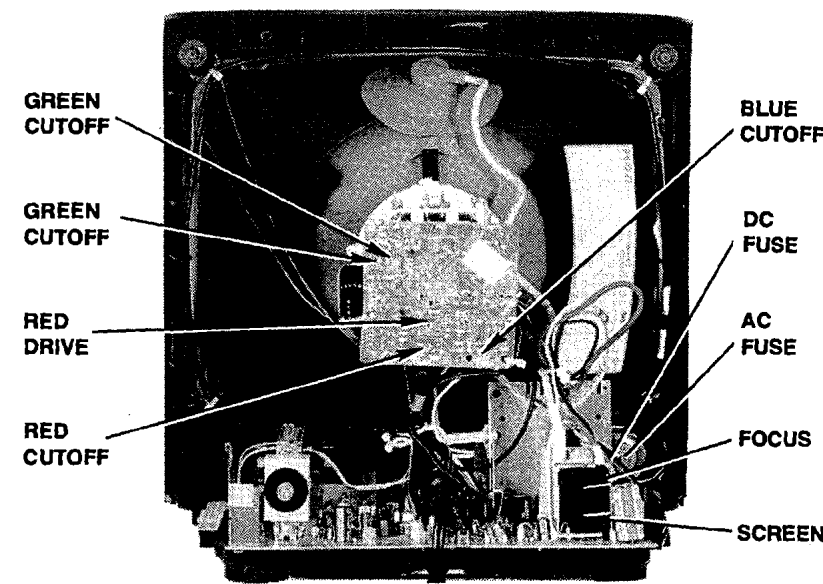


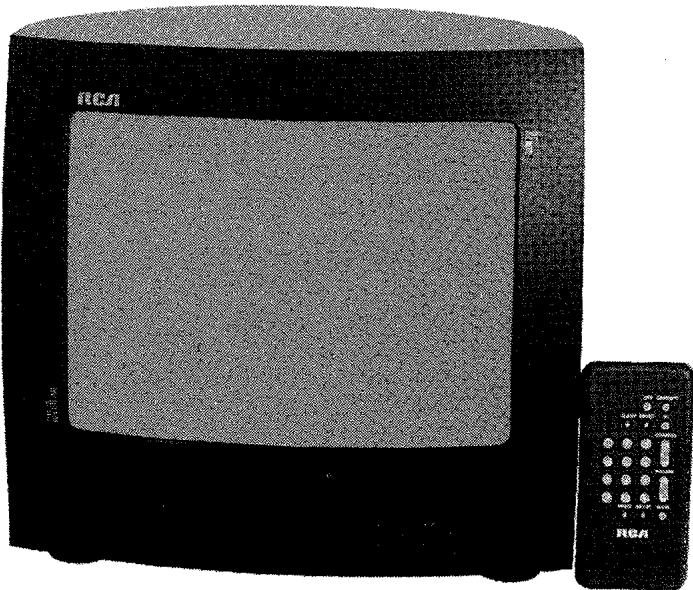
CABINET - REAR VIEW



PHOTOFACT® Technical Service Data

RCA

Model E13250BTF03 (Chassis TX82T)



Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts lists

Coverage includes these additional models and chassis:

MODEL	CHASSIS
E13163EGC03	TX82TA
E13163EGF03	TX82TA
E13240WNF01	TX82T
E13240WNF02	TX82TC
E13240WNF03	TX82T
E13241GMC03	TX82T
E13241GMF02	TX82TC
E13250BTC03	TX82T



HOWARD W. SAMS & COMPANY

OCTOBER 1992 SET 3217

SET 3217

MODEL E13250BTF03 (CHASSIS TX82T)

INDEX

Cabinet - Rear View	1
GridTrace Location	
CRT Board	3
Main Board	3
High Voltage Shutdown Test	3
IC Functions	3
Important Parts Information	4
Parts List	4
Placement Chart	3
Safety Precautions	1
Schematics	
Power Supply	2
Remote Transmitter	1
System Control	2
Television	2
Tuner	1
Schematic Notes	1
Test Equipment	1
Tuner Information	1

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.

Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein.

©1993 by Howard W. Sams & Company
2647 Waterfront Parkway East Drive, Suite 300
Indianapolis, IN 46214-2012

Printed in the United States of America 5 4 3 2 1

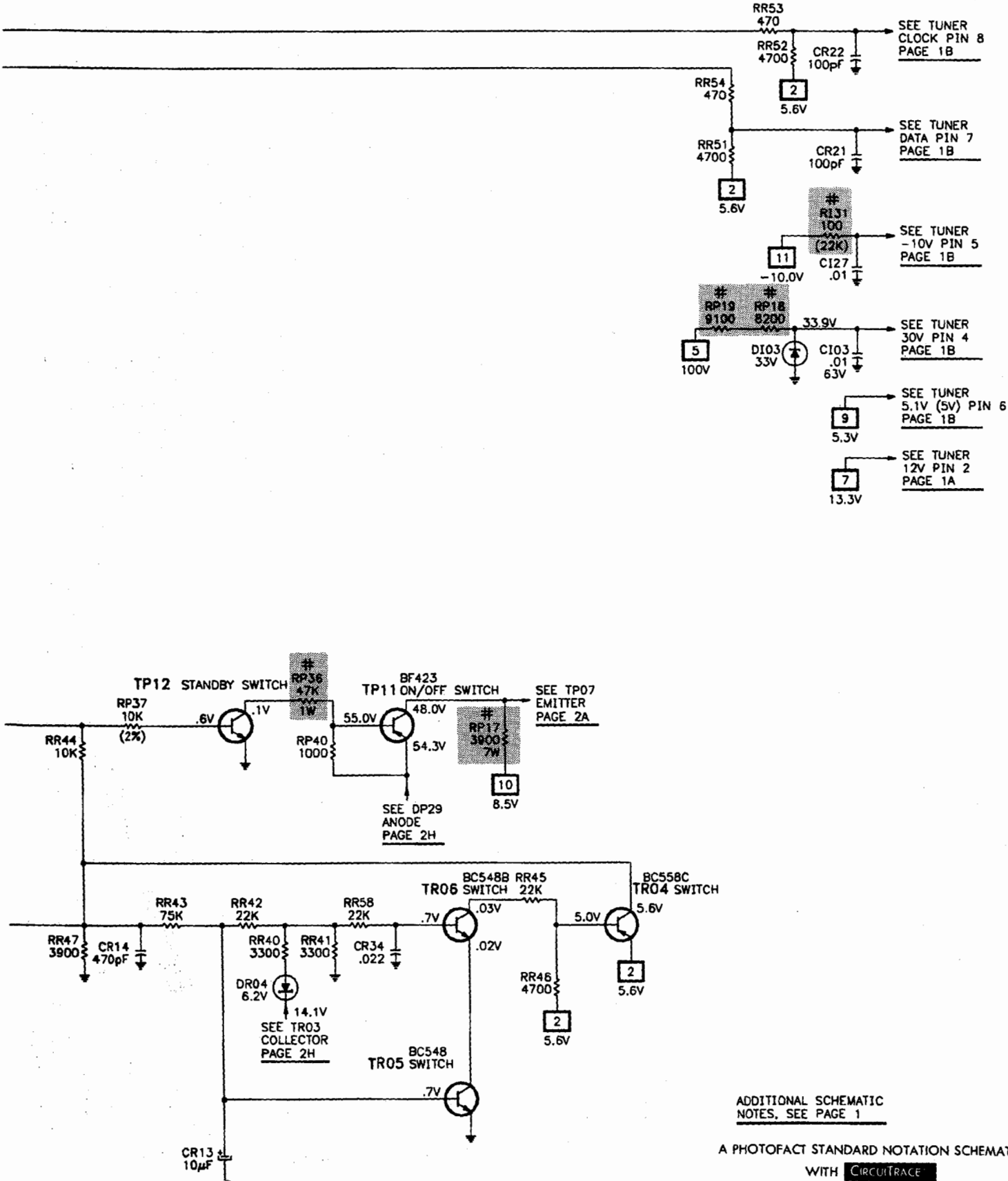


93RF02507



RCA

SYSTEM CONTROL SCHEMATIC continued

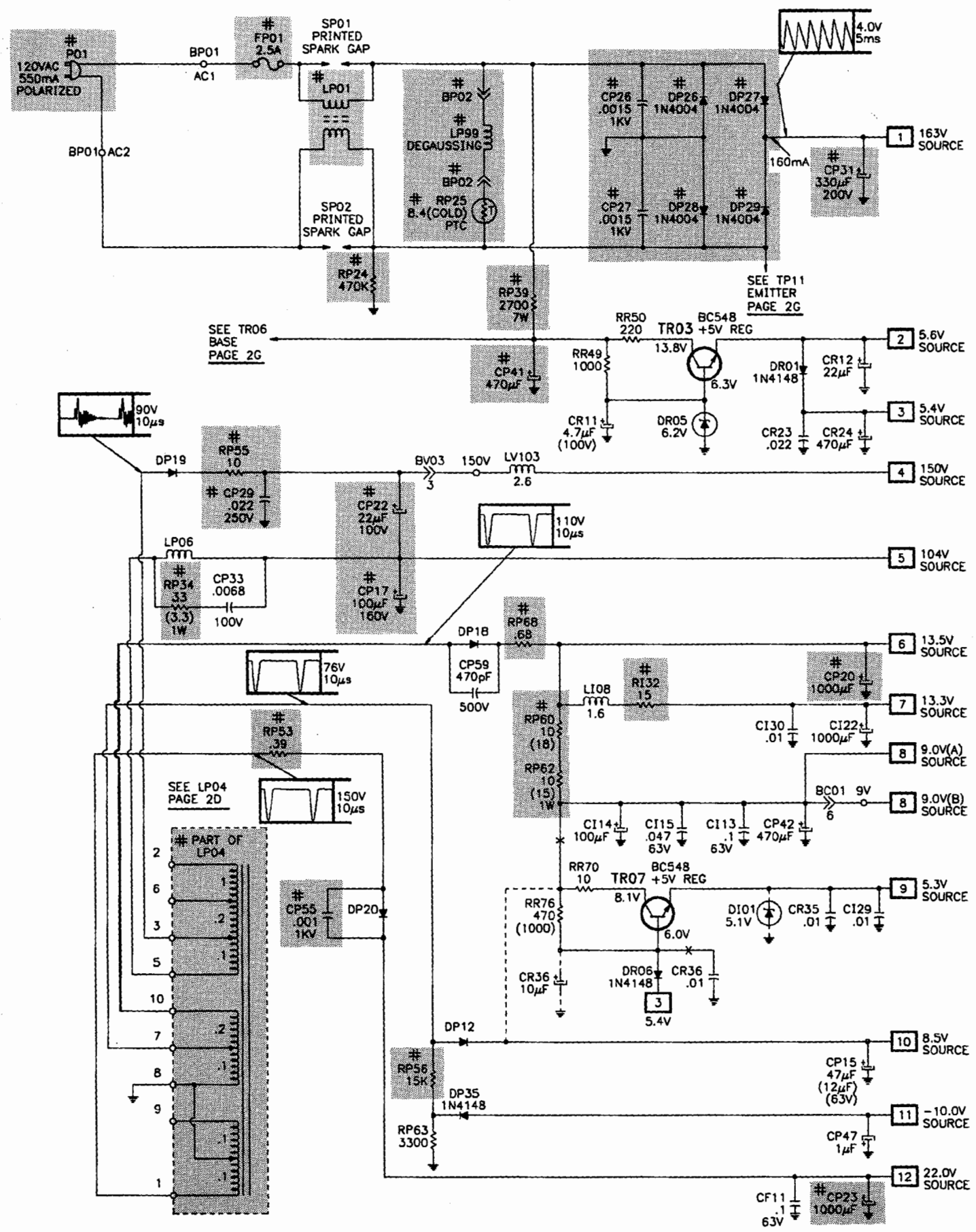


ADDITIONAL SCHEMATIC NOTES, SEE PAGE 1

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITACE

© Howard W. Sams & Co. 1993

POWER SUPPLY SCHEMATIC



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.

