

SAFETY PRECAUTIONS

SERVICE WARNING

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

SERVICING THE HIGH VOLTAGE AND CRT

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

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

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

GENERAL GUIDELINES

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

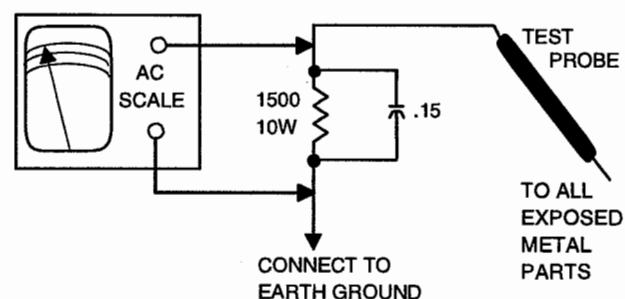
SAFETY CHECKS -- FIRE AND SHOCK HAZARD

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 an 8000 ohms resistor across R439. 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.

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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Page 1 SET 4185



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PHOTOFACT® Technical Service Data

SET 4185
MODELS TVM1302A (VERSION B, C), TVM1302S (VERSION E)

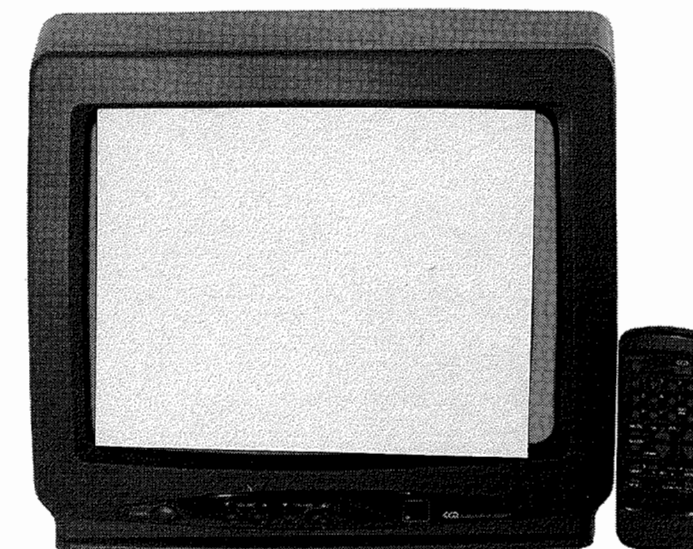
SANSUI

INDEX

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

SANSUI

Models TVM1302A (Version B, C), TVM1302S (Version E)



Representative Model

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



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SEPTEMBER 1999 SET 4185

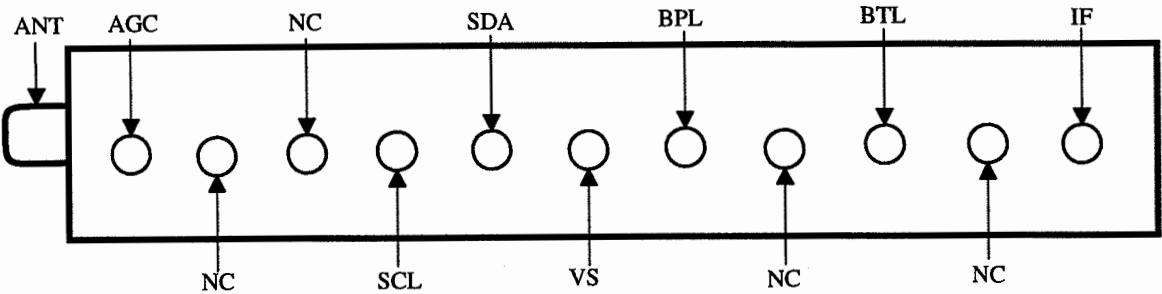
For Supplier Address,
See PHOTOFACT Annual Index

TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
AGC	4.5V	5.3V	5.1V
NC	1.0V	4.5V	5.1V
NC	1.2V	1.2V	1.2V
SCL	5.0V	5.0V	5.0V
SDA	5.0V	5.0V	5.0V
VS	9.3V	9.0V	9.4V
BPL	4.7V	4.7V	4.7V
NC	0V	0V	0V
BTL	30.0V	30.0V	30.0V
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



MISCELLANEOUS ADJUSTMENTS

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 22kV and 24kV.

B+ 130V 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 130V ±1V.

ADJUST MODE DISPLAY

Turn receiver on and tune in an active station. There is a hole below the TV button on the remote. Insert point of a paper clip into the hole and press once. The adjust mode display will appear on the screen followed by a number. If the 7 button on the remote is pressed the next adjust mode is displayed. If the 8 button on the remote is pressed the adjust mode will end. Pressing the channel up or down button will select the item to adjust. Pressing the volume up or down button will change the value.

NOTE: In adjust mode 1 Cut Off and X-Ray Test have to be selected by pressing the 5 or 6 button on the remote.

