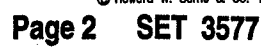
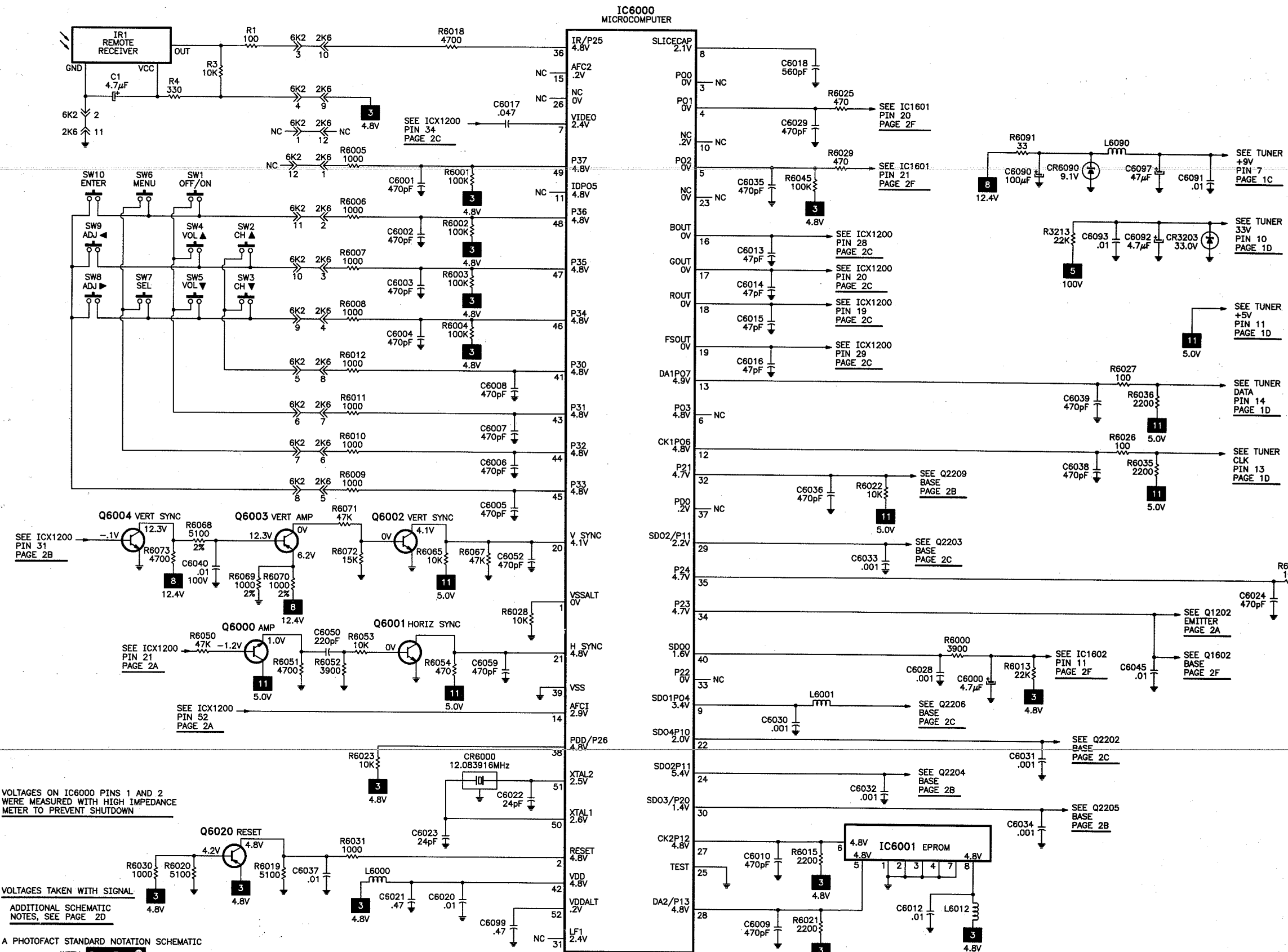


