

SAFETY PRECAUTIONS

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.

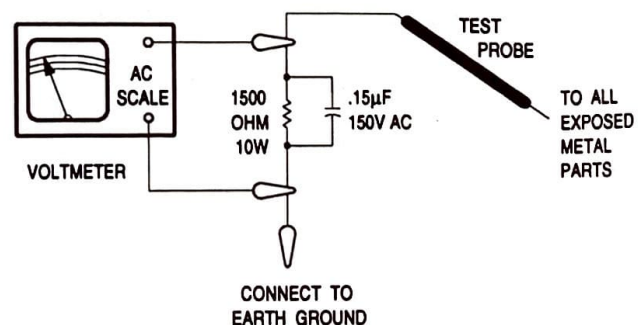
Hot Leakage Current Check

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.



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	46-86309-3	NTE519	ECG519	SK3100
D4	HZ3.6CP	46-861720-3	NTE5006A	ECG5006A	SK3A6
D5 Thru					
D10	1S2471	46-86309-3	NTE519	ECG519	SK3100
D11	Z30BM	-	NTE5035A	ECG5035A	SK30A
	MTZ30B	46-862796-3	NTE5035A	ECG5035A	SK30A
	MTZ30TP	-	-	-	-
D12	Z5.1B	-	NTE5010A	ECG5010A	SK5A1
	MTZ5.1B	46-86915-3	NTE5010A	ECG5010A	SK5A1
	MTZ5.1TP	-	NTE5010A	ECG5010A	SK5A1
D13 (1)	-	-	-	-	-
D14 (1)	-	-	-	-	-
D15	1S2471	46-86309-3	NTE519	ECG519	SK3100
D16 (1)	-	-	-	-	-
D18	1S2471	46-86309-3	NTE519	ECG519	SK3100
D101	Z9.1BL	-	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	46-861159-3	NTE5018A	ECG5018A	SK9A1
	MTZ9.1TP	-	NTE5018A	ECG5018A	SK9A1
D201 Thru					
D204	1S2471	46-86309-3	NTE519	ECG519	SK3100
D301	1N4002	86-67-3	NTE116	ECG116	SK3311
D302	RU-1	-	NTE552	ECG552	SK9000
	RU1V	46-86507-3	NTE552	ECG552	SK9000
D401	Z9.1BL	-	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	46-861159-3	NTE5018A	ECG5018A	SK9A1
	MTZ9.1TP	-	NTE5018A	ECG5018A	SK9A1
D402	1S2471	46-86309-3	NTE519	ECG519	SK3100
# D471	GP15J	-	NTE125	ECG125	SK3081
	1N4004TA	86-67-3	NTE116	ECG116	SK3312
# D472	1S2471	46-86309-3	NTE519	ECG519	SK3100
# D473	Z9.1BL	-	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	46-861159-3	NTE5018A	ECG5018A	SK9A1
	MTZ9.1TP	-	NTE5018A	ECG5018A	SK9A1
D501	RU-1	-	NTE552	ECG552	SK9000
	RU1V	46-86507-3	NTE552	ECG552	SK9000
D502	Z9.1BL	-	NTE5018A	ECG5018A	SK9A1
	MTZ9.1B	46-861159-3	NTE5018A	ECG5018A	SK9A1
	MTZ9.1TP	-	NTE5018A	ECG5018A	SK9A1
# D561	RU-1	-	NTE552	ECG552	SK9000
	RU1V	46-86507-3	NTE552	ECG552	SK9000
# D801	GP15J	46-861410-3	NTE125	ECG125	SK3081
	1N4004TA	86-67-3	NTE116	ECG116	SK3312
# D802 Thru					
# D805	GP15J	46-861410-3	NTE125	ECG125	SK3081
D806	Z11BL	-	NTE5020A	ECG5020A	SK11A
	MTZ11B	46-861336-3	NTE5020A	ECG5020A	SK11A
	MTZ11TP	-	NTE5020A	ECG5020A	SK11A

For SAFETY use only equivalent replacement part.

(1) Used in some versions.

SEMICONDUCTORS *continued*

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
# D807	1S2471	46-86309-3	NTE519	ECG519	SK3100
D808	Z5.1B	-	NTE5010A	ECG5010A	SK5A1
	MTZ5.1B	46-86915-3	NTE5010A	ECG5010A	SK5A1
	MTZ5.1TP	-	NTE5010A	ECG5010A	SK5A1
# D809	1S2471	46-86309-3	NTE519	ECG519	SK3100
D810	GP15J	-	NTE125	ECG125	SK3081
	1N4004TA	86-67-3	NTE116	ECG116	SK3312
D901	RU-1	-	NTE552	ECG552	SK9000
	RU1V	46-86507-3	NTE552	ECG552	SK9000
D902	1S2471	46-86309-3	NTE519	ECG519	SK3100
IC1	GS8908-02D	-	-	-	-
	TMP47C434N-3464	46-134132-3	-	-	-
IC2	93C46N	-	-	-	-
	HY93C46	46-133912-3	-	-	-
IC201	TA8680N	46-132931-3	NTE7010	ECG7010	SK10479
IC301	LA7830	46-131208-3	NTE1773	ECG1773	SK9752
# IC801	STR30130	6125860002	NTE1777	ECG1777	SK9870
Q1	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	46-86679-3	NTE290A	ECG290A	SK3114A
	KTA1015-Y	-	NTE290A	ECG290A	SK9132
Q2 Thru					
Q5	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	46-86682-3	NTE85	ECG85	SK9229
	KTC1815-Y	-	NTE85	ECG85	SK9229
Q6	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	46-86679-3	NTE290A	ECG290A	SK3114A
	KTA1015-Y	-	NTE290A	ECG290A	SK9132
Q101	KTC3197	-	NTE107	ECG107	SK3293
	KTC3197TP	46-86535-3	NTE107	ECG107	SK3293
	KTC388A	-	NTE85	ECG85	SK3132
Q201	KTA1270Y	-	NTE290A	ECG290A	SK3114A
	KTA1270-TP-Y	46-86805-3	NTE290A	ECG290A	SK3114A
	KTA562-Y	-	NTE290A	ECG290A	SK3114A
	KTA562	-	NTE290A	ECG290A	SK3114A
Q202	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	46-86682-3	NTE85	ECG85	SK9229
	KTC1815-Y	-	NTE85	ECG85	SK9229
Q252	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	46-86679-3	NTE290A	ECG290A	SK3114A
	KTA1015-Y	-	NTE290A	ECG290A	SK9132
Q401	KTC2482	46-86630-3	NTE399	ECG399	SK3244
# Q402	2SD1651	-	NTE2331	ECG2331	SK9422
	2SD1651-KR	46-861453-3	NTE2331	ECG2331	SK9422
Q561 Thru					
Q563	KTC2482	46-86630-3	NTE399	ECG399	SK3244
Q801	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	46-86682-3	NTE85	ECG85	SK9229
	KTC1815-Y	-	NTE85	ECG85	SK9229