RF AGC DELAY

Tune in an active station. Activate the adjust mode 4 display. Press the 3 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 adjust mode 3 display. Press the 1 button. Press the volume up or down button to a point where highlights are just visible.

SUB COLOR

Tune in a color bar pattern. Set color and brightness to midrange. Set the contrast to maximum. Activate the adjust mode 3 display. Press the 4 button. Press the volume up or down button for best color level on screen. Check other channels.

SUB TINT

Tune in a picture. Set color and brightness to midrange. Set the contrast to maximum. Activate the adjust mode 3 display. Press the 3 button. Press the volume up or down button to adjust for best flesh tone. Check other channels.

ADJUST MODE 1

- 1. H PHASE
- 2. V DC
- 3. V SIZE
- 4. OSD H
- 5. CUT OFF
- 6. X - RAY TEST
- 7. NEXT
- 8. END

ADJUST MODE 2

- 1. -
- 2. RED BIAS
- 3. GREEN BIAS
- 4. BLUE BIAS
- 5. RED DRIVE
- 6. BLUE DRIVE
- 7. NEXT
- 8. END

ADJUST MODE 3

- 1. BRIGHT
- 2. CONTRAST
- 3. TINT
- 4. COLOR
- 5. SHARPNESS
- 6. -
- 7. NEXT
- 8. END

ADJUST MODE 4

- 1. APC OFFSET
- 2. VCO FREE RUN
- 3. RF AGC DELAY
- 4. VIDEO LEVEL
- 5. FM LEVEL
- 6. -
- 7. NEXT
- 8. END

VALUES FOR ADJUST MODES 1 THRU 4

Item	Adjustment	Value Range	On-set Value	Notes
H PHASE	Horizontal Centering	0 - 7	5	Adjust for proper horizontal centering.
V DC	Vertical Centering	0 - 4	1	Adjust for proper vertical centering.
V SIZE	Vertical Size	0 - 63	21	Adjust for proper vertical size.
OSD H	On Screen Display	0 - 35	24	Center the On Screen Display.
CUT OFF	-	-	-	Will collapse the vertical to a horizontal line. Press menu button to return to adjust mode. Use for screen adjust only.
X - RAY TEST	-	-	-	Set will shut down if the X- Ray circuit is good.
RED BIAS	Red Cut Off	0 - 127	33	-
GREEN BIAS	Green Cut Off	0 - 127	17	-
BLUE BIAS	Blue Cut Off	0 - 127	0	-
RED DRIVE	Red Drive	0 - 127	65	-
BLUE DRIVE	Blue Drive	0 - 127	70	-
BRIGHT	Sub Brightness	0 - 96	73	-
CONTRAST	Sub Contrast	64 - 127	100	-
TINT	Sub Tint	32 - 96	69	-
COLOR	Sub Color	32 - 96	63	-
SHARPNESS	Sharpness	12 - 21	17	-
APC OFFSET	APC Offset	0 - 64	32	-
VCO FREE RUN	VCO Free Run	0 - 127	96	Connect voltmeter to pin 6 of CP101 and adjust for 3.8V.
RF AGC DELAY	RF AGC Delay	0 - 63	43	-
VIDEO LEVEL	Video Level	0 - 7	6	-
FM LEVEL	FM Level	0 - 31	31	-

TEST EQUIPMENT

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.
Oscilloscope	SC3100
Generators	
RGB	CM2125
Multiburst Signal	VG91
Color Bar	VG91
TV Stereo	VG91
Digital VOM	SC3100
Frequency Meter	SC3100
Hi-Voltage Probe	HP200
Accessory Probes	TP212
Isolation Transformer	PR570
Capacitance Analyzer	LC102
CRT Analyzer	CR7000
AC Leakage Tester	PR570
Inductance Analyzer	LC102
Flyback Yoke Tester	TVA92
Field Strength Meter	SL753
Transistor Tester	TF46
Horizontal Analyzer	HA-2500
Video Analyzer	VG91, TVA92