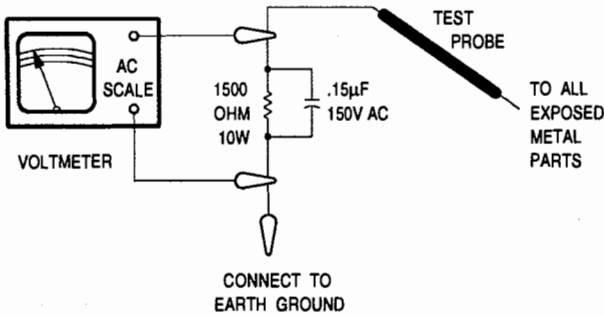
Hot Leakage Current Check

- 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.



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

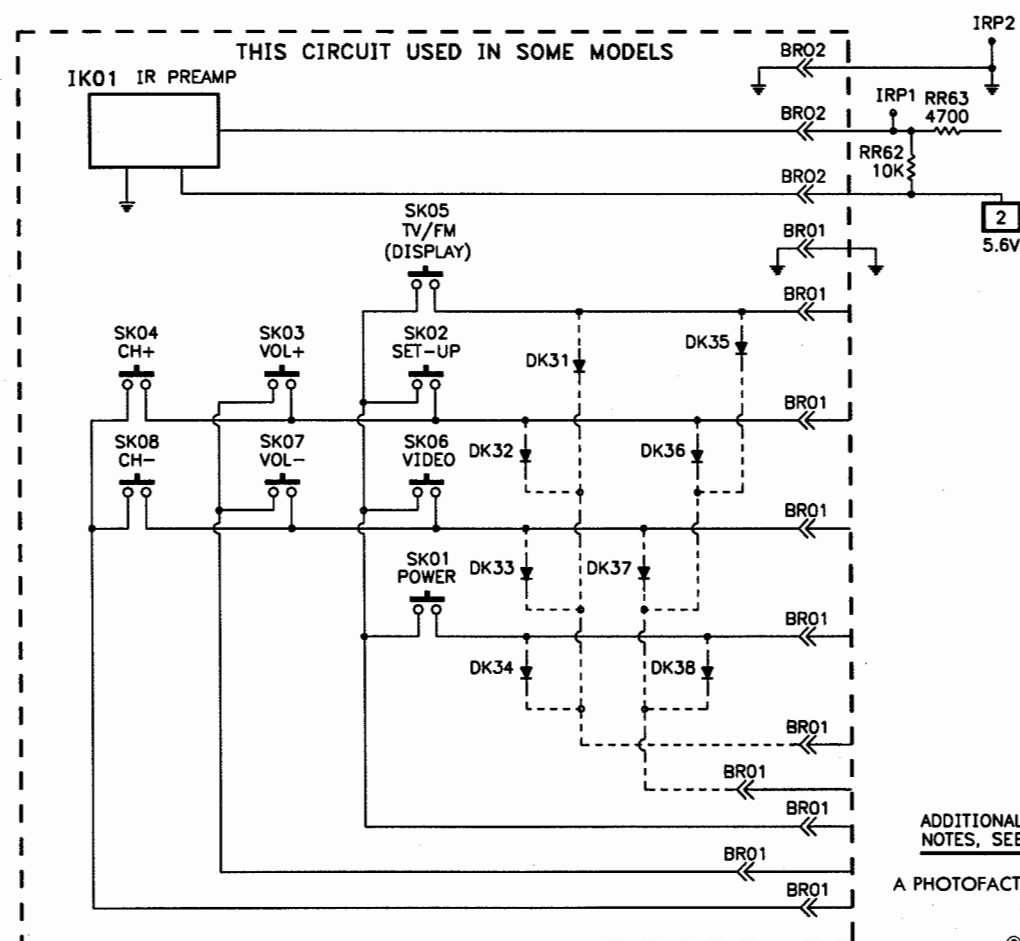
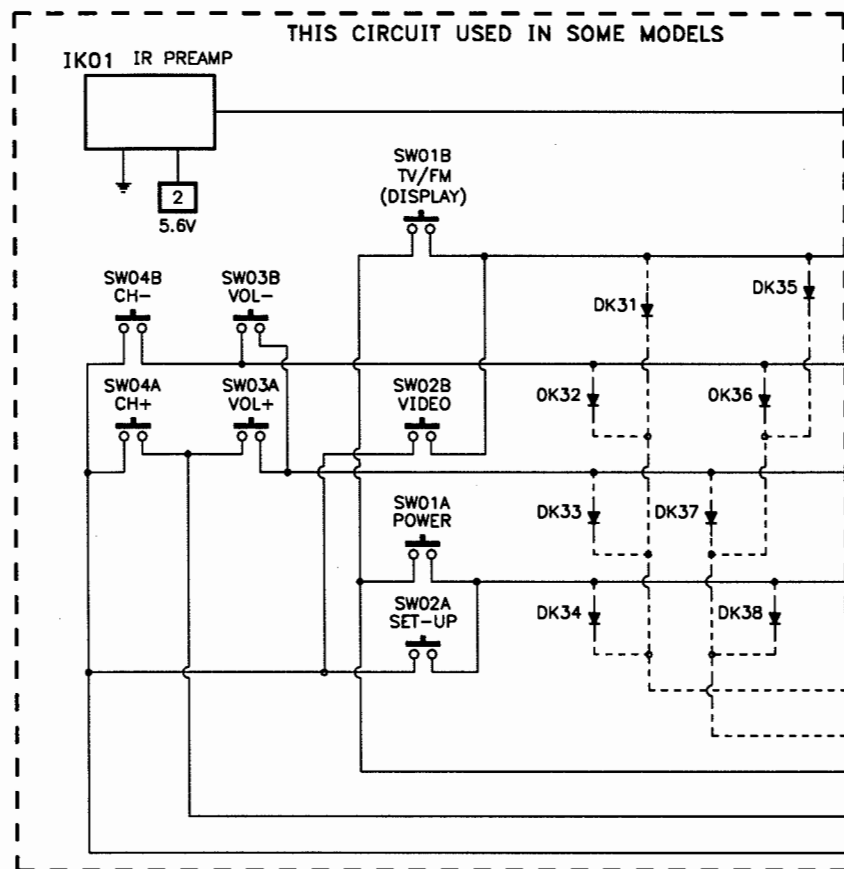
- # For SAFETY use only equivalent replacement part, see parts list.
- * Circuitry not used in some sets.
- Circuitry used in some versions.
- ⏏ Ground
- ⏏ Chassis ground
- ⏏ Common tie point
- △ Taken from common tie point
- II Schematic Circuittrace
- A— Cabling: Heavy lines reduce use of mutiple lines.

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.

RCA

MODEL E13250BTF03 (CHASSIS TX82T)

