

SAFETY PRECAUTIONS

SERVICE WARNING

Only qualified service technicians who are familiar with safety checks and guidelines should perform service work. Before replacing parts, disconnect power source to protect electrostatically sensitive parts. Do not attempt to modify any circuit unless so recommended by the manufacturer. When servicing the receiver, use an isolation transformer between the line cord and power receptacle.

SERVICING THE HIGH VOLTAGE AND CRT

Use EXTREME CAUTION when servicing the high voltage circuits. To discharge static high voltage, connect a 10K ohms resistor in series with a test lead between the receiver ground and CRT anode lead. DO NOT lift the CRT by the neck. Always wear shatterproof goggles when handling the CRT to protect eyes in case of implosion.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering X-ray radiation. In solid-state receivers and monitors, the CRT is the only potential source of X-rays. Keep an accurate high voltage meter available at all times. Check meter calibration periodically. Whenever servicing a receiver, check the high voltage at various brightness levels to be sure it is regulating properly. Keep high voltage at rated value, NO HIGHER. Excessive high voltage may cause X-ray radiation or failure of associated components. DO NOT depend on protection circuits to keep voltage at rated value. When troubleshooting a receiver with excessive high voltage, avoid close contact with the CRT. DO NOT operate the receiver longer than necessary. To locate the cause of excessive high voltage, use a variable AC transformer to regulate voltage. In present receivers, many electrical and mechanical components have safety related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For SAFETY, use only equivalent replacement parts when replacing these components.

GENERAL GUIDELINES

Perform a final SAFETY CHECK before returning receiver to customer. Check repaired area for poorly soldered connections, and check entire circuit board for solder splashes. Check board wiring for pinched wires or wires contacting any high wattage resistors. Check that all control knobs, shields, covers, grounds, and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by Howard W. Sams & Company as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to Howard W. Sams & Company by the manufacturers of the specific type of replacement part listed.

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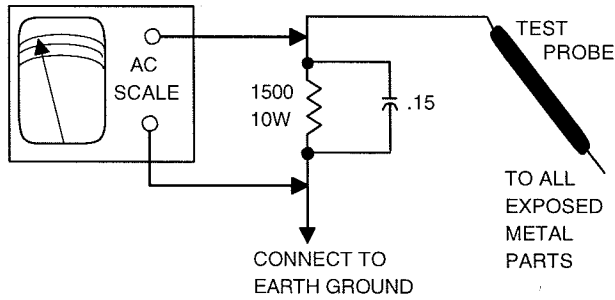
SAFETY CHECKS -- FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 1M ohms and 5.2M ohms. Parts without a return path must measure infinity.

Hot Leakage Current Check

Plug the AC cord directly into an AC outlet. DO NOT use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15µF capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point. Voltage measurements should not exceed .75VAC, 500µA. Any value exceeding this limit constitutes a potential shock hazard and must be corrected. If the AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.



HIGH VOLTAGE SHUTDOWN TEST

After servicing the high voltage circuits, test the shutdown circuit by momentarily placing a 3900 ohms resistor across R409. The receiver should go into shutdown losing sound and raster. To return the receiver to normal operation, unplug the power cord for at least 5 seconds.



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PHOTOFACT® Technical Service Data

SET 4305

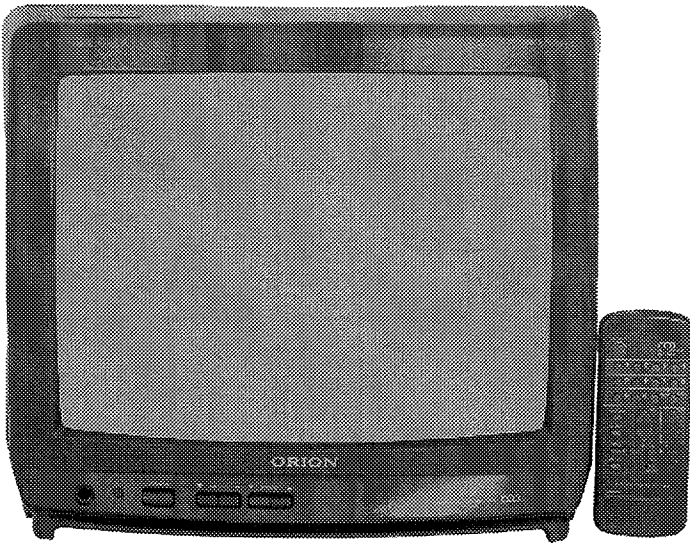
MODEL TV1329

ORION

INDEX

GridTrace Location
Main Board 3
High Voltage Shutdown Test 1
IC Functions 2
Important Parts Information 1
Miscellaneous Adjustments 1
Parts List 4
Placement Chart 1
Safety Precautions 1
Schematic Component Location 1
Schematic Notes 2
Schematics
Power Supply 2
System Control 2
Television 2
Test Equipment 4
Tuner Information 1

ORION
Model TV1329

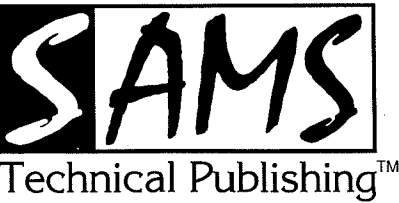


Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

Coverage includes these additional models:

MODELS
TV1329 Version A
TV1329 Version B
TV1329 Version C
TV1329 Version D



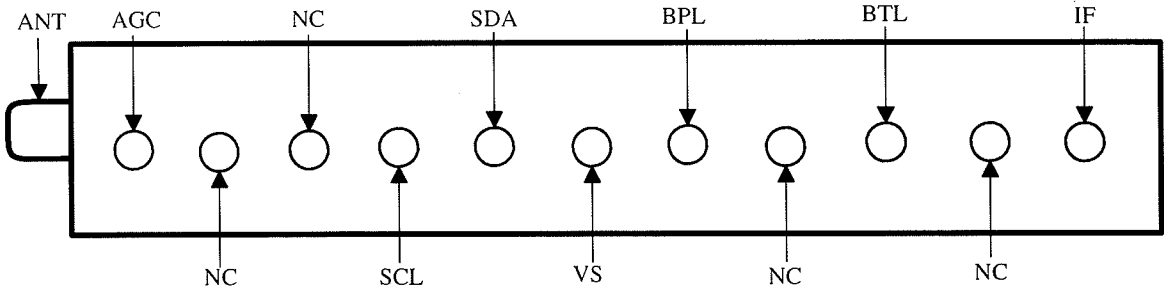
JUNE 2000 SET 4305

TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
AGC	2.1V	2.2V	1.8V
NC	0.9V	4.5V	5.0V
NC	0.5V	0.5V	0.5V
SCL	4.9V	4.9V	4.9V
SDA	4.9V	4.9V	4.9V
VS	0V	0V	0V
BPL	5.0V	5.0V	5.0V
NC	0V	0V	0V
BTL	31.5V	31.6V	31.6V
NC	0V	0V	0V
IF	0V	0V	0V

