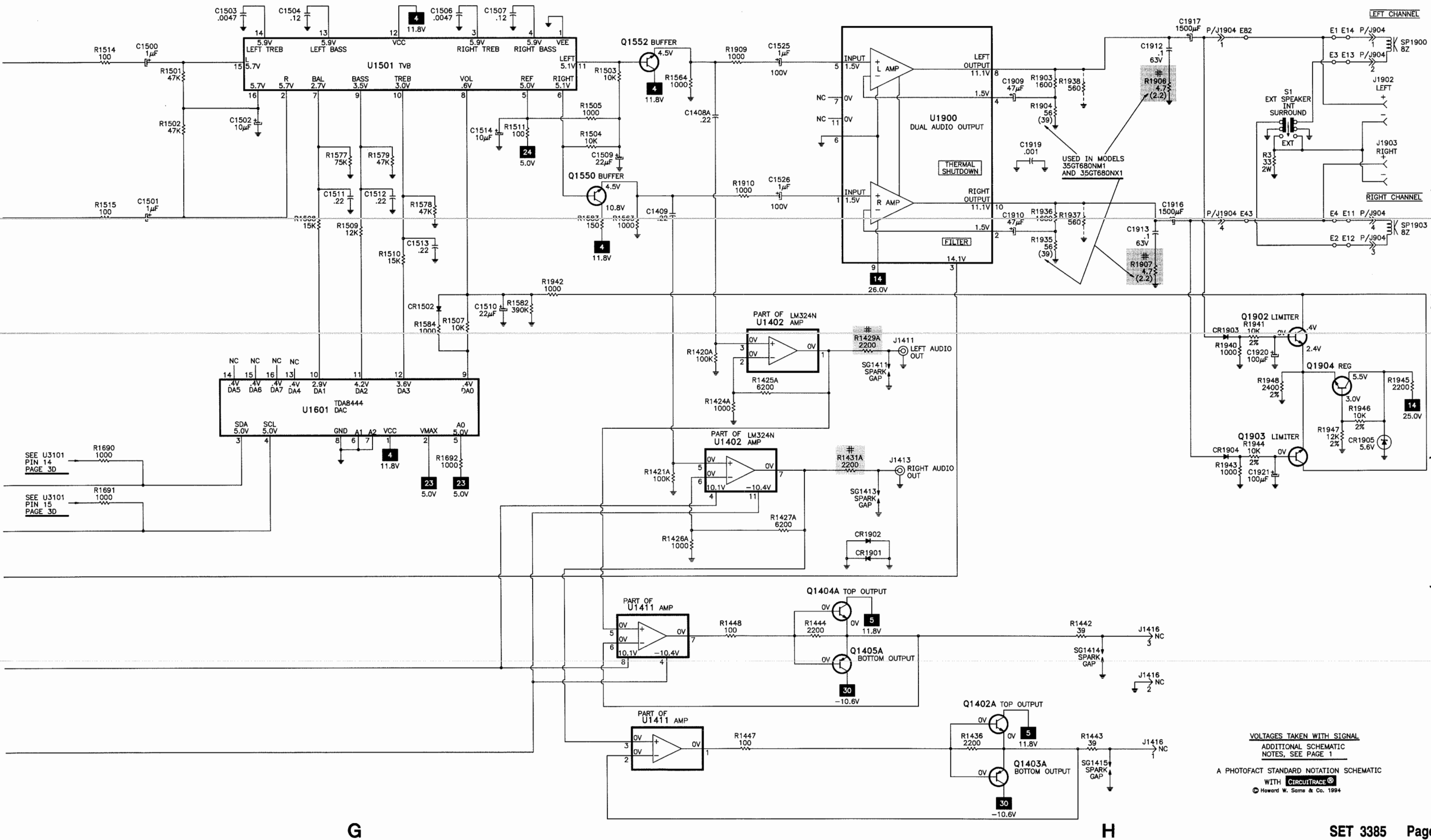
Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
CR1401 Thru					
CR1404	-	176746	NTE5011A	ECG5011A	SK5A6
CR1405	-	192848	NTE5018A	ECG5018A	SK9A1
CR1406	-	164874	NTE177	ECG177	SK9091
CR1501, 02	-	164717	NTE519	ECG519	SK3100
CR1901, 02	-	147015	NTE125	ECG125	SK5010A
CR1903, 04, 05	-	161081	NTE5011T1	ECG5011T1	SK9968
CR2701, 02	-	164717	NTE519	ECG519	SK3100
CR2704, 05, 06	-	164717	NTE519	ECG519	SK3100
CR2802	-	164717	NTE519	ECG519	SK3100
CR2901	-	164717	NTE519	ECG519	SK3100
CR2903 (2)	-	164717	NTE519	ECG519	SK3100
CR3101	-	176746	NTE5011A	ECG5011A	SK5A6
CR3102, 03	-	164717	NTE519	ECG519	SK3100
CR3301, 02	-	164717	NTE519	ECG519	SK3100
CR3401	-	150711	-	-	-
CR3402	-	182827	NTE5010A	ECG5010A	SK5A1
CR3403	-	175393	-	-	-
CR3601	-	200155	-	-	-
CR4001 Thru					
CR4004	-	147015	NTE125	ECG125	SK5010A
CR4101	-	164588	NTE519	ECG519	SK3100
CR4102	-	164717	NTE519	ECG519	SK3100
CR4105	-	207878	-	-	-
CR4106	-	176296	NTE125	ECG125	SK5010A
CR4111	-	202055	NTE5577	ECG5577	SK6727
CR4112	-	164874	NTE177	ECG177	SK9091
CR4115	-	136634	NTE143A	ECG143A	SK13V
CR4116	-	200157	NTE142A	ECG142A	SK12V
# CR4117	-	176296	NTE125	ECG125	SK5010A
# CR4118, 19	-	164590	NTE580	ECG580	SK5036
CR4121	-	136634	NTE143A	ECG143A	SK13V
CR4122	-	200158	-	-	-
CR4123	-	176746	NTE5011A	ECG5011A	SK5A6
CR4201	-	164717	NTE519	ECG519	SK3100
CR4201A	-	176296	NTE125	ECG125	SK5010A
CR4202	-	176296	NTE125	ECG125	SK5010A
CR4302	-	164717	NTE519	ECG519	SK3100
CR4303	-	161871	NTE145A	ECG145A	SK15V
CR4304, 05	-	164717	NTE519	ECG519	SK3100
CR4401	-	198596	-	-	-
CR4402	-	164589	NTE558	ECG558	SK3998
CR4403	-	139706	NTE177	ECG177	SK9091
CR4404	-	164717	NTE519	ECG519	SK3100
# CR4405 (2)	-	140971	NTE552	ECG552	SK9000
CR4501	-	164717	NTE519	ECG519	SK3100
CR4502	-	139706	NTE177	ECG177	SK9091
CR4503	-	146320	NTE135A	ECG135A	SK5V1
CR4504	-	164589	NTE558	ECG558	SK3998
CR4511	-	164717	NTE519	ECG519	SK3100
CR4512	-	132616	NTE5071A	ECG5071A	SK6V8
CR4606	-	161081	NTE5011T1	ECG5011T1	SK9968
CR4701	-	176296	NTE125	ECG125	SK5010A
CR4702	-	153672	NTE552	ECG552	SK9000
CR4705	-	176296	NTE125	ECG125	SK5010A
CR4709	-	164717	NTE519	ECG519	SK3100
CR4710	-	139706	NTE177	ECG177	SK9091
CR4712	-	209741	-	-	-
CR4713	-	153672	NTE552	ECG552	SK9000
CR4803	-	176296	NTE125	ECG125	SK5010A

For SAFETY use only equivalent replacement part.
(2) Used in models 35GT680NM1 and 35GT680NX1.

