

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 ground 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.

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 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.

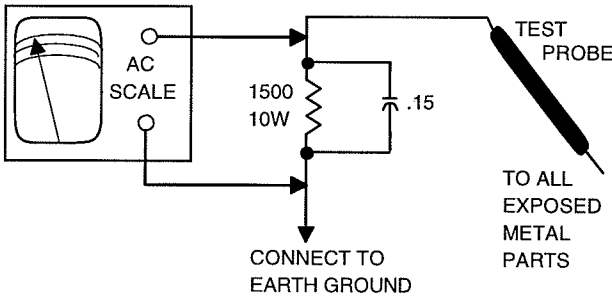
SAFETY CHECKS -- FIRE AND SHOCK HAZARD

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.



HIGH VOLTAGE SHUTDOWN TEST

Set all customer controls for normal picture. Check for 10.2V ±.5V at TP653. Using an external power supply, apply 13.1V to TP653. The receiver should shut down. If the receiver fails to shut down, the high voltage shutdown circuit requires repair. To return to normal operation, remove external power supply, and momentarily place a short between TP651 and TP652. Restore AC power and check receiver for proper operation.

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by SAMS Technical Publishing as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to SAMS Technical Publishing 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.

© 2001 SAMS Technical Publishing

5436 West 78th Street
Indianapolis, IN 46268-4149

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

066329



TVCR-329

TVCRfacts™ Technical Service Data TVCR-329

TVCR-329

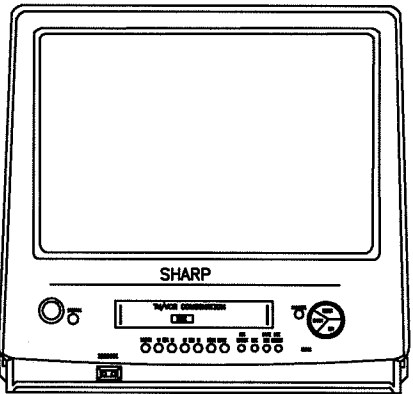
MODELS 25VT-H6Q, 25VT-H80 (CHASSIS VN-61)

SHARP

INDEX

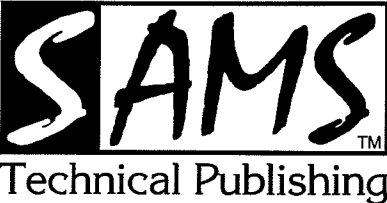
Exploded Views 1
High Voltage Shutdown Test 1
IC Functions 4
Important Parts Information 4
Mechanical Alignment 1
Miscellaneous Adjustments 3
Parts List
Electrical 4
Mechanical 1
Placement Chart 4
Safety Precautions 1
Schematic Component Location 2
Schematic Notes 2
Schematics
Power Supply 2
Servo 3
System Control 2
Television 2
VCR Y/C, Audio 3
Test Equipment 1
Tuner Information 1

SHARP
Models 25VT-H6Q, 25VT-H80 (Chassis VN-61)



Essential coverage
for servicing a TV/VCR...

- Schematics
- Exploded Views
- Interconnect Diagram
- Mechanical Alignment
- Electrical Parts List
- Mechanical Parts List
- Placement Chart
- Waveforms

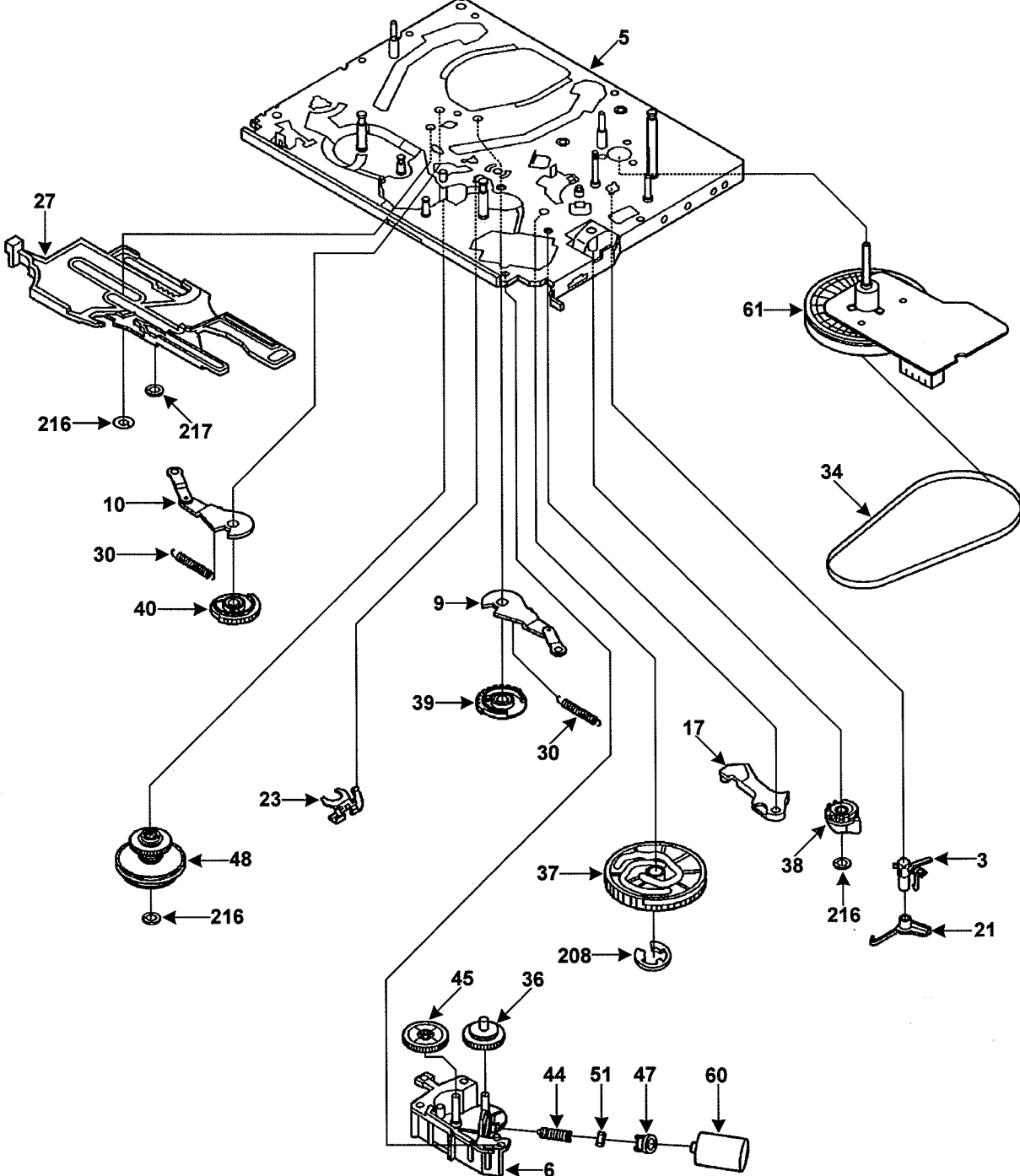
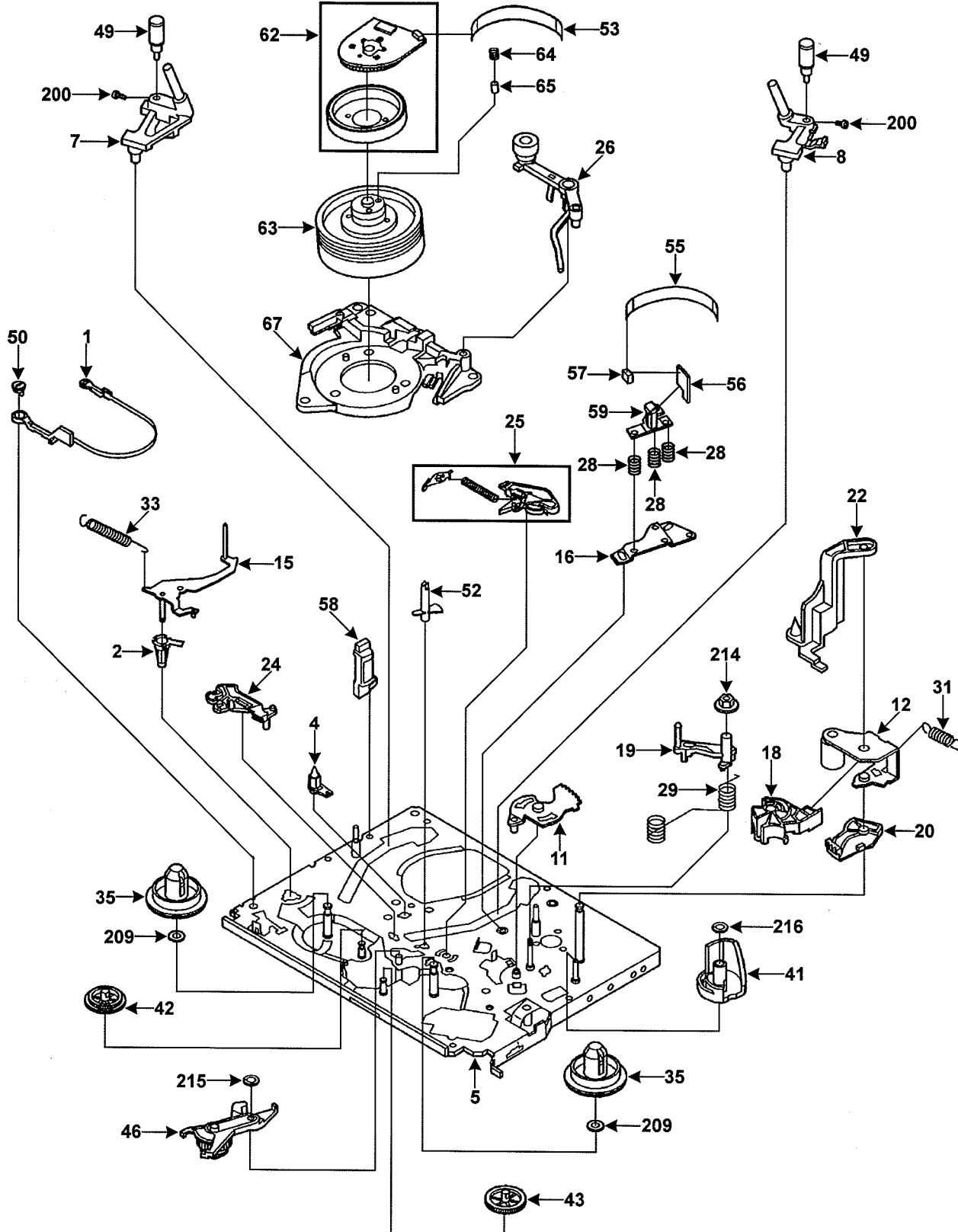