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

TUNER TERMINAL GUIDE



SCHEMATIC COMPONENT LOCATION GUIDE

ATC001	C23	C418	D5	C647	B6	IC201	D2	R122	A21	R407	D4	R627	C11
C001	B23	C420	D26	C648	B6	IC351	A6	R123	A21	R408	E3	R632	D4
C002	E27	C422	D6	C649	B7	IC401	D5	R124	B21	R409	E3	R636	D14
C004	C2	C425	D5	C650	C11	IC402	E26	R127	A18	R410	D7	R637	D14
C101	C27	C426	E27	C651	C7	IC501	B26	R128	B21	R414	D4	R638	D13
C102	D19	C427	D6	C652	C6	IC601	E26	R130	D21	R416	D6	R643	E27
C103	C27	C429	D4	C653	C7	J351	A8	R132	E21	R417	D4	R645	B10
C105	C28	C430	D7	C654	C5	L201	E27	R133	A17	R418	D5	R646	A10
C107	D20	C433	D26	C801	D15	L202	B1	R134	C21	R419	D5	R647	B11
C108	D18	C434	E3	C804	B14	L205	A3	R136	C21	R420	D5	R648	B11
C109	B20	C435	E11	C805	C14	L406	D9	R137	C21	R421	E11	R649	E1
C110	B19	C437	D8	C806	B14	L501	A26	R138	C21	R427	E6	R651	C7
C111	D19	C439	E4	C819	C16	L502	B26	R139	B21	R428	D9	R652	C6
C120	C18	C440	E5	CD501	A25	L601	B7	R141	B21	R429	D9	R653	D13
C121	C19	C442	E8	CF201	B2	OS101	A17	R142	D18	R431	D6	R655	B7
C123	A17	C443	E7	D001	B23	Q101	B18	R143	C21	R432	D5	R656	B6
C129	E19	C446	E5	D101	C18	Q102	C18	R144	B17	R433	D8	R660	C7
C130	E19	C448	D27	D103	D27	Q103	C21	R145	B21	R443	D27	R662	B9
C131	B17	C502	B26	D124	D25	Q104	C21	R146	B18	R445	E11	R663	B9
C132	C26	C503	A27	D125	C21	Q401	E6	R147	D25	R446	E5	R664	C6
C133	D25	C504	B27	D126	C25	Q402	E4	R148	B21	R447	E5	R665	C6
C134	B21	C506	B28	D127	D25	Q602	D14	R149	B21	R448	E5	R666	C7
C135	D26	C507	C26	D401	D3	Q604	B6	R150	B21	R449	E5	R802	A15
C201	E27	C519	C25	D402	D3	Q605	C6	R161	C18	R501	B25	R803	A15
C202	E28	C605	B10	D403	D6	Q801	A14	R162	C17	R502	A27	R804	C15
C203	B2	C608	E27	D404	E25	Q802	C14	R177	C25	R503	C26	R805	C15
C204	B5	C609	E28	D407	D26	Q803	B14	R201	B2	R506	B27	R806	B15
C206	B4	C610	B11	D408	E26	R001	B23	R202	B2	R507	C25	R807	B15
C207	A4	C611	D1	D410	D26	R002	B23	R203	A4	R508	C25	R809	A14
C208	C2	C612	D2	D411	E9	R006	E19	R204	B4	R509	C26	R811	C14
C209	A5	C614	D3	D422	D26	R007	E19	R205	A5	R515	B25	R813	B14
C210	A4	C615	D3	D501	A27	R101	B19	R206	B2	R601	B4	R814	B14
C211	B4	C616	D3	D502	A27	R102	B18	R208	C3	R602	B4	R815	C14
C212	B5	C617	D1	D503	B27	R103	B18	R209	B5	R604	B13	R816	C14
C213	B4	C618	E1	D504	B27	R104	B18	R210	C3	R605	D2	RY101	A25
C214	B2	C619	E1	D602	C12	R105	E19	R211	B1	R606	D3	RY101	C22
C215	B3	C620	C10	D603	C11	R106	E19	R212	C3	R607	D1	SP351	B8
C216	A2	C622	E27	D605	E2	R107	E21	R213	C2	R608	D1	SW101	A18
C217	B3	C623	E27	D606	D13	R108	C18	R215	B2	R609	D4	SW102	A18
C218	B3	C624	A9	D609	C6	R109	D19	R351	B6	R611	E2	SW103	A18
C224	B2	C625	B10	D610	D14	R110	C19	R353	B7	R612	B12	SW104	A19
C351	E28	C626	E27	DY	D7	R111	D19	R354	A6	R613	B12	SW105	A19
C352	A6	C627	C11	F501	A25	R112	B19	R356	B6	R614	E1	T351	A7
C354	B6	C628	B11	FB401	D10	R113	E21	R357	B6	R615	E1	T401	E5
C357	A5	C632	A10	FB401	D25	R114	D18	R362	A8	R618	C10	TH501	A26
C404	E26	C635	C11	IC101	A20	R115	B20	R363	A7	R619	C7	V801	B16
C405	E26	C636	C11	IC103	C26	R116	C18	R401	D3	R620	C6	X101	B20
C412	E26	C637	D4	IC104	C18	R117	B17	R402	D6	R622	C10	X601	B10
C414	D6	C643	E27	IC199	E18	R118	C17	R403	D5	R623	C11		
C415	D5	C644	D14	IC201	A5	R119	C17	R404	E3	R624	C11		
C416	D9	C645	B10	IC201	B10	R120	B21	R405	D3	R625	B13		
C417	D5	C646	C8	IC201	B4	R121	A21	R406	E3	R626	B13		

MISCELLANEOUS ADJUSTMENTS

BASIC ADJUSTMENTS DISPLAY

Turn receiver on and tune in an active station. There is a hole below the TV button on the remote. Insert the point of a paper clip into the hole and press once. There is another way to access the service mode, press the volume down button on the set, and at the same time press the 9 button on the remote for two seconds. The basic adjustments display items will appear on the screen in yellow. If the 1 button on the remote is pressed the color of the text displayed will change from yellow to blue. If the 1 button on the remote is pressed again the basic adjustments will be displayed one at a time as shown below. After selecting the item desired by pressing the item number, the other items in that adjust mode can be selected by pressing the channel up or down button. Pressing the volume up or down button will change the value. To select a different adjust mode after adjusting an item press the menu button. Exit the adjust mode by pressing the 0 button.