GE

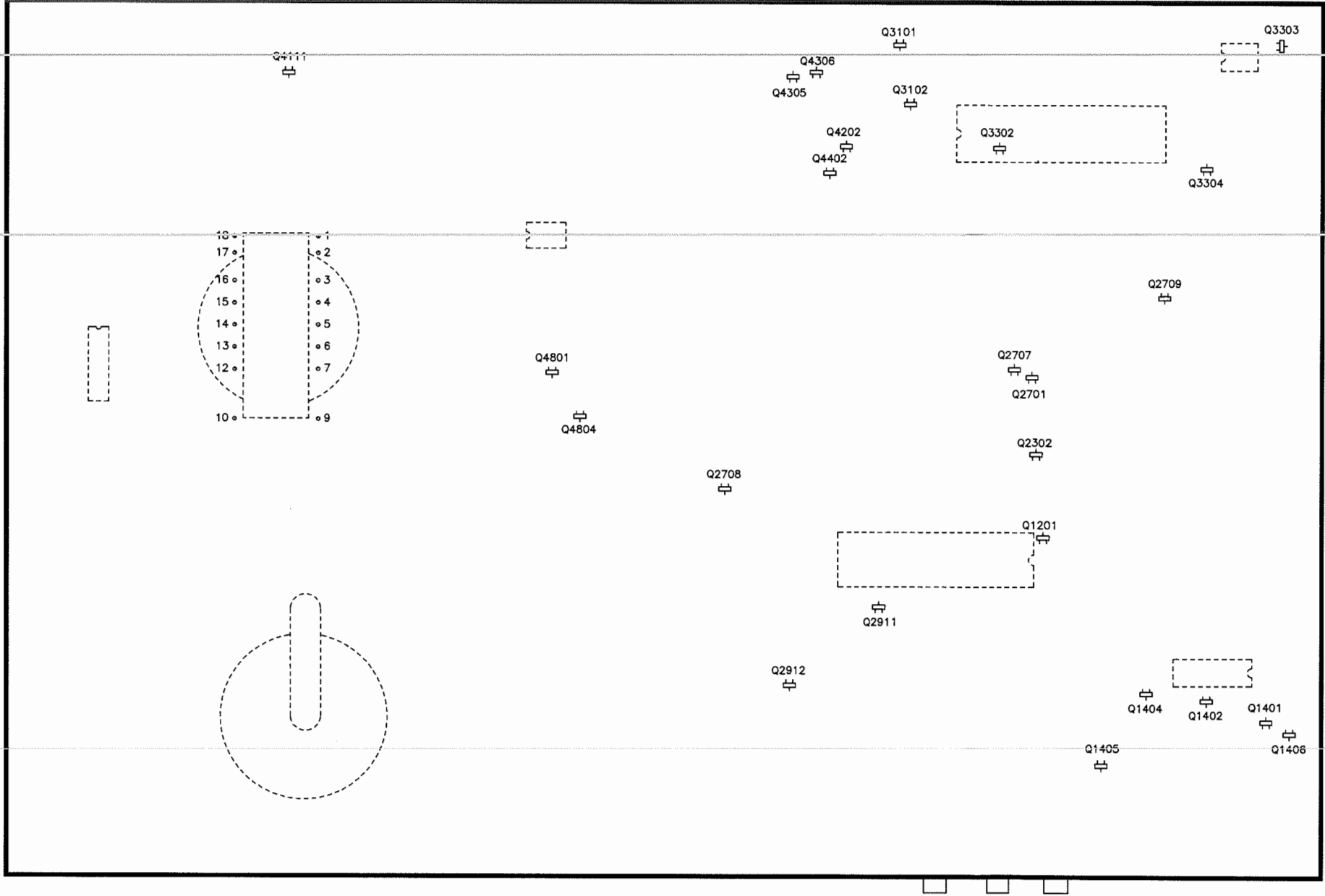
MODELS 35GT681FM1/JX1 (CHASSIS CTC169BD5)