JANUARY 2001 SET TVCR-329

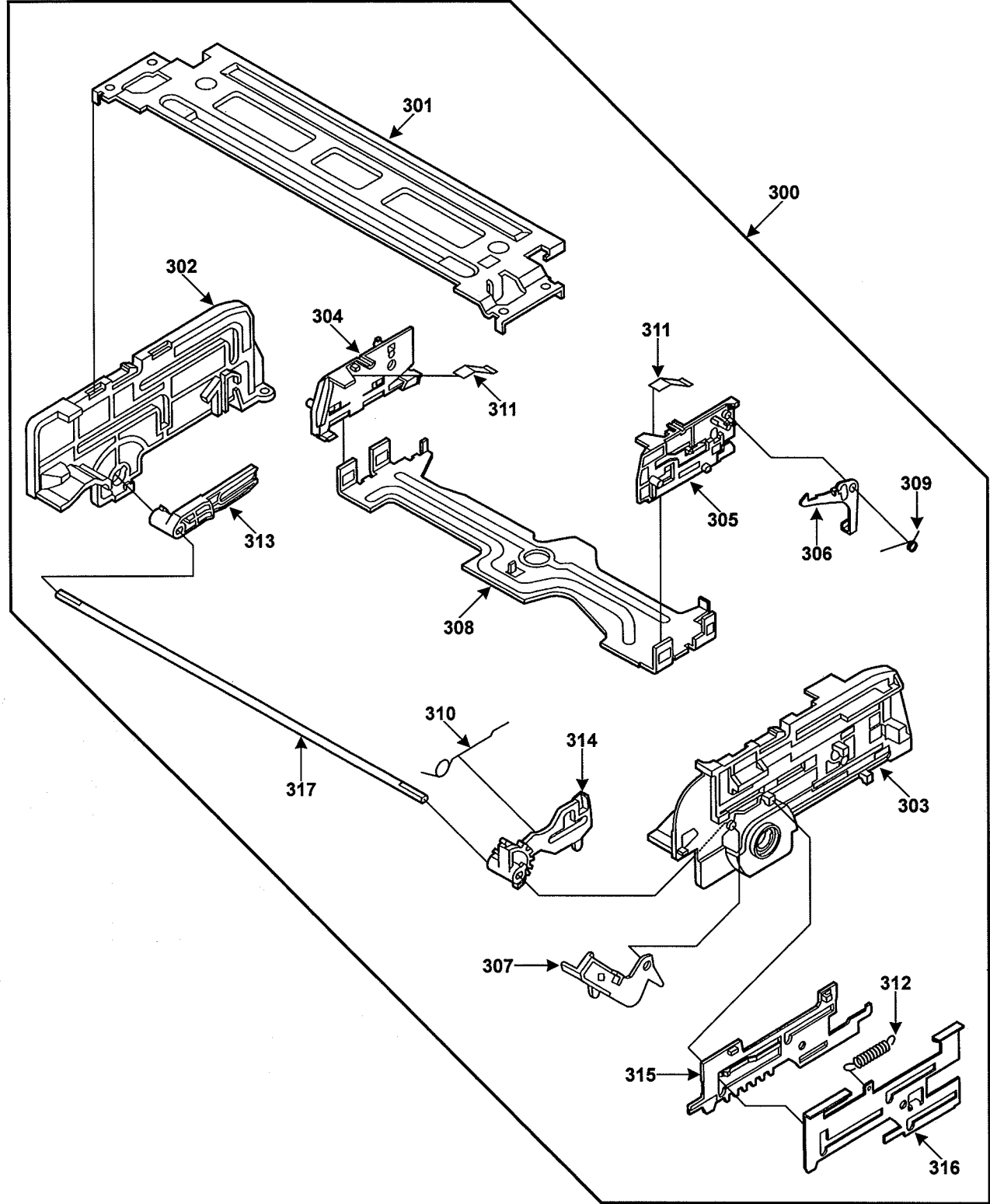
For Supplier Address,
See PHOTOFACT Annual Index

TVCR-329

EXPLODED VIEW - TOP



EXPLODED VIEW - CASSETTE HOUSING CONTROL ASSEMBLY



MECHANICAL PARTS LIST

Item No.	Description	Part No.	Item No.	Description	Part No.
1	Tension Band Assembly	LBNDK1009AJZZ	50	Tension Pole Adjuster	NSFTP0034AJZZ
2	Tension Arm Boss	LBOSZ1001AJZZ	51	Damper Raber	PGUMM0043AJZZ
3	Slow Brake Boss	LBOSZ1002AJZZ	52	Light Guide	PREFL1007AJZZ
4	Cassette Stay Left	LBOSZ1003AJZZ	53	Flat Cable	QCNW-0247AJZZ
5	Main Chassis Assembly	LCHSM0158AJZZ	55	Flat Cable	QCNW-0272AJZZ
6	Loading Motor Block	LHLDZ1958AJZZ	56	Audio/Control Head Board	QPWBF5243AJZZ
7	Supply Pole Base Assembly	LPOLM0056GEZZ	57	6 pin Socket	QSOCN0685REZZ
8	Take-Up Pole Base Assembly	LPOLM0057GEZZ	58	Full Erase Head	RHEDT0031AJZZ
9	Take-Up Loading Arm Assembly	MLEVF0459AJZZ	59	Audio/Control Head Assembly	RHEDU0085GEZZ
10	Supply Loading Arm Assembly	MLEVF0461AJZZ	60	Loading Motor	RMOTM1062GEZZ
11	Pinch Drive Lever Assembly	MLEVF0463AJZZ	61	Capstan Motor	RMOTN2053GEZZ
12	Pinch Roller Lever Assembly	MLEVF0464GEZZ	62	Drum Drive Motor	RMOTP1129GEZZ
15	Tension Arm Assembly	MLEVF0467AJZZ	63	Upper and Lower Drum Assembly	DDRMW0014TEXO
16	Audio/Control Head Arm	MLEVF0468AJFW	64	Drum Earth Brush Spring	MSPRC0194GEFJ
17	Shifter Drive Lever	MLEVP0271AJZZ	65	Drum Earth Brush	QBRSK0034GEZZ
18	Pinch Double Action Lever	MLEVP0272AJZZ	67	Drum Base	PGiDC0055GEFW
19	Reverse Guide Lever Assembly	MLEVP0273AJZZ	200	Screw	LX-XZ3030GEFD
20	Reverse Drive Lever	MLEVP0275AJZZ	208	E-Ring	XRESJ40-06000
21	Slow Brake	MLEVP0276AJZZ	209	Washer 5.2 X 9.5 X .3	XWHJZ52-03095
22	Open Lever	MLEVP0277AJZZ		Washer 5.2 X 9.5 X .4	XWHJZ52-04095
23	Clutch Lever	MLEVP0278AJZZ		Washer 5.2 X 9.5 X .5	XWHJZ52-05095
24	Supply Main Brake Assembly	MLEVP0279AJZZ		Washer 5.2 X 9.5 X .6	XWHJZ52-06095
25	Take-Up Main Brake Assembly	MLEVP0280AJZZ		Washer 5.2 X 9.5 X .7	XWHJZ52-07095
26	Auto Head Cleaner	CLEVP0287AJZZ	214	Reverse Guide Adjusting Nut	PSPAP0009AJZZ
27	Shifter	MSLiP0008AJZZ	215	Cut Washer (1)	LX-WZ1003GE00
28	Audio/Control Head Spring	MSPRC0205AJFJ	216	Cut Washer (1)	LX-WZ1041GE00
29	Reverse Guide Spring	MSPRD0165AJFJ	217	Cut Washer (1)	LX-WZ1073GE00
30	Loading Double Action Spring	MSPRT0402AJFJ	300	Cassette Housing Control Assembly	CHLDX3074TVE0
31	Pinch Double Action Spring	MSPRT0403AJFJ	301	Upper Plate	LANGF9592AJFW
33	Tension Spring	MSPRT0405AJFJ	302	Left Frame	LHLDX1028AJ00
34	Drive Belt	NBLTK0066AJ00	303	Right Frame	LHLDX1029AJ00
35	Reel Disk	NDAiV1070AJ00	304	Left Holder	LHLDX1030AJZZ
36	Loading Connect Gear	NGERH1267AJZZ	305	Right Holder	LHLDX1031AJZZ
37	Master Cam	NGERH1268AJ00	306	Right Proof Lever	MLEVF0469AJFW
38	Cassette Control Drive Gear	NGERH1269AJZZ	307	Door Opener Lever	MLEVP0281AJ00
39	Take-Up Loading Gear	NGERH1270AJZZ	308	Slider	MSLiF0073AJFW
40	Supply Loading Gear	NGERH1271AJZZ	309	Right Proof Lever Spring	MSPRD0151AJFJ
41	Pinch Drive Cam	NGERH1272AJZZ	310	Right Drive Gear Spring	MSPRD0166AJFJ
42	Supply Reel Relay Gear	NGERH1275AJZZ	311	Cassette Spring	MSPRP0175AJFJ
43	Take-Up Reel Relay Gear	NGERH1276AJZZ	312	Spring	MSPRT0381AJFJ
44	Worm Gear	NGERW1062AJZZ	313	Left Drive Gear	NGERH1278AJZZ
45	Worm Wheel Gear	NGERW1063AJZZ	314	Right Drive Gear	NGERH1279AJZZ
46	Idler Wheel Assembly	NiDR-0015AJZZ	315	Double Action Rack Gear	NGERR1008AJ00
47	Motor Pulley	NPLYV0155AJZZ	316	Drive Angle Gear	NGERR3005AJFW
48	Pulley Limiter Assembly	NPLYV0156AJZZ	317	Main Shaft	NSFTD0041AJFD
49	Guide Roller	NROLP0110GEZZ			

(1) Cut washer is not reusable. If removed, replace with a new one.

MECHANICAL ALIGNMENT

Numbers in parenthesis indicate the number used in the Mechanical Parts List and Exploded Views. All alignments are made with unit in the eject mode.

MECHANISM INITIAL SETTING

Turn the pulley on the Loading Motor (60) until the initial setting is achieved.

CASSETTE HOUSING CONTROL ALIGNMENT

Cassette Control Drive Gear / Drive Angle Gear

Align the Cassette Control Drive Gear (38) with the Drive Angle Gear (316) as shown in figure 1.

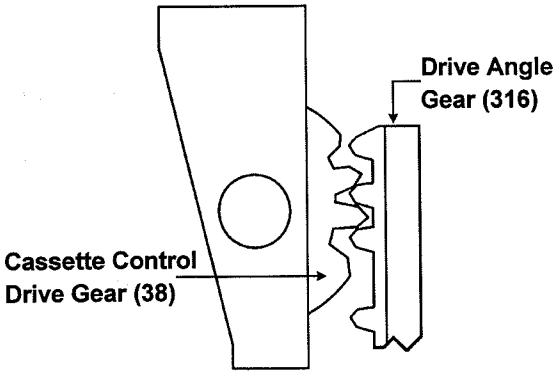


Figure 1

Drive Angle Gear / Right Drive Gear

Align the Drive Angle Gear (316) with the Right Drive Gear (314) as shown in figure 2.