SYSTEM CONTROL SCHEMATIC

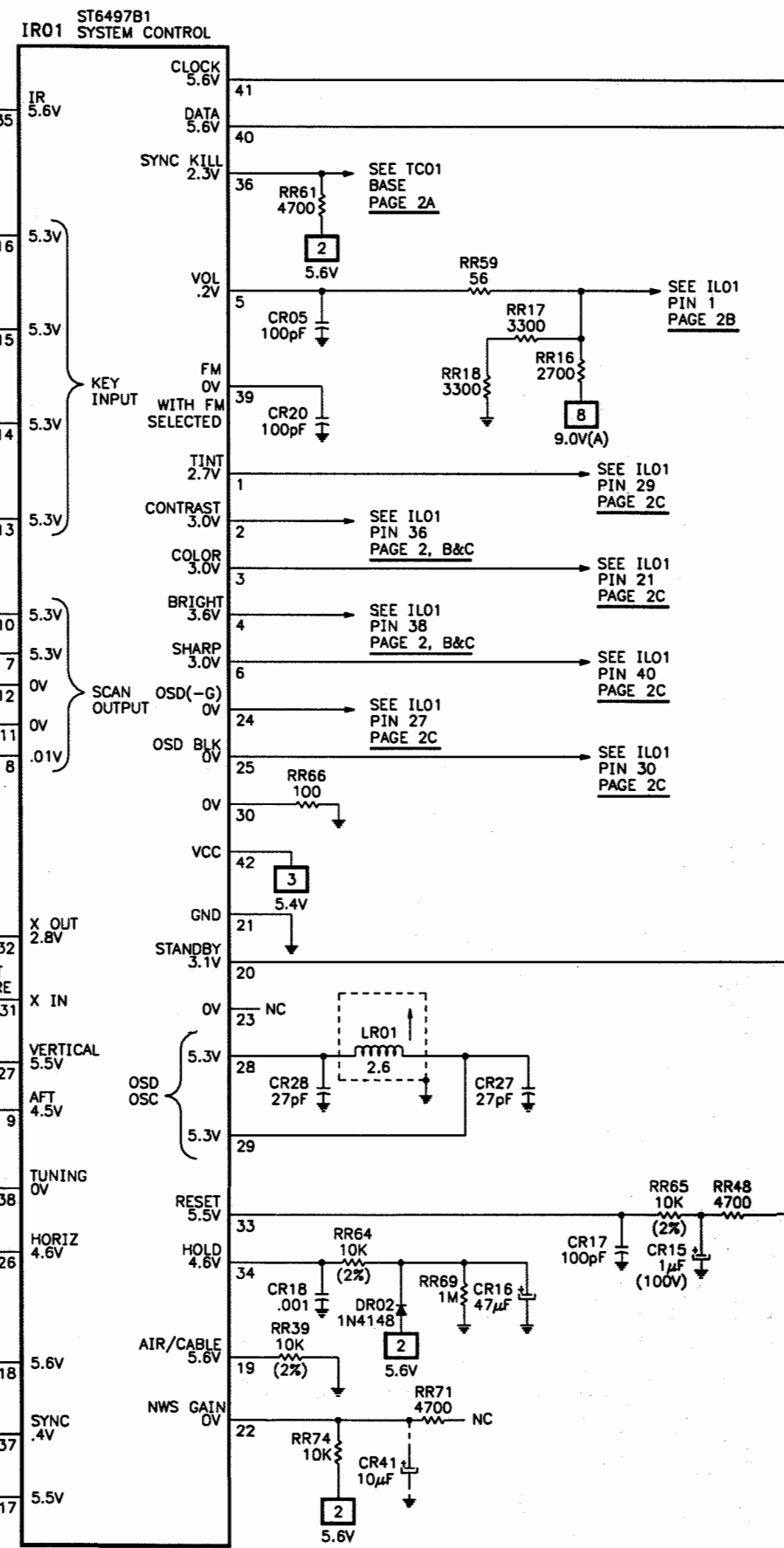
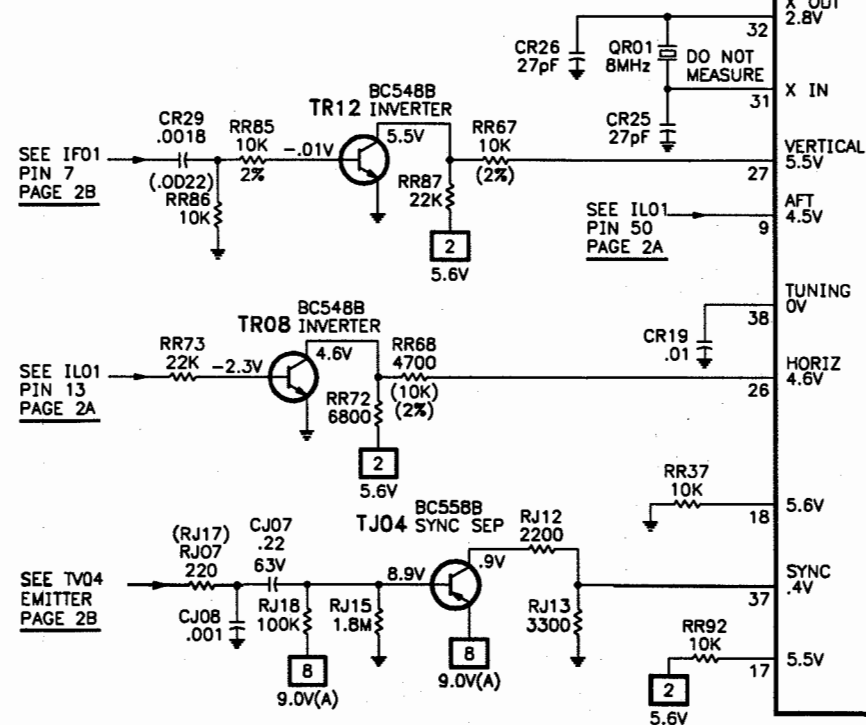
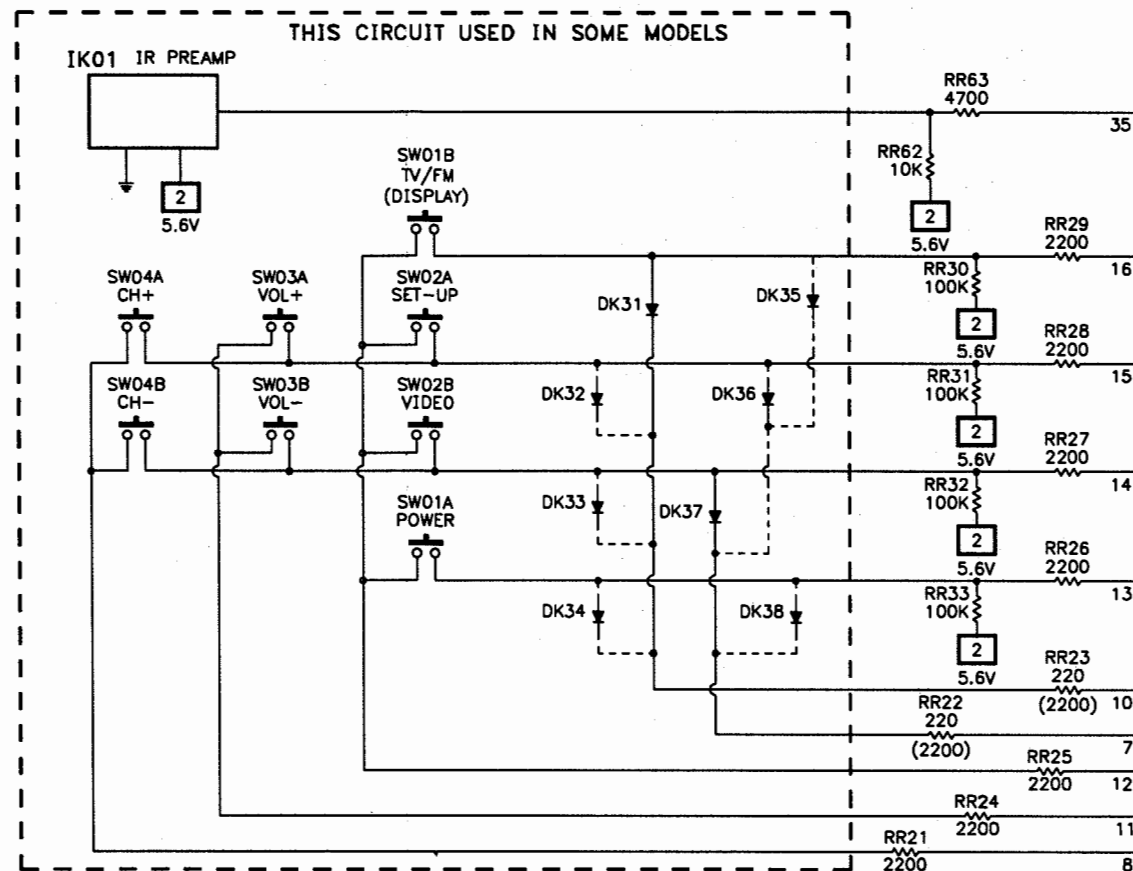


ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 1

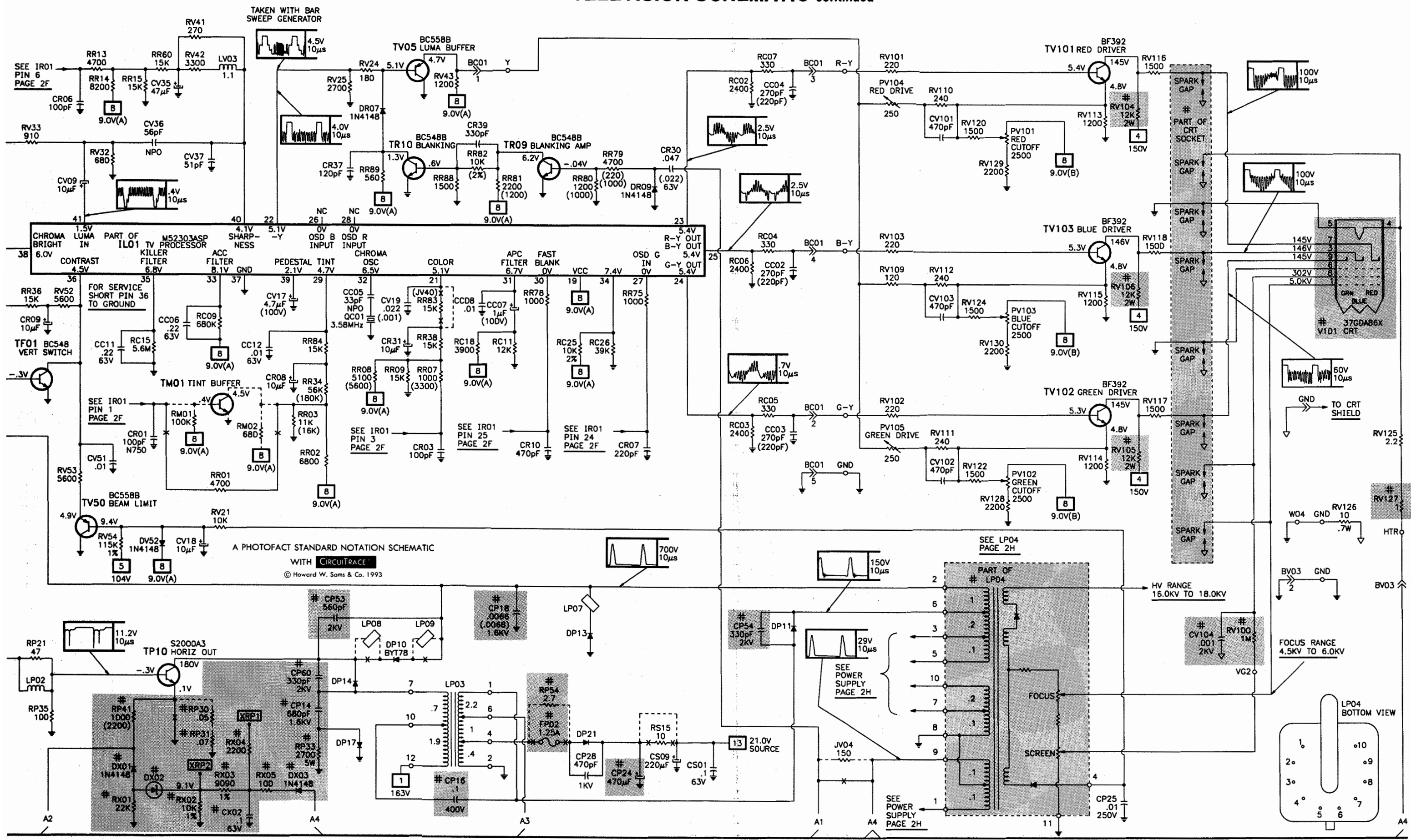
A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITRACE

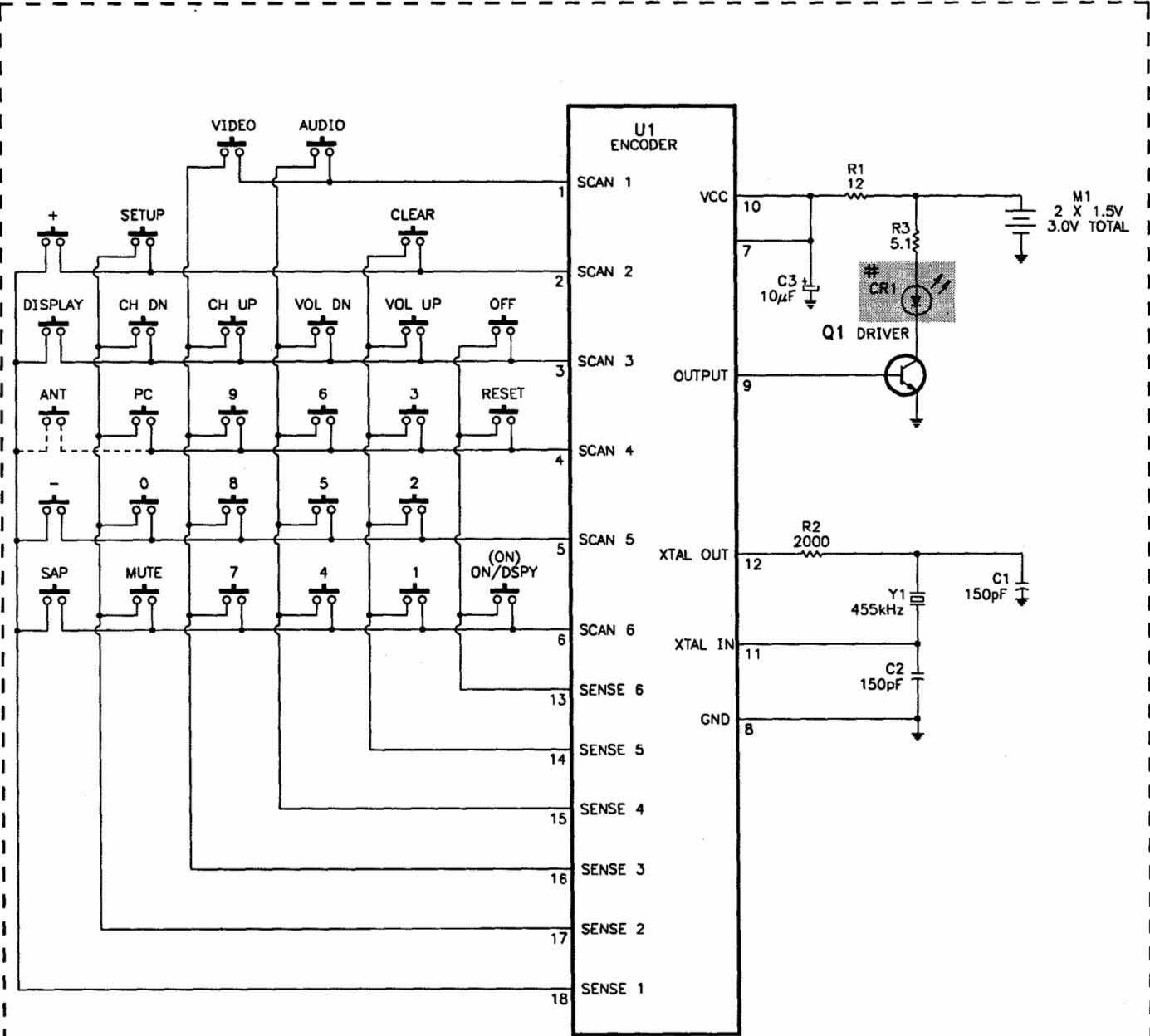
© Howard W. Sams & Co. 1993



© Howard W. Sams & Co. 1993



C
REMOTE TRANSMITTER SCHEMATIC



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 1

A PHOTOFACT STANDARD NOTATION SCHEMATIC

© Howard W. Sams & Co. 1993

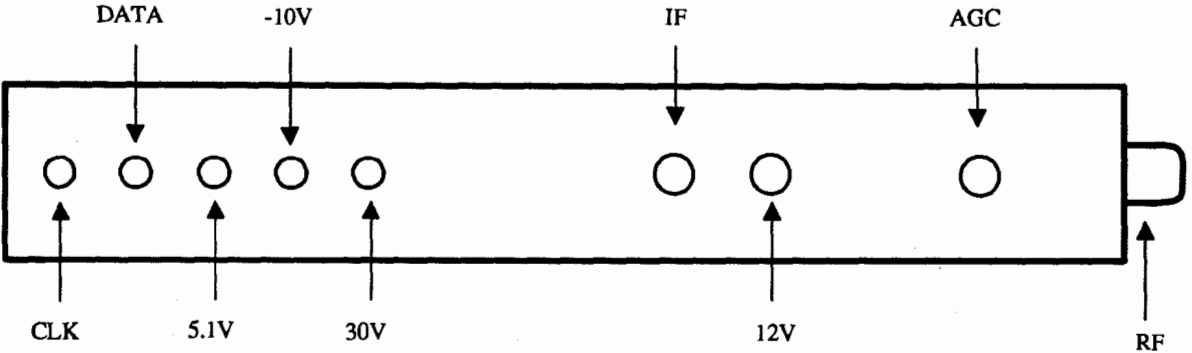
TUNER INFORMATION

TUNER VOLTAGE CHART

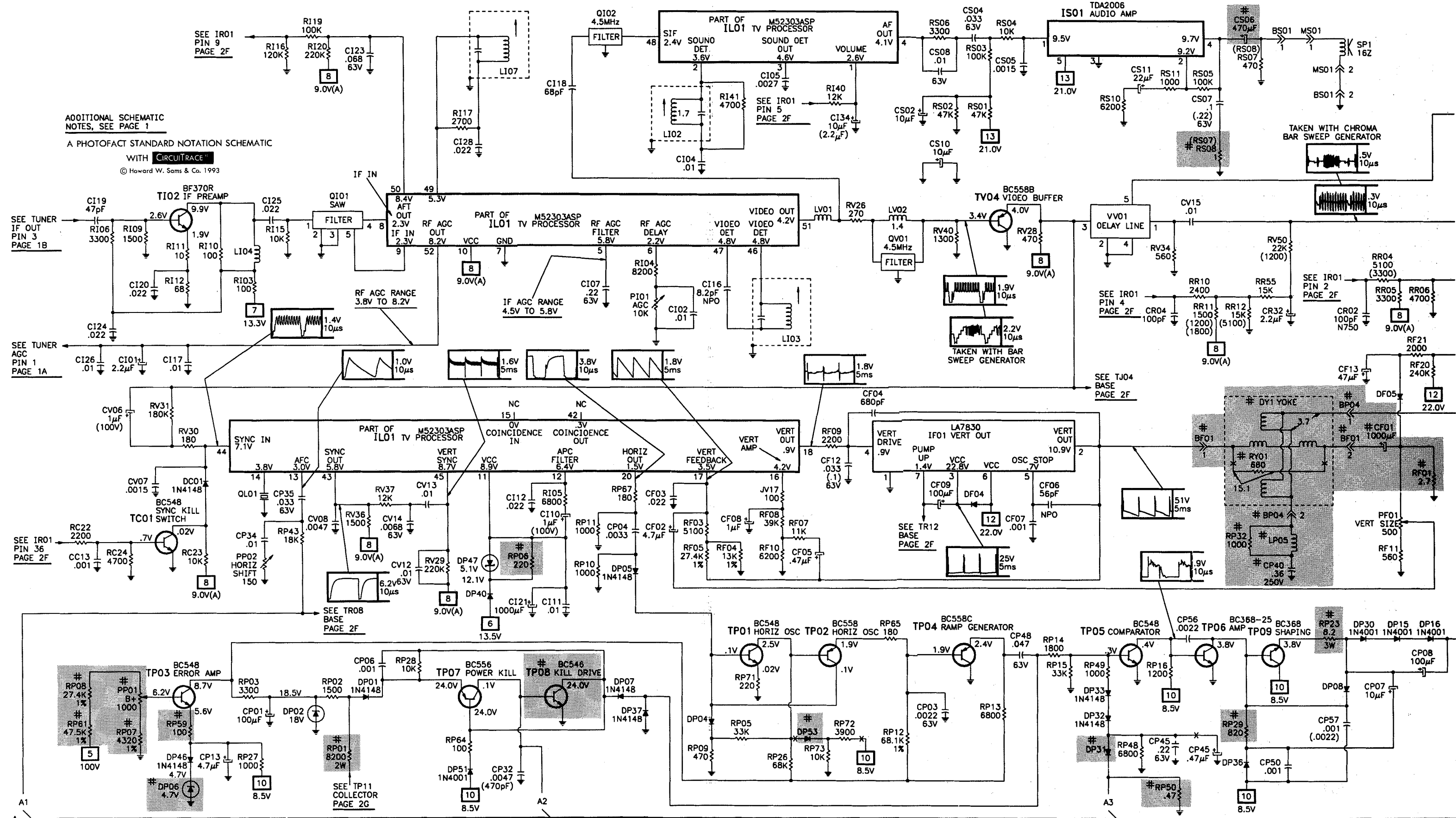
Pin	VHF Low Band	VHF High Band	UHF Band
CLK	5.6V	5.6V	5.6V
DAT	5.5V	5.5V	5.5V
5.1V	5.3V	5.3V	5.3V
-10V	-11.2V	-5.2V	-11.2V
30V	33.9V	33.9V	33.9V
IF	11.9V	11.5V	11.8V
12V	13.3V	13.3V	13.3V
AGC	8.2V	8.2V	8.2V