AUDIO SCHEMATIC continued

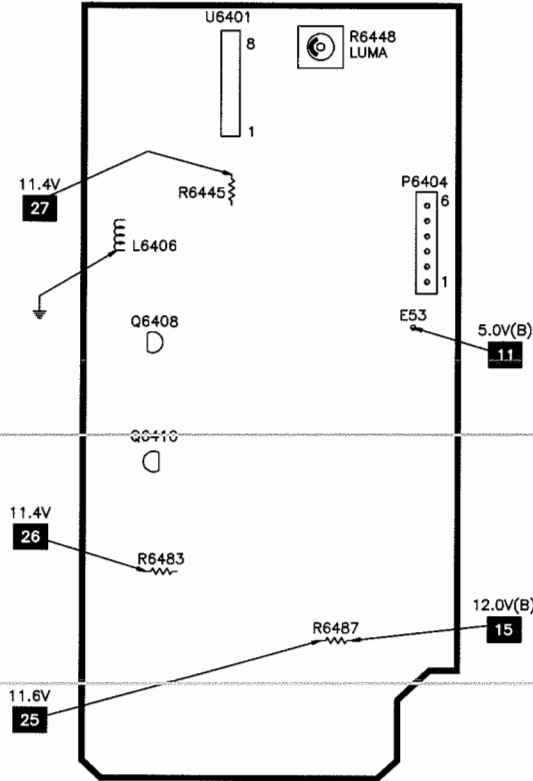


PLACEMENT CHART continued

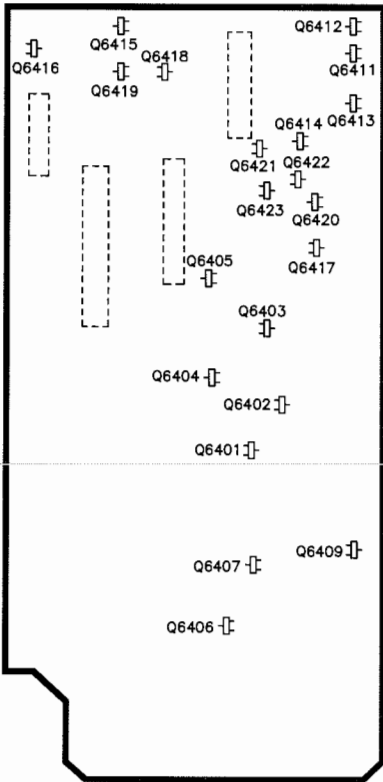
MAIN BOARD - BOTTOM VIEW



BLACK STRETCH ADAPTER BOARD - TOP VIEW

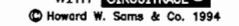


BLACK STRETCH ADAPTER BOARD - BOTTOM VIEW



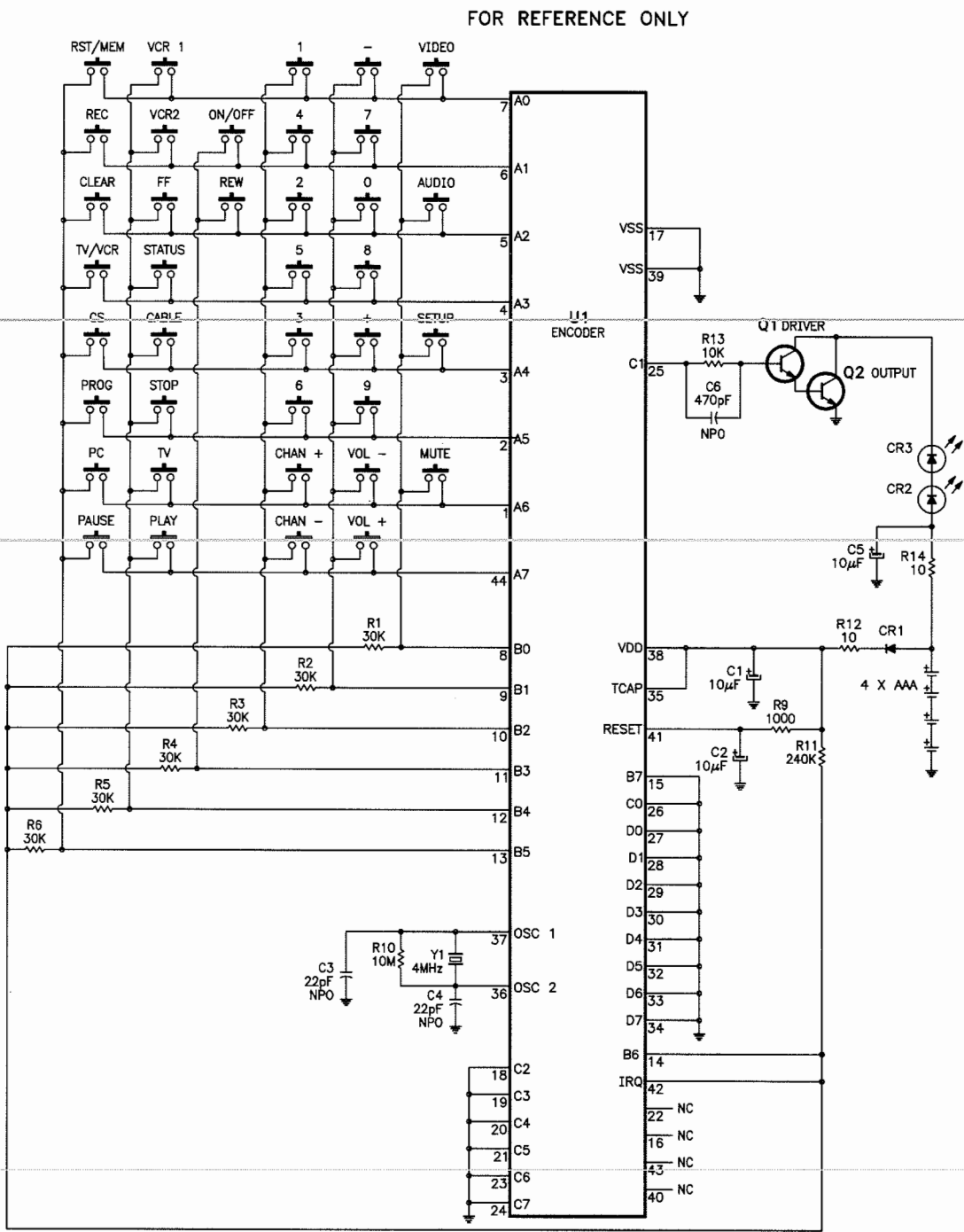
SW3433 POWER SW3413 VOL DN SW3431 CH DN SW3411 VIDEO CR3403 POWER 9 U3401 1 CR3401
SW3423 VOL UP SW3403 CH UP SW3421 SET UP SW3401 AUDIO R3424 Q3401

The diagram shows the internal components of the KS5001 control panel. At the top left is the J5002 terminal block. To its right is the E9 ground terminal. Below these are three switches labeled Q5002, Q5001, and Q5003. The KS5001 label is positioned above the main circular component of the panel.



