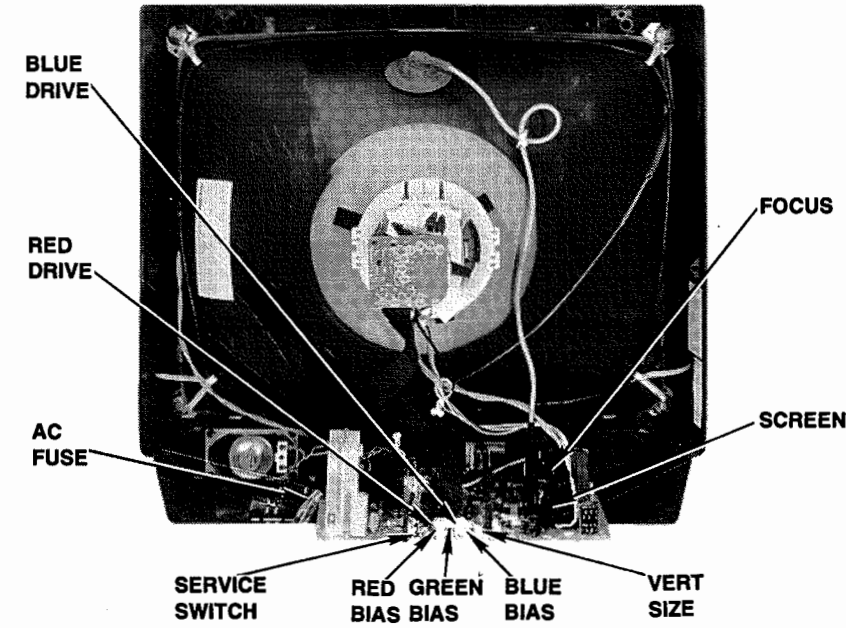


CABINET - REAR VIEW



TEST JIG HOOKUP

Function	Chek-A-Color Adapter No.	PC Board Plug No.	Pin	Color
CRT	B239	P401	1	Black
Yoke	D482		2	Yellow
Yoke Setting	YP2A		3	Red
Comments	Focus Tap		4	Blue

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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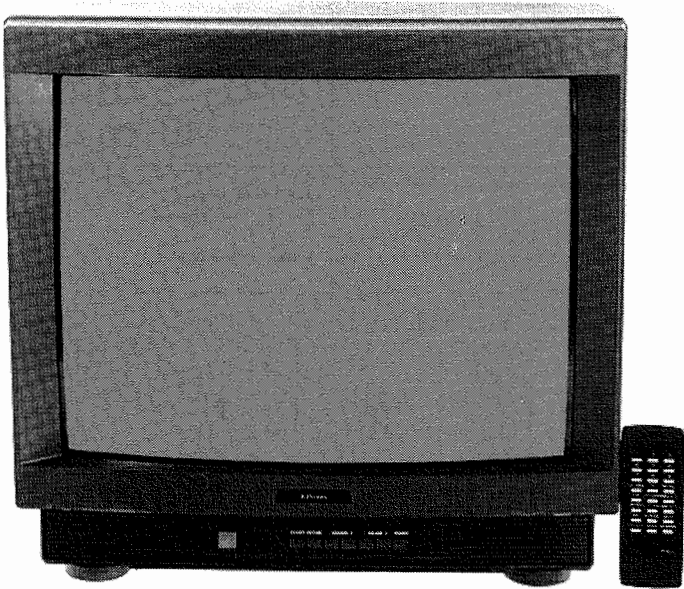
PHOTOFACT® Technical Service Data

SET 3135

MODEL 2714 (CHASSIS NC-95E)

JCPENNEY

JCPENNEY
Model 2714 (Chassis NC-95E)



Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts lists

Catalog No. 685-0044
Product Service No. 685-2714-00

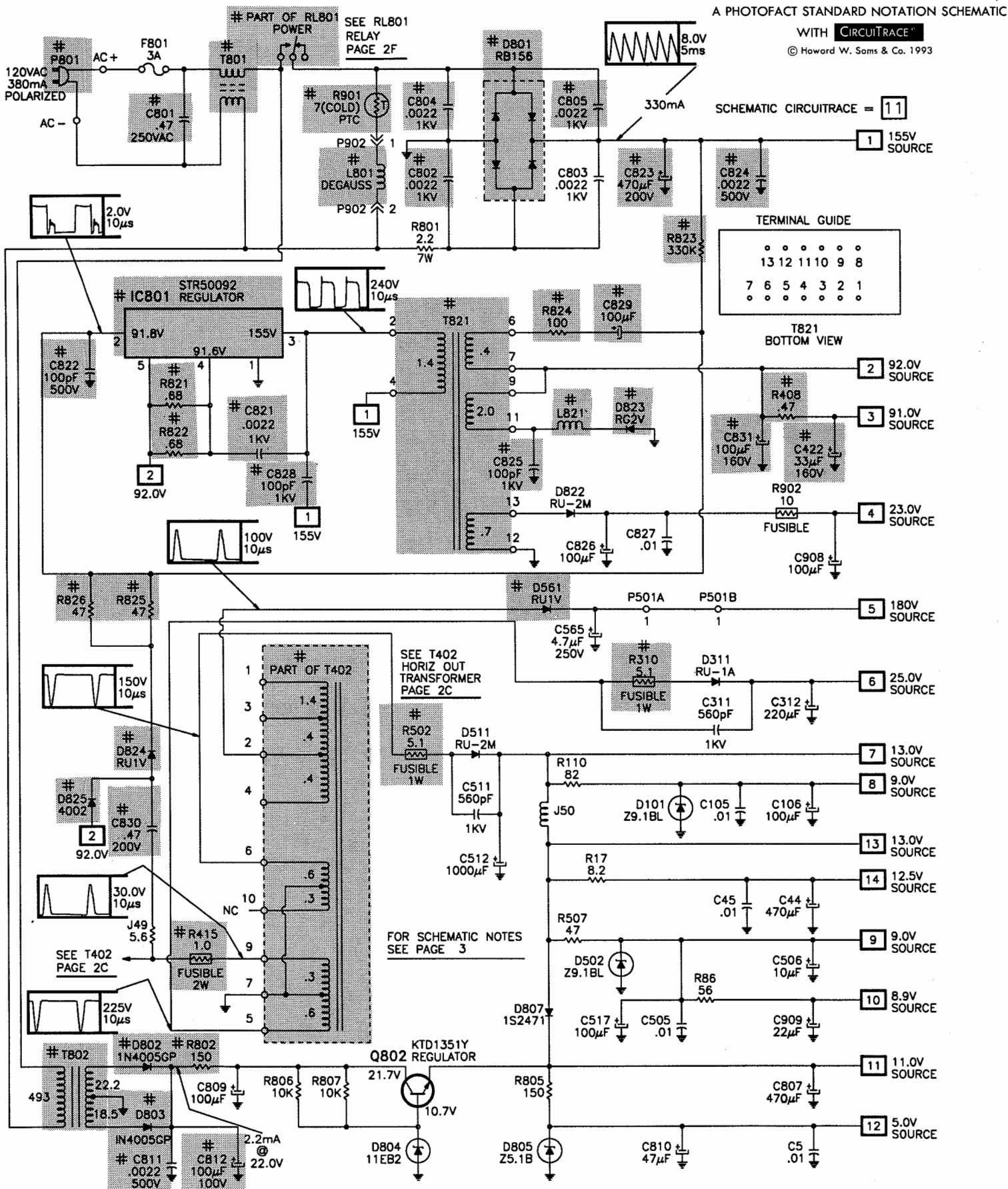


HOWARD W. SAMS & COMPANY

APRIL 1993 SET 3135

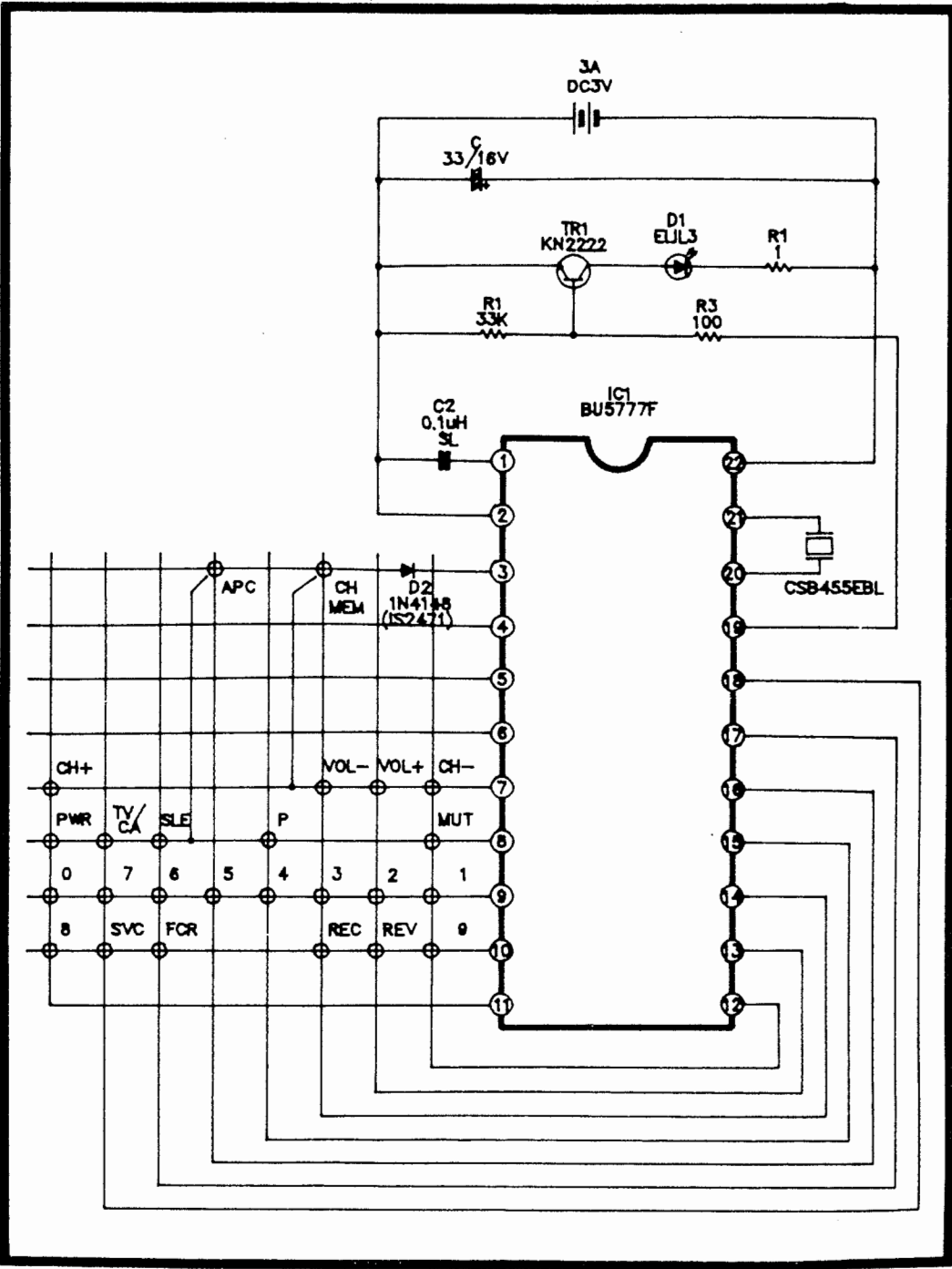
Parts: JCPenney Distr. Center, 6840 Barton Rd.,
Morrow, GA. 30260

POWER SUPPLY SCHEMATIC



G

REMOTE CONTROL TRANSMITTER SCHEMATIC (FS-185A, B, C)



Courtesy of Manufacturer

H

JCPENNEY

MODEL 2714 (CHASSIS NC-95E)

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
F801	Fuse	1347-7690	3Amp/125VAC
L402	Ferrite Bead	-	-
# L801	Degaussing	1371-5776	-
# P801	Cord AC	174-060M	-
# RL801	Relay	141-018A	Power
SP1	Speaker	120-089H	3 1/2" X 2" 16 Ohm 3W
SW1	Switch	140-333B	Power
SW2	Switch	140-333B	VOL+
SW3	Switch	140-333B	VOL-
SW4	Switch	140-333B	CH+
SW5	Switch	140-333B	CH-
SW6	Switch	140-333B	P-Mode
SW7	Switch	140-333B	TV/CATV
SW201	Switch	1347-7831	Service
# T801	Line Filter	1198-0729	-
# V501	CRT	A51KKS42XX01R7JE	-
X1	Filter	1357-8075	4.0MHz
X401	Filter	1348-5412	-
X501	Crystal	1266-2904	3.58MHz
Z101	Filter	1348-5446	SAW
Z201	Delay Line	150-245D	-
Z251	Filter	1357-8067	4.5MHz
Z601	Filter	1357-8059	4.5MHz
	Board	1348-5602	Antenna
	Board	110-L05A	CRT
	Board	110-M54H	Main
	Board	1370-7385 (1)	Pre-Amp
	Remote Receiver	106-037A	-
	Remote Transmitter	105-185H	-
	Socket	1357-8414	CRT
	U/V Tuner	1358-3919 (1)	-

(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.
For SAFETY use only equivalent replacement part.