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, color, and picture to minimum. Connect a high voltage probe to the CRT anode. The high voltage should read between 24kV and 25kV.

B+ CHECK

Turn receiver on and tune in an active station. Set picture and brightness to normal. Check the voltage at pin 4 of IC501, it should be 135V ±1V.

SCREEN ADJUST

Access the service mode. Press the 5 button on the remote, that will change the menu, press the 5 button once more. The vertical will collapse to a horizontal line. Adjust the screen control for a very faint line. Press menu button to return to the basic adjust mode.

1. H / V
2. AKB
3. COLOR TEMP
4. PICTURE
5. OTHERS
6. TEST PATTERN
7.
8. (VOL TEST) 0. END

DISPLAY OF THE MAIN MENU CHANGES
COLOR WHEN ANY NUMBER IS SELECTED

1. AKB AUTO
2. R. BIAS
3. G. BIAS
4. B. BIAS
5. R. DRIVE
6. G. DRIVE
7. B. DRIVE
8. AGC AUTO 0. RETURN

DISPLAY IF THE 2 BUTTON IS SELECTED
ON THE MAIN MENU

1. RF AGC DELAY
2. VIDEO LEVEL
3. FM LEVEL
4. OSD H
5. CUT OFF
6. X - RAY
7.
8. 0. RETURN

DISPLAY IF THE 5 BUTTON IS SELECTED
ON THE MAIN MENU

BASIC ADJUSTMENTS

Item	Adjustment	Value Range	On-set Value	Notes
H PHASE	Horizontal Centering	0 - 31	16	Adjust for proper horizontal centering.
H. BLK	Horizontal Blanking	R0 - R7	R0	-
V SIZE	Vertical Size	0 - 127	60	Adjust for proper vertical size.
V POSI	Vertical Centering	0 - 15	6	Adjust for proper vertical centering.
V LIN	Vertical Linearity	0 -31	15	Adjust for proper vertical linearity.
V SC	Vertical Size Center	0 - 31	0	Adjust for proper vertical center size.
V COMP	Vertical Compression	0 - 7	7	-
H FREQ	Horizontal Frequency	0 - 63	63	-
RED BIAS	Red Cut Off	0 - 255	26	-
GREEN BIAS	Green Cut Off	0 - 255	83	-
BLUE BIAS	Blue Cut Off	0 - 255	10	-
RED DRIVE	Red Drive	0 - 127	74	-
GREEN DRIVE	Green Drive	0 - 127	15	-
BLUE DRIVE	Blue Drive	0 - 127	94	-
C.TEMP R	Color Temp Red	0 - 63	32	Set to 32.
C.TEMP G	Color Temp Green	0 - 63	32	Set to 32.
C.TEMP B	Color Temp Blue	0 - 63	32	Set to 32.
BRIGHT	Sub Brightness	0 - 127	59	-
CONTRAST	Sub Contrast	0 - 127	90	-
COLOR	Sub Color	0 - 96	76	-
TINT	Sub Tint	0 - 96	58	-
SHARPNESS	Sharpness	0 - 40	24	-
OSD CONT	OSD Contrast	0 - 3	0	-
RF AGC DELAY	RF AGC Delay	0 - 63	46	-
VIDEO LEVEL	Video Level	0 - 7	5	-
FM LEVEL	FM Level	0 - 31	7	-
OSD H	On Screen Display	0 - 35	19	Center the On Screen Display.
TONE CONT	Tone Control Level	0 - 80	80	-
IF / CHROMA	-	0 - 127	0	-

RF AGC DELAY

Tune in an active station. Activate the basic adjustments display. Press the 5 button on the remote, that will change the menu, press the 1 button. Press the volume up or down button to a point where snow just appears, then press the volume up or down button until snow disappears.

SUB BRIGHTNESS

Tune in a picture. Set color, contrast, and brightness to minimum. Activate the basic adjustments display. Press the 4 button on the remote, that will change the menu, press the 1 button. Press the volume up or down button to a point where highlights are just visible.

DISPLAY IF
THE 4 BUTTON
IS SELECTED
ON THE MAIN
MENU

1. BRIGHT
2. CONTRAST
3. COLOR
4. TINT
5. SHARPNESS
6. OSD CONT.
7.
8. 0. RETURN

SUB COLOR

Tune in a color bar pattern. Set color and brightness to midrange. Set the contrast to maximum. Activate the basic adjustments display. Press the 4 button on the remote, that will change the menu, Press the 3 button. Press volume up or down button for best color level on screen. Check all channels.

SUB TINT

Tune in a picture. Set color and brightness to midrange. Set the contrast to maximum. Activate the basic adjustments display. Press the 4 button on the remote, that will change the menu, Press the 4 button. Press the volume up or down button to adjust for best flesh tone. Check other channels.

HORIZONTAL PHASE

Tune in a crosshatch pattern. Set color and brightness to midrange. Set the contrast to maximum. Activate the basic adjustments display. Press the 1 button on the remote, that will change the text color to blue, Press the 1 button. Press the volume up or down button to adjust for best horizontal centering with slight overscan on both sides.

VERTICAL SIZE

Tune in a crosshatch pattern. Set color and brightness to midrange. Set the contrast to maximum. Activate the basic adjustments display. Press the 1 button on the remote, that will change the text color to blue, Press the 1 button, then press channel up button on the remote to slect V Size. Press volume up or down button to adjust for slight overscan on top and bottom.