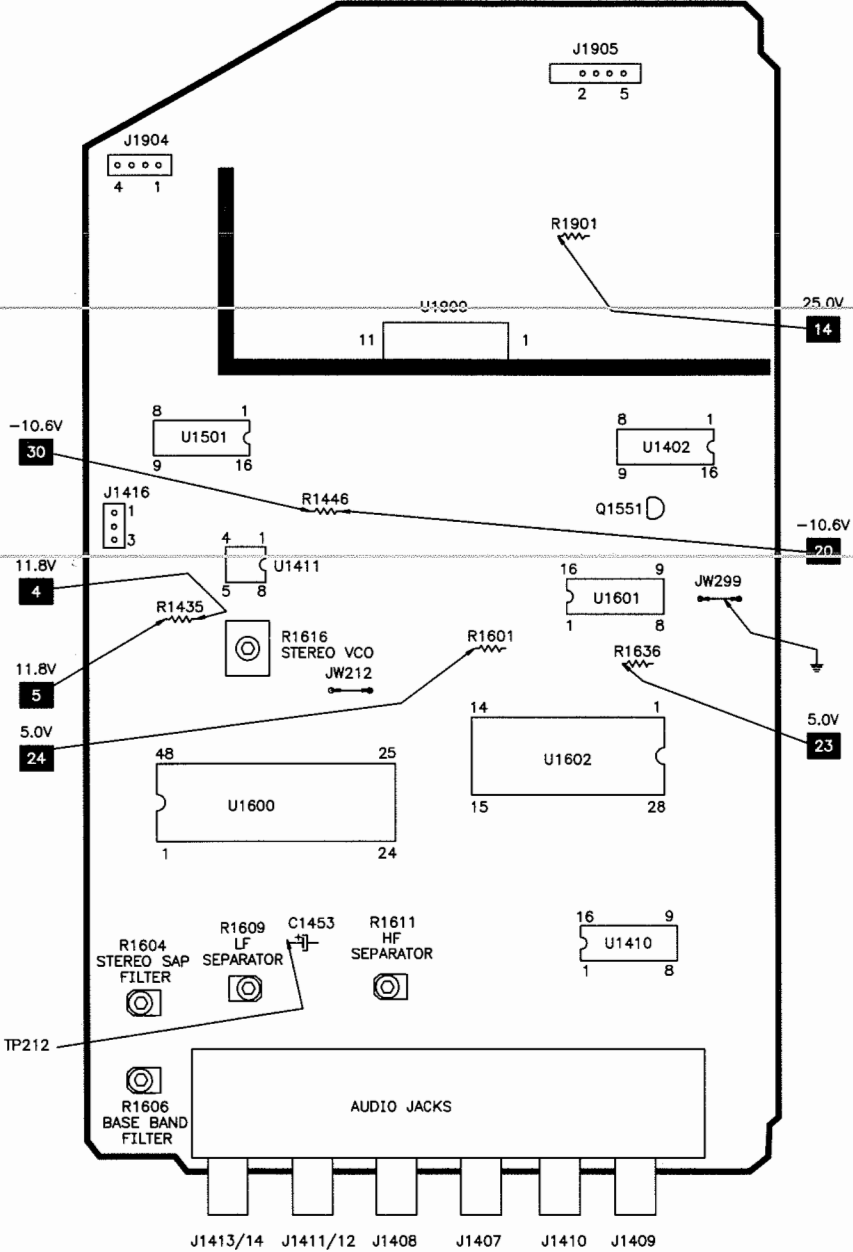
REMOTE TRANSMITTER (CRK59C) SCHEMATIC

PLACEMENT CHART

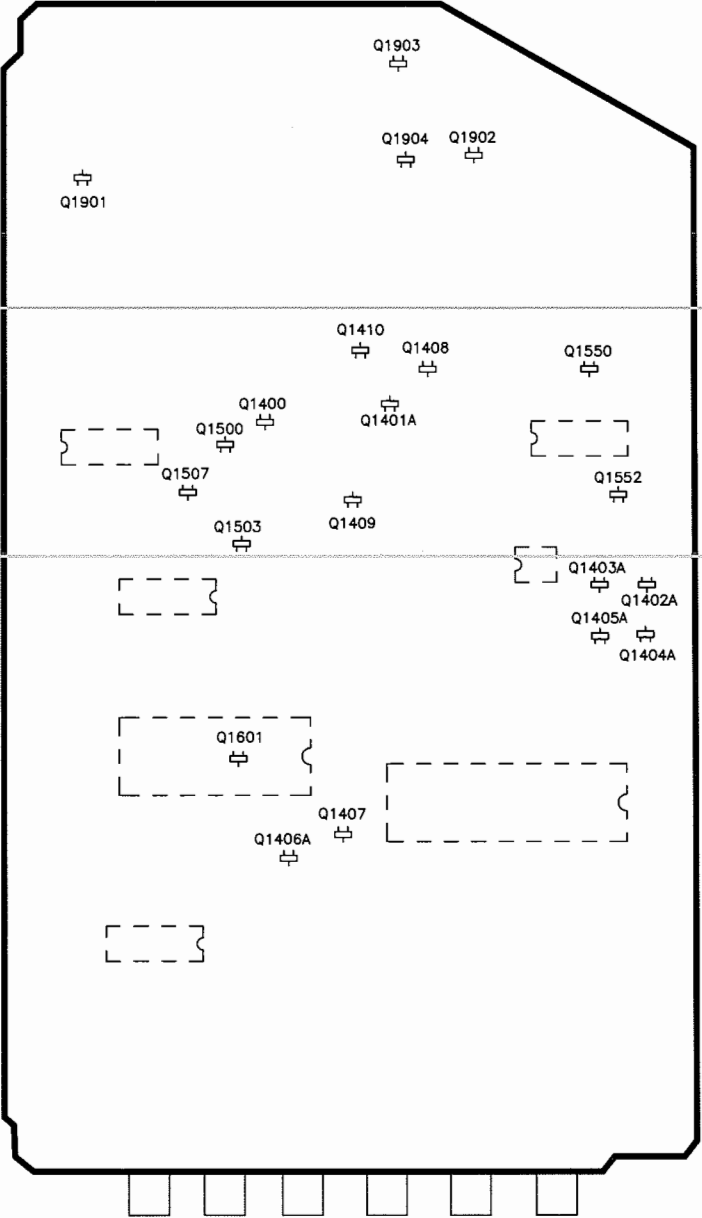


A PHOTOFAC STANDARD NOTATION SCHEMATIC
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SRS AUDIO 5 WATT BOARD - TOP VIEW



SRS AUDIO 5 WATT BOARD - BOTTOM VIEW



PARTS LIST continued

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.
CR4805	-	138974	NTE137A	ECG137A	SK6V2
CR4806	-	164717	NTE519	ECG519	SK3100
# CR4901	-	157301	NTE177	ECG177	SK9091
# CR4902	-	159429	NTE5019T1	ECG5019T1	SK9970
CR5003	-	174489	NTE177	ECG177	SK9091
	-	139706	NTE177	ECG177	SK9091
# CR5004	-	174489	NTE177	ECG177	SK9091
# CR5005	-	174489	NTE177	ECG177	SK9091
CR6401, 02	-	164717	NTE519	ECG519	SK3100
Q1201	-	179740	NTE2406*	ECG2406*	SK10097*
Q1400	-	179740	NTE2406*	ECG2406*	SK10097*
Q1401	-	179741	NTE2407*	ECG2407*	SK10098*
Q1401A	-	179740	NTE2406*	ECG2406*	SK10097*
Q1402	-	179740	NTE2406*	ECG2406*	SK10097*
Q1402A	-	179740	NTE2406*	ECG2406*	SK10097*
Q1403	-	143806	NTE159	ECG159	SK3466
Q1403A	-	179741	NTE2407*	ECG2407*	SK10098*
Q1404	-	179740	NTE2406*	ECG2406*	SK10097*
Q1404A	-	179740	NTE2406*	ECG2406*	SK10097*
Q1405	-	179740	NTE2406*	ECG2406*	SK10097*
Q1405A	-	179741	NTE2407*	ECG2407*	SK10098*
Q1406	-	179740	NTE2406*	ECG2406*	SK10097*
Q1406A	-	179741	NTE2407*	ECG2407*	SK10098*
Q1407, 08	-	179741	NTE2407*	ECG2407*	SK10098*
Q1409	-	179740	NTE2406*	ECG2406*	SK10097*
Q1410	-	179741	NTE2407*	ECG2407*	SK10098*
Q1500	-	179741	NTE2407*	ECG2407*	SK10098*
Q1503	-	179740	NTE2406*	ECG2406*	SK10097*
Q1507	-	179741	NTE2407*	ECG2407*	SK10098*
Q1550	-	179740	NTE2406*	ECG2406*	SK10097*
Q1551	-	192849	-	-	-
Q1552	-	179740	NTE2406*	ECG2406*	SK10097*
Q1601	-	179740	NTE2406*	ECG2406*	SK10097*
Q1901	-	179740	NTE2406*	ECG2406*	SK10097*
Q1902, 03, 04 (1)	-	179740	NTE2406*	ECG2406*	SK10097*
Q2301	-	146848	NTE229*	ECG229*	SK3246A*
Q2302	-	179740	NTE2406*	ECG2406*	SK10097*
Q2701	-	179740	NTE2406*	ECG2406*	SK10097*
Q2702	-	146847	NTE123AP	ECG123AP	SK3854
Q2703	-	143806	NTE159	ECG159	SK3466
Q2707	-	179740	NTE2406*	ECG2406*	SK10097*
Q2708	-	179741	NTE2407*	ECG2407*	SK10098*
Q2709	-	179740	NTE2406*	ECG2406*	SK10097*
Q2903, 04, 05	-	176980	NTE123AP	ECG123AP	SK3854
Q2906	-	143806	NTE159	ECG159	SK3466
	-	177789	NTE32*	ECG32*	SK3867A*
Q2908, 09, 10	-	176980	NTE123AP	ECG123AP	SK3854
Q2911	-	179740	NTE2406*	ECG2406*	SK10097*
Q2912 (1)	-	219412	-	-	-
Q3101	-	179741	NTE2407*	ECG2407*	SK10098*
Q3102	-	179740	NTE2406*	ECG2406*	SK10097*
Q3301	-	145410	NTE159	ECG159	SK3466
Q3302, 03	-	179740	NTE2406*	ECG2406*	SK10097*
Q3304	-	179741	NTE2407*	ECG2407*	SK10098*
Q3401	-	146847	NTE123AP	ECG123AP	SK3854
Q4101	SGSIF461	200165	-	ECG2311%	-
Q4105, 06	-	143802	NTE159	ECG159	SK3466
Q4107	-	146847	NTE123AP	ECG123AP	SK3854
# For SAFETY use only equivalent replacement part.					
* Lead configuration may vary from original.					
% Use insulating hardware supplied with replacement.					
(1) Used in models 35GT681FM1 and 35GT681JX1.					