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

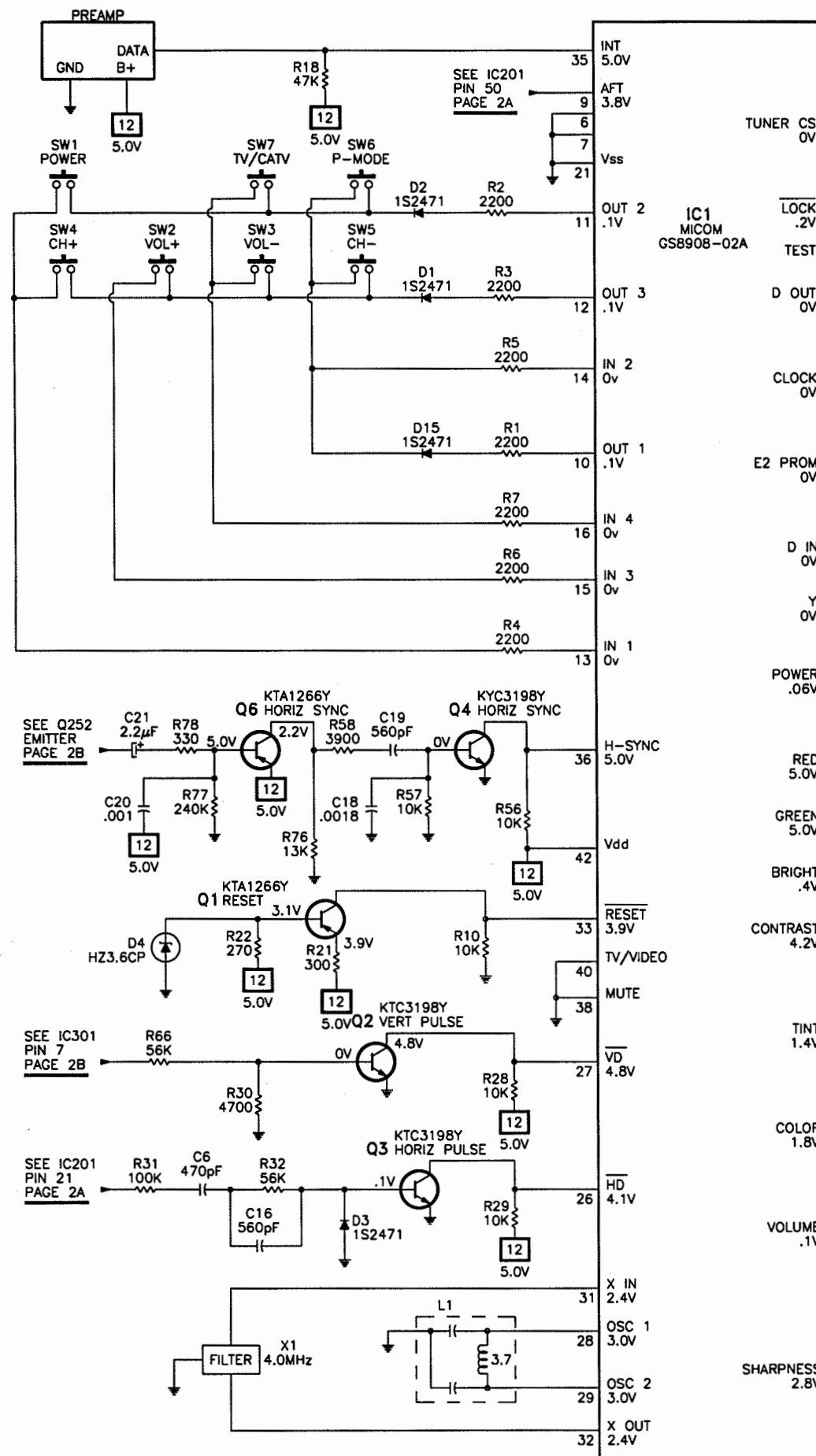
Or consult the Sams *Annual Index* for the address of the original equipment manufacturer.

Participating Vendors

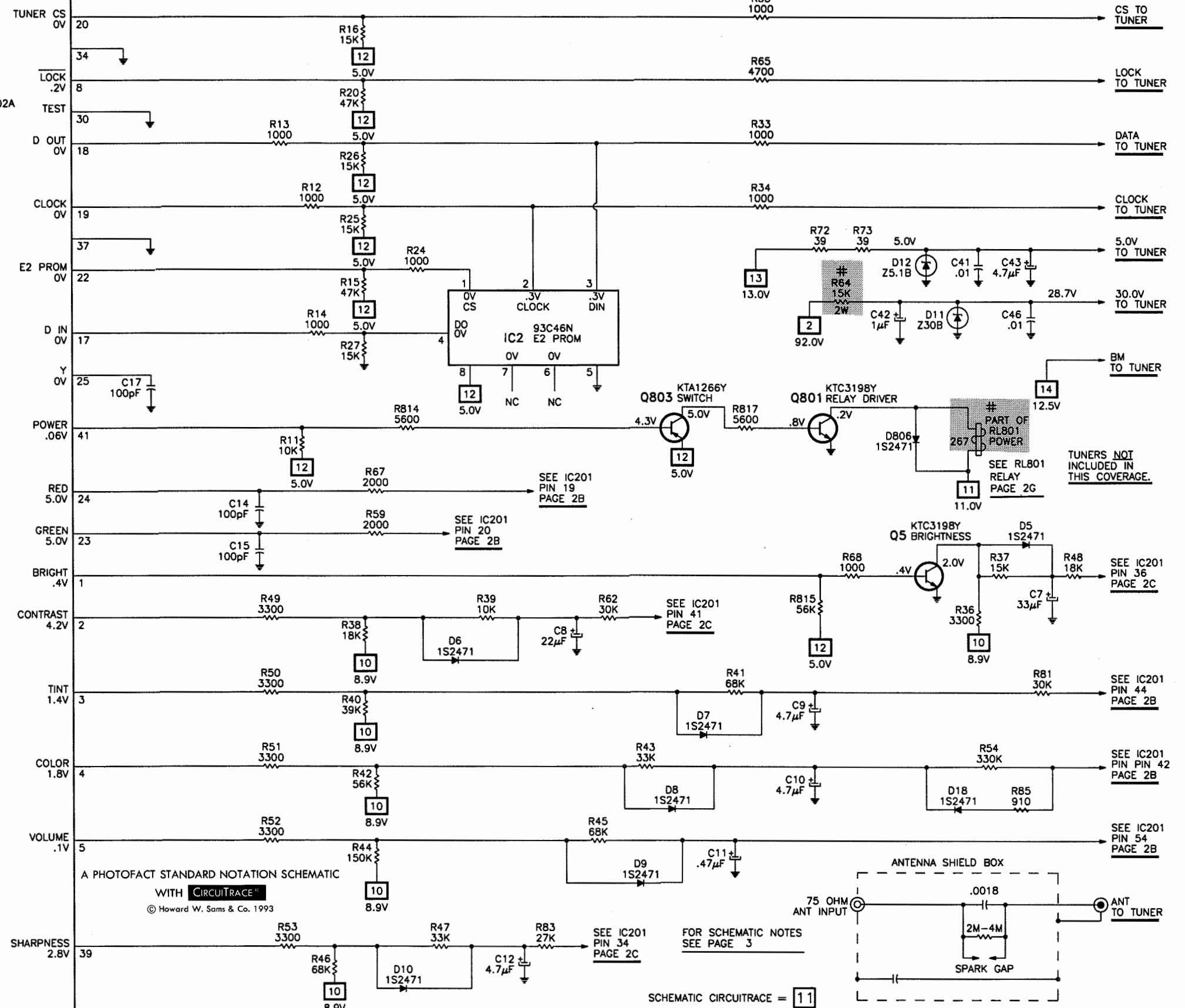
- Custom Components Corporation (Chek-A-Color)
- NTE Electronics, Inc. (NTE)
- Philips ECG Company (ECG)
- PTS Electronics Corporation (PTS)
- Sencore, Inc.
- Thomson Consumer Electronics, Inc. (SK, TCE)