VERTICAL CENTERING

Tune in a crosshatch pattern. Set color and brightness to midrange. Set the contrast to maximum. Activate the basic adjustments display. Press the 1 button on the remote, that will change the text color to blue, Press the 1 button, then press channel up button on the remote to slect V Posi. Press volume up or down button to adjust for best vertical centering.

OSD HORIZONTAL CENTERING

Activate the basic adjustments display. Press the 1 button on the remote, that will change the text color to blue, Press the 1 button, then press channel down button twice on the remote to slect OSD H. Press the volume up or down button to adjust for best horizontal centering of the on screen display.

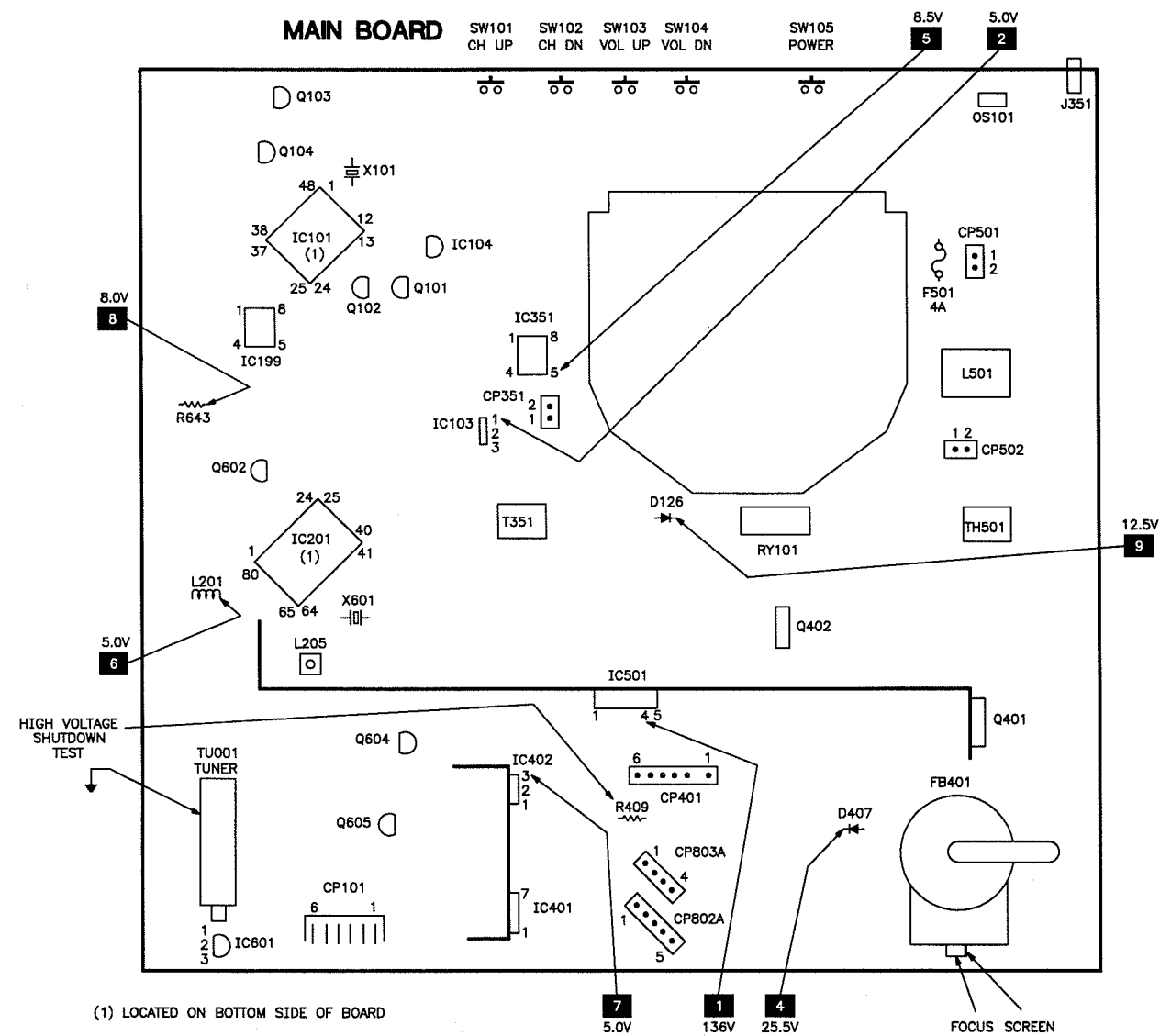
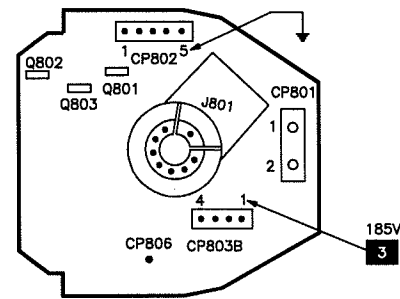
WHITE BALANCE

Operate the receiver for 15 minutes. Activate the basic adjustments display. Press the 1 button on the remote, that will change the text color to blue, Press the 2 button, then press channel up button on the remote to slect and select service numbers 2, 3, and 4. Set the data values to obtain white screen. Set brightness for a visible raster. Alternately adjust data value of service numbers 5, 6, and 7 until a good gray scale with normal white is obtained. Set the data values for normal color level.

CONVERGENCE / PURITY

The deflection yoke is bonded to the CRT. Convergence and purity adjustments are not required.

PLACEMENT CHART



Important Parts Information

- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- Where items may be replaced with equivalent parts, several alternates are shown from participating vendors.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

Obtaining Parts

Many of these parts are available from your local Sams authorized distributor or the manufacturer of the equipment. Call Sams for the name of your nearest distributor:

800-428-7267

Or consult the Sams *Annual Index* for the address of the original equipment manufacturer.

Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors.