Important Parts Information

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

Obtaining Parts

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

800-428-7267

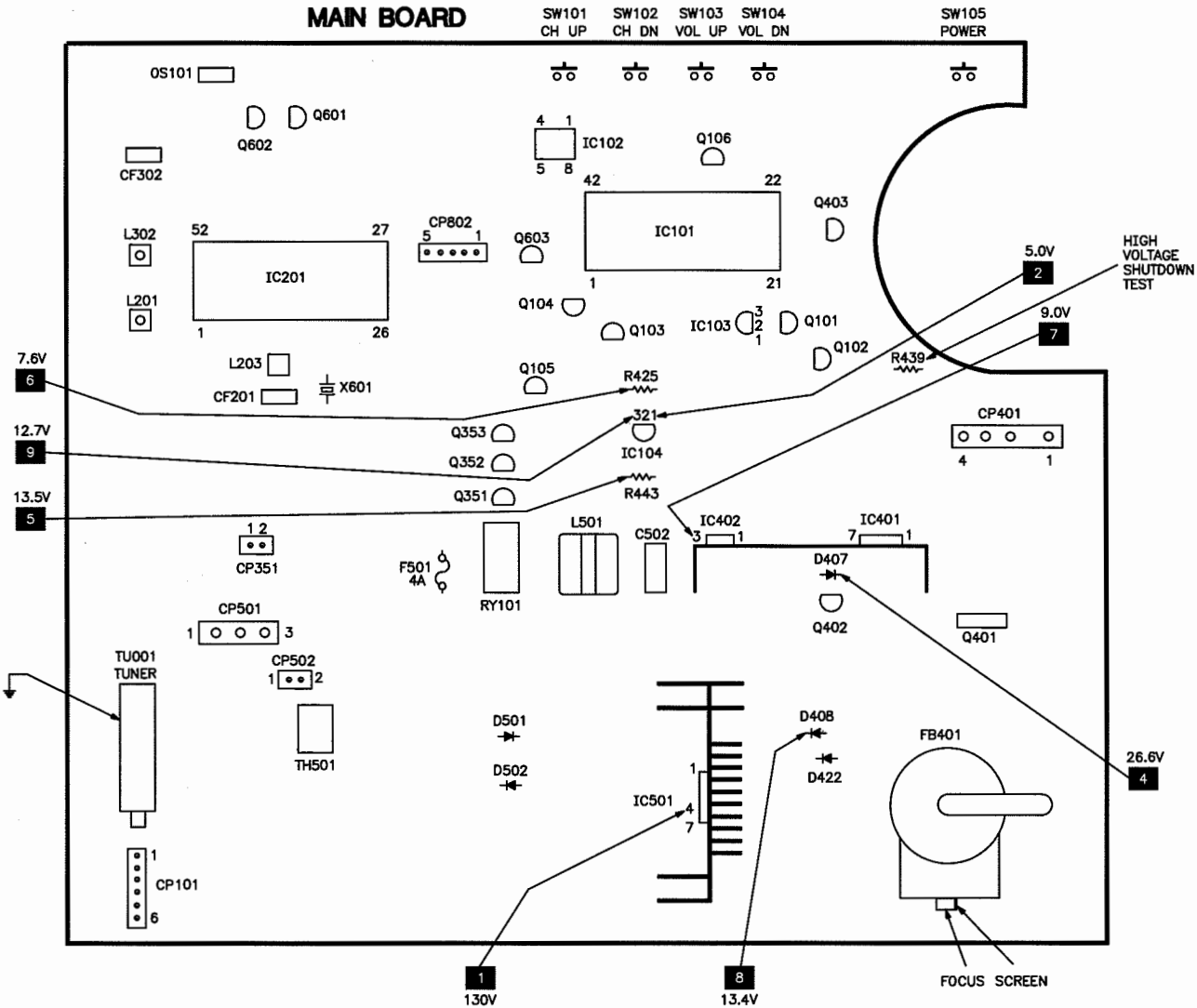
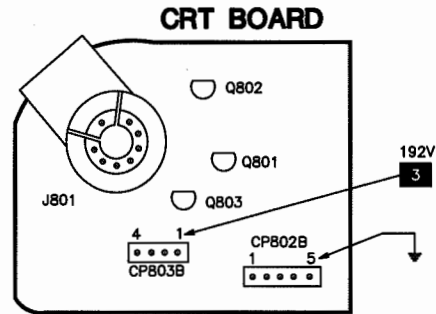
Or consult the Sams *Annual Index* for the address of the original equipment manufacturer.

