

SAFETY PRECAUTIONS

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.

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

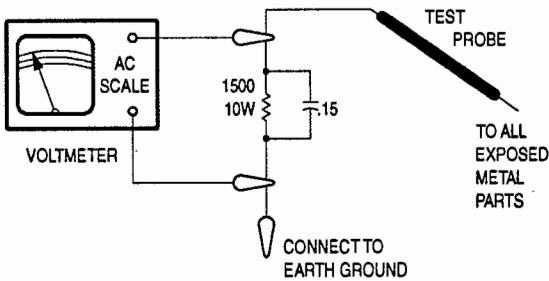
Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with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



94PF02687



PHOTOFACT® Technical Service Data

SET 3376

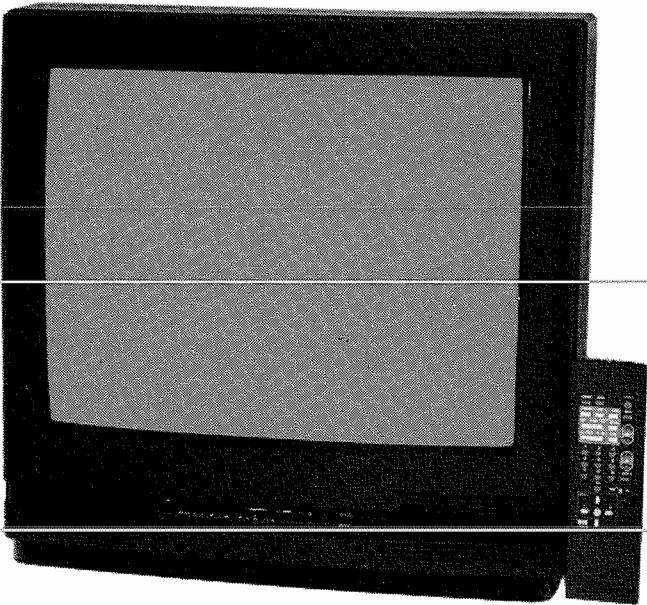
MODEL SRW1969421 (CHASSIS 19Y400)

SYLVANIA

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SYLVANIA
Model SRW1969421 (Chassis 19Y400)



Representative Model
Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

Coverage includes these additional models and chassis:

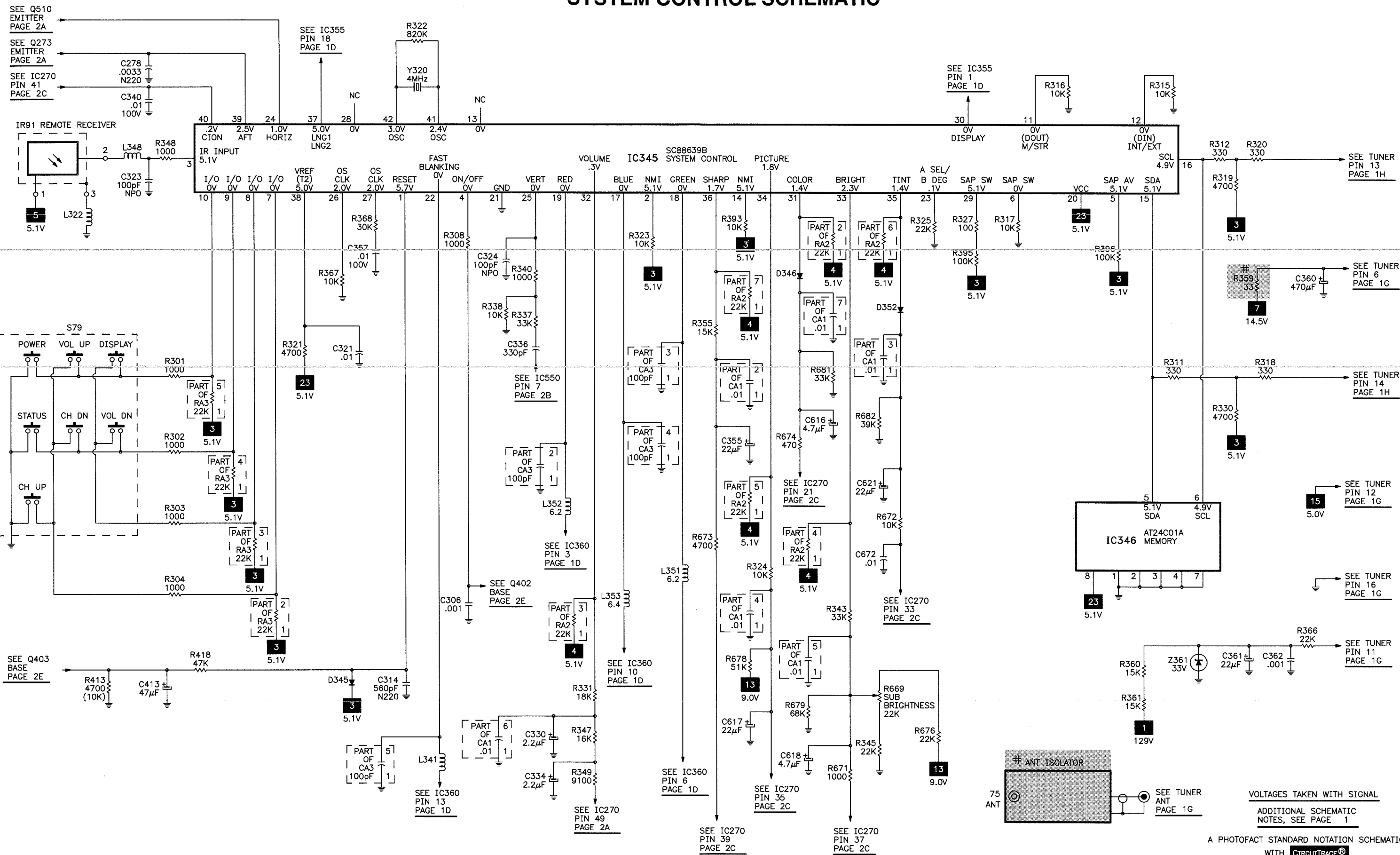
MODEL	CHASSIS
SRB1965401	19Y101
SRB1965421	19Y400
SRB1965422	19Y400
SRC1960401	19Y101
SRC1960421	19Y400
SRW1969401	19Y101



HOWARD W. SAMS & COMPANY
SEPTEMBER 1994 SET 3376

For Supplier Address,
See PHOTOFACT Annual Index

SYSTEM CONTROL SCHEMATIC



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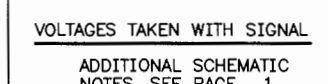
MODEL SRW1969421 (CHASSIS 19Y400)

