

SET 1890 FOLDER 2
 ZENITH MODELS L1720W, W9, L1740W, W9, L1780W, W9, L3710W, SL1741W

PHOTOFACT® Folder

with CIRCUITRACE®

For Supplier Address See PHOTOFACT Index

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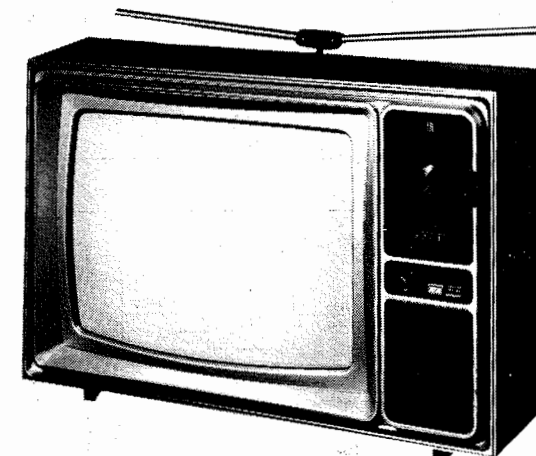
COLOR TV

MODEL REMOTE

L1720W ---
 L1720W9 ---
 L1740W ---
 L1740W9 ---
 L1780W ---
 L1780W9 ---
 L3710W ---
 SL1741W 130-9A/124-16

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Model L1740W

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HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. 80PD2434

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For SAFETY use only equivalent replacement part.

--- Circuitry not used in some versions

--- Circuitry used in some versions

See ports list

Nominal value

Ground

Common tie point

Waveforms: triggered scope, keyed rainbow generator

Item numbers in rectangles appear in the

alignment/adjustment instructions.

Supply voltage maintained as shown at input.

Voltages measured with digital meter, no signal.

Controls adjusted for normal operation.

Arrow at control indicates direction of advance.

Terminal identification may not be found on unit.

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

Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITRACE

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SAFETY PRECAUTIONS

PRODUCT SAFETY SERVICING GUIDELINES FOR COLOR TELEVISION RECEIVERS

CAUTION: No modification of any circuit should be attempted. Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines. To do otherwise increases the risk of potential hazards and injury to the user.

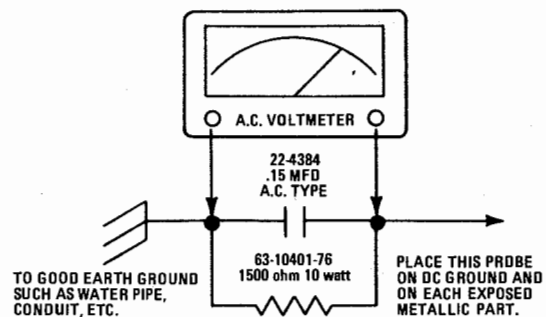
SAFETY CHECKS

After the original service problem has been corrected, a check should be made of the following:

SUBJECT: FIRE & SHOCK HAZARD

1. Be sure that all components are positioned in such a way as to avoid possibility of adjacent component shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Never release a repair unless all protective devices such as insulators, barriers, covers, shields, strain reliefs, and other hardware have been reinstalled per original design.
3. Soldering must be inspected to discover possible cold solder joints, frayed leads, damaged insulation (including AC cord), solder splashes or sharp solder points. Be certain to remove all loose foreign particles.
4. Check the "across-the-line" capacitor and other components for physical evidence of damage or deterioration and replace if necessary. Follow original layout, lead length and dress.
5. No lead or component should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. All critical components (shaded on the schematic diagram and parts lists) such as fuses, flameproof resistors, capacitors, etc. must be replaced with exact Zenith types. Do not use replacement components other than those specified or make unrecommended circuit modifications.

After re-assembly of the set always perform an AC leakage test at DC ground test point and on all exposed metallic parts of the cabinet, (the channel selector knobs, antenna terminals, handle and screws) to be sure the set is safe to operate without danger of electrical shock. **DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST.** Use an AC voltmeter, having 5000 ohms per volt or more sensitivity, in the following manner; Connect a 1500 ohm 10 watt resistor (63-10401-76), paralleled by a .15 mfd. 150V AC type capacitor (22-4384) between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and .15 mfd. capacitor. Reverse the AC plug and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed .75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



SUBJECT: IMPLOSION

1. All Zenith picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage during installation. Avoid scratching the tube.
2. Use only recommended Zenith replacement tubes.

SUBJECT: X-RADIATION

1. Be sure procedures and instructions to all service personnel cover the subject of X-radiation. The only potential source of X-rays in current TV receivers is the picture tube. However, this tube does not emit X-rays when the H.V. is at the factory specified level. It is only when the H.V. is excessive that X-radiation may be generated.

Refer to the X-ray Precaution Label which is located inside each television receiver for the correct high voltage. The proper value is also given in the applicable service manual. Operation at higher voltages may cause a failure of the picture tube or high voltage supply and, under certain circumstances, may produce radiation in excess of desirable levels.

2. Only Zenith specified CRT anode connectors must be used. The degaussing shield also serves as an X-ray shield in color sets, do not defeat its purpose.
3. It is essential that the serviceman has available an accurate and reliable high voltage meter. The calibration of the meter should be checked periodically against a reference standard, such as the one available at your distributor.
4. When the high voltage circuitry is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be run up and down while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly. We suggest that you and your service organization review test procedures so that voltage regulation is always checked as a standard servicing procedure, and that the high voltage reading be recorded on each customer's invoice.
5. When trouble shooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage compartment. Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.
6. Color transistor sets manufactured after June, 1973 ("E" Line and later), use new type picture tubes specifically designed to withstand higher operating voltages without causing excessive X-radiation. It is strongly recommended that the C.R.T. shop fixture be equipped with the new type tube. Addition of a permanently connected H.V. meter to the H.V. anode of the shop C.R.T. fixture is advisable. The C.R.T.'s in these sets should never be replaced with any other tube types as that may result in excessive X-radiation and possible violation of the law.
7. Starting with late production "E" line color sets, a special four lead damper capacitor was used. Its feature, the interlocking four leads, should not be defeated. However, each time one of these sets is serviced, for whatever reason, the part number of the capacitor should be examined. If it is the 22-7233 type (used in "E" and "F" model lines only), that capacitor must be replaced with an improved recommended type (22-7504-01). Please refer to Zenith Tech Topics (Issue No. 87) for the details. Your distributor will answer any questions, or you may write to Zenith for further details.

SUBJECT: TIPS ON PROPER INSTALLATION

1. Never install any receiver in a closed-in recess, cubbyhole or closely fitting shelf space.
2. Never install a receiver over, or close to a heat duct, or in the path of heated air flow.
3. Avoid conditions of high humidity such as; outdoor patio installations where dew is a factor, near steam radiators where steam leakage is a factor, etc.
4. Avoid placement where draperies may obstruct rear venting. The customer should also avoid the use of decorative scarves or other coverings which might obstruct ventilation.
5. Wall and shelf mounted installations using a commercial mounting kit, must follow the factory approved mounting instructions.
6. A receiver mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom. Bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage tests on customized installations.
7. Caution customers against the mounting of a receiver on a sloping shelf or in a tilted position, unless the receiver is properly secured.
8. A receiver in a roll-about cart should be stable in its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
9. Caution customers against the use of a cart or stand which has not been listed by Underwriters Laboratories, Inc. for use with their specific model of television receiver.

Courtesy of the Manufacturer

HV SHUTDOWN CIRCUIT TESTS

Electronic Power Sentry color TV sets utilize a safety HV shutdown circuit for protection. In the event of a failure involving the M-10 (9-160-03) Module, exchange the Module with a new module or a factory rebuilt module. **DO NOT TRY TO REPAIR IT IN THE CUSTOMER'S HOME.**

A functional test of the HV shutdown circuit must be performed to check for a proper operation if you attempt servicing these receivers in the high voltage deflection, power supply, or in the HV shutdown circuitry.

1. Measure the DC voltage across the Zener diode (CRX3355) cathode to ground. It should be approximately 10VDC. Temporarily connect a 1K Ohm 5%, 1/2w resistor across the Zener diode (CRX3355). The HV should shutdown. This checks out the circuit operation.

A more elaborate test to determine the actual HV value at which HV shutdown will occur can be made as follows:

CAUTION: It will normally not be necessary to perform this test unless components in the HV shutdown circuit are replaced or if the operational test described in the previous paragraph was unsuccessful. It should be recognized that significantly elevated HV will be produced during this test and adequate care should be taken to avoid picture tube damage.

2. Adjust the picture and brightness controls to zero. Connect a 40KV HV meter to the HV supply in the set. Temporarily connect (with clip leads) a 1.8Megohm 1/2w 5% resistor between pins 1 and 2 of connector 3R (located near the HV transformer). Observe an increase in HV. Reduce this resistance (using a variable resistor) in small increments while observing the increase in HV until the HV shutdown occurs. **Caution:** To prevent circuit damage do not use less than 470K Ohm. The HV shutdown must be accomplished before the HV reaches 32KV for 9-160-03 and 36KV for 9-160-04. Most sets will shutdown well below these values; however, if no HV shutdown occurs even up to these values the circuit must be repaired.

CAUTION: In a receiver where the high voltage shutdown circuit is being activated for any reason, **DO NOT**, under any circumstance, disconnect the protective gap device which is used across RX3377. To do so may create a potential shock hazard and may result in serious damage not only to the M-10 board but to other parts of the receiver.

3. In case of shutdown circuit activation, in order to determine if there is a breakdown in the high voltage transformer which is causing the protective gap device to activate the shutdown circuit, the following test can be conducted:

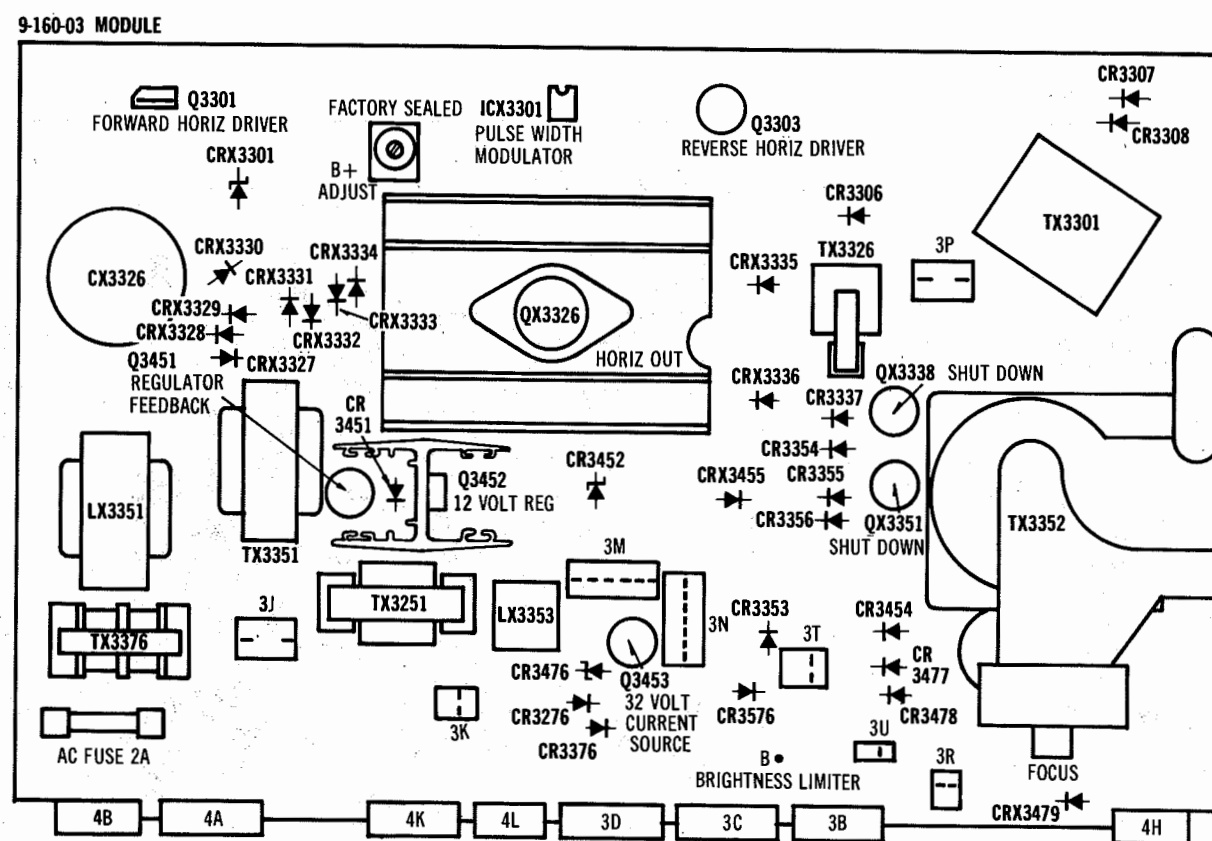
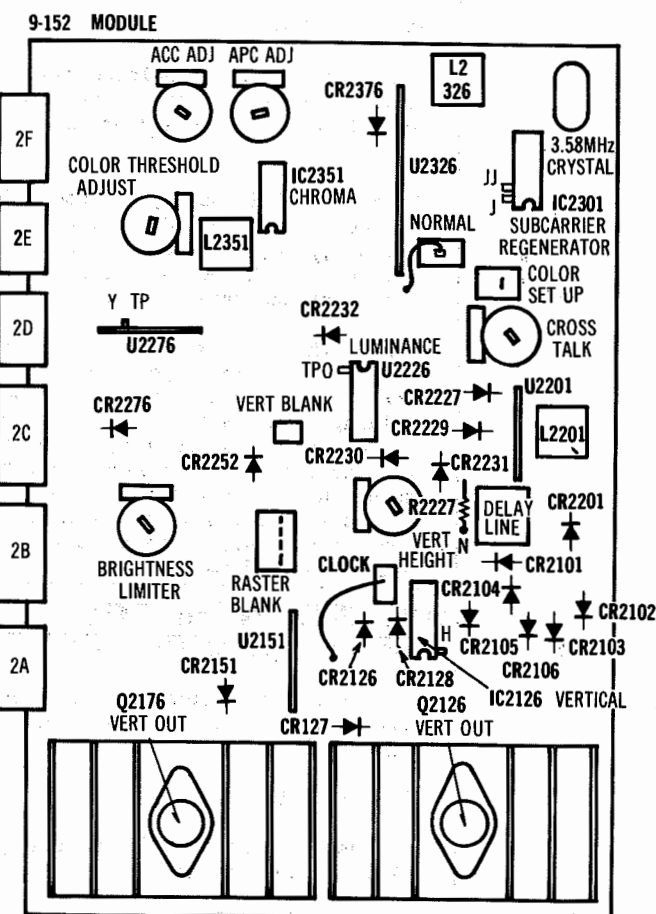
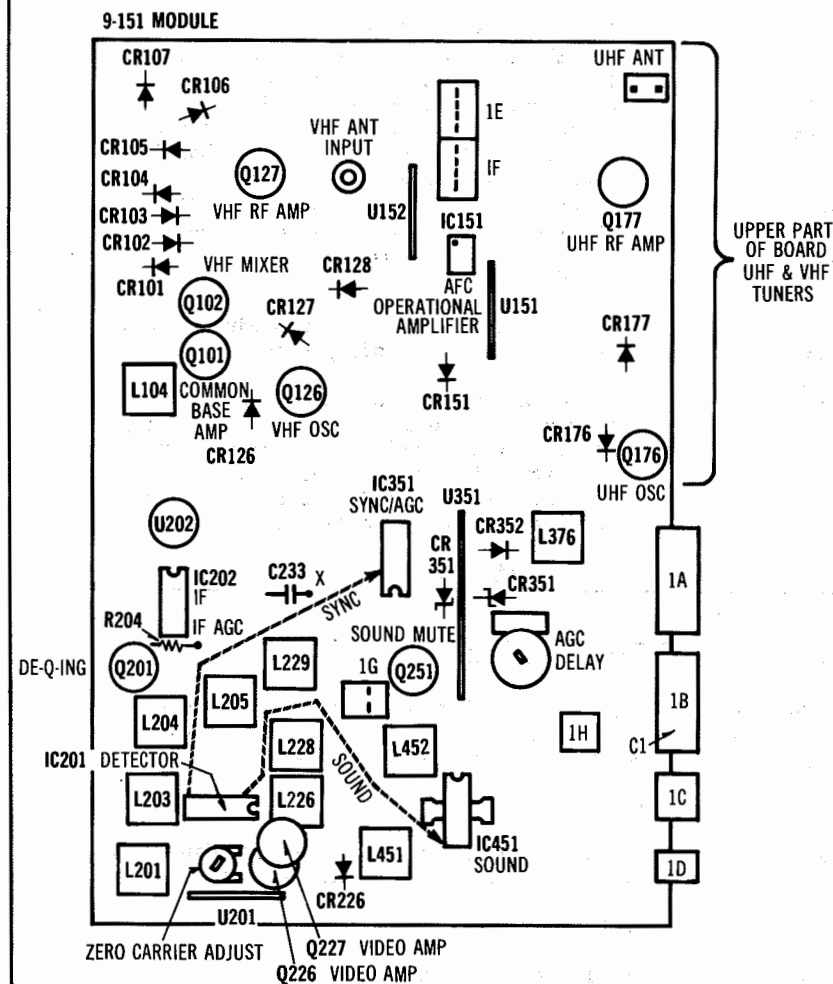
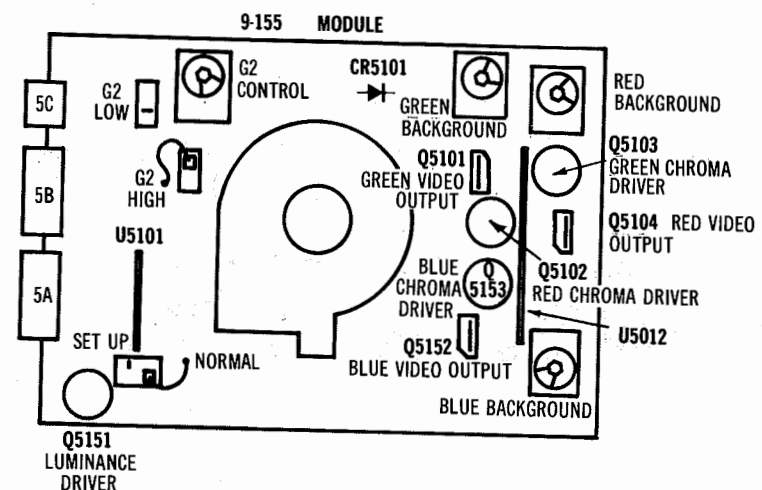
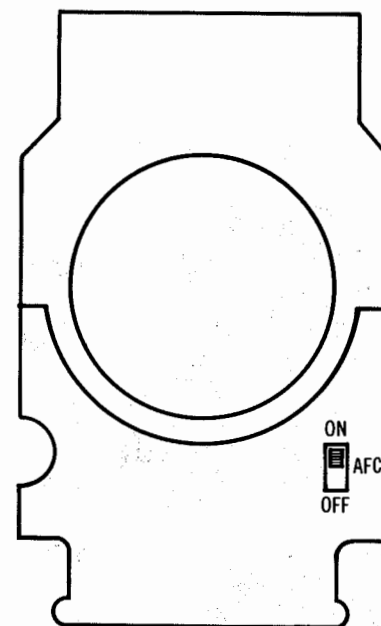
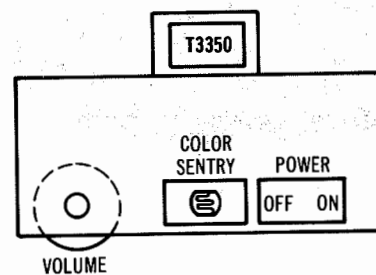
CAUTION: Use a line isolation transformer and disconnect all test equipment, including the antenna connections, from the TV set prior to this test because it involves tying together the hot and cold grounds.

Temporarily connect a jumper wire across RX3377. If the high voltage remains on, most likely the high voltage transformer is breaking down and the board must be replaced. If the shutdown circuit is still activating even with the jumper wire from hot to cold grounds, then the problem is due to either a malfunction in the shutdown circuit or in the high voltage circuit, in which case the high voltage is excessively high and is in turn causing the shutdown circuit to activate. To determine where the fault is do not disconnect the shutdown circuit, as that may cause the high voltage to rise excessively, without first plugging the receiver into a variable AC supply, such as a variac. Adjust the AC supply voltage to zero and after temporarily disconnecting the Zener diode (CRX3355), slowly increase the AC supply variac while monitoring the high voltage with a meter capable of reading at least up to 40KVDC. If HV does not exceed 28KV for 9-160-03 or 32KV for 9-160-04 modules even when the AC supply is at 120VAC, the fault is probably in the HV shutdown circuit and the circuit should be repaired. If the high voltage exceeds the above values by more than two kilovolts, the HV shutdown circuit is functioning as intended and the condition which is making the high voltage excessive should be identified and repaired. Once repairs are made, the HV shutdown circuit must be reconnected and tested per the above outlined functional tests.

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

Courtesy of the Manufacturer

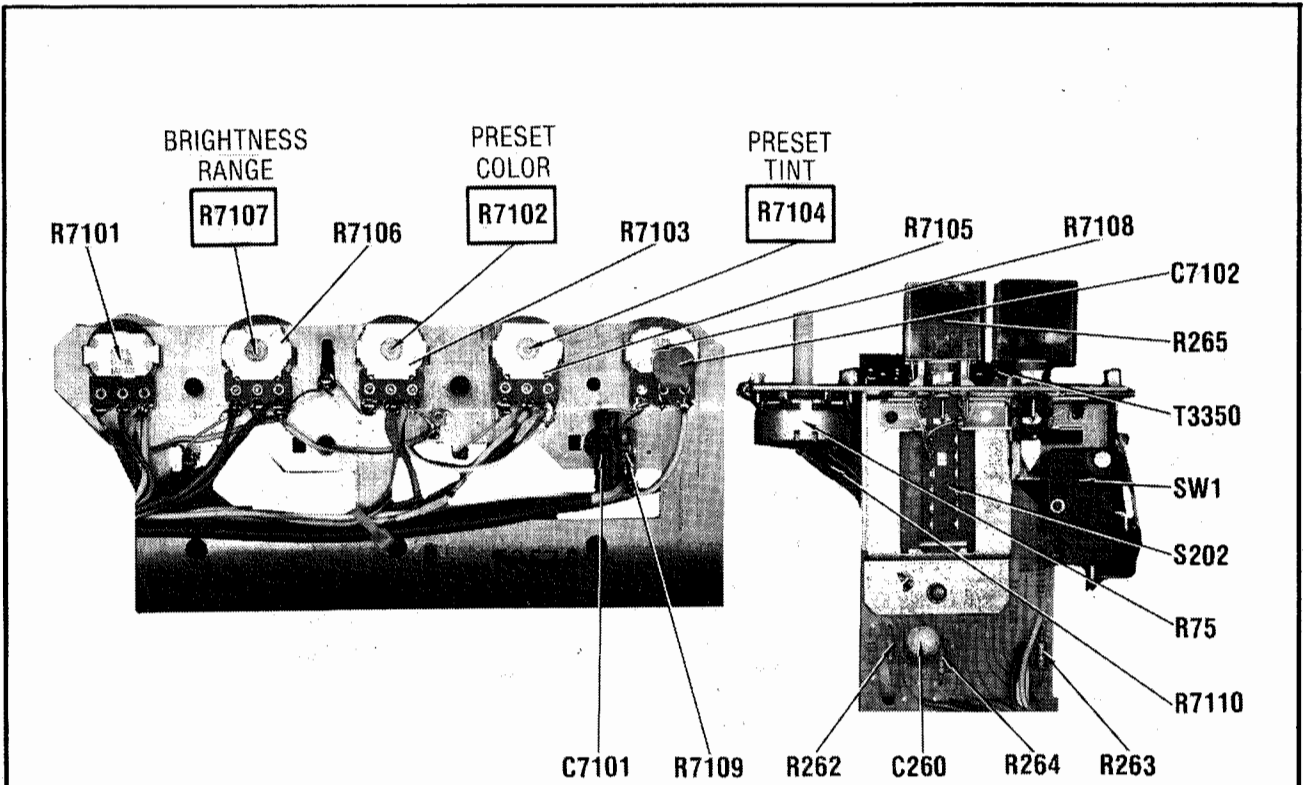


**ZENITH MODELS L1720W,W9, L1740W,W9,
L1780W,W9, L3710W, SL1741W**

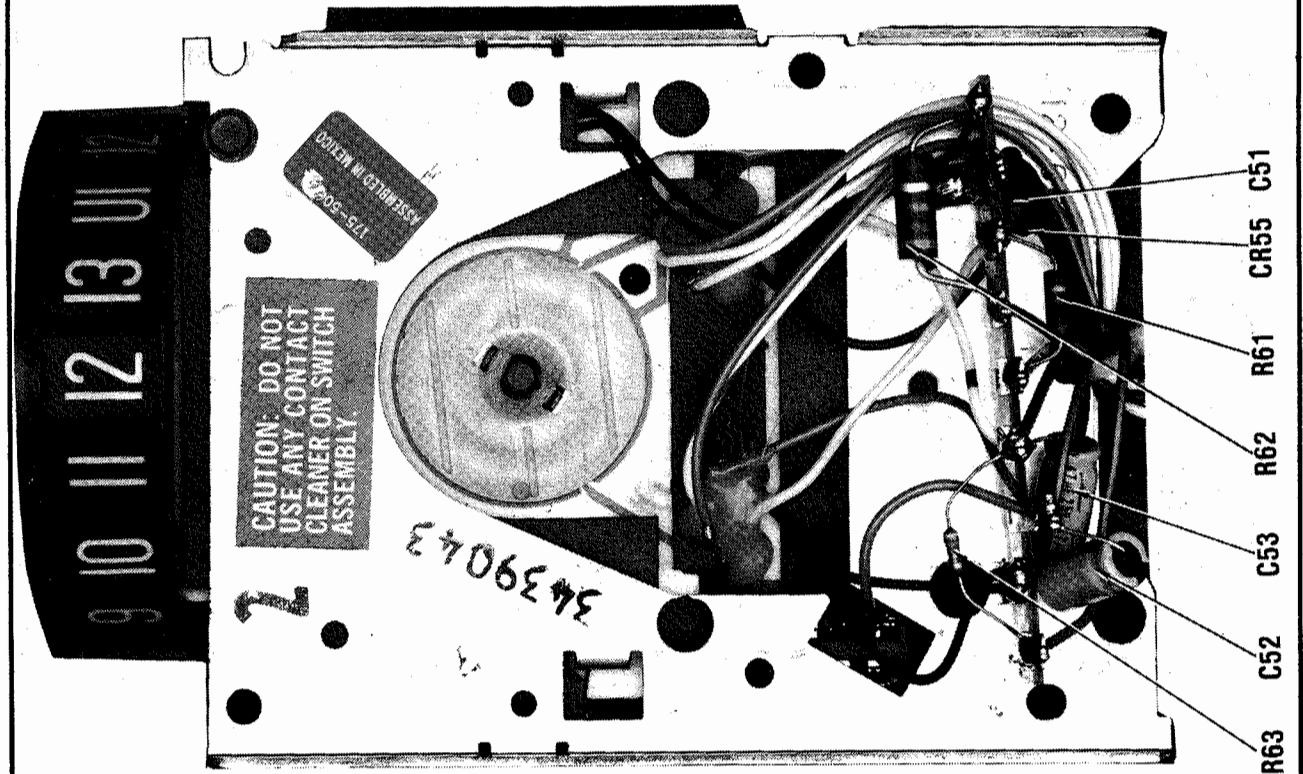
FOLDER 2

PLACEMENT CHART

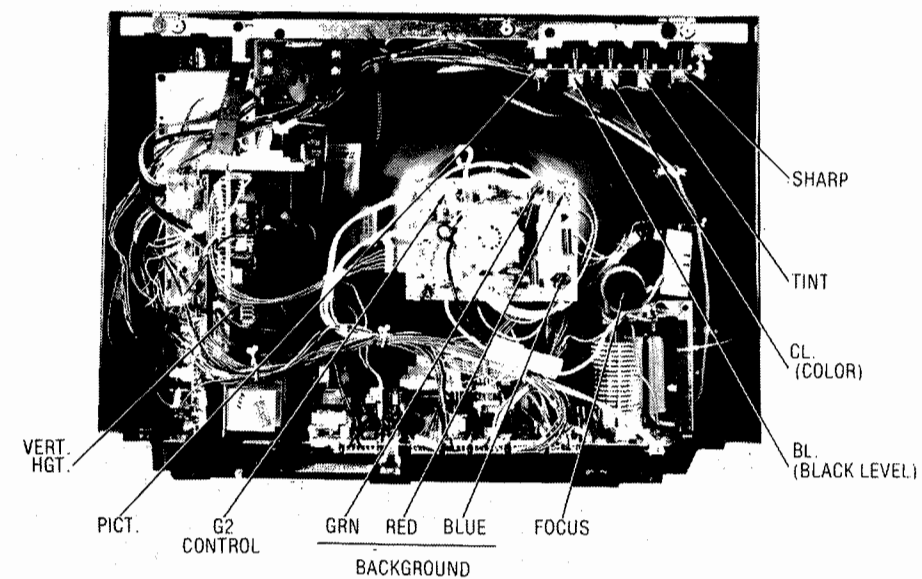
PLACEMENT CHART



CONTROL ASSEMBLY



CHANNEL SELECTOR (175-5096)



CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove seven screws holding cabinet back and remove back. Removal of screw holding video panel access door is not necessary.

Disconnect CRT socket, HV anode, degaussing coil connector, deflection yoke connectors 3D and 3P, connectors 1C, 1D, 1E, 1F, 1G, 2E, 3N, 3U, 4A, AC power supply connector and ground wires.

Remove three screws holding chassis frame, one screw holding upper brace and slide chassis frame back. Remove one screw holding ground strap to M1-M2 module frame, two screws holding secondary control bracket to upper frame, and two screws holding antenna terminal board to upper frame. Remove secondary control panel, antenna terminal board and main chassis from cabinet.

CRT may be removed at this point of disassembly. Remove volume control knob from cabinet front. Remove nut holding headphone jack to cabinet side, two screws holding front panel control bracket to cabinet front, five screws holding channel selector assembly to cabinet front, remove channel selector assembly and front panel control from cabinet.

CRT REMOVAL

Follow "Chassis Removal" procedure and lay set facedown on a soft protective surface.

Loosen and remove deflection yoke from neck of CRT. Remove four screws holding degaussing coil shield to cabinet front and lift shield out of cabinet. Remove four screws holding CRT to cabinet front and lift CRT out of cabinet.