Participating Vendors

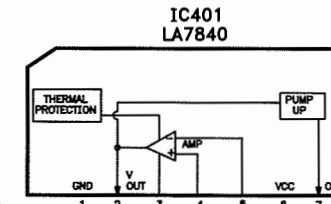
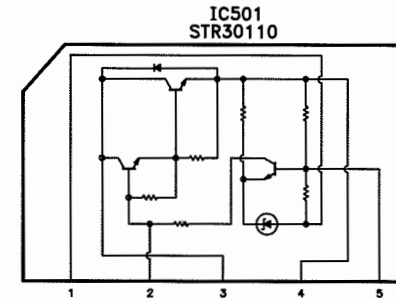
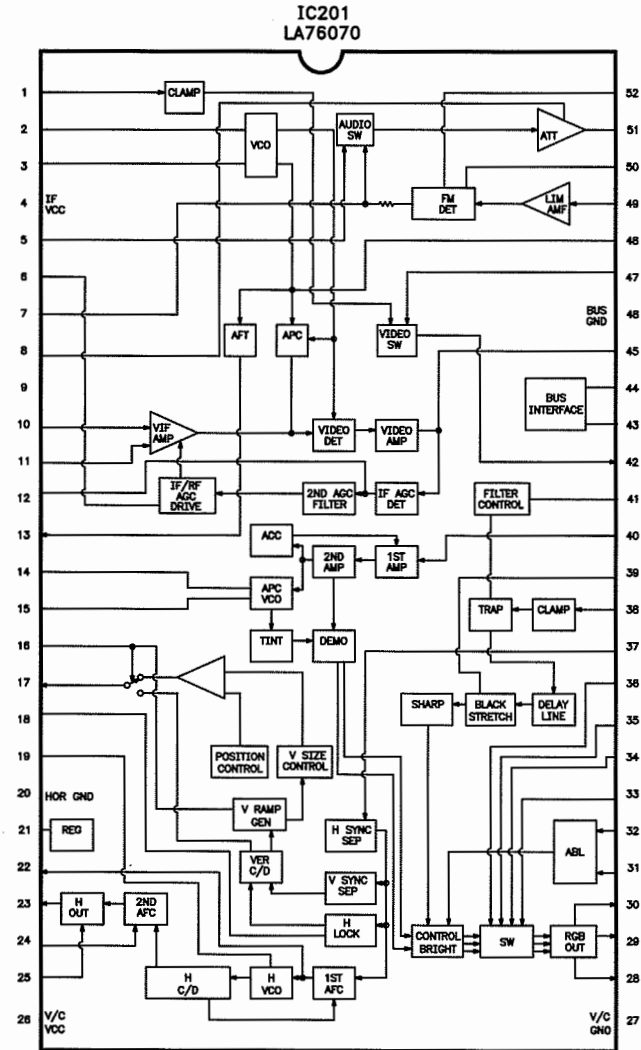
Information on test equipment and replacement parts is listed in these pages for the following participating vendors. Consult the Sams *Annual Index* for their current address.

- | | |
|--|--|
| ▪ Custom Components Corporation (Chek-A-Color) | ▪ Terrell & Nobis (TNI Electronics) |
| ▪ NTE Electronics, Inc. (NTE) | ▪ Sencore, Inc. |
| ▪ Philips ECG Company (ECG) | ▪ Thomson Consumer Electronics, Inc. (SK, TCE) |