G

H

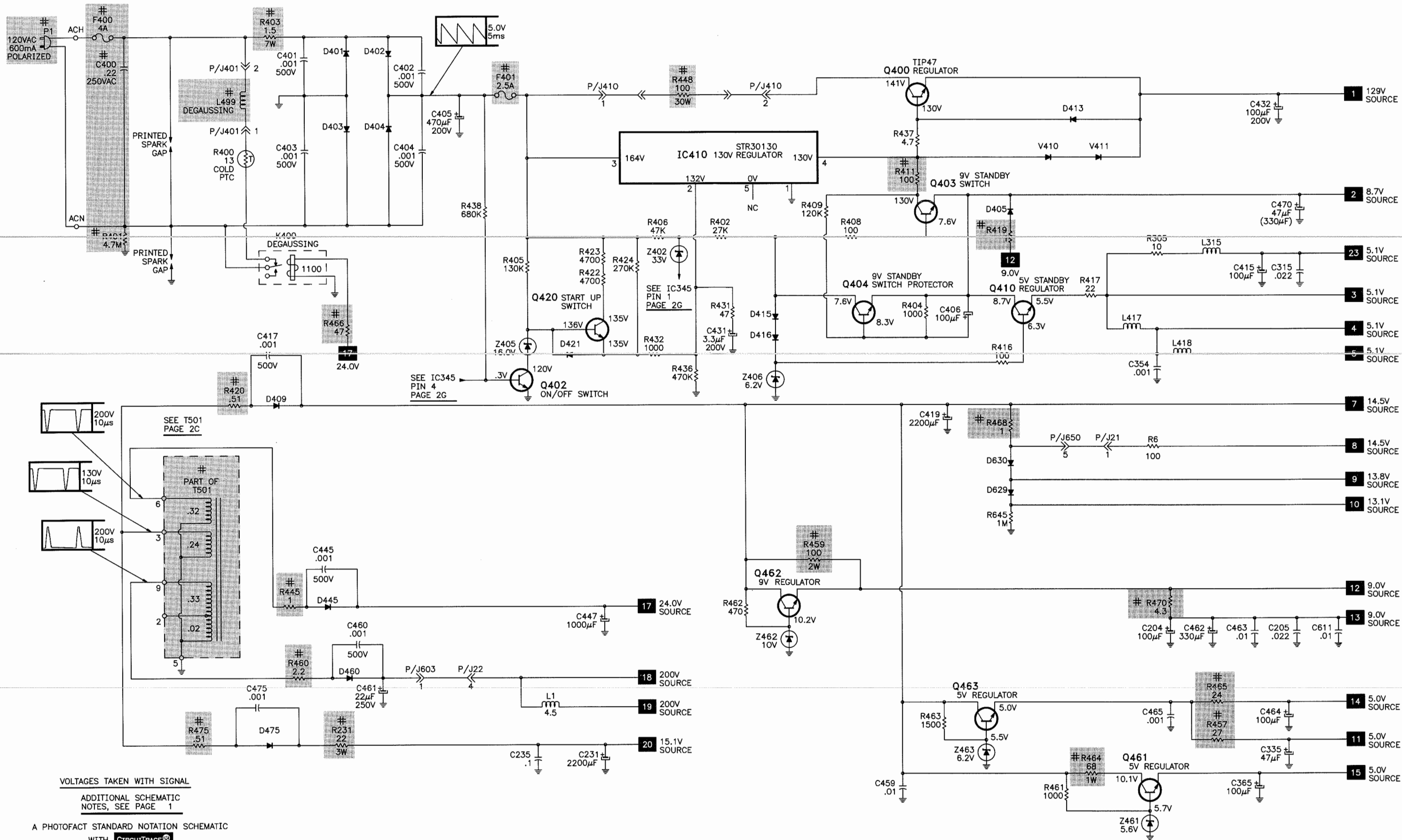
SYLVANIA

MODEL SRW1969421 (CHASSIS 19Y400



WITH **CIRCUITRACE®**
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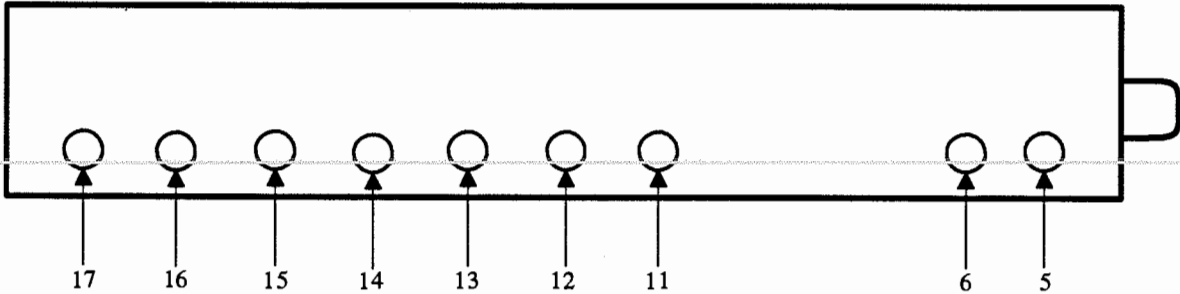
POWER SUPPLY SCHEMATIC



TUNER INFORMATION

TUNER VOLTAGE CHART							
Pin	VHF Low Band	VHF High Band	UHF Band	Pin	VHF Low Band	VHF High Band	UHF Band
5	5.3V	5.3V	8.7V	15	2.8V	2.8V	3.8V
6	12.0V	12.0V	12.0V	16	0V	0V	0V
11	.8V	1.5V	1.3V	17	0V	0V	0V
12	5.0V	5.0V	5.0V	NOTE: VHF Low Band voltages taken on channel 2. VHF High Band voltages taken on channel 7. UHF Band voltages taken on channel 14.			
13	5.0V	5.0V	5.0V				
14	5.0V	5.0V	5.0V				

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.

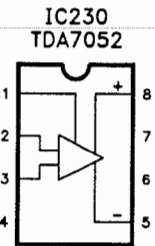
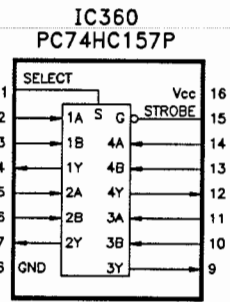
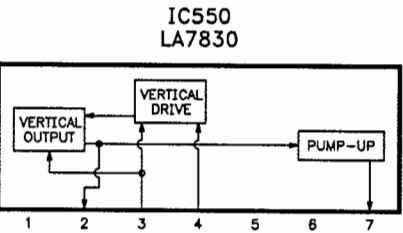
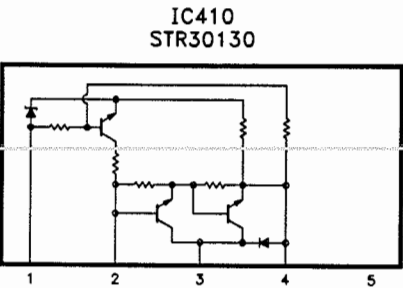
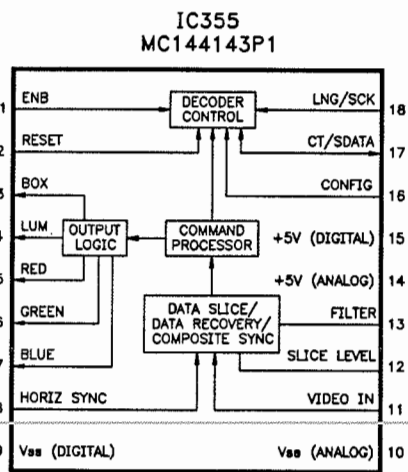
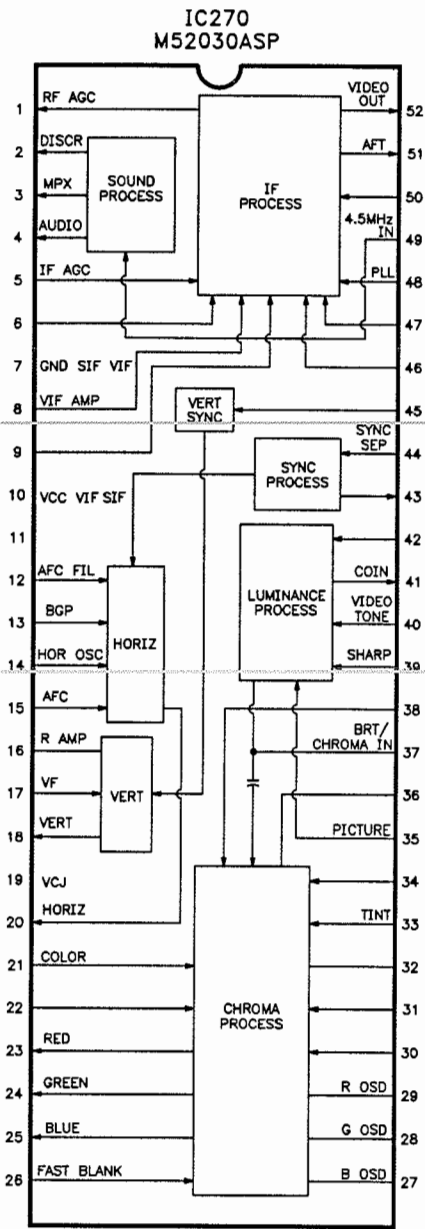
Resistors are 1/2W or less, 5% or greater unless noted.