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.
Q802	KTC1627AY	-	NTE382	ECG382	SK9137
	KTC3198-TP-Y	46-86682-3	NTE85	ECG85	SK9229
	KTC1815-Y	-	NTE85	ECG85	SK9229
Q803	KTA1266Y	-	NTE290A	ECG290A	SK3114A
	KTA1266-TP-Y	46-86679-3	NTE290A	ECG290A	SK3114A
	KTA1015-Y	-	NTE290A	ECG290A	SK9132
Q901	KTC3203Y	-	NTE382	ECG382	SK9137
	KTC3203-TP-Y	46-86589-3	NTE382	ECG382	SK9137
	KTC2120-Y	-	NTE289A	ECG289A	SK3124A
Q902	KTA1271Y	-	NTE383	ECG383	SK9138
	KTA1271-TP-Y	46-86574-3	NTE383	ECG383	SK9138
	KTA950-Y	-	NTE294	ECG294	SK3841
Q903	KTC3198Y	-	NTE85	ECG85	SK9229
	KTC3198-TP-Y	46-86682-3	NTE85	ECG85	SK9229
	KTC1815-Y	-	NTE85	ECG85	SK9229

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)

PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R81	150K 5% 1/6W	46-601545-3	-
# R308	430 5% 1/2W	64-43105	HW143
# R309	1000 5% 1/6W	46-601025-3	-
# R310	3.3 .5W Fusible	46-61570-3	-
# R408	.47 5% 1/2W	46-611078-3	HWD47
# R413	100 1/2W Fusible	46-61438-3	-
# R471	5.6 5% 1/6W	46-605695-3	-
# R472	2200 5% 1/6W	46-602225-3	-
# R473	3300 5% 1/6W	46-603325-3	-
# R474	2700 5% 1/6W	46-602725-3	-
# R501	2 5% 1W Fusible	46-611118-3	F1W2D0
# R511	1.6 5% 2W Fusible	46-61583-3	-
# R801	2.2 5% 7W Wirewound	46-61922-3	-
# R802	220K 5% 1/2W	64-22405	HW422
# R803	5.6 5W	46-61875-3	-
# R804	220 5% 25W Wirewound	46-611115-3	-
# R805	6800 5% 1/2W	46-68445-3	HW268
# R806	22 5% 2W	46-68279-3	2W022
# R807	470K 5% 1/2W	64-47405	HW447
# R808	6800 5% 1/2W	46-68445-3	HW268
# R816	7 Cold PTC	46-611116-3	-
# R818	6800 5% 1/2W	-	HW268
	390 5% 1/2W (1)	3009391275	HW139
# R819	6800 5% 1/2W	-	HW268
	390 5% 1/2W (1)	3009391275	HW139
# R820 (1)	390 5% 1/2W	30009391275	HW139
# R821 (1)	390 5% 1/2W	30009391275	HW139
# R822 (1)	390 5% 1/2W	30009391275	HW139
# R823 (1)	390 5% 1/2W	30009391275	HW139
# R824 (1)	390 5% 1/2W	30009391275	HW139
# R825 (1)	390 5% 1/2W	30009391275	HW139
# R901	4.7 1/2W Fusible	46-61902-3	-
R902	15 1/2W Fusible	46-611348-3	-
VR151	10K AGC	46-242177-3	-
VR311	10K Vertical Size	46-242177-3	-
VR505	20K 3.58MHz VCO	46-242178-3	-
VR561	300 Blue Drive	46-242179-3	-
VR565	5000 Red Bias	46-242180-3	-
VR571	300 Red Drive	46-242179-3	-
VR573	5000 Green Bias	46-242180-3	-
VR574	5000 Blue Bias	46-242180-3	-

For SAFETY use only equivalent replacement part.

(1) Used in some versions.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F801	AC Fuse	-	4A, 125VAC
	AC Fuse	STD387315	3A, 125VAC
# F802	DC Fuse	STD385100	1A, 125V
M1	Shield Box	46-101612-3	Antenna
# P1	Line Cord	46-23674-3	AC, Polarized
# RL801	Relay	46-691828-3	Power
SP1	Speaker	46-331287-3	2" X 2 3/4", 16 Ohms, 1.5W
SW1	Switch	46-691824-3	Power
SW2	Switch	46-691824-3	Volume +
SW3	Switch	46-691824-3	Volume -
SW4	Switch	46-691824-3	Channel +
SW5	Switch	46-691824-3	Channel -
SW6	Switch	46-691824-3	P-Mode
SW7	Switch	46-691824-3	TV/CATV
SW8	Switch	46-691824-3	APC
SW201	Switch	46-691825-3	Service
# V501	CRT	A34KFC02XX20	-
X1	Filter	46-133700-3	4.0MHz
X401	Filter	46-331267-3	Resonator, 503kHz
X501	Oscillator	46-33733-3	Crystal, 3.58MHz
Z101	Filter	46-133569-3	-
Z201	Delay line	46-23666-3	3.58MHz
Z251	Filter	46-132199-3	4.5MHz
Z601	Filter	46-131984-3	4.5MHz
	Adapter	46-101612-3	Antenna
	Antenna	46-82586-3	Rod, Assembly
	PC Board (1)	111-C76A	Main (Includes CRT PC Board)
	Pre-Amp	46-841077-3	Remote Receiver
#	Socket	46-452239-3	CRT
	Transmitter	46-841200-3	Remote
	Tuner (1)	46-95466-3	UHF/VHF (VTSS7USZF3)

For SAFETY use only equivalent replacement part.