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.
Q4108	-	143802	NTE159	ECG159	SK3466
Q4109	-	146847	NTE123AP	ECG123AP	SK3854
Q4110	-	143802	NTE159	ECG159	SK3466
Q4111	-	179741	NTE2407*	ECG2407*	SK10098*
Q4201	-	146847	NTE123AP	ECG123AP	SK3854
Q4201A	-	146847	NTE123AP	ECG123AP	SK3854
Q4202	-	179740	NTE2406*	ECG2406*	SK10097*
Q4301	-	146847	NTE123AP	ECG123AP	SK3854
Q4302	-	200168	-	-	-
Q4304	-	146847	NTE123AP	ECG123AP	SK3854
Q4305, 06	-	179740	NTE2406*	ECG2406*	SK10097*
Q4401	2SD1885	200167	NTE2324%	ECG2324%	SK10136
Q4402	-	179740	NTE2406*	ECG2406*	SK10097*
Q4505	-	146847	NTE123AP	ECG123AP	SK3854
Q4506	-	148970	-	-	-
Q4507	-	146847	NTE123AP	ECG123AP	SK3854
Q4601	-	146847	NTE123AP	ECG123AP	SK3854
Q4702, 03, 04	-	157627	NTE54	ECG54	SK9366
Q4705	-	146847	NTE123AP	ECG123AP	SK3854
Q4801	-	179741	NTE2407*	ECG2407*	SK10098*
Q4802	-	200168	-	-	-
Q4803	-	146847	NTE123AP	ECG123AP	SK3854
Q4804	-	179740	NTE2406*	ECG2406*	SK10097*
# Q4901	-	147665	NTE159	ECG159	SK3466
Q5001, 02, 03	2SC4544	146826	NTE376%	ECG376%	SK9362A%
Q6401, 02	-	179740	NTE2406*	ECG2406*	SK10097*
Q6403	-	179741	NTE2407*	ECG2407*	SK10098*
Q6404, 05	-	179740	NTE2406*	ECG2406*	SK10097*
Q6406	-	179741	NTE2407*	ECG2407*	SK10098*
Q6407	-	179740	NTE2406*	ECG2406*	SK10097*
Q6408	-	146847	NTE123AP	ECG123AP	SK3854
Q6409	-	179741	NTE2407*	ECG2407*	SK10098*
Q6410	-	146847	NTE123AP	ECG123AP	SK3854
Q6411, 12, 13	-	179741	NTE2407*	ECG2407*	SK10098*
Q6414	-	179740	NTE2406*	ECG2406*	SK10097*
Q6415, 16	-	179741	NTE2407*	ECG2407*	SK10098*
Q6417 Thru	-	-	-	-	-
Q6420	-	179740	NTE2406*	ECG2406*	SK10097*
Q6421	-	179741	NTE2407*	ECG2407*	SK10098*
Q6422, 23	-	179740	NTE2406*	ECG2406*	SK10097*
SCR501 (2)	-	197591	NTE5424	ECG5424	-
(1)	-	194320	-	-	-
# U1001	TA8680N	200137	NTE7010	ECG7010	SK10479
U1401	-	161079	NTE4052B	ECG4052B	SK4052B
U1402	LM324N	207827	NTE987	ECG987	SK3643
U1410	HCF4052BE	161079	NTE4052B	ECG4052B	SK4052B
U1411	-	204292	-	-	-
U1501	-	176226	NTE1576	ECG1576	SK7672
U1600	-	190484	-	-	-
U1601	TDA8444	204290	-	-	-
U1602	-	207828	-	-	-
U1900	-	250031	-	-	-
U2601	-	179729	-	-	-
U3101 (1)	-	218817	-	-	-
(2)	-	210736	-	-	-
U3200 (1)	-	219833	-	-	-
(2)	-	210704	-	-	-
# For SAFETY use only equivalent replacement part.					
* Lead configuration may vary from original.					
% Use insulating hardware supplied with replacement.					
(1) Used in models 35GT681FM1 and 35GT681JX1.					
(2) Used in models 35GT680NM1 and 35GT680NX1.					

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.
U3401	CX20106A	195885	-	-	-
# U4101	TEA2261	200419	-	-	-
U4501	LM311N	200420	NTE922M	ECG922M	SK3668
U4801	LM311N	200420	NTE922M	ECG922M	SK3668
U6401	CX20125	201146	-	-	-
REMOTE TRANSMITTER					
CR1	-	164717	NTE519	ECG519	SK3100
CR2, 3	-	148056	-	-	-
Q1, Q2	-	148996	NTE123AP	ECG123AP	SK3854
U1	-	203811	-	-	-
TUNER					
DH01	-	200553	-	-	-
DH02	-	200471	-	-	-
DH46	-	200472	-	-	-
DH57	-	200554	-	-	-
DH58	-	200471	-	-	-
DH59	-	200472	-	-	-
DH69	-	200471	-	-	-
DH73	-	200471	-	-	-
DH75	-	200555	-	-	-
DH83, 84	-	200472	-	-	-
DH97	-	200471	-	-	-
II06	-	200558	-	-	-
TH04	-	200566	-	-	-
TH14	-	200567	-	-	-
TH65	-	200566	-	-	-
TH75	-	200557	-	-	-
TH87	-	200574	-	-	-
TH93	-	200557	-	-	-
TI11, 13, 14	-	200556	-	-	-
# For SAFETY use only equivalent replacement part.					

PARTS LIST continued

CONTROLS & RESISTORS continued			
Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
R6418	680 2% 1/8W SMT	178286	-
	330 5% 1/8W SMT	155497	-
R6420	1800 2% 1/8W SMT	181484	-
R6421	1500 2% 1/8W SMT	181482	-
R6422 (1)(2)	1000 2% 1/8W SMT	190462	-
(2)	820 2% 1/8W SMT	176814	-
R6423	750 2% 1/8W SMT	181056	-
R6424	620 2% 1/8W SMT	181493	-
R6425	680 2% 1/8W SMT	178286	-
R6426 (1)(2)	390 2% 1/8W SMT	178284	-
(2)	430 2% 1/8W SMT	190461	-
R6447	750 2% 1/8W SMT	181056	-
R6448	300 Luma	190525	-
R6449	5100 2% 1/8W SMT	175418	-
R6465 (1)(2)	1000 2% 1/8W SMT	190462	-
(2)	1200 5% 1/8W SMT	178196	-
R6469	10K 2% 1/8W SMT	174364	-
	12K 5% 1/8W SMT	174365	-
R6470	3900 2% 1/8W SMT	157377	-
R6476	6200 2% 1/8W SMT	181058	-
R6478	2700 2% 1/8W SMT	181064	-
# R6487	10 2% 1/4W	829010	QW010
	10 5% 1/4W	-	QW010
# RT4201 (1)	5.9 Cold PTC Thermistor	207768	-
(2)	5.9 Cold PTC Thermistor	190002	-
RT4501	PTC Thermistor	181161	-
# For SAFETY use only equivalent replacement part. (1) Used in models 35GT681FM1 and 35GT681JX1. (2) Used in models 35GT680NM1 and 35GT680NX1.			