Value in () used in some versions.

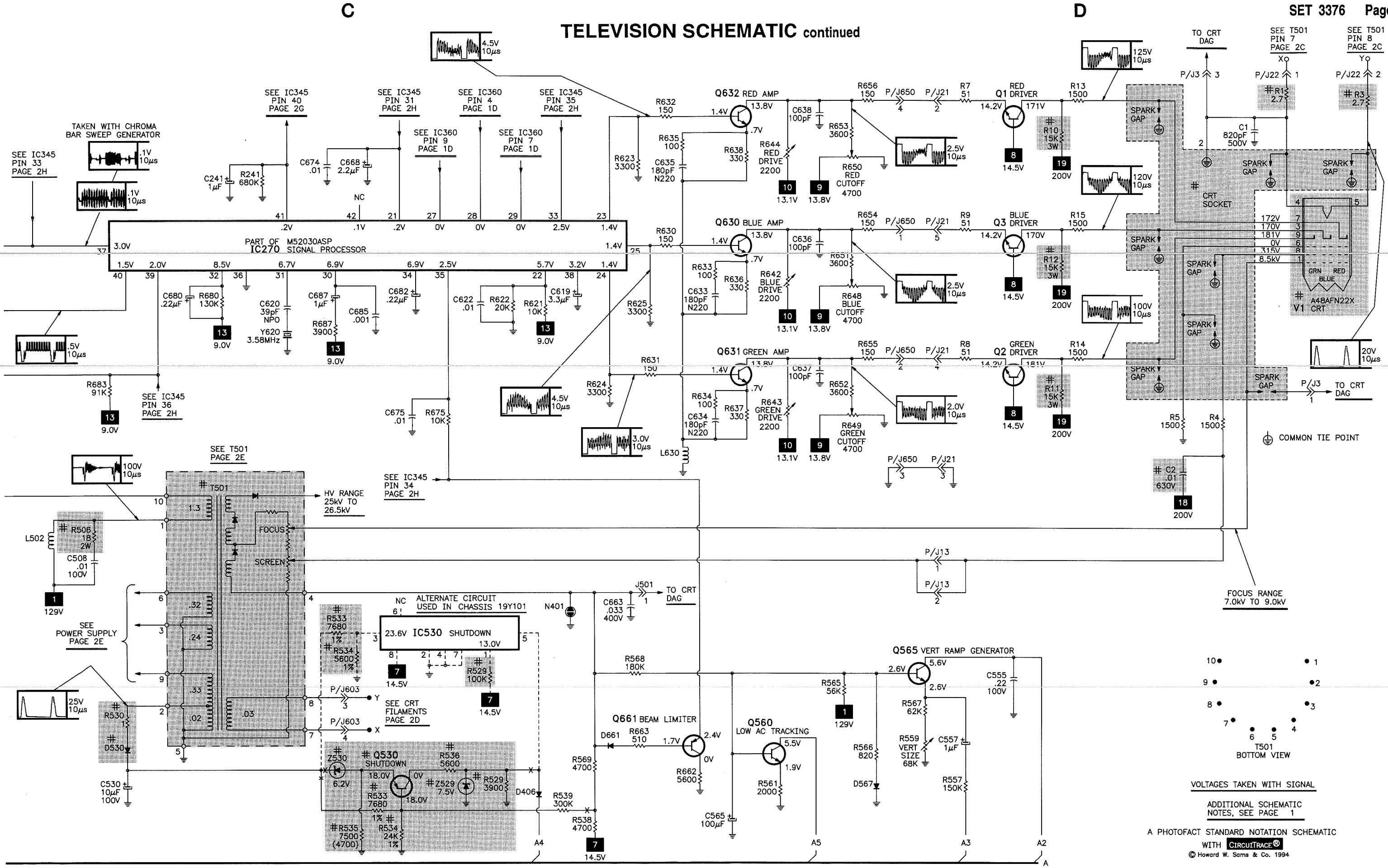
Measurements with switching as shown, unless noted.

Rated voltage shown on zener diodes.