(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.

SEARS

MODEL 580.40478290

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
# C308	.1 100V	46-201614-3
# C411	1 μ F 250V 20%	46-18967-3
# C412	.0047 50V 10%	46-20956-3
	.0047 500V	-
# C414	.006 1.6KV 5%	46-201844-3
# C417	.27 200V 5%	46-201519-3
# C471	33 μ F 25V	46-18559-3
# C472	4.7 μ F 50V 20%	46-18429-3
C503	10pF NPO 50V 5%	46-201386-3
C564	.0022 1KV 10%	142782
# C801	.1 125VAC	20-817-1
# C802 (1)	.0022 500V 10%	12-222711-6
# C804	470 μ F 200V	46-18690-3
# C807	4.7 μ F 160V 20%	46-18418-3
# C809	33 μ F 160V	46-18755-3
CA1	470pF 20% X 4	46-133564-3

For SAFETY use only equivalent replacement part.
(1) Used in some versions.

CABINET PARTS

MODEL 580-40478290

Item	Part No.
Button Assembly	46-523266-3
Cabinet Assembly	46-422050-3
Cabinet Back Assembly	46-422048-3

REMOTE TRANSMITTER

Item	Part No.
Battery Cover	46-213050-3



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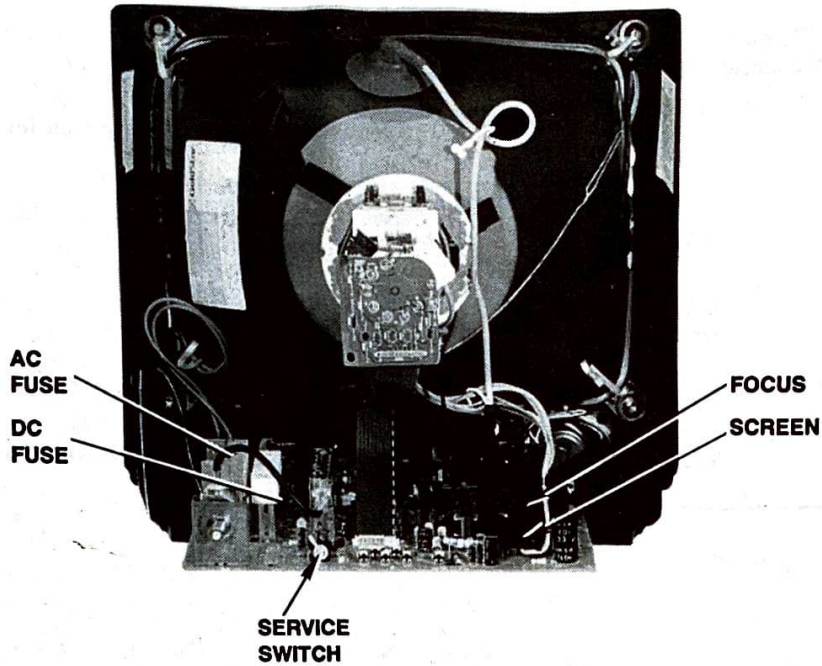
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B. Buchanan, T. Clensy,
D. Cobb, G. Farrell, B. Fink,
M. Herkless, J. Kocho,
J. Limp, F. Malek, B. Medaris,
R. Raus, B. Skinner, J. Young*

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.	On-Unit No.
# DY1	Yoke 90° Horiz 3.51mH Vert 26.7mH	153-113J	851-036A
L1	6.5MHz Oscillator	46-103386-3	-
L101	.79 μ H	46-102646-3	-
L103	Video IF	46-102765-3	-
L181	AFT	46-103387-3	-
L201	33 μ H	46-102795-3	-
L251	15 μ H	46-101298-3	-
# L403	6800 μ H	46-103390-3	-
# L404	Horizontal Linearity	46-103417-3	-
L601	Sound IF	46-103392-3	-
L602	27 μ H	46-103340-3	-
# L801	Degaussing	46-103496-3	-
# T401	Horizontal Driver	46-801326-3	151-101B
# T403 (1)	Horizontal Output	46-801665-3	154-064C
# T801	Line Filter	46-102771-3	-

For SAFETY use only equivalent replacement part.
(1) Focus and screen controls are part of T403.

CABINET - REAR VIEW



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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Page 1 SET 3190