Do not lift CRT by the neck.

SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

FUSE DEVICES

A 2-amp fuse is used for AC line protection. (See Placement Chart.)

LAMP ACCESSIBILITY

Tuner assembly must be removed. See Disassembly Instructions.

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the horiz osc coil. (See Placement Chart.)

WIDTH

The width may be varied by proper adjustment of width coil. (See Placement Chart.)

FOCUS

The focus may be varied by a focus control. (See photo, Cabinet-Rear View.)

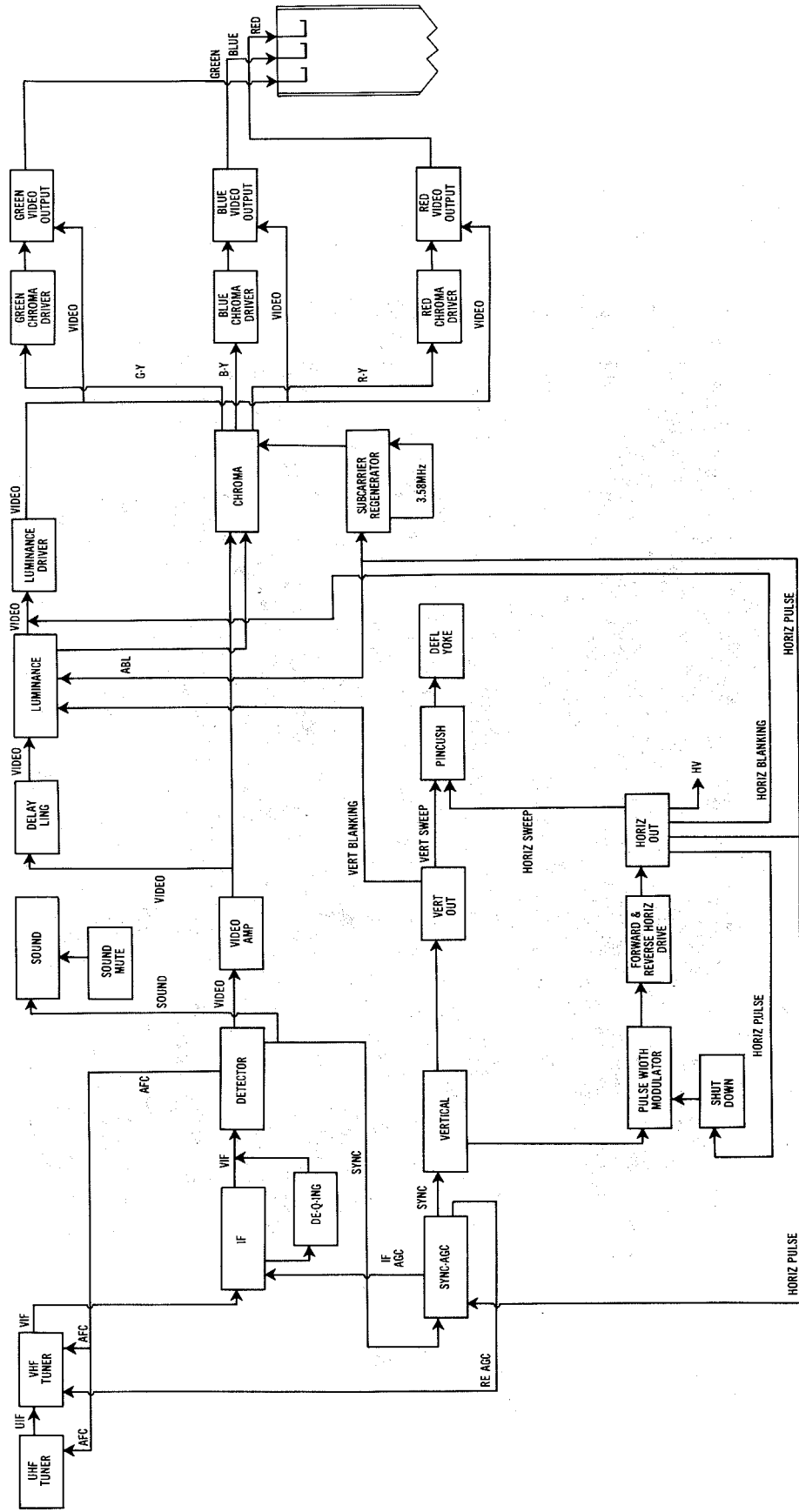
AGC

The AGC may be varied by AGC Delay control.

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

BLOCK DIAGRAM



RESISTANCE MEASUREMENTS

MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS																			
P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	IC201	IC202	IC351
1	INC	1255	0	5790	29K	764	764	173	3450	1899	6150	0	3440	7590	7590		1255	6810	INF
2	NC	1255	0	5790	29K	764	764	173	3450	1899	6150	0	3440	7590	7590		1255	6810	INF
3	INF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15K	218K	6820
4	NC	5790	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4670	11K	11K
5	NC	29K	764	764	173	3450	1899	6150	0	3440	7590	0	3440	7590	7590	0	4670	11K	11K
6	NC	764	764	173	3450	1899	6150	0	3440	7590	0	3440	7590	7590	0	3440	12K	8660	8200
7	FIL	764	764	173	3450	1899	6150	0	3440	7590	0	3440	7590	7590	0	3440	12K	8200	8200
8	FIL	173	3450	1899	6150	0	3440	7590	0	3440	7590	0	3440	7590	0	3440	12K	1192	1192
9	840K	INF	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
10	143K	3450	1899	6150	0	3440	7590	0	3440	7590	0	3440	7590	7590	0	3440	684	109K	109K
11	8M	1899	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6110	6110	6110
12	143K	6150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5670	5670	5670
13	143K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1960	1960	1960
14		3440	6790	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510	3510
15		7590															INF	INF	INF
16		7590															9270	9270	9270

(1) This reading will vary depending upon the condition of the electrolytic in the circuit.
(2) Reading depends upon polarity of meter connections.
(3) Measured to AC ground.

TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 120VAC. Allow a 20-minute warm-up period for receiver and test equipment.

Suggested Alignment Tools: GC ELECTRONICS
L201, L203, L226, L228, L229, L2326 9296, 9297, 9300
L1102 (L102) (VHF IF Output), L204, L205 9440
L451, L452, L376 9293, 9294

PRELIMINARY INSTRUCTIONS

Set the channel selector to the highest unused channel. Set scope sweep to external. Connect scope vertical input to scope vertical input on sweep/marker generator. Connect scope external horizontal input to scope horizontal input on sweep/marker generator. Ground test equipment to TV chassis unless specified otherwise. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown.

Connect a +6 volt bias to Test Point IF AGC.
Connect a DC meter to Test Point C1. With no signal adjust Zero Carrier Adjust Control (R226) for +6.6 volts.

VIDEO IF ALIGNMENT

DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To Test Point C1.	To Test Point A (mixer input).	44MHz (10MHz Sweep)	41.25MHz	Adjust L204 for MINIMUM. See Figure 1.
"	"	"	41.25MHz 42.17MHz 44.00MHz 45.75MHz	Adjust L205 and L1102 (L102) (VHF IF Output) for maximum gain and symmetry of response. L205 and L1102 (L102) (VHF IF Output) affect overall response. See Figure 2.
"	"	"	41.25MHz 42.17MHz 44.00MHz 45.75MHz	Adjust Oscillator Coil (L203) to move the oscillation from the right side of the response curve to the left side. Adjust Limiter Coil (L229) for maximum gain at 45.75MHz marker. See Figure 3.
"	"	"	41.25MHz 42.17MHz 44.00MHz 45.75MHz	Adjust Oscillator Coil (L203) to return the oscillation back to its proper position on the right side of the response curve. See Figure 2.

4.5MHz TRAP ALIGNMENT

Tune in a strong TV signal and set the contrast at maximum. Adjust the fine tuning until a beat pattern is visible on the screen. Adjust L201 for MINIMUM beat interference.

SOUND IF ALIGNMENT

Tune in a station and adjust L452 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce the signal while aligning for undistorted output by adjusting L451.

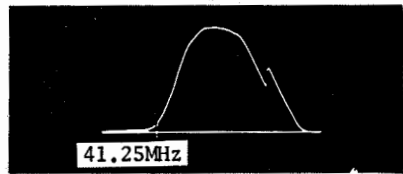


Figure 1

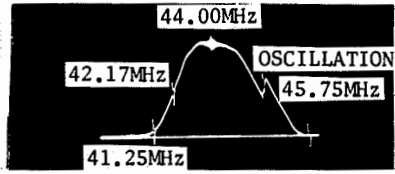


Figure 2

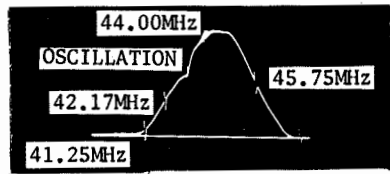
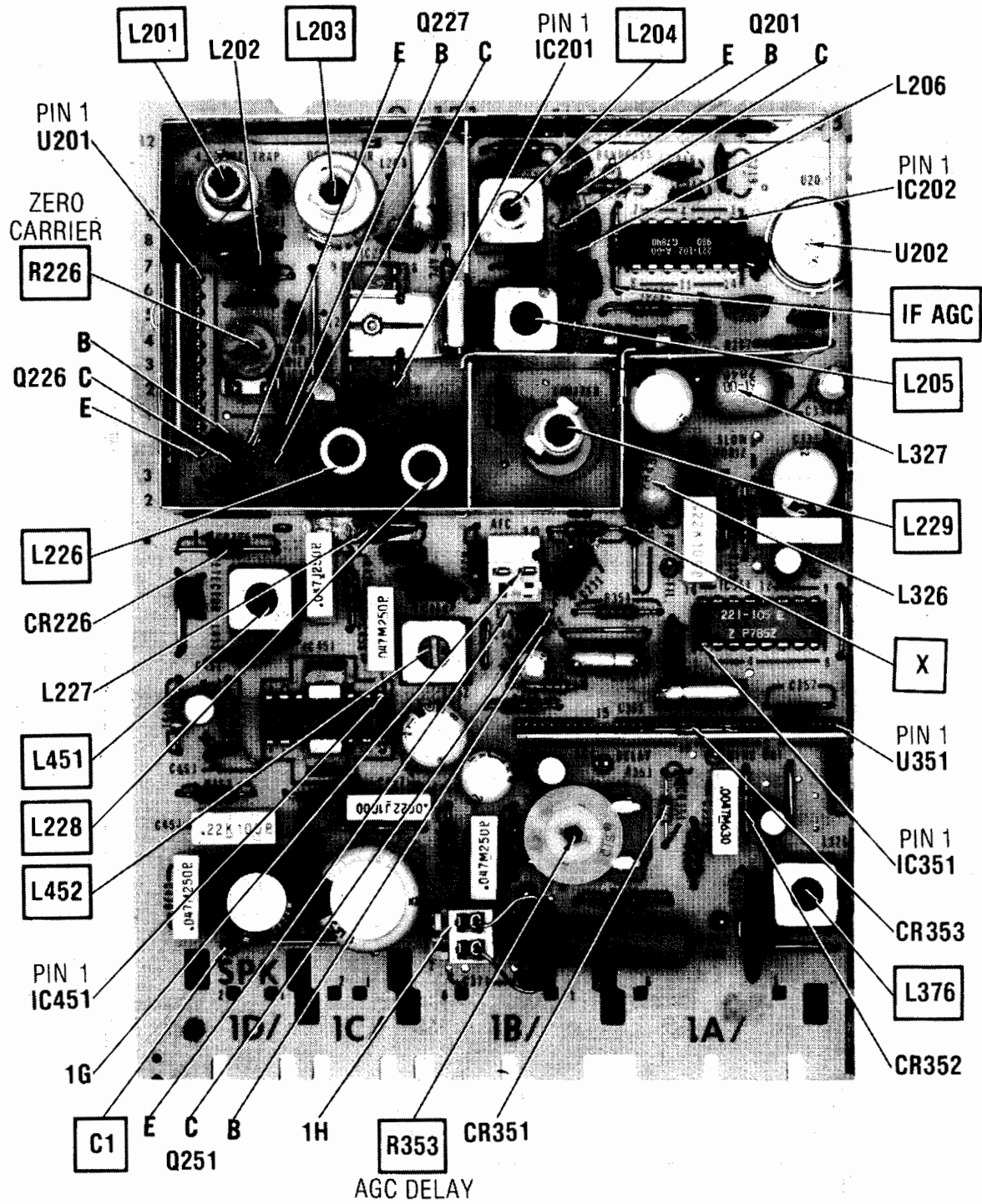


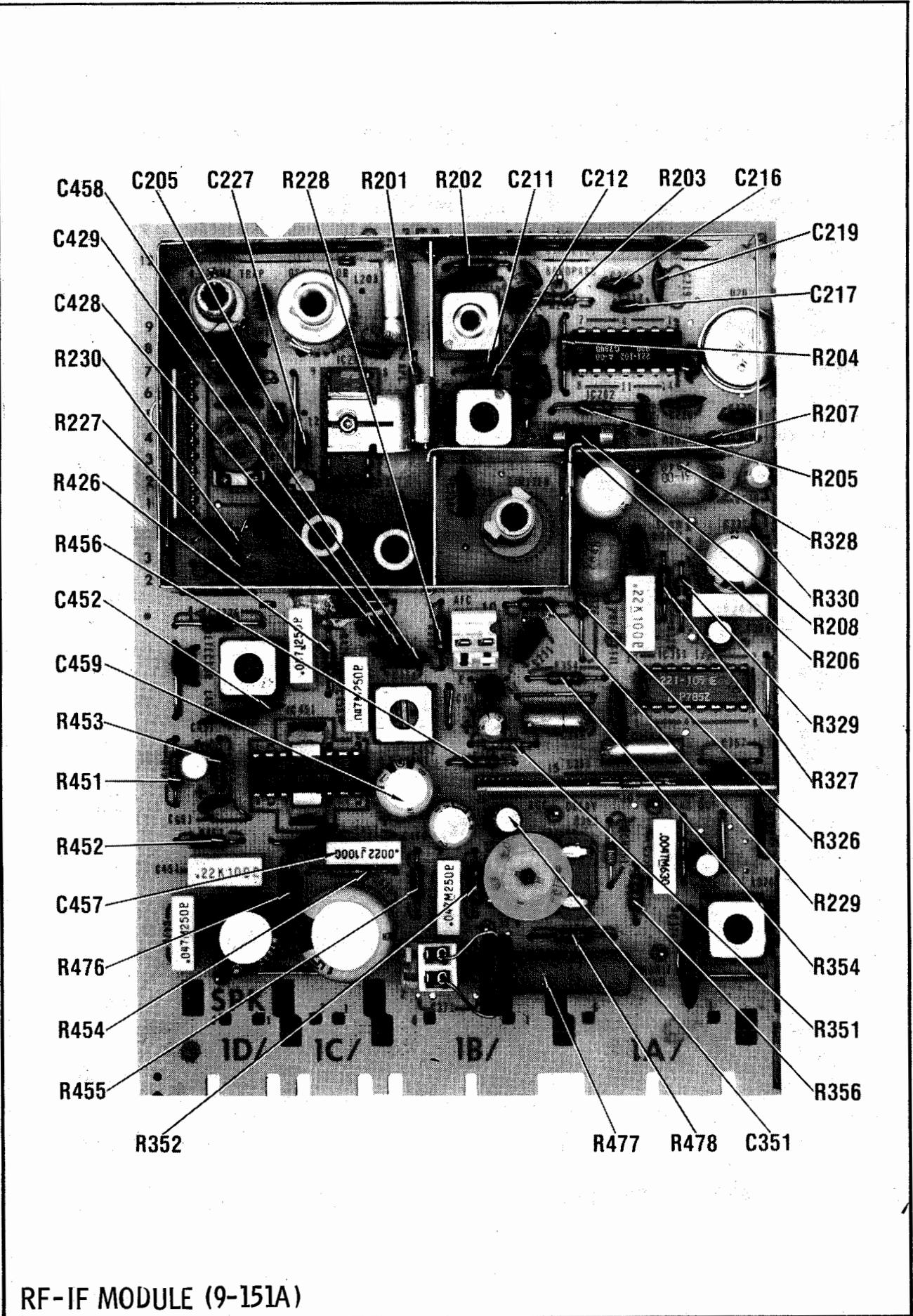
Figure 3



RF-IF MODULE (9-151A)

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2



RF-IF MODULE (9-151A)

TV ALIGNMENT INSTRUCTIONS (Continued)

AUTOMATIC FINE TUNING ALIGNMENT

Connect as explained in preliminary instructions unless specified otherwise. Place AFC Switch to On position.				
DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To X (AFC Output).	To Test Point A (mixer input).	44.00MHz (10MHz Sweep)	41.25MHz 45.75MHz	Adjust L226 to place 45.75MHz marker at crossover. Adjust L228 to place 41.25MHz marker at crossover. See Figure 4.

CHROMA BANDPASS ALIGNMENT

Connect as explained in preliminary instructions. Set color level to maximum, tint control to mid-range. Place Color Alignment Jumper to Color Set-up position.				
DETECTOR PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To 2nd Amp Output Test Point.	To Test Point A (mixer input).	44MHz (10MHz Sweep)	3.08MHz 3.58MHz 4.08MHz	Adjust L2351 for maximum gain and symmetry of response. See Figure 5.
			(4.5MHz Trap)	Inability to obtain proper bandpass alignment may be due to misadjustment of the 4.5MHz trap. Adjust L201 for MINIMUM at 4.5MHz.
Return Color Alignment Jumper to Normal position.				

3.58MHz TRAP ALIGNMENT

This adjustment is made with the set turned Off. Connect a scope and generator across 3.58MHz Trap (L2201). Set generator for 3.58MHz and adjust L2201 for MINIMUM indication on scope.

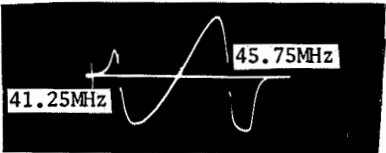


Figure 4

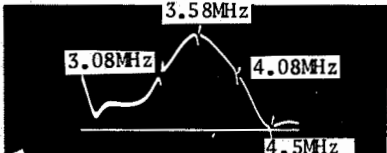
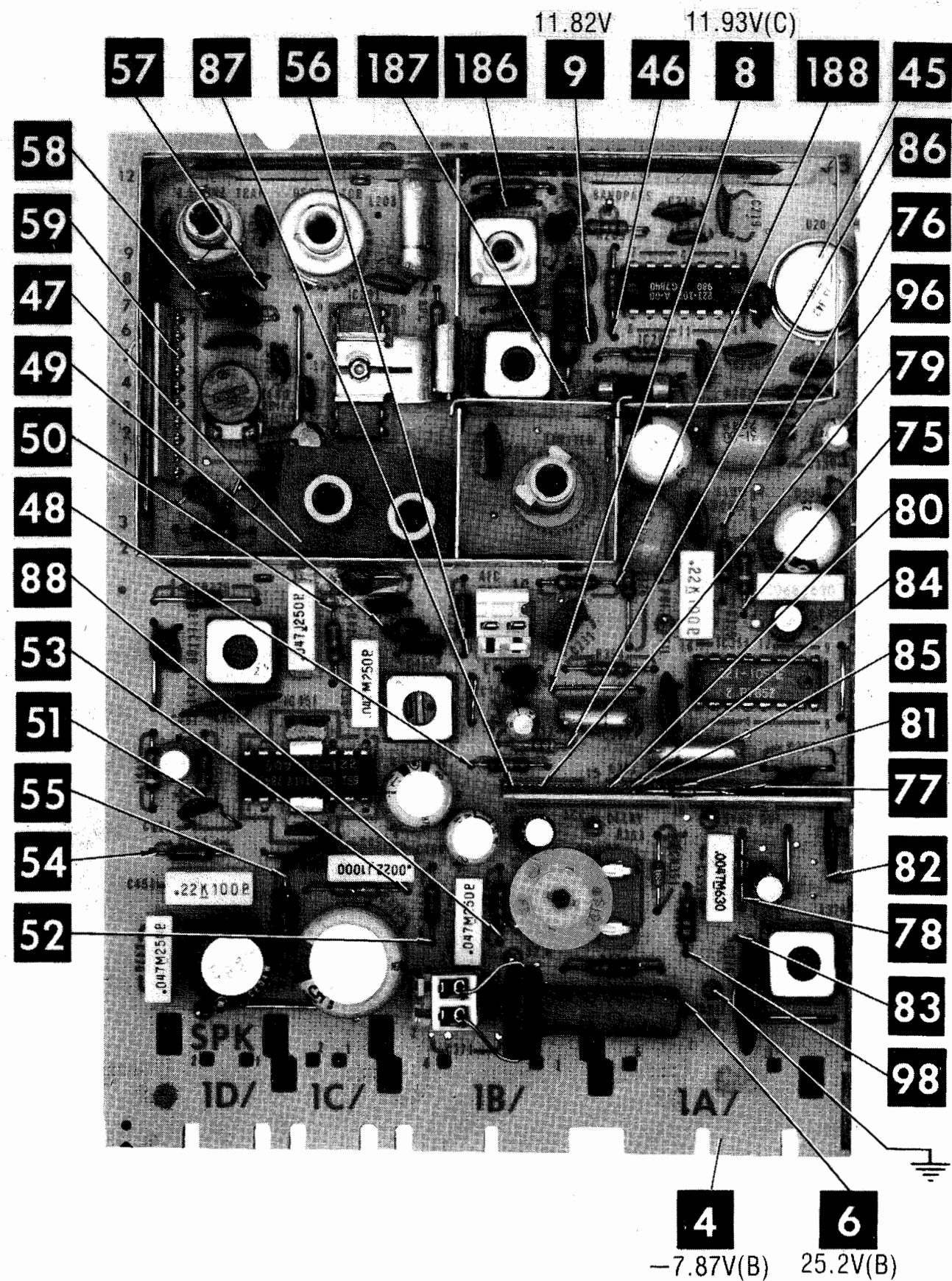


Figure 5

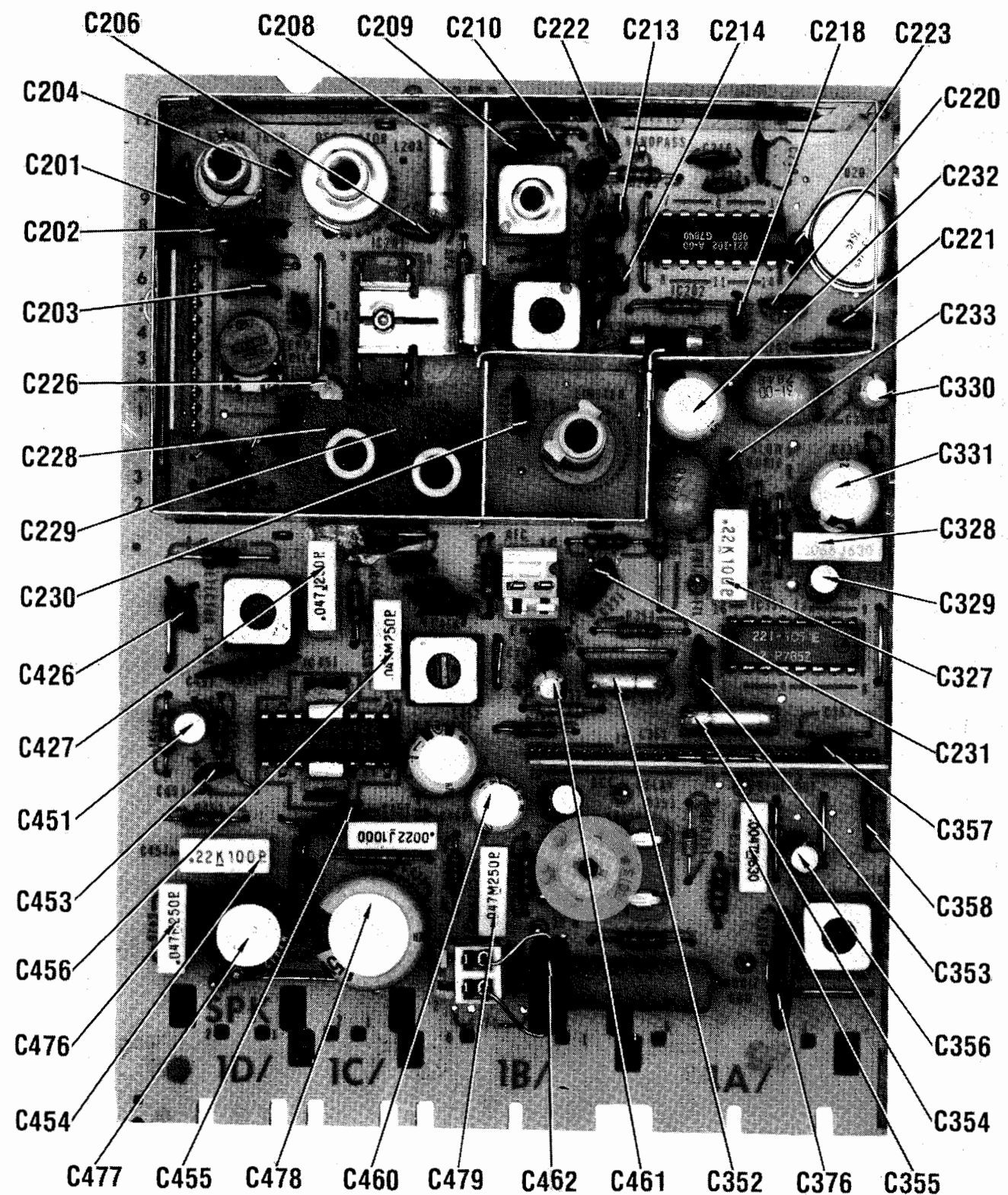
ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2



RF-IF MODULE(9-151A)

A Howard W. Sams CIRCUITRACE® Photo



RF-IF MODULE(9-151A)

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

TROUBLESHOOTING CHECK CHART

The following chart lists component failures most likely to produce the indicated symptoms.

PICTURE or SOUND

NO PIC, NO SOUND, NO RASTER: Fuse, CRX3327 thru CRX3330, CRX3331 thru CRX3334, CRX3352, CR3452, CR3453, CRX3477, CRX3478, CRX3479, CR3451, CR2232, CR3476, CRX3454, 12V Reg, Regulator Feedback, 32 Volt Current Source.

NO PIC, NO SOUND, HAS RASTER: Tuner, IF (IC202), Detector (IC201).

NO PIC, NO SOUND, HAS SNOW: Tuner, AGC (IC351).
NO PIC, HAS SOUND, NO RASTER: Video Amps, CR2201, Luminance (IC2226), Luminance Driver, CRT.

NO PIC, HAS SOUND, HAS RASTER: Video Amps, CR2201, Luminance (IC2226), Luminance Driver.

HAS PIC, NO SOUND: Sound Mute, Sound (IC451).
OVERLOADED PICTURE: AGC (IC202).
LOW OR EXCESSIVE BRIGHTNESS: Video Amps, Luminance (IC2226), Luminance Driver, LDR1.

SYNC

NO VERT SYNC: Vert (IC2126).
NO HORIZ SYNC: Pulse Width Mod (ICX3301).
NO VERT/HORIZ SYNC: Sync (IC351).

RASTER

YELLOW (NO BLUE): Chroma (IC2351), Blue Chroma Driver/Video Output, CRT.

CYAN (NO RED): Chroma (IC2351), Red Chroma Driver/Video Output, CRT.

MAGENTA (NO GREEN): Chroma (IC2351), Green Chroma Driver/Video Output, CRT.

SWEEP

NO RASTER, HAS SOUND: HV Rect (TX3352), CR3306, CRT.

NO RASTER, NO SOUND: Shut Down, Pulse Width Mod (ICX3301), Forward/Reverse Horiz Drivers, Horiz Out, CR3353, CRX3355.

NO VERT DEFLECTION: Vert (IC2126), CR3103, CR2104, CR2106, Vert Out, CR2127, CR2151.

POOR VERT LIN OR FOLDOVER: Vert Out, CR2103, CR2104, CR2106.

POOR HORIZ LIN OR FOLDOVER: Forward/Reverse Horiz Drivers, Horiz Out.

NARROW PICTURE: Horiz Drivers/Out.
VERT OFF FREQUENCY: Vert (IC2126).
HORIZ OFF FREQUENCY: Pulse Width Mod (ICX3301).

COLOR (B/W operating normally)

NO COLOR: Chroma (IC2351).
WEAK COLOR: Chroma (IC2351).
NO COLOR SYNC: Chroma (IC2351), Subcarrier Regenerator (IC2301).

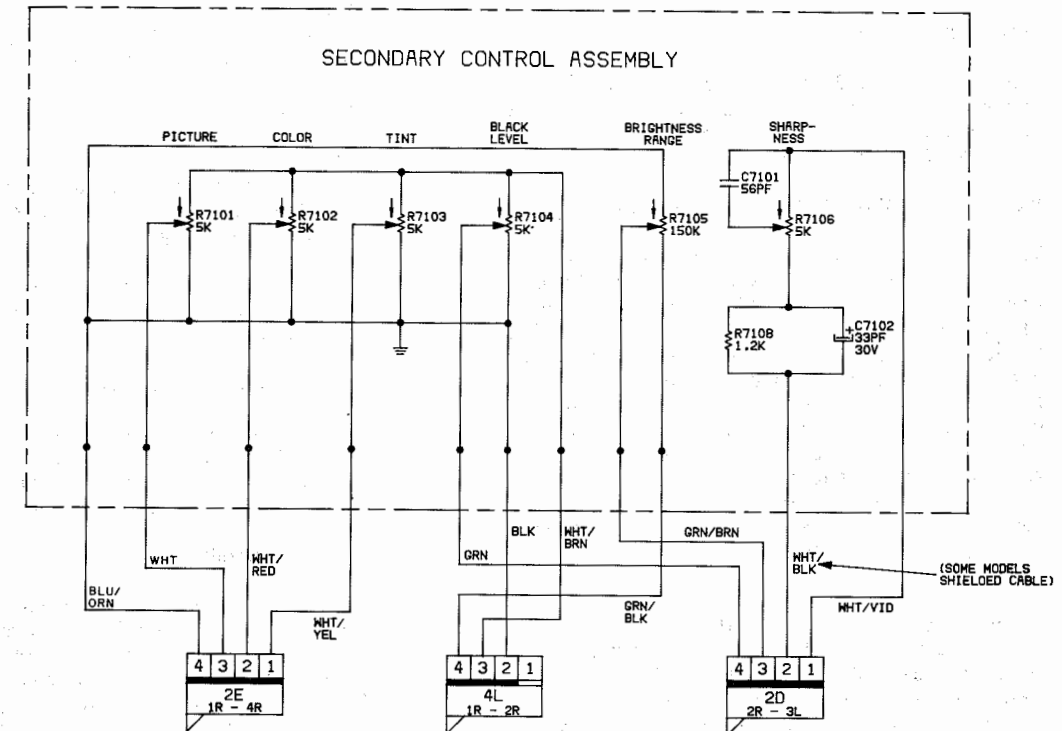
NO GREEN: Chroma (IC2351), Green Chroma Driver/Video Output.