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A

SYSTEM CONTROL SCHEMATIC



VOLTAGES ON IC6000 PINS 1 AND 2 WERE MEASURED WITH HIGH IMPEDANCE METER TO PREVENT SHUTDOWN

VOLTAGES TAKEN WITH SIGNAL
ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2D

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
WITH CIRCUITACE®
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B

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ZENITH SR1941Y

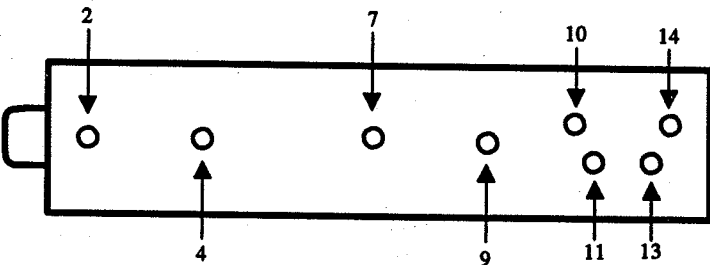
TUNER INFORMATION

TUNER VOLTAGE CHART

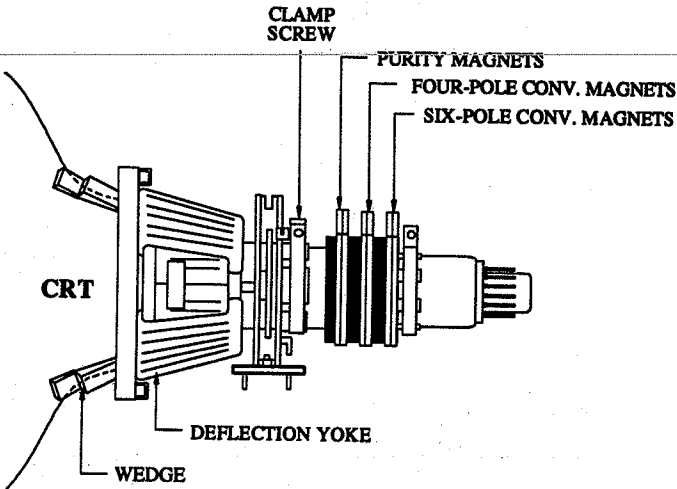
Pin	Function	VHF Low Band	VHF High Band	UHF Band
2	TUNING VOLTAGE	.9V	4.0V	5.7V
4	AGC	4.2V	4.3V	4.1V
7	+9V	9.2V	9.2V	9.2V
9	IF OUT	0V	0V	0V
10	33V	32.0V	32.0V	32.0V
11	+5V	5.0V	5.0V	5.0V
13	CLK	4.9V	4.9V	4.9V
14	DATA	4.9V	4.9V	4.9V