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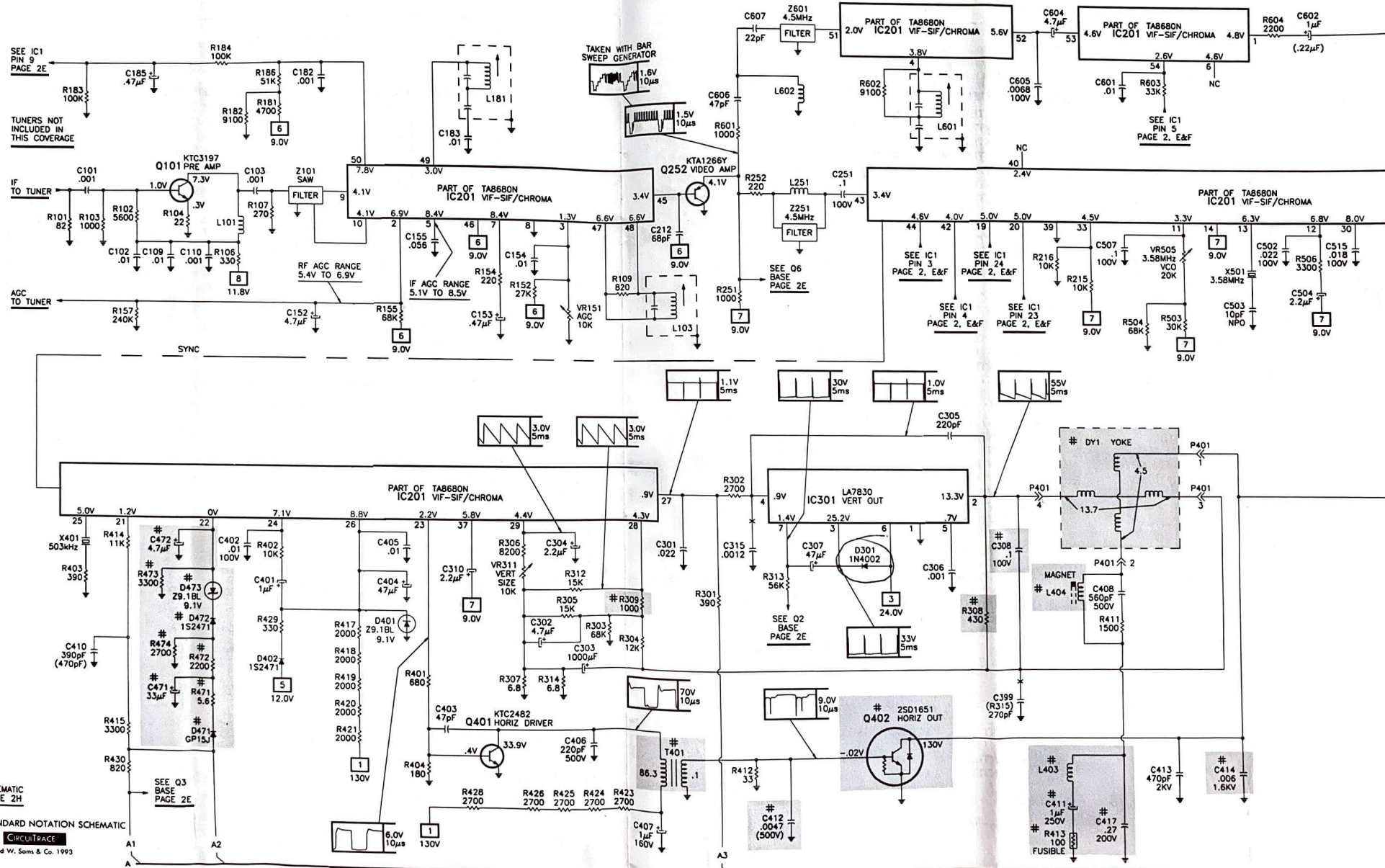