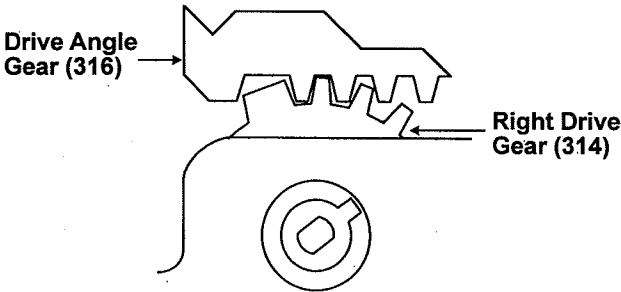


Figure 2

GEAR ALIGNMENT

Pinch Drive Lever Assembly / Reverse Guide Lever Assembly / Reverse Drive Lever / Pinch Drive Cam

Align the Reverse Drive Lever (20) with the Reverse Guide Lever Assembly (19) and the Pinch Drive Lever Assembly (11). Align the Pinch Drive Cam (41) with the Pinch Drive Lever Assembly as shown in figure 3.

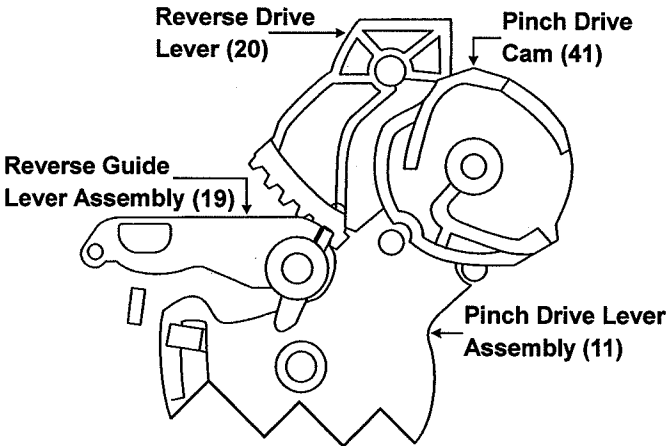


Figure 3

Take-Up Loading Gear / Supply Loading Gear

Align the Take-Up Loading Gear (39) with the Supply Loading Gear (40) as shown in figure 4.

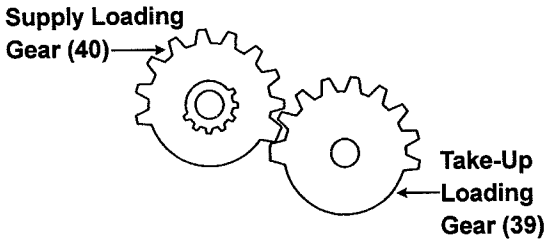


Figure 4

Take-Up Loading Gear / Shifter

Align the Take-Up Loading Gear (39) with the hole in the Shifter (27) as shown in figure 5.

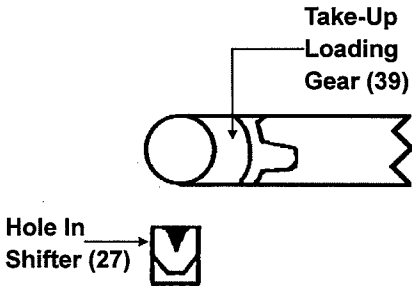


Figure 5

Cassette Control Drive Gear / Master Cam

Align the Cassette Control Drive Gear (38) with the wide tooth of Master Cam (37) as shown in figure 6.

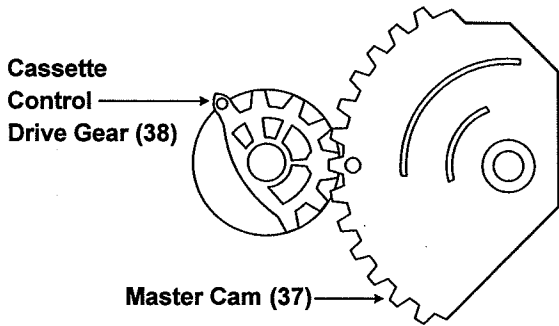


Figure 6

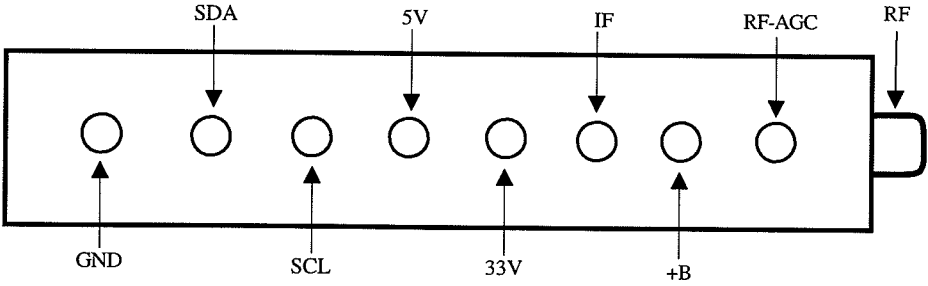
TUNER INFORMATION

TUNER VOLTAGE CHART

Pin	VHF Low Band	VHF High Band	UHF Band
RF-AGC	4.0V	3.7V	3.1V
+B	9.0V	9.0V	9.0V
IF	0V	0V	0V
33V	33.0V	33.0V	33.0V
5V	5.0V	5.0V	5.0V
SCL	4.6V	4.6V	4.6V
SDA	4.6V	4.6V	4.6V
GND	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



TEST EQUIPMENT

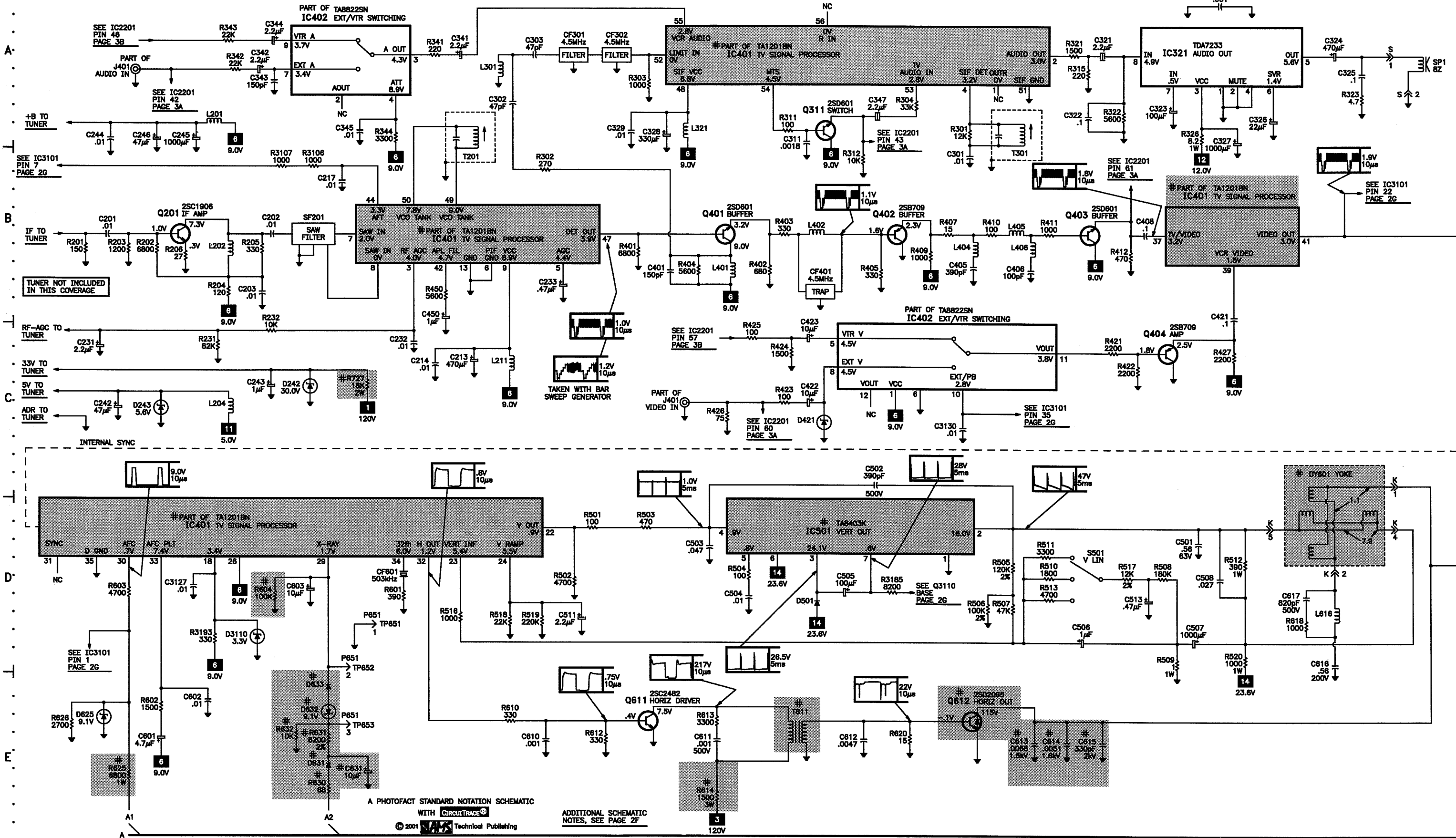
Test equipment listed by participating manufacturer illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.