IC FUNCTIONS



TELEVISION SCHEMATIC continued



VOLTAGES TAKEN WITH SIGNAL

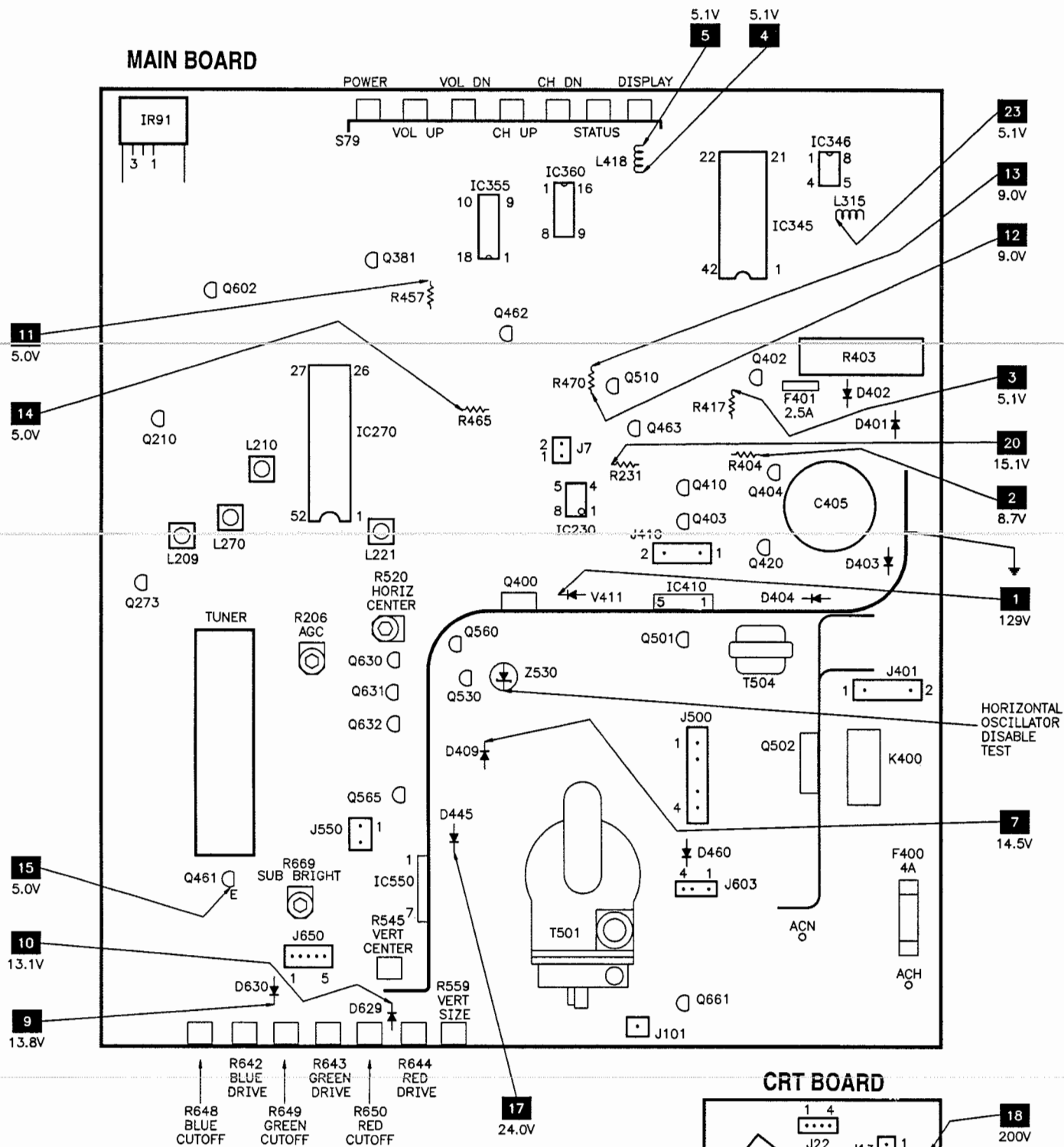
ADDITIONAL SCHEMATIC NOTES, SEE PAGE 1

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITRACE

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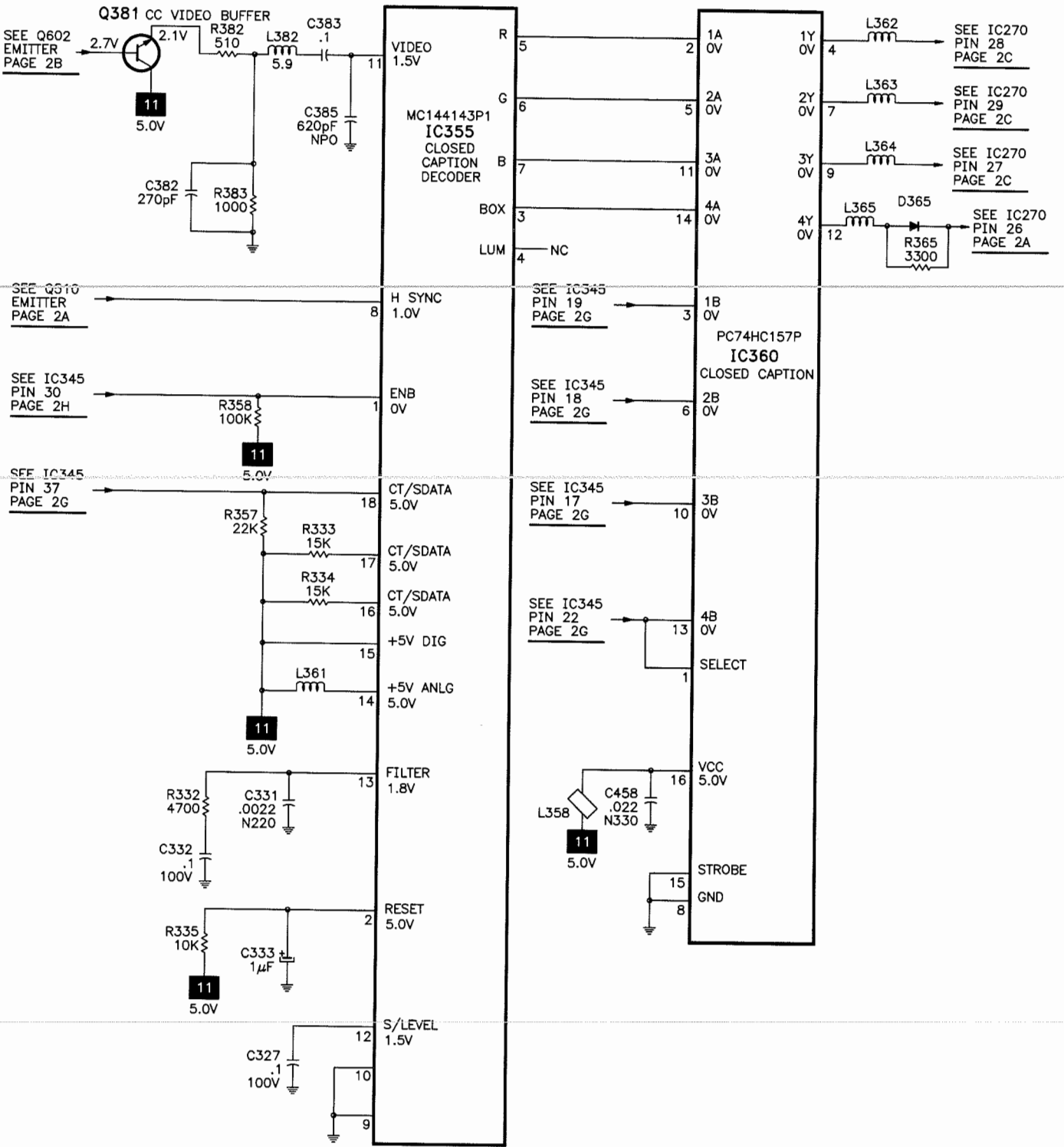
PLACEMENT CHART



HORIZONTAL OSCILLATOR DISABLE TEST

Apply DC voltage from a variable DC power supply to the cathode of Z530, low side to ground. Gradually increase the power supply voltage to about 31.0V, the receiver should lose horizontal sync. If receiver does not lose horizontal sync, the X-ray protect circuit needs repair.