- Philips ECG Company (ECG)
- Sencore, Inc.
- Terrell & Nobis (TNI Electronics)

ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2F

TUNER NOT INCLUDED
IN THIS COVERAGE

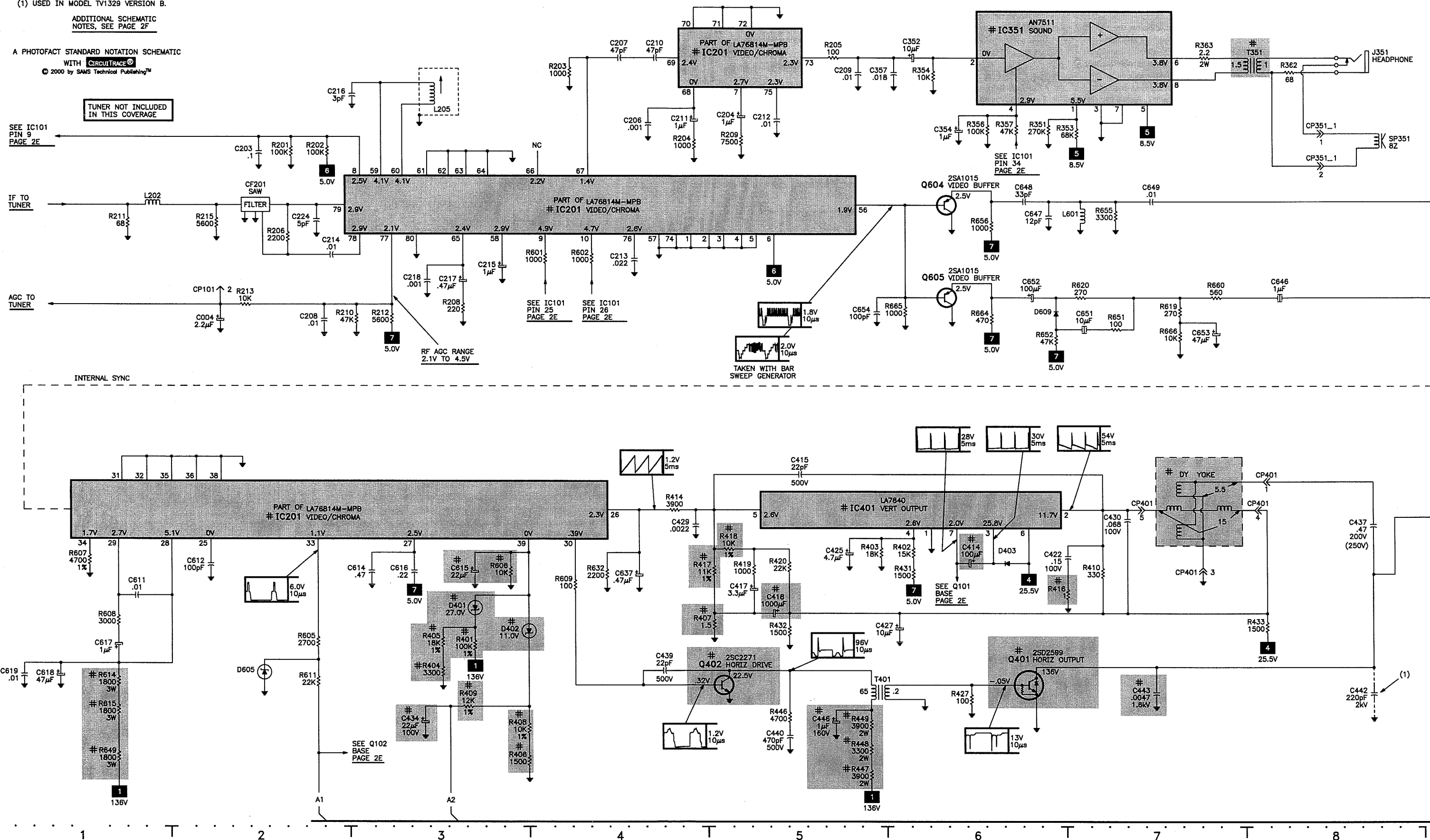
IF TO
TUNER

AGC TO
TUNER

C.

D-

E.





E



7
5.0V

BPL
TO TUNER

R001
68K

R002
68K

C001
.022

D001

1
136V

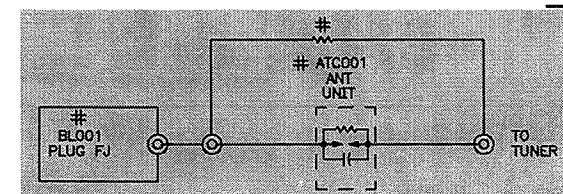
BTL
TO TUNER

NC → VS
TO TUNER


NC → NC
TO TUNER

NC → NC
TO TUNER

NC → NC
TO TUNER



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

- X— Circuitry not used in some versions.
- Circuitry used in some versions.
- ↓ Ground
-  Chassis ground
- ▽ Common tie point
- △ Taken from common tie point
- 3** Schematic **CIRCUITRACE®** Voltage source tie point.
- A — Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless otherwise noted.

Waveforms taken with triggered scope and colorbar signal.

Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.

Supply voltages maintained as seen at input.

Voltages measured with digital meter and a 100QV RF signal, with colorbar pattern applied to antenna terminal.

Controls adjusted for normal operation.

Capacitors are 50 volts or less, 5% or greater unless noted.

Electrolytic capacitors are 50 volts or less, 20% or greater unless noted.

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

Value in () used in some versions.

Measurements with switching as shown unless noted.