JCPENNEY

MODEL 2714 (CHASSIS NC-95E)



CPU SCHEMATIC



PARTS LIST

SEMICONDUCTORS

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
D1 Thru					
D3	1S2471	1266-2318	NTE519	ECG519	SK3100
D4	HZ3.6CP	1368-1762	NTE5006A	ECG5006A	SK3A6
D5 Thru					
D10	1S2471	1266-2318	NTE519	ECG519	SK3100
D11	Z30B	-	NTE5084A	ECG5084A	SK30V
	MTZ30B	1348-5016	NTE5035A	ECG5035A	SK30A
D12	Z5.1B	-	NTE5010A	ECG5010A	SK5A1
	MTZ5.1B	1348-4985	NTE5010A	ECG5010A	SK5A1
D15	1S2471	1266-2318	NTE519	ECG519	SK3100
D18	1S2471	1266-2318	NTE519	ECG519	SK3100
D101	Z9.1BL	-	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	1348-4993	NTE5018A	ECG5018A	SK9A1
D202 Thru					
D205	1S2471	1266-2318	NTE519	ECG119	SK3100
D301	GP15J	-	NTE125	ECG125	SK3081
D311	RU-1A	1270-5273	NTE552	ECG552	SK9000
D401	Z9.1BL	0DD150009CE	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	1348-4993	NTE5018A	ECG5018A	SK9A1
D402	1S2471	1266-2318	NTE519	ECG519	SK3100
	DS4148	1270-5281	NTE177	ECG177	SK9091
D421	RU-2M	-	NTE552	ECG552	SK9000
	RU-2MV	1195-6414	NTE552	ECG552	SK9000
D471	GP15J	-	NTE125	ECG125	SK3081
D473	Z11BL	-	NTE5020A	ECG5020A	SK11A
	MTZ11B	1348-5008	NTE5020A	ECG5020A	SK11A
D502	Z9.1BL	-	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	1348-4993	NTE5018A	ECG5018A	SK9A1
D511	RU-2M	-	NTE552	ECG552	SK9000
	RU-2MV	1195-6414	NTE552	ECG552	SK9000
# D561	RU1V	1377-6208	NTE552	ECG552	SK9000
# D801	RB-156	1347-7112	NTE5306	ECG5306	SK3677
# D802, 03	1N4005GP	1001-5667	NTE116	ECG116	SK3313
D804	11EB2	-	-	-	-
	RD11FBD2	1199-7830	NTE5074A	ECG5074A	SK11V
D805	Z5.1B	-	NTE5010A	ECG5010A	SK5A1
	MTZ5.1B	1348-4985	NTE5010A	ECG5010A	SK5A1
D806, 07	1S2471	1266-2318	NTE519	ECG519	SK3100
D822	RU-2M	-	NTE552	ECG552	SK9000
	RU-2MV	1195-6414	NTE552	ECG552	SK9000
# D823	RG2V	-	NTE580	ECG580	SK5036
	RG-2V	1368-1747	NTE580	ECG580	SK5036
# D824	RU1V	1377-6208	NTE552	ECG552	SK9000
# D825	1N4005GP	1001-5667	NTE116	ECG116	SK3313
D902	1S2471	1266-2318	NTE519	ECG519	SK3100
IC1	GS8908-02D	-	-	-	-
	TMP47C434N-3464	1377-4609	-	-	-
IC2	93C46N	-	-	-	-
	NM93C46	-	-	-	-
	NM93C46N	1378-8658	-	-	-