D CLOSED CAPTION SCHEMATIC



VOLTAGES TAKEN WITH SIGNAL

ADDITIONAL SCHEMATIC NOTES, SEE PAGE 1

A PHOTOFAC STANDARD NOTATION SCHEMATIC

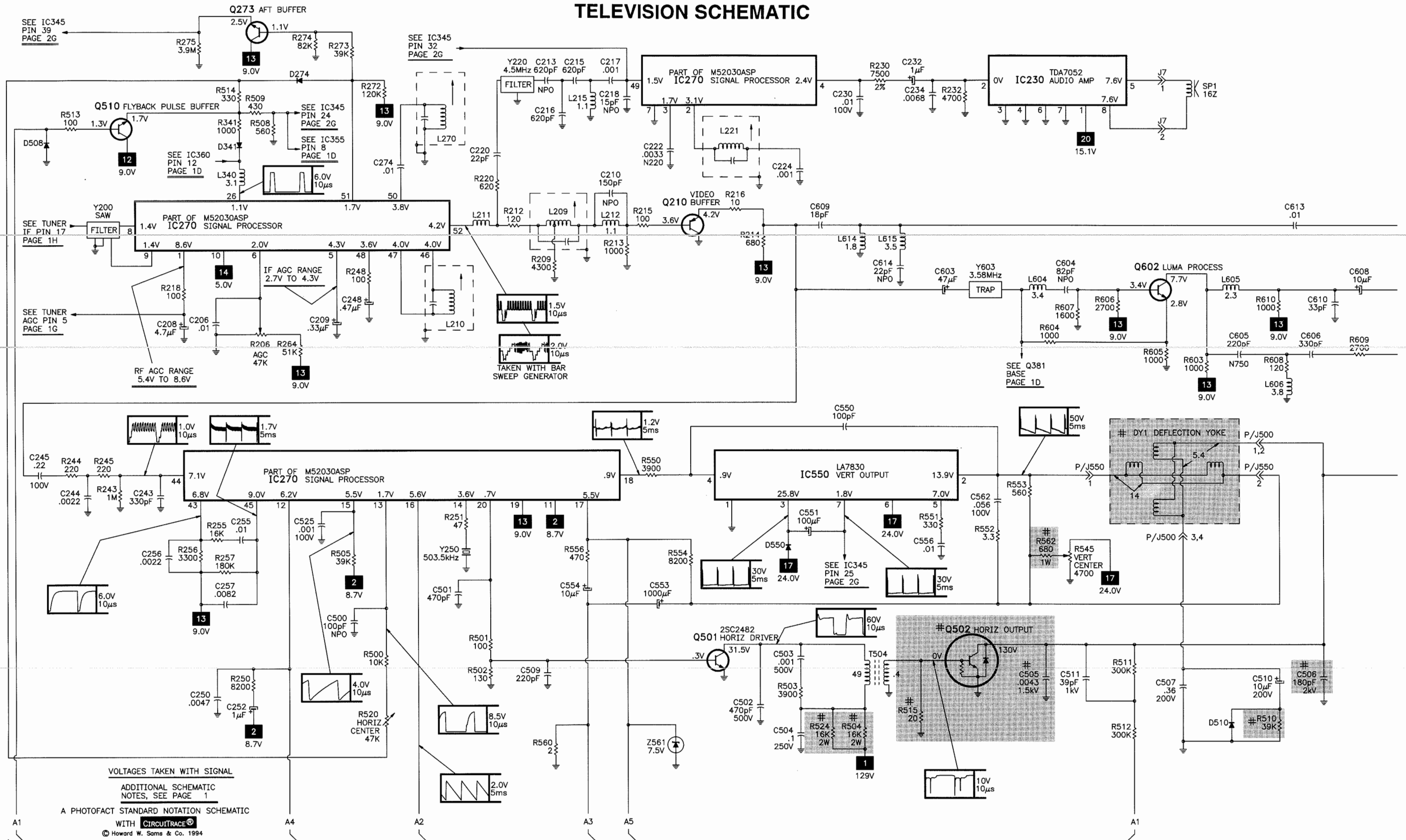
WITH CIRCUITACE

© Howard W. Sams & Co. 1994

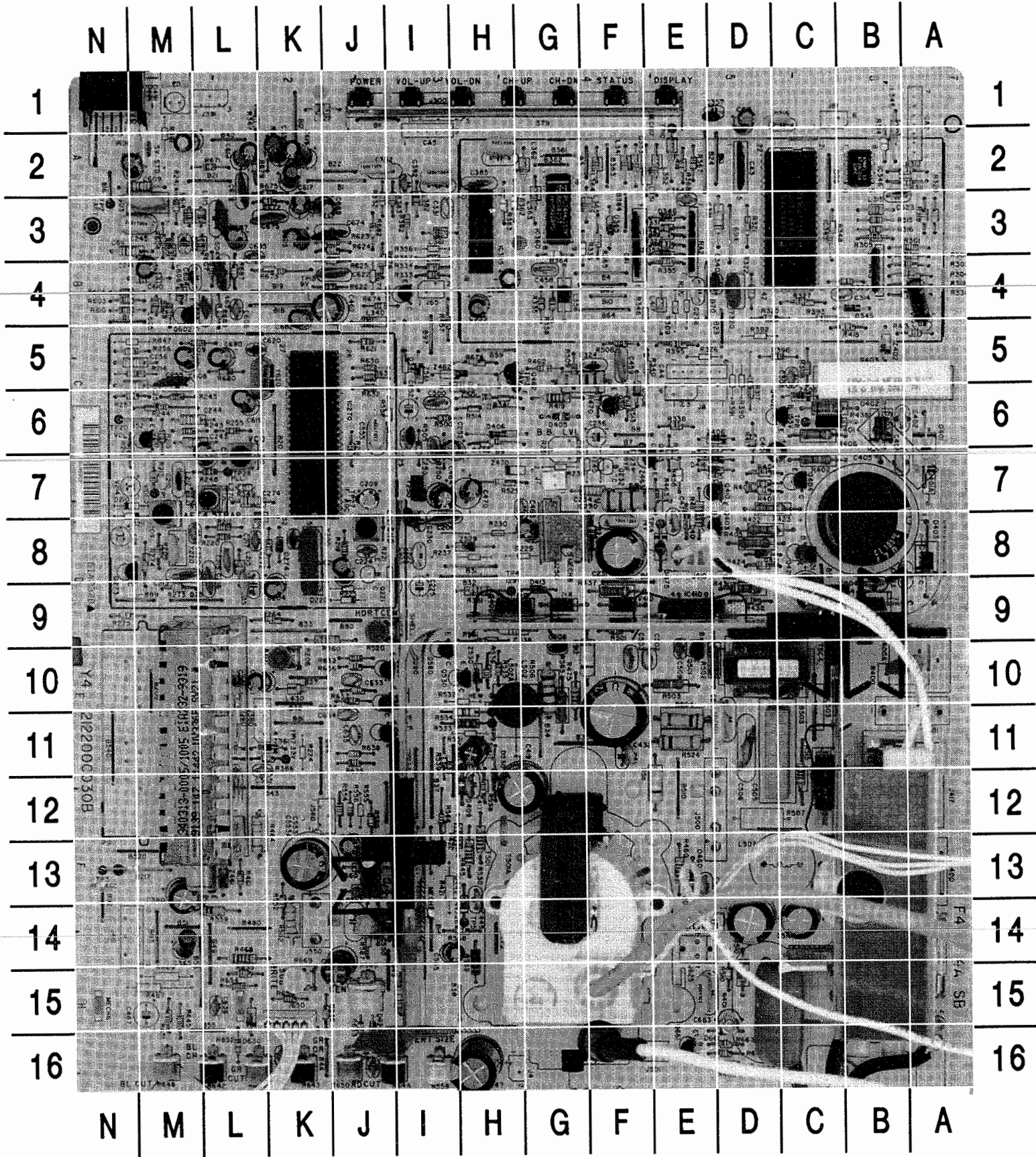
A

TELEVISION SCHEMATIC

B



MAIN BOARD



MAIN BOARD, GRIDTRACE LOCATION GUIDE

C204	K-9	C459	F-5	D401	A-7	L630	K-10	R330	A-4	R504	E-11	R656	K-15
C205	L-9	C460	E-13	D402	B-6	N401	D-15	R331	E-3	R505	I-6	R662	D-16
C206	I-8	C461	D-14	D403	A-8	Q210	M-6	R332	J-3	R506	G-10	R663	D-16
C208	J-8	C462	J-4	D404	B-9	Q273	N-8	R333	I-4	R508	F-5	R669	K-15
C209	J-7	C463	L-4	D405	G-6	Q381	I-4	R334	I-4	R509	G-5	R671	L-2
C210	M-7	C464	I-7	D406	H-6	Q400	H-9	R335	G-4	R510	D-15	R672	K-3
C213	M-8	C465	G-7	D409	H-12	Q402	C-6	R337	E-7	R511	E-12	R673	K-4
C215	L-8	C470	H-7	D413	G-9	Q403	D-8	R338	E-6	R512	F-10	R674	J-4
C216	L-9	C475	E-8	D415	D-7	Q404	C-7	R340	E-5	R513	F-6	R675	K-2
C217	L-8	C500	I-6	D416	D-7	Q410	D-7	R341	H-6	R514	H-6	R676	H-5
C218	K-8	C501	H-5	D421	D-8	Q420	C-8	R343	E-3	R515	C-12	R678	J-3
C220	M-8	C502	F-10	D445	H-14	Q461	M-13	R345	K-15	R520	J-9	R679	L-2
C222	I-8	C503	F-10	D460	E-13	Q462	H-5	R347	L-1	R524	E-11	R680	L-5
C224	J-8	C504	D-11	D475	E-8	Q463	E-7	R348	C-3	R529	H-7	R681	K-2
C230	I-8	C505	D-12	D508	F-6	Q501	E-10	R349	L-7	R530	H-13	R682	J-3
C231	F-8	C506	D-11	D510	D-15	Q502	C-12	R355	E-4	R533	H-11	R683	L-4
C232	G-8	C507	D-16	D530	H-12	Q510	F-6	R357	I-3	R534	H-11	R687	L-4
C234	F-7	C508	G-10	D550	J-14	Q530	H-10	R358	G-4	R535	H-10	RA2	E-3
C235	F-8	C509	E-10	D567	I-13	Q560	I-10	R359	L-14	R536	H-10	RA3	B-4
C241	M-4	C510	C-14	D629	J-15	Q565	J-13	R360	J-9	R538	H-12	S79	G-1
C243	M-6	C511	F-11	D630	L-15	Q602	M-4	R361	H-9	R539	I-11	T501	G-14
C244	M-6	C525	I-6	D661	D-16	Q630	J-10	R365	F-3	R545	J-15	T504	D-10
C245	M-3	C530	H-11	F400	A-14	Q631	J-10	R366	L-11	R550	J-12	V410	F-9
C248	L-7	C550	J-14	F401	C-6	Q632	J-11	R367	E-2	R551	I-14	V411	G-9
C250	I-6	C551	J-15	IC230	G-8	Q661	E-16	R368	E-2	R552	K-14	Y200	K-8
C252	H-6	C553	K-13	IC270	J-7	R206	K-10	R382	I-3	R553	J-13	Y220	M-8
C255	M-5	C554	J-13	IC345	C-4	R209	M-8	R383	I-3	R554	J-12	Y250	I-7
C256	N-5	C555	J-6	IC346	B-2	R212	L-8	R393	C-4	R556	J-12	Y320	D-4
C257	N-5	C556	I-15	IC355	H-4	R213	M-7	R395	E-6	R557	J-13	Y603	M-3
C274	L-7	C557	J-13	IC360	G-2	R214	N-5	R396	C-7	R559	I-16	Y620	L-5
C278	E-4	C562	J-14	IC410	E-9	R215	M-6	R400	A-10	R560	J-13	Z361	L-11