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



CRT NECK ASSEMBLY



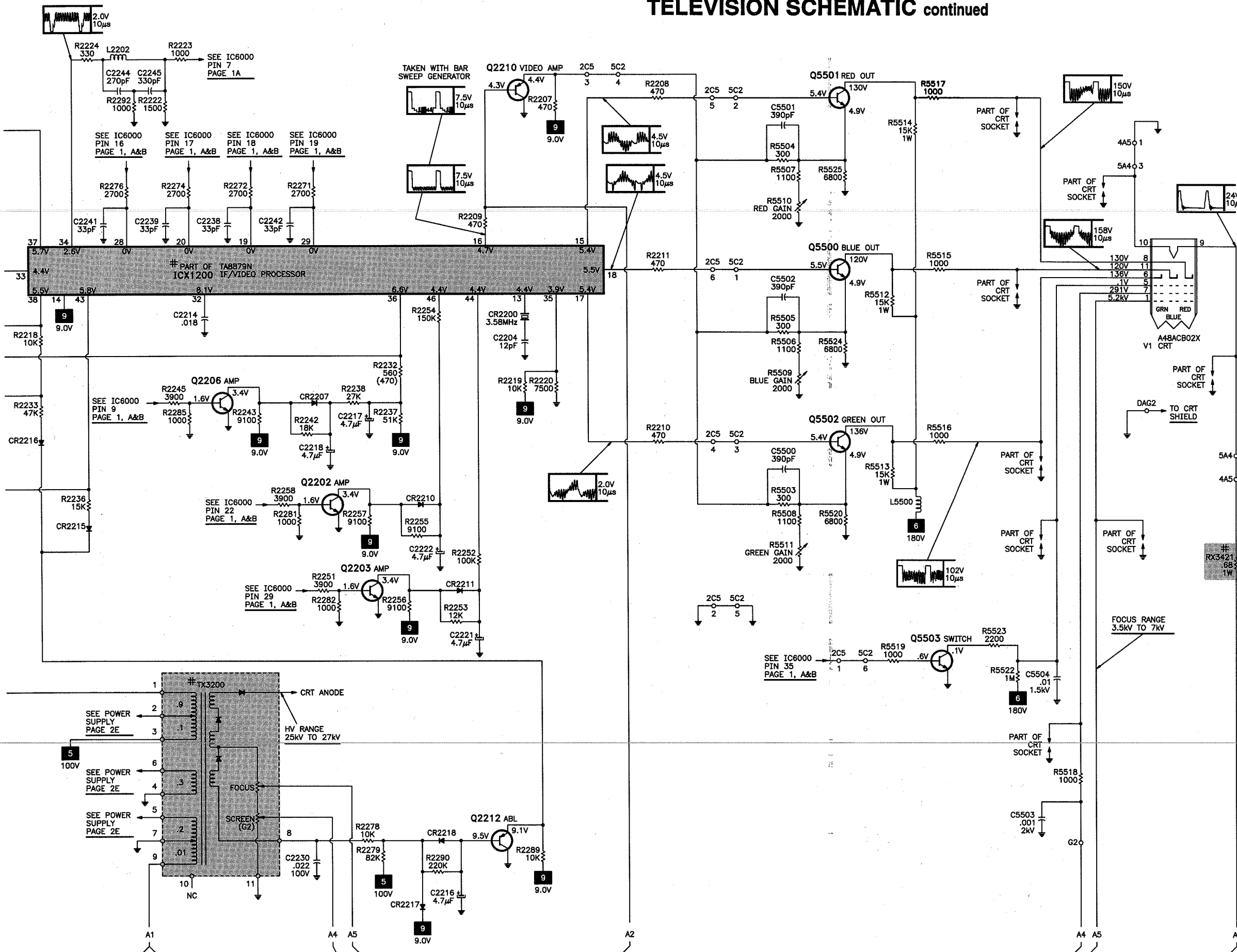
TELEVISION SCHEMATIC continued

SCHEMATIC NOTES

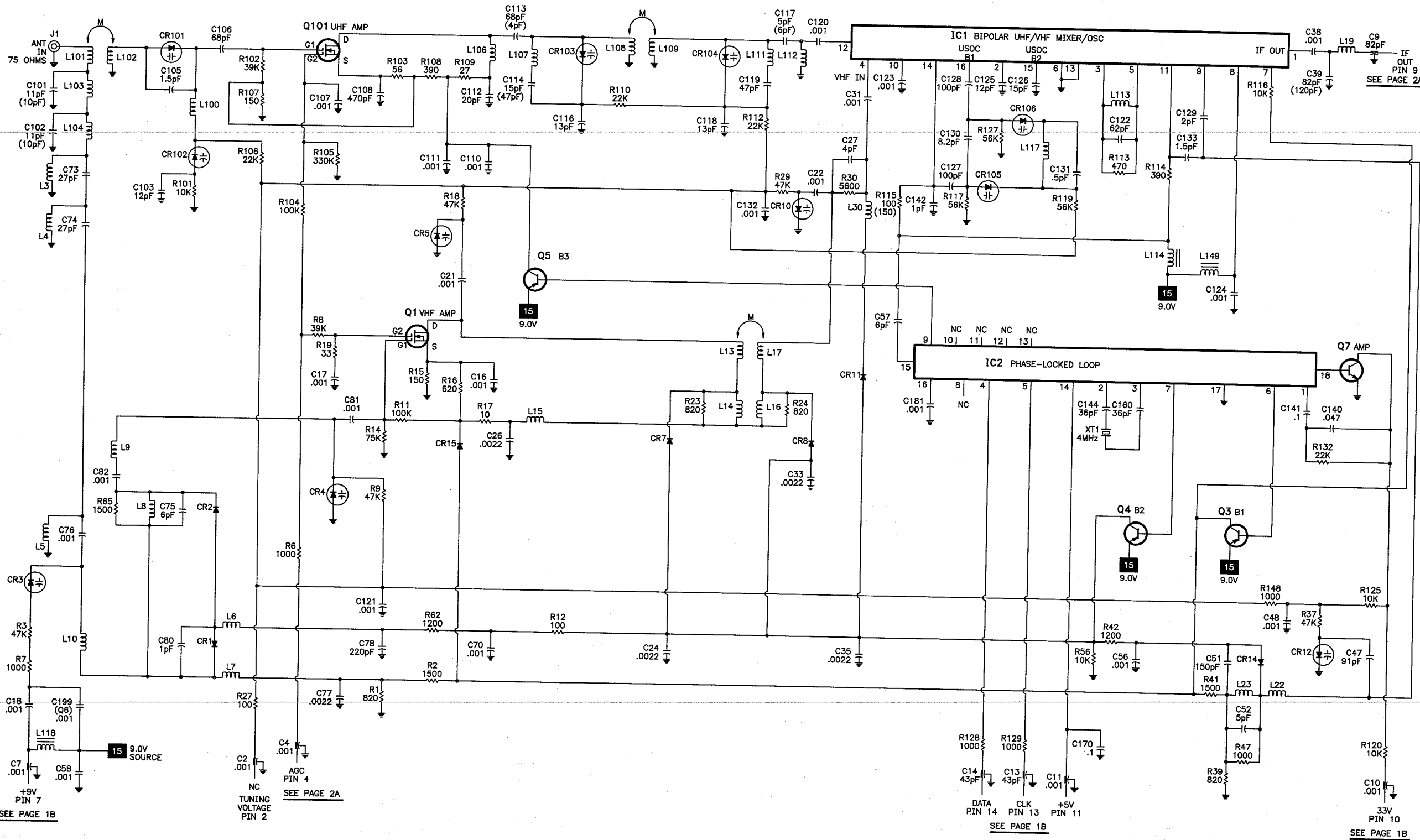
For SAFETY use only equivalent replacement part, see parts list.

- ✖ 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.



TUNER 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)

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.
C3483	-	103-254-01	NTE116	ECG116	SK3313
CR800, 01	-	103-398	-	-	-
CR804, 05	-	103-398	-	-	-
CR1201	-	103-336-18A	-	-	-
CR2100	-	103-326A	NTE552	ECG552	SK9000
CR2201	-	103-336-18A	NTE5018A	ECG5018A	SK9A1
CR2202	-	103-398	-	-	-
CR2206	-	103-336-18A	NTE5018A	ECG5018A	SK9A1
CR2207 Thru	-	-	-	-	-
CR2211	-	103-398	-	-	-
CR2213 Thru	-	-	-	-	-
CR2218	-	103-398	-	-	-
CR3200	-	103-284A	NTE552	ECG552	SK9000
CR3201	-	103-326A	NTE552	ECG552	SK9000
CR3203	-	103-279-36A	NTE5085A	ECG5085A	SK36V
CR3488, 90, 92	-	103-295A	NTE177	ECG177	SK9091
CR3493	-	103-279-10A	NTE5010A	ECG5010A	SK5A1
CR6002	-	103-398	-	-	-
CR6090	-	103-336-18A	NTE5018A	ECG5018A	SK9A1