NO BLUE: Chroma (IC2301), Blue Chroma Driver/Video Output.

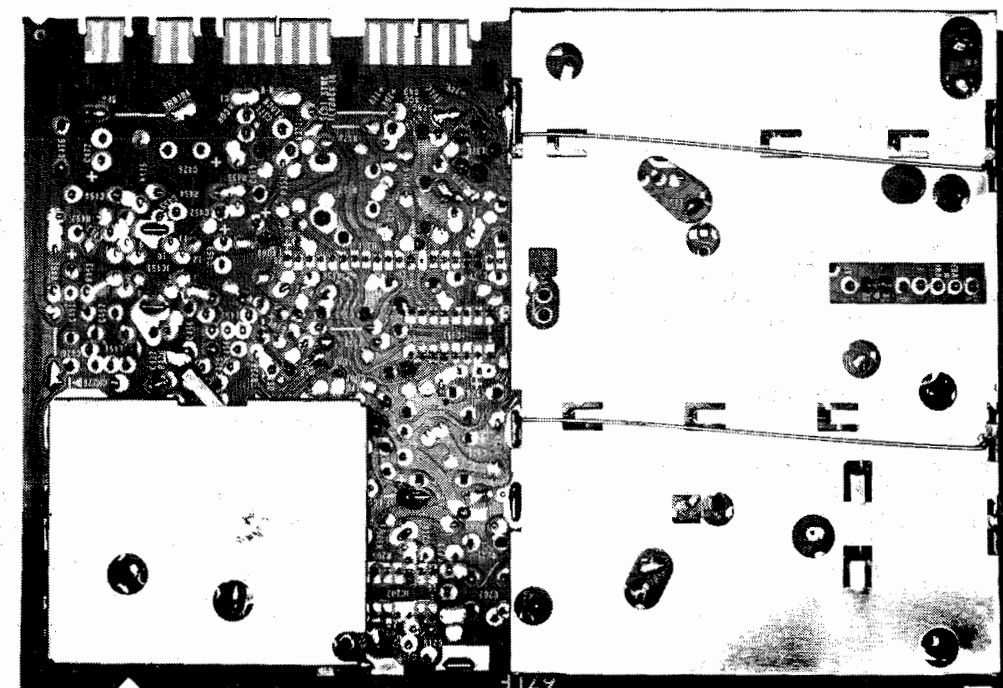
NO RED: Chroma (IC2301), Red Chroma Driver/Video Output.

INCORRECT HUE (TINT): Chroma (IC2351).

IMPORTANT SAFETY NOTICE SECONDARY CONTROL BRACKET IS ISOLATED FROM DC (COLD) GROUND.



Courtesy of the Manufacturer



RF-IF MODULE SHIELD LOCATION

SET 1890 FOLDER 2

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

MISCELLANEOUS ADJUSTMENTS

HORIZONTAL OSCILLATOR (HORIZONTAL AND VERTICAL CLOCK) ADJUSTMENT

Tune in a local station and adjust all controls for a normal picture. Adjust Horiz Osc Coil (L376) to a point where it is virtually impossible to lose horizontal or vertical sync while switching from channel to channel.

ZERO CARRIER ADJUSTMENT

Tune to an unused channel and disconnect antenna. Connect a DC meter to C1, low side to ground. Adjust Zero Carrier Adjust Control (R226) for 6.6 volts.

BRIGHTNESS RANGE AND LIMITER ADJUSTMENTS

Tune in a picture and allow set to warm-up 5 minutes. Turn Picture Control and Brightness Limiter Control (R2278) fully counterclockwise. Connect a jumper from Test Point N (Junction R2227 and L2202) to ground. Turn Black Level Control to center detent. Adjust Brightness Range Control (R7107) to a point where raster is just extinguished. Wire a 10K-ohm potentiometer as a rheostat. Connect the rheostat in series with a 3330-ohm resistor between Test Point Y T.P. and ground. Connect the low side of a DC meter to Brightness Limiter Test Point B, high side to ground.

Adjust the 10K-ohm rheostat for .875 volts DC. Move the DC meter to T.P. O (Pin 1, IC2226), low side to ground. Adjust Brightness Limiter Control (R2278) for a reading between 3.3 volts and 3.6 volts. Remove jumper, rheostat, resistor and DC meter. Tune in a picture and touch up Brightness Range Control for proper blacks if necessary.

HIGH VOLTAGE CHECK

Connect high voltage meter to picture tube anode. High voltage should read 26KV at MINIMUM brightness and 120 volts AC line.

AGC ADJUSTMENT

Tune in a weak station without snow. Turn AGC Delay Control (R353) to the right until snow appears in the picture, then back until snow just disappears. Check this setting for other weak stations.

COLOR THRESHOLD ADJUSTMENT

Tune to an unused channel and set Color Control to midrange. Rotate Color Threshold Control (R2381) clockwise until color confetti appears on screen, rotate Threshold Control counterclockwise until color confetti just disappears.

CROSS TALK ADJUSTMENT

Connect a color-bar generator to the antenna terminals and tune in a color-bar pattern. Set AFC Switch to On position. Set the Picture Control to MINIMUM and the Color Control to center position. Adjust the Black Level Control until the background changes from black to slightly gray. Adjust the Tint Control to produce a magenta bar. Adjust Cross Talk Control (R2304) for the most uniform magenta color across the bar.

APC ADJUSTMENT

Connect a color-bar generator to the antenna terminals and tune in a color-bar pattern. Set the Tint Control to center position. Place Color Alignment Jumper to Color Set-up position. Adjust APC Control (R2351) for MINIMUM movement of the vertical color bars. Return Color Alignment Jumper to Normal position.

TINT RANGE ADJUSTMENT

Tune in a local station and adjust for a normal color picture. Set the Tint Control to center position. Adjust Tint Center Coil (L2326) for normal skin tones.

ACC ADJUSTMENT

Connect a color-bar generator to the antenna terminals and tune in a color-bar pattern. Place Color Alignment Jumper to Color Set-up position. Connect a DC meter to Test Point Q T.P. Connect a jumper from Test Point J to Test Point JJ and observe meter reading. Remove jumper from Test Point J to Test Point JJ. Adjust ACC Control (R2376) for identical reading. Return Color Alignment Jumper to Normal position.

COLOR SENTRY PRESET ADJUSTMENT

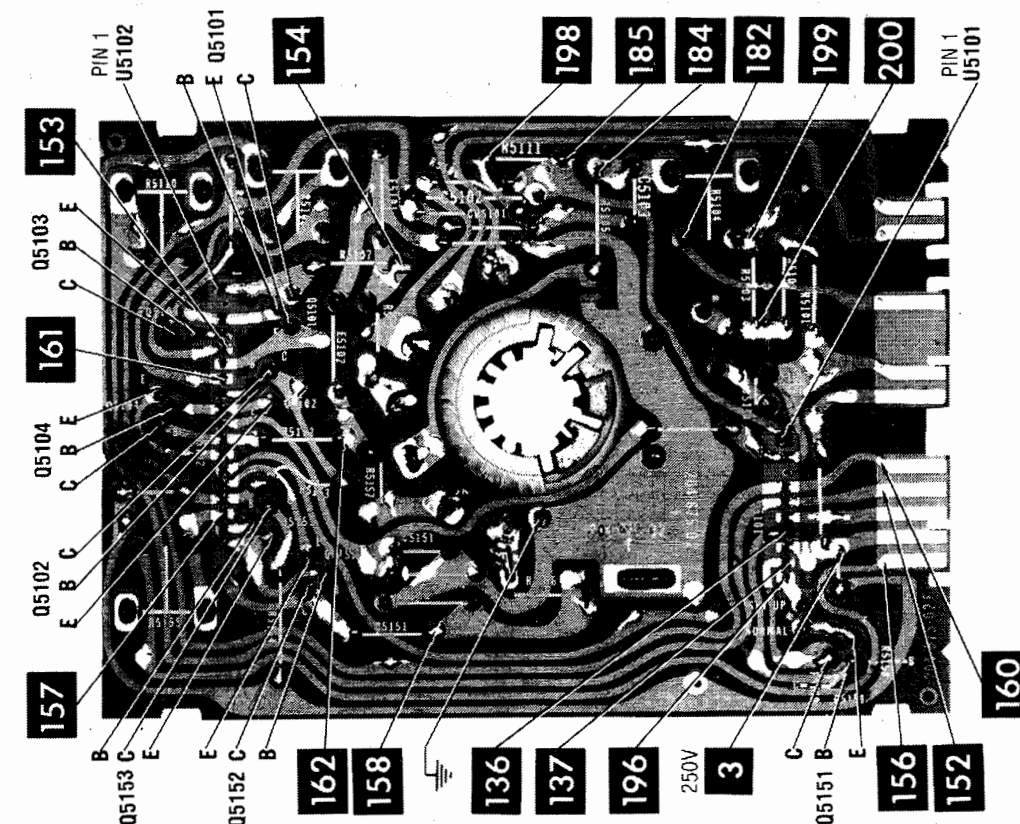
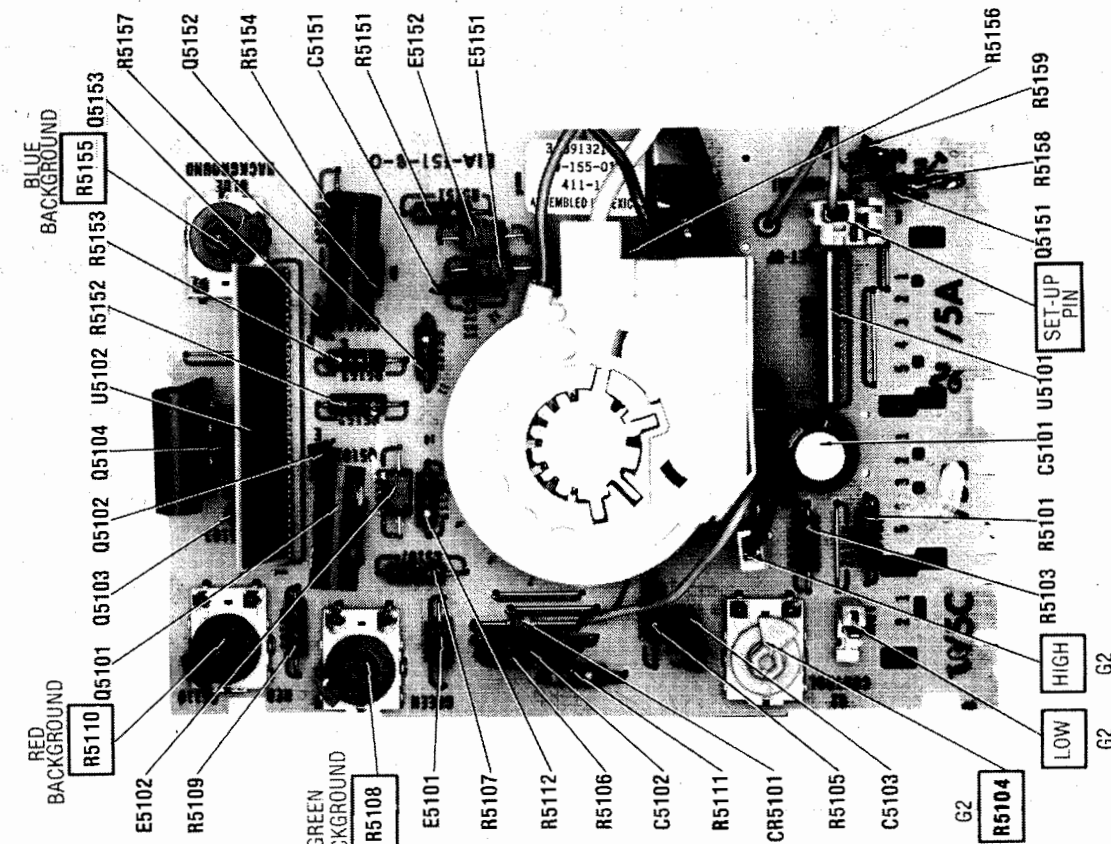
With the Color Sentry Switch in the Off position, tune in a local station. Adjust all controls for a normal color picture. Set the Color Sentry Switch to On position. Adjust Preset Color Level Control (R7102) for normal color saturation. Adjust Preset Tint Control (R7104) for normal skin tones.

COLOR TEMPERATURE ADJUSTMENT

Perform Master G2 Control (R5104) Adjustment before proceeding to Color Temperature Adjustment. See "Purity Adjustment" for Master G2 Control Adjustment procedure.

Place the Red (R5110), Green (R5108), and Blue (R5155) Background Controls to MINIMUM. Advance the Black Level Control to obtain a dim raster. The color of the dim raster will depend on which gun has the highest cut-off point. Advance the Background Controls of the two missing colors to produce a dim, white raster.

NOTE: One Background Control should always be in the full counterclockwise position.



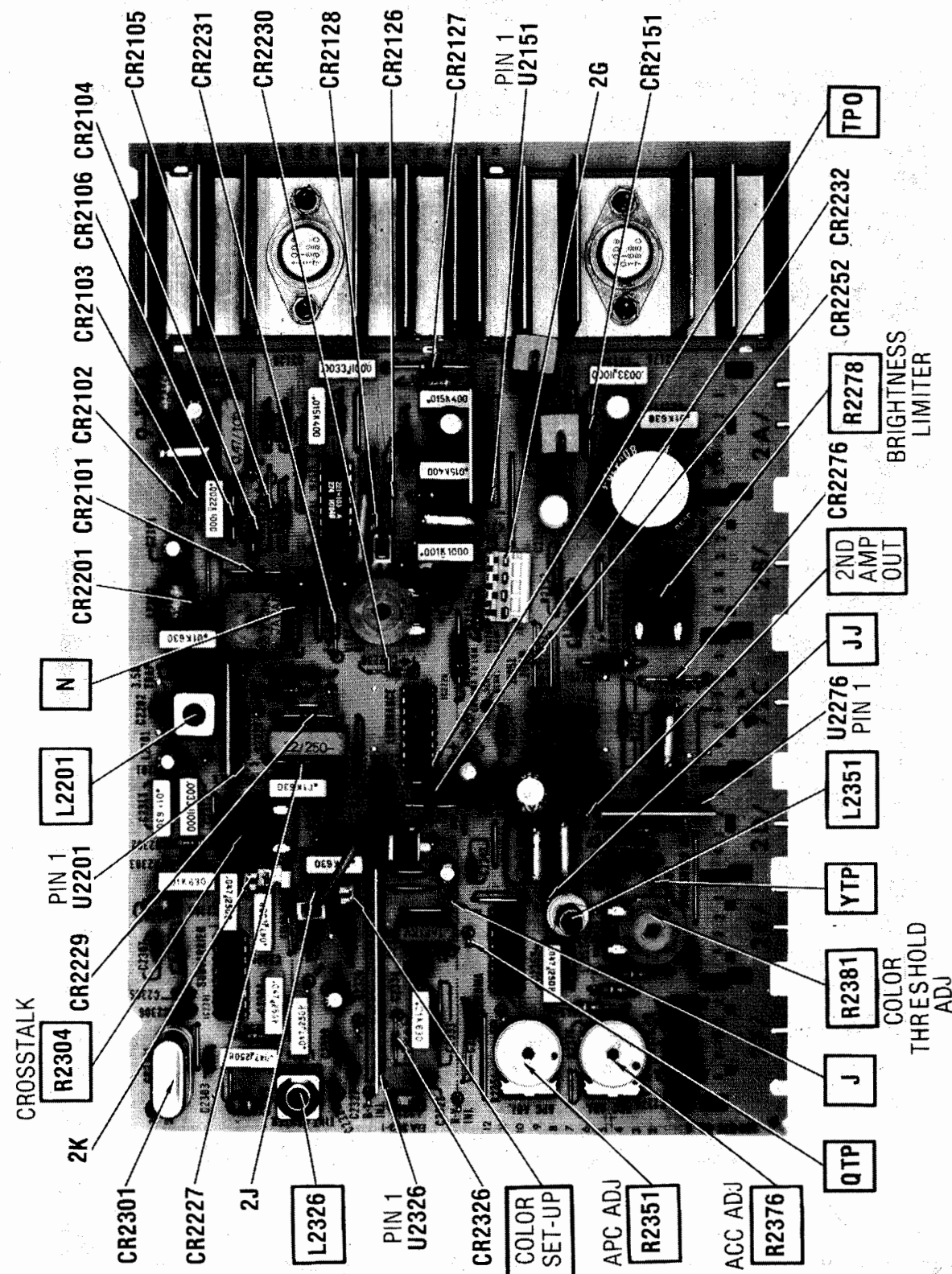
A Howard W. Sams CIRCUITRACE® Photo

VIDEO OUTPUT MODULE (9-155)

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

CHROMA-LUMINANCE MODULE (9-152C)



PURITY ADJUSTMENT

Connect a crosshatch generator to the antenna terminals and tune in a dot pattern. If the picture tube appears to be magnetized use a degaussing coil to demagnetize the picture tube and mounting brackets. If necessary, perform center convergence.

Before proceeding with the Purity Adjustment, the Master G2 Control (R5104) must be adjusted. Set the Color Level, Black Level, and Picture Controls to MINIMUM. Set the Red (R5110), Green (R5108), and Blue (R5155) Background Controls to MINIMUM. Place the Set-up Jumper to the Set-up position. Advance the Master G2 Control until a dim raster appears. If the screen remains black with the Master G2 Control at maximum, move the G2 Range Plug to the High position and adjust the Master G2 Control for a dim raster. Return the Set-up Jumper to Normal position and leave the G2 Range Plug on High position. Advance the Green Background, Black Level, and Picture Controls to produce a green screen. Move deflection yoke back to produce green stripes. Adjust the purity knob to center the green stripes. Turn Green Background Control to MINIMUM. Advance the Red Background Control to produce a red stripe. Slide the deflection yoke forward until a uniform red screen is obtained. If necessary, readjust the purity knob to ob-

tain a pure red screen. Check the purity of all three colors by advancing each Background Control one at a time.

CONVERGENCE ADJUSTMENT

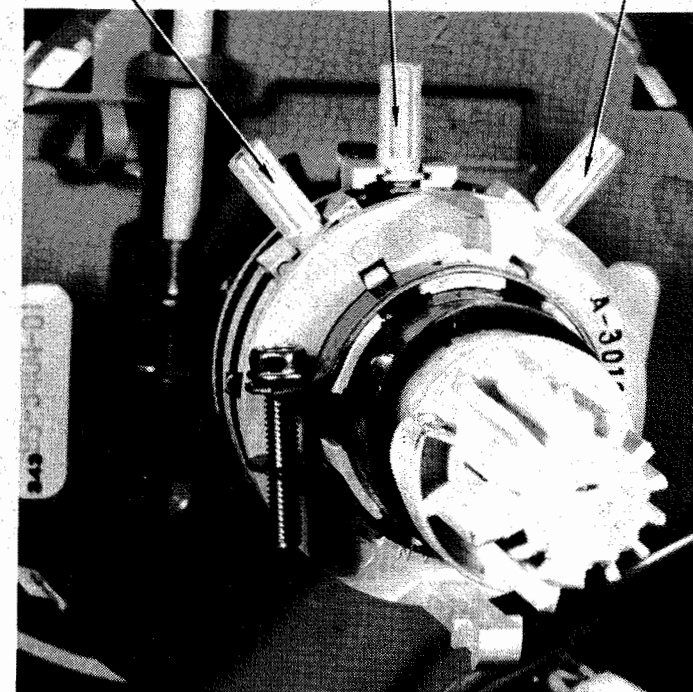
Connect a crosshatch generator to the antenna terminals and tune in a crosshatch pattern. Turn the knob of the four pole static control to converge the red and blue horizontal lines. Rotate the knob of the four pole static control around the neck of the picture tube to converge the red and blue vertical lines.

Turn the knob of the six pole static control to converge the red/blue and green horizontal lines.

Rotate the knob of the six pole static control around the neck of the picture tube to converge the red/blue and green vertical lines.

If necessary, tilt the deflection yoke up or down to converge the vertical center line at the top and bottom of the screen and to converge the horizontal center line at the right and left sides of the screen. Turn top adjustable mounting screw in until it seats on CRT. Tilt the deflection yoke to the right or left to converge the horizontal lines at the top and bottom of the screen and to converge the vertical lines at the right and left sides of the screen. Set the two remaining mounting screws in until they rest on CRT. Tighten all toggle locks.

6-POLE STATIC PURITY 4-POLE STATIC



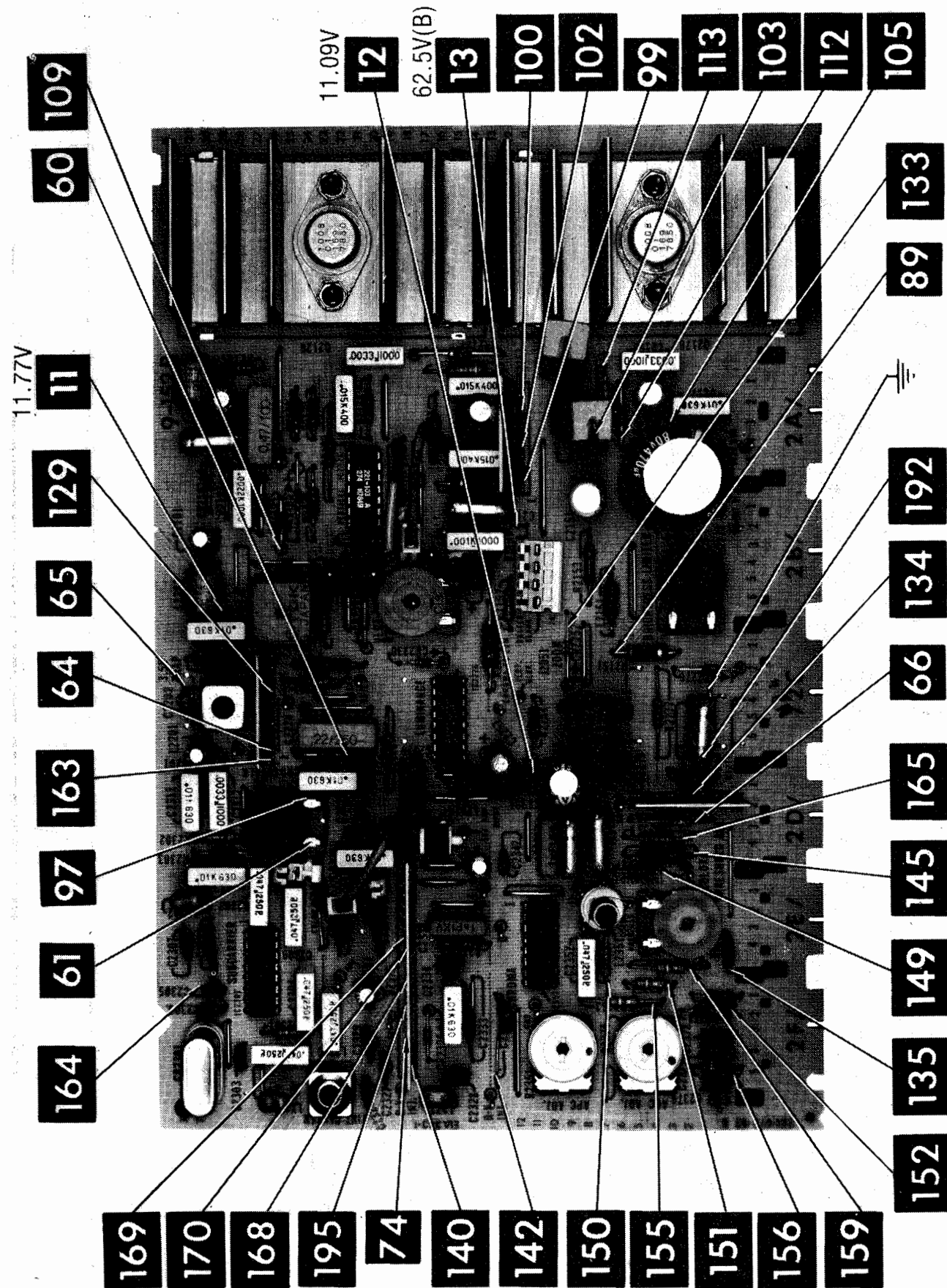
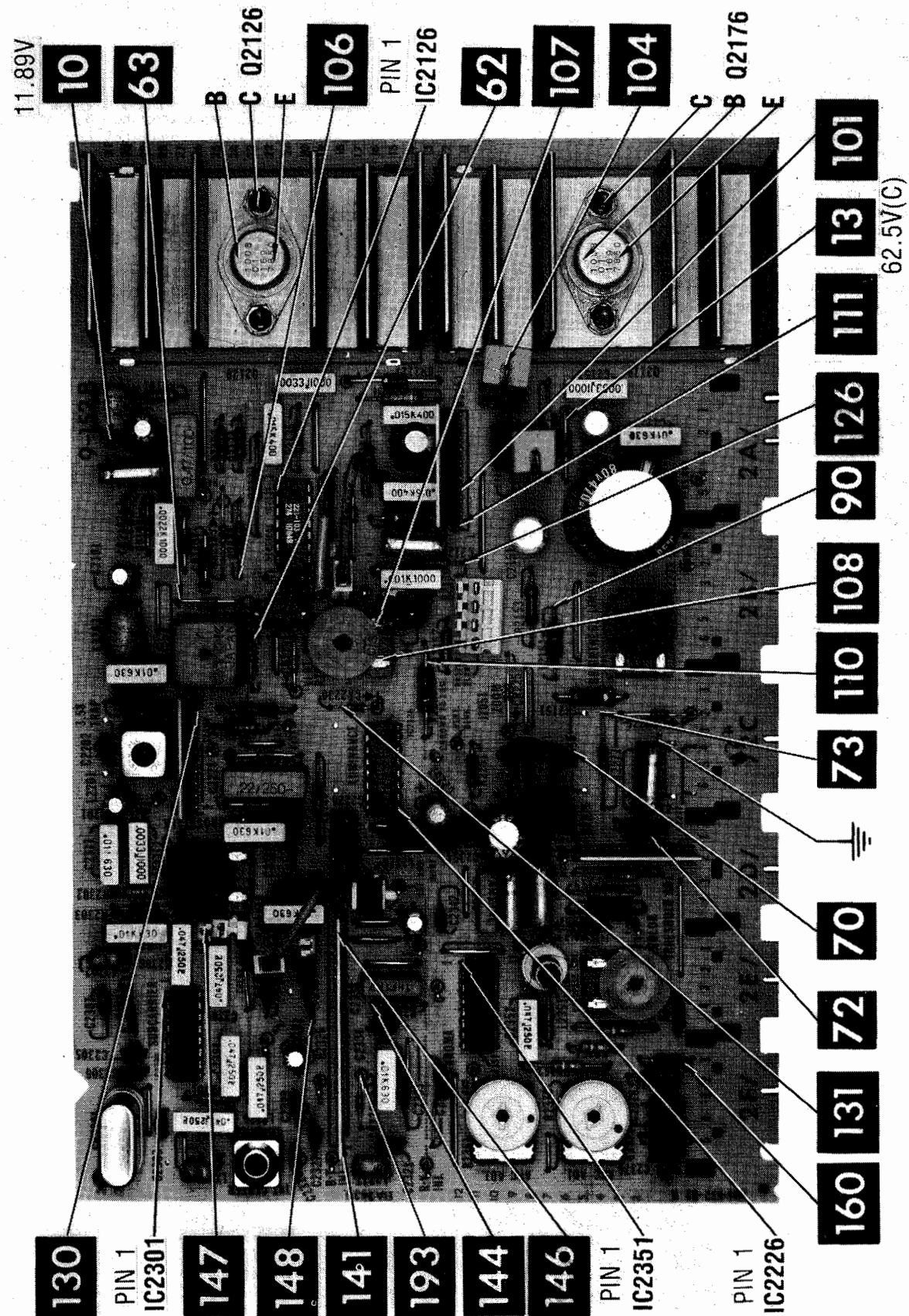
CRT NECK ASSEMBLY

ZENITH MODELS L1720W/W9, L1740W/W9, L1780W/W9, L3710W, SL1741W

FOLDER 2

CHROMA-LUMINANCE MODULE (9-152C)

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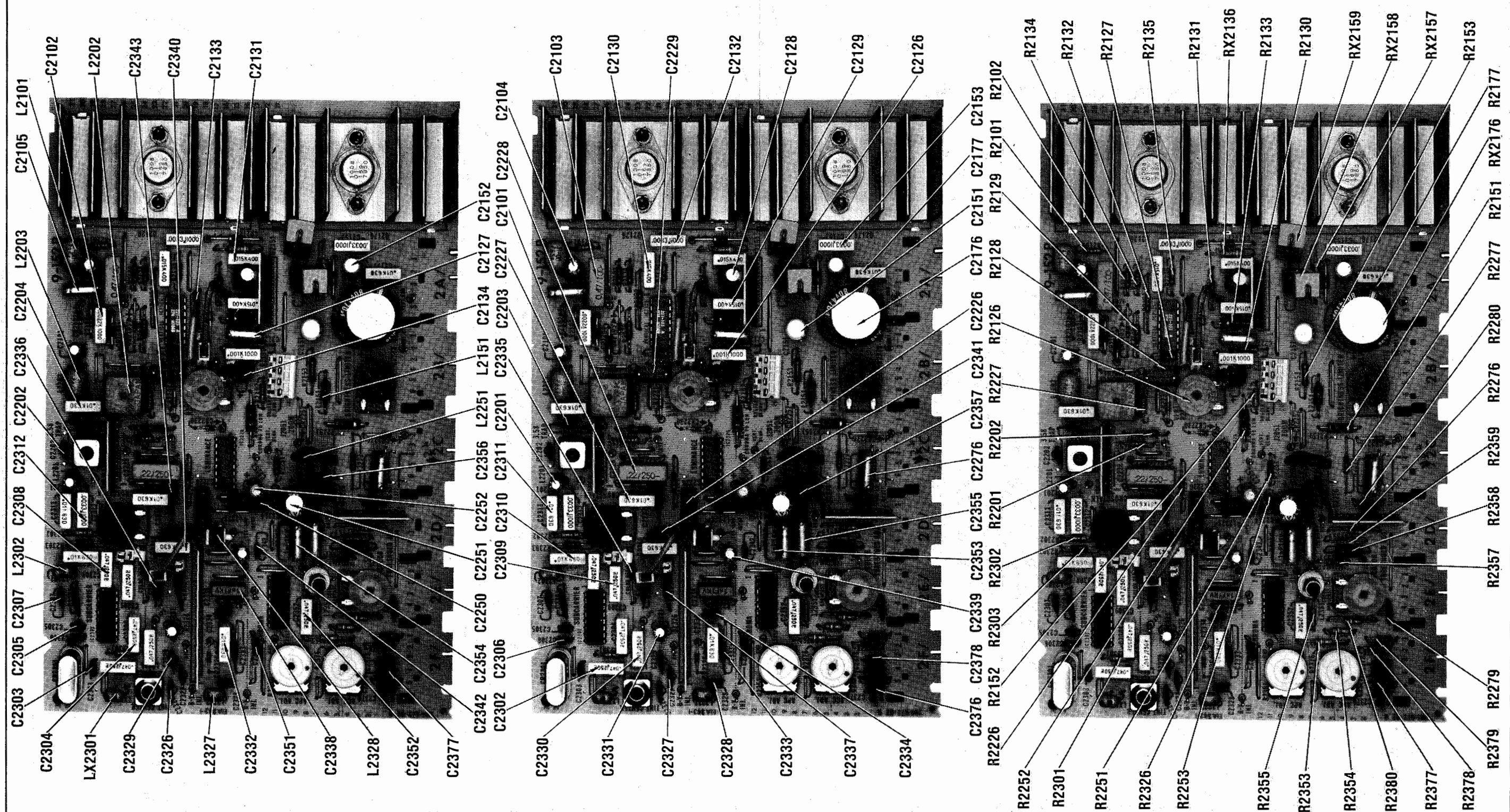