C306	C-5	C565	I-14	IC550	I-14	R216	N-6	R401	C-15	R561	H-9	Z402	B-5
C314	B-4	C603	M-2	IR91	N-1	R218	J-8	R402	C-7	R562	K-14	Z405	C-6
C315	C-1	C604	M-4	J7	G-7	R220	L-8	R403	B-5	R565	G-11	Z406	D-6
C321	D-3	C605	L-4	J401	B-11	R230	H-8	R404	D-7	R566	I-12	Z461	L-13
C323	B-3	C606	L-4	J410	E-8	R231	F-7	R405	D-8	R567	J-14	Z462	H-5
C324	F-5	C608	M-5	J500	D-12	R232	F-8	R406	C-6	R568	H-14	Z463	F-7
C327	H-2	C609	M-2	J501	E-16	R241	M-3	R408	D-7	R569	H-15	Z529	H-8
C330	K-2	C610	M-4	J550	K-14	R243	M-6	R409	D-7	R603	N-4	Z530	H-10
C331	I-3	C611	M-3	J603	E-14	R244	M-6	R411	E-8	R604	M-3	Z561	I-5
C332	J-2	C613	L-3	J650	K-15	R245	M-6	R413	A-5	R605	M-3		
C333	H-4	C614	M-3	K400	B-12	R248	L-7	R416	D-7	R606	N-4		
C334	M-2	C616	K-2	L209	M-7	R250	I-7	R417	D-6	R607	L-4		
C335	H-4	C617	K-2	L210	L-7	R251	J-6	R418	B-5	R608	M-4		
C336	H-9	C618	L-2	L211	L-8	R255	L-6	R419	G-6	R609	L-5		
C340	D-4	C619	L-6	L212	M-7	R256	N-5	R420	H-13	R610	N-4		
C354	E-3	C620	L-5	L215	L-8	R257	N-6	R422	D-8	R621	J-5		
C355	K-3	C621	K-3	L221	J-8	R264	K-9	R423	D-7	R622	J-4		
C357	A-1	C622	J-4	L270	L-7	R272	K-8	R424	D-8	R623	J-3		
C360	M-13	C633	J-10	L315	B-3	R273	M-9	R431	D-9	R624	J-3		
C361	L-10	C634	J-11	L322	K-1	R274	M-8	R432	D-9	R625	J-4		
C362	L-11	C635	J-11	L340	J-4	R275	N-9	R436	D-9	R630	J-5		
C365	M-14	C636	L-15	L341	F-2	R301	A-3	R437	F-9	R631	J-5		
C382	I-2	C637	K-16	L348	B-1	R302	A-4	R438	C-6	R632	J-5		
C383	I-2	C638	J-16	L351	F-2	R303	A-4	R445	H-13	R633	J-10		
C385	H-2	C663	E-15	L352	E-2	R304	A-4	R448	A-13	R634	J-10		
C400	B-15	C668	J-3	L353	F-2	R305	B-3	R457	I-4	R635	J-11		
C401	B-7	C672	L-2	L358	G-4	R308	C-5	R459	F-5	R636	J-10		
C402	A-6	C674	J-3	L361	I-3	R311	A-2	R460	E-13	R637	J-10		
C403	B-9	C675	K-3	L362	G-2	R312	A-2	R461	L-13	R638	J-11		
C404	B-9	C680	L-5	L363	G-2	R315	B-3	R462	G-5	R642	L-16		
C405	B-8	C682	K-4	L364	F-2	R316	B-3	R463	E-7	R643	K-16		
C406	C-7	C685	L-3	L365	F-3	R317	D-5	R464	L-12	R644	J-16		
C413	A-4	C687	L-3	L382	I-3	R318	A-3	R465	H-6	R645	M-15		
C415	D-1	CA1	F-4	L417	E-4	R319	A-4	R466	D-16	R648	M-16		
C417	H-12	CA3	D-2	L418	E-2	R320	A-3	R468	L-14	R649	L-16		
C419	H-12	D274	K-8	L502	H-10	R321	D-3	R470	F-6	R650	J-16		
C431	C-6	D341	I-5	L604	L-3	R322	D-4	R475	G-10	R651	M-15		
C432	F-11	D345	B-4	L605	M-4	R323	B-4	R500	I-6	R652	L-16		
C445	H-13	D346	E-3	L606	M-4	R324	E-3	R501	F-9	R653	J-15		
C447	H-16	D352	E-3	L614	M-3	R325	D-4	R502	D-10	R654	L-15		
C458	G-4	D365	F-3	L615	L-3	R327	C-4	R503	E-10	R655	L-15		