# CRX2203	-	103-284A	NTE552	ECG552	SK9000
# CRX2204	-	103-398	-	-	-
# CRX2205	-	103-336-18A	NTE5018A	ECG5018A	SK9A1
# CRX3204	-	103-326A	NTE552	ECG552	SK9000
# CRX3410	-	103-344-01	NTE116	ECG116	SK3313
# CRX3411	-	103-408A	NTE5013A	ECG5013A	SK6A2
# CRX3412	-	103-417-05	NTE580	ECG580	SK5036
# CRX3471 Thru	-	-	-	-	-
# CRX3474	-	103-315-06A	NTE116	ECG116	SK3313
IC1601	LA7765	221-907	-	-	-
IC1602	TDA8198	221-908	-	-	-
IC1603	L78M08ABV	221-166-02	NTE964	ECG964	SK3630
IC2100	LA7830	221-796	NTE1773	ECG1773	SK9752
IC3200	-	221-166	NTE960	ECG960	SK3591
IC6000	-	221-949-01	-	-	-
IC6001	-	221-745-04	-	-	-
# ICX1200	TA8879N	221-806	-	-	-
Q800	-	121-975A	NTE123AP	ECG123AP	SK3854
Q801	-	121-1300-01A	-	-	-
Q802	-	121-1301-01A	-	-	-
Q804	-	121-975A	NTE123AP	ECG123AP	SK3854
Q805	-	121-1300-01A	-	-	-
Q806	-	121-1301-01A	-	-	-
Q1201	-	121-1261A	-	-	-
Q1202	-	121-975A	NTE123AP	ECG123AP	SK3854
Q1601	-	121-973A	NTE159	ECG159	SK3466
Q1602	-	121-975A	NTE123AP	ECG123AP	SK3854
Q2200	-	121-1019A	NTE159	ECG159	SK3466
Q2201 Thru	-	-	-	-	-
Q2206	-	121-975A	NTE123AP	ECG123AP	SK3854
Q2209	-	121-975A	NTE123AP	ECG123AP	SK3854
Q2210	-	121-1256A	-	-	-
Q2212	-	121-1019A	NTE159	ECG159	SK3466
Q3201	-	121-1290	-	-	-
Q3202	-	121-975A	NTE123AP	ECG123AP	SK3854
Q3420	-	121-973A	NTE159	ECG159	SK3466
Q3422	-	121-1102A	NTE290A	ECG290A	SK3114A
Q3423	-	121-1146A	NTE123AP	ECG123AP	SK3854