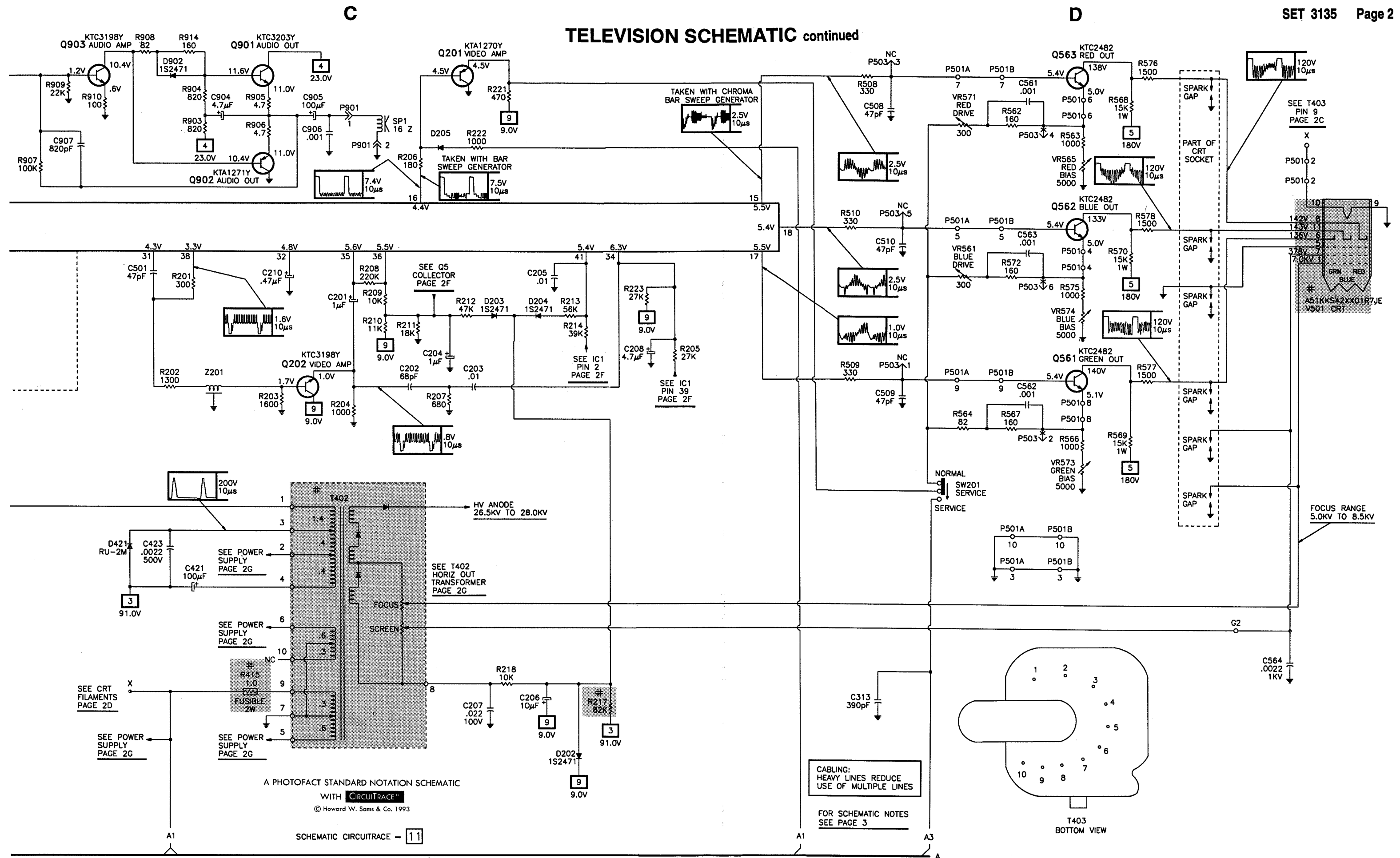
For SAFETY use only equivalent replacement part.

SEMICONDUCTORS continued

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
IC201	TA8680N	1348-5032	NTE7010	ECG7010	SK10479
IC301	LA7830	1310-8410	NTE1773	ECG1773	SK9752
# IC801	STR50092	-	-	-	-
	STR50092K	1377-6224	-	-	-
Q1	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	1377-3791	NTE290A	ECG290A	SK3114A
	KTA1015	-	NTE290A	ECG290A	SK9132
Q2 Thru					
Q5	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	1377-3858	NTE85	ECG85	SK9229
	KTC1815	-	NTE85	ECG85	SK3124A
Q6	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	1377-3791	NTE290A	ECG290A	SK3114A
	KTA1015	-	NTE290A	ECG290A	SK9132
Q101	KTC3197	1377-3841	NTE107	ECG107	SK3293
	KTC388A	-	NTE85	ECG85	SK3132
Q201	KTA1270Y	-	NTE290A	ECG290A	SK3114A
	KTA1270-TP-Y	1377-3809	NTE290A	ECG290A	SK3114A
	KTA562TM	-	NTE290A	ECG290A	SK3114A
Q202	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	1377-3858	NTE85	ECG85	SK9229
	KTC1815	-	NTE85	ECG85	SK3124A
Q252	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	1377-3791	NTE290A	ECG290A	SK3114A
	KTA1015	-	NTE290A	ECG290A	SK9132
Q401	KTC2482	1270-5232	NTE399	ECG399	SK3244
	KTC2482Y	-	NTE399	ECG399	SK3244
# Q402	2SD1555	1318-5996	NTE2331	ECG2331	SK9422
Q561 Thru					
Q563	KTC2482	1209-5873	NTE399	ECG399	SK3244
	KTC2482Y	-	NTE399	ECG399	SK3244
Q801	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	1377-3858	NTE85	ECG85	SK9229
	KTC1815	-	NTE85	ECG85	SK3124A
Q802	KTD1351Y	-	NTE291	ECG291	SK3440
	KTD1351-Y	0TR135100AB	NTE291	ECG291	SK3440
	KTD880	-	NTE152	ECG152	SK3893
Q803	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	1377-3791	NTE290A	ECG290A	SK3114A
	KTA1015	-	NTE290A	ECG290A	SK9132
Q901	KTC3203Y	-	-	-	-
	KTC3203-TP-Y	1377-6356	-	-	-
	KTC2120	-	NTE289A	ECG289A	SK3849
Q902	KTA1271Y	-	NTE383	ECG383	SK9138
	KTA1271-TP-Y	1377-6349	NTE383	ECG383	SK9138
	KTA950	-	NTE290A	ECG290A	SK3114A
Q903	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	1377-3858	NTE85	ECG85	SK9229
	KTC1815	-	NTE85	ECG85	SK3124A

For SAFETY use only equivalent replacement part.



PARTS LIST continued

CAPACITORS

Item No.	Rating	Mfr. Part No.
# C308	.1 100V	1311-8674
# C413	820pF 2KV 10%	1316-3092
# C414	.0068 1.6KV 5%	1316-1807
# C417	.47 50V 20%	1063-0192
# C801	.47 250VAC	181-408C
# C802	.0022 1KV 10%	1266-2136
# C804	.0022 1KV 10%	1266-2136
# C805	.0022 1KV 10%	1266-2136
# C811	.0022 500V 10%	1273-7623
# C821	.0022 1KV 10%	1266-2136
# C822	100pF 500V 10%	1377-6091
# C824	.0022 500V 10%	1273-7623
# C825	100pF 500V 10%	1377-6109
# C828	100pF 500V 10%	1377-6109
# C830	.47 200V 5%	1063-0192

For SAFETY use only equivalent replacement part.

ELECTROLYTIC CAPACITORS

Item No.	Rating	Mfr. Part No.
# C411	1uF 250V 20%	1198-0430
# C422	33uF 160V	1198-0620
C812	100uF 100V 20%	1377-6075
# C823	470uF 200V	1311-8781
# C829	100uF 16V 20%	1266-2482
# C831	100uF 160V 20%	1377-4518

For SAFETY use only equivalent replacement part.

COILS (RF-IF)

Item No.	Rating	Mfr. Part No.
J50	33uH	0LA0332K119
L1	6.5MHz	1357-8034
L101	.79uH	1310-8733
L103	VIF	1198-0786
L181	AFT	1348-5370
L251	15uH	1357-7929
# L403	6800uH	1266-2763
L601	SIF	1348-5388
L602	27uH	1357-7937
# L821	.85uH	1377-6414

For SAFETY use only equivalent replacement part.