CHROMA-LUMINANCE MODULE (9-152C)

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

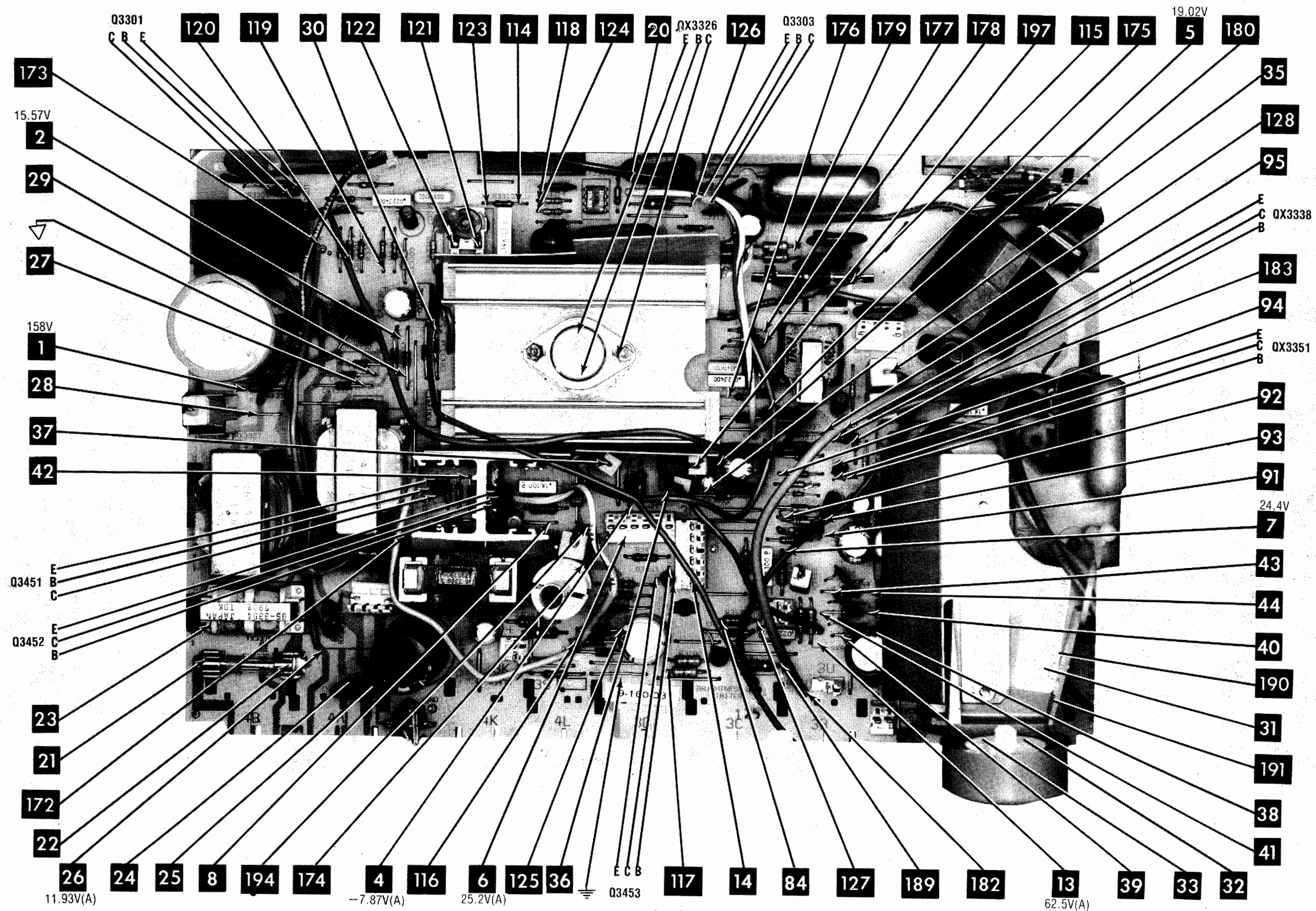
CHROMA-LUMINANCE MODULE (9-152C)



CHROMA-LUMINANCE MODULE (9-152C)

FOLDER 2

 '6M'M08711 '6M'M08711 '6M'M08711 '6M'M08711
 '6M'M08711 '6M'M08711 '6M'M08711 '6M'M08711



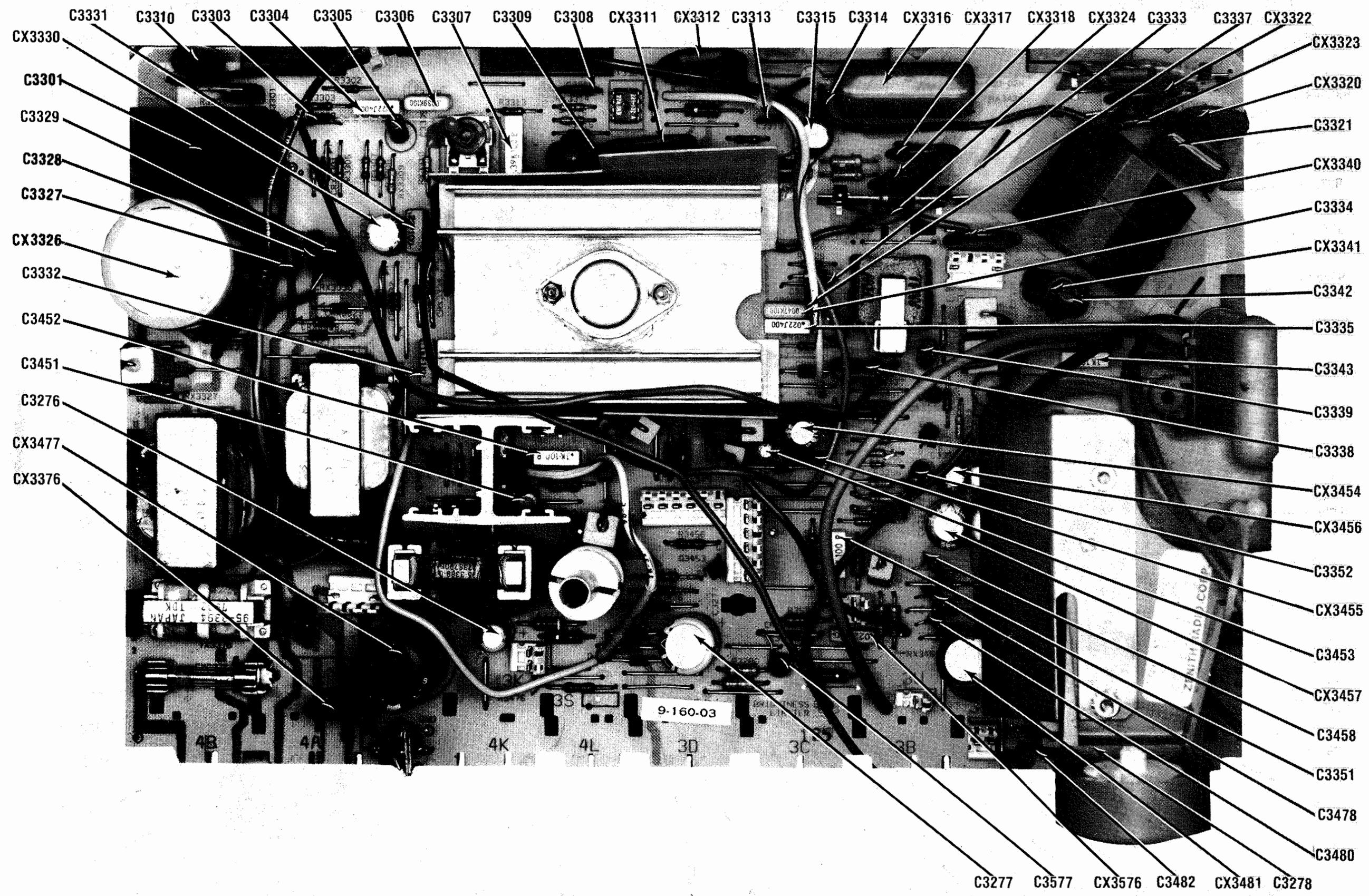
POWER SUPPLY-HORIZ SWEEP MODULE (9-160-03B)

A Howard W. Sams CIRCUITRACE® Photo

POWER SUPPLY-HORIZ SWEEP MODULE (9-160-03B)

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

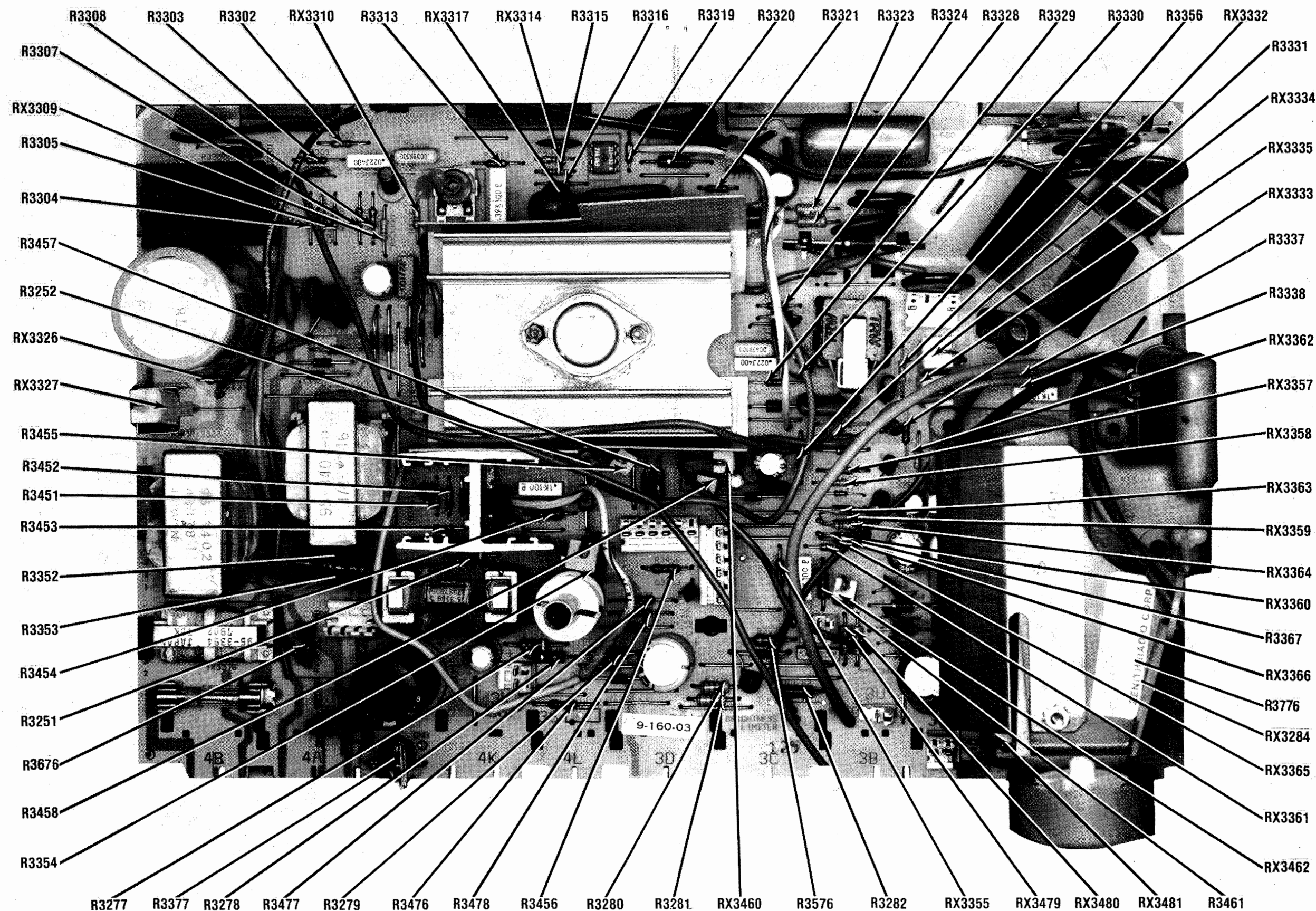


POWER SUPPLY-HORIZ SWEEP MODULE (9-160-03B)

POWER SUPPLY-HORIZ SWEEP MODULE (9-160-03B)

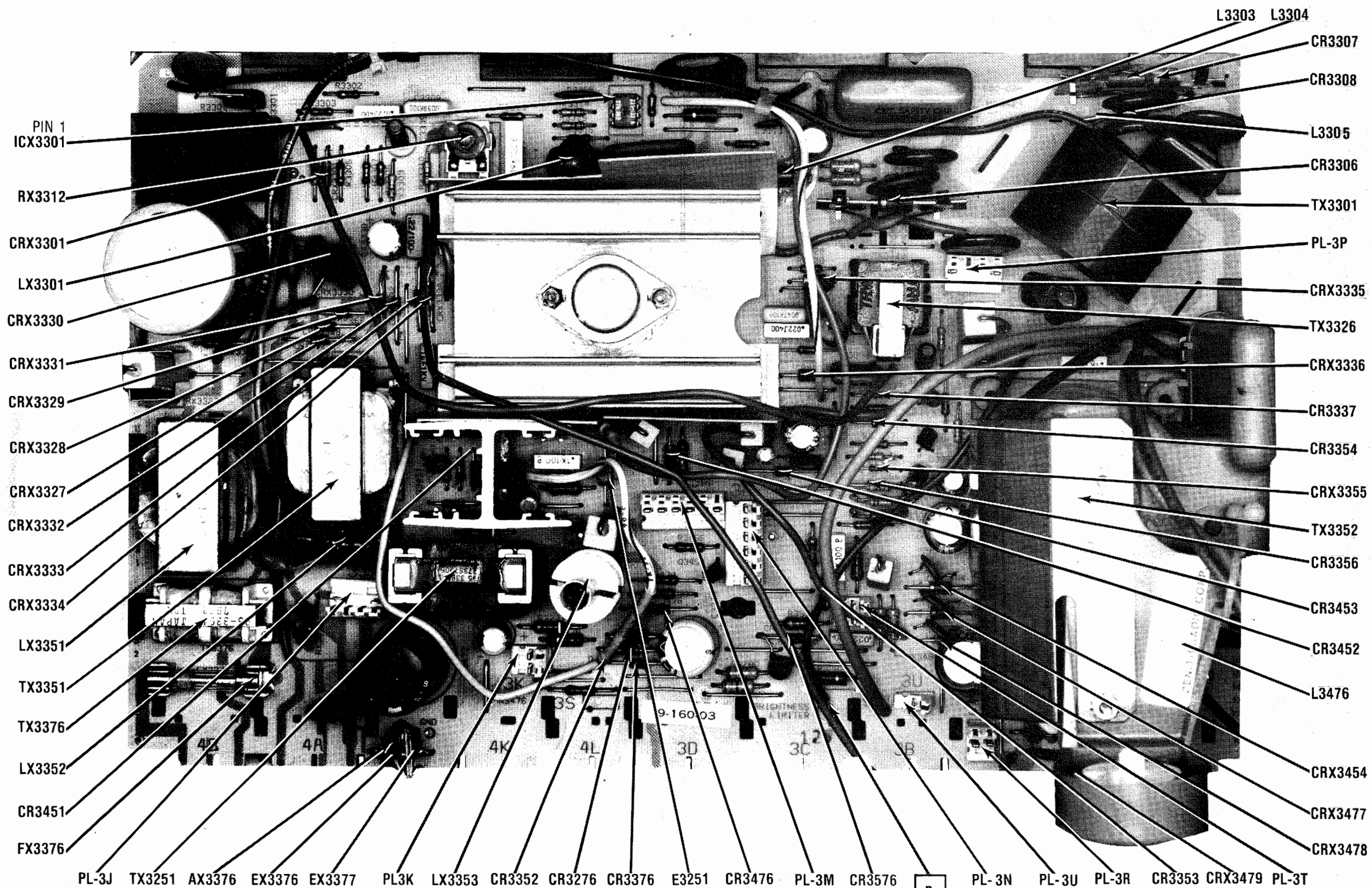
ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2



ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

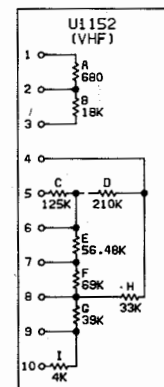
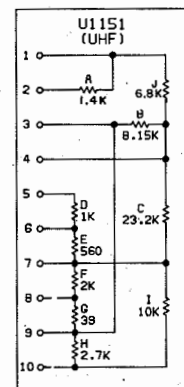


POWER SUPPLY-HORIZ SWEEP MODULE (19-160-03B)

POWER SUPPLY-HORIZ SWEEP MODULE (19-160-03B)

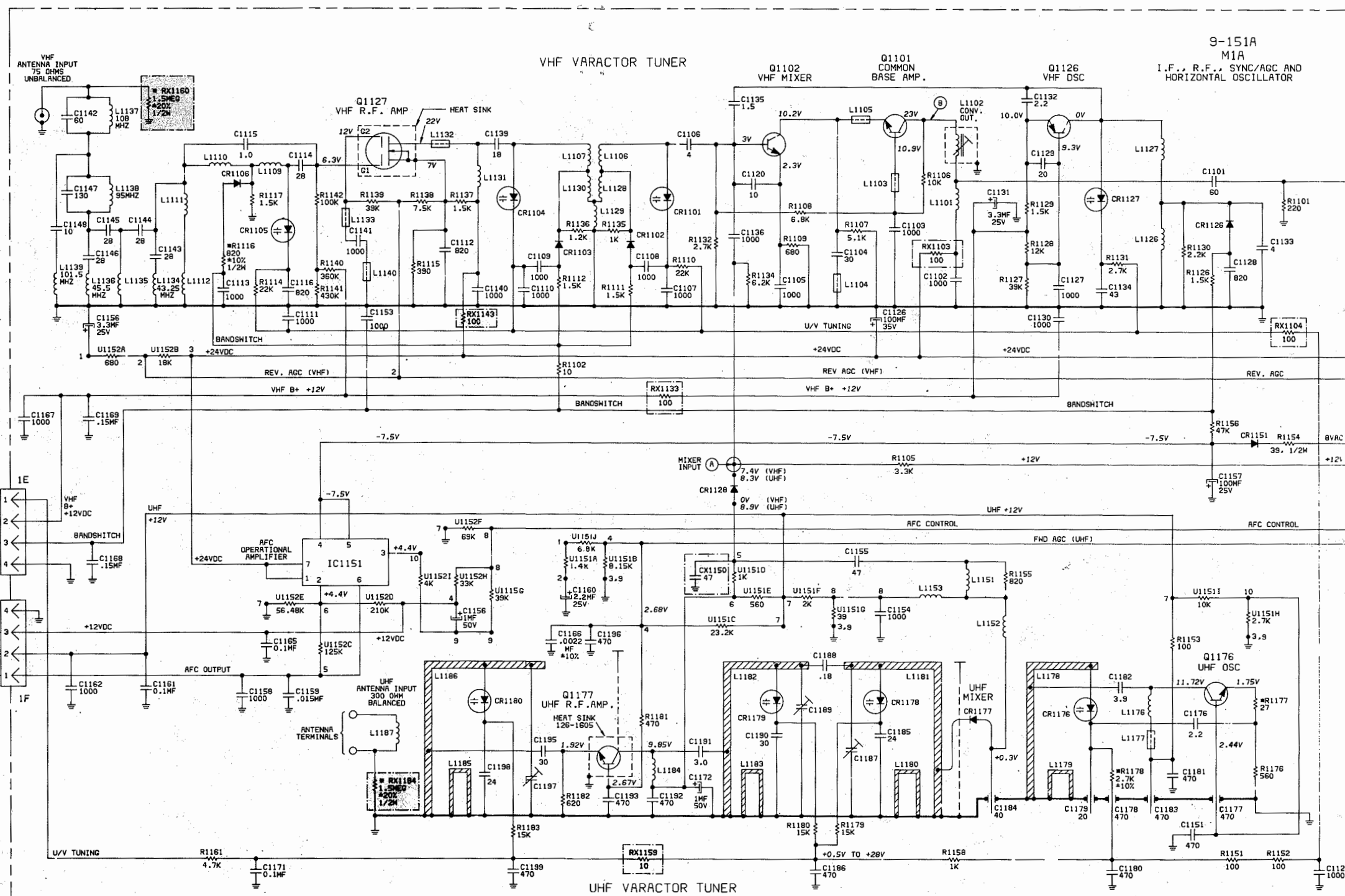
ZENITH MODELS L1720W, W9, L1740W, W9,
L1780W, W9, L3710W, SL1741W

FOLDER 2



THESE RESISTIVE ELEMENTS ARE PART OF THICK FILM U1151, & U1152 FOR DETAILED SCHEMATIC, REFER TO PARTS LIST FOR DRAWING NUMBER

* INDICATES CARBON COMPOSITION



SCHEMATIC, 9-151A MODULE (SECTION A)