For SAFETY use only equivalent replacement part.

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.
Q5500 Thru	-	-	-	-	-
Q5503	-	121-1140A	NTE399	ECG399	SK9352
Q6000, 01, 02	-	121-975A	NTE123AP	ECG123AP	SK3854
Q6003	-	121-978-03A	NTE159	ECG159	SK3466
Q6004	-	121-975A	NTE123AP	ECG123AP	SK3854
Q6020	-	121-978-03A	NTE159	ECG159	SK3466
# QX3200	-	121-1148	NTE2302	ECG2302	SK9422
# QX3410	-	121-1146A	NTE123AP	ECG123AP	SK3854
# QX3412	-	121-1299	-	-	-
TUNER					
CR1, 2	-	103-488A	-	-	-
CR3	-	-	-	-	-
CR4, 5	-	103-487A	-	-	-
CR7, 8	-	103-488A	-	-	-
CR10	-	103-487A	-	-	-
CR11	-	103-488A	-	-	-
CR12	-	103-487A	-	-	-
CR14, 15	-	103-488A	-	-	-
CR101 Thru	-	-	-	-	-
CR106	-	103-487A	-	-	-
IC1	-	221-748	-	-	-
IC2	-	221-760	-	-	-
Q1	-	121-1216-02A	-	-	-
Q3, 04, 05	-	121-1282A	-	-	-
Q7	-	121-1130A	-	-	-
Q101	-	121-1162A	-	-	-

For SAFETY use only equivalent replacement part.