RESISTORS

Item No.	Rating	Mfr. Part No.	NTE Part No.
# R64	15K 5% 2W Metal Film Oxide	1377-3692	2W315
# R217	82K 5% 1/2W Carbon Film	1270-4292	HW382
# R308	430 5% 1/2W Carbon Film	1159-6137	HW143
# R310	5.1 5% 1W Fusible	ORF0511J607	F1W5D1
# R408	.47 5% 1/2W Metal Film	1270-5166	HWD47
# R411	1800 5% 1/2W Carbon Film	1370-7294	HW218
# R413	220 5% 1/2W Fusible	ORF2200H609	-
# R415	1 5% 2W Fusible	1377-6307	F1W1D0
# R417	5600 5% 1W Metal Film Oxide	ORS5601J607	1W256
# R418	5600 5% 1W Metal Film Oxide	ORS5601J607	1W256
# R425	4700 5% 2W Metal Film Oxide	ORS4701K666	2W247
# R502	5.1 5% 1W Fusible	ORS0511J607	F1W5D1
R801	2.2 7W Wirewound	180-777B	-
# R802	150 5% 1/6W Carbon Film	1368-2000	-
# R821	.68 5% 1/2W Carbon Film	1377-6257	HWD68
# R822	.68 5% 1/2W Carbon Film	1377-6257	HWD68
# R823	330K 5% 1/2W Carbon Film	ORD3303H609	HW433
# R824	100 5% 1/2W Carbon Film	1045-8545	HW110
# R825	47 5% 1/2W Carbon Film	1273-7326	HW047
# R826	47 5% 1/2W Carbon Film	1273-7326	HW047
# R901	7 Cold PTC	163-012L	-
R902	10 5% 1/2W Fusible	-	-

For SAFETY use only equivalent replacement part.

CABINET PARTS

Item	Part No.
Back Cover Assembly	303-D30B
Button	441-131A
Cabinet Assembly	300-843H
Front Panel Assembly	313-201B
Grille	314-182A

COILS & TRANSFORMERS

Item No.	Function	Mfr. Part No.	Other On-Unit No.
# DY1	90° Yoke Horiz 1.95mH Vert 29.0mH	153-131A	153-131A
# L404	Horizontal Linearity	1198-0687	150-159A
# T401	Horizontal Driver	1195-6356	151-101B
# T402	Horizontal Output (1)	154-177E	154-177E
# T802	Standby Power	151-329C	151-329C
# T821	SMPS	1377-6422	151-251B

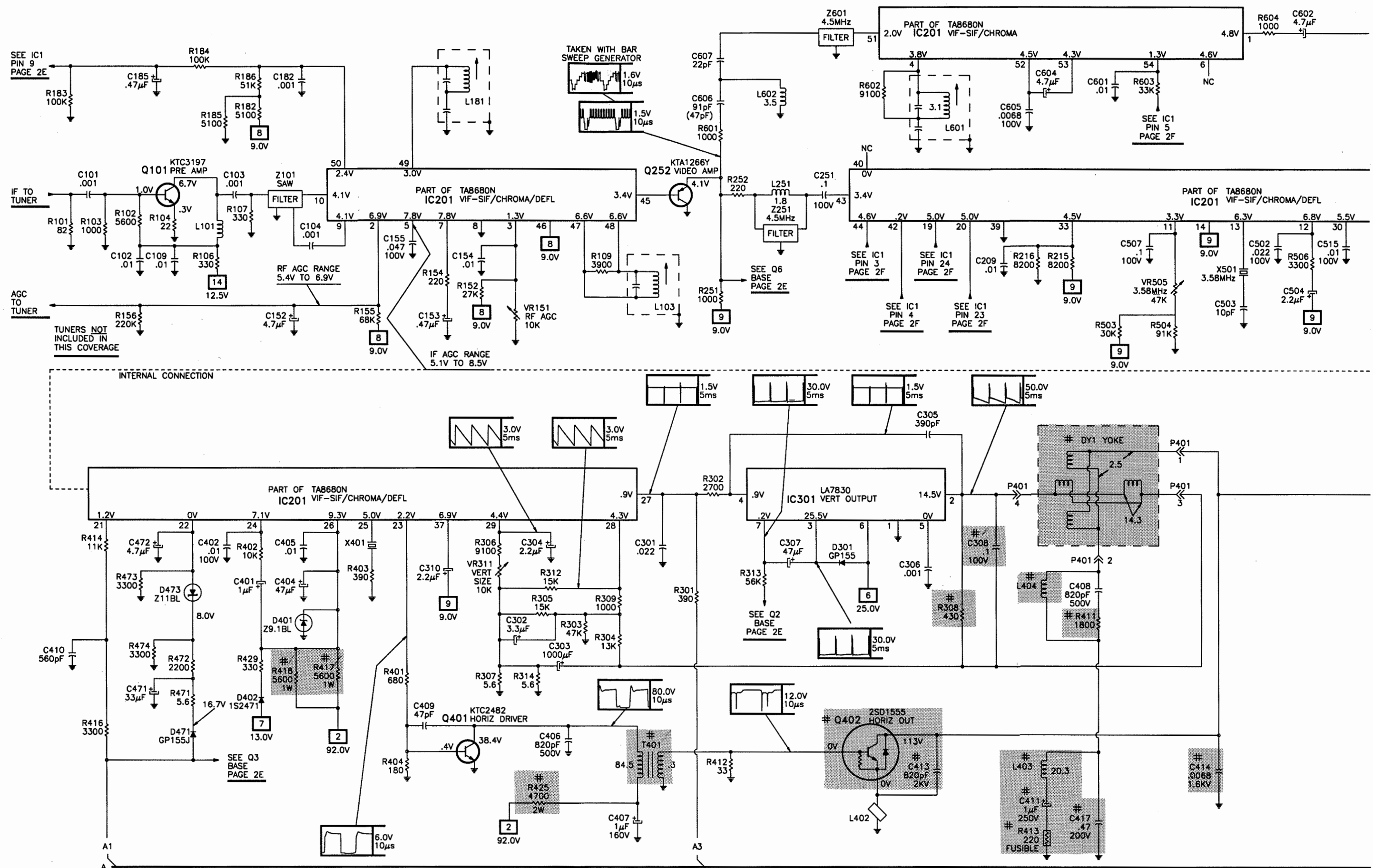
For SAFETY use only equivalent replacement part.
(1) Includes Focus and Screen controls.

CONTROLS

(All wattages 1/2 watt or less, unless otherwise listed.)