Courtesy of the Manufacturer

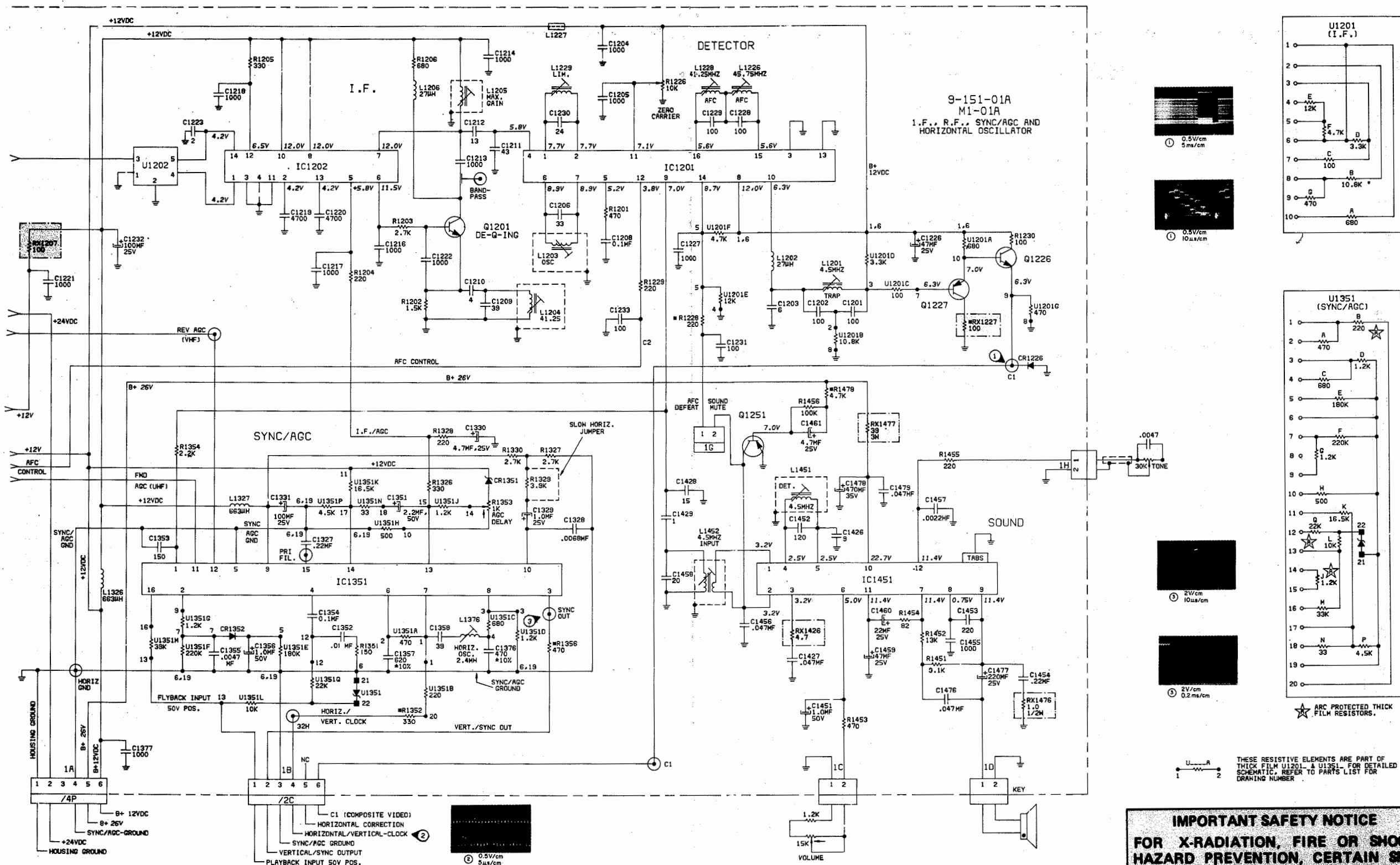
LEGEND, 9-151A MODULE

CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION	CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION	CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION	CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
C1101	22-7093-06	CAPACITOR, DISC, 50PF, 15%, 100V, N220120PPM	C1211	22-7621-29	CAPACITOR, DISC, 43PF, 15%, 50V	C1301	22-7390-01	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1101	63-9921-56	RESISTOR, FILM, 220 OHM, 1%, 1/4W
C1102	22-4946	CAPACITOR, DISC, 1000PF, 50V, 500V	C1212	22-7621-18	CAPACITOR, DISC, 13PF, 15%, 50V	C1302	22-7390-02	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1102	63-9921-24	RESISTOR, FILM, 10 OHM, 1%, 1/4W
C1103	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1213	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1303	22-7390-03	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1103	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1104	22-6147	CAPACITOR, DISC, 30PF, 15%, 50V, N150130PPM	C1214	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1304	22-7390-04	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1104	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1105	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1215	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1305	22-7390-05	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1105	63-9921-84	RESISTOR, FILM, 3.3K OHM, 1%, 1/4W
C1106	22-5146	CAPACITOR, DISC, 4PF, 1.25PF, 500V, N150160PPM	C1216	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1306	22-7390-06	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1106	63-9921-96	RESISTOR, FILM, 10K OHM, 1%, 1/4W
C1107	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1217	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1307	22-7390-07	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1107	63-9921-89	RESISTOR, FILM, 5.1K OHM, 1%, 1/4W
C1108	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1218	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1308	22-7390-08	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1108	63-9921-82	RESISTOR, FILM, 0.8K OHM, 1%, 1/4W
C1109	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1219	22-7613-20	CAPACITOR, DISC, 4700PF, 10%, 50V	C1309	22-7390-09	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1109	63-9921-88	RESISTOR, FILM, 680 OHM, 1%, 1/4W
C1110	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1220	22-7613-20	CAPACITOR, DISC, 4700PF, 10%, 50V	C1310	22-7390-10	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1110	63-9922-04	RESISTOR, FILM, 32K OHM, 1%, 1/4W
C1111	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1221	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1311	22-7390-11	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1111	63-9921-76	RESISTOR, FILM, 1.5K OHM, 1%, 1/4W
C1112	22-7603-01	CAPACITOR, TRAP, LEADLESS, 80PF, +80-20%, 400V, Z5U	C1222	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1312	22-7390-12	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1112	63-9921-76	RESISTOR, FILM, 1.5K OHM, 1%, 1/4W
C1113	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V	C1223	22-3774	CAPACITOR, DISC, 2PF, 1.25PF, 500V, N150	C1313	22-7390-13	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1113	63-9922-04	RESISTOR, FILM, 22K OHM, 1%, 1/4W
C1114	22-6225-02	CAPACITOR, DISC, 28PF, 15%, 50V, N750120PPM	C1224			C1314	22-7390-14	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1114	63-9921-62	RESISTOR, FILM, 390 OHM, 1%, 1/4W
C1115	22-7450-10	CAPACITOR, DISC, 10PF, 15%, 50V, N150160PPM	C1225			C1315	22-7390-15	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1115	63-7782	RESISTOR, CARBON, 820 OHM, 10%, 1/2W
C1116	22-7503-01	CAPACITOR, TRAP, LEADLESS, 80PF, +80-20%, 400V, Z5U	C1226	22-7706-08A	CAPACITOR, ELECTROLYTIC, 47 MF, +50-10%, 25V	C1316	22-7390-16	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1116	63-9921-60	RESISTOR, FILM, 2.2K OHM, 1%, 1/4W
C1117			C1227	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V	C1317	22-7390-17	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1117	63-9921-60	RESISTOR, FILM, 2.2K OHM, 1%, 1/4W
C1118			C1228	22-7670	CAPACITOR, DISC, 100PF, 15%, 100V	C1318	22-7390-18	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1118	63-9921-76	RESISTOR, FILM, 1.5K OHM, 1%, 1/4W
C1119			C1229	22-6225-43	CAPACITOR, DISC, 100PF, 15%, 50V, NPD130PPM	C1319	22-7390-19	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1119	63-9922-10	RESISTOR, FILM, 39K OHM, 1%, 1/4W
C1120	22-7559-12	CAPACITOR, DISC, 10PF, 15%, 50V, N150160PPM	C1230	22-4180	CAPACITOR, DISC, 24PF, 15%, 50V, NPD130PPM	C1320	22-7390-20	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1120	63-9921-98	RESISTOR, FILM, 18K OHM, 1%, 1/4W
C1121			C1231	22-6163	CAPACITOR, DISC, 100PF, 10%, 50V, N1500120PPM	C1321	22-7390-21	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1121	63-9921-70	RESISTOR, FILM, 1.5K OHM, 1%, 1/4W
C1122			C1232	22-7526	CAPACITOR, ELECTROLYTIC, 100MF, +100-10%, 25V	C1322	22-7390-22	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1122	63-9921-60	RESISTOR, FILM, 2.2K OHM, 1%, 1/4W
C1123			C1233	22-6163	CAPACITOR, DISC, 100PF, 10%, 50V, N1500120PPM	C1323	22-7390-23	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1123	63-9921-82	RESISTOR, FILM, 2.7K OHM, 1%, 1/4W
C1124	22-4946	CAPACITOR, DISC, 1000 PF, 50V, 500V				C1324	22-7390-24	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1124	63-9921-82	RESISTOR, FILM, 2.7K OHM, 1%, 1/4W
C1125						C1325	22-7390-25	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1125	63-9921-82	RESISTOR, FILM, 2.7K OHM, 1%, 1/4W
C1126	22-7154-08	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 35V				C1326	22-7390-26	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1126	63-9921-82	RESISTOR, FILM, 2.7K OHM, 1%, 1/4W
C1127	22-4987-03	CAPACITOR, DISC, 1000PF, 50V, 500V				C1327	22-7390-27	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1127	63-9921-72	RESISTOR, FILM, 1K OHM, 1%, 1/4W
C1128	22-7528-01	CAPACITOR, TRAP, LEADLESS, 80PF, +80-20%, 400V				C1328	22-7390-28	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1128	63-9921-74	RESISTOR, FILM, 1.2K OHM, 1%, 1/4W
C1129	22-6175	CAPACITOR, DISC, 20PF, 15%, 50V, NPD130PPM				C1329	22-7390-29	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1129	63-9921-78	RESISTOR, FILM, 1.5K OHM, 1%, 1/4W
C1130	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V				C1330	22-7390-30	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1130	63-9921-93	RESISTOR, FILM, 7.5K OHM, 1%, 1/4W
C1131	22-7152-02	CAPACITOR, ELECTROLYTIC, 3.5MF, +100-10%, 25V				C1331	22-7390-31	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1131	63-9922-10	RESISTOR, FILM, 39K OHM, 1%, 1/4W
C1132	22-7544-02	CAPACITOR, TUB, 2.2PF, 1.1PF, 400V, N470160PPM/20				C1332	22-7390-32	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1132	63-9922-38	RESISTOR, FILM, 39K OHM, 1%, 1/4W
C1133	22-5146	CAPACITOR, DISC, 4 PF, 1.25PF, 500V, N150160PPM				C1333	22-7390-33	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1133	63-9922-55	RESISTOR, FILM, 300K OHM, 1%, 1/4W
C1134	22-7558-13	CAPACITOR, DISC, 43 PF, 15%, 100V, N750120PPM				C1334	22-7390-34	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1134	63-9922-20	RESISTOR, FILM, 100K OHM, 1%, 1/4W
C1135	22-6225-11	CAPACITOR, DISC, 1 PF, 1.25PF, 500V, NPD130PPM				C1335	22-7390-35	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1135	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1136	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V				C1336	22-7390-36	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1136	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1137						C1337	22-7390-37	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1137	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1138	22-6150	CAPACITOR, DISC, 18PF, 15%, 50V, 500V				C1338	22-7390-38	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1138	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1139	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V				C1339	22-7390-39	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1139	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1140	22-7556	CAPACITOR, DISC, 1000PF, 50V, 500V				C1340	22-7390-40	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1140	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1141	22-7093-06	CAPACITOR, DISC, 50PF, 15%, 100V, N220120PPM				C1341	22-7390-41	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1141	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1142	22-6225-02	CAPACITOR, DISC, 28PF, 15%, 50V, N750120PPM				C1342	22-7390-42	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1142	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1143	22-6225-02	CAPACITOR, DISC, 28PF, 15%, 50V, N750120PPM				C1343	22-7390-43	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1143	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1144	22-6225-02	CAPACITOR, DISC, 28PF, 15%, 50V, N750120PPM				C1344	22-7390-44	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1144	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1145	22-6225-02	CAPACITOR, DISC, 28PF, 15%, 50V, N750120PPM				C1345	22-7390-45	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1145	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1146	22-6225-02	CAPACITOR, DISC, 28PF, 15%, 50V, N750120PPM				C1346	22-7390-46	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1146	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1147	22-7531	CAPACITOR, DISC, 130PF, 15%, 100V, N750120PPM				C1347	22-7390-47	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1147	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1148	22-6225-03	CAPACITOR, DISC, 10PF, 15%, 50V, N150160PPM				C1348	22-7390-48	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1148	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1149						C1349	22-7390-49	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1149	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1150	22-7558-13	CAPACITOR, DISC, 43 PF, 15%, 100V, N750120PPM				C1350	22-7390-50	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1150	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1151	22-7503	CAPACITOR, TRAP, LEADLESS, 80PF, +80-20%, 400V				C1351	22-7390-51	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1151	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1152						C1352	22-7390-52	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1152	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1153	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V				C1353	22-7390-53	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1153	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1154	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V				C1354	22-7390-54	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1154	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1155	22-6225-42	CAPACITOR, DISC, 47PF, 15%, 50V				C1355	22-7390-55	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1155	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1156	22-7143	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 25V				C1356	22-7390-56	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1156	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1157	22-7526	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 25V				C1357	22-7390-57	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1157	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1158	22-4948	CAPACITOR, DISC, 1000PF, 50V, 500V				C1358	22-7390-58	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1158	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1159	22-7559-14	CAPACITOR, DISC, 1000 PF, 50V, 500V				C1359	22-7390-59	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1159	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1160	22-7559-14	CAPACITOR, DISC, 1000 PF, 50V, 500V				C1360	22-7390-60	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1160	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1161	22-7553-24	CAPACITOR, POLYESTER, 0.1 MF, 100V, 20V				C1361	22-7390-61	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1161	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1162	22-4948	CAPACITOR, DISC, 1000 PF, 50V, 500V				C1362	22-7390-62	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1162	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1163	22-7152-02	CAPACITOR, ELECTROLYTIC, 3.5 MF, +100-10%, 25V				C1363	22-7390-63	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1163	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1164						C1364	22-7390-64	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1164	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1165	22-7563-24	CAPACITOR, POLYESTER, 0.1 MF, 100V, 100V				C1365	22-7390-65	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1165	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1166	22-7563-24	CAPACITOR, POLYESTER, 0.02 MF, 100V, 400V				C1366	22-7390-66	CAPACITOR, ELECTROLYTIC, 1 MF, 100V, 25V	R1166	63-9921-48	RESISTOR, FILM, 100 OHM, 1%, 1/4W
C1167	22-4948	CAPACITOR, DISC,									

SCHEMATIC, 9-151-01A MODULE (SECTION B)

Courtesy of the Manufacturer

IMPORTANT SAFETY NOTICE
 FOR X-RADIATION, FIRE OR SHOCK HAZARD PREVENTION, CERTAIN SPECIAL OR REDUNDANT PARTS ARE USED. USE ONLY EXACT REPLACEMENTS. DO NOT ALTER THE CIRCUIT OR DEFEAT THE FUSES. FAILURE TO COMPLY MAY BE UNLAWFUL.



**ZENITH MODELS L1720W, W9, L1740W, W9,
L1780W, W9, L3710W, SL1741W**

QUANTITY USED	PART NUMBER	DESCRIPTION
	204-882	I.F., R.F., SYNC, AGC & HORIZONTAL OSCILLATOR PRINTED CIRCUIT BOARD

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE DESIGN ENGINEER. ANY PARTS OR COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT, AND THEIR PHYSICAL LOCATION, WIRING AND CONNECTIONS MUST BE PRESERVED. IN THE EVENT OF COMPLETION OF REPAIRS, IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AGAINST OVERCURRENT, OVERVOLTAGE, OVERHEATING, OVERTEMPERATURE, RADIATION DAMAGE, AND/OR OVERSTRESS. IT IS REQUIRED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL AREAS ARE SHOWN IN THE CIRCUIT REFERENCE DESIGNATOR. THESE AREAS ARE INCLUDED IN THE CIRCUIT REFERENCE DESIGNATOR, DESIGNATES SPECIAL COMPONENTS IN THE AREAS WHICH ARE REQUIRED TO MAINTAIN PERFORMANCE OF THE CHASSIS. NO REPAIRS SHOULD BE MADE WITHOUT PRIOR APPROVAL BY THE SAFETY ENGINEERING DEPARTMENT.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS MAY IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SETS IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

THE LETTER "X" IN THE ELECTRICAL SCHEMATIC AND PARTS LIST, DESIGNATES SPECIAL CRITICAL SAFETY COMPONENTS. THESE SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ZENITH PARTS LIST AND SCHEMATIC.

UHF TUNER 175-1971-03-04

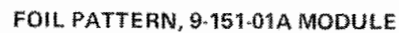
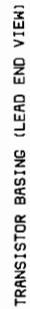


IMPORTANT SAFETY NOTICE

WHEN REPAIRING THIS CIRCUIT DIAGRAM, NO CHANGES SHOULD BE MADE WITHOUT THE AUTHORITY OF THE QUALITY ASSURANCE DEPARTMENT. THE QUALITY ASSURANCE DEPARTMENT HAS CONDUCTED A THOROUGH REVIEW OF THIS CIRCUIT DIAGRAM AND HAS DETERMINED THAT THE CIRCUIT IS SAFE TO REPAIR. THE QUALITY ASSURANCE DEPARTMENT HAS CONDUCTED A THOROUGH REVIEW OF THIS CIRCUIT DIAGRAM AND HAS DETERMINED THAT THE CIRCUIT IS SAFE TO REPAIR. THE QUALITY ASSURANCE DEPARTMENT HAS CONDUCTED A THOROUGH REVIEW OF THIS CIRCUIT DIAGRAM AND HAS DETERMINED THAT THE CIRCUIT IS SAFE TO REPAIR.

CAUTION

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE AC-



SET 1890 FOLDER 2

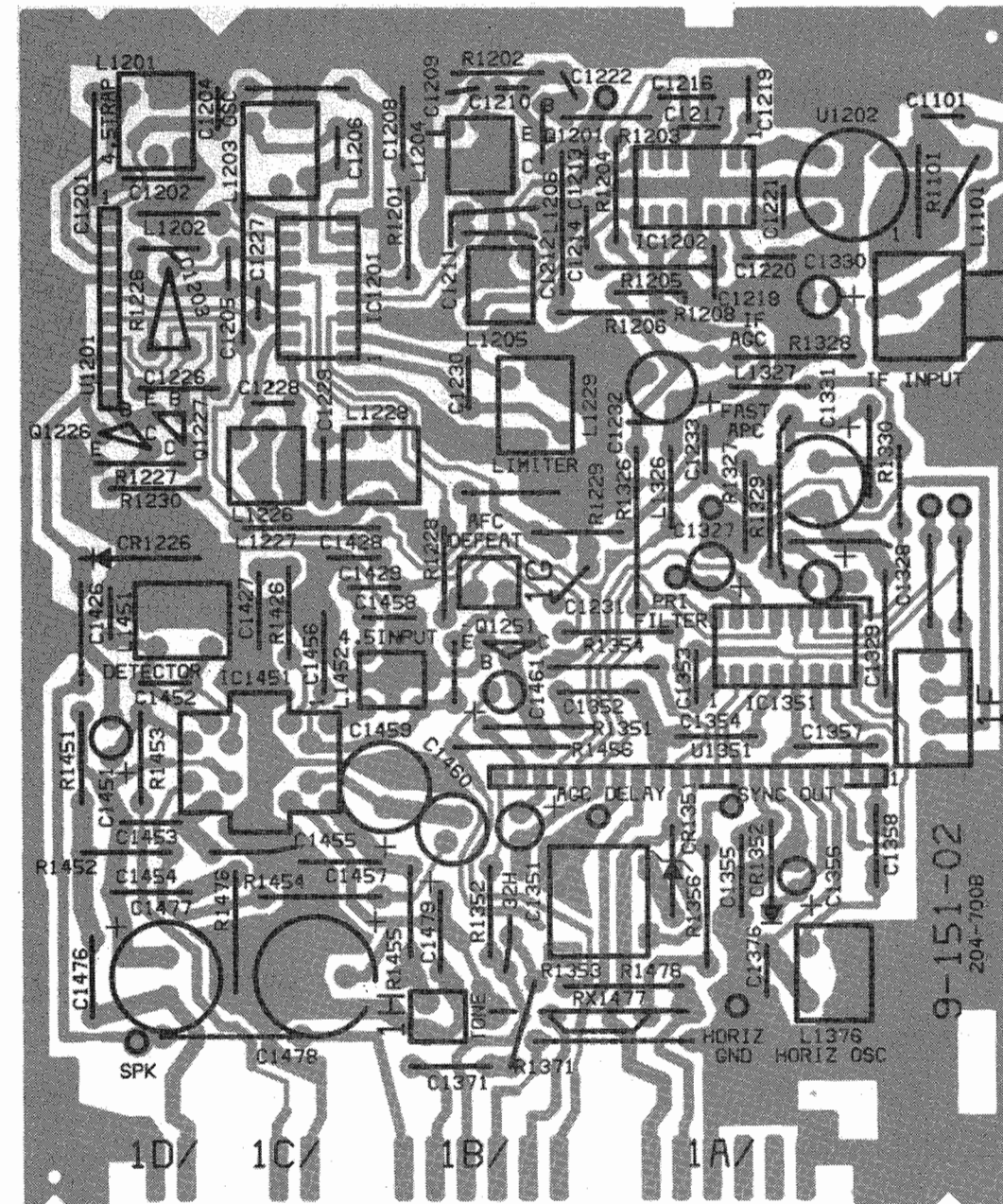
FOLDER 2
25

LEGEND, 9-151-02 MODULE

CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION	CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
C1101	22-7621-24	CAPACITOR, DISC, 39 PF, ±5%, 50V, (NPO±60)	CR1226	103-254-01	DIODE, LOW VOLTAGE
C1201	22-7619-34	CAPACITOR, DISC, 100 PF, ±5%, 50 V (NPO±30)	CR1351	103-279-13A	DIODE, ZENER, 6.2 VOLTS, 0.5 WATTS
C1202	22-7619-34	CAPACITOR, DISC, 100 PF, ±5%, 50 V (NPO±30)	CR1352	103-142-01	DIODE, LOW VOLTAGE
C1203	22-2381	CAPACITOR, DISC, 6 PF, ±5 PF, 500V (NPO±60)	IC1201	221-9T-01	INTEGRATED CIRCUIT, SYNC DETECTOR
C1204	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V	IC1202	221-102-01	INTEGRATED CIRCUIT, VIDEO I.F. AMP.
C1205	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V	IC1351	221-105	INTEGRATED CIRCUIT, SYNC SIG. SCAN PROCESSOR
C1206	22-7622-27	CAPACITOR, DISC, 51 PF, ±10%, 50V (NPO±60)	IC1451	221-98	INTEGRATED CIRCUIT, AUDIO MONOLITHIC
C1207			L1101	20-3856-01	COIL, PEAKING, .37 uH
C1208	22-7553-24	CAPACITOR, POLYESTER, 0.1 MF, ±10%, 100V	L1201	20-3880	COIL, RCF, TRAP, 4.5 MHz
C1209	22-7621-24	CAPACITOR, DISC, 39 PF, ±5%, 50V (NPO±30)	L1202	20-2707	COIL, PEAKING, 27uH
C1210	22-7621-24	CAPACITOR, DISC, 4 PF, ±.25 PF, 50V (NPO±30)	L1203	20-3675	COIL, RCF, TUNABLE, OSC.
C1211	22-7622-28	CAPACITOR, DISC, 56 PF, ±10%, 50V (NPO±60)	L1204	20-3672	COIL, RCF, TUNABLE, 41.25
C1212	22-7621-20	CAPACITOR, DISC, 24 PF, ±5%, 50V (NPO±60)	L1205	20-3677	COIL, RCF, TUNABLE, MAX. GAIN
C1213	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V	L1206	20-2707	COIL, PEAKING, 27uH
C1214	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V			
C1215			L1226	20-3893	COIL, RCF, TUNABLE, AFC
C1216	22-4948	CAPACITOR, DISC, 1000 PF, 50V, 500V	L1227	149-417	CORE, FERRITE SLEEVE
C1217	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V	L1228	20-3693	COIL, RCF, TUNABLE
C1218	22-4948	CAPACITOR, DISC, 1000 PF, 50V, 500V	L1229	20-3691	COIL, RCF, TUNABLE, LIMITER
C1219	22-7613-20	CAPACITOR, DISC, 4700 PF, ±10%, 50V			
C1220	22-7613-20	CAPACITOR, DISC, 4700 PF, ±10%, 50V	LX1326	20-3831	COIL, RCF, FILTER
C1221	22-3774	CAPACITOR, DISC, 2 PF, ±.25 PF, 500V (N150)	LX1327	20-3831	COIL, RCF, FILTER
C1222	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V			
C1226	22-7708-08A	CAPACITOR, ELECTROLYTIC, 47 MF, +50-10%, 25V	L1376	20-3848	COIL, RCF, TUNABLE
C1227	22-4897-03	CAPACITOR, DISC, 1000 PF, 50V, 500V			
C1228	22-7679-02	CAPACITOR, DISC, 82 PF, ±5%, 50V (NPO±30)	L1451	20-3600	COIL, RCF, TUNABLE, 4.5 MHz, QUADRATURE
C1229	22-7619-34	CAPACITOR, DISC, 100 PF, ±5%, 50V (NPO±30)	L1452	95-3333	TRANSFORMER, RCF, TUNABLE, 4.5 MHz, INPUT
C1230	22-7621-20	CAPACITOR, DISC, 27 PF, ±5%, 50V (NPO±60)			
C1231	22-6163	CAPACITOR, DISC, 100 PF, ±10%, 500V (N1500±250)	Q1201	121-603	TRANSISTOR, NPN, SILICON
C1232	22-7526	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 25V	Q1226	121-695	TRANSISTOR, NPN, SILICON
C1233	22-6163	CAPACITOR, DISC, 100 PF, ±10%, 500V (N1500±250)	Q1227	121-986	TRANSISTOR, PNP, SILICON
			Q1281	121-973	TRANSISTOR, PNP, SILICON
C1327	22-7389-02	CAPACITOR, ELECTROLYTIC, 1 MF, ±20%, 25V			
C1328	22-7559-14	CAPACITOR, POLYESTER, .015MF, ±10%, 400V	R1101	63-9921-56	RESISTOR, FILM, 220 OHM, ±5%, 1/4W
C1329	22-7389-02	CAPACITOR, ELECTROLYTIC, 1MF, ±20%, 25V	R1201	63-9921-66	RESISTOR, FILM, 560 OHM, ±5%, 1/4W
C1330	22-7152-03	CAPACITOR, ELECTROLYTIC, 4.7MF, +100-10%, 25V	R1202	63-9921-76	RESISTOR, FILM, 1.5K OHM, ±5%, 1/4W
C1331	22-7526	CAPACITOR, ELECTROLYTIC, 100MF, +100-10%, 25V	R1203	63-9921-82	RESISTOR, FILM, 2.7K OHM, ±5%, 1/4W
			R1204	63-9921-56	RESISTOR, FILM, 220 OHM, ±5%, 1/4W
C1351	22-7390-01	CAPACITOR, ELECTROLYTIC, 2.2MF, +50-10%, 50V	R1205	63-9921-60	RESISTOR, FILM, 330 OHM, ±5%, 1/4W
C1352	22-7572-12	CAPACITOR, POLYESTER, .01 MF, ±10%, 600V	R1206	63-9921-68	RESISTOR, FILM, 680 OHM, ±5%, 1/4W
C1353	22-6291	CAPACITOR, DISC, 150PF, ±10%, 500V			
C1354	22-7566-18	CAPACITOR, POLYESTER, .033MF, ±10%, 250V	R1226	63-10651-04	CONTROL, ROTARY, SINGLE, 10K OHM, ZERO CARRIER
C1355	22-7569-06	CAPACITOR, POLYESTER, .0047MF, ±10%, 400V	R1227	63-10183-48	RESISTOR, CARBON, 100 OHM, ±10%, 1/4W
C1356	22-7153	CAPACITOR, ELECTROLYTIC, 1MF, +100-10%, 50V	R1228	63-10183-56	RESISTOR, CARBON, 220 OHM, ±10%, 1/4W
C1357	22-7669	CAPACITOR, DISC, 620PF, ±10%, 500V	R1229	63-9921-56	RESISTOR, FILM, 220 OHM, ±5%, 1/4W
C1358	22-3015	CAPACITOR, DISC, 39PF, ±5%, 500V	R1230	63-10183-48	RESISTOR, CARBON, 100 OHM, ±10%, 1/4W
C1376	22-3958	CAPACITOR, DISC, 470 PF, ±10%, 500V	R1326	63-9921-60	RESISTOR, FILM, 330 OHM, ±5%, 1/4W
			R1327	63-9921-82	RESISTOR, FILM, 2.7K OHM, ±5%, 1/4W
C1426	22-2514	CAPACITOR, DISC, 9 PF, ±.5 PF, 500V, (NPO±60)	R1328	63-9921-56	RESISTOR, FILM, 220 OHM, ±5%, 1/4W
C1427	22-7740-20	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V	R1329	63-9921-86	RESISTOR, FILM, 3.9K OHM, ±5%, 1/4W
C1428	22-6177	CAPACITOR, DISC, 15 PF, ±5%, 500V (NPO±60)	R1330	63-9921-82	RESISTOR, FILM, 2.7K OHM, ±5%, 1/4W
C1429	22-7185	CAPACITOR, DISC, 1 PF, ±.25 PF, 500V			
C1451	22-7153	CAPACITOR, ELECTROLYTIC, 1 MF, +100-10%, 50V	R1351	63-9921-50	RESISTOR, FILM, 120 OHM, ±5%, 1/4W
C1452	22-7623-36	CAPACITOR, DISC, 120 PF, ±5%, 50V (N30±30)	R1352	63-10183-60	RESISTOR, CARBON, 330 OHM, ±10%, 1/4W
C1453	22-2703	CAPACITOR, DISC, 220 PF, ±10%, 500V	R1353	63-9697-25	CONTROL, ROTARY, SINGLE, 1K OHM, (ARC ADJUST)
C1454	22-7553-28	CAPACITOR, POLYESTER, .22 MF, ±10%, 100V	R1354	63-9921-80	RESISTOR, FILM, 2.2K OHM, ±5%, 1/4W
C1455	22-3748	CAPACITOR, DISC, 1000 PF, ±10%, 1KV	R1355		
C1456	22-7740-20	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V	R1356	63-10181-64	RESISTOR, CARBON, 470 OHM, ±5%, 1/4W
C1457	22-7576-01	CAPACITOR, POLYESTER, .0022 MF, ±20%, 1KV			
C1458	22-6825-41	CAPACITOR, DISC, 20 PF, ±5%, 500V (N330±60)	R1426	63-9921-16	RESISTOR, FILM, 4.7 OHM, ±5%, 1/4W
C1459	22-7152-07	CAPACITOR, ELECTROLYTIC, 47 MF, +100-10%, 25V	R1451	63-9921-95	RESISTOR, FILM, 9.1K OHM, ±5%, 1/4W
C1460	22-7152-05	CAPACITOR, ELECTROLYTIC, 22 MF, +100-10%, 25V	R1452	63-9921-99	RESISTOR, FILM, 13K OHM, ±5%, 1/4W
C1461	22-7152-03	CAPACITOR, ELECTROLYTIC, 4.7 MF, +100-10%, 25V	R1453	63-9921-64	RESISTOR, FILM, 470 OHM, ±5%, 1/4W
			R1454	63-9921-46	RESISTOR, FILM, 82 OHM, ±5%, 1/4W
C1475	22-7567-20	CAPACITOR, POLYESTER, .047 MF, ±20%, 250V	R1455	63-9921-56	RESISTOR, FILM, 220 OHM, ±5%, 1/4W
C1477	22-7152-09	CAPACITOR, ELECTROLYTIC, 220 MF, +100-10%, 25V	R1456	63-9922-20	RESISTOR, FILM, 100K OHM, ±5%, 1/4W
C1478	22-7154-11	CAPACITOR, ELECTROLYTIC, 470 MF, +100-10%, 35V			
C1479	22-7740-20	CAPACITOR, POLYESTER, .047 MF, ±20%, 100 V	R1476	63-9946	RESISTOR, FILM, 1 OHM, ±5%, 1/2W
			R1478	63-10183-68	RESISTOR, CARBON, 4.7K OHM, ±10%, 1/4W
			U1201	105-131-01	RESISTIVE NETWORK, I.F.
			U1202	224-13	FILTER, CERAMIC SHIP
			U1351	A-8000	RESISTIVE NETWORK & DIODE ASSY (105-155 & 123-279-31)

CRITICAL SAFETY COMPONENTS:

THE LETTER "X" IN THE ELECTRICAL SCHEMATIC AND PARTS LIST, DESIGNATES SPECIAL CRITICAL SAFETY COMPONENTS. THESE SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ZENITH PARTS LIST AND SCHEMATIC.



FOIL PATTERN, 9-151-02 MODULE

Courtesy of the Manufacturer

IF MODULE (9-151-02)

Courtesy of the Manufacturer

IF MODULE (9-151-02)

SET 1890 FOLDER 2

FOLDER 2
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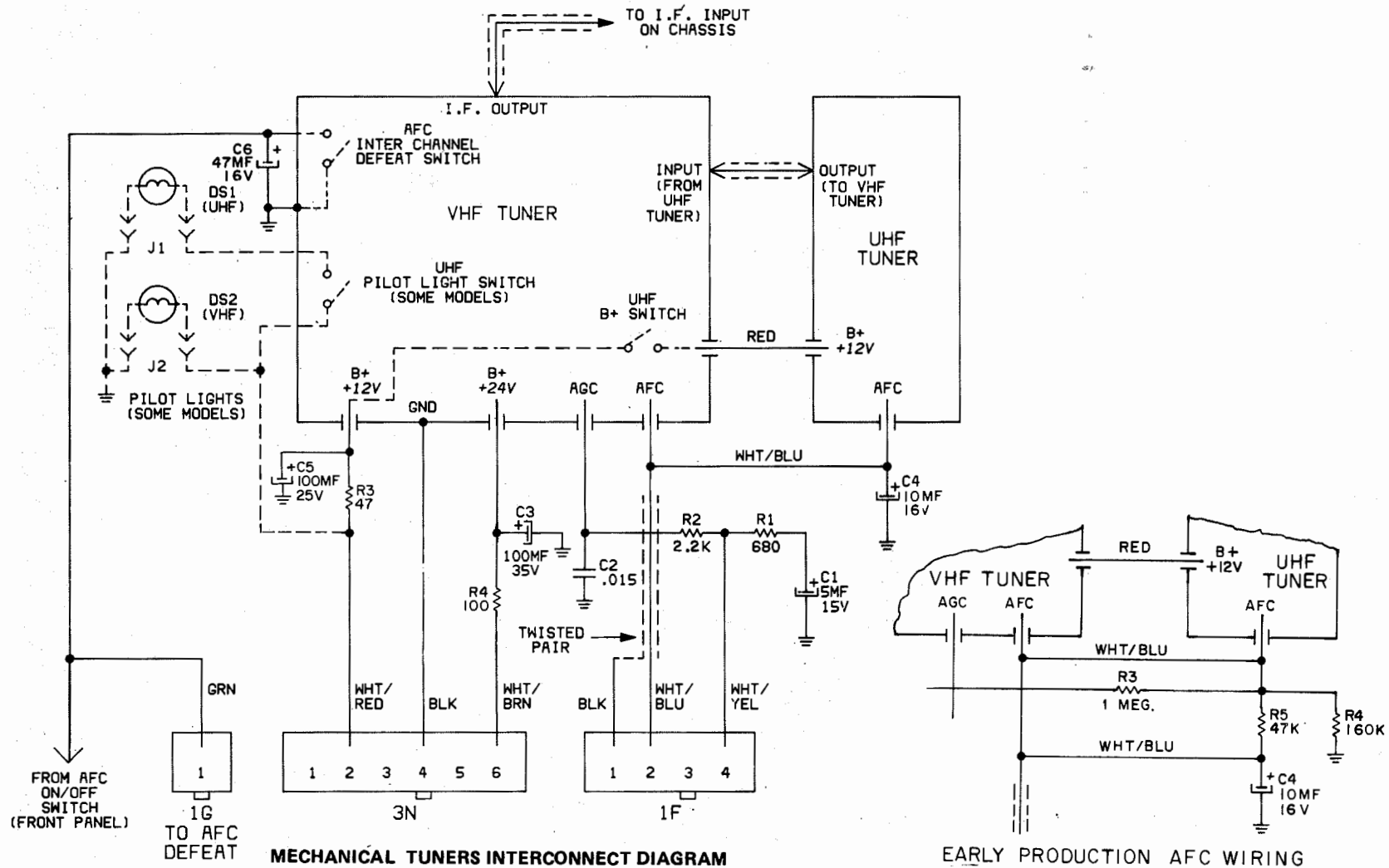
USED ON		CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
VHF TUNER	UHF TUNER			
175-2214-50	175-1971-03	C1	22-5424	CAPACITOR, ELECTROLYTIC, 5 MF, ±20%, 15V
		C2	22-5891	CAPACITOR, TUBULAR, .015 MF, ±10%, 100V
		C3	22-7144-08	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 35V
		C4	22-7151-04	CAPACITOR, ELECTROLYTIC, 10 MF, +100-10%, 16V
		C5	22-7152-08	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 25V
		C6	22-7151-07	CAPACITOR, ELECTROLYTIC, 47 MF, +100-10%, 16V
		DS1	100-689	LIGHT, PILOT, 12 VOLT
		DS2	100-689	LIGHT, PILOT, 12 VOLT
		J1	78-2198-02	SOCKET, PILOT LIGHT, UHF
		J2	78-2159-03	SOCKET, PILOT LIGHT, VHF
		R1	63-1778	RESISTOR, 680 OHM, ±10%, 1/2W
		R2	63-1799	RESISTOR, 2.2K OHM, ±10%, 1/2W
		R3	63-10559-40	RESISTOR, 47 OHM, ±5%, 1/4W, FAILSAFE
		R4	63-10559-48	RESISTOR, 100 OHM, ±5%, 1/4W, FAILSAFE

IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT, AND THEIR PHYSICAL LOCATION, WIRING AND LEAD DRESS MUST CONFORM TO ORIGINAL LAYOUT. UPON COMPLETION OF REPAIRS, IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL CIRCUITS ARE ALSO USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL AREAS ARE SHOWN ON THE SCHEMATIC FOR EASY IDENTIFICATION. THE LETTER "X" INCLUDED IN THE CIRCUIT REFERENCE DESIGNATOR, DESIGNATES SPECIAL COMPONENTS IN THE AREAS WHICH ARE REQUIRED TO MAINTAIN SAFE PERFORMANCE. NO DEVIATIONS ARE ALLOWED WITHOUT PRIOR APPROVAL BY THE SAFETY ENGINEERING DEPARTMENT.