PLACEMENT CHART



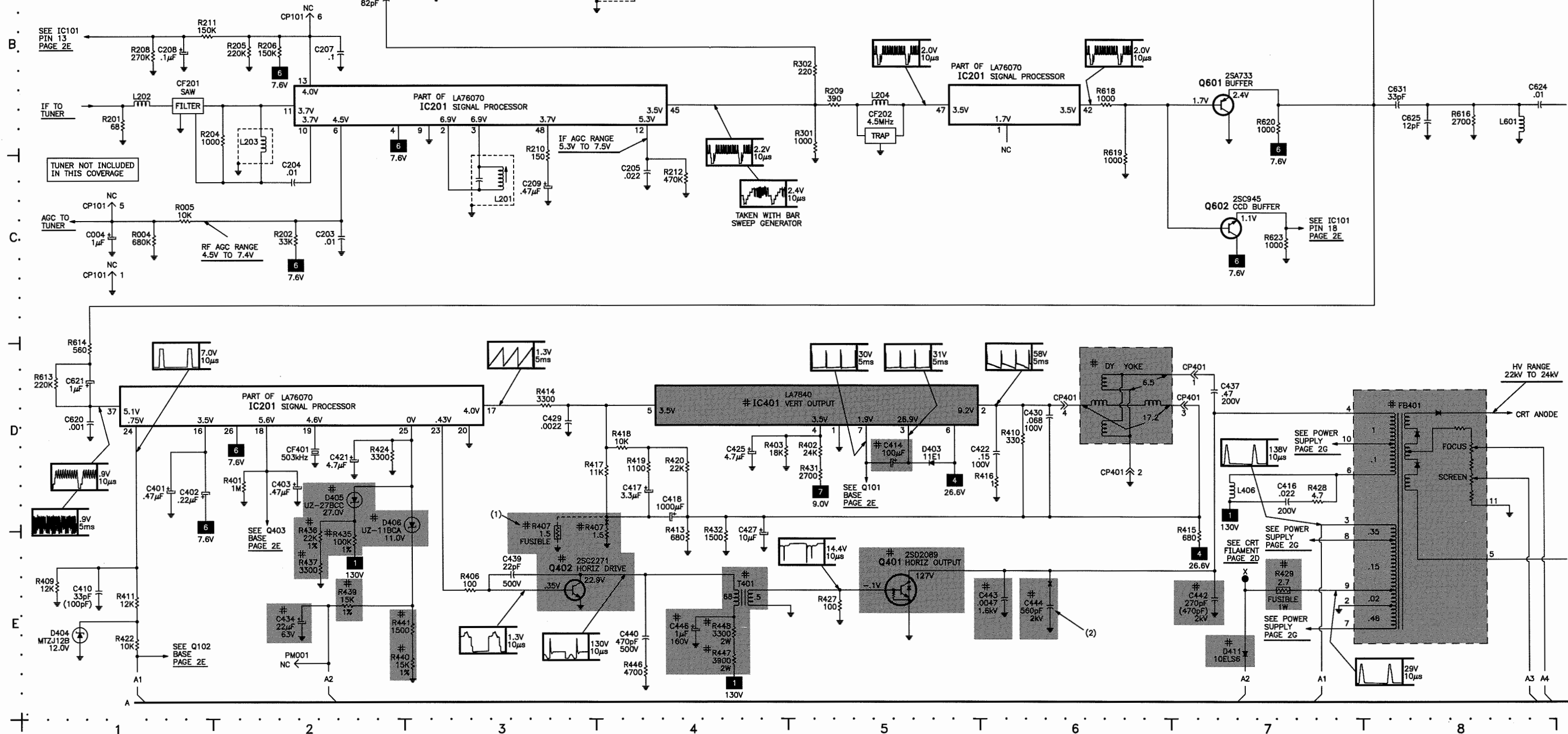
IC FUNCTIONS



TELEVISION SCHEMATIC

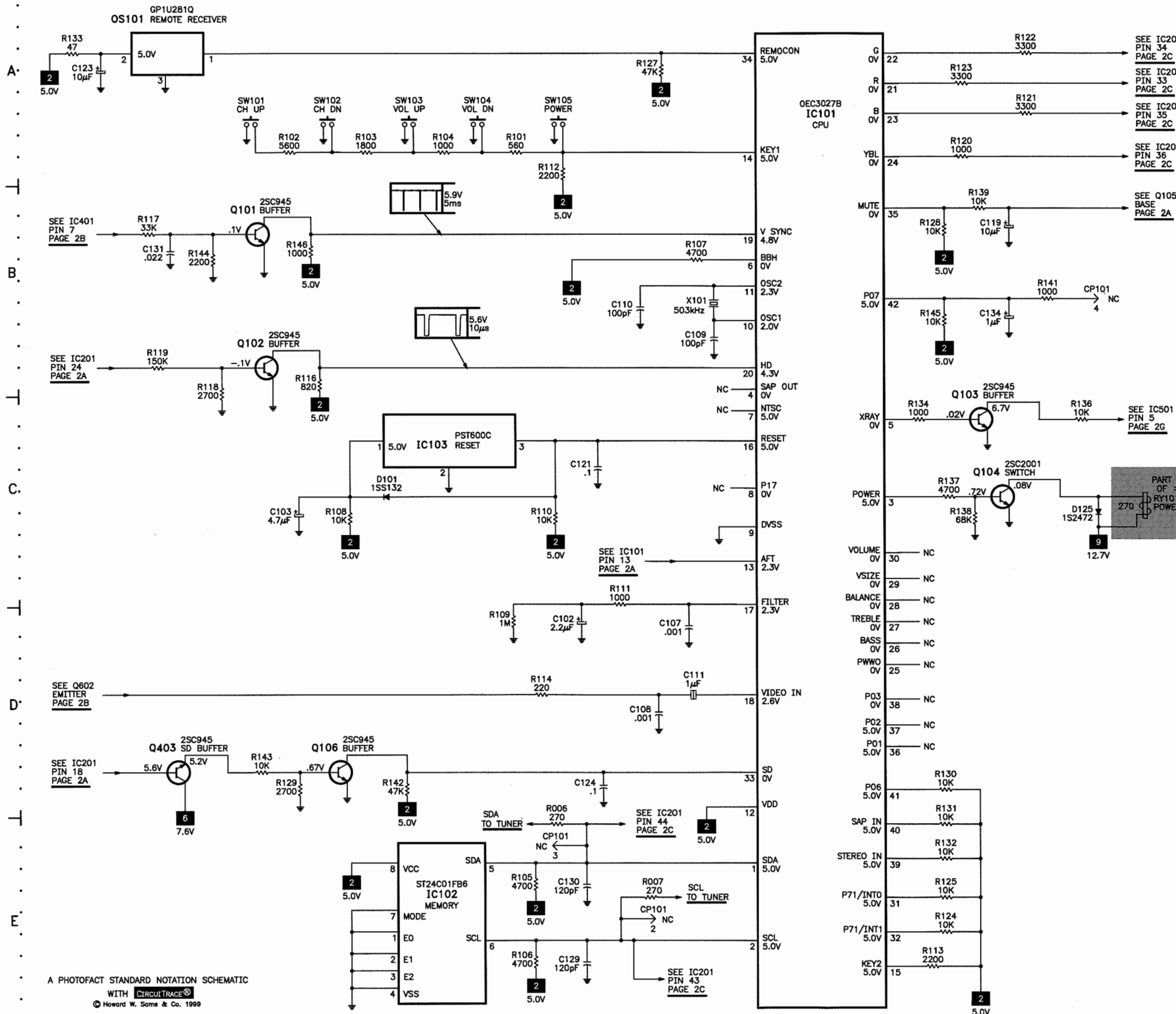
(1) USED IN MODEL TVM1302S (VERSION E)
(2) USED IN MODEL TVM1302A (VERSION C)