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

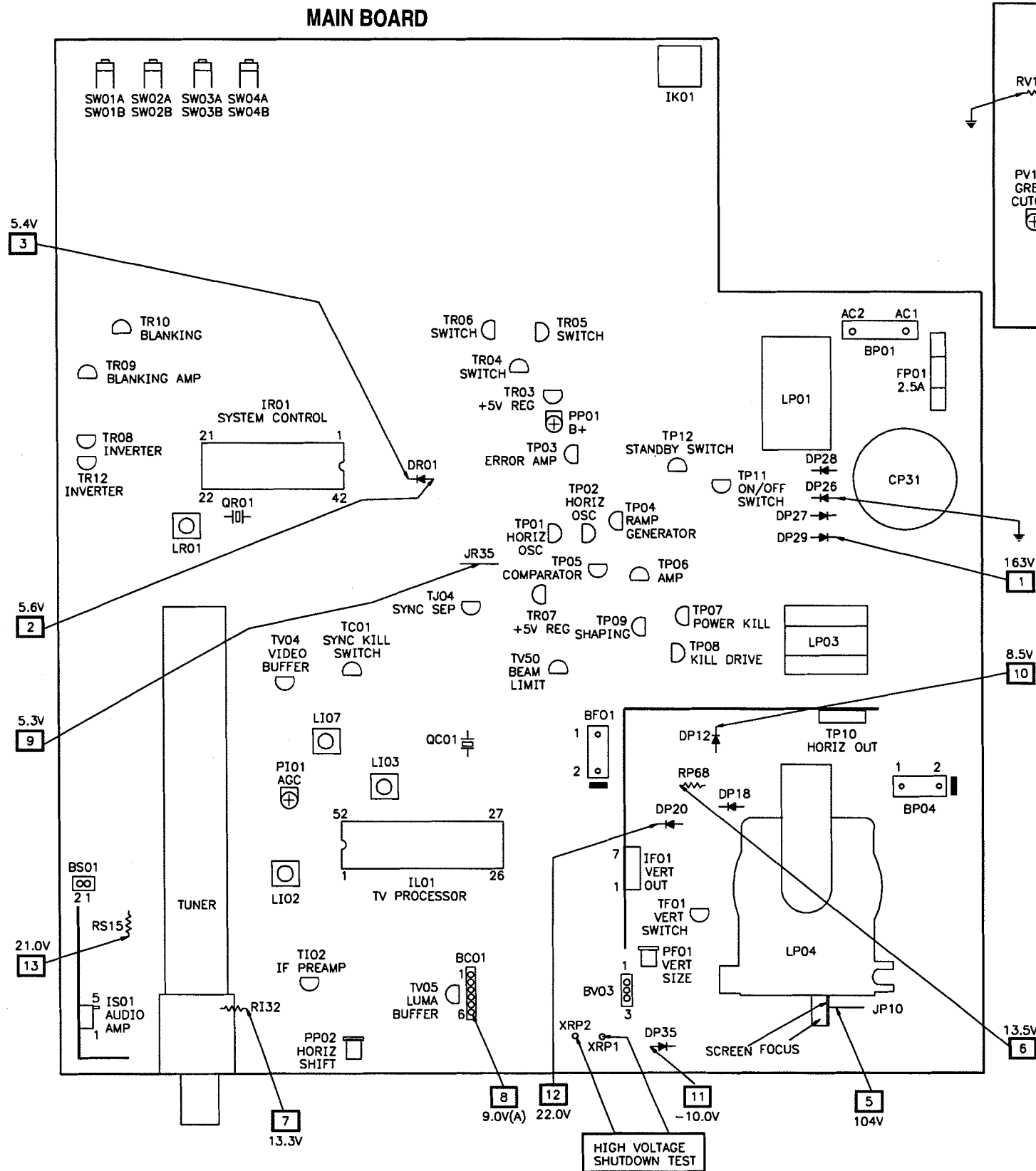
TUNER TERMINAL GUIDE



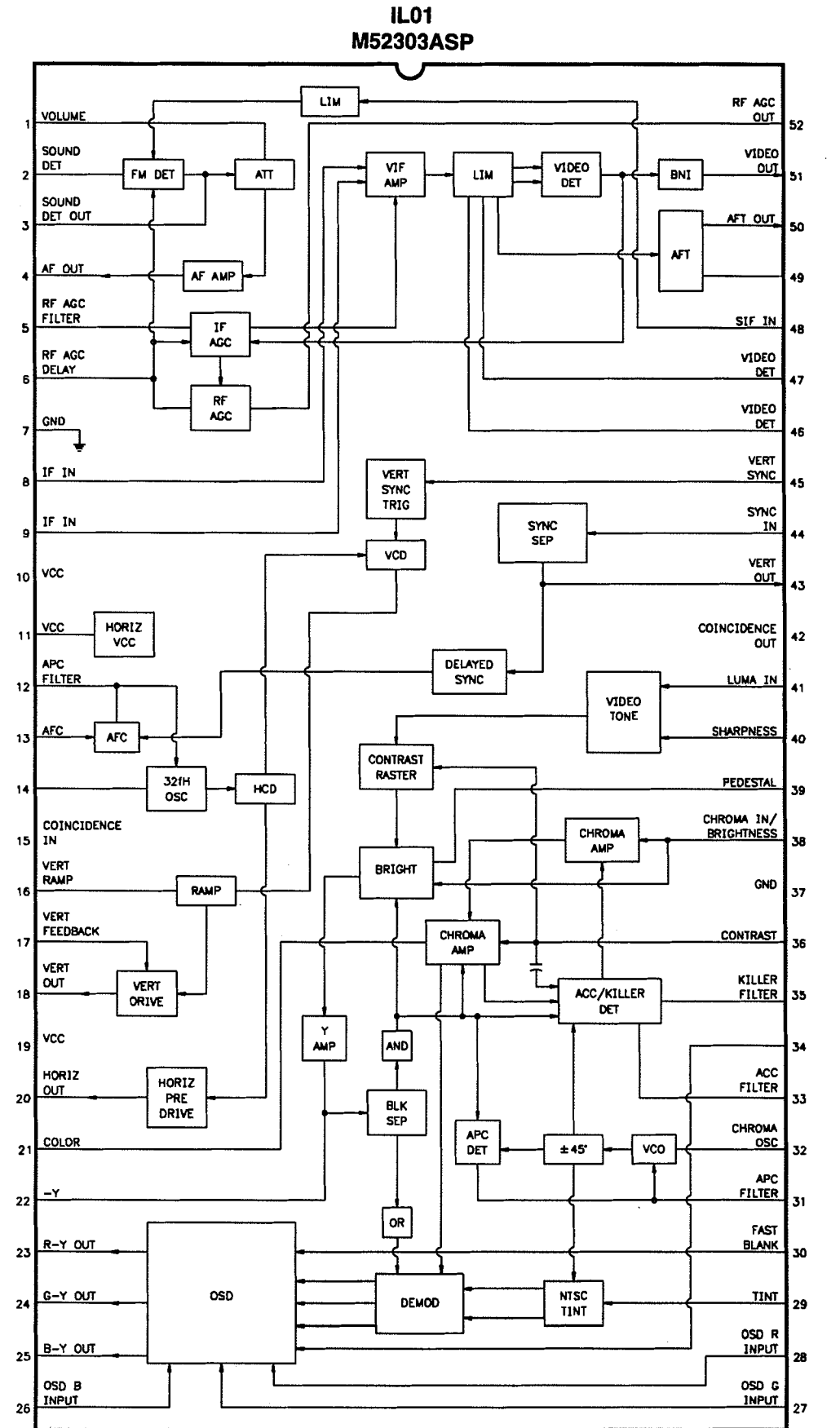
© Howard W. Sams & Co. 1993



PLACEMENT CHART



IC FUNCTIONS



PARTS LIST continued

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# BF01	Connector	198539	Vertical Yoke
# BF02	Connector	198542	Degaussing
# BF04	Connector	198542	Horizontal Yoke
# FP01	Fuse	198605	2.5 Amp, 250V, Slow Blow
# FP02	Fuse	212461	1.25 Amp, 250V
# P01	Line Cord	198540	AC, Polarized
QC01	Filter	198630	3.58MHz
QI01	Filter	210250	SAW
QI02	Filter	210239	4.5MHz
QL01	Filter	198633	43.5MHz
QR01	Filter	210549	8MHz
QV01	Filter	205431	4.5MHz
SK01	Switch	216098	Power
SK02	Switch	216098	Set-Up
SK03	Switch	216098	Volume +
SK04	Switch	216098	Channel +
SK05	Switch	216098	TV/FM
SK06	Switch	216098	Video
SK07	Switch	216098	Volume -
SK08	Switch	216098	Channel -
SP1	Speaker	198787	1 5/8" X 2 3/4", 16 Ohm, 2W
SW01A, B	Switch	198742	Power, TV/FM
SW02A, B	Switch	198742	Set-Up, Video
SW03A, B	Switch	198742	Volume +, Volume -
SW04A, B	Switch	198742	Channel +, Channel -
# V101	CRT	37GDA86X	-
	CRT	370KSB22(YB)	-
	CRT	A34EAE01X	-
	CRT	A34JLN60X	-
VV01	Delay Line	198753	-
#	Adapter	193983	75 to 300 Ohm
	Antenna	156265	VHF
	Antenna	212431	VHF, Models E13163EGC03/GF03
#	Bracket	198810	Chassis Mounting
	Magnet	161009	Beam Bender
	PC Board (1)	210624	CRT, Complete
	PC Board (1)	216058	CRT, Complete, Chassis TX82TA
	PC Board (1)	216136	Front Panel, Complete, Chassis TX82TA
	PC Board (1)	192039	Remote Transmitter (CRK52A)
	PC Board (1)	191564	Remote Transmitter (CRK53D)
			Models E13163EGC03/GF03
#	Screw	149552	CRT Mounting
#	Screw	-	CRT Mounting, Models E13163EGC03/GF03
#	Socket	198812	CRT
	Transmitter	187986	Remote Control (CRK52A)
	Transmitter	192108	Remote Control (CRK53D), Models E13163EGC03/GF03
	Tuner (1)	198626	UHF/VHF (MTP-M-2006)
	Wedge	161019	Yoke (3 used)
	Wedge	149903	Yoke (3 used),
			Models E13163EGC03/GF03, E13240WNF01/02/03

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

MISCELLANEOUS continued

Item No.	Description	Mfr. Part No.	Notes
REMOTE TRANSMITTER (CRK52A/53D)			
Y1	Crystal	157804	455kHz
M1	Battery	-	1.5V, AAA (2 used)
UHF/VHF TUNER			
# CR01	Unit	200482	Component Combination
Q106	Crystal	200560	4MHz
#	Connector	200489	Antenna
# For SAFETY use only equivalent replacement part.			



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

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

CABINET PARTS

MODELS E13163EGC03/GF03

Item	Mfr. Part No.
Buttons	216101
Cabinet Back	BK1433
Cabinet Front, Mask	MK1432
Window, IR	216102

MODELS E13240WNF01/02/03

Item	Mfr. Part No.
Cabinet Back	BK1106
Cabinet Front, Mask	MK1367
Window, IR	197835

MODELS E13241GMC03/MF02

Item	Mfr. Part No.
Cabinet Back	BK1100
Cabinet Front, Mask	MK1366
Window, IR	198814

MODELS E13250BTC03/TF03

Item	Mfr. Part No.
Buttons	216057
Cabinet Back	BK1430
Cabinet Front, Mask	MK1431
Window, IR	216056

REMOTE TRANSMITTER CRK52A

Buttons	192035
Case, Bottom	192033
Case, Top	192034
Door, Battery	192038

REMOTE TRANSMITTER CRK53D

Buttons	192558
Case, Bottom	191568
Case, Top	191567
Door, Battery	191570
Window, IR	191569