CAUTION

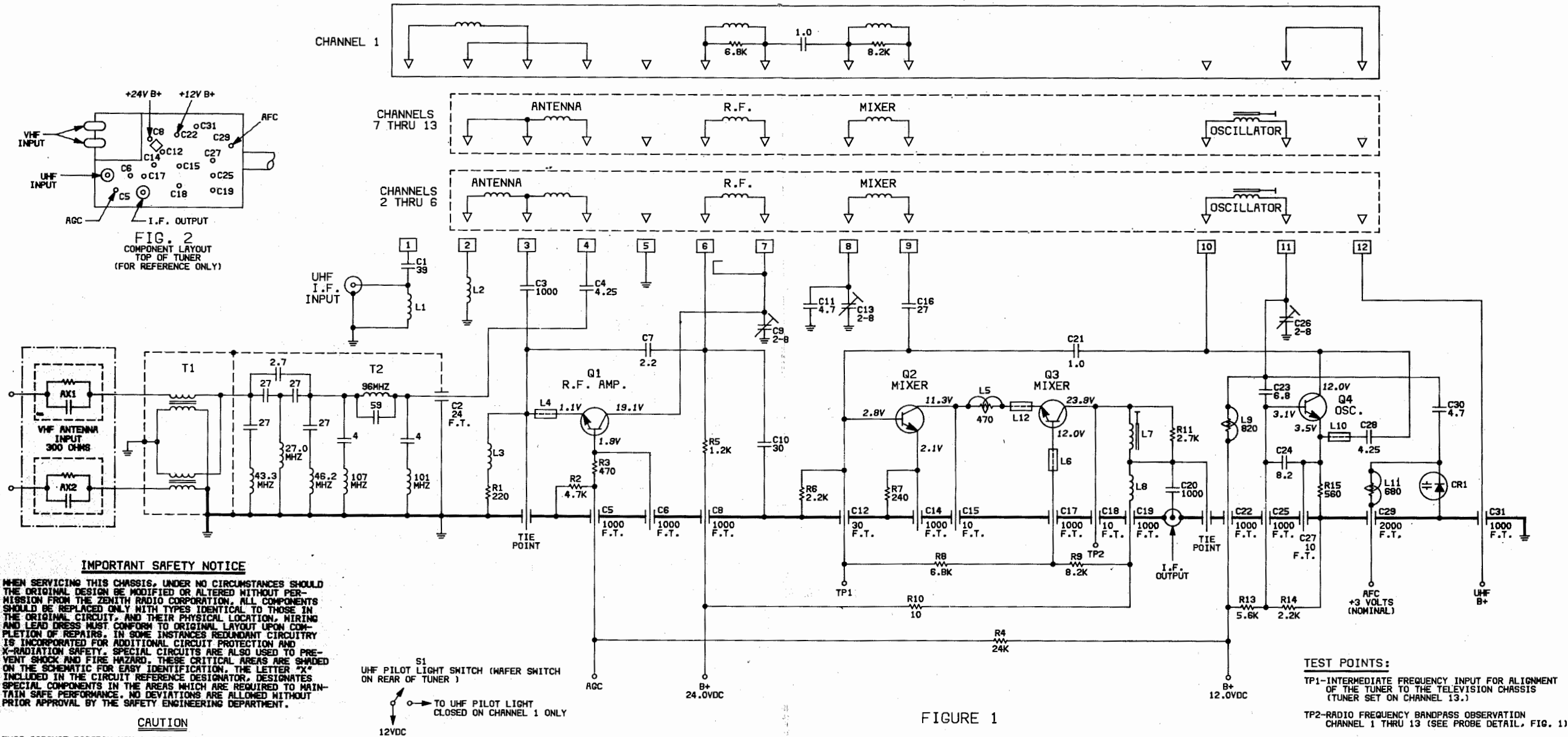
THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS MAY BE IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SETS IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.



CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
AX1		ANTENNA ISOLATION, R/C NETWORK
AX2		ANTENNA ISOLATION, R/C NETWORK
C1		CAPACITOR, DISC, 39 PF, 15%, 500V
C2		CAPACITOR, F.T., .24 PF, 500V
C3		CAPACITOR, DISC, 1000 PF, 500V
C4		CAPACITOR, DISC, 4.25 PF, ±.25 PF, 500V
C5		CAPACITOR, F.T., 1000 PF, 500V
C6		CAPACITOR, F.T., 1000 PF, 500V
C7		CAPACITOR, DISC, 2.2 PF, 10.1PF, 500V
C8		CAPACITOR, F.T., 1000 PF, 500V
C9		CAPACITOR, TRIMMER, 2-8 PF, 500V
C10		CAPACITOR, DISC, 30 PF, 15%, 500V
C11		CAPACITOR, DISC, 4.7 PF, ±.25 PF, 500V
C12		CAPACITOR, F.T., 30 PF, 500V
C13		CAPACITOR, TRIMMER, 2-8 PF, 500V
C14		CAPACITOR, F.T., 1000 PF, 500V
C15		CAPACITOR, F.T., 10 PF, 500V
C16		CAPACITOR, DISC, 2T PF, 15%, 500V
C17		CAPACITOR, F.T., 1000 PF, 500V
C18		CAPACITOR, F.T., 10 PF, 500V
C19		CAPACITOR, F.T., 1000 PF, 500V
C20		CAPACITOR, DISC, 1000 PF, 500V
C21		CAPACITOR, 1.0 PF, 50V
C22		CAPACITOR, F.T., 1000 PF, 500V
C23		CAPACITOR, DISC, 6.8 PF, 15%, 500V
C24		CAPACITOR, DISC, 8.2 PF, 15%, 500V
C25		CAPACITOR, F.T., 1000 PF, 500V
C26		CAPACITOR, TRIMMER, 2-8 PF, 500V
C27		CAPACITOR, F.T., 10 PF, 500V
C28		CAPACITOR, DISC, 4.25 PF, ±.25 PF, 500V
C29		CAPACITOR, F.T., 2000 PF, 500V
C30		CAPACITOR, 4.7 PF, ±.25 PF, 500V
C31		CAPACITOR, F.T., 1000 PF, 500V
CR1		DIODE, VARACTOR
		TIE POINT, F.T.
L1		COIL, DC RETURN
L2		COIL, ANTENNA TAP
L3		COIL, RF CHOKE
L4		BEAD, FERRITE
L5		COIL, RESISTOR CHOKE
L6		BEAD, FERRITE
L7		COIL, I.F.
L8		COIL, I.F. TAP
L9		COIL, RESISTOR CHOKE
L10		BEAD, FERRITE
L11		COIL, RESISTOR CHOKE
L12		BEAD, FERRITE
Q1		TRANSISTOR, MOTOROLA MPS H08 OR SPS 2110
Q2		TRANSISTOR, FAIRCHILD FTR-108
Q3		TRANSISTOR, HITACHI 2SC 1906
Q4		TRANSISTOR, HITACHI 2SC 1906
		TRANSISTOR, MOTOROLA MPS H11 OR SPS 428
R1		RESISTOR, 220 OHM, 1/4W
R2		RESISTOR, 4.7K OHM, 1/4W
R3		RESISTOR, 470 OHM, 1/4W
R4		RESISTOR, 24K OHM, 1/2W
R5		RESISTOR, 1.2K OHM, 1/2W
R6		RESISTOR, 2.2K OHM, 1/4W
R7		RESISTOR, 240 OHM, 1/4W
R8		RESISTOR, 8.2K OHM, 1/4W
R9		RESISTOR, 8.2K OHM, 1/4W
R10		RESISTOR, 10 OHM, 1/2W
R11		RESISTOR, 2.7K OHM, 1/4W
R13		RESISTOR, 5.6K OHM, 1/4W
R14		RESISTOR, 2.2K OHM, 1/4W
R15		RESISTOR, 560 OHM, 1/4W
S1		SWITCH, PILOT LIGHT
T1		TRANSFORMER, VHF ANTENNA
T2		FILTER CB, I.F., F.W. ASSEMBLY

ZENITH MODELS L1720W, W9, L1740W, W9,
L1780W, W9, L3710W, SL1741W

175-2213-50, 175-2214-50
VHF TRANSISTOR TUNER,
A.F.C., 4 CIRCUIT (COLOR)



SCHEMATIC, 175-2214-50 VHF TUNER

Courtesy of the Manufacturer

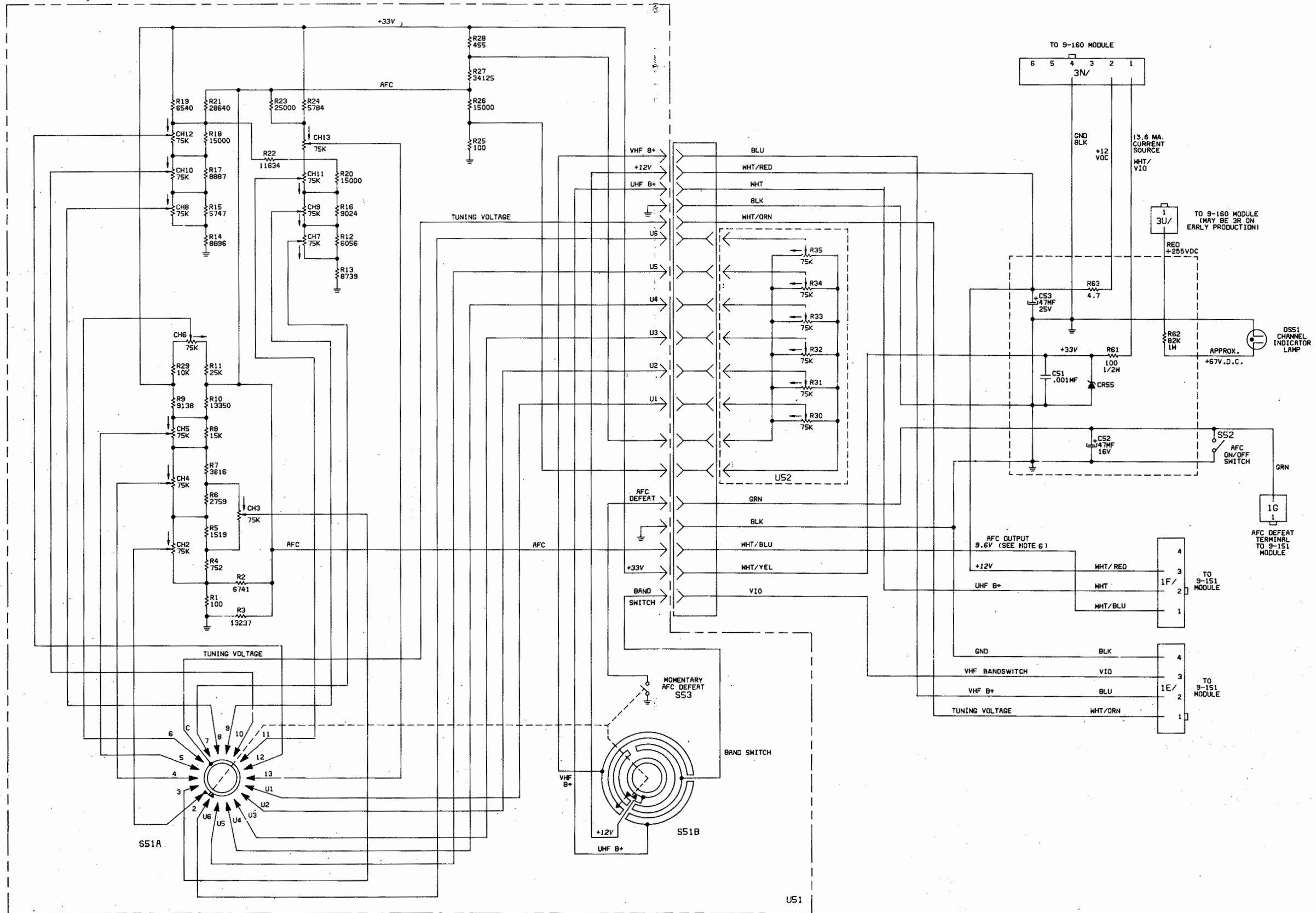
ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

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SCHEMATIC, 175-5096 CHANNEL SELECTOR

Courtesy of the Manufacturer

CHANNEL SELECTOR (175-5096)

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CHANNEL SELECTOR (175-5096)

CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
C51	22-4948	CAPACITOR, DISC, .001 MF, GMV, 500V
C52	22-7141-07	CAPACITOR, ELECTROLYTIC, 47 MF, +100-10%, 16V
C53	22-7142-07	CAPACITOR, ELECTROLYTIC, 47 MF, 25V
CR55	103-237	DIODE, ZENER 33 VOLTS
OS51	100-666	BULB, NEON
R61	63-1743	RESISTOR, CARBON COMPOSITION, 100 OHM, $\pm 10\%$, 1/2W
R62	63-6150	RESISTOR, CARBON COMPOSITION, 82K OHM, $\pm 10\%$, 1W
R63	63-9921-16	RESISTOR, CARBON COMPOSITION, 4.7 OHM, $\pm 5\%$, 1/4W
S51A	A-6115	ROTOR AND CONTACTS (FRONT)
S51B	A-6113-01	ROTOR AND CONTACTS (REAR)
S52	85-1450	SLIDE SWITCH REGULAR, AFC DEFEAT
U51	63-10682	RESISTIVE VHF CONTROL SUBSTRATE (SEE NOTE 7)
U52	63-10681	RESISTIVE UHF CONTROL SUBSTRATE (SEE NOTE 7)

1. THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED, THIS MAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SETS IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.
2. RESISTOR R61, IS METAL FILM RESISTOR AND MUST BE REPLACED WITH AN EQUIVALENT TYPE TO INSURE ORIGINAL PERFORMANCE CHARACTERISTICS. (X1 CHASSIS ONLY).
3. ALL VOLTAGES TAKEN WITH A VOLT METER HAVING AN INPUT RESISTANCE OF ELEVEN MEGOHMS. VOLTAGES MAY VARY BY $\pm 10\%$.
4. CHANNEL SWITCH SHOWN IN CHANNEL 2 POSITION.
5. THE FOLLOWING VOLTAGES SHOULD BE MEASURED WITH PLUGS 1E/ AND 1F/ CONNECTED TO THE 9-151 MODULE AND PLUG 4N/ CONNECTED TO THE 9-154 MODULE ON "X1" CHASSIS, OR PLUGS 3N/ AND 3U/ CONNECTED TO THE 9-160 MODULE ON "X2" CHASSIS.

CHANNEL SELECTOR TO 9-511 MODULE CONNECTOR VOLTAGES					
HOUSING	PIN	DESIGNATION	LO - VHF CH.2 - CH.6	H1 - VHF CH.7 - CH.13	UHF CH.14 - CH.83
IE	1	TUNING VOLTAGE	0 - 29	4 - 28	0.7 - 28
	2	VHF B+	+12	+12	D
	3	BANDSWITCH VOLTAGE	APPROX. -7	+12	+12
	4	GROUND	0 REF.	0 REF.	0 REF.
IF	1	AFC (SEE NOTE 6)	9.6	9.6	9.6
	2	UHF B+	0	0	+12
	3	B+	+12	+12	+12
	4	NC	NC	NC	NC

6. VOLTAGE AT AFC OUTPUT AS SHOWN WHEN 9-151 MODULE IS POWERED AND 9-151 MODULE AFC DEFEAT PIN IN IG CONNECTOR IS GROUNDED.
7. SUBSTRATE CONTAINS NO SERVICEABLE COMPONENTS.

130-9A			SPACE COMMAND SEVEN FUNCTION, I.C. DETECTION, CONTROL UNIT		
CIRCUIT REFERENCE DESIG.	PART NUMBER	DESCRIPTION	CIRCUIT REFERENCE DESIG.	PART NUMBER	DESCRIPTION
C1	22-7143-08	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 50V	R1	63-10559-16	RESISTOR, FILM, 4.7 OHM, ±5%, 1/4W
C2	22-7696	CAPACITOR, ELECTROLYTIC, 4.7 MF, +100-10%, 25V	R2	63-10444-76	RESISTOR, WIREWOUND, 150 OHM, ±10%, 5W
C3	22-7562-28	CAPACITOR, POLYESTER, .22 MF, ±5%, 100V	R3	63-9921-86	RESISTOR, FILM, 3.9K OHM, ±5%, 1/4W
C4	22-7562-28	CAPACITOR, POLYESTER, .22 MF, ±5%, 100V	R4	63-9921-86	RESISTOR, FILM, 3.9K OHM, ±5%, 1/4W
C5	22-7154-01	CAPACITOR, ELECTROLYTIC, 2.2 MF, +100-10%, 35V	R5	63-9921-82	RESISTOR, FILM, 2.7K OHM, ±5%, 1/4W
C6	22-7389	CAPACITOR, ELECTROLYTIC, 10 MF, +50-10%, 25V	R6	63-9921-72	RESISTOR, FILM, 1K OHM, ±5%, 1/4W
C7	22-7389	CAPACITOR, ELECTROLYTIC, 10 MF, +50-10%, 25V	R7	63-9921-64	RESISTOR, FILM, 470 OHM, ±5%, 1/4W
C8	22-7241	CAPACITOR, DISC, .001 MF, ±10%, 500V	R8	63-9921-72	RESISTOR, FILM, 1K OHM, ±5%, 1/4W
C9	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V	R9	63-10559-16	RESISTOR, FILM, 4.7 OHM, ±5%, 1/4W, FAILSAFE
C10	22-7696	CAPACITOR, ELECTROLYTIC, 4.7 MF, +100-10%, 25V	R10	63-10795	CONTROL, 5K OHM, GAIN
C11	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V	R11	63-10559-16	RESISTOR, FILM, 4.7 OHM, ±5%, 1/4W, FAILSAFE
C12	22-7696	CAPACITOR, ELECTROLYTIC, 4.7 MF, +100-10%, 25V	R12	63-9921-96	RESISTOR, FILM, 10K OHM, ±5%, 1/4W
C13	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V	R13	63-9921-94	RESISTOR, FILM, 8.2K OHM, ±5%, 1/4W
C14	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V	R14	63-7749	RESISTOR, CARBON, 150 OHM, ±5%, 1/2W
C15	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V	R15	63-7742	RESISTOR, CARBON, 100 OHM, ±5%, 1/2W
C16	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V	R16	63-7742	RESISTOR, CARBON, 100 OHM, ±5%, 1/2W
C17	22-7395	CAPACITOR, DISC, 470 PF, ±5%, N1500, 500V	R17	63-9921-86	RESISTOR, FILM, 3.9K OHM, ±5%, 1/4W
C18	22-7680	CAPACITOR, ELECTROLYTIC, 47 MF, +100-10%, 16V	R18	63-9921-80	RESISTOR, FILM, 2.2K OHM, ±5%, 1/4W
C19	22-7562-28	CAPACITOR, POLYESTER, .22 MF, ±5%, 100V	R19	63-7729	RESISTOR, CARBON, 47 OHM, ±10%, 1/2W
C20			R20	63-9921-84	RESISTOR, FILM, 3.3K OHM, ±5%, 1/4W
C21	22-3383	CAPACITOR, DISC, 100 PF, ±10%, 500V	R21	63-9921-86	RESISTOR, FILM, 3.9K OHM, ±5%, 1/4W
C22	22-7686	CAPACITOR, ELECTROLYTIC, 220 MF, +100-10%, 50V	R22	63-9922-03	RESISTOR, FILM, 20K OHM, ±5%, 1/4W
C23	22-3383	CAPACITOR, DISC, 100 PF, ±10%, 500V	R23		
CRX1	103-284-01	DIODE, LOW VOLTAGE GENERAL, SILICON	R24	63-9921-56	RESISTOR, FILM, 220 OHM, ±5%, 1/4W
CRX2	103-284-01	DIODE, LOW VOLTAGE GENERAL, SILICON	R25	63-10353-48	RESISTOR, FILM, 100 OHM, ±5%, 1/4W
CRX3	103-284-01	DIODE, LOW VOLTAGE GENERAL, SILICON	R26	63-9921-86	RESISTOR, FILM, 3.9K OHM, ±5%, 1/4W
CRX4	103-284-01	DIODE, LOW VOLTAGE GENERAL, SILICON	R27	63-9921-24	RESISTOR, FILM, 10 OHM, ±5%, 1/4W
CR5	103-254-01	DIODE, LOW VOLTAGE GENERAL, SILICON	R28		
CR6	103-301-09	DIODE, ZENER, 6.8VOLTS, 1 WATT	R29	63-9921-24	RESISTOR, FILM, 10 OHM, ±5%, 1/4W
IC1	221-134	INTEGRATED CIRCUIT		204-560-02	7 FUNCTION SPACE COMMAND MODULE BOARD
Q1	121-975	TRANSISTOR, NPN, SILICON			
Q2	121-975	TRANSISTOR, NPN, SILICON			

■ CRITICAL SAFETY COMPONENTS:
THE LETTER "X" IN THE ELECTRICAL SCHEMATIC AND PARTS LIST, DESIGNATES SPECIAL CRITICAL SAFETY COMPONENTS. THESE SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ZENITH PARTS LIST AND SCHEMATIC.

**ZENITH MODELS L1720W, W9, L1740W, W9,
L1780W, W9, L3710W, SL1741W**

FOLDER 2

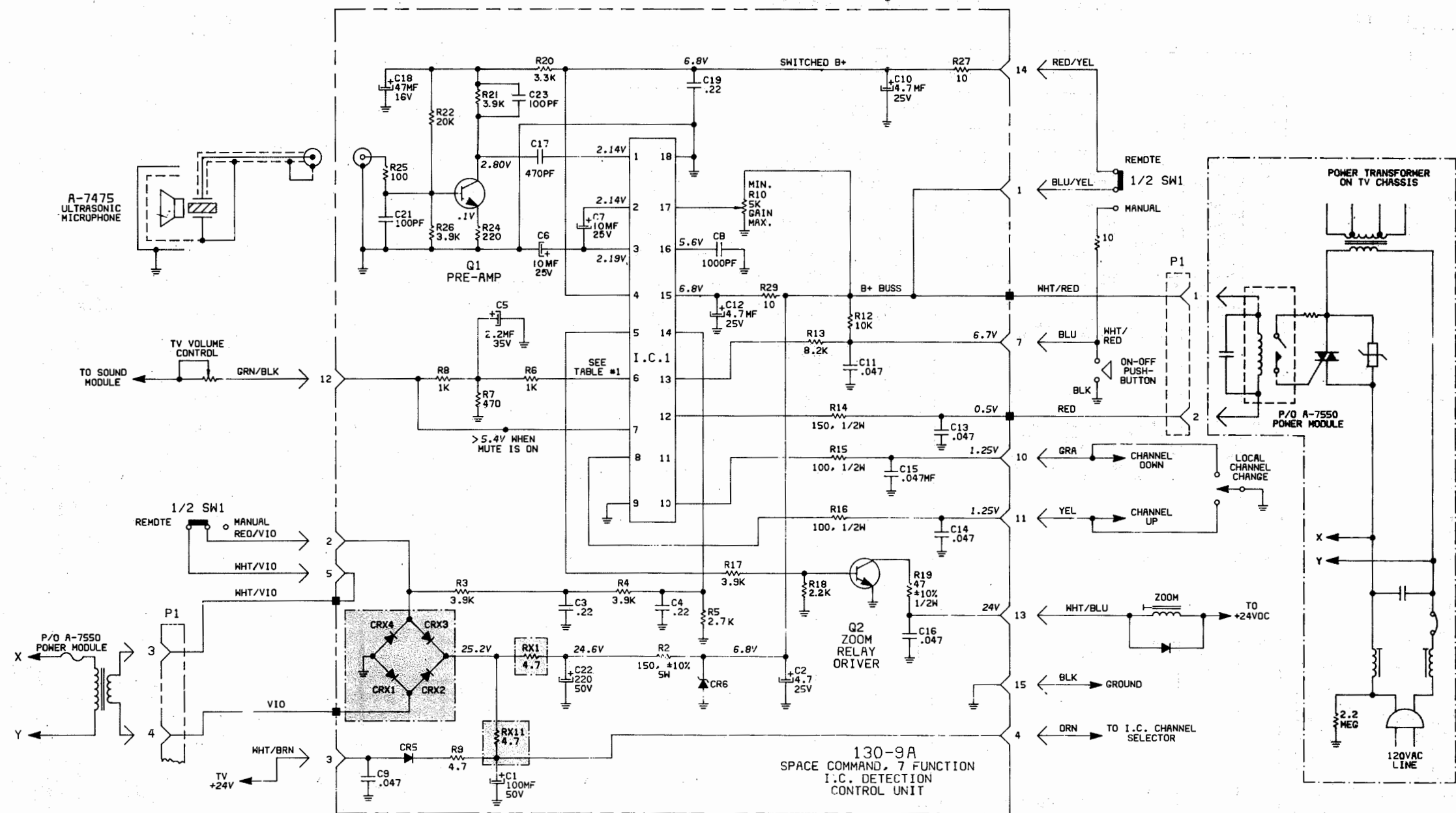
CHANNEL SELECTOR (175-5096)

Courtesy of the Manufacturer

REMOTE RECEIVER BOARD (130-9A)

SET 1890 FOLDER 2

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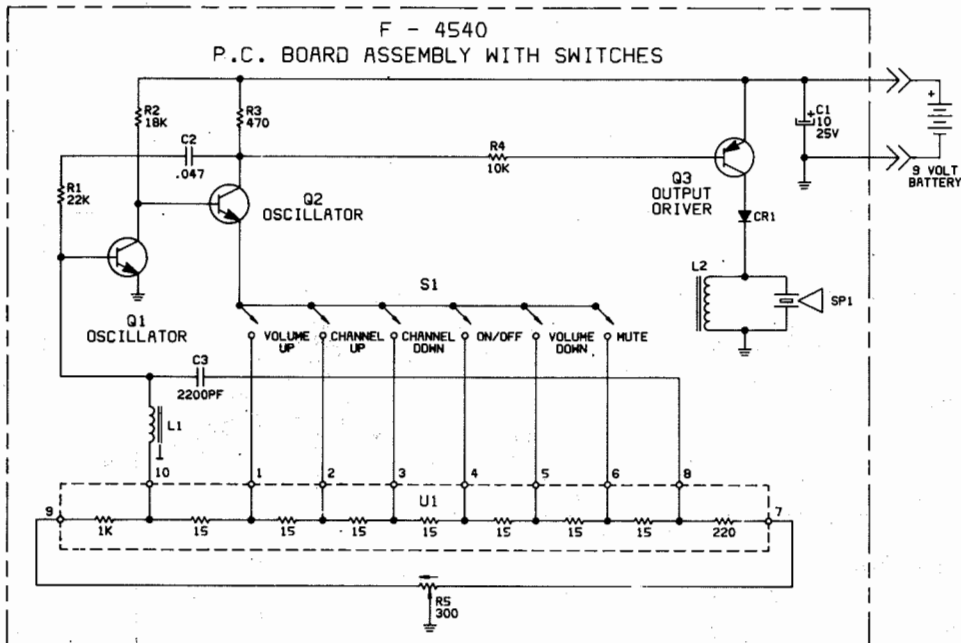
I.C.1 FUNCTIONS	
PIN NO.	DESCRIPTIONS
1	AMP. INPUT
2	DE-COUPLING
3	DE-COUPLING
4	AMP. B+
5	ZOOM
6	VOLUME
7	MUTE
8	CHANNEL UP
9	DIGITAL GROUND
10	CHANNEL DOWN
11	
12	ON/OFF DRIVER
13	ON/OFF PUSHBUTTON
14	60 HERTZ CLOCK
15	DIGITAL B+
16	ROLL OFF
17	AMP. GAIN CONTROL
18	AMP. GROUND

TABLE 1 VOLUME STEP VOLTAGES		
STEP NO.	MIN.	MAX.
0	3.22	4.19
1	2.79	3.65
2	2.37	3.12
3	1.93	2.57
4	1.51	2.04
5	1.06	1.48
6	0.58	0.89
7	0.10	0.30

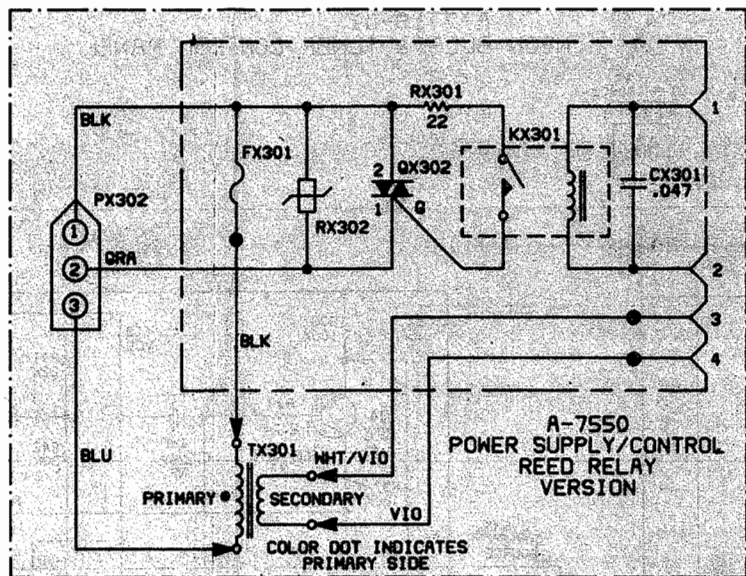
- NOTES:
1. ITEMS SHOWN EXTERNALLY FROM THE BOARD ARE FOR REFERENCE ONLY AND MAY VARY DEPENDING ON MODEL.
 2. ALL RESISTORS ARE 1/4 WATT, CARBON, 5% TOLERANCE UNLESS OTHERWISE SPECIFIED.
 3. ALL VOLTAGES REPRESENT THE 130-9A MODULE. WHEN TV SET IS IN "ON" POSITION, THESE VOLTAGES MAY VARY 10%.