Equipment	Sencore No.	Equipment	Sencore No.
Oscilloscope	SC3100	Isolation Transformer	PR570
Generators		Capacitance Analyzer	LC102
RGB	CM2125	CRT Analyzer	CR7000
Multiburst Signal	VG91	AC Leakage Tester	PR570
Color Bar	VG91	Inductance Analyzer	LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3100	Field Strength Meter	SL753
Frequency Meter	SC3100	Transistor Tester	TF46
Hi-Voltage Probe	HP200	Horizontal Analyzer	HA-2500
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

A

B

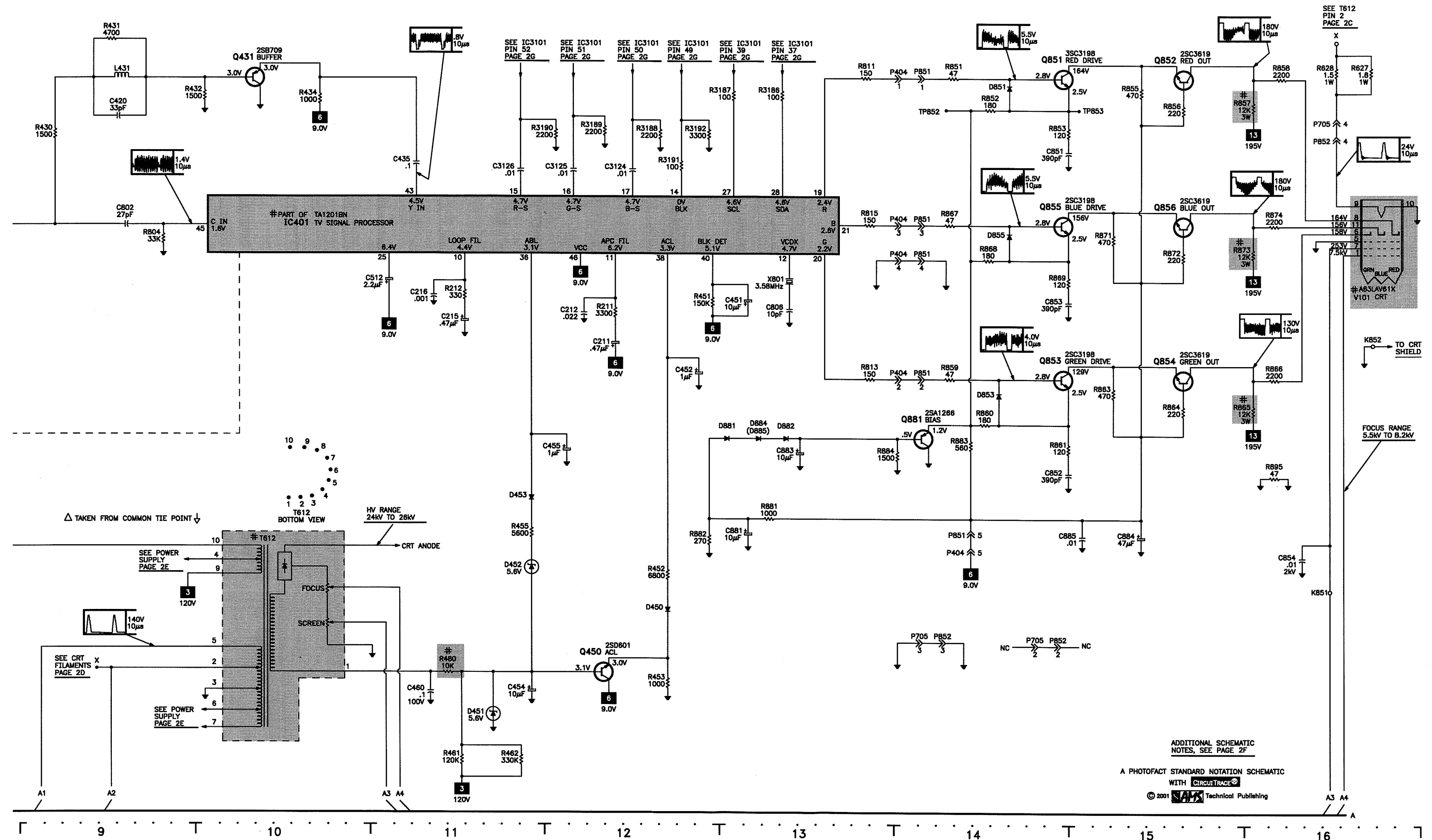
TELEVISION SCHEMATIC



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2F

ACT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITTRACE®**

2001 **SAK** Technical Publishing



F

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

—X— Circuitry not used in some versions.

--- Circuitry used in some versions.

↓ Ground

nm 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 otherwise noted.

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 1000 μ V 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.

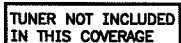
Resistors are 1/2W or less, 5% or greater unless noted.

Value in () used in some versions.

Measurements with switching as shown unless noted.

Rated voltage shown on zener diodes.

G



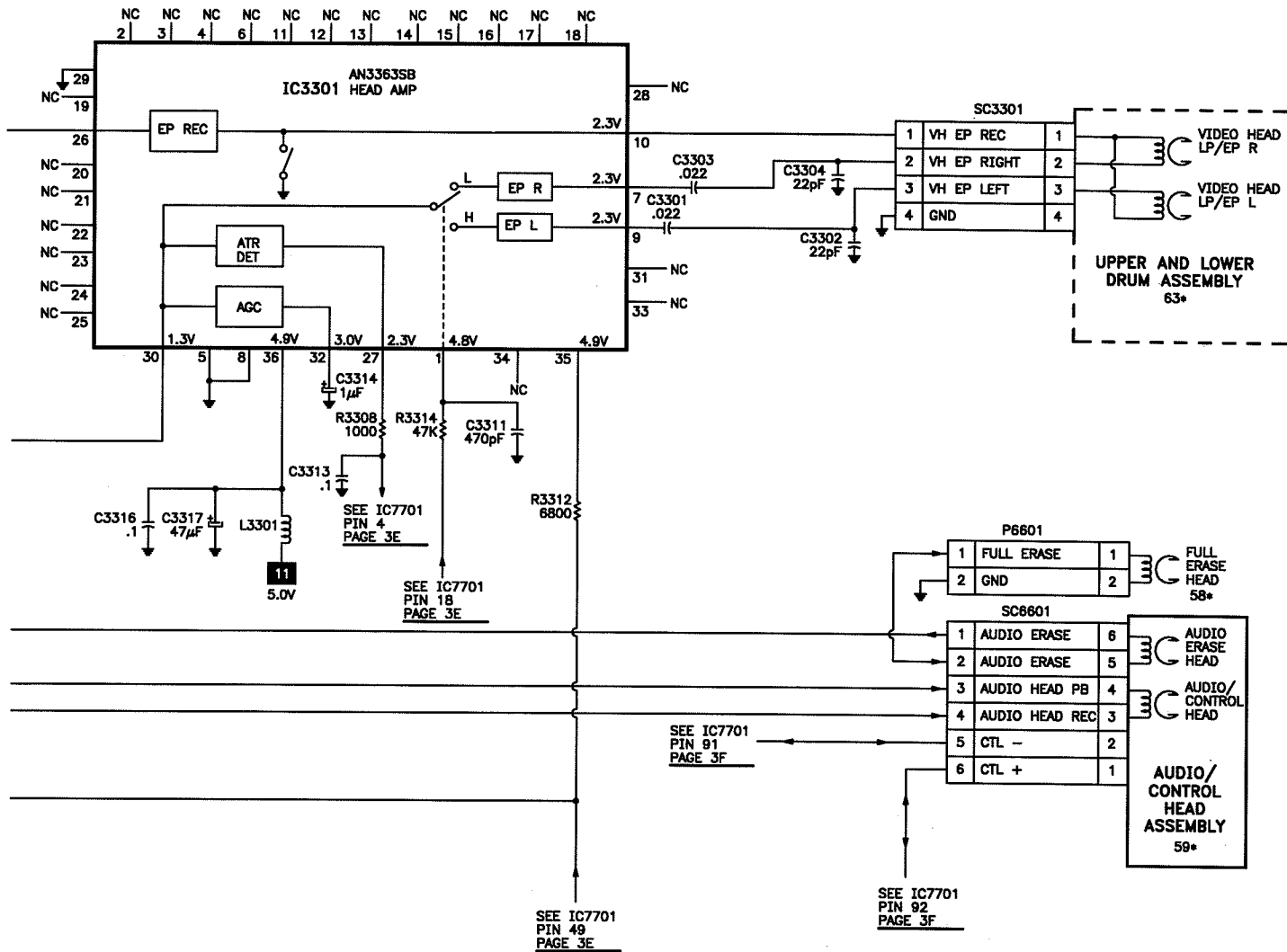
C2002	B1	C881	D13	C6622	B39	FB727	B22	Q8302	E49	R743	B18	R1312	D26	R7759	B47
C201	B2	C883	C13	C6623	D30	FB728	B23	Q8303	D50	R744	B18	R1314	E27	R7760	B47
C203	B2	C884	D15	C6624	D30	FB731	A22	Q8304	D50	R745	B18	R1315	E27	R7761	C47
C211	C12	C885	D15	C6625	E33	FB732	A23	Q8305	D50	R746	B18	R1316	E27	R7762	C47
C212	C12	C2201	A30	C6626	E34	FB1301	D27	R201	B1	R747	B17	R1317	E27	R7763	B48
C213	C3	C2202	A31	C6627	E35	FB6601	D35	R202	B1	R748	B17	R1318	E27	R7764	B48
C214	C3	C2203	A31	C6628	E36	FB7701	C50	R203	B1	R756	D22	R1319	E27	R7765	C47
C215	C11	C2204	A34	C6629	E43	FB7702	D45	R204	B2	R757	D22	R1312	C27	R7766	D43
C216	B11	C2205	D44	C6630	E44	FULL	B40	R205	B2	R765	D20	R1344	C27	R7767	D43
C217	B2	C2207	E32	C7704	D46	IC321	R206	A7	B1	R766	D20	R1345	E27	R7768	B46
C231	C1	C2208	D30	C7705	D47	IC401	A5	R211	C12	R768	D20	R1347	E27	R7769	B46
C232	C3	C2209	A29	C7706	E48	IC401	B10	R212	B11	R782	E18	R1349	E27	R7771	B47
C233	B4	C2210	A29	C7707	B43	IC401	B3	R231	C2	R804	B9	R1350	A27	R7772	C48
C241	C23	C2211	A33	C7708	B48	IC401	B7	R232	C2	R811	A13	R1351	A27	R7773	C48
C242	C3	C2212	D32	C7709	C47	IC401	D2	R233	B28	R813	A13	R1352	A27	R7774	D47
C243	C3	C2213	B33	C7710	C48	IC402	A5	R234	B28	R815	A13	R1353	C25	R7775	E46
C244	B1	C2214	E29	C7711	B48	IC402	D2	R235	B28	R815	A14	R1354	C25	R7776	E46
C245	B2	C2215	E32	C7712	B42	IC501	A5	R302	B3	R852	A14	R1355	C25	R7777	E41
C246	B1	C2216	E29	C7715	E46	IC701	B20	R303	A4	R853	B14	R1356	C25	R7778	E41
C301	B6	C2217	B33	C7716	E45	IC701	E17	R304	A5	R855	A15	R1360	E27	R7779	E41
C302	A3	C2218	D29	C7717	B46	IC756	C23	R311	B5	R856	A15	R1361	B26	R7780	E41
C303	A3	C2219	D33	C7721	E46	IC765	B23	R312	B5	R857	A16	R1362	A26	R7781	E41
C311	B5	C2221	B30	C7722	C24	IC2201	C31	R315	A6	R858	A16	R1363	A26	R7782	E46
C321	A6	C2223	D23	C7722	E42	IC2202	R321	R322	A7	R860	C14	R1366	B26	R7783	E46
C322	A6	C2224	C32	C7723	E42	IC3101	A26	R322	A8	R861	C14	R1367	B26	R7790	E46
C323	A7	C2225	C32	C7725	B48	IC3102	C27	R323	B7	R863	C15	R1368	E27	R7791	B48
C324	A8	C2226	A35	C7728	E43	IC3103	B25	R326	A3	R864	C15	R1369	B27	R7792	C43
C325	A8	C2228	A35	C7729	E43	IC3301	A37	R341	A2	R865	C16	R1370	C27	R7793	E43
C326	A7	C2230	B34	C7730	B48	IC6601	C36	R342	A3	R866	B16	R1374	D17	R7794	C43
C327	B7	C2231	B35	C7731	B48	IC7701	C49	R343	A2	R867	C16	R1376	D17	R7795	C43
C328	B4	C2235	D23	C7732	A7	IC7702	A45	R344	B3	R868	B14	R1377	B28	R7796	D47
C329	B4	C2237	B33	C7733	D48	J401	A4	R401	B4	R869	B15	R1378	D		

MODELS 25VT-H60, 25VT-H80 (CHASSIS VN-61)

* Indicates the item number used in the mechanical parts list and exploded views.