RCA

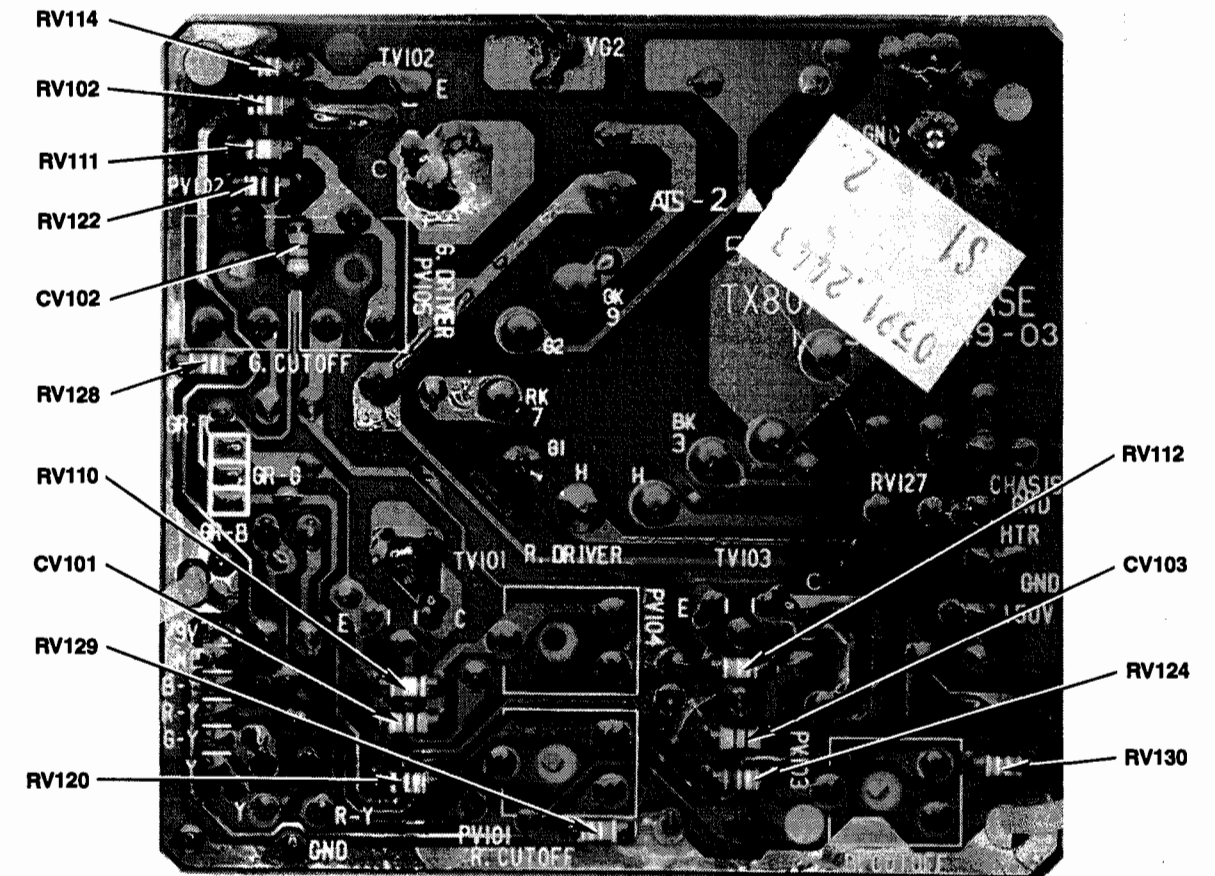
MODEL E13250BTF03 (CHASSIS TX82T)

A HOWARD W. SAMS GRIDTRACE™ PHOTO



CV104	J-8
LV103	D-9
PV101	B-5
PV102	G-1
PV103	B-8
PV104	D-5
PV105	G-3
RV100	I-6
RV101	B-4
RV103	B-7
RV104	E-3
RV105	H-4
RV106	C-9
RV109	C-7
RV113	D-2
RV115	B-6
RV116	E-4
RV117	I-5
RV118	E-8
RV125	F-9
RV126	G-9
RV127	E-9
TV101	C-3
TV102	I-3
TV103	D-7

RCA
MODEL E13250BTF03 (CHASSIS TX827)



PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
PF01	500 Vertical Size	198627	-
PI01	10K AGC	198628	-
# PP01	1000 B+	198629	-
PP02	150 Horizontal Shift	210546	-
PV101	2500 Red Cutoff	198796	-
PV102	2500 Green Cutoff	198796	-
PV103	2500 Blue Cutoff	198796	-
PV104	250 Red Drive	198795	-
	250 Red Drive (1)	216052	-
PV105	250 Green Drive	198795	-
	250 Green Drive (1)	216052	-
RC25	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
# RF01	2.7 5% 1/2W	198648	HW2D7
RF04	13K 1% 1/4W	-	-
	13K 5% 1/4W	198650	QW313
RF05	27.4K 1% .16W SMT	198651	-
# RI31	100 5% 1/4W Nonflammable	198667	QW110
	22K 5% 1/8W	151443	EW322-
# RI32	15 5% 1/4W Nonflammable	205422	QW015
# RP01	8200 5% 2W	210529	2W282
# RP06	220 5% 1/4W Nonflammable	209917	QW122
# RP07	4320 1% .16W SMT	198676	-
# RP08	27.4K 1% .16W SMT	198651	-
RP12	68.1K 1% .16W SMT	198790	-
# RP17	3900 5% 7W Wirewound	198682	-
# RP18	8200 5% 1/4W	210181	QW282
# RP19	9100 5% 1/4W	210183	QW291
# RP23	8.2 5% 3W	202049	3W8D2
# RP24	470K 10% 1/2W	-	HW447
# RP25	8.4 PTC Cold	198688	-
# RP29	820 5% 1/4W	198690	QW182
# RP30	.05 5% 1/4W (2)	198691	-
# RP31	.07 10% 1/4W (2)	198692	-
# RP32	1000 10% 1/2W	206386	HW210
# RP33	2700 10% 5W Wirewound	198694	5W227
# RP34	33 5% 1W	-	1W033
	3.3 5% 1W	198695	1W3D3
# RP36	47K 5% 1W	198696	1W347
# RP39	2700 10% 7W Wirewound	198697	-
# RP41	1000 5% .16W	198678	-
	2200 5% .16W SMT	198698	-
# RP50	.47 5% 1/4W	202050	-
# RP53	.39 5% 1/4W Nonflammable	198701	-
# RP54	2.7 10% .4W (2)	210184	-
# RP55	10 5% .35W SMT	210185	-
# RP56	15K 5% 1/4W	198703	QW315
# RP59	100 5% .16W SMT	198660	-

For SAFETY use only equivalent replacement part.

- (1) Chassis TX82TA.
(2) Used in some versions.

CONTROLS & RESISTORS continued

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# RP60	10 5% 1/2W SMT	210186	-
	18 5% 1/2W SMT	502018	-
# RP61	47.5K 1% .16W SMT	198705	-
# RP68	.68 5% 1/2W	216049	HWD68
	.68 5% 1/2W	184063	HWD68
RR37	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
RR39	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
RR64	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
RR65	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
RR67	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
RR68	4700 5% 1/4W	198722	QW247
	10K 2% 1/4W	829310	QW310
RR82	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
RR85	10K 5% 1/4W	198711	QW310
	10K 2% 1/4W	829310	QW310
# RS07	1 5% .16W SMT	198729	-
RV54	115K 1% 1/4W	210194	-
# RV100	1M 5% 1/2W	180028	HW510
# RV104	12K 5% 2W	183193	2W312
# RV105	12K 5% 2W	183193	2W312
# RV106	12K 5% 2W	183193	2W312
# RV127	1 5% .3W	209918	-
# RX01	22K 5% .16W SMT	198714	-
# RX02	10K 1% 1/4W	198739	-
# RX03	9090 1% .4W	198740	-
# RX04	2200 5% .16W SMT	198698	-
# RX05	100 5% .16W SMT	198660	-
# RY01	680 5% 1/2W	175364	HW168

REMOTE TRANSMITTER

R3	5.1 2% 1/4W	829A51	QW5D1
----	-------------	--------	-------

UHF/VHF TUNER

# R001	3.9M 10% 1/2W	200713	HW539
--------	---------------	--------	-------

For SAFETY use only equivalent replacement part.

- (2) Used in some versions.

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.	On-Unit No.
# DY1	Yoke 90° Horiz 214mH Vert 25.1mH	198805	2842034-503
LI02	Sound IF Detector	198613	-
LI03	Video Detector	206385	-
LI04	.82µH	198615	-
LI07	AFT	210787	-
	AFT	198616	-
LI08	47µH	198617	-
# LP01	Line Filter	198618	-
LP02	6µH	198619	-
# LP03	Switch Mode	210541	80426705
# LP04	Horizontal Output (1)	198622	2G25010-501
# LP05	Horizontal Linearity (2)	198623	6603-090
	Horizontal Linearity (3)	205416	-
LP06	50µH	198624	-
LP07	Ferrite Bead	210544	-
LP08	Ferrite Bead (4)	210544	-
LP09	Ferrite Bead	210544	-
# LP99	Degaussing	198807	-
LR01	35µH	205430	-
LV01	1.5µH	198783	-
LV02	12µH	198782	-
LV03	18µH	210249	-
LV103	150µH	210247	-

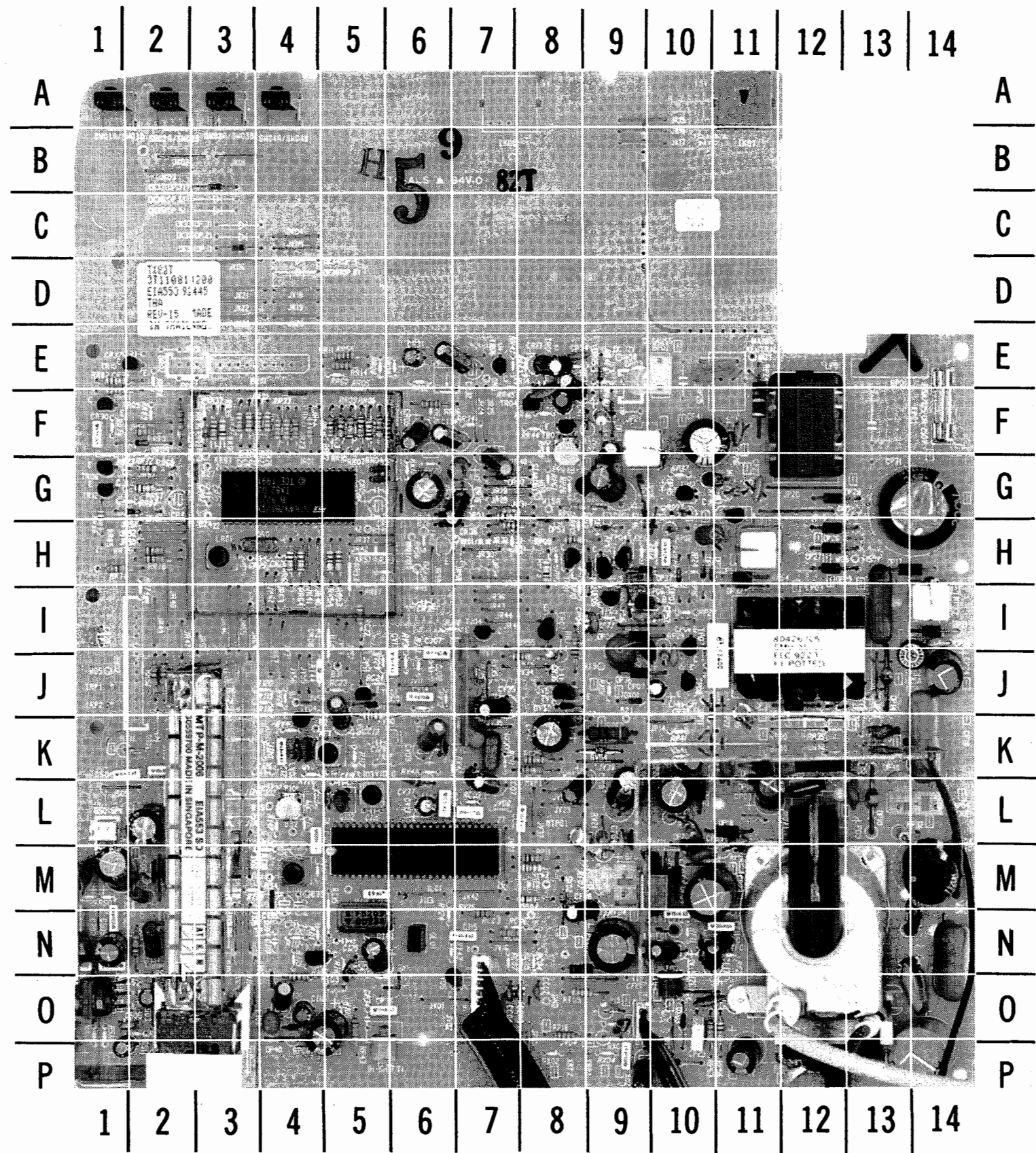
UHF/VHF TUNER

LH64	3.9µH	200559	-
LH78	1.2µH	200481	-

For SAFETY use only equivalent replacement part.