Item No.	Function	Resistance	Mfr. Part No.
VR151	RF AGC	10K	1347-7237
VR311	Vert Size	10K	1347-7237
VR505	3.58MHz	50K	1347-7252
VR561	Blue Drive	300	1368-2448
VR565	Red Bias	5000	1347-7195
VR571	Red Drive	300	1368-2448
VR573	Green Bias	5000	1347-7195
VR574	Blue Bias	5000	1347-7195

B

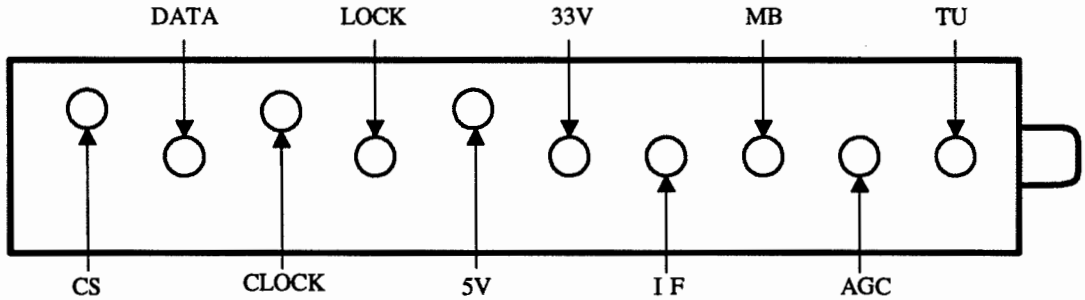


TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
CS	.1V	.1V	.1V
DATA	.1V	.1V	.1V
CLOCK	.2V	.2V	.2V
LOCK	.1V	.1V	.1V
5V	4.5V	4.5V	4.5V
33V	32.2V	32.2V	32.2V
IF	0V	0V	0V
MB	11.7V	11.7V	11.7V
AGC	6.9V	6.9V	6.9V
TU	1.0V	4.0V	6.7V

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 sets.
 - Circuitry used in some versions.
 - ⊥ Ground
 - ⏏ Chassis ground
 - ▽ Common tie point
- Waveforms and voltages are taken from ground, unless noted otherwise.
- Waveforms taken with triggered scope and keyed rainbow generator. Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.
- Item numbers in rectangle appear in adjustment instructions.
- Supply voltages maintained as seen at input.
- Voltages measured with digital meter and no signal.
- 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 1/2 W or less, 5% or greater unless noted.
- Value in () used in some versions.
- Measurements with switching as shown, unless noted.

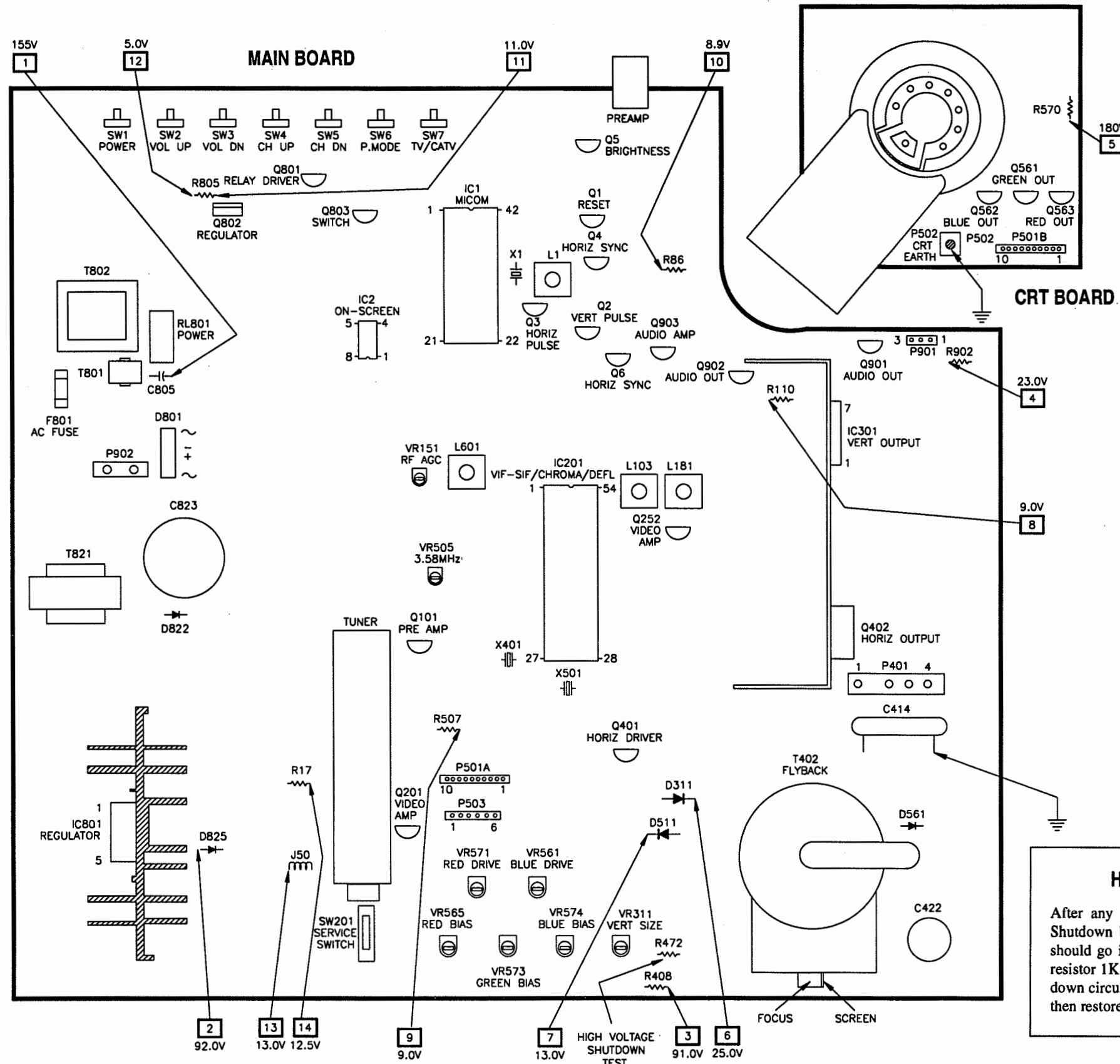
TEST EQUIPMENT

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.