IMPORTANT SAFETY NOTICE
 FOR X-RADIATION, FIRE OR SHOCK HAZARD PREVENTION, CERTAIN SPECIAL OR REDUNDANT PARTS ARE USED. USE ONLY EXACT REPLACEMENTS. DO NOT ALTER THE CIRCUIT OR DEFEAT THE FUSES. FAILURE TO COMPLY MAY BE UNLAWFUL.

SCHMATIC, 130-9A SPACE COMMAND RECEIVER



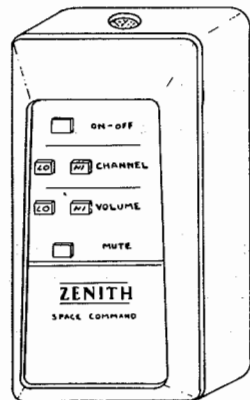
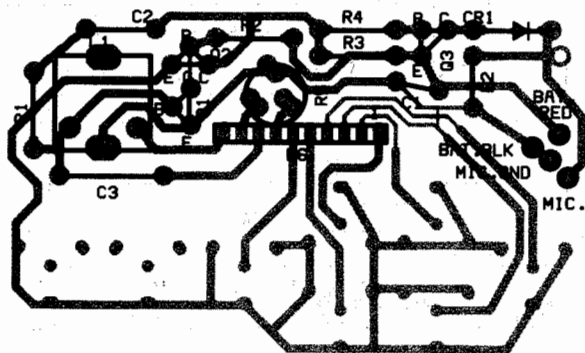
RESISTORS ARE 1/4 WATT, 5 PERCENT TOLERANCE, FILM UNLESS OTHERWISE SPECIFIED.



IMPORTANT SAFETY NOTICE
FOR X-RADIATION, FIRE OR SHOCK HAZARD PREVENTION, CERTAIN SPECIAL OR REDUNDANT PARTS ARE USED. USE ONLY EXACT REPLACEMENTS. DO NOT ALTER THE CIRCUIT OR DEFEAT THE FUSES. FAILURE TO COMPLY MAY BE UNLAWFUL.

INTERNAL CIRCUIT PANEL ASSY-WIRING (SC)		
CIRCUIT REFER. DESIGN.	PART NUMBER	DESCRIPTION
■ CX301	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V
■ FX301	136-117-06	FUSE, TIME DELAY, .160 AMPERES, 125 VOLTS
■ KX301	195-101	RELAY, REED
■ QX301	185-9-02	THYRISTOR, SILICON BIDIIRECTIONAL (TRIAC)
■ RX301	63-10559-32	RESISTOR, FILM, FAIL SAFE, 22 OHM, ±5%, 1/4W
■ RX302	63-10507	RESISTOR, METAL OXIDE VARISTOR
	204-580-01	CIRCUIT PANEL - POWER SUPPLY
EXTERNAL POWER SUPPLY (SC)		
■ PX302	A-2059	CABLE ASSEMBLY WITH HOUSING (3 CONDUCTORS)
■ TX301	95-3249-01	TRANSFORMER, POWER
■ IX1	194-285	SHIELD, POWER TERMINAL (NOT SHOWN)

124-16 SIX FUNCTION SC TRANSMITTER		
CIRCUIT REF. DESIGN.	PART NUMBER	DESCRIPTION
C1	22-4931	CAPACITOR, TANTALUM, 10 MF, ±20%, 25V
C2	22-6447-01	CAPACITOR, MYLAR, .047 MF, ±20%, 100V
C3	22-6055	CAPACITOR, MICA, 2200 PF, ±10%, 100V
CR1	103-142-01	DIODE, LOW VOLTAGE, GENERAL, SILICON
L1	20-3712	COIL, RCF, TUNABLE, SC OSCILLATOR
L2	20-3722	COIL, RCF, SC OUTPUT
SP1	49-1267-03	SPEAKER, CERAMIC, ULTRASONIC
Q1	121-975	TRANSISTOR, NPN, SILICON
Q2	121-975	TRANSISTOR, NPN, SILICON
Q3	121-973	TRANSISTOR, PNP, SILICON
R1	63-9922-04	RESISTOR, FILM, 22K OHM, ±5%, 1/4W
R2	63-9922-02	RESISTOR, FILM, 18K OHM, ±5%, 1/4W
R3	63-9921-64	RESISTOR, FILM, 470 OHM, ±5%, 1/4W
R4	63-9921-96	RESISTOR, FILM, 10K OHM, ±5%, 1/4W
R5	63-10577	CONTROL, 300 OHM, ROTARY
S1	A-7246-03	SWITCH ASSEMBLY
U1	105-142	THICK FILM, RESISTIVE NETWORK



SCHEMATIC AND LEGEND, 124-16 S.C. TRANSMITTER

IMPORTANT SAFETY NOTICE
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT, AND THEIR PHYSICAL LOCATION, WIRING AND LEAD DRESS MUST CONFORM TO ORIGINAL LAYOUT UPON COMPLETION OF REPAIRS. IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL CIRCUITS ARE ALSO USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL AREAS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION. THE LETTER "X" INCLUDED IN THE CIRCUIT REFERENCE DESIGNATOR, DESIGNATES SPECIAL FAIL SAFE COMPONENTS IN THE AREAS WHICH ARE REQUIRED TO MAINTAIN SAFE PERFORMANCE. NO DEVIATIONS ARE ALLOWED WITHOUT PRIOR APPROVAL BY THE SAFETY ENGINEERING DEPARTMENT.

CRITICAL SAFETY COMPONENTS:

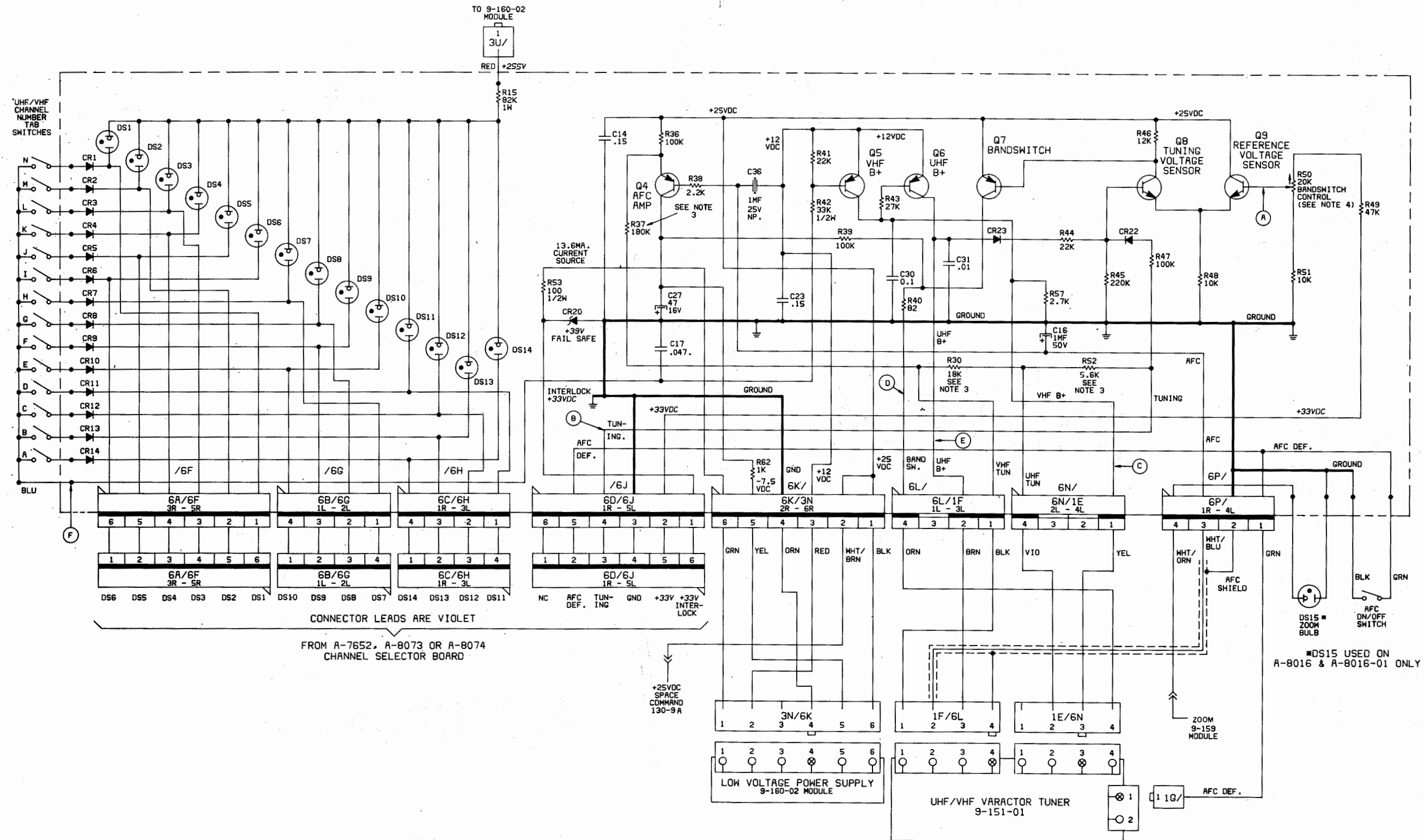
THE LETTER "X" IN THE ELECTRICAL SCHEMATIC AND PARTS LIST, DESIGNATES SPECIAL FAIL SAFE PERFORMANCE. THESE COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL SCHEMATIC.

SCHEMATIC AND LEGEND, A-7550 S.C. POWER SUPPLY

ZENITH MODELS L1720W/W9, L1740W/W9, L1780W/W9, L3710W, SL1741W

FOLDER 2

A-7719-01
NEON BULB & TUNER CONTROL PANEL

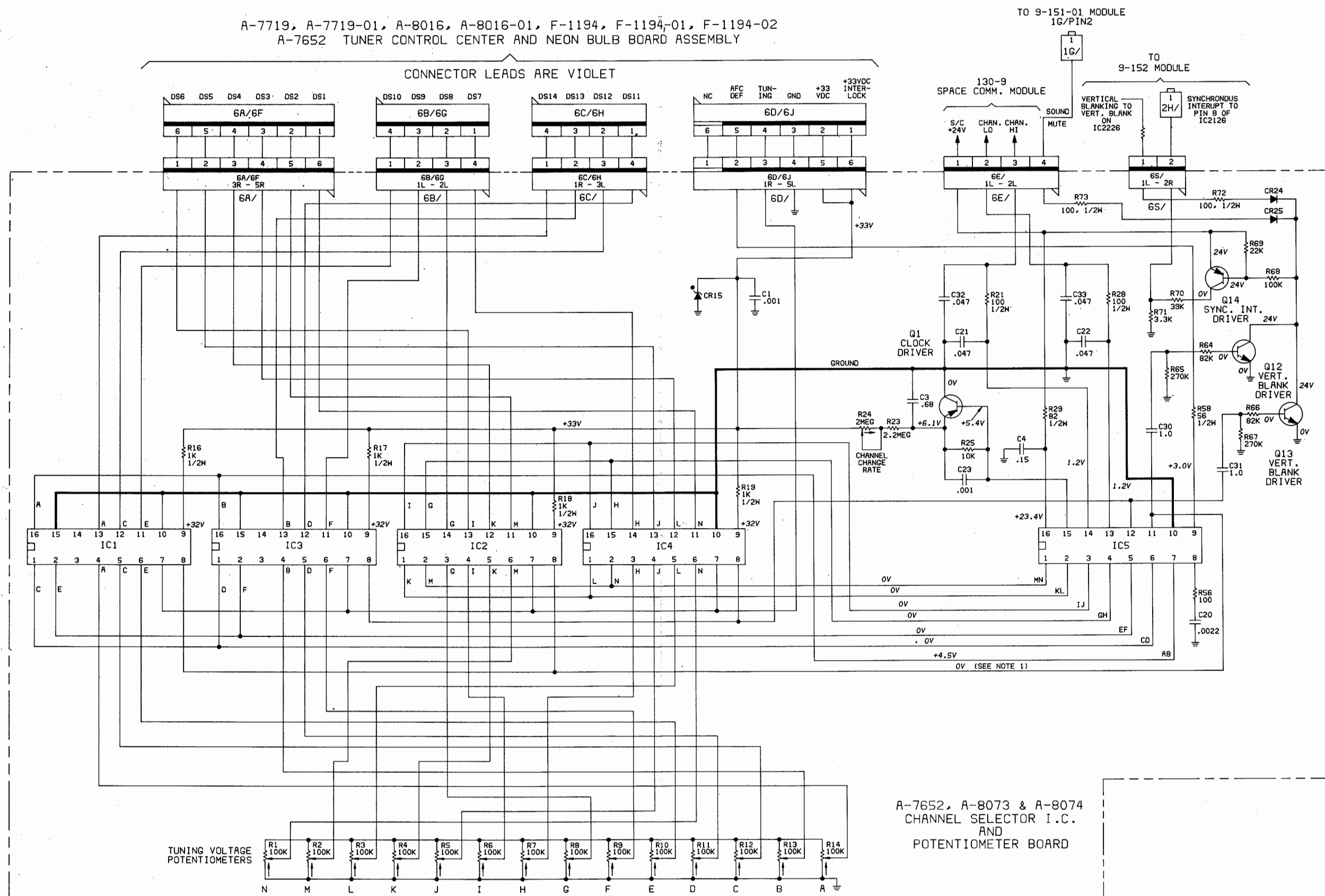


SCHEMATIC, 175-5103 CHANNEL SELECTOR (SECTION A)

ZENITH MODELS L1720W/W9, L1740W/W9,
L1780W/W9, L3710W, SL1741W

FOLDER 2

A-7719, A-7719-01, A-8016, A-8016-01, F-1194, F-1194-01, F-1194-02
A-7652 TUNER CONTROL CENTER AND NEON BULB BOARD ASSEMBLY



SCHEMATIC, 175-5103 CHANNEL SELECTOR (SECTION B)

CHANNEL SELECTOR (175-5103)

Courtesy of the Manufacturer

CHANNEL SELECTOR (175-5103)

SET 1890 FOLDER 2

35

**ZENITH MODELS L1720W, W9, L1740W, W9,
L1780W, W9, L3710W, SL1741W**

FOLDER 2

A-7719-01 NEON BULB AND TUNER CONTROL PANEL		
CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
C14	22-5012	CAPACITOR, TUBULAR, .15 MF, ±10%, 50V
C16	22-1153	CAPACITOR, ELECTROLYTIC, 1 MF, +100-10%, 50V
C17	22-6447-01	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V
C23	22-5012	CAPACITOR, TUBULAR, .15 MF, ±10%, 50V
C27	22-7151-08	CAPACITOR, ELECTROLYTIC, 100 MF, +100-10%, 16V
C30	22-7547	CAPACITOR, POLYESTER, 0.1 MF, ±10%, 50V
C31	22-7547	CAPACITOR, POLYESTER, 0.1 MF, ±10%, 50V
C36	22-6693	CAPACITOR, ELECTROLYTIC, 1 MF, +100-20%, 25V, NP
CR1 THRU CR14	103-254-01	DIODE, LOW VOLTAGE, SILICON RECTIFIER
CR20	103-270-A	DIODE, ZENER, +39V, 1 WATT
CR21	103-142-01	DIODE, LOW VOLTAGE, GENERAL, SILICON
CR22	103-142-01	DIODE, LOW VOLTAGE, GENERAL, SILICON
CR23	103-142-01	DIODE, LOW VOLTAGE, GENERAL, SILICON
DS1 THRU DS14	100-660	LAMP, CHANNEL INDICATOR
Q4	121-699	TRANSISTOR, PNP, SILICON
Q5	121-978	TRANSISTOR, PNP, SILICON
Q6	121-978	TRANSISTOR, PNP, SILICON
Q7	121-978	TRANSISTOR, PNP, SILICON
Q8	121-447	TRANSISTOR, NPN, SILICON
Q9	121-447	TRANSISTOR, NPN, SILICON
R15	63-0151	RESISTOR, C.C. 82K OHM, ±5%, 1W
R30	63-10312-02	RESISTOR, METAL FILM, 18K OHM, ±5%, 1/4W
R36	63-9922-20	RESISTOR, FILM, 100K OHM, ±5%, 1/4W
R37	63-10312-26	RESISTOR, METAL FILM, 180K OHM, ±5%, 1/4W
R38	63-9921-80	RESISTOR, FILM, 2.2K OHM, ±5%, 1/4W
R39	63-9922-20	RESISTOR, FILM, 100K OHM, ±5%, 1/4W
R40	63-9921-46	RESISTOR, FILM, 82 OHM, ±5%, 1/4W
R41	63-9922-04	RESISTOR, FILM, 22K OHM, ±5%, 1/4W
R42	63-7847	RESISTOR, CARBON COMP., 33K OHM, ±5%, 1/2W
R43	63-9922-06	RESISTOR, FILM, 27K OHM, ±5%, 1/4W
R44	63-9922-04	RESISTOR, FILM, 22K OHM, ±5%, 1/4W
R45	63-9922-28	RESISTOR, FILM, 220K OHM, ±5%, 1/4W
R46	63-9921-98	RESISTOR, FILM, 12K OHM, ±5%, 1/4W
R47	63-9922-20	RESISTOR, FILM, 100K OHM, ±5%, 1/4W
R48	63-9921-96	RESISTOR, FILM, 10K OHM, ±5%, 1/4W
R49	63-9922-12	RESISTOR, FILM, 47K OHM, ±5%, 1/4W
R50	63-8576	CONTROL, ROTARY, POTENTIOMETER, 20K OHM
R51	63-9921-96	RESISTOR, FILM, 10K OHM, ±5%, 1/4W
R52	63-10311-90	RESISTOR, METAL FILM, 5.6K OHM, ±5%, 1/4W
R53	63-7742	RESISTOR, C.C., 100 OHM, ±5%, 1/2W
R57	63-9921-82	RESISTOR, FILM, 2.7K OHM, ±5%, 1/4W
R62	63-9921-72	RESISTOR, FILM, 1K OHM, ±5%, 1/4W
204-653-05		14 POSITION SPACE COMMAND BULB AND TUNER CONTROL PANEL

A-8073 CHANNEL SELECTOR I.C. & POT BOARD 14 POSITION SEQUENTIAL ALL ELECTRONIC TUNING SYSTEM		
CIRCUIT REFERENCE DESIGNATOR	PART NUMBER	DESCRIPTION
C1	22-4948	CAPACITOR, CERAMIC DISC, 1000 PF, GMV, 500V
C3	22-7563-34	CAPACITOR, POLYESTER, .68 MF, ±10%, 100V
C4	22-5012	CAPACITOR, TUBULAR, .15 MF, ±10%, 50V
C20	22-2623	CAPACITOR, CERAMIC DISC, 2200 PF, ±10%, 500V
C21	22-6447-01	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V
C22	22-6447-01	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V
C23	22-4948	CAPACITOR, CERAMIC DISC, 1000 PF, GMV, 500V
C30	22-7563-36	CAPACITOR, POLYESTER, 1 MF, ±10%, 100V
C31	22-7563-36	CAPACITOR, POLYESTER, 1 MF, ±10%, 100V
C32	22-6447-01	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V
C33	22-6447-01	CAPACITOR, POLYESTER, .047 MF, ±20%, 100V
CR15	103-237	DIODE, ZENER, +33 VOLTS
CR24	103-142-01	DIODE, LOW VOLTAGE, GENERAL SILICON
CR25	103-142-01	DIODE, LOW VOLTAGE, GENERAL SILICON
IC1	221-84	INTEGRATED CIRCUIT, NIXIE DRIVER
IC2	221-84	INTEGRATED CIRCUIT, NIXIE DRIVER
IC3	221-84	INTEGRATED CIRCUIT, NIXIE DRIVER
IC4	221-84-01	INTEGRATED CIRCUIT, NIXIE DRIVER
IC5	221-83	INTEGRATED CIRCUIT, COUNTER MONOLITHIC
Q1	121-699	TRANSISTOR, PNP SILICON
Q12	121-975	TRANSISTOR, NPN SILICON
Q13	121-975	TRANSISTOR, NPN SILICON
Q14	121-699	TRANSISTOR, PNP SILICON
R1 THRU R14	63-10799	CONTROL, ROTARY, 100K OHM, POTENTIOMETER
R16	63-7784	RESISTOR, CARBON, 1K OHM, ±5%, 1/2W
R17	63-7784	RESISTOR, CARBON, 1K OHM, ±5%, 1/2W
R18	63-7784	RESISTOR, CARBON, 1K OHM, ±5%, 1/2W
R19	63-7784	RESISTOR, CARBON, 1K OHM, ±5%, 1/2W
R21	63-7744	RESISTOR, CARBON, 100 OHM, ±20%, 1/2W
R23	63-9924-52	RESISTOR, FILM, 2.2 MEGOHM, ±10%, 1/4W
R24	63-9928-07	CONTROL, ROTARY, 2 MEGOHM, POTENTIOMETER
R25	63-9921-96	RESISTOR, FILM, 10K OHM, ±5%, 1/4W
R28	63-7744	RESISTOR, CARBON, 100 OHM, ±20%, 1/2W
R29	63-7739	RESISTOR, CARBON, 82 OHM, ±5%, 1/2W
R56	63-9921-48	RESISTOR, FILM, 100 OHM, ±5%, 1/4W
R58	63-7732	RESISTOR, CARBON, 56 OHM, ±5%, 1/2W
R64	63-9922-18	RESISTOR, FILM, 82K OHM, ±5%, 1/4W
R65	63-9922-30	RESISTOR, FILM, 270K OHM, ±5%, 1/4W
R66	63-9922-18	RESISTOR, FILM, 82K OHM, ±5%, 1/4W
R67	63-9922-30	RESISTOR, FILM, 270K OHM, ±5%, 1/4W
R68	63-9922-20	RESISTOR, FILM, 100K OHM, ±5%, 1/4W
R69	63-9922-04	RESISTOR, FILM, 22K OHM, ±5%, 1/4W
R70	63-9922-10	RESISTOR, FILM, 39K OHM, ±5%, 1/4W
R71	63-9921-84	RESISTOR, FILM, 3.3K OHM, ±5%, 1/4W
R72	63-7744	RESISTOR, CARBON, 100 OHM, ±20%, 1/2W
R73	63-7744	RESISTOR, CARBON, 100 OHM, ±20%, 1/2W
204-697-04		14 POSITION SPACE COMMAND POT BOARD

Courtesy of the Manufacturer

A-7719-01 TEST POINTS *				
TEST POINT	DESIGNATION	LO VHF BAND	HI VHF BAND	UHF
A	BANDSWITCH SET (SEE NOTE 4)	APPROX. +7V SEE NOTE 4		
B	TUNING VOLTAGE	+0.5V TO +12.0V	+10.0V TO +27.0V	+0.5V TO 28.0V
C	VHF B*	+11.8V	+11.8V	<1.1V
D	SWITCHING VOLTAGE	-8V	+20.5V	+20.5V
E	UHF B*	0V	0V	+11.8V
F	UHF/VHF SWITCH	0V	0V	+12V

A-7719-01 TRANSISTOR VOLTAGES *									
LO VHF BAND (VT = 2.0 VOLTS) (VT TUNING VOLTAGES)				HI VHF BAND (VT = 20.0 VOLTS)			UHF (VT = 2.0 VOLTS)		
	EMITTER	BASE	COLLECTOR	EMITTER	BASE	COLLECTOR	EMITTER	BASE	COLLECTOR
Q4	+3.7V	+3.0V	-8V	+3.7V	+3.0V	-8V	+3.7V	+3.0V	-8V
Q5	+12V	+11.3V	+11.8V	+12V	+11.3V	+11.8V	+12V	+12V	<1.1V
Q6	+12V	+11.8V	0V	+12V	+11.8V	0V	+12V	+11.3V	+11.8V
Q7	+24V	+24V	-8V	+24V	+23.3V	+23.8V	+24V	+23.3V	+23.8V
Q8	+6.3V SEE NOTE 4	+1.2V	+24V	+7.9V	+8.6V	+23.3V	+9.3V	+10V	+23.3V
Q9	+6.3V SEE NOTE 4	+7V SEE NOTE 4	+24V	+7.9V	>+7V SEE NOTE 4	+24V	+9.3V	+7V SEE NOTE 4	+24V

* ALL VOLTAGES MEASURED WITH VOLT-METER WITH AN INPUT OF 11 MEGOHMS AND MAY VARY BY ±10%. MEASUREMENTS MADE UNDER NO SIGNAL CONDITION TO THE AFC INPUT CABLE (WHT/BLU SHIELDED LEAD) AND UHF AND VHF TUNERS CONNECTED.

CHANNEL SELECTOR LEGEND, 175-5103 CHANNEL SELECTOR

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS* for the most up-to-date replacement.

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
MODELS L1720W, L1720W9		MODELS L1780W, L1780W9	
Cabinet Front	14-11117-08	Cabinet Front	14-11117-09
Cabinet Rear	14-11274-01	Cabinet Rear	14-11274
Cabinet Shelf	14-11277	Cabinet Shelf	14-11277
Knob-VHF Fine Tuning	46-9737	Knob-Tint, Color, Sharpness, Black Level	A-8388
Knob-UHF Channel Selector	46-9742	Knob-Picture	A-8388-01
Knob-UHF Fine Tuning	46-9743	Knob-On/Off	46-10181
Knob-AFC	46-9928-03	Knob-Channel Selector	46-10258
Knob-Control With Hex Shaft	46-10059-07	Knob-Control With Hex Shaft	46-10059-07
Knob-On/Off/Volume	46-10186		
Knob-VHF Channel Selector	46-10229		
Knob-Sharpness, Tint Color, Color Level, Black Level	A-8388		
Knob-Picture	A-8388-01		
MODELS L1740W, L1740W9			
Cabinet Front	14-11117-10		
Cabinet Back	14-11274-01		
Cabinet Shelf	14-11277		
Knob-Channel Selector	A-8387		
Knob-Tint, Color, Sharpness, Black Level	A-8388		
Knob-Picture	A-8388-01		
Knob-On/Off	46-10181-01		
Knob-Volume	46-10186		
Knob-Control With Hex Shaft	46-10059-07		

WIRING DATA

High Voltage Lead	Use BELDEN No. 9967 (30 KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor) 8208 (Two-Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8528 (Solid) Available in 13 Colors 8522 (Stranded) Available in 13 Colors
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
75-Ohm Tuner Input Lead	Use BELDEN No. 8241
300-Ohm Antenna Lead-in	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) 4-Conductor 8485 (Round) 5-Conductor 8488 (Round) 8-Conductor

ZENITH MODELS L1720W, W9, L1740W, W9, L1780W, W9, L3710W, SL1741W

FOLDER 2

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS[®] for the most up-to-date replacement.

ITEM No.	PART NAME	PART No.	NOTES
AX3376	Component Combination	105-146	AC Isolation (1-2.5Meg, 400pF)
CR2301	Crystal	103-152-01	3.58MHz
E3251	Spark Gap	52-2240-08	
E5101	Spark Gap	52-2240-06	
E5102	Spark Gap	52-2240-06	
E5151	Spark Gap	52-2240-06	
E5152	Spark Gap	52-2240-06	
EX3376	Spark Gap	52-2240-02	
EX3377	Spark Gap	52-2240-02	
J401	Jack	78-2284	Earphone
L227	Ferrite Bead	149-417	
L3302	Ferrite Bead	149-454	
L3303	Ferrite Bead	149-454	
L3304	Ferrite Bead	149-454	
L3326	Wire	91-2843-03	#24GA, 1-1/2" (Orange)
L3356	Degaussing Coil	20-3933-02	
P3301	AC Cord	A-7670	
S202	Switch	85-1282	Color Sentry
SW1101	Switch		Power On/Off (Part of Light Sensor Unit with AC Switch Part Number A-5451-01 or 02)
U202	Ceramic Filter	224-13	
U351	Component Combination	A-8000	Resistor Network and Diode Assembly
VX201	CRT	17VBNP22	
1A,1B, 2B,2C, 3C,3D, 3M,3P, 4A	Connector	43-1592	6 Pin
1C,1D, 1G,	Connector	43-1588	2 Pin
2H,4H, 5C	Connector	43-1590	4 Pin
1E,1F, 2D,2E, 4L	Connector	43-1595	5 Pin
2A,2F, 3B,4K, 5A,5B	Connector	43-1604	4 Pin
2G,3J	Connector	43-1600	1 Pin
2H,3U	Connector	43-1604	4 Pin
3J	Connector		2 Pin
3K,3R, 3T	Connector	43-1606	6 Pin
3N	Connector	43-1593	5 Pin
4B	Antenna Isolation	105-108-01	(2 used)
	Channel Selector	175-5096	Assembly
	Channel Selector	175-5103	Assembly (Used in Model SL1741W)
	Earphone	39-56-01	Plug and Cable
	Magnet	A-7690-01	Convergence and Purity
	P.C. Board	F-3872	Color Sentry Switch Board
	P.C. Board	A-5995	Light Sensor with Components
	P.C. Board	7-124-12D	Secondary Controls and Switches
	P.C. Board	F-4540	Secondary Controls and Switches
	UHF Antenna	S-86924-01	RUSSELL Replacement BOW-1H
	VHF Antenna	1-224	
	UHF Tuner	175-1971-04	Used in Models L1720W, L1720W9
	VHF Tuner	175-2214-50	Used in Models L1720W, L1720W9

For SAFETY use only equivalent replacement part.

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

ITEM No.	PART NAME	MFGR. PART No.	NOTES
	Module	9-151A	RF-IF
	Module	9-151-01A	RF-IF
	Module	9-151-02	RF-IF
	Module	9-155	Video Output
	Module	9-155-01	Video Output
	Module	9-152C	Chroma Luminance
	Module	9-152B	Chroma Luminance
	Module	9-160-03B	Power Supply-Horiz Sweep
	Module	9-160-03	Power Supply-Horiz Sweep
	Module	9-160	Power Supply-Horiz Sweep
	Module	130-9A	Remote Receiver
	Module	A-7550	Remote Power Supply
	Module	175-5096	Channel Selector; Used in Models L1740W, L1740W9, L1780W, L1780W9.
	Module	175-5103	Channel Selector; Used in Model SL1741W.