- (1) Focus and screen controls are part of LP04.
(2) Chassis TX82T, TA.
(3) Chassis TX82TC.
(4) Used in some versions.

MAIN BOARD - TOP VIEW



A HOWARD W. SAMS GRIDTRACE™ PHOTO

MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE													
BC01	O-7	CP28	I-14	DF05	N-10	IS01	O-1	RP40	G-11	RS03	N-2		
BF01	M-9	CP29	O-10	DI03	K-2	JV17	N-8	RP43	O-5	RS15	M-2		
BP01	E-13	CP31	G-14	DK31	C-3	LI02	M-4	RP50	J-12	RV21	L-9		
BP02	E-10	CP33	P-13	DK37	B-3	LI03	L-5	RP53	M-11	RV25	N-7		
BP04	L-14	CP35	O-5	DP01	H-10	LI04	N-5	RP55	P-12	RV30	K-5		
BS01	L-1	CP40	N-14	DP02	H-10	LI07	K-5	RP56	O-11	RV52	H-7		
BV03	O-9	CP41	F-10	DP04	H-9	LI08	O-4	RP60	K-9	RV53	J-8		
CC02	O-8	CP42	K-8	DP05	H-9	LP01	F-12	RP62	K-8	RV54	K-9		
CC03	O-7	CP45	J-11	DP06	G-9	LP02	L-12	RP63	O-10	RX03	O-9		
CC04	O-7	CP47	P-9	DP07	H-10	LP03	I-12	RP67	M-8	SW01A	A-1		
CC05	K-7	CP48	H-10	DP08	I-9	LP04	N-12	RP68	L-10	SW01B	A-1		
CC06	L-7	CP50	J-10	DP10	L-13	LP05	M-14	RP73	H-8	SW02A	A-2		
CC07	L-7	CP53	L-13	DP11	K-10	LP06	O-14	RR01	F-5	SW02B	A-2		
CC11	L-6	CP54	K-11	DP12	L-10	LP07	K-14	RR04	F-5	SW03A	A-3		
CC12	L-8	CP55	M-10	DP13	K-14	LR01	H-3	RR07	F-5	SW03B	A-3		
CF01	N-9	CP56	I-9	DP14	J-13	LV01	L-5	RR10	F-5	SW04A	A-4		
CF02	N-10	CP57	I-9	DP15	L-11	LV02	K-4	RR11	E-5	SW04B	A-4		
CF04	L-9	CP59	L-11	DP16	L-11	LV03	L-6	RR13	F-5	TC01	J-5		
CF05	M-9	CP60	K-13	DP17	H-14	PF01	O-10	RR14	E-5	TF01	N-11		
CF06	L-9	CR01	G-5	DP18	L-11	PI01	L-4	RR16	F-6	TI02	N-4		
CF08	N-9	CR02	G-5	DP19	P-12	PP01	F-8	RR21	F-4	TJ04	I-7		
CF09	L-9	CR08	G-7	DP20	M-10	PP02	P-5	RR22	F-5	TP01	H-8		
CF11	N-11	CR09	F-6	DP21	I-14	QC01	K-7	RR23	F-4	TP02	H-9		
CF12	N-10	CR11	F-8	DP26	H-12	QI01	N-5	RR24	F-4	TP03	G-8		
CF13	N-10	CR12	F-8	DP27	H-12	QI02	L-5	RR25	F-4	TP04	H-9		
CI01	O-4	CR13	E-8	DP28	H-12	QL01	N-6	RR26	F-4	TP05	I-9		
CI03	K-2	CR14	F-8	DP29	G-12	QR01	H-4	RR27	F-4	TP06	I-9		
CI07	L-4	CR15	G-7	DP30	K-11	QV01	K-4	RR28	F-3	TP07	J-10		
CI10	O-4	CR16	G-7	DP31	J-12	RC02	N-7	RR29	F-3	TP08	J-10		
CI13	M-5	CR24	G-6	DP32	I-11	RC18	K-8	RR37	F-3	TP09	J-9		
CI14	N-5	CR29	I-1	DP33	H-10	RC22	I-5	RR39	F-3	TP10	K-12		
CI15	N-7	CR30	F-1	DP35	P-10	RC25	K-8	RR48	G-7	TP11	G-11		
CI21	O-5	CR31	E-6	DP36	J-9	RF01	N-10	RR49	F-9	TP12	G-10		
CI22	L-2	CR32	E-7	DP37	H-9	RF09	O-8	RR50	F-9	TR03	F-8		
CI23	K-4	CR34	E-8	DP40	O-4	RI03	O-4	RR51	J-2	TR04	F-8		
CI34	F-7	CS01	N-1	DP46	G-9	RI31	K-2	RR52	J-2	TR05	E-8		
CJ07	J-6	CS02	N-2	DP47	O-4	RI32	O-3	RR53	H-5	TR06	E-7		
CP01	G-9	CS04	K-1	DP51	H-11	RP01	H-10	RR54	H-5	TR07	I-8		
CP03	H-9	CS05	O-2	DP53	H-8	RP02	H-10	RR59	F-6	TR08	G-1		
CP04	I-9	CS06	M-1	DR01	G-6	RP03	G-8	RR63	F-2	TR09	F-1		
CP06	I-10	CS07	N-1	DR02	G-7	RP06	O-4	RR64	H-4	TR10	E-2		
CP07	J-10	CS08	L-2	DR04	F-9	RP09	H-8	RR65	H-4	TR12	G-1		
CP08	L-11	CS09	N-1	DR05	E-9	RP11	M-8	RR67	G-2	TV04	K-4		
CP13	F-9	CS10	O-2	DR06	H-6	RP17	H-11	RR68	G-2	TV05	O-6		
CP14	I-13	CS11	P-1	DR07	G-2	RP18	O-8	RR70	J-8	TV50	J-8		
CP15	K-10	CV06	K-5	DR09	F-2	RP19	O-9	RR71	H-1	VV01	J-7		
CP16	J-11	CV09	K-6	DV52	J-8	RP23	J-9	RR75	H-2	XRP1	P-9		
CP17	P-14	CV12	J-6	DX01	J-9	RP24	F-11	RR76	J-8	XRP2	P-8		
CP18	K-14	CV14	J-6	DX02	M-8	RP25	E-11	RR78	H-2				
CP20	L-10	CV17	L-6	DX03	O-10	RP27	G-10	RR80	F-2				
CP22	P-11	CV18	L-8	FP01	F-14	RP29	J-10	RR81	F-1				
CP23	M-10	CV35	J-7	FP02	J-14	RP32	L-13	RR82	E-1				
CP24	J-14	CV36	K-6	IF01	M-10	RP33	I-14	RR83	M-8				
CP25	O-10	CX02	P-9	IK01	A-11	RP34	N-14	RR84	G-7				
CP26	F-11	DC01	J-5	IL01	M-5	RP36	G-10	RR85	H-1				
CP27	G-11	DF04	M-10	IR01	G-5	RP39	F-9	RR92	F-3				

PARTS LIST continued

SEMICONDUCTORS continued

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
TR03	BC548	198743	NTE123AP*	ECG123AP*	SK3854*
TR04	BC558C	198745	NTE159*	ECG159*	SK3466*
TR05	BC548	198746	NTE123AP*	ECG123AP*	SK3854*
TR06	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TR07	BC548	-	NTE123AP*	ECG123AP*	SK3854*
	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
	BC337-16	216099	NTE123AP*	ECG123AP*	SK3854*
TR08	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TR09	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TR10	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TR12	BC548B	198743	NTE123AP*	ECG123AP*	SK3854*
TV04, 05	BC558B	198745	NTE159*	ECG159*	SK3466*
TV50	BC558B	198745	NTE159*	ECG159*	SK3466*
TV101 Thru TV103	BF392	198763	NTE287	ECG287	SK3433
REMOTE TRANSMITTER (CRK53D)					
# CR1	-	153342	-	-	-
Q1	-	148996	NTE123AP	ECG123AP	SK3854
U1	-	181040	-	-	-
UHF/VHF TUNER					
DH01 (3)	-	200553	-	-	-
DH02	-	200471	-	-	-
DH46	-	200472	-	-	-
DH57 (4)	-	200554	-	-	-
DH58	-	200471	-	-	-
DH66	-	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	-	200556	-	-	-
TI113, 14	-	200556	-	-	-

For SAFETY use only equivalent replacement part.

* Lead configuration may vary from original.

(3) 4 used.

(4) 6 used.

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)