3190

A

TELEVISION SCHEMATIC

B

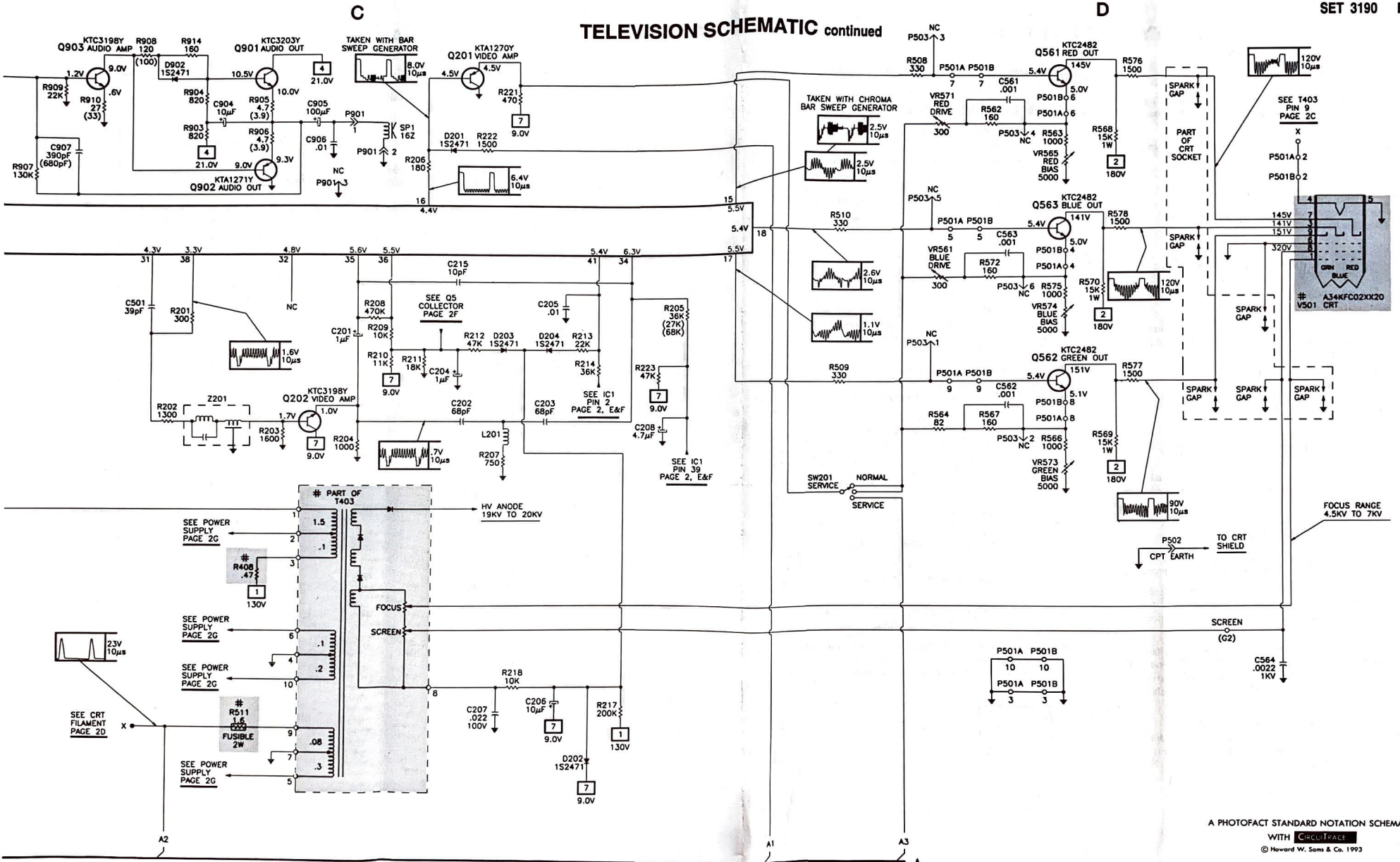


ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2H

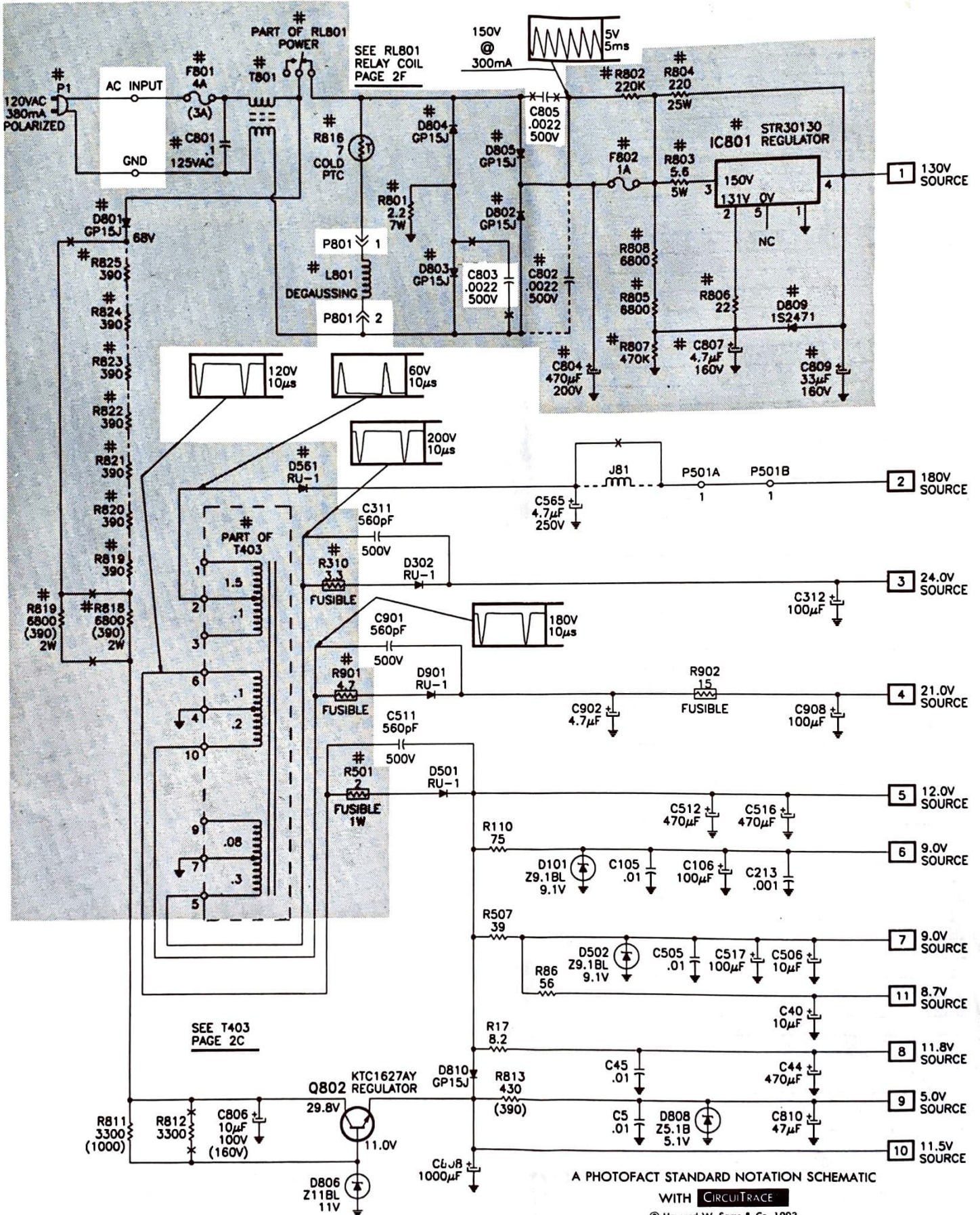
A PHOTOFACE STANDARD NOTATION SCHEMATIC

WITH CIRCUITTRACE

TELEVISION SCHEMATIC continued



POWER SUPPLY SCHEMATIC



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	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	SC3100	TV Stereo Power Monitor	SR68, PA81
Frequency Meter	SC3100	Field Strength Meter	SL750
Hi-Voltage Probe	HP200	Transistor Tester	TF46
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

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

△ Taken from common tie point

11 Schematic Circuittrace

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 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.