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ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2F
A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH CIRCUITTRACE®
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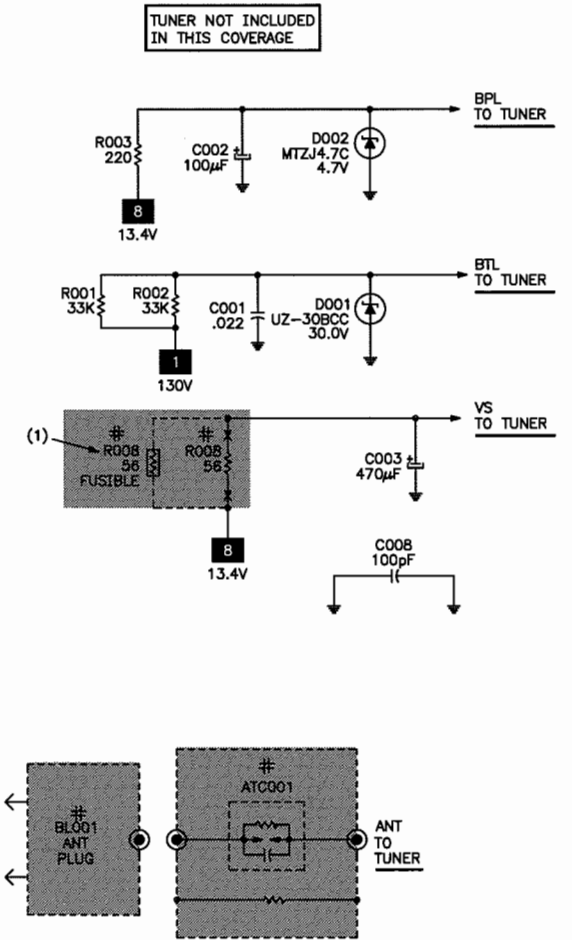


SYSTEM CONTROL SCHEMATIC



SEE RY101
PAGE 2G

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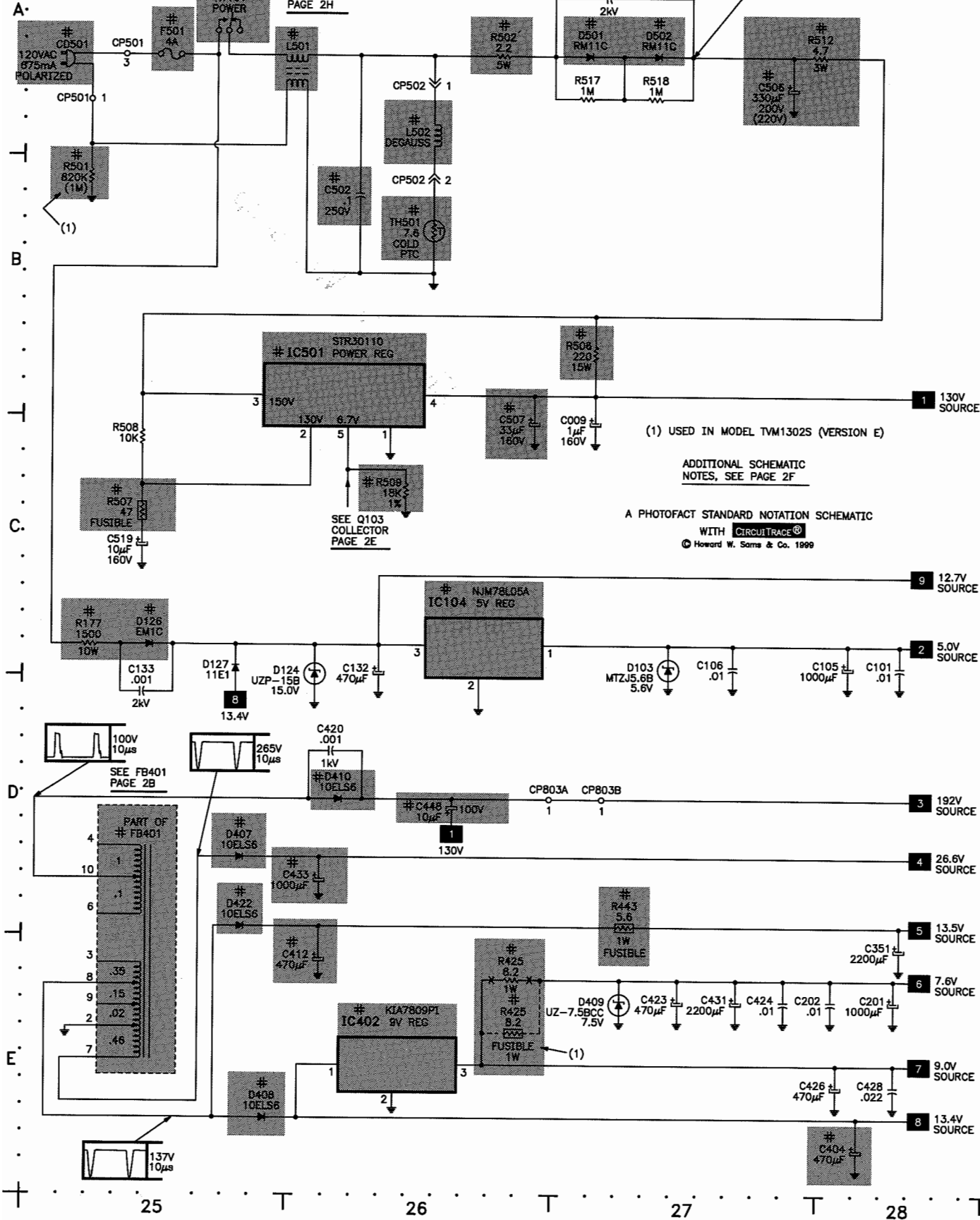