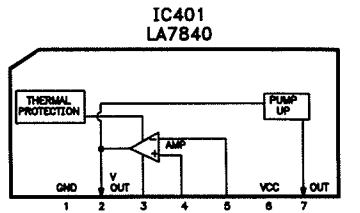
Rated voltage shown on zener diodes.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE[®]**
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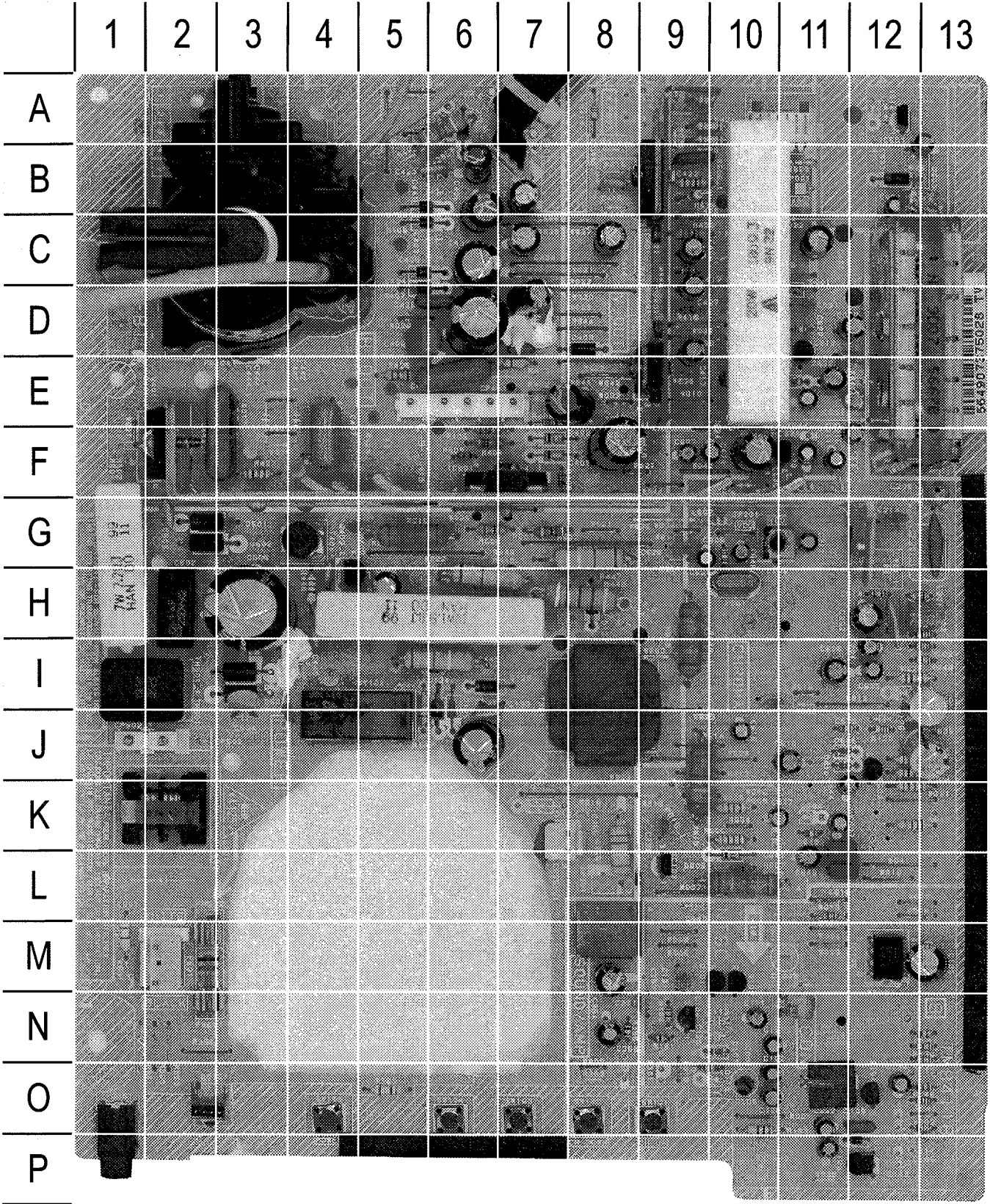


IC201.
LA76814M-MPB



MODEL TV1329

MAIN BOARD - TOP VIEW



MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

C001	D11	C404	D7	C615	J10	D101	O10	IC501	F7	R145	O13	R507	G7
C002	D12	C405	B6	C616	L11	D103	P12	IC601	A12	R161	N9	R508	G6
C004	B12	C412	C6	C617	K11	D124	J6	J351	P1	R162	N9	R509	F6
C101	N13	C414	C8	C618	J11	D125	J6	L201	H13	R177	H6	R515	G5
C102	O10	C415	B8	C619	K11	D126	J6	L202	F13	R356	N8	R601	H13
C103	O12	C416	E6	C620	F11	D127	H8	L205	G11	R362	O5	R602	I13
C105	M13	C417	D9	C622	D11	D401	F7	L406	D5	R363	K8	R604	K12
C107	N11	C418	F8	C623	F10	D402	F7	L501	K2	R401	F6	R605	K10
C111	N10	C420	B6	C624	F10	D403	D8	L601	F10	R405	F6	R607	L10
C120	O10	C422	B9	C625	G9	D404	D5	OS101	O2	R407	C10	R609	K10
C121	N10	C425	C9	C626	A13	D407	C5	Q101	M10	R408	F7	R611	G8
C123	P11	C426	C11	C627	F9	D408	C5	Q102	M10	R409	E7	R614	L10
C131	M9	C427	C9	C628	G9	D410	A6	Q103	P12	R410	E7	R615	K9
C132	J6	C430	D7	C635	I12	D411	A6	Q104	O12	R414	A8	R625	J12
C133	J6	C433	C6	C636	J13	D422	B5	Q401	F2	R416	B9	R626	J12
C134	O12	C434	C7	C637	K11	D501	G2	Q402	H4	R417	C9	R627	I12
C135	K9	C435	D6	C643	L11	D502	G2	Q602	J12	R418	D9	R643	K12
C201	H12	C437	F4	C644	K12	D503	I3	Q604	F11	R421	A9	R648	I13
C202	H12	C439	H4	C646	G10	D504	I3	Q605	D11	R427	F3	R649	I9
C203	H13	C440	I4	C648	F10	D602	L10	R001	C10	R428	E5	R660	F10
C204	I12	C443	F3	C650	I13	D603	B12	R002	C10	R429	A6	RY101	J5
C208	D10	C446	H5	C651	E12	D605	L10	R006	B13	R432	B9	SW101	O9
C209	D10	C448	B7	C652	E11	D606	J11	R007	B13	R433	C9	SW102	O8
C211	F11	C502	H2	C653	E11	D609	E11	R110	O10	R443	H8	SW103	O7
C212	D12	C503	G2	CF201	G13	D610	J11	R114	J9	R445	A9	SW104	O6
C213	G12	C504	I3	CP101	A11	F501	M2	R117	J9	R446	H4	SW105	O4
C214	H12	C506	H3	CP351	K7	FB401	C3	R120	J12	R447	G8	T351	I8
C215	F12	C507	D6	CP401	E5	IC103	L9	R130	N13	R448	H6	T401	G4
C217	G11	C519	E8	CP501	M2	IC104	N9	R132	N13	R449	I6	TH501	I2
C351	M8	C605	G10	CP502	J2	IC199	M12	R133	O10	R501	M1	TU001	D13
C352	O11	C608	I11	CP802A	A7	IC351	M8	R136	O13	R502	H1	X101	O11
C354	N8	C609	J11	CP803A	B7	IC401	B9	R141	O13	R503	G5	X601	H10
C357	N9	C614	L11	D001	D11	IC402	E9	R143	L11	R506	C10		