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

PARTS LIST continued

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
DY1	Yoke Horiz 1.6mH Vert 19.4mH	95-3705-10
L1200	22µH	20-4277-26A
L1201	AFT	20-4172-12A
L1202	VCO	20-4172-05A
L1203	Audio Detector	20-4278B
L1205	.82µH	20-4277-09A
L1600	100µH	20-4129-32
L2101	68µH	20-4405-47
L2200	15µH	20-4277-24A
L2202	12µH	20-4277-40A
L3000	Degaussing	20-4330-18
L3201	Horizontal Linearity	20-4142-03
L3206	Ferrite Bead	149-540
L3208	68µH	20-3907-22A
L3299	Ferrite Bead	149-583-01
L3412	Ferrite Bead	149-576-01
L3413	-	20-4201
L3414	Ferrite Bead	149-576
L3415	Ferrite Bead	149-576
L3499	Ferrite Bead	149-576
L5500	120µH	20-3907-25A
L6000, 01	1µH	20-4277-10A
L6012	10µH	20-3907-12A
L6090	68µH	20-3907-22A
# LX3401	Line Filter	95-3868-02
# TX3200 (1)	Horizontal Output	95-4435
# TX3201	Horizontal Driver	95-4445
# TX3410	Buck Regulator	95-4443
TUNER		
L3	-	20-4470-03
L4	-	20-4470-05
L5	-	20-4470-06
L6	-	20-4470-07
L7	-	20-4470-08
L8	-	20-4470-09
L9	-	20-4470-10
L10	-	20-4470-11
L13	-	20-4470-02
L14	-	20-4470
L15	-	20-4470-13
L16	-	20-4470-12
L17	-	20-4470-02
L19	-	20-4470-14
L22	-	20-4470-15
L23	-	20-4470-16
L30	-	20-4470-17
L100	-	20-4470-27
L101	-	20-4470-18
L102	-	20-4442
L103, 04	-	20-4470-01
L106	-	20-4470-19
L107	-	20-4470-20
L108	-	20-4470-22

For SAFETY use only equivalent replacement part.
(1) Focus and screen (G2) controls are part of TX3200.

COILS & TRANSFORMERS continued

Item No.	Function/Rating	Mfr. Part No.
L109	-	20-4470-21
L111	-	20-4470-23
L112	-	20-4470-24
L113	-	20-4470-25
L114	.22µH	20-4277-60A
L117	-	20-4470-26
L118	3.3µH	20-4277-16A
L149	1.0µH	20-4277-10A

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C1203	100pF 5% 50V NPO	22-8241-34A
C1218	18pF 5% 50V NPO	22-8241-16A
C1219	68pF 5% 50V NPO	22-8241-30A
C1220	30pF 5% 50V N150	22-8245-21A
C1221	7pF ±.5pF 50V NPO	22-8241-07A
C2102	220pF 5% 50V NPO	22-8241-42A
C2205	1µF 20% 50V NP	22-8190-01A
C3416, 72	.001 10% 1kV	22-7811A
C5503	.001 10% 2kV	22-7523
C5504	.01 +80% -20% 1.5kV	22-7755
C9717	1µF 20% 50V NP	22-8190-01A
# CX804	1000µF 20% 25V	22-8310-16
# CX2223	4.7µF 20% 50V	22-8074-10A
# CX2224	47µF 20% 25V	22-8310-11A
# CX3203	.013 3% 1.6kV	22-8229-27
# CX3210	530pF 5% 3kV	22-8063-02
# CX3402	.47 5% 250V	22-7876-20
# CX3410	.001 10% 1kV	22-7811A
# CX3411	1µF 20% 100V	22-8314-04A
# CX3412	330µF 20% 25V	22-8310-14
# CX3413	220µF 20% 160V	22-8315-13
# CX3414	220µF 20% 160V	22-8315-13
# CX3418	.001 10% 1kV	22-7811A
# CX3425	.0047 20% 250VAC	22-7431-06
# CX3449	470µF 20% 200V	22-8444-11
# CX3474	2200µF 20% 16V	22-8309-17

TUNER

C2, 4, 7	.001 +130% -0% 50V Feedthru	22-7894-06
C9	82pF 10% 50V Feedthru	22-7993-06
C10, 11	.001 +80% -20% 50V Feedthru	22-8304-02
C13, 14	43pF 10% 50V Feedthru	22-8303-03

For SAFETY use only equivalent replacement part.