PARTS LIST

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.
D274	-	4835 130 37048	NTE519	ECG519	SK3100
D341, 45, 46	-	4835 130 37048	NTE519	ECG519	SK3100
D352, 65	-	4835 130 37048	NTE519	ECG519	SK3100
D401 Thru					
D404	-	4822 130 41275	NTE125	ECG125	SK3081
D405	-	4835 130 37094	NTE580	ECG580	SK5036
D406	-	4835 130 37048	NTE519	ECG519	SK3100
D409	-	4835 130 37094	NTE580	ECG580	SK5036
D413, 15, 16	-	4835 130 37048	NTE519	ECG519	SK3100
D421	-	4835 130 37048	NTE519	ECG519	SK3100
D445 (1)	-	4835 130 37052	NTE580	ECG580	SK5036
D445, 60	-	4835 130 37094	NTE580	ECG580	SK5036
D475	-	4835 130 37052	NTE580	ECG580	SK5036
D508	-	4835 130 37048	NTE519	ECG519	SK3100
D510	-	4835 130 37052	NTE580	ECG580	SK5036
# D530	-	4835 130 37048	NTE519	ECG519	SK3100
D550	-	4835 130 37094	NTE580	ECG580	SK5036
D567	-	4835 130 37048	NTE519	ECG519	SK3100
D629	-	4835 130 37048	NTE519	ECG519	SK3100
D630	-	4835 130 37058	NTE587	ECG587	SK9937
D661	-	4835 130 37053	NTE552	ECG552	SK9000
IC230	TDA7052	4835 209 47005	NTE7051	ECG7051	-
IC270	M52030ASP	4835 209 88106	-	-	-
IC345	SC88639B	4835 209 88109	-	-	-
IC346	AT24C01A	4835 209 88108	-	-	-
IC355	MC144143P1	4835 209 88025	-	-	-
IC360	PC74HC157P	4835 209 87904	-	-	-
IC410	STR30130	4835 209 47056	NTE1777	ECG1777	SK9870
IC530 (1)	-	4835 209 87838	-	-	-
IC550	LA7830	4835 209 87069	NTE1773	ECG1773	SK9752
Q1 Thru					
Q3	-	4835 130 47059	NTE399	ECG399	SK9352
Q210	-	4835 130 47126	NTE159*	ECG159*	SK3466*
Q273	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q381	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q400	TIP47	4835 130 47072	NTE198	ECG198	SK3220
Q402	-	4835 130 47059	NTE399	ECG399	SK9352
Q403	-	4835 130 47892	-	-	-
Q404	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q410	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Q420	-	4835 130 47059	NTE399	ECG399	SK9352
Q461	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Q462	-	4835 130 47059	NTE399	ECG399	SK9352
Q463	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Q501	2SC2482	4835 130 47073	NTE399	ECG399	SK9352
# Q502	-	4835 130 47897	-	-	-
Q510	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
# Q530	-	4835 130 47126	NTE159*	ECG159*	SK3466*
Q560, 65	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
# For SAFETY use only equivalent replacement part.					
* Lead configuration may vary from original.					
(1) Used in chassis 19Y101.					

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.
Q602	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q630 Thru					
Q632	-	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q661	-	4835 130 47126	NTE159*	ECG159*	SK3466*
V410, 11	-	4822 130 41275	NTE125	ECG125	SK3081
Z361	-	4835 130 37502	NTE147A	ECG147A	-
Z402	-	4835 130 37003	-	-	-
Z405	-	4835 130 37501	NTE5075A	ECG5075A	-
Z406	-	4835 130 37121	NTE5013T1	ECG5013T1	SK9969
Z461	-	4835 130 37068	NTE5011T1	ECG5011T1	SK9968
Z462	-	4835 130 37203	NTE5019T1	ECG5019T1	-
Z463	-	4835 130 37121	NTE5013T1	ECG5013T1	SK9969
# Z529	-	4835 130 37016	-	-	-
# Z530	-	4835 130 37121	NTE5013T1	ECG5013T1	SK9969
Z561	-	4835 130 37016	-	-	-
# For SAFETY use only equivalent replacement part.					
* Lead configuration may vary from original.					

CABINET PARTS	
Item	Mfr. Part No.
MODELS SRB1965401 / 421 / 422	
Button Assembly	4835 219 47202
Cabinet Back	4835 432 97263
Cabinet Front	4835 430 27075
IR Lens	4835 381 17005
MODELS SRC1960401 / 421	
Button Assembly	4835 410 27198
Cabinet Back	4835 432 97423
Cabinet Front	4835 430 27094
IR Lens	4835 381 17005
MODELS SRW1969401 / 421	
Button Assembly	4835 219 47209
Cabinet Back	4835 432 97445
Cabinet Front	4835 430 27092
IR Lens	4835 381 17005

COILS & TRANSFORMERS		
Item No.	Function/Rating	Mfr. Part No.
# DY1	Yoke 90 °	4835 150 17023
	Horiz 3mH	
	Vert 28mH	
L1	100µH	4835 157 57141
L209	4.5MHz	4835 157 57113
L210	45.75MHz	4835 157 57485
L211	2.2µH	4835 157 67005
L212	4.7µH	4835 157 57059
L215	3.9µH	4835 157 67007
L221	4.5MHz	4835 157 57113
L270	45.8MHz	4835 157 57608
L315, 22	2.7µH	4835 157 67006
L340	100µH	4835 157 57141
L341, 48	2.7µH	4835 157 67006
L351 Thru		
L353	2.7µH	4835 157 67006
L358	Ferrite Bead	4835 526 17003
L361	1.5µH	4835 157 57819
L362 Thru		
L365	2.7µH	4835 157 67006
L382	68µH	4835 157 57821
L417, 18	2.7µH	4835 157 67006
# L499	Degaussing	4835 157 97059
# L499 (2)	Degaussing	4835 157 97046
L502	Suppression	4835 152 27047
L604	27µH	4835 157 67019
L605	22µH	4835 157 67018
L606	33µH	4835 157 67025
L614	15µH	4835 157 57057
L615	47µH	4835 150 57045
L630	.47µH	4835 157 67002
# T501 (1)	Horizontal Output	4835 140 67099
T504	Horizontal Driver	4835 142 47021
# For SAFETY use only equivalent replacement part.		
(1) Focus and screen controls are part of T501.		
(2) Used in models SRB1965401, SRB1965421, and SRB1965422.		

TEST EQUIPMENT

IMPORTANT PARTS INFORMATION

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

- 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) | ▪ PTS Electronics Corporation (PTS) |
| ▪ NTE Electronics, Inc. (NTE) | ▪ Sencore, Inc. |
| ▪ Philips ECG Company (ECG) | ▪ Thomson Consumer Electronics, Inc. (SK, TCE) |

SERVICE TIPS

1. If receiver will not turn off or turns on and off rapidly, resistor network RA3 has been installed backward.
2. Microprocessor can lockup if all channels have been removed from "Favorite Station Memory."
3. Replace IC345 if the following is observed:
 - If customer can accidentally change "Reset" values in the Service Mode.
 - When receiver is turned on in the VCR/AUX mode and the picture is black with no audio but channel number appears.