(1) USED IN MODEL TVM1302S (VERSION E)

SCHEMATIC NOTES

- # For SAFETY use only equivalent replacement part, see parts list.
- Circuitry not used in some versions.
- Circuitry used in some versions.
- ↓ Ground
- ⏏ Chassis ground
- ⏏ Common tie point
- △ Taken from common tie point
- 3 Schematic CIRCUITTRACE® 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 1000μV RF signal, with colorbar pattern applied to antenna terminal. Controls adjusted for normal operation. Capacitors are 50 volts or less, 5% or greater unless noted. Electrolytic capacitors are 50 volts or less, 20% or greater unless noted. Resistors are 1/2W or less, 5% or greater unless noted. Value in () used in some versions. Measurements with switching as shown unless noted. Rated voltage shown on zener diodes.

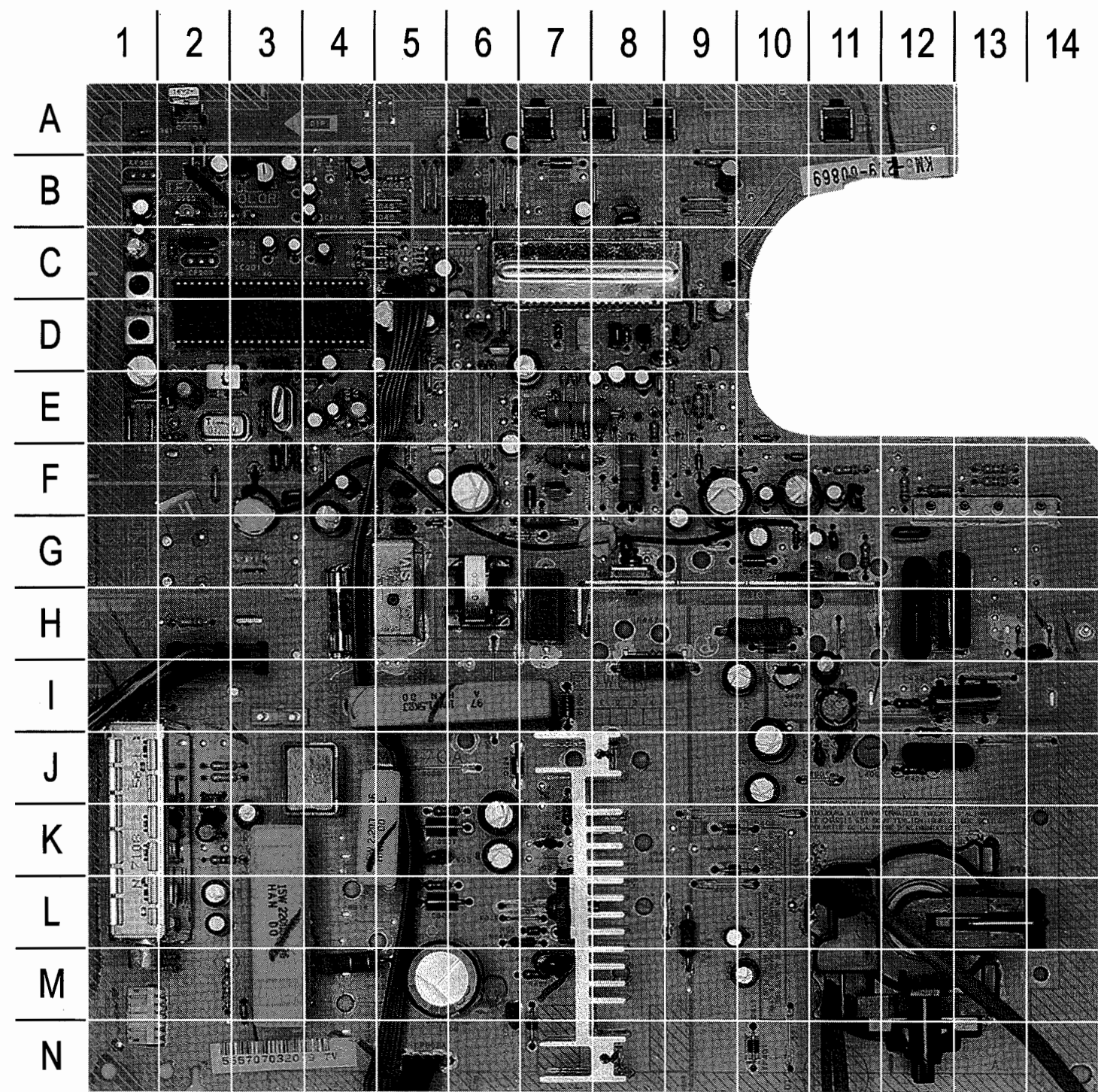
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SCHEMATIC COMPONENT LOCATION GUIDE