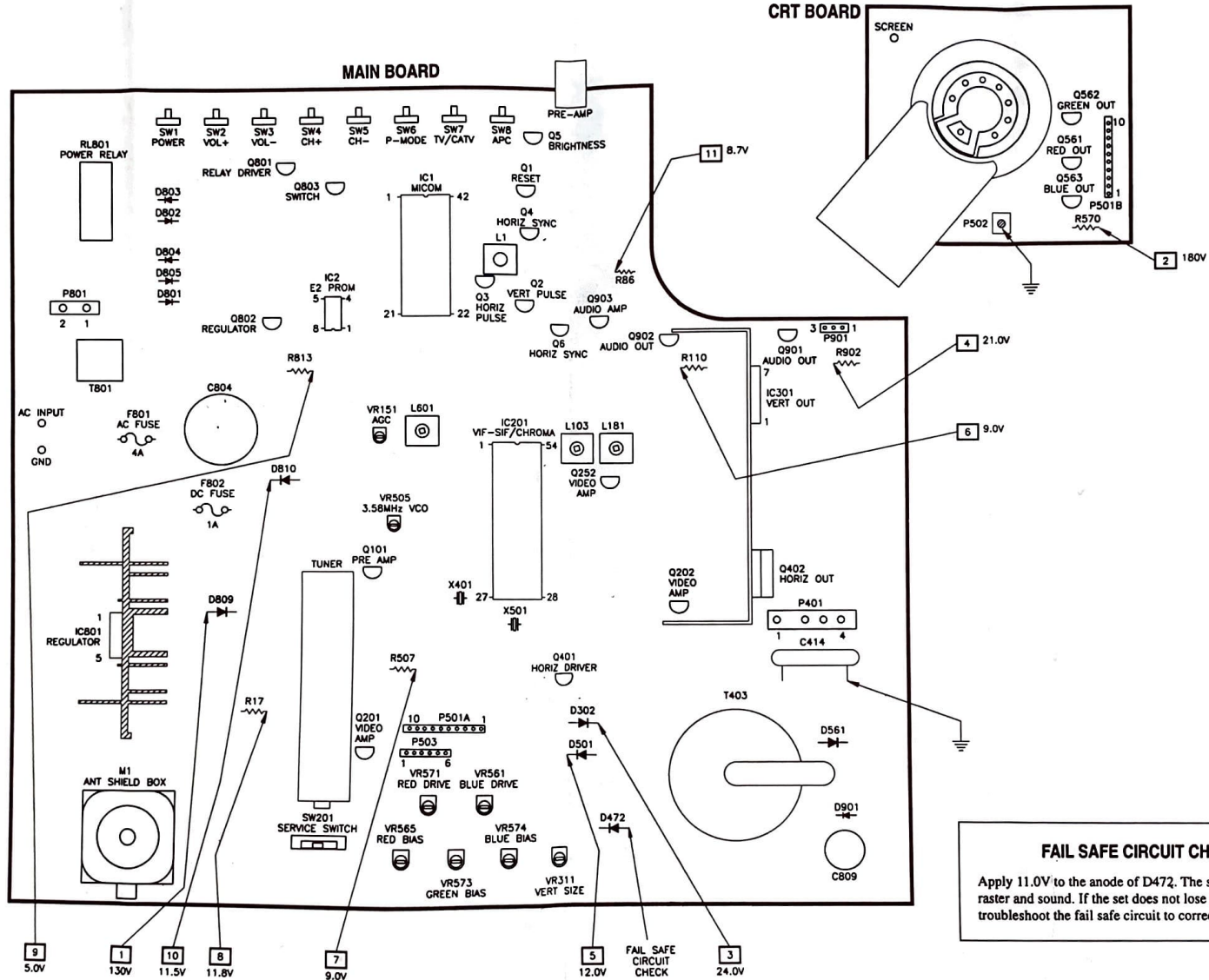
Measurements with switching as shown, unless noted.

Rated voltage shown on Zener Diodes.