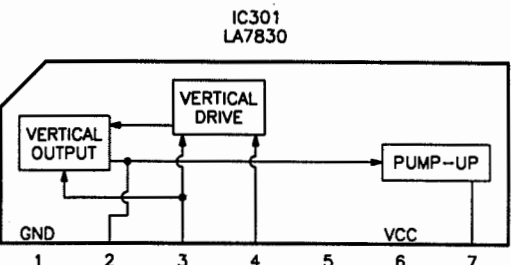
Equipment	Sencore No.	Equipment	Sencore No.
Oscilloscope	SC3080	Isolation Transformer	PR57
Generators		Capacitance Analyzer	LC101, LC102
RGB	CM2000	CRT Analyzer	CR70
Multiburst Signal	VG91	AC Leakage Tester	PR57
Color Bar	VG91	Inductance Analyzer	LC101, LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3080	TV Stereo Power Monitor	SR68, PA81
Frequency Meter	SC3080	Field Strength Meter	SL750
Hi-Voltage Probe	HP200	Transistor Tester	TF46
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

NOTES

PLACEMENT CHART



IC FUNCTIONS



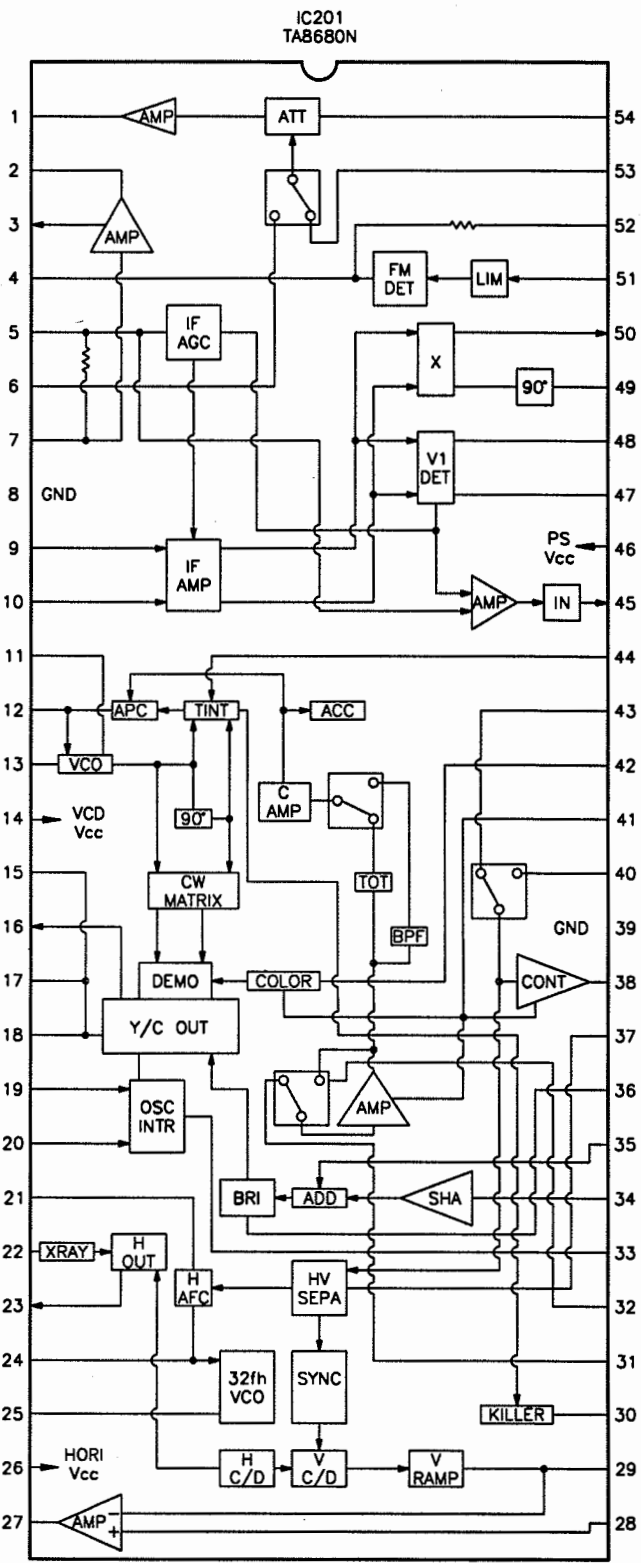
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Created with pride by the employees of Howard W. Sams & Company.

B. Bryant, G. Farrell, B. Fink, M. Herkless, J. Kocha, J. Limp, F. Malek, B. Medaris, B. Skinner, J. Watson

HIGH VOLTAGE SHUTDOWN TEST

After any service related to the High Voltage circuits, test Shutdown by connecting a 1K resistor across R472. The set should go into shutdown, and latch in off state even after the resistor 1K is removed. If the set returns to operation the shutdown circuit needs repair. To restore operation, remove power, then restore power.



SAFETY PRECAUTIONS

NOTES

SERVICE WARNING

ONLY qualified service technicians who are familiar with safety checks and guidelines should perform service work. For continued SAFETY:

- 1. Before replacing parts, disconnect power source to protect electrostatically sensitive parts.
- 2. Do not attempt to modify any circuit unless so recommended by the manufacturer.
- 3. When servicing chassis, use an isolation transformer between the line cord and power receptacle.

SERVICING HIGH VOLTAGE AND PICTURE TUBE

Use EXTREME CAUTION when servicing the High Voltage circuits.

- 1. To discharge static High Voltage, connect a 10 kilohm resistor in series with a test lead between chassis and picture tube anode lead.
- 2. DO NOT lift picture tube by the neck.
- 3. ALWAYS wear shatterproof goggles when handling picture tube 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 picture tube is the only potential source of x-rays.

- 1. Keep an accurate High Voltage meter available at all times. Check meter calibration periodically.
- 2. Whenever servicing a chassis, check High Voltage at various brightness levels to be sure it is regulating properly.
- 3. 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.
- 4. When troubleshooting a set with excessive High Voltage, avoid close contact with picture tube. DO NOT operate set longer than necessary. To locate the cause of excessive High Voltage, use a variable AC transformer to regulate voltage.
- 5. In present chassis, 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.

SAFETY CHECKS -- FIRE AND SHOCK HAZARD

Cold Leakage Checks for Sets with Isolated Ground

- 1. Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch ON.
- 2. Use an ohmmeter to measure the resistance between the jumpered 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 200 kilohms and 5 megohms. Parts without a return path must register infinity.

Hot Leakage Current Check

- 1. Plug the AC cord directly into AC outlet. DO NOT use an isolation transformer.
- 2. Use a 1500-ohm, 10-watt resistor in parallel with a .15-microfarad 150 Volts AC capacitor to connect between any exposed metal parts on the set and a good earth ground. (See figure below.)
- 3. Use an AC voltmeter with at least 1000 ohms-per-volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point.
- 4. Voltage readings should not exceed .75 volts RMS (5 milliamps AC). Any value exceeding this limit constitutes a potential shock hazard and must be corrected.
- 5. If 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 set to customer.

- 1. Check repaired area for poorly soldered or de-soldered connections, and check entire circuit board for solder splashes.
- 2. Check inner board wiring for pinched wires or wires contacting any high-wattage resistors.
- 3. 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.