CAPACITORS & ELECTROLYTICS		
Item No.	Rating	Mfr. Part No.
C1204	10pF 2% 50V NPO SMT	174402
C1406	39pF 5% 50V NPO SMT	181090
C1407	150pF 5% 50V NPO SMT	181091
C1410 (1)	470pF 5% 50V N750 SMT	210893
(2)	470pF 10% 50V SMT	200138
C1616	2.2µF 20% 50V NP	190527
C1617	3.3µF 20% 50V NP	190528
C1618	4.7µF 20% 50V NP	190529
C2308	180pF 5% 50V NPO SMT	190543
C2309	12pF 5% 50V NPO SMT	174403
C2310 (1)	18pF 5% 50V NPO SMT	194440
(2)	18pF 10% 50V NPO SMT	193337
C2312	7pF 2% 50V NPO SMT	174401
C2316	560pF 5% 50V NPO	200139
C2602	33pF 5% 50V NPO SMT	174408
C2603	100pF 5% 50V NPO SMT	174412
C2604	15pF 5% 50V NPO SMT	174404
C2704	7pF ±.5pF 50V NPO SMT	174401
C2707 (1)	82pF 5% 50V NPO SMT	176828
(2)	100pF 5% 50V NPO SMT	174414
C2718	100pF 5% 50V NPO SMT	174412
C2724 (1)	180pF 5% 50V NPO SMT	193338
(2)	68pF 5% 50V NPO SMT	193339
C2804	15pF 5% 50V NPO SMT	174404
C2811, 12, 13	22pF 5% 50V NPO SMT	194903
C2814 (1)	68pF 5% 50V NPO SMT	174410
(2)	82pF 5% 50V NPO SMT	176828
C2815	27pF 10% 50V NPO SMT	192050
C2905, 09	18pF 5% 50V NPO SMT	174405
C2924, 26	560pF 5% 50V NPO SMT	200139
C3110	22pF 5% 50V NPO SMT	194903
C3119 (1)	33pF 5% 50V NPO SMT	174408
(2)	56pF 5% 50V NPO SMT	190552
C3120 (1)	33pF 5% 50V NPO SMT	174408
(2)	56pF 5% 50V NPO SMT	190552
C3128	560pF 5% 50V NPO SMT	200139
C3144	560pF 10% 50V NPO SMT	202904
C3145 (1)	100pF 5% 50V NPO SMT	193340
C3301, 02, 03	100pF 5% 50V NPO SMT	174412
C3314	220pF 5% 50V NPO SMT	178188
C3315	100pF 5% 50V NPO SMT	174412
C3316	560pF 10% 50V NPO SMT	202904
C3317	15pF 5% 50V NPO SMT 079LG	202907
	15pF 5% 50V NPO SMT 126LG	174404
C3318 (1)	27pF 5% 50V NPO SMT	174407
(2)	47pF 5% 50V NPO SMT	174409
C3320, 21 (1)	27pF 5% 50V NPO SMT	174407
(2)	47pF 5% 50V NPO SMT	174409
C3323 (1)	82pF 5% 50V NPO SMT	192049
# C4002, 05	680pF 20% 1kV	190538
# C4007	820µF 10% 200V	190561
# C4008	.005 20% 120V	195697
# C4110	470pF 5% 1.5kV N1500	143242
C4111	680pF 20% 1kV	190538
# C4112	.0056 5% 800V	201619
C4116	47pF 5% 50V NPO	143867
C4140	680pF 20% 1kV	190538
# C4141	470µF 20% 180V	200147
C4155	470pF 5% 50V N750 SMT	210893
# C4401	.0162 1.6kV	206009
# C4402	.056 5% 400V	200149
# For SAFETY use only equivalent replacement part. (1) Used in models 35GT681FM1 and 35GT681JX1. (2) Used in models 35GT680NM1 and 35GT680NX1.		

CAPACITORS & ELECTROLYTICS continued		
Item No.	Rating	Mfr. Part No.
# C4403	.48 5% 250V	197518
# C4406	470pF 5% 1.5kV N1500	143242
# C4407	.0047 10% 250V	190534
# C4503	2200µF 10% 35V	200151
# C4511	1.54µF 5% 250V	200152
C4701	.01 20% 1kV	137583
C4702, 04, 13	680pF 20% 1kV	190538
# C4716	.082 10% 250V	181404
C4801	10µF 20% 50V NP	196060
# C4905	1µF 20% 100V	189991
C5001	.001 10% 3KV	120696
C6402 (1)	22pF 5% 50V NPO SMT	174408
(2)	100pF 5% 50V NPO SMT	174412
C6404 (1)(2)	47pF 5% 50V NPO SMT	174409
(2)	10pF 2% 50V NPO SMT	174402
C6406	10µF 25V NP	-
C6407	100pF 5% 50V NPO SMT	174412
C6408	82pF 5% 50V NPO SMT	176828
C6409	10pF 2% 50V NPO SMT	174402
C6417	470pF 10% 50V NPO SMT	174416
C6420, 21	220pF 5% 50V NPO SMT	178188
REMOTE TRANSMITTER		
C3, C4	22pF 10% 50V NPO SMT	194903
C6	470pF 10% 50V NPO	192040
TUNER		
CH66, 72	390pF 2% 63V	200480
# For SAFETY use only equivalent replacement part. (1) Used in models 35GT681FM1 and 35GT681JX1. (2) Used in models 35GT680NM1 and 35GT680NX1.		