E'





* INDICATES THE ITEM NUMBER USED IN THE MECHANICAL PARTS LIST AND EXPLODED VIEWS.

ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2F

A PHOTOFAC T STANDARD NOTATION SCHEMATIC

WITH CIRCUITRACE®

© 2001 **SAMS** Technical Publishing

MISCELLANEOUS ADJUSTMENTS

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, color, picture, and screen control to minimum. Connect a high voltage probe to CRT anode. High voltage should measure 24kV to 26kV.

B+ ADJUST

Tune in a picture. Connect voltmeter to the cathode of D727 and ground. Adjust R738 for $120V \pm 1V$.

ENTERING SERVICE MODE

Service mode adjustments are required when IC401 and IC3102 are replaced. If CRT is replaced perform only adjustments relating to the CRT. If IC3101 is replaced no adjustment is required.

Turn on receiver and use reset function in the video adjustment menu to ensure that customer controls are in their proper reset position. Remove AC power. Press and hold the channel up button on the receiver while restoring AC power. The service mode will now be displayed.

When in the service mode a number is displayed indicating the service number and it is changed by pressing the channel up / down buttons on the receiver or remote transmitter. The on-set data value can be changed by pressing the volume up / down buttons on the receiver or remote transmitter. For a complete listing of the service adjustments, refer to the Service Mode Adjustment Chart.

EXIT SERVICE MODE

Turn off the power or unplug the receiver to exit service mode.

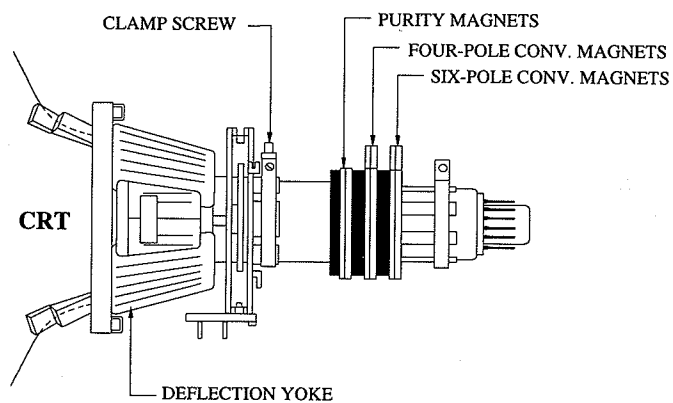
RESETTING TO INITIAL VALUES

The initial values are written to IC3102 by entering the service mode and pressing the channel up and down buttons on the receiver for more than two seconds.

PURITY

Operate the receiver for 15 minutes. Tune in a green raster. Use a degaussing coil to demagnetize the CRT and mounting brackets. Loosen the deflection yoke clamp screw and slide the deflection yoke backward to obtain a vertical green band. Rotate and spread the purity magnet tabs until the green band is centered on the screen. Move the deflection yoke forward to obtain a uniform green screen.

CRT NECK ASSEMBLY

**RF AGC**

Tune in a picture. Enter the service mode and select service number S09. Set the data value to a point where no snow (noise) appears in picture. Exit the service mode to select another channel. Check all channels for proper operation.

CAPTION POSITION

Enter the service mode and select service number S25. A black text box appears on screen. Adjust data value to center text box.

VCO

Connect a digital voltmeter to pin 44 of IC401 and ground. Tune in a local channel. Enter the service mode and select service number S10. Set the data value to 64. Adjust T201 to obtain a reading of 2.2V on the digital voltmeter.

WHITE BALANCE

Operate the receiver for 15 minutes. Enter the service mode and select service number S03. Set the data value to 0. Set brightness for a visible raster. Alternately adjust data value of S14 and S15 until a good gray scale with normal white is obtained. Select service number S03. Set the data value for normal color level.

GRAY SCALE

Connect a digital voltmeter between TP852 and TP853 on the CRT board. Tune in an active channel. Set color, brightness, and picture to minimum. Enter the service mode, select service number S21 and adjust the data value to 1 to turn off the luminance signal (Y mute). Select service number S03 and adjust the data value to obtain .26V on the digital voltmeter. Adjust screen control, if necessary, to obtain a barely visible raster. Adjust service numbers S11, S12, S13, for a good gray scale with normal white at high and low brightness. Set color to midrange. Adjust screen control for normal brightness.

CONVERGENCE

Operate the receiver for 15 minutes. Connect a color bar generator to the antenna terminals and tune in a dot pattern. Adjust the 4-pole magnet tabs to converge the red and blue dots at the center of the screen. Adjust the 6-pole magnet tabs to converge the red/blue dots over the green dots at the center of the screen.

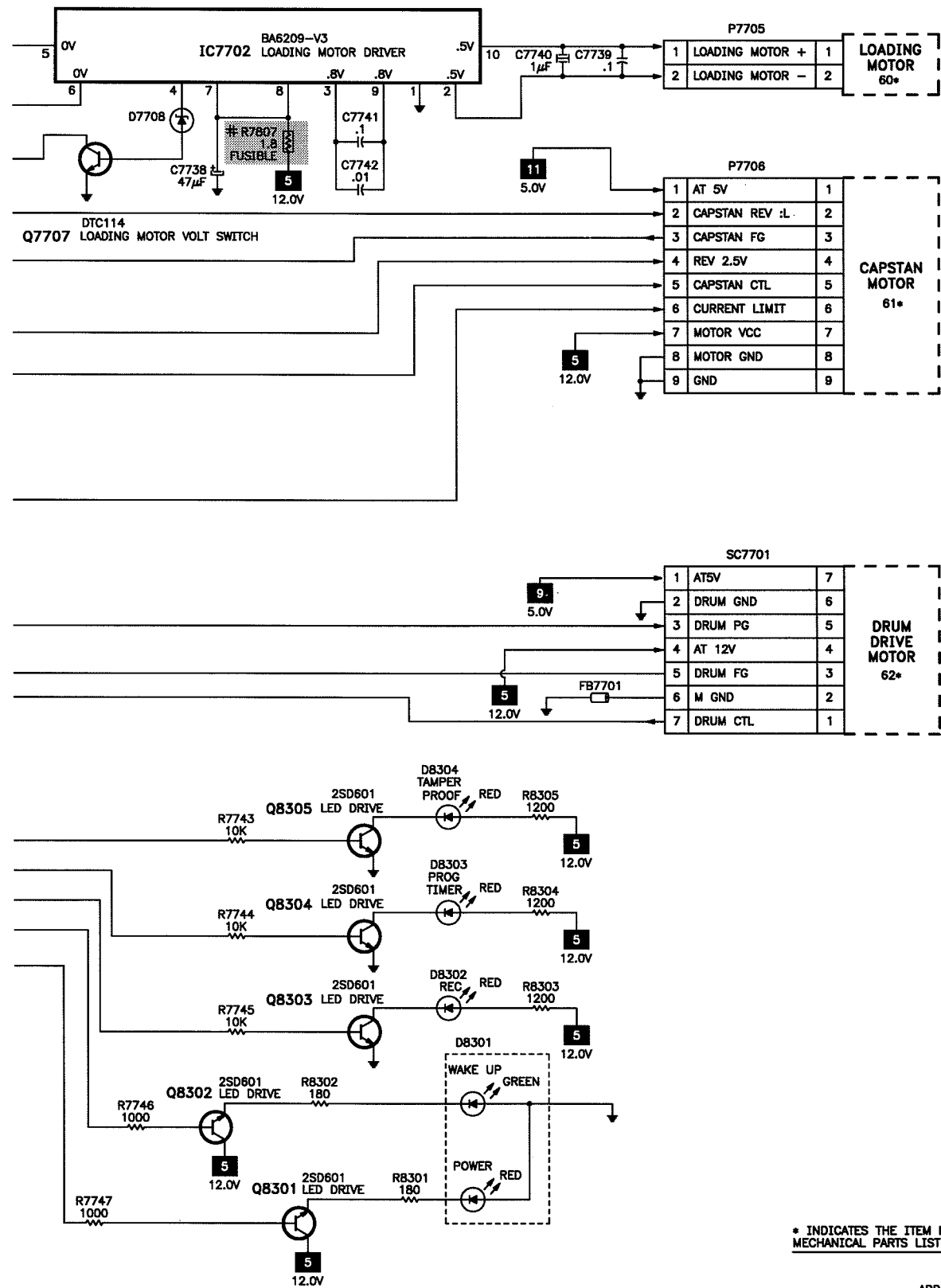
NOTE: Rotate the two tabs of each set of magnets equally and opposite to converge vertically and rotate both tabs in the same direction to converge horizontally. Since the 4-pole and 6-pole magnets interact, repeat the adjustment until center convergence is correct.

Tune in a crosshatch pattern and remove the rubber wedges between the deflection yoke and the CRT. Tilt the deflection yoke up or down to converge the vertical lines at top and bottom of screen and the horizontal lines at the right and left sides of the screen. Tilt the deflection yoke right or left to converge horizontal lines at top and bottom of screen and the vertical lines at the right and left sides of the screen. Repeat convergence procedure if necessary to obtain best overall convergence.

A.



G
SERVO SCHEMATIC continued



* INDICATES THE ITEM NUMBER USED IN THE MECHANICAL PARTS LIST AND EXPLODED VIEWS.

ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2F

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITTRACE®

© 2001 SAMS Technical Publishing

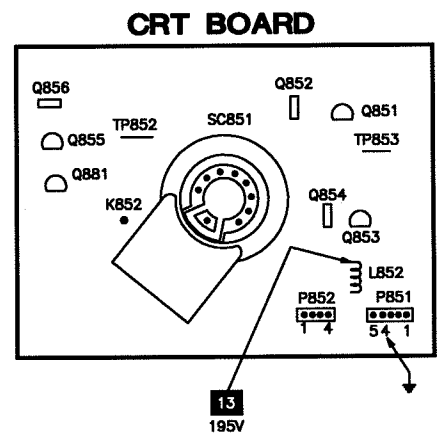
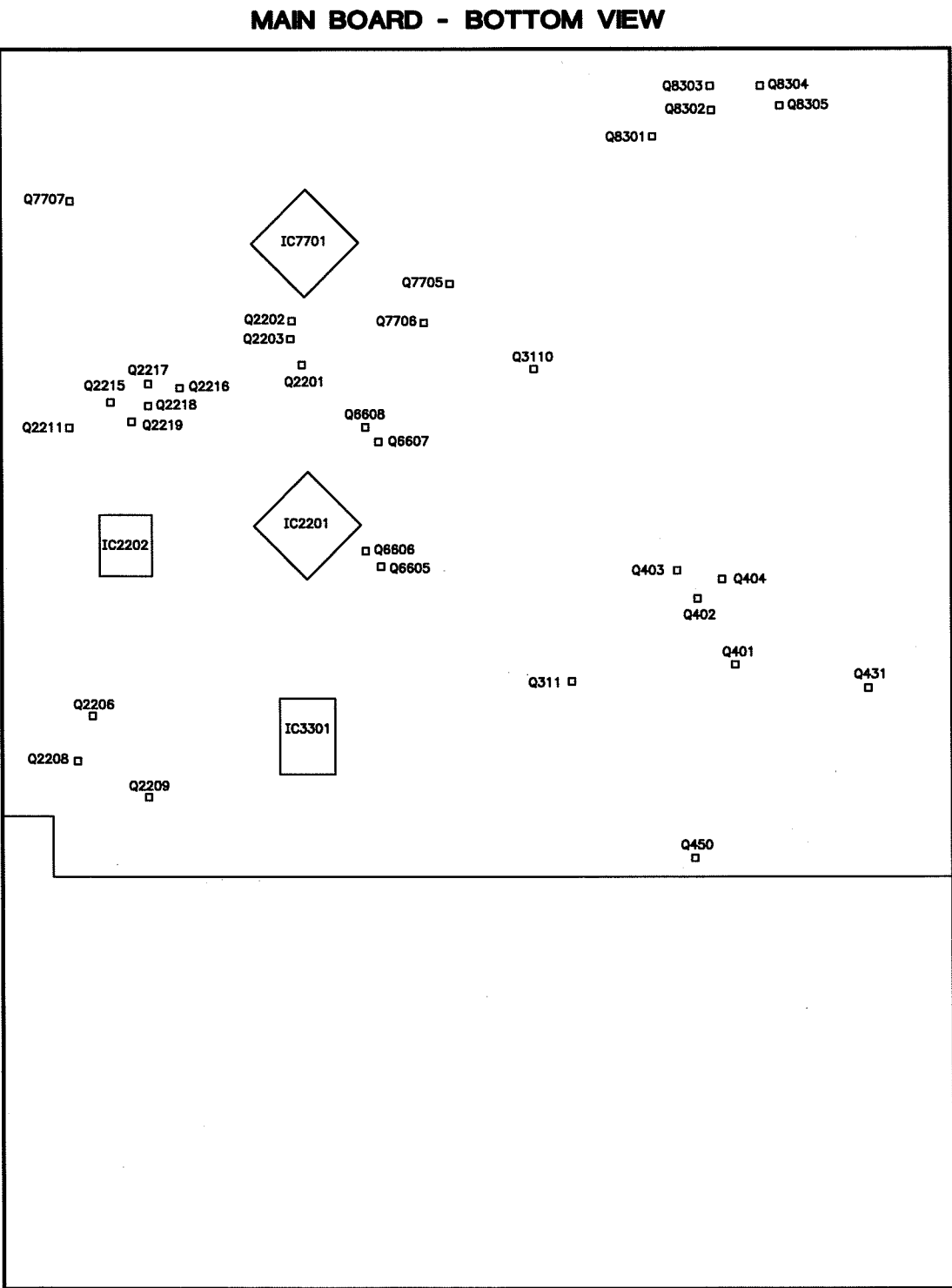
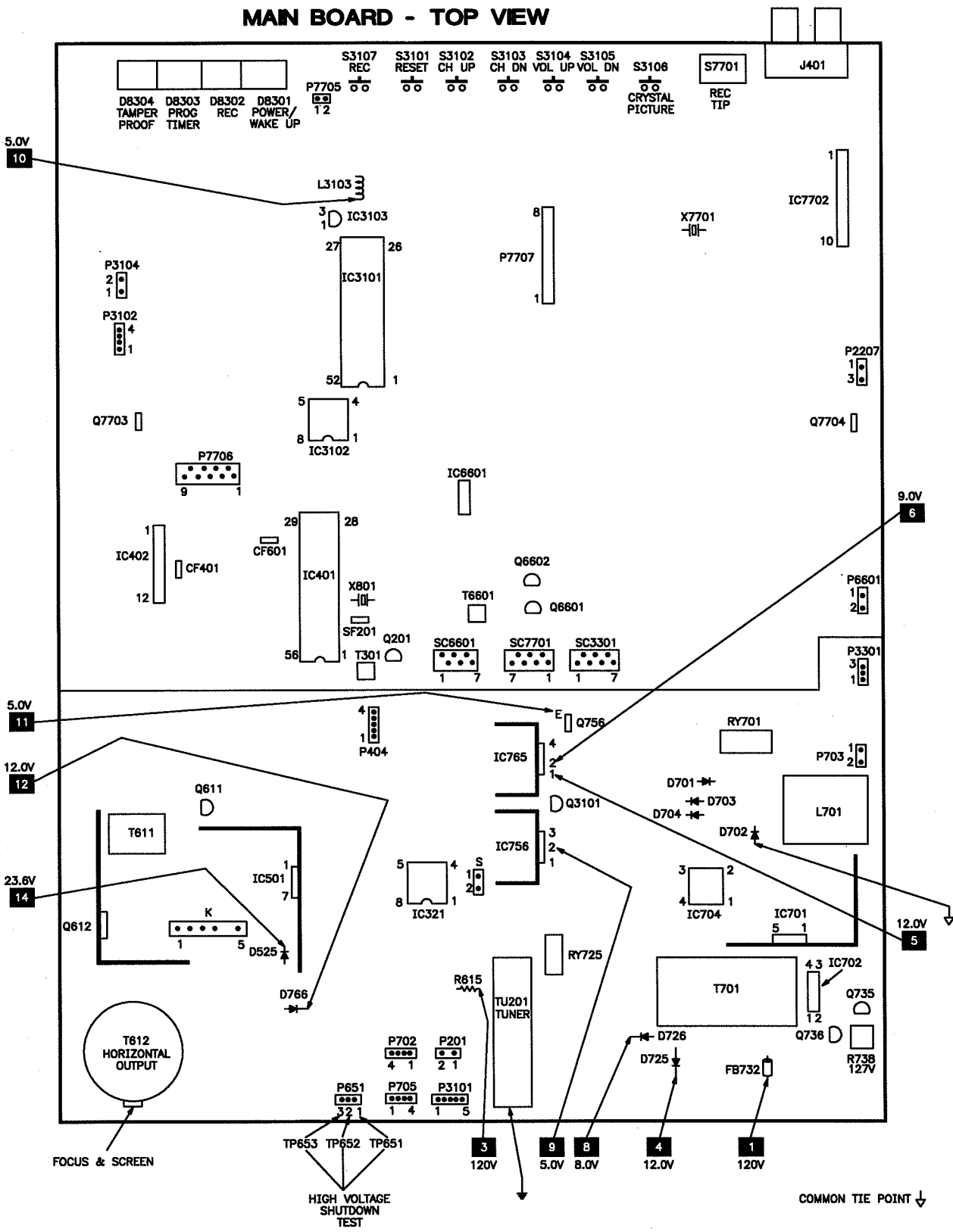
MISCELLANEOUS ADJUSTMENTS continued