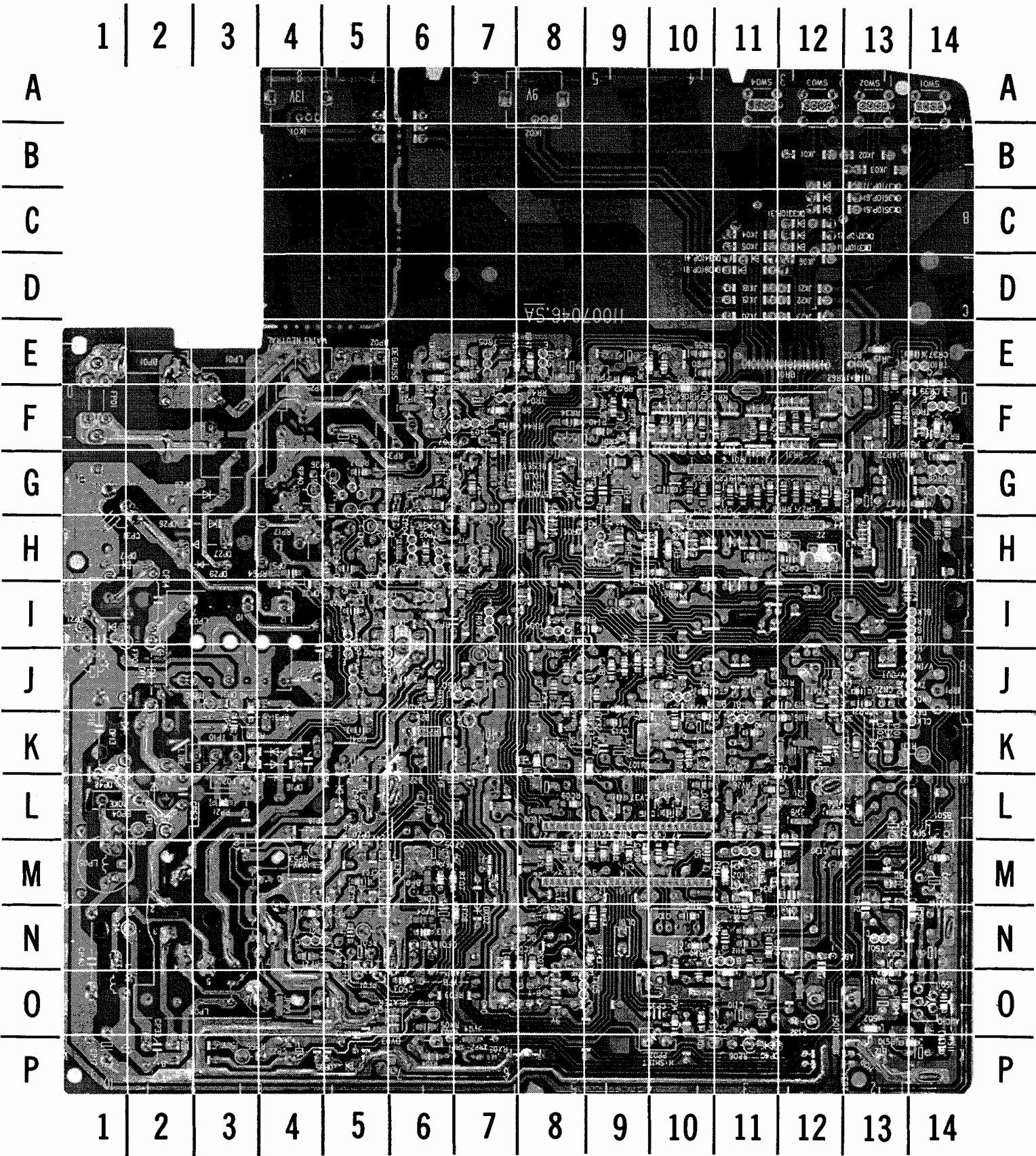
CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
CC05	33pF 10% 50V NPO	210153
# CF01	1000µF 25V	190721
CF06	56pF 5% 50V NPO	198771
CI16	8.2pF 10% 50V NPO	202047
# CP14	680pF 5% 1.6KV	198560
# CP16	.1 10% 400V	198561
# CP17	100µF 20% 160V	194728
# CP18	.0066 1.6KV	198562
	.0068 1.6KV (1)	205418
# CP20	1000µF 16V	185862
# CP22	22µF 20% 100V	210156
# CP23	1000µF 25V	190721
# CP24	470µF 20% 25V	178836
# CP26	.0015 10% 1KV	198565
# CP27	.0015 10% 1KV	198565
# CP28	470pF 1KV	210527
# CP29	.022 10% 250V	210525
# CP31	330µF 20% 200V	182286
# CP40	.36 5% 250V	198567
# CP41	470µF 10% 50V	159311
# CP53	560pF 2KV	198568
# CP54	330pF 2KV	198569
# CP55	.001 1KV	198570
# CP60	330pF 2KV	198569
CR01	100pF 5% 50V N750	198579
CR02	100pF 5% 50V N750	198579
# CS06	470µF 20% 25V	178836
CV36	56pF 5% 50V NPO	198771
# CV104	.001 2KV	205421
# CX02	.1 10% 63V	198551

For SAFETY use only equivalent replacement part.

(1) Chassis TX82TC.

MAIN BOARD - BOTTOM VIEW



MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

CC08	M-8	RC05	N-8	RP61	G-7	RV26	L-11
CC13	K-10	RC06	N-8	RP64	H-4	RV28	J-11
CF03	O-6	RC07	N-8	RP65	H-6	RV29	J-10
CF07	M-5	RC09	L-8	RP71	H-7	RV31	K-10
CI02	L-11	RC11	K-8	RP72	I-6	RV32	J-9
CI04	N-11	RC15	M-9	RR02	E-9	RV33	K-9
CI05	M-10	RC23	J-10	RR03	F-10	RV34	J-8
CI11	M-9	RC24	J-10	RR05	F-10	RV36	J-9
CI12	M-9	RC26	M-8	RR06	F-10	RV37	J-9
CI16	L-10	RF03	N-6	RR08	E-10	RV40	K-11
CI17	M-10	RF04	N-6	RR09	F-10	RV41	K-9
CI18	L-10	RF05	M-6	RR12	F-10	RV42	K-9
CI19	N-11	RF07	M-6	RR15	F-11	RV43	N-9
CI20	N-11	RF08	N-7	RR17	F-9	RV50	H-8
CI24	O-10	RF10	M-6	RR18	G-9	RX01	J-6
CI25	N-10	RF11	N-5	RR30	F-12	RX02	P-7
CI26	L-12	RF20	N-4	RR31	F-12	RX04	P-6
CI27	K-13	RF21	N-4	RR32	F-12	RX05	O-6
CI28	K-10	RI04	L-11	RR33	F-11		
CI29	J-12	RI05	O-10	RR34	F-8		
CI30	M-12	RI06	O-11	RR36	F-9		
CJ08	J-9	RI09	N-11	RR38	E-10		
CP32	J-5	RI10	O-10	RR40	E-6		
CP34	O-10	RI11	N-11	RR41	E-6		
CR03	G-10	RI12	N-11	RR42	E-7		
CR04	G-10	RI15	N-10	RR43	E-8		
CR05	G-10	RI16	K-12	RR44	F-7		
CR06	G-11	RI17	K-10	RR45	F-8		
CR07	G-12	RI19	J-12	RR46	F-7		
CR10	G-12	RI20	J-12	RR47	E-8		
CR17	G-11	RI40	F-9	RR55	E-10		
CR18	G-11	RI41	L-11	RR58	E-7		
CR19	G-11	RJ07	J-9	RR60	E-10		
CR20	G-11	RJ12	H-10	RR61	I-10		
CR21	J-13	RJ13	H-10	RR62	E-13		
CR22	J-13	RJ15	J-8	RR66	G-12		
CR23	H-10	RJ18	I-9	RR69	G-9		
CR25	H-12	RP05	H-7	RR72	G-14		
CR26	H-11	RP07	G-6	RR73	G-14		
CR27	G-12	RP08	G-7	RR74	I-13		
CR28	G-12	RP10	I-7	RR79	F-14		
CR35	I-9	RP12	H-6	RR86	H-14		
CR36	J-7	RP13	H-6	RR87	G-14		
CR37	E-14	RP14	H-5	RR88	E-13		
CR39	E-14	RP15	I-6	RR89	F-13		
CV07	M-10	RP16	I-5	RS01	N-14		
CV08	M-9	RP21	L-3	RS02	O-13		
CV13	K-9	RP26	G-7	RS04	O-13		
CV15	J-8	RP28	I-5	RS05	O-14		
CV19	M-8	RP35	K-3	RS06	L-13		
CV37	L-9	RP37	G-5	RS07	M-14		
CV51	M-9	RP41	K-5	RS08	M-14		
JV04	P-7	RP48	K-3	RS10	P-14		
RC03	N-8	RP49	H-5	RS11	P-14		
RC04	N-7	RP59	G-6	RV24	N-9		

PARTS LIST

SEMICONDUCTORS					
(Select replacement for best results.)					
Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
DC01	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DF04	1N4001	198597	NTE116	ECG116	SK3313
	BA157	198590	NTE580	ECG580	-
DF05	-	198601	-	-	-
DI01	-	198591	-	-	-
DI03	-	198600	-	-	-
DK31	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DK32	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DK33(1)	-	-	-	-	-
DK34(1)	-	-	-	-	-
DK35(1)	-	-	-	-	-
DK36(1)	-	-	-	-	-
DK37	1N4148	174576	NTE519	ECG519	SK3100
DK38(1)	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DP01	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DP02	-	198592	-	-	-
DP04	-	198601	-	-	-
DP05	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
# DP06	-	198593	-	-	-
DP07	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DP08	-	198590	NTE580	ECG580	-
DP10	BYT78	198594	-	-	-
DP11	-	210786	-	-	-
	-	198589	NTE519	ECG519	SK3100
DP12	-	198590	NTE580	ECG580	-
DP13	-	198596	-	-	-
DP14	-	198594	-	-	-
DP15, 16	1N4001	198597	NTE116	ECG116	SK3313
DP17	-	198598	-	-	-
DP18 Thru					
DP21	-	198590	NTE580	ECG580	-
# DP26 Thru					
# DP29	1N4004	198599	NTE116	ECG116	SK3312
	1N4006	209919	NTE125	ECG125	SK3032A
DP30	1N4001	198597	NTE116	ECG116	SK3313
# DP31	-	198590	NTE580	ECG580	-
DP32, 33	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DP35	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DP36	-	198590	NTE580	ECG580	-
# 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.
DP37	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DP40	-	198601	-	-	-
DP46	1N4148	174576	NTE519	ECG519	SK3100
	-	198601	-	-	-
	-	198589	NTE519	ECG519	SK3100
DP47	-	198602	-	-	-
DP51	1N4001	198597	NTE116	ECG116	SK3313
# DP53	-	198601	-	-	-
DR01, 02	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DR04, 05	-	198603	NTE5013T1	ECG5013T1	SK9969
DR06, 07	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DR09	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
DV52	1N4148	174576	NTE519	ECG519	SK3100
# DX01	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
# DX02	-	198774	NTE5019T1	ECG5019T1	SK9970
# DX03	1N4148	174576	NTE519	ECG519	SK3100
	-	198589	NTE519	ECG519	SK3100
IF01	LA7830	188086	NTE1773	ECG1773	SK9752
IK01	-	198606	-	-	-
IK01(2)	-	216094	-	-	-
IL01	M52303ASP	210543	-	-	-
IR01	ST6497B1	210646	-	-	-
IS01	TDA2006	198609	NTE1378	ECG1378	SK7706
TC01	BC548	198743	NTE123AP*	ECG123AP*	SK3854*
TF01	BC548	198743	NTE123AP*	ECG123AP*	SK3854*
TI02	BF370R	206017	-	-	-
TJ04	BC558B	198745	NTE159*	ECG159*	SK3466*
TM01(1)	-	-	-	-	-
TP01	BC548	198746	NTE123AP*	ECG123AP*	SK3854*
TP02	BC558	198747	NTE159*	ECG159*	SK3466*
TP03	BC548	198746	NTE123AP*	ECG123AP*	SK3854*
TP04	BC558B	198747	NTE159*	ECG159*	SK3466*
TP05	BC548	198746	NTE123AP*	ECG123AP*	SK3854*
TP06	BC368-25	210783	NTE397*	ECG397*	SK3528*
	BC968	198748	-	-	-
TP07	BC556	198749	NTE159*	ECG159*	SK3466*
# TP08	BC546	198750	NTE199*	ECG199*	SK3245*
TP09	BC368	198748	NTE297	ECG297	SK3449
TP10	S2000A3	198794	-	-	-
TP11	BF423	198751	NTE397*	ECG397*	SK3528*
TP12	-	198752	-	-	-
# For SAFETY use only equivalent replacement part.					
* Lead configuration may vary from original.					
(1) Used in some versions.					
(2) Chassis TX82TA					