PARTS LIST continued

CONTROLS & RESISTORS			
Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
R1204	5000 WBA Level	181113	-
# R1402	430 5% 1/4W	829143	QW143
R1403	3000 2% 1/10W SMT	194917	-
R1404	3000 2% 1/8W SMT	190464	-
# R1406	430 5% 1/4W	829143	QW143
# R1410 (1)	430 5% 1/4W	829143	QW143
(2)	390 5% 1/4W	433018	QW139
R1411	3000 2% 1/10W SMT	194917	-
R1412	1100 2% 1/10W SMT	202586	-
R1413	330 2% 1/8W SMT	181488	-
R1414	2000 2% 1/4W SMT	175321	-
R1419	910 2% 1/8W SMT	182627	-
R1420	1300 2% 1/8W SMT	182623	-
R1421	510 2% 1/10W SMT	202585	-
R1425	120K 2% 1/8W SMT	180816	-
R1426	470 2% 1/8W SMT	182628	-
R1427	1500 2% 1/8W SMT	181482	-
R1428	330 2% 1/8W SMT	181488	-
# R1429A (1)	2200 5% 1/2W	176632	HW222
R1430	2700 2% 1/4W	176648	QW227
# R1431A (1)	2200 5% 1/2W	176632	HW222
# R1432	10 10% 1/4W	829010	QW010
# R1452, 54, 56, 58	1000 5% 1/4W	108865	QW210
# R1463, 64, 65	47 5% 1/4W	829047	QW047
# R1488, 94	2200 5% 1/4W	176632	QW222
R1604	20K Stereo SAP Filter	191389	-
R1606	50K Base Band Filter	190526	-
R1609	100K LF Separator	181108	-
R1611	250K HF Separator	195951	-
R1616	50K Stereo VCO	190526	-
# R1655	3.3 5% 1/2W	175772	QW3D3
# R1656	10 10% 1/4W	829010	QW010
# R1906, 07 (1)	4.7 5% 1/4W Nonflammable	147960	QW4D7
(2)	2.2 5% 1/4W	829A22	QW4D7
R1941, 44, 46	10K 2% 1/10W SMT	195937	-
R1947	12K 2% 1/10W SMT	205352	-
R1948	2400 2% 1/10W SMT	205342	-
# R2301	100 5% 1/4W	175325	QW110
R2302	1500 2% 1/8W SMT	181482	-
R2303	390 2% 1/8W SMT	178284	-
R2306	100 2% 1/8W SMT	181486	-
R2307	620 2% 1/8W SMT	181493	-
R2311	10K RF AGC	181107	-
# R2323	1.2 5% 1/4W	200172	QW1D2
R2603	500 Notch Depth	181112	-
R2604	1300 2% 1/8W SMT	182623	-
R2606	750 2% 1/8W SMT	181056	-
R2703	1000 2% 1/8W SMT	190462	-
R2706	10K 2% 1/8W SMT	174364	-
R2708	1500 2% 1/4W	175367	QW215
R2710	100 2% 1/8W SMT	181486	-
R2711	750 2% 1/8W SMT	181056	-
R2719	13.3K 1% 1/4W	173370	-
# R2721	27K 5% 1/2W	206037	HW327
R2725	750 2% 1/10W SMT	202914	-
R2730	1000 Contrast Preset	181109	-
R2732	1500 2% 1/8W SMT	181482	-
R2733 (1)	620 2% 1/8W SMT	181493	-
(2)	270 2% 1/8W SMT	181481	-
R2734 (1)	1000 2% 1/8W SMT	190462	-
(2)	430 2% 1/8W SMT	190461	-
# For SAFETY use only equivalent replacement part.			
(1) Used in models 35GT681FM1 and 35GT681JX1.			
(2) Used in models 35GT680NM1 and 35GT680NX1.			

CONTROLS & RESISTORS continued			
Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
R2735	100 2% 1/8W SMT	181486	-
R2736 (1)	910 2% 1/8W SMT	182627	-
(2)	1000 2% 1/8W SMT	190462	-
R2737	1000 2% 1/8W SMT	190462	-
R2740	560 2% 1/8W SMT	182822	-
R2742	1500 2% 1/8W SMT	181482	-
R2801	1000 2% 1/8W SMT	190462	-
R2802	30K Chroma Filter	177366	-
R2804	120K 2% 1/8W SMT	180816	-
R2813	22K 2% 1/8W SMT	174367	-
R2814	30K 2% 1/10W SMT	200176	-
R2816	10K Tint Preset	181107	-
R2901, 02, 03	1000 2% 1/8W SMT	190462	-
R2910	220 2% 1/8W SMT	181492	-
R2913	4500 Red Bias	190533	-
R2914	220 2% 1/8W SMT	181492	-
R2917	4500 Blue Bias	190533	-
R2918	220 2% 1/8W SMT	181492	-
R2921	4500 Green Bias	190533	-
R2922	220 2% 1/8W SMT	181492	-
# R2924	10 10% 1/4W	829010	QW010
	10 10% 1/4W	200442	QW010
R2926	100 Red/Blue Drive	190531	-
R2928	100 Green Drive	190531	-
R2935	220 2% 1/8W SMT	181492	-
R2938	200 2% 1/8W SMT	178280	-
R2942, 43	470 2% 1/8W SMT	182628	-
R2944	560 2% 1/8W SMT	182822	-
R2945	200 2% 1/8W SMT	178280	-
R2946	1000 2% 1/8W SMT	190462	-
# R2947	10 10% 1/4W	829010	QW010
R3115, 17	10K 2% 1/8W SMT	174364	-
R3120	560 2% 1/8W SMT	182822	-
R3121, 36	10K 2% 1/8W SMT	174364	-
R3138	22K 2% 1/8W SMT	174367	-
R3141	100 2% 1/8W SMT	181486	-
R3143	1000 2% 1/8W SMT	190462	-
R3305	10K 2% 1/8W SMT	174364	-
R3307	27K 2% 1/10W SMT	205245	-
R3309	7500 2% 1/8W SMT	200178	-
# R3310	47 5% 1/4W	175040	QW047
R3335 (1)	13K 2% 1/10W SMT	205353	-
(2)	18K 2% 1/10W SMT	205356	-
R3342	91K 2% 1/10W SMT	200180	-
R3343	13K 2% 1/8W SMT	178285	-
R3346	1500 Sub Bright	200181	-
R3402	133K 1% 1/4W	195752	-
R3602	10K 2% 1/8W SMT	174364	-
# R4001	1.8 10% 15W Wirewound	200444	-
# R4002	2.7M 5% 1/2W	183127	HW527
# R4003	33K 5% 2W	200182	2W333
R4102	4700 2% 1/4W	175413	QW247
# R4103	51K 5% 1/4W	175315	QW351
R4104	1500 2% 1/4W	175367	QW215
R4108	910 2% 1/4W	203097	QW191
# R4110	.18 5% 2W Wirewound	200183	-
R4113	300 Standby	190525	-
R4114	45.3K 1% 1/4W	176506	-
R4115	3240 1% 1/4W	200184	-
# R4116	500 B+ Reg	(3)	-
# For SAFETY use only equivalent replacement part.			
(1) Used in models 35GT681FM1 and 35GT681JX1.			
(2) Used in models 35GT680NM1 and 35GT680NX1.			
(3) Part of CR4111 B+ REG kit.			

CONTROLS & RESISTORS continued			
Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R4119	330 5% 7W Wirewound	200185	-
# R4126	6.8 5% 3W Wirewound	206016	-
R4139	10K 2% 1/8W SMT	174364	-
R4148	53.6K 1% 1/4W	200189	-
# R4149	1.2 5% 1W	831A12	1W1D2
R4152	470 2% 1/8W SMT	182628	-
R4306	15K Horizontal Phase	200417	-
R4307 (1)	30K 5% 1/4W	175046	QW330
(2)	26.7K 1% 1/4W	196081	-
R4308	120 2% 1/8W SMT	181485	-
# R4312	47 5% 1/4W	175040	QW047
# R4313	100 5% 1/2W	176796	HW110
# R4314	39 5% 1/2W	200192	HW039
R4326	3300 2% 1/10W SMT	195938	-
R4327	15K 2% 1/4W	175360	QW315
R4328	5100 2% 1/8W SMT	175418	-
# R4401	220 5% 1/2W	176651	HW122
# R4402	10 5% 1/2W	181098	HW010
R4509, 10	10K 2% 1/8W SMT	174364	-
R4511	8200 2% 1/8W SMT	181065	-
R4513	120 2% 1/8W SMT	181485	-
# R4518	470 5% 1/4W	829147	QW147
# R4520	6800 5% 1/2W	179248	HW268
R4522	15K Vert Height	200417	-
# R4523	1000 5% 1W	831210	1W210
# R4544	4.7 5% 1/4W	147960	QW4D7
	4.7 5% 1/4W	200197	QW4D7
# R4701	10 5% 1/2W	830010	HW010
# R4703	2.7 5% 3W Wirewound	196074	-
# R4704	Resistor Block	196072	-
# R4710	12 2% 1/4W	829012	QW012
# R4713	82K 5% 1/2W	830382	HW382
R4715	200 2% 1/4W	175363	QW120
R4716	680 2% 1/4W	175312	QW168
R4717	56 2% 1/4W	175318	QW056
R4718	100 2% 1/8W SMT	181486	-
# R4719	470 5% 1/2W	830147	HW147
# R4720	10 5% 1/2W	830010	HW010
R4802	2000 Width	200199	-
R4805	10K E/W Pin Amp	181107	-
# R4809	390 5% 1/2W	175769	HW139
# R4821	150 5% 1W	175784	1W115
# R4901	10K 5% 1/4W	175317	QW310
# R4902	100 5% 1/4W	175325	QW110
# R4903	34K 1% 1/4W	207881	-
# R4904	46.4K 1% 1/4W	204794	-
R4905	22K 2% 1/4W	175054	QW322
R4920	5100 2% 1/4W	175417	QW251
R4923	150K XRP	207883	-
# R5015	3.3M	(4)	-
R6401	1000 2% 1/4W	175055	QW210
R6402	2200 2% 1/8W SMT	181079	-
R6403	18K 2% 1/8W SMT	174366	-
	27K 2% 1/8W SMT	193061	-
R6404	10K 2% 1/8W SMT	174364	-
R6407	4700 2% 1/8W SMT	178287	-
R6408	15K 2% 1/8W SMT	192835	-
	13K 2% 1/8W SMT	178285	-
R6417	1500 2% 1/8W SMT	181482	-
	150 5% 1/8W SMT	179379	-
# For SAFETY use only equivalent replacement part.			
(1) Used in models 35GT681FM1 and 35GT681JX1.			
(2) Used in models 35GT680NM1 and 35GT680NX1.			
(4) Part of resistor block R4704.			