ORION

MODEL TV1329



C108	F3	R103	J1	R138	B2	R351	H3	R632	E8
C109	D2	R104	K1	R139	A1	R353	H3	R636	C8
C110	D1	R105	A5	R142	A4	R354	H4	R637	C7
C129	B5	R106	B5	R144	G4	R357	H3	R638	D7
C130	C5	R107	C1	R146	G5	R402	H14	R645	B6
C206	D10	R109	E3	R148	F5	R403	G14	R646	C8
C207	C10	R111	F3	R149	F5	R404	J11	R647	C8
C210	B11	R112	D1	R150	F5	R406	I11	R651	B12
C216	E10	R113	E1	R201	A9	R419	G13	R652	B12
C218	D10	R115	D1	R202	B9	R420	G13	R653	D7
C224	C9	R116	F4	R203	D10	R431	H13	R655	F12
C610	G9	R118	G5	R204	B11	R606	C6	R656	E11
C612	E8	R119	F3	R205	B11	R608	E7	R662	F11
C632	C8	R121	F5	R206	C10	R612	E6	R663	G11
C645	E9	R122	F5	R208	D10	R613	F6	R664	D13
C647	F11	R123	G5	R209	C9	R618	E10	R665	D12
C654	D12	R124	C8	R210	B11	R619	C12	R666	C12
IC101	C3	R127	A4	R211	A11	R620	B12		
IC201	D9	R128	A4	R212	D14	R622	G11		
R101	L1	R134	B1	R213	D13	R623	G12		
R102	I1	R137	B2	R215	A10	R624	G12		

PARTS LIST

SEMICONDUCTORS			
(Select the replacement that gives the best results.)			
Item No.	Type No.	Mfr. Part No.	ECG Part No.
D001	HZ30-3L	-	-
	HZ30-3LTD	D94TA30013	-
D101	1SS133	-	ECG519
	1SS133T-77	D1VT001330	ECG519
D103	MTZJ5.6B	-	ECG5011T1
	MTZJ5.6BT-77	D97U05R61B	ECG5011T1
D124	RD15FB1	D9201150B1	-
D125	1S2472	-	ECG519
	1S2472T-77	D1VT024720	ECG519
# D126	EM1C	-	ECG125
	EM1CV1	D2BT0EM1C0	-
D127	11E1N	-	ECG116
	11E1N-TA1B2	D28T11E1N1	ECG116
# D401	HZ27-1L	-	-
	HZ27-1LTD	D94TA27011	-
# D402	HZ11B1L	-	-
	HZ11B1LTD	D94TA11B11	-
D403	11E1N	-	ECG116
	11E1N-TA1B2	D28T11E1N1	ECG116
# D404	AU02A	-	ECG552
	AU02AV0	D2BTAU02A0	-
# D407, 08	AU02A	-	ECG552
	AU02AV0	D2BTAU02A0	-
	10ELS6TA1B2	D28T10ELS6	ECG552
D410	AU02A	-	ECG552
	AU02AV0	D2BTAU02A0	-
	10ELS6TA1B2	D28T10ELS6	ECG552
# D411, 22	AU02A	-	ECG552
	AU02AV0	D2BTAU02A0	-
	10ELS6TA1B2	D28T10ELS6	ECG552
# D501 Thru			
# D504	RM11C	D2BTRM11C0	ECG125
D602	1SS133	-	ECG519
	1SS133T-77	D1VT001330	ECG519
D603	11E1N	-	ECG116
	11E1N-TA1B2	D28T11E1N1	ECG116
D605	HZ6B2L	-	-
	HZ6B2LTD	D94TA6RB12	-
D606, 09, 10	1SS133	-	ECG519
	1SS133T-77	D1VT001330	ECG519
IC101 (1)	OEC3039A	I53F53039A	-
IC101 (2)	OEC3039B	I53F53039B	-
# IC103	KIA78L05BP	I1K998L050	ECG977
IC104	PST600C	I9UJ0T600C	-
IC199	M24C01-BN6	A3H201A015	-
# IC201	LA76814M-MPB	I03FE76814	-
# IC351	AN7511	I01DP75110	-
# IC401	LA7840	I03SD78400	-
# IC402	KIA7805PI	I1KA978050	ECG1960
# For SAFETY use only equivalent replacement part.			
(1) Used in models TV1329 and TV1329 Versions A and B.			
(2) Used in models TV1329 Versions C and D.			

SEMICONDUCTORS continued			
(Select the replacement that gives the best results.)			
Item No.	Type No.	Mfr. Part No.	ECG Part No.
# IC501	STR30110	I2B4901100	ECG7077
IC601	KIA78L09BP	I1KJ98L090	-
Q101, 02, 03	2SC1815-Y	-	ECG85
	2SC1815Y(TPE2)	TC5T018154	ECG85
Q104	2SC2001L	-	ECG85
	2SC2001(C)-T_L	TCLT02001L	ECG85
# Q401	2SD2599	-	-
	2SD2599(LBOEC1)	TDUU025990	-
# Q402	2SC2271D	-	ECG399
	2SC2271(D,E)-AE	TC3T022710	ECG399
Q602, 04, 05	2SA1015Y	-	ECG290A
	2SA1015Y(TPE2)	TA5T010154	ECG290A
# Q801, 02, 03	2SC4217R	-	ECG399
	2SC1473A-TA-(RQ)	TCKT1473A0	ECG399
# For SAFETY use only equivalent replacement part.			

COILS & TRANSFORMERS		
Item No.	Function/Rating	Mfr. Part No.
# DY (1)	Yoke Horiz 4mH Vert 30mH	-
# FB401 (2)	Horizontal Output	043214029F
L201	10μH	O21LA6100K
L202	1μH	O216731R0K
L205	AFT	O336020388
L406	18μH	O2186G180M
# L501	Line Filter	O29K000074
# L502	Degaussing	O28F140025
L601	15μH	O21LA6150K
# T351	Audio Output	O45126001A
T401	Horizontal Driver	O3305Y002S
# For SAFETY use only equivalent replacement part.		
(1) Bonded part of CRT.		
(2) Screen and focus controls are part of FB401.		