SEARS

MODEL 580.40478290

PLACEMENT CHART

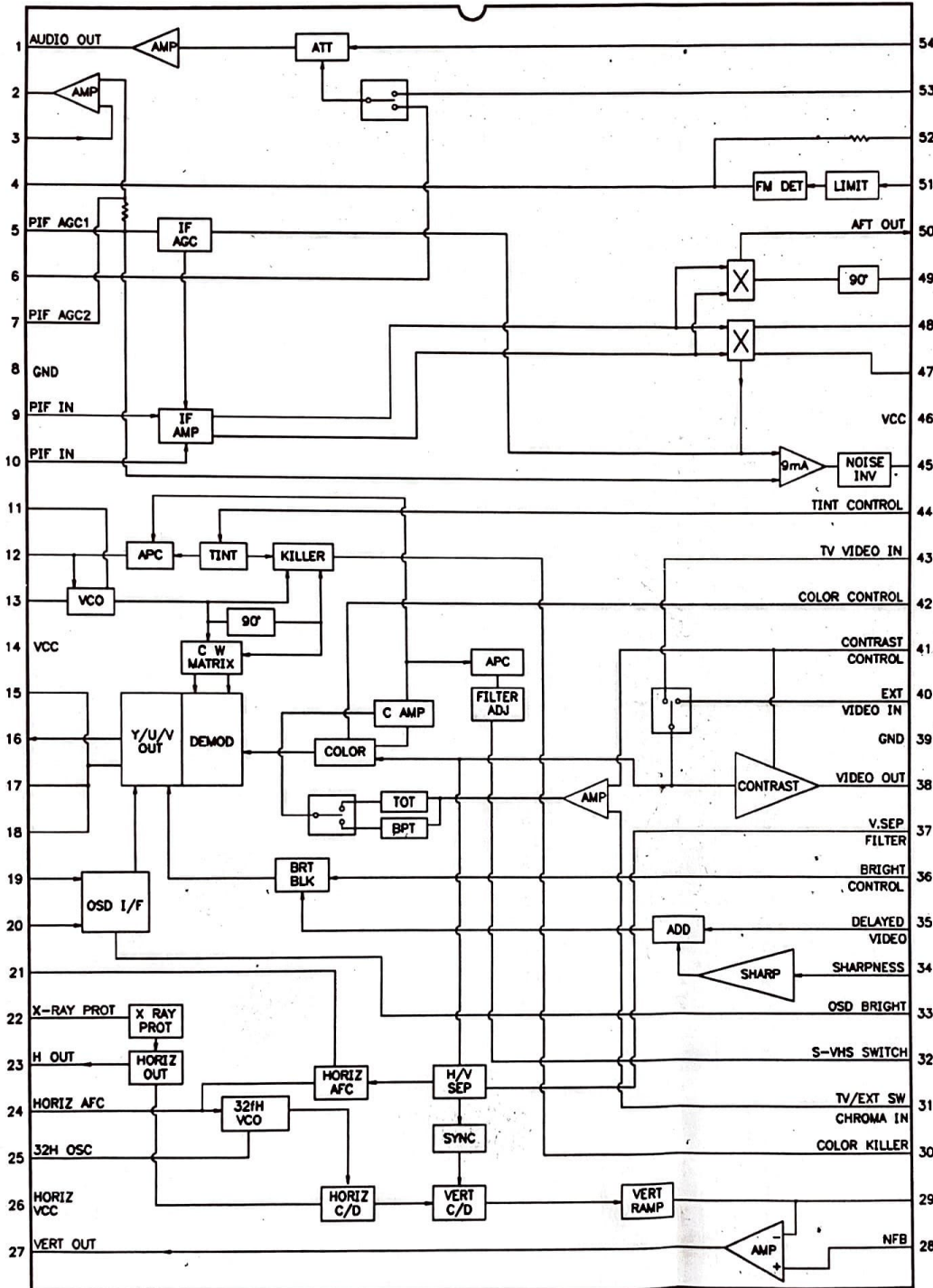


FAIL SAFE CIRCUIT CHECK

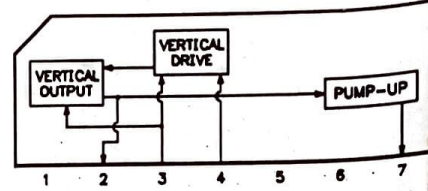
Apply 11.0V to the anode of D472. The set should lose raster and sound. If the set does not lose raster and sound, troubleshoot the fail safe circuit to correct the problem.

IC FUNCTIONS

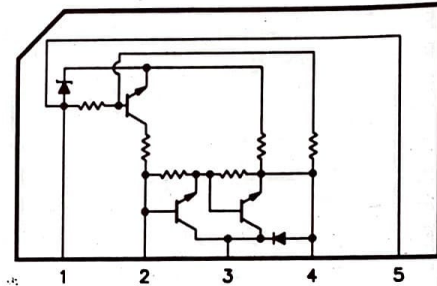
**IC201
TA8680N**



**IC301
LA7830**



**IC801
STR30130**



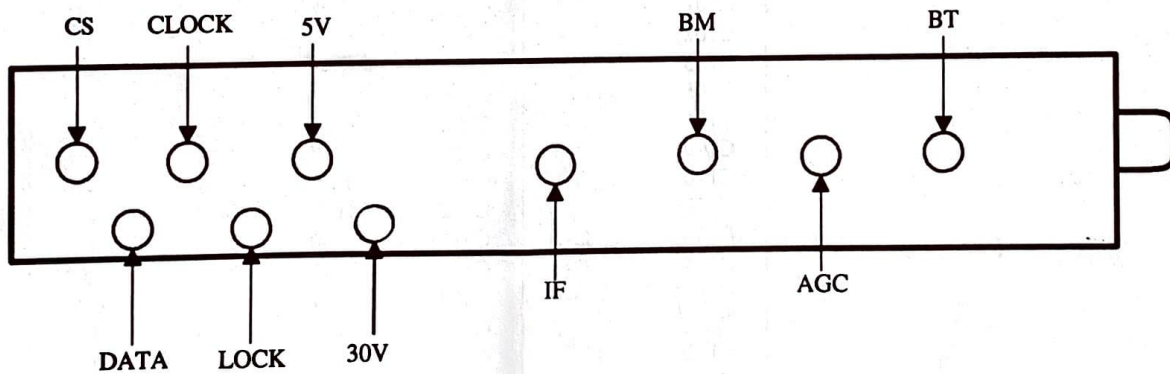
TUNER INFORMATION

TUNER VOLTAGE CHART

	VHF Low Band	VHF High Band	UHF Band
BT	1.3V	4.6V	7.9V
AGC	6.7V	6.9V	6.3V
BM	11.0V	11.0V	11.0V
IF	0V	0V	0V
30V	28.8V	29.0V	29.1V
5V	4.5V	4.5V	4.5V
LOCK	.1V	.1V	.1V
CLOCK	.3V	.3V	.3V
DATA	.3V	.3V	.3V
CS	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