SERVICE MODE ADJUSTMENT CHART

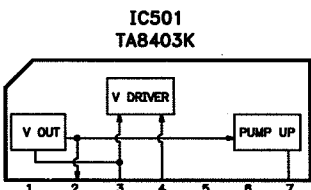
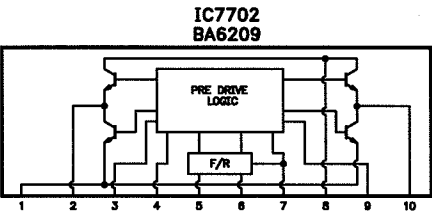
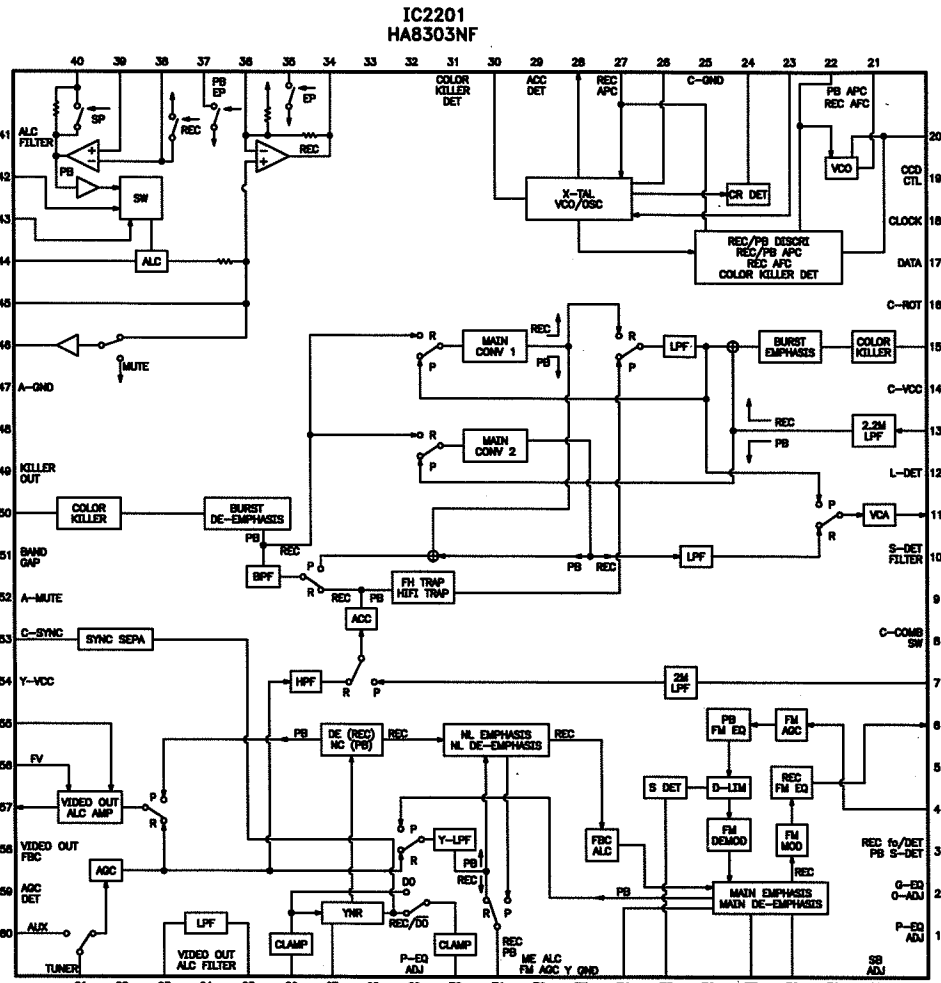
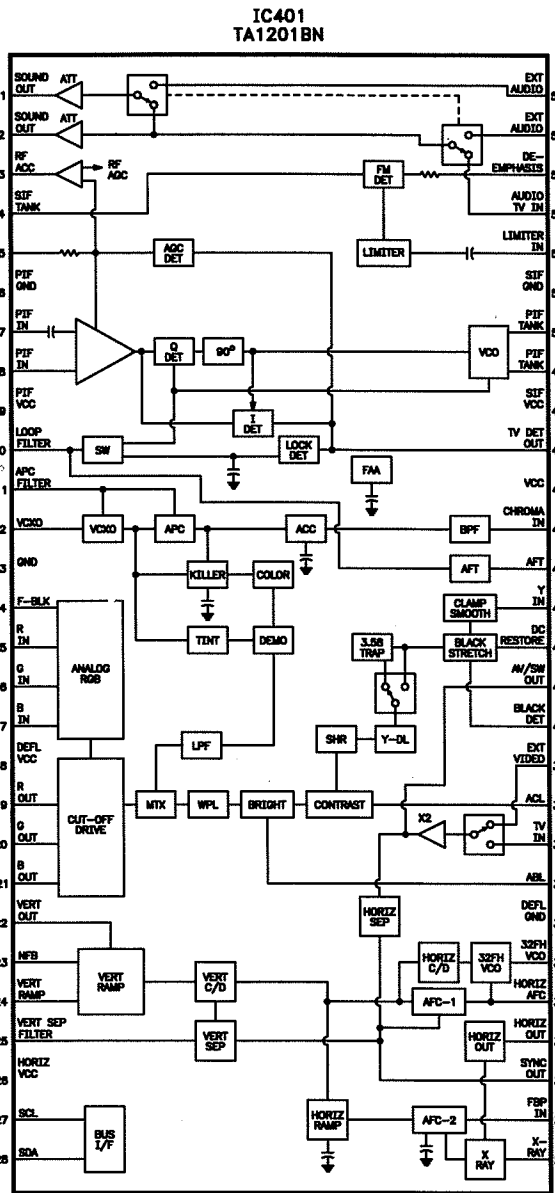
Service No.	Service Adjustment	Data Value Range	Initial Data Value	Notes
S01	Sub Color	0-127	55	Adjust for normal color level.
S02	Sub Tint	0-127	64	Adjust for normal flesh tones.
S03	Sub Brightness	0-127	64	Adjust for normal brightness level.
S04	Sub Picture	0-127	80	Adjust for normal contrast range.
S05	Sharpness	0-63	32	Must be set to 32.
S06	Vertical Phase	0-7	3	Must be set between 0 and 3.
S07	Vertical Amp	0-63	29	Adjust for proper vertical size with best linearity.
S08	Horizontal Phase	0-31	20	Adjust for best horizontal centering on screen.
S09	RF AGC	0-63	32	0 produces black raster.
S10	VCO	0-127	64	-
S11	Red Cutoff	0-255	00	-
S12	Green Cutoff	0-255	00	-
S13	Blue Cutoff	0-255	00	-
S14	Green Gain	0-255	128	-
S15	Blue Gain	0-255	128	-
S16	60Hz	0-1	0	Must be set to 0.
S17	Trap	0-1	0	No adjustment required.
S18	AFC	0-1	1	No adjustment required.
S19	White Peak Limiter	0-1	1	-
S20	Blanking	0-1	0	No adjustment required.
S21	Y-Mute	0-3	0	0 = Normal, 1 = No Y, 2 = Test mode, and 3 = Vertical collapse.
S22	Balance	0-63	32	No adjustment required.
S23	Audio Switch	0-1	0	-
S24	Video Switch	0-1	0	-
S25	Caption Position	-	-	Adjust to center the black box on the screen.
S26	Text Picture	0-80	20	-
S27	CCD Level	0-10	7	-

SHARP
MODELS 25VT-H6Q, 25VT-H8Q (CHASSIS VN-61)

PLACEMENT CHART



IC FUNCTIONS



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.

- Philips ECG Company (ECG)
- Sencore, Inc.

ELECTRICAL PARTS LIST

SEMICONDUCTORS

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.
D242	-	RH-EX0207CEZZ	ECG5035A
D243	-	RH-EX0301CEZZ	-
D421	-	RH-EX0393GEZZ	-
D450	1SS119	VHD1SS119//-1	ECG519
D451	-	RH-EX0298CEZZ	-
D452	-	RH-EX0285CEZZ	-
D453	1SS119	VHD1SS119//-1	ECG519
D501	-	RH-DX0441CEZZ	ECG116
# D525	-	RH-DX0131CEZZ	ECG552
D625	-	RH-EX0313CEZZ	ECG139A
# D631	-	VHD1SS82///1A	ECG177
# D632	-	RH-EX0311CEZZ	ECG139A
# D633	1SS119	VHD1SS119//-1	ECG519
# D701 Thru			
# D704	-	RH-DX0154CEZZ	ECG116
D705	1SS82	VHD1SS82///1A	ECG177
D706	10ELS2	VHD10ELS2//-1	ECG587
D707	1SS82	VHD1SS82///1A	ECG177
D709	-	RH-DX0279CEZZ	-
D710	-	RH-DX0441CEZZ	ECG116
# D725	-	RH-DX0473CEZZ	-
# D726	-	RH-DX0433CEZZ	-
# D727	-	RH-DX0461CEZZ	-
D735	-	RH-EX0299CEZZ	-
D737, 38, 39	1SS119	VHD1SS119//-1	ECG519
# D765, 66	-	RH-DX0131CEZZ	ECG552
D768, 69	1SS119	VHD1SS119//-1	ECG519
D851, 53, 55	1SS119	VHD1SS119//-1	ECG519
D881, 82, 84	1SS119	VHD1SS119//-1	ECG519
D2201	1SS119	VHD1SS119//-1	ECG519
D2207, 08, 09	1SS119	VHD1SS119//-1	ECG519
D3105, 08	1SS119	VHD1SS119//-1	ECG519
D3110	-	RH-EX0281CEZZ	-
D3116	-	RH-EX0335CEZZ	-
# D3117	-	RH-EX0335CEZZ	-
D3123	1SS119	VHD1SS119//-1	ECG519
D7701	1SS119	VHD1SS119//-1	ECG519
D7702, 03	-	RH-PX0252GEZZ	-
D7704, 05	-	RH-PX0253GEZZ	-
D7707	-	RH-PX0234GEZZ	-
D7708	-	RH-EX0615GEZZ	-
D8301	-	RH-PX0302CEZZ	-
D8302, 03, 04	-	RH-PX0348CEZZ	-
IC321	TDA7233	VHITDA7233/-1	-
# IC401	TA1201BN	RH-iX2701CEZZ	-
IC402	TA8822SN	RH-iX2345CEZZ	-
# IC501	TA8403K	VHITA8403K/-1	-
# IC701	STRF6515	VHISTRF6515-1	-
# IC702, 04	-	RH-FX0002GEZZ	-
IC756	KIA7805PI	VHKA7805Pi-1	ECG1960
IC765	PQ09RE1	VHiPQ09RE1/-1	-
# IC2201	HA8303NF	VHiHA8303NF-1	-
IC2202	MN3880S	VHiMN3880S/-1	-
IC3101	M37267M8-206SPRH	iX2711CEN1	-
IC3102	AT24C01A	VHiAT24C01A-1	-
IC3103	PST994C	VHiPST994C/-1	-
IC3301	AN3363SB	VHiAN3363S/-1	-
IC6601	BA7755	VHiBA7755/-1	-
IC7701	-	RH-iX2747CEN2	-
IC7702	BA6209-V3	VHiBA6209//1E	-
Q201	2SC1906	VS2SC1906//1E	ECG107
Q311	2SD601(A)	VS2SD601A//-1	ECG2408
Q401	2SD601(A)	VS2SD601A//-1	ECG2408
Q402	2SB709(A)	VS2SB709A//-1	ECG2409
Q403	2SD601(A)	VS2SD601A//-1	ECG2408
Q404, 31	2SB709(A)	VS2SB709A//-1	ECG2409
Q450	2SD601(A)	VS2SD601A//-1	ECG2408
Q611	2SC2482	VS2SC2482//-1	ECG399
# Q612	2SD2095	VS2SD2095//1E	ECG2331
Q735	2SC3198(Y)	VS2SC3198-Y-1	ECG85
Q736	2SA1266(Y)	VS2SA1266-Y-1	ECG290A

For SAFETY use only equivalent replacement part

SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.
Q756	2SD471(KL)	VS2SD471-KL1E	ECG293
Q851	2SC3198(Y)	VS2SC3198-Y-1	ECG85
Q852	2SC3619	VS2SC3619LB1E	ECG2501
Q853	2SC3198(Y)	VS2SC3198-Y-1	ECG85
Q854	2SC3619	VS2SC3619LB1E	ECG2501
Q855	2SC3198(Y)	VS2SC3198-Y-1	ECG85
Q856	2SC3619	VS2SC3619LB1E	ECG2501
Q881	2SA1266(Y)	VS2SA1266-Y-1	ECG290A
Q2201	2SC2412K(Q)	VS2SC2412KQ-1	ECG2408
Q2202	DTA144EK	VSDTA144EK/-1	ECG2419
Q2203	DTC144EK	VSDTC144EK/-1	ECG2418
Q2206, 08, 09	2SC2412K(Q)	VS2SC2412KQ-1	ECG2408
Q2211	DTC144EK	VSDTC144EK/-1	ECG2418
Q2215, 16	2SA1037K(Q)	VS2SA1037KQ-1	ECG2409
Q2217, 18, 19	2SC2412K(Q)	VS2SC2412KQ-1	ECG2408
Q3101	2SA1271(Y)	VS2SA1271-Y-1	ECG383
Q3110	2SD601(A)	VS2SD601A//-1	ECG2408
Q6601	2SC3939(QR)	VS2SC3939SQR-1	-
Q6602	2SC2001(LK)	V2SC2001LK-1	ECG85
Q6605	DTC124EK	VSDTC124EK/-1	ECG2416
Q6606	DTA144EK	VSDTA144EK/-1	ECG2419
Q6607	2SC2412K(Q)	VS2SC2412KQ-1	ECG2408
Q6608	DTA144EK	VSDTA144EK/-1	ECG2419
Q7703, 04	-	RH-PX0004PEZZ	-
Q7705	2SD1306	VS2SD1306-E1E	ECG2406
Q7706	2SD601(A)	VS2SD601A//-1	ECG2408
Q7707	DTC114EK	VSDTC114EK/-1	ECG2414
Q8301 Thru			
Q8305	2SD601(A)	VS2SD601A//-1	ECG2408

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C321	2.2µF 20% 50V NP	VCE9GA1HW225M
C347	2.2µF 20% 50V NP	VCEAEA1HW225M
# C613	.0068 +50% -10% 1.6kV	VCFPDP3CA682H
# C614	.0051 +50% -10% 1.6kV	VCFPDP3CA512H
# C615	330pF 2kV	RC-KZ0036CEZZ
# C631	10µF 20% 50V	VCEAGA1HW106M
# C701	.22 250VAC	RC-FZ004SCEZZ
# C702, 03	.01 500V	VCKYPB2HE103P
# C705	680µF 200V	RC-EZ0394CEZZ
C707	.0015 2kV	RC-KZ0371CEZZ
# C712	.0047 50V	RC-KZ0312CEZZ
C714	.0015 2kV	RC-KZ0371CEZZ
# C726	2200µF 20% 25V	VCEAGA1EW228M
C728, 29	.001 1kV	RC-KZ0365CEZZ
# C730	330µF 200V	RC-EZ0583CEZZ
# C731	33µF 180V	RC-EZ0580CEZZ
C854	.01 2kV	RC-KZ0024CEZZ
C7740	1µF 20% 50V NP	VCE9EA1HW105M

For SAFETY use only equivalent replacement part.