TEST EQUIPMENT			
Test equipment listed by participating manufacturer illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.			
Equipment	Sencore No.	Equipment	Sencore No.
Oscilloscope	SC3100	Isolation Transformer	PR570
Generators		Capacitance Analyzer	LC102
RGB	CM2125	CRT Analyzer	CR7000
Multiburst Signal	VG91	AC Leakage Tester	PR570
Color Bar	VG91	Inductance Analyzer	LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3100	Field Strength Meter	SL753
Frequency Meter	SC3100	Transistor Tester	TF46
Hi-Voltage Probe	HP200	Horizontal Analyzer	HA-2500
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.
# R177	1500 5% 10W Wirewound	R5Y2CF152J
# R401	100K 1% 1/4W	R4X5T4104F
# R404	3300 5% 1/8W	R903N8332J
# R405	18K 1% 1/4W	R4X5T4183F
# R406	1500 5% 1/8W	R903N8152J
# R407	1.5 5% 1/2W	R002T21R5J
# R408	10K 1% 1/6W	R4X5T6103F
# R409	12K 1% 1/6W	R4X5T6123F
# R416	1 5% 1/2W	R0L2U2010J
# R417	11K 1% 1/6W	R425T6113F
# R418	10K 1% 1/6W	R425T6103F
# R429 (1)	3.3 5% 1W Fusable	R655813R3J
# R429 (2)	2.7 5% 1W Fusable	R655812R7J
# R443	4.7 5% 2W Fusible	R6550A4R7J
# R447	3900 5% 2W	R3X18A392J
# R448	3300 5% 2W	R3X18A332J
# R449	3900 5% 2W	R3X18A392J
# R502	2.2 5% 7W Wirewound	-
	2.2 5% 5W Wirewound	R5Y2CD2R2J
# R506	180 5% 20W Wirewound	R5Y2CH181J
# R507	47 5% 1/4W	R65584470J
# R509	12K 1% 1/6W	R4X5T6123F
# R515	1.5 5% 3W	R3X28B1R5J
# R606	10K 5% 1/8W	R903N8103J
R607	4700 1% 1/6W	R4X5T6472F
# R614, 15, 49	1800 5% 3W	R3X28B182J
# R803, 05, 07	15K 5% 2W	R3X10A153J
# TH501	3 Cold PTC	DF20BG3R0Q

For SAFETY use only equivalent replacement part.
(1) Not used in model TV1329 Version B.
(2) Useu in model TV1329 Version B.

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C133	.001 10% 1kV	C0JTB0613K
# C404	470µF 20% 10V	E02LT1471M
	470µF 20% 10V	E01VT1471M
	470µF 20% 10V	E632T1471D
# C405	470µF 20% 16V	E02LT2471M
	470µF 20% 16V	E01VT2471M
# C412	470µF 20% 10V	E02LT1471M
	470µF 20% 10V	E01VT1471M
	470µF 20% 10V	E632T1471D
# C414	100µF 20% 35V	E02LT4101M
	100µF 20% 35V	E01VT4101M
# C418	1000µF 20% 25V	E02LF3102M
# C420	.001 10% 1kV	C0JTB0613K
# C433	470µF 20% 35V	E02LT4471M
# C434	22µF 20% 100V	E02LT8220M
C442 (1)	220pF 10% 2kV	C01BBP7H2K
# C443	.0047 +50% -10% 1.6kV	P414F9472H
# C446	1µF 20% 160V	E02LTB010M
# C448	22µF 20% 100V	E02LT8220M
C502	.1 20% 250VAC	P2122B104M
C503, 04	.001 10% 1kV	C0JTB0613K
# C506	220µF 20% 200V	E02LFC221M
# C615	22µF 20% 16V	E50HU2220M
C636	10µF 20% 50V NP	E02ET5100M
C646	1µF 20% 50V NP	E05HU5010M
C650	10µF 20% 50V NP	E0EE05100M
C651	10µF 20% 50V NP	E00NU2100M
C819	.001 10% 2kV	C13VB0713K

For SAFETY use only equivalent replacement part.
(1) Used in model TV1329 Version B.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# ATC001	Assembly	NXC0032-010010	Antenna
	Assembly	NXC0027-010010	Antenna
# CD501	Line Cord	120R614908	AC, Polarized
CF201	Filter	1022T45R71	SAW
# F501	Fuse	O81PC04003	4Amp, Slow Blow
FH501, 02	Fuse Holder	O6710T0006	For F501
J351	Jack	O602121012	Earphone
# J801	Socket	O66X120014	CRT
OS101	Receiver	O77Q014003	Remote, PIC-28143SY-2
# RY101	Relay	0560V20115	Power
# SP351	Speaker	070C132014	3" Round, 8 Ohms, 1W
SW101	Switch	O504201T31	Channel Up
SW102	Switch	O504201T31	Channel Down
SW103	Switch	O504201T31	Volume Up
SW104	Switch	O504201T31	Volume Down
SW105	Switch	O504201T31	Power
# TU001 (1)	Tuner	O145S00049	UHF/VHF, ENV56D67G3
# V801 (2)	CRT	O98Q140495	A34AGT13X98
# V801 (3)(4)(5)	CRT	O98Y140497	A34JXV70X28N45
X101	Crystal	100C32R803	32.768kHz
X601	Crystal	100W3R5702	3.58MHz
	Antenna	125C108030	Rod
	PC Board (2)	A3H201A11A	CRT
	PC Board (3)(4)	A3H401C11A	CRT
	PC Board (5)	A3H401C11B	CRT
	PC Board (2)	A3H401A01A	Main
	PC Board (3)	A3H401C01A	Main
	PC Board (4)	A3H401C01B	Main
	PC Board (5)	A3H401C01C	Main
	Transmitter	O76R074150	Remote, R25-1028

For SAFETY use only equivalent replacement part.
(1) Contact TNI Electronics for replacement; order by manufacturer's part number.
(2) Used in models TV1329 and TV1329 Version A.
(3) Used in model TV1329 Version B.
(4) Used in model TV1329 Version C.
(5) Used in model TV1329 Version D.

CABINET PARTS

Models TV1329 and TV1329 Versions A, B, C, and D.

Item	Mfr. Part No.
Button Frame	735WPAA122
Button Holder	735WPAA121
Cabinet Front	701WPB0162
Cabinet Front Assembly	A3H401A720
Cabinet Rear	702WPA0535

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MODEL TV1329