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

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MODEL SRW1969421 (CHASSIS 19Y400)

PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R1, 3	2.7 5% 1/2W	4835 116 57051	HW2D7
# R10 Thru			
# R12	15K 5% 3W	4835 116 67018	3W315
R206	47K AGC	4835 100 17017	-
R206 (1)	47K AGC	4835 100 17042	-
R230	7500 2% 1/8W	4835 110 67094	EW275
# R231	22 5% 3W	4835 116 67072	3W022
# R359	33 5% 1/3W	4835 116 57159	-
R400	13 Cold PTC	4835 116 47001	-
# R401	4.7M 5% 1/2W	4835 116 57009	HW547
# R403	1.5 10% 7W	4835 112 47007	-
# R411	100 5% 1/3W	4835 116 87002	-
# R419	1 5% 1/3W	4822 111 30483	-
# R420	.51 5% 1/2W	4835 116 67001	HWD51
# R445	1 5% 1/3W	4822 111 30483	-
# R448	100 5% 30W Wirewound	4835 112 37019	-
# R457	27 5% 1/8W	4835 116 57472	EW027
# R459	100 5% 2W	4835 116 57132	2W110
# R460	2.2 5% 1/3W	4822 111 30492	-
# R464	68 5% 1W	4835 116 57279	1W068
# R465	24 5% 1/8W	4835 116 57493	EW024
# R466	47 5% 1/3W	4835 116 57069	-
# R468	1 5% 1/3W	4822 111 30483	-
# R470	4.3 5% 1/8W	4835 116 57497	EW4D3
# R475	.51 5% 1/2W	4835 116 67001	HWD51
# R504	16K 5% 2W	4835 116 67087	2W316
# R506	18 5% 2W	4835 116 67017	2W018
# R510	39K 5% 1/4W	4835 116 57475	QW339
# R515	20 5% 1/3W	4835 116 57065	-
R520	47K Horizontal Centering	4835 100 17017	-
R520 (1)	47K Horizontal Centering	4835 100 17042	-
# R524	16K 5% 2W	4835 116 67087	2W316
# R529	3900 5% 1/8W	4835 116 57425	EW239
# R529 (1)	100K 5% 1/8W	4835 116 57395	EW410
# R530	1 5% 1/3W	4822 111 30483	-
# R533	7680 1% 1/4W	4835 116 57487	-
# R534	24K 1% 1/4W	4835 116 57273	-
# R534 (1)	5600 1% 1/4W	4835 116 57485	-
# R535	7500 5% 1/8W	-	EW275
	4700 5% 1/8W	4835 116 57427	EW247
# R536	5600 5% 1/8W	4835 116 57434	EW256
R545	4700 Vertical Centering	4835 100 17054	-
R559	68K Vertical Size	4835 100 17052	-
# R562	680 5% 1W	4835 116 67144	1W168

For SAFETY use only equivalent replacement part.
(1) Used in chassis 19Y101.

CONTROLS & RESISTORS continued

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
R642	2200 Blue Drive	4835 100 17021	-
R643	2200 Green Drive	4835 100 17021	-
R644	2200 Red Drive	4835 100 17021	-
R648	4700 Blue Cutoff	4835 100 17022	-
R649	4700 Green Cutoff	4835 100 17022	-
R650	4700 Red Cutoff	4835 100 17022	-
R669	22K Sub Brightness	4835 100 17045	-
R669 (1)	22K Sub Brightness	4835 100 17038	-
RA2	22K x 6 Network	4835 111 97036	-
RA3	22K x 4 Network	4835 111 97035	-

(1) Used in chassis 19Y101.

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
# C2	.01 630V	4835 121 47335
C210	150pF 5% 50V NPO	4835 122 47042
C213	620pF 5% 50V NPO	4835 122 47368
C218	15pF 5% 50V NPO	4835 122 47085
C222	.0033 10% 50V N220	4835 122 47039
C278	.0033 10% 50V N220	4835 122 47039
C314	560pF 10% 50V N220	4835 122 47206
C323, 24	100pF 5% 50V NPO	4835 122 47014
C331	.0022 N220	4835 122 47007
C385	620pF 10% 50V NPO	4835 122 47368
# C400	.22 250VAC	4835 122 97047
C458	.022 N330	4835 122 17027
C500	100pF 5% 50V NPO	4835 122 47014
# C505	.0043 1.5kV	4835 121 47421
# C506	180pF 2kV	4835 122 57007
C511	39pF 5% 1kV	4835 122 47224
C604	82pF 5% 50V NPO	4835 122 47024
C605	220pF 5% 50V N750	4835 122 47025
C614	22pF 5% 50V NPO	4835 122 47017
C620	39pF 5% 50V NPO	4835 122 47021
C633 Thru		
C635	180pF 10% 50V N220	4835 122 47369
CA1	.01 x 6 Network	4835 122 97003
CA3	100pF x 4 Network	4835 122 97076

For SAFETY use only equivalent replacement part.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F400	Fuse	4835 253 97095	4Amp, 125VAC, Slow Blow
# F401	Fuse	4835 253 97031	2.5Amp, 125VAC
IR91	Remote	4835 210 27003	Receiver
K400	Relay	4835 277 27016	Degaussing
N401	Neon Bulb	4835 134 27001	-
# P1	Line Cord	4835 321 17006	AC, Polarized
SP1	Speaker	4835 240 37002	3", 16 Ohms
SP1	Speaker (2)	4835 240 37006	2" X 3 1/2", 16 Ohms
S79	Switch Assembly	4835 276 57004	Power, Display, Volume Up, Volume Down, Channel Up, Channel Down, Status.
# V1	CRT	4835 131 27058	A48AFN22X
Y200	Filter	4835 153 97022	SAW
Y220	Filter	4835 158 97009	4.5MHz
Y220	Filter (3)	4835 157 57341	4.5MHz
Y250	Resonator	4835 157 57145	503.5kHz
Y320	Resonator	4835 157 57822	4MHz
Y603	Trap	4835 154 97025	3.58MHz
Y620	Crystal	4835 242 77022	3.58MHz
Y620	Crystal (3)	4835 242 77179	3.58MHz
#	Antenna Isolator	4835 219 47173	75 Ohms
#	CRT Socket	4835 265 97331	-
#	Magnet	4835 150 27007	Convergence & Purity
	PC Board (1)	-	CRT, 00APT110
	PC Board (1)	-	Main, 00EMY407
	PC Board (1)(3)	-	Main, 00EMY107
	Remote	4835 219 17467	Transmitter
	Remote (2)	4835 219 17473	Transmitter
	Remote (4)	4835 219 17444	Transmitter
	Tuner (1)	4835 210 47058	00340313, UHF/VHF, UV936E
	Tuner (1) (3)	4835 210 47055	00340313, UHF/VHF, UV936E
	Wedge	4835 535 27001	3 used

For SAFETY use only equivalent replacement part.
(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.
(2) Used with models SRC1960401 and SRC1960421.
(3) Used in chassis 19Y101.
(4) Used in models SRB1965401, SRB1965421, and SRB1965422.

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MODEL SRW1969421 (CHASSIS 19Y400)