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
R1208	5000 RF AGC	63-11007-25	-
R2106	10K Vertical Size	63-11007-14	-
R3201	4700 5% 3W	63-11164-88B	3W247
R3419	1000 5% 10W Wirewound	63-10458-96A	10W210
R5509	2000 Blue Gain	63-11090-36	-
R5510	2000 Red Gain	63-11090-22	-
R5511	2000 Green Gain	63-11090-47	-
R6068	5100 2% 1/4W	63-10233-89	QW251
R6069, 70	1000 2% 1/4W	63-10233-72	QW210
# RX806	1000 5% 1/4W	63-10235-72	QW210
# RX807	1 5% 1/4W	63-10559	QW1D0
# RX809	10 5% 1/2W	63-10565-24C	HW010
# RX810	1 5% 1/4W	63-10559	QW1D0
# RX820, 21	1 5% 1/4W	63-10559	QW1D0
# RX2260	820 5% 1/8W	63-10979-45	EW182
# RX2261	3300 5% 1/8W	63-10979-59	EW233
# RX2263	5.6 5% 1/2W	63-10565-18	HW5D6
# RX2264, 65	4700 5% 1/8W	63-10979-62	EW247
# RX2266	3300 5% 1/8W	63-10979-59	EW233
# RX3401	2.2M 20% 1/2W	63-11264	HW522
# RX3402	1000 5% 1/4W	63-10235-72	QW210
# RX3410	56K 5% 1/2W	63-11088-14	HW356
# RX3411	56K 5% 1/4W	63-10236-14	QW356
# RX3412	680 5% 1/4W	63-10235-68	QW168
# RX3413	100 5% 1/4W	63-10235-48	QW110
# RX3414	56K 5% 1/2W	63-11088-14	HW356
# RX3415	56.2K 1% 1/2W	63-11082-72	-
# RX3417	3830 1% 1/4W	63-10936-65	-
# RX3421	.68 5% 1W	63-11157-36B	1WD68
# RX3425	1 5% 5W Wirewound	63-10442-24A	5W1D0
# RX3449	220K 5% 1/2W	63-11088-28	HW422
# RX3450	1 5% 1/2W	63-10565	HW1D0
# RX3475	250 B+	63-11007-28	-
# RX3480	1.5 5% 5W Wirewound	63-10442-28A	5W1D5
# RX3497	12.8 Cold PTC	63-10710A	-

For SAFETY use only equivalent replacement part.

CABINET PARTS

Item	Part No.
Cabinet Front	14-12047-33
Cabinet Rear	14-12048
Cabinet Tray	14-11976-02
Crystal Window	192-864-01
Overlay, Emblem	30-1411-20
Pushbutton Knob	46-10508-15
Pushbutton Pad	194-2227

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
CR1601	Crystal	224-179	378kHz
CR2200	Crystal	224-27A	3.58MHz
CR2212	Crystal	224-131	503kHz
CR6000	Filter	224-157A	12.083916MHz
CRT1	Socket	78-3394	CRT
# FX3499	Fuse	136-113-23A	4Amp, 250V, Normal Lag
IR1	Receiver	162-35	Remote
# KX3401	Relay	195-158	Degaussing
P3400	Line Cord	A-18035	AC, Polarized
SP1, 2	Speaker	49-1369	2 1/4" X 3 1/2", 8 Ohms, 1.5W
SW1	Switch	85-1691A	Off/On
SW2	Switch	85-1691A	Channel Up
SW3	Switch	85-1691A	Channel Down
SW4	Switch	85-1691A	Volume Up
SW5	Switch	85-1691A	Volume Down
SW6	Switch	85-1691A	Menu
SW7	Switch	85-1691A	Select
SW8	Switch	85-1691A	Adjust Right
SW9	Switch	85-1691A	Adjust Left
SW10	Switch	85-1691A	Enter
TU6000 (1)	Tuner	175-2402	UHF/VHF
U1200	Filter	224-54A	4.5MHz
U1201	Filter	224-160	SAW
U2200	Delay Line	105-218	-
U2201	Trap	224-23A	4.5MHz
V1	CRT	G-A48ACB02X	A48ACB02X
	Balun	A-14323	Antenna, 75 To 300 Ohms
#	Fuse Holder	19-840-02	For FX3499 (2 Used)
	Isolator	A-18006	Antenna
	PC Board (1)	9-1555-01	Main
	PC Board (1)	F-47376	Keyboard
	PC Board (1)	A-17929	Keyboard
	Transmitter	124-206-01	Remote
	Wedge	152-338	Yoke Positioning (3 Used)

TUNER

XT1	Crystal	224-32-05	4MHz
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For SAFETY use only equivalent replacement part.
(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.



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