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.
# PR701	PTC	RMPTP0026CEZZ
# R460	10K 5% 1/2W	VRS-SV2HC103J
R505	120K 2% 1/8W	VRD-RA2BE124G
R506	100K 2% 1/8W	VRD-RA2EE104G
R517	12K 2% 1/8W	VRD-RA2BE123G
# R525	1 5% 1/2W	VRD-SV2HB1R0J
# R604	100K 5% 1/16W	VRS-CY1JF104J
# R614	1500 5% 3W	VRS-SV3LB152J
R615	4.7 10% 5W	VRW-KQ3HC4R7K
# R625	6800 5% 1W	VRS-VV3AB682J
# R630	68 5% 1/2W	VRD-RM2HD680J
# R631	8200 2% 1/8W	VRD-RA2BE822G
# R632	10K 2% 1/8W	VRD-RA2BE103G
# R701	1.5 10% 7W Wirewound	VRW-KQ3NC1R5K
# R702	3.9M 10% 1/2W	VRC-UA2HG395K
# R703	2.7M 10% 1/2W	VRC-UA2HG275K
# R717	12K 5% 1/2W	VRD-RM2HD123J
# R727	18K 5% 2W	VRS-VV3DB183J
R738	6800 127V	RVR-M4333CEZZ
# R765	1 5% 1/4W	VRN-GA2EB1R0J
# R766	.47 5% 1/4W	VRN-GA2EBR47J
# R857, 65, 73	12K 5% 3W	VRS-VV3AB123J
R7788, 93	10K 1% 1/16W	VRS-CY1JF103F
# R7807	1.8 5% 1/4W Fusible	VRG-SC2EB1R8J
# VA701	Varistor	RH-VX0026CEZZ

For SAFETY use only equivalent replacement part.

CABINET PARTS

Item	Mfr. Part No.
------	---------------

Models 25VT-H60 and 25VT-H80

Badge (SHARP) (1)	HBDGB1008MESA
Button - Control (1)	JBTN-0229PESA
Button - Eject (1)	JBTN-0225PESA
Button - Power (1)	JBTN-0160PESA
Cabinet Assembly	CCABA1260WEV0
Cabinet Rear	GCABB1114MEKA
Cassette Flap-Door (1)	HDECQ0081PESA
Control Button Assembly (1)	CBTN-0228WEV0
Decoration LED (1)	HDECQ0079PESA
Spring - Cassette Flap-Door (1)	MSPRD0123AJFJ
Spring - Button - Power (1)	MSPRC0003MEFW
Window Remote Control (1)	GCOVA0052PESA

(1) Part of cabinet assembly.

ELECTRICAL PARTS LIST continued

COILS & TRANSFORMERS			
Item No.		Function/Rating	Mfr. Part No.
#	DY601	Yoke Horiz 1.27mH Vert 19.0mH	RCiLH0081MEZZ
	FB702	Ferrite Bead	RBLN-0037CEZZ
	FB704	Ferrite Bead	RBLN-0036CEZZ
	FB725	Ferrite Bead	RBLN-0037CEZZ
	FB726	Ferrite Bead	RBLN-0054CEZZ
	FB727, 28, 31	Ferrite Bead	RBLN-0037CEZZ
	FB732	Ferrite Bead	RBLN-0020CEZZ
	FB3101	Ferrite Bead	RBLN-0037CEZZ
	FB6601	Ferrite Bead	RBLN-0036CEZZ
	FB7701, 02	Ferrite Bead	RBLN-0036CEZZ
	L201	68µH	VP-MK680K0000
	L202	1.2µH	VP-XF1R2K0000
	L204	68µH	VP-XF680K0000
	L211	56µH	VP-XF560K0000
	L301	22µH	VP-MK220K0000
	L321	56µH	VP-XF560K0000
	L401	8.2µH	VP-XF8R2K0000
	L402	12µH	VP-MK120K0000
	L404	2.7µH	VP-XF2R7K0000
	L405	6.8µH	VP-XF6R8K0000
	L406	8.2µH	VP-XF8R2K0000
	L431	68µH	VP-XF680K0000
	L616	-	RCiLZ0621CEZZ
#	L700	Degaussing	RCiLG0007MEZZ
#	L701	Line Filter RCiLF0090CEZZ	
	L725	-	RCiLP0238CEZZ
	L726, 27	-	RCiLP0236CEZZ
	L851	82µH	VP-MK820K0000
	L2202	82µH	VP-XF820K0000
	L2203	470µH	VP-MK471K0000
	L2205	15µH	VP-XF150K0000
	L2206	150µH	VP-XF151K0000
	L2208	100µH	VP-XF101K0000
	L2209	4.7µH	VP-DF4R7K0000
	L2210	560µH	VP-MK561K0000
	L3101, 02	10µH	VP-XF100K0000
	L3103	Oscillator	RCiLB0012PEZZ
	L3301	100µH	VP-MK101K0000
	L5501	10µH	VP-XF100K0000
	L5502	12µH	VP-XF120K0000
	L5506	39µH	VP-XF390K0000
	L6601	220µH	VP-DF221K0000
	L6602, 03	8200µH	VPADK822J0000
	L6604	-	VPADK153J0000
	L6605	12µH	VP-DF120K0000
	L7701	1µH	VP-XF1R0K0000
	T201	VCO	RCiLi0614CEZZ
	T301	SIF Detector	RCiLi0605CEZZ
#	T611	Horizontal Drive	RTRNZ0447CEZZ
#	T612 (1)	Horizontal Output	RTRNF0127PEZZ
#	T701	Power	RTRNZ0096PEZZ
	T6601	Oscillator	RTRNH0053GEZZ
# For SAFETY use only equivalent replacement part.			
(1) Screen and focus controls are part of T612.			

MISCELLANEOUS			
Item No.	Description	Mfr. Part No.	Notes
CF301	Filter	RFiLC0267CEZZ	4.5MHz
CF302	Filter	RFiLC0029TAZZ	4.5MHz
CF401	Trap	RFiLC0013CEZZ	4.5MHz
CF601	Crystal	RFiLA0034CEZZ	503kHz
CF3101	Filter	RFiLC0121GEZZ	-
# F701	Fuse	QFS-B4023CEZZ	4Amp, 125V
FH701	Fuse Holder	QFSHD1017CEZZ	For F701
FH702	Fuse Holder	QFSHD1018CEZZ	For F701
# P1	Line Cord	QACCD3042CESA	AC, Polarized
J401	Jack	QJAKF0040CEZZ	Assembly
RMC2601	Receiver	RRMCU0222CEZZ	Remote
# RY701	Relay	RRLYU0036CEZZ	Degaussing
# RY725	Relay	RRLYJ0071CEZZ	Power
S501	Switch	QSW-B0015CEZZ	Vertical Linearity
S2501	Switch	QSW-K0077GEZZ	Stop/Eject
S2502	Switch	QSW-K0077GEZZ	Play
S2503	Switch	QSW-K0077GEZZ	Fast Forward
S2504	Switch	QSW-K0077GEZZ	Rewind
S2601	Switch	QSW-K0124CEZZ	Power
S3101	Switch	QSW-K0077GEZZ	Reset
S3102	Switch	QSW-K0077GEZZ	Channel Up
S3103	Switch	QSW-K0077GEZZ	Channel Down
S3104	Switch	QSW-K0077GEZZ	Volume Up
S3105	Switch	QSW-K0077GEZZ	Volume Down
S3106	Switch	QSW-K0077GEZZ	Crystal Picture
S3107	Switch	QSW-K0077GEZZ	Record
S7701	Switch	-	Record Tip
SC851	Socket	QSOCV0913CEZZ	CRT
SF201	Filter	RFiLC0236CEZZ	SAW
SP1	Speaker	VSP0080P-E98S	3" Round, 8 Ohms, 2W
# TU201	Tuner	VTUVTSR6UF78/	UHF/VHF
# V101	CRT	VB63LAV61X/*S	A63LAV61X
X801	Crystal	RCRSB0001PEZZ	3.58MHz
X5502	Crystal	RCRSB0204GEZZ	3.58MHz
X7701	Crystal	RCRSB0159GEZZ	-
58*	Head	RHEDT0031AJZZ	Full Erase
59*	Head	RHEDU0085GEZZ	Audio Control, Assembly
60*	Motor	RMOTM1062GEZZ	Loading
61*	Motor	RMOTN2053GEZZ	Capstan
62*	Motor	RMOTP1129GEZZ	Drum Drive
63*	Drum	DDRMW0014TEX0	Upper and Lower, Assembly
	Magnet	PMAGF3001MEZZ	Purity/Convergence
	PC Board	DUNTK8604WEV1	CRT
	PC Board	DUNTK9054WEV3	Main
	PC Board	DUNTK9055WEV3	Power Sw
	PC Board	DUNTK9066WEV0	Sensor
	PC Board	DUNTK9056WEV3	VCR Key
	Transmitter (1)	RRMCG1242PESA	Remote
	Transmitter (2)	RRMCG1244PESA	Remote
	Wedge	PSPAG0012MEZZ	Yoke Positioning (3 Used)
# For SAFETY use only equivalent replacement part.			
* Indicates the item number used in Mechanical Parts List and Exploded Views.			
(1) Used in model 25VT-H60.			
(2) Used in model 25VT-H80.			

SHARP

MODELS 25VT-H60, 25VT-H80 (CHASSIS VN-61)