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
CR55		103-237	GEZD-33	ZB338	REN 147	SK3095/147A	ECG147A	TM147A/**	WEP1122/147A	103-237
CR226		103-254-01	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-254-01
CR351		103-279-08A		ZM4, 3B		SK3774/5008A	ECG5008A	TM5008	WEP1408/5008	103-279-08A
CR352		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR353		103-279-31	GEZD-4, 3		REN 5068	SK3332/5068A	ECG5068A	TM5068A	WEP1152/5068A	103-279-31
CR2101		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2102		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2103		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2104		103-254-01	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-254-01
CR2105		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2106		103-254-01	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-254-01
CR2126		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2127		103-254-01	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-254-01
CR2128		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2151		103-254-01	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-254-01
CR2201		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2227		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2229		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2230		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2231		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2232		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2252		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR2276		103-140A	GEZD-6, 8	ZB5, 8B	REN 5071	SK3334/5071A	ECG5071A	TM5071A/**	WEP1106/5071A	103-140A
CR2326		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR3276		103-254-01	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-254-01
CR3306		103-316-04	GE-512	PTC204	REN 156	SK3051/156	ECG156	TM156	WEP4008/156	103-316-04
CR3307		103-287	GE-511	PTC216	REN 506	SK3843/506	ECG506	TM506	WEP172/506	103-287
CR3308		103-305	GE-511	PTC216	REN 506	SK3843/506	ECG506	TM506	WEP172/506	103-305
CR3337		103-312	GE-511	PTC216	REN 506	SK3843/506	ECG506	TM506	WEP172/506	103-312
CR3337		103-142-01	GE-300	PTC214	REN 177	SK3175/177	ECG177	TM177	WEP1062/177	103-142-01
CR3352										

**ZENITH MODELS L1720W, W9, L1740W, W9
L1780W, W9, L3710W, SL1741W**

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly intraduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RAYTHEON PART No.	RCA PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
CRX3335		103-284A	GE-510	PTC205	REN 125	SK3081/125	ECG125	TM125	WEP170/125	103-284A
CRX3336		103-284A	GE-510	PTC205	REN 125	SK3081/125	ECG125	TM125	WEP170/125	103-284A
CRX3355		103-308A		ZM128		SK3787/5021A	ECG5021A	TM5021	WEP1423/5021	103-308A
CRX3454		103-298-05A	GE-504A	PTC202	REN 116	SK3313/116	ECG116	TM116	WEP158/116	103-298-05A
CRX3477		103-284A	GE-510	PTC205	REN 125	SK3081/125	ECG125	TM125	WEP170/125	103-284A
CRX3478		103-284A	GE-510	PTC205	REN 125	SK3081/125	ECG125	TM125	WEP170/125	103-284A
CRX3479		103-284A	GE-510	PTC205	REN 125	SK3081/125	ECG125	TM125	WEP170/125	103-284A
IC201		221-97-01								221-97-01
IC202		221-102-01								221-102-01
IC351		221-105								221-105
IC451		221-98				SK3832/1231	ECG1231	TM1231		221-98
IC2126		221-103A								221-103A
IC2226		221-96				SK3207/818	ECG818	TM818		221-96
IC2301		221-1040								221-1040
IC2351		221-106								221-106
ICX3301		221-132								221-132
Q201		121-503	GE-61	PTC132	REN 161*	SK3246/229	ECG319	TM319	WEP924/319	121-503
Q226		121-895	GE-20	PTC132*	REN 161	SK3716/161	ECG161	TM161	WEP63/161	121-895
Q227		121-986	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-986
Q251		121-973	GE-21	PTC103	REN 129	SK3466/159	ECG129	TM129	WEP60/129	121-973
Q2126		121-1008-01	GE-233	PTC112	REN 291	SK3440/291	ECG291	TM291	WEP780/291	121-1008-01
Q2127		121-1008-01	GE-233	PTC112	REN 291	SK3440/291	ECG291	TM291	WEP780/291	121-1008-01
Q3301		121-1037	GE-27		REN 171	SK3201/171	ECG171	TM171	WEP702/171	121-1037
Q3303		121-1040	GE-20	PTC136	REN 123A	SK3854/123AP	ECG123AP	TM123AP	WEP736/123A	121-1040
Q3451		121-499-01	GE-20	PTC136	REN 123A	SK3854/123AP	ECG123AP	TM123AP	WEP736/123A	121-499-01
Q3452		121-966-01	GE-66	PTC110	REN 152	SK3054/152	ECG152	TM152	WEP745/152	121-966-01
Q3453		121-1019	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-1019
		121-1043	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-1043
Q5101		121-868-01	GE-27		REN 171	SK3201/171	ECG171	TM171	WEP702/171	121-868-01
Q5102		121-986	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-986
Q5103		121-986	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-986
Q5104		121-868-01	GE-27		REN 171	SK3201/171	ECG171	TM171	WEP702/171	121-868-01
Q5151		121-1019	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-1019
Q5152		121-868-01	GE-27		REN 171	SK3201/171	ECG171	TM171	WEP702/171	121-868-01
Q5153		121-986	GE-82	PTC103	REN 159	SK3466/159	ECG159	TM159	WEP62/159	121-986
QX3326		121-1029	GE-259	PTC146	REN 238	SK3710/238	ECG238	TM238	WEP764/238	121-1029
QX3338		121-973	GE-21	PTC103	REN 129	SK3466/159	ECG129	TM129	WEP60/129	121-973
QX3351		121-975	GE-20	PTC136	REN 123A	SK3854/123AP	ECG123AP	TM123AP	WEP736/123A	121-975

For SAFETY use only equivalent replacement part.
* Lead configuration may vary from original.
/** Also available as exact type replacement.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C226	47 25V	22-7708-08A	PC50-25	VTT47E25	QV1-77	EV-1426.1
C232	100 25V	22-7526	PC100-25	VTT100G25	QV1-97	EV-1331
C260	47 25V	22-7152-07	PC50-25	VTT47E25	QV1-77	EV-1426.1
C327	1 25V	22-7389-02	PC1-50	VTT1A50	QV1-11	EV-1615
C329	1 25V	22-7389-02	PC1-50	VTT1A50	QV1-11	EV-1615
C330	4.7 25V	22-7152-03	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C331	100 25V	22-7526	PC100-25	VTT100G25	QV1-97	EV-1331
C351	2.2 50V	22-7390-01	PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C356	1 50V	22-7153	PC1-50	VTT1A50	QV1-11	EV-1615
C451	1 50V	22-7153	PC1-50	VTT1A50	QV1-11	EV-1615
C459	47 25V	22-7152-07	PC50-25	VTT47E25	QV1-77	EV-1426.1
C460	22 25V	22-7152-05	PC25-25	VTT22D25		EV-1424
C461	4.7 25V	22-7152-03	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C477	220 25V	22-7152-09	PC250-25	VTT220K25	QV1-119	EV-1340
C478	470 35V	22-7154-11	WBR500-35*	VTT470M35	QV1-157	EV-1451
C2101	1 50V	22-7710-01A	PC1-50	VTT1A50	QV1-11	EV-1615
C2104	47 16V	22-7707-08A	PC50-16	VTT47D16	QV1-73	EV-1226
C2128	47 35V	22-7713-01B	PC50-50	VTT47E35	QV1-77	EV-1426.1
C2134	47 35V	22-7709-08A	PC50-50	VTT47E35	QV1-77	EV-1426.1
C2151	10 100V	22-7712-05B	WBR10-150*	VTT10G100		TVA-1337*
C2152	15 35V	22-7713A	PC20-50	VTT22G63	QV1-51	EV-1523
C2176	470 80V	22-7587	WBR500-150*	TC10501A*		TVA-1376*
C2201	47 50V	22-7710A	PC1-50	VTT47A63	QV1-3	EV-1610
C2251	470 16V	22-7707-12	PC500-16	VTT470K16	QV1-151	EV-1251
C2252	22 25V	22-7708-06B	PC25-25	VTT22D25		EV-1424
C2331	10 25V	22-7708-05A	PC10-25	VTT10B25		EV-1422
C2339	2.2 50V	22-7710-02A	PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C3276	15 25V	22-7389-04	PC20-50	VTT22D25		EV-1323.1
C3277	100 100V	22-7157-08	WBR100-150*	TC10101B*		TVA-1346*
C3305	1 50V	22-7153	PC1-50	VTT1A50	QV1-11	EV-1615
C3309	10 16V	22-7151-04	PC10-25	VTT10B25	QV1-41	EV-1222
C3315	47 16V	22-7680	PC50-16	VTT47D16	QV1-73	EV-1226
C3339	2.2 50V	22-7390-01	PC2-100	VTT2R2A50	QV1-21	EV-1617.1

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
# LX 3351	420mA	4.2	78mH	95-3400			# For SAFETY use only equivalent replacement part.
# TX 3376	.82A AC	.22	7mH	95-3394			# For SAFETY use only equivalent replacement part.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T3350	8	8	95-3383			

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFR. PART No.	QUAM PART No.	
SP401	4" PM, 32 Ohms	49-1215-06 or 49-1215-07	4A1232U	Used in Models L1720W, L1720W9, L1740W, L1740W9, L1780W, L1780W9, L3710W.
		49-1302		Used in Model SL1741W.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
# FX 3376	2A @ 125V Slow-blow	136-123-01		MDL2	1A1907-02	313002	102071	

For SAFETY use only equivalent replacement part.

ZENITH MODELS L1720W/W9, L1740W/W9, L1780W/W9, L3710W, SL1741W

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L201	4.5MHz Trap	20-3798			
L202	4.5MHz Trap	20-3880(2)			
L203	Peaking (27uH)	20-2707		72F275AP	
	Osc	20-3759			
L204	41.25MHz Trap	20-3875(2)			
	41.25MHz Trap	20-3821-01			
L205	Video IF	20-3872(2)			
	Video IF	20-3820			
L206	Peaking (27uH)	20-3877(2)			
L226	45.75MHz	20-2707		72F275AP	
	45.75MHz	20-3769-01			
L228	41.25MHz	20-3883(2)			
	41.25MHz	20-3843			
L229	Video IF	20-3883(2)			
	Video IF	20-3760			
L326	Peaking (663uH)	20-3881(2)			
L327	Peaking (663uH)	20-3831			
L451	Quadrature	20-3831			
L452	4.5MHz Input	20-3800			
L2101	Peaking (663uH)	95-3333			
L2151	Peaking (27uH)	20-3831			
L2201	3.58MHz Trap	20-3907-17A			
L2202	Delay Line	20-3869			
L2203	Peaking (663uH)	20-3828			
L2251	Peaking (47uH)	20-3831			
	Peaking (47uH)	20-3907-20A			
L2301	Peaking (18uH)	F-4202(1)			
L2302	Peaking (47uH)	20-3887-15D			
L2326	RF Choke (18uH)	20-3887-20D			
L2327	Peaking (6.8uH)	20-3904			
L2328	Chroma Take-off	20-3887-10D			
L2351	Chroma Bandpass (15uH)	95-3080			
L3476	Peaking (100uH)	20-3867-01			
LX3301	Peaking (663uH)	20-3907-24A			
		20-3831-01			

For SAFETY use only equivalent replacement part.
(1) Includes 2700-ohm resistor.
(2) Module 9-151-02.

COILS & TRANSFORMERS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA				
		MFR. PART No.	OTHER IDENTIFICATION	MILLER PART No.	THORDARSON PART No.	TRIAD PART No.
L376	Horiz Osc	20-3849				
LX3200	Yoke Horiz .78mH 100° Vert 20mH	95-3404-01				
LX3352	Horiz Linearity	20-3675				
LX3353	Horiz Width	20-3885				
TX3251	Pincushion	20-3885-01				
TX3301	Feedback	95-3389-04				
	Feedback	95-3347				
TX3326	Horiz Driver	95-3427-01				
TX3351	Startup	95-3344				
TX3352	Horiz Output	95-3403-01				
	Horiz Outout	95-3380-05				
		95-3380-06				

For SAFETY use only equivalent replacement part.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	GENERAL LINE
C3342	22 16V NP	22-7404-06		TCN3520		TVA-1652
C3352	2.2 50V	22-7390-01		VT22R2A50		EV-1617.1
C3451	1 50V	22-7153	PC2-100	VT1A50	QV1-21	EV-1615
C3453	10 16V	22-7151-04	PC1-50	VT10B25	QV1-11	EV-1222
C5101	4.7 315V	22-7603	PC10-25	VT10B25	QV1-41	TVA-1703
C7102	33 16V		WBR5-450	TC708		EV-1325
CX3326A	300 180V	22-7735	PC30-25	VT33025	QV1-63	
	300 180V			FP216-9		
CX3330	100 25V	22-7526	PC100-25	VT100G25	QV1-97	EV-1331
CX3341	1 50V	22-7153	PC1-50	VT1A50	QV1-11	EV-1615
CX3454	330 25V	22-7708-11	WBR300-35*	VT330L25	QV1-135	EV-1345
CX3456	47 35V	22-7709-08	PC50-50	VT47E35	QV1-77	EV-1426.1
CX3457	470 35V	22-7709-12	WBR500-35*	VT470M35	QV1-157	EV-1451
CX3477	1000 80V	22-7688-01				
CX3481	10 315V	22-7603-01				

For SAFETY use only equivalent replacement part.
* Axial replacement for radial device.

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	GENERAL LINE
C201	100 NPO 500V 5%		NP0100	CN0310		10TCC-T10
C202	100 NPO 500V 5%		NP0100	CN0310		10TCC-T10
C203	60F NPO 500V ±.5		NP06P8	CN0568		10TCC-V68
C204	.001 500V			GP210	QCT2-41	10TS-D10
C205	.001 500V			GP210	QCT2-41	10TS-D10
C206	33 NPO 100V 5%		NP033	CN0433	QCC2-22	10TCC-Q33
C208	.1 100V 10%		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C209	39 NPO 50V 5%			CN0439		10TCC-Q39
C210	4pF NPO 50V ±.25	22-7621-04	NP047	CN0547		
C211	43 NPO 50V 5%			CN0447		
C212	13 NPO 50V 5%			CN0412	QCC2-26	10TCC-Q47
C213	.001 500V			GP210	QCT2-41	10TS-D10
C214	.001 500V			GP210	QCT2-41	10TS-D10
C216	.001 500V			GP210	QCT2-41	10TS-D10
C217	.001 500V			GP210	QCT2-41	10TS-D10
C218	.001 500V			GP210	QCT2-41	10TS-D10
C219	.0047 50V 10%		WMF1D47	EWFA247	QF1-57	1PB-D47
C220	.0047 50V 10%		WMF1D47	EWFA247	QF1-57	1PB-D47
C221	.001 500V			GP210	QCT2-41	10TS-D10
C222	.001 500V			GP210	QCT2-41	10TS-D10
C223	2pF NPO50 500V ±.25	22-3774		CN0522		
C227	.001 500V			GP210	QCT2-41	10TS-D10
C228	100 500V 5%			CN0310		10TCC-T10
C229	100 NPO 500V 5%		NP0100	CN0310		10TCC-T10
C230	24 NPO 500V 5%		NP0100	CN0422		10TCC-Q22
C231	100 N1500 500V 10%		NP022	CN15-310		10TCW-T10
C233	100 N1500 500V 10%			CN15-310		10TCW-T10
C327	.22 100V 10%			EWFA1022	QF1-253	1PB-P22
C328	.0068 400V 10%		DPMS2P22	EWFA1022		6PS-D68
C352	.01 600V 10%		DPMS6D68	EWFA1022	QF1-97	6PS-S10
C353	150 500V 10%		DPMS6S1	EWFA1022		10TCC-T15
C354	.1 100V 10%			CN0315		1PB-P10
C355	.0047 400V 10%		DPMS2P1	EWFA1010	QF1-215	6PS-D47
C357	620 500V 10%		DPMS6D47	EWFA1010	QF1-63	MWC-621
C358	39 NPO 500V 5%		CD19FD621J03	EWFA1010		10TCC-Q39
C376	470 N750 500V 10%			EWFA1010		10TCU-T47
C426	9pF NPO 500V ±.5			EWFA1010	QCC2-15	10TCC-Q10
C427	.047 100V		NP010	CN0410	QF1-171	1PB-S47
C428	15 NPO 500V 5%		DPMS2S47	CN0415		10TCC-Q15
C429	1pF NPO 500V ±.25	22-7185	NP015	CN0510		
C452	120 N30 500V 5%	22-5912				
C453	220 500V 10%					
C454	.22 100V 10%					
C455	.001 1KV 10%					
C456	.047 100V					
C457	.0022 1KV					
C458	20 N30 500V 5%	22-6225-41				
C462	.01 50V					
C476	.047 250V					
C479	.047 100V					
C2102	.001 600V 10%					
C2103	.47 100V 5%					
C2105	.1 100V 10%					
C2126	.001 100V 10%					
C2127	.1 100V 10%					
C2129	.015 400V 10%					
C2130	.015 400V 10%					
C2131	.015 400V 10%					
C2132	.0068 400V					
C2133	680 500V 10%					
C2153	.0033 600V 10%					
C2177	.01 600V 10%					
C2202	43 NPO 50V 5%					
C2203	.001 500V 10%					
C2204	.01 600V 10%					

ZENITH MODELS L1720W/W9, L1740W/W9, L1760W/W9, L1770W/W9, L1790W/W9

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C2226	.1 100V		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C2227	.01 600V 10%		OPMS6S1	EWFA110	QF1-97	6PS-S10
C2228	.22 250V 10%		OPMS6P22	EWFA022		6PS-P22
C2229	.033 250V 10%		DPMS6S33	EWFA133		6PS-S33
C2250	.047 50V		DPMS2S47	EWFA147	QF1-171	1PB-S47
C2276	.1 100V 10%		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C2301	160 N750 500V 5%					10TCU-T18
C2302	.047 100V 10%		DPMS2S47	EWFA147	QF1-171	1PB-S47
C2303	68 N750 50V 5%		N68	CN7468		10TCU-068
C2304	.047 100V 10%		OPMS2S47	EWFA147	QF1-171	1PB-S47
C2305	12 N750 50V 5%			CN7412		10TCU-012
C2306	120 N750 50V 5%					10TCU-T12
C2307	43 NPO 50V 5%		NP047	CN0447	QCC2-26	10TCC-047
C2308	.047 100V		OPMS2S47	EWFA147	QF1-171	1PB-S47
C2309	.047 100V		DPMS2S47	EWFA147	QF1-171	1PB-S47
C2310	.01 600V 10%		DPMS6S1	EWFA110	QF1-97	6PS-S10
C2311	.01 600V 10%		DPMS6S1	EWFA110	QF1-97	6PS-S10
C2312	.0027 250V 10%		DPMS6D27	PVC6227		6PS-D27
C2326	200 N750 50V 5%					10TCU-T20
C2327	330 N750 50V 5%		N330	CN7333		10TCU-T33
C2328	120 N750 50V 5%					10TCU-T12
C2329	270 N750 50V 5%			CN7327		10TCU-T27
C2330	.047 100V		DPMS2S47	EWFA147	QF1-171	1PB-S47
C2332	.01 600V 10%		OPMS6S1	EWFA110	QF1-97	6PS-S10
C2333	470 1KV 10%		GP470	GP347	QCT2-35	10TS-T47
C2334	51 NPO 50V 5%		NP050	CN0450		10TCC-050
C2335	12 N75 500V 5%			*		10TCN-012
C2336	65 N1500 500V 5%			CN15-468		10TCW-068
C2337	50 NPO 100V 5%		NP050	CN0450		10TCC-050
C2338	.001 600V 10%		NP010	CN0410	QCC2-15	10TCC-010
C2340	.01 600V 10%		DPMS601	EWFA210	QF1-7	6PS-D10
C2341	68 NPO 50V 5%		OPMS6S1	EWFA110	QF1-97	6PS-S10
C2342	220 50V 5%		NP068	CN0468		10TCC-068
C2343	75 NPO 500V 5%					10TCC-T22
C2351	470 1KV 10%		NP075	CN0475	QCT2-35	10TCC-Q75
C2352	.047 100V		GP470	GP347	QF1-171	1PB-S47
C2353	.001 600V 10%		DPMS2S47	EWFA147	QF1-7	6PS-D10
C2354	.1 100V 10%		DPMS6D1	EWFA1010	QF1-215	1PB-P10
C2355	.1 100V 10%		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C2356	180 N330 500V 5%			*		10TCS-T18
C2357	470 N1500 500V 5%			CN15-347		10TCW-T47
C2376	270 N750 50V 10%			CN7327		10TCU-T27
C2377	270 N750 50V 10%			CN7327		10TCU-T27
C2378	270 N750 50V 10%			CN7327		10TCU-T27
C3278	.1 250V 10%		DPMS4P1	EWFA010		4PB-P10
C3301	.56 200V 10%					PP2R5-P56
C3302	180 N330 500V 5%			*		10TCS-T18
C3303	.0015 500V 10%			GP215		10TS-D15
C3304	.022 100V 10%		OPMS2S22	EWFA1A22	QF1-127	1PB-S22
C3306	.0039 100V 10%		WMF-1D39	EWFA239		1PB-D39
C3307	.39 100V 10%		WMF-1P39	EWFA039		1PB-P39
C3308	.001 500V 10%			GP210	QCT2-41	10TS-D10
C3310	.0027 500V 10%			GP227		10TS-D27
C3313	.001 500V 10%			GP210	QCT2-41	10TS-D10
C3314	.001 500V 10%			GP210	QCT2-41	10TS-D10
C3319	82 500V		NP082	CN0482		10TCC-Q82
C3321	.68 200V 10%		WMF-2P68	EWFA268		2PB-P68
C3327	.001 1KV			GP210	QCT2-41	10TS-D10
C3328	.001 1KV			GP210	QCT2-41	10TS-D10
C3329	.001 1KV			GP210	QCT2-41	10TS-D10
C3331	.22 100V 10%		DPMS2P22	EWFA022	QF1-253	1PB-P22
C3332	.001 1KV 10%		OPMS1601	PVC1621		16PS-D10
C3333	.001 500V 10%			GP210	QCT2-41	10TS-D10
C3334	.0047 100V 10%		WMF1047	EWFA247	QF1-57	1PB-D47
C3335	.022 100V 10%		OPMS2S22	EWFA1A22	QF1-127	1PB-S22
C3336	.001 500V 10%		DPMS601	EWFA210	QF1-7	6PS-D10
C3337	560 500V 10%			GP356		10TS-T56
C3338	.047 200V 10%		OPMS4S47	EWFA147		4PB-S47
C3343	.1 100V 10%		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C3351	.1 100V 10%		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C3353	180 500V 5%					10TCC-T18
C3362	.01 1KV		GP10000	GP110	QC1-149	5GA-S10
C3452	.1 100V 10%		DPMS2P1	EWFA1010	QF1-215	1PB-P10
C3458	.001 1KV 10%			GP210	QCT2-41	10TS-D10
C3478	.001 1KV 10%			GP210	QCT2-41	10TS-D10
C3480	.001 1KV 10%			GP210	QCT2-41	10TS-D10
C3482	.001 500V 10%			GP210	QCT2-41	10TS-D10
C3577	.001 1KV 10%			GP210	QCT2-41	10TS-D10
C5102	.01 1.5KV		DPMS16S1	PVC1611		16PS-S10
C5103	.001 2KV 10%		DPMS-2001	PVC2X21		20PS-D10
C5151	.01 500V		GP10000	GP110	QC1-149	5GA-S10
C7101	47 NPO 500V 5%		NP047	CN0447	QCC2-26	10TCC-Q47
CX3311	.01 1KV		GP10000	GP110	QC1-149	5GA-S10
CX3312	.01 1KV		GP10000	GP110	QC1-149	5GA-S10
CX3316	.017 1.6KV 5%					
CX3317	530 3KV 10%					
CX3318	530 3KV 10%					
CX3320	530 3KV 10%					
CX3322	530 3KV 10%					
CX3323	530 3KV 10%					
CX3324	.001 2KV 10%					
CX3340	.01 2KV		DPMS-2001	PVC2X21		20PS-D10
CX3376	.0047 1KV		GP4700	GP247		5GA-D47
CX3455	.001 1KV 10%			GP210	QCT2-41	10TS-D10
CX3576	.022 250V 10%		DPMS-4S22	EWFA122		4PB-S22

For SAFETY use only equivalent replacement part.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA		
			MFR. PART No.	MALLORY PART No.	TRW PART No.
R75	Volume	15K	63-10722		BU11,CF88,SS16,DC1
R226	Volume/Switch	15K	63-10767-01(22)		
R353	Volume/Switch	15K	63-10772		
R2126	Zero Carrier Adjust	10K	63-10651-04	RVA0911H103	U260R103B
R2278	AGC Adjust	1000	63-9697-25	MTIC13L4	U201R102B
R2304	Vert Height	2000	63-10585	MTIC23L4	U201R252B
	Brightness Limiter	30K	63-9697-32	MTIC253L4	U201R253B
	Cross Talk	10K	63-10531-01		
	Cross Talk	10K	63-10684-10		
R2351	APC	20K	63-9697-14	MTIC24L4	U201R253B
R2376	ACC	20K	63-9697-14	MTIC24L4	U201R253B
R2381	Color Threshold	10K	63-9697-30	MTIC14L4	U201R103B
R5104	Master G2	4Meg	63-10670-02	MTIC355L4	
R5108	Green Background	800	63-10794-04	MTIC13L4	U201R102B
R5110	Red Background	800	63-10794-03	MTIC13L4	U201R102B
R5155	Blue Background	800	63-10794-05	MTIC13L4	U201R102B
R7101	Picture	5000	63-10769		
R7102	Preset Color (Rear)	5000	63-10778(19)		
R7103	Color (Front)	5000	63-10770-03(22)		
	Color	5000	63-10778(20)		
R7104	Preset Tint (Rear)	5000	63-10770-03(22)		
R7105	Tint (Front)	5000	63-10779(21)		
R7106	Tint	5000			
	Black Level (Front)	5000 Detent @ 50%			
R7107	Brightness Range	150K			
R7108	Sharpness	5000 Detent @ 50%	63-10768		
	Sharpness	5000	63-10768-05(22)		
	Tone	30K	63-10684-06(18)		
RX3312	B+ Adjust	2000	63-10652		
RX3381	Focus	20Meg			

For SAFETY use only equivalent replacement part. (20) Includes R7104 and R7105.
(18) Factory sealed, value may vary per factory. (21) Includes R7106 and R7107.
(19) Includes R7102 and R7103. (22) Used in Models L1720W and L1720W9.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		MFR. PART No.	WORKMAN PART No.			MFR. PART No.	WORKMAN PART No.
R208	80K Cold NTC			# RX3326	100K 5% 1/2W Carbon	63-9947-20	22-2144
R227	100 10% 1/4W Carbon	63-10183-48	22-1072	# RX3327	4 10% 10W WW	63-8246	24-4021
R265	LDR			# RX3332	1000 5% 1/4W Carbon	63-9921-72	22-1096
R426	4.7 5% 1/4W Carbon	63-9921-16	22-1040	# RX3333	4700 5% 1/4W Carbon	63-9921-88	22-1112
R476	1 5% 1/2W Film	63-8360		# RX3334	6200 5% 1/4W Carbon		
R477	39 10% 3W Film	63-8360		# RX3334	1500 10% 7W WW	63-10452	
R3303	47 5% 1/4W Carbon	63-9921-40	22-1064	# RX3335	270 5% 5W WW	63-10442-82	
R3313	6800 5% 1/4W Carbon	63-9921-92	22-1116	# RX3355	2.2 5% 1/2W Carbon	63-9946-08	
R3315	1000 5% 1/4W Carbon	63-9921-72	22-1096	# RX3357	22 5% 1/4W Carbon	63-9921-32	22-1056
R3316	4700 5% 1/4W Carbon	63-9921-88	22-1112	# RX3358	2200 5% 1/4W Carbon	63-9921-80	22-1104
R3319	6200 5% 1/4W Carbon	63-9921-91		# RX3359	1100 1% 1/2W Carbon	63-10810	
R3331	27K 5% 1/4W Carbon	63-9922-06	22-1130	# RX3360	2740 1% 1/2W Carbon	63-10810-01	
R3354	390 10% 5W WW	63-10271		# RX3361	1100 1% 1/2W Carbon	63-10810	
R3356	100K 5% 1/4W Carbon	63-9922-20	22-1144	# RX3362	620 5% 1/4W Carbon	63-9921-67	
R3367	15K 5% 1/4W Carbon		22-1124	#	47K 5% 1/4W		22-1136
R3455	2 10% 2W WW	63-10714		# RX3363	20K 5% 1/4W Carbon	63-9922-03	
R3457	10 5% 1/2W Carbon	63-9946-24	22-2048	# RX3364	22K 5% 1/4W Carbon	63-9922-04	22-1128
R3458	2 10% 2W WW	63-10714		# RX3365	51K 5% 1/4W Carbon	63-9922-13	
R3461	33 5% 1/2W Carbon	63-9946-36	22-2060	# RX3366	56K 5% 1/4W Carbon	63-9922-14	22-1138
R3462	2 10% 2W WW	63-10714		# RX3377	1.2Meg 20% 1/2W Carbon	63-10526-03	22-2170
R3476	22K 5% 1/2W	63-9947-04	22-2128	#			
R5107	3300 5% 1/2W Carbon	63-7805	22-2108	# RX3399	10Meg 20% 1/2W Carbon	63-10526-04	22-2192
R5151	3300 5% 1/2W Carbon	63-7805	22-2108	#			
R5152	3300 5% 1/2W Carbon	63-7805	22-2108	# RX3460	1 5% 2W Carbon	63-10420-24	
RX2136	39 5% 1/2W Carbon		22-2062	# RX3479	3.3 5% 1/2W Carbon	63-10565-12	22-2036
	51 5% 1/2W Carbon	63-10565-41		# RX3480	3.3 5% 1/2W Carbon	63-10565-12	20-2036
RX2157	1.5 5% 1/2W Carbon	63-10565-04		# RX3481	47 10% 3W WW	63-10430-64	
RX2158	1.8 5% 5W WW	63-10442-30		RX3676	12 Cold PTC	63-10710	FR605
RX2159	1 5% 5W WW	63-10442-24		U201	Resistor Network	105-131-01	
RX2176	1.5 5% 1/2W Carbon	63-10565-04		U2151	Resistor Network	105-132	
RX3284	.62 5% 2W Carbon	63-10742-03		U2201	Resistor Network	105-134	
RX3309	10K 5% 1/4W Carbon	63-9921-96	22-1120	U2276	Resistor Network	105-149-01	
RX3310	8200 5% 1/4W Carbon	63-9921-94	22-1118	U2326	Resistor Network	105-158	
RX3314	1000 5% 1/4W Carbon	63-9921-72	22-1096	U5101	Resistor Network	105-130-01	
RX3315	1000 5% 1/4W Carbon	63-9921-72	22-1096	U5102	Resistor Network	105-136	
RX3317	9100 5% 1/4W Carbon						
	10K 5% 1/4W Carbon	63-9921-96	22-1120				