SEARS

MODEL 580.40478290

MAIN BOARD, GRIDTRACE LOCATION GUIDE

C2	D-10	C307	E-14	C904	D-11	L103	G-10	R27	E-6	R109	G-9	R415	K-7	R904	D-12
C4	B-8	C308	H-14	C905	D-14	L181	G-10	R28	E-8	R110	E-12	R417	M-16	R905	D-13
C5	B-7	C310	H-10	C906	D-14	L201	I-10	R29	D-8	R152	F-6	R418	M-4	R906	E-12
C6	F-6	C311	L-10	C907	D-11	L251	F-11	R30	E-8	R154	G-7	R419	L-3	R907	D-11
C7	A-10	C312	J-12	C908	E-13	L403	G-14	R31	F-6	R155	F-6	R420	J-3	R908	E-11
C8	B-11	C315	G-12	CA1	C-6	L404	I-14	R32	E-7	R157	F-6	R421	J-3	R909	E-11
C9	B-11	C399	G-13	D1	C5	L601	F-7	R33	G-5	R181	F-8	R423	N-3	R910	E-10
C10	B-11	C401	J-7	D2	C-5	L602	F-9	R34	G-5	R182	E-8	R424	N-3	R914	D-12
C11	C-11	C402	J-8	D3	E-7	M1	M-1	R35	F-5	R183	F-6	R425	M-3	RL801	B-1
C12	C-11	C403	K-8	D4	B-8	P401	J-13	R36	B-9	R184	F-7	R426	M-3	SW1	A-3
C14	D-8	C404	K-8	D5	B-10	P501A	L-7	R37	B-10	R186	F-8	R428	M-3	SW2	A-3
C15	E-8	C405	K-8	D6	B-10	P503	L-7	R38	B-9	R201	H-9	R429	M-8	SW3	A-4
C16	F-7	C406	K-9	D7	B-10	P801	D-1	R39	B-10	R202	H-10	R430	K-6	SW4	A-5
C17	D-8	C407	K-9	D8	C-10	P901	D-13	R40	B-9	R203	H-11	R471	N-10	SW5	A-6
C18	C-9	C408	I-13	D9	C-10	PRE-AMP	A-9	R41	B-10	R204	I-11	R472	N-10	SW6	A-7
C19	D-9	C410	K-8	D10	C-10	Q1	B-9	R42	C-9	R205	I-9	R473	K-7	SW7	A-7
C20	D-9	C411	G-13	D11	K-4	Q2	D-9	R43	C-10	R206	H-7	R474	N-10	SW8	A-8
C21	E-11	C412	J-12	D12	J-4	Q3	D-8	R44	C-9	R207	I-9	R501	M-10	SW201	N-5
C40	D-10	C413	I-13	D15	D-5	Q4	C-9	R45	C-10	R208	I-9	R503	H-6	T401	K-10
C41	J-4	C414	K-13	D18	D-9	Q5	A-9	R46	C-9	R209	I-9	R504	H-6	T403	L-12
C43	I-4	C417	H-14	D101	F-11	Q6	E-9	R47	C-10	R210	H-11	R506	H-7	T801	E-1
C44	K-6	C471	N-10	D201	L-6	Q101	I-6	R48	A-11	R211	H-11	R507	K-7	TUNER	K-5
C45	K-6	C472	J-7	D202	F-12	Q201	L-6	R49	B-9	R212	F-12	R508	H-7	VR151	F-6
C46	J-4	C501	I-9	D203	G-12	Q202	I-11	R50	B-9	R213	F-11	R509	I-7	VR311	N-9
C101	J-6	C502	H-7	D204	G-12	Q252	H-10	R51	C-9	R214	F-11	R510	I-7	VR505	H-6
C102	J-6	C503	J-8	D301	E-13	Q401	K-9	R52	C-9	R215	J-9	R511	M-10	VR561	M-8
C103	H-6	C504	H-7	D302	L-10	Q402	I-13	R53	C-9	R216	J-9	R562	M-7	VR565	N-7
C105	G-10	C505	H-7	D401	K-9	Q801	B-5	R54	E-9	R217	N-13	R563	M-7	VR571	M-7
C106	H-9	C506	I-6	D402	M-8	Q802	D-4	R56	C-9	R218	M-11	R564	N-6	VR573	N-7
C109	H-6	C507	H-7	D471	N-10	Q803	B-5	R57	C-9	R221	K-7	R566	M-6	VR574	N-8
C110	I-6	C511	M-9	D472	M-10	Q901	D-13	R58	D-9	R222	L-6	R567	N-6	X1	C-8
C152	L-4	C512	L-9	D473	L-8	Q902	E-11	R59	E-8	R223	H-12	R572	L-8	X401	I-8
C153	G-7	C515	J-9	D501	L-9	Q903	E-10	R63	F-11	R251	G-11	R575	L-8	X501	J-8
C154	G-7	C516	K-11	D502	J-7	R1	C-6	R65	G-5	R252	F-10	R601	F-10	Z101	G-6
C155	G-7	C517	I-7	D561	K-14	R2	C-6	R66	D-8	R301	K-7	R602	G-7	Z201	H-11
C182	F-7	C561	M-7	D801	D-3	R3	C-6	R67	D-8	R302	J-9	R603	E-9	Z251	F-11
C183	G-11	C562	N-6	D802	C-3	R4	C-6	R68	B-6	R303	G-13	R604	F-9	Z601	F-9
C185	E-6	C563	L-8	D803	B-3	R5	D-6	R69	J-4	R304	G-13	R801	C-3		
C201	I-10	C565	N-11	D804	C-3	R6	D-6	R70	J-3	R305	G-13	R802	G-3		
C202	I-10	C601	F-9	D805	D-3	R7	D-6	R71	H-5	R306	M-9	R803	H-2		
C203	I-9	C602	E-10	D806	D-4	R9	B-6	R72	H-5	R307	F-13	R804	J-3		
C204	H-10	C604	F-9	D807	A-2	R10	C-8	R73	H-5	R308	G-14	R805	I-3		
C205	H-10	C605	F-9	D808	F-6	R11	B-6	R74	I-4	R309	I-11	R806	I-3		
C206	F-12	C606	F-10	D809	I-3	R12	D-6	R76	E-9	R310	L-10	R807	I-3		
C207	M-11	C607	F-9	D810	G-5	R13	D-6	R77	E-10	R312	J-10	R808	H-3		
C208	I-11	C801	F-1	D901	M-14	R14	D-6	R78	E-10	R313	F-12	R811	D-4		
C212	G-9	C803	B-3	D902	D-12	R15	E-7	R81	E-9	R314	E-14	R812	D-4		
C213*	H-9	C804	F-3	F801	F-2	R16	E-6	R83	H-11	R401	J-8	R813	F-5		
C215	I-9	C805	C-3	F802	F-3	R17	L-4	R85	E-8	R402	J-7	R814	B-6		
C251	H-11	C806	E-2	IC1	C-7	R20	E-7	R86	D-11	R403	J-8	R816	C-1		
C301	J-9	C807	E-3	IC2	D-5	R21	B-9	R101	J-6	R404	K-9	R817	B-5		
C302	G-13	C808	E-4	IC201	H-8	R22	B-9	R102	I-6	R408	K-14	R818	C-4		
C303	F-14	C809	M-19	IC301	F-13	R23	E-6	R103	J-6	R411	I-13	R819	C-5		
C304	J-9	C810	B-7	IC801	J-1	R24	E-7	R104	I-6	R412	J-11	R901	L-14		
C305	F-13	C901	M-13	L1	C-8	R25	E-5	R106	J-6	R413	G-14	R902	E-14		
C306	F-13	C902	K-14	L101	H-6	R26	E-5	R107	H-6	R414	K-8	R903	D-11		

SAMS PHOTOFACT POINTERS

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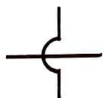
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Many manufacturers assume you'll know that crossed lines represent tie points. At Sams we leave no room for confusion. We show you with our standard notation, so instead of puzzling, you can get your repair done. Here's how.



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