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MODEL S 35GT681FM1/JX1 (CHASSIS CTC169BD5)

PARTS LIST continued

MISCELLANEOUS			
Item No.	Description	Mfr. Part No.	Notes
# C4006	Capristor	250102	11M, 470pF
CF1201	Filter	195702	4.5MHz
CF2301	Filter	181125	4.5MHz
DL2601	Delay Line	193568	-
DL2701	Delay Line	195704	-
# F4001	Fuse	175425	5Amp, 125V, Fast Acting
# FL4001	Line Filter	207879	-
J1401, 02	Jack	190514	Video In
J1403	Jack	190514	Select Video Out
J1404	Jack	195705	S-Video In
J1407	Jack	190513	Left Input 1 Audio In
J1408	Jack	190512	Right/Mono Input 1 Audio In
J1409	Jack	190513	Left Input 2 Audio In
J1410	Jack	190512	Right/Mono Input 2 Audio In
J1411, 12	Jack	190516	Left Audio Out, Left Selected Audio Out
J1413, 14	Jack	190515	Right Audio Out, Right Selected Audio Out
# K4201	Relay	190490	Degaussing
# KS5001	Socket	189986	CRT
# P1	Line Cord	187802	AC, Polarized
SF2301	Filter	200203	SAW
SP1900, 03	Speaker	183159	2 1/4" X 5", 8 Ohms, 5W
SW1	Switch	181166	External Speaker
SW3401	Switch	181724	Audio
	Switch	207842	Audio
SW3403	Switch	181724	Channel Up
	Switch	207842	Channel Up
SW3411	Switch	181724	Video
	Switch	207842	Video
SW3413	Switch	181724	Volume Down
	Switch	207842	Volume Down
SW3421	Switch	181724	Set Up
	Switch	207842	Set Up
SW3423	Switch	181724	Volume Up
	Switch	207842	Volume Up
SW3431	Switch	181724	Channel Down
	Switch	207842	Channel Down
SW3433	Switch	207842	Power
SW4201	Switch	181166	Strength
SW4202	Switch	205225	Polarity
# V101	CRT	A89AEJ10X01	-
Y2801	Crystal	161235	3.58MHz
Y3101 (1)	Crystal	209856	8MHz
(2)	Crystal	182839	8MHz
Y4301	Resonator	200210	503.3kHz
	Jack Panel	210738	-
	PC Board (2)(3)	210888	Analog Stereo 5 Watt
	PC Board (1)(3)	207812	Black Stretch Adapter
	PC Board (2)(3)	210880	Black Stretch Adapter
	PC Board (3)	203094	CRT
	PC Board (3)	207813	External Speaker
	PC Board (3)	210065	Field Correction Pix Tilt
	PC Board (3)	204910	Front Panel Assembly
	PC Board (1)(3)	219413	SRS Audio 5 Watt
	Terminal	161073	Speaker
	Transmitter	197462	Remote (CRK59C)
	Tuner (3)	200075	UHF/VHF (MTP-M-2016-01)
REMOTE TRANSMITTER			
Y1	Crystal	196001	-
TUNER			
QI06	Crystal	200560	4MHz
# For SAFETY use only equivalent replacement part.			
(1) Used in models 35GT681FM1 and 35GT681JX1.			
(2) Used in models 35GT680NM1 and 35GT680NX1.			
(3) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.			

COILS & TRANSFORMERS			
Item No.	Function/Rating		Mfr. Part No.
# DF4500 (1)	Yoke 110°	Horiz 950µH Vert 24.6mH	-
FB4101	Ferrite Bead		152102
FB4102	Ferrite Bead		152102
FB4103	Ferrite Bead		153328
FB4401	Ferrite Bead		161237
FB4402	Ferrite Bead		206390
L1201	-		190504
L2301	68µH		195708
L2302	2.2µH		197616
L2303	-		190506
L2304	-		190503
L2305	2.2µH		197616
L2306	-		206035
L2307 (2)(3)	12µH		210687
(3)	18µH		195711
L2601 (2)(3)	18µH, Notch Frequency		216800
(3)	18µH, Notch Frequency		181131
L2602	39µH		195710
L2603	-		160518
L2702	39µH		195710
L2704	100µH		206045
L2705	4.7µH		158726
L2706 (2)	10µH		200162
(3)	10µH		175409
L2801	22µH		195712
L2802	22µH		195712
L2803	22µH		195712
L2804	-		200161
L3101 (2)	10µH		200162
(3)	10µH		175409
# L3601	-		161243
L3602	-		207880
L4101	2.2µH		190480
# L4201	Degaussing		208549
L4202	Field Cancel		208550
# L4401 (2)(3)	17.5µH		210895
(3)	17.5µH		196064
L4701	47µH		190729
# L4702 (2)	10µH		200162
(3)	10µH		175409
# L4803	Pincushion		206391
L5001	120µH		195750
L5004	47µH		195713
L5005	47µH		195713
L5006	47µH		195713
L6401 (2)(3)	22µH		195712
(3)	22µH		200161
L6402	22µH		195712
L6403	120µH		195750
L6406	-		176622
# T4101	Regulator Feedback		200204
# T4102	Chopper		210896
# T4301	Horizontal Drive		205196
# T4301	Horizontal Output		200418
TUNER			
LH64	3.9µH		200559
LH78	1.2µH		200481
# For SAFETY use only equivalent replacement part.			
(1) Yoke permanently bonded to CRT. On unit no.			
89L1UBZ/02-E04-88.			
(2) Used in models 35GT681FM1 and 35GT681JX1.			
(3) Used in models 35GT680NM1 and 35GT680NX1.			

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

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MODELS 35GT681FM1/JX1 (CHASSIS CTC169BD5)