C001	B-23	C420	D-26	D126	C-25	Q803	B-15	R211	B-1	R507	C-25
C002	A-23	C421	D-2	D127	D-25	R001	B-23	R212	C-4	R508	C-25
C003	B-24	C422	D-6	D351	A-6	R002	B-23	R301	B-5	R509	C-26
C004	C-1	C423	E-27	D352	A-6	R003	A-23	R302	B-5	R512	A-27
C008	B-23	C424	E-27	D403	D-5	R004	C-1	R303	A-4	R517	A-27
C009	C-27	C425	D-4	D404	E-1	R005	C-1	R304	B-3	R518	A-27
C101	D-28	C426	E-28	D405	D-2	R006	E-19	R353	A-4	R602	C-11
C102	D-19	C427	E-4	D406	D-3	R007	E-19	R354	A-5	R603	C-11
C103	C-18	C428	E-28	D407	D-25	R008	B-23	R355	A-5	R607	E-10
C105	D-28	C429	D-3	D408	E-25	R008	B-23	R356	A-7	R609	B-11
C106	D-27	C430	D-6	D409	E-27	R101	B-19	R357	A-6	R610	B-11
C107	D-20	C431	E-27	D410	D-26	R102	B-18	R358	A-6	R611	B-11
C108	D-19	C433	D-26	D411	E-7	R103	B-18	R359	A-7	R612	B-11
C109	B-20	C434	E-2	D422	E-25	R104	B-18	R359	A-7	R613	D-1
C110	B-19	C435	E-9	D501	A-27	R105	E-19	R360	A-7	R614	D-1
C111	D-20	C437	D-7	D502	A-27	R106	E-19	R360	A-7	R615	C-11
C119	B-21	C439	E-3	D605	E-9	R107	B-20	R361	A-5	R616	B-8
C121	C-19	C440	E-4	DY	D-6	R108	C-18	R401	D-2	R618	B-6
C123	A-17	C442	E-7	F501	A-25	R109	D-19	R402	D-5	R619	C-6
C124	D-19	C443	E-6	FB401	D-25	R110	C-19	R403	D-4	R620	B-7
C129	E-19	C444	E-6	FB401	D-8	R111	D-19	R404	C-12	R623	C-7
C130	E-19	C446	E-4	IC101	A-20	R112	B-19	R405	C-13	R625	D-10
C131	B-17	C448	D-26	IC102	E-18	R113	E-21	R406	E-3	R626	D-14
C132	D-26	C502	B-26	IC103	C-18	R114	D-19	R407	E-3	R627	D-14
C133	D-25	C503	A-27	IC104	C-26	R116	C-18	R407	E-4	R628	D-15
C134	B-21	C506	A-27	IC201	A-3	R117	B-17	R409	E-1	R632	C-14
C201	E-28	C507	C-26	IC201	B-10	R118	C-17	R410	D-6	R633	C-14
C202	E-28	C519	C-25	IC201	B-3	R119	B-17	R411	E-1	R634	B-14
C203	C-2	C601	C-11	IC201	B-5	R120	B-21	R413	E-4	R635	E-10
C204	C-2	C603	C-11	IC201	D-2	R121	A-21	R414	D-3	R801	C-16
C205	C-4	C607	D-9	IC401	D-4	R122	A-21	R415	E-7	R802	B-15
C207	B-2	C608	D-10	IC402	E-26	R123	A-21	R416	D-6	R803	B-15
C208	B-1	C611	E-9	IC501	B-26	R124	E-21	R417	D-4	R804	C-15
C209	C-3	C613	B-10	L201	C-3	R125	E-21	R418	D-4	R805	C-15
C301	A-3	C614	B-11	L202	B-1	R127	A-19	R419	D-4	R806	B-15
C302	A-4	C615	B-11	L203	C-2	R128	B-21	R420	D-4	R807	C-15
C303	B-2	C620	D-1	L204	B-5	R129	D-18	R421	E-9	R809	B-14
C304	A-4	C621	D-1	L301	B-3	R130	D-21	R422	E-1	R811	C-14
C305	A-3	C622	A-8	L302	B-4	R131	E-21	R424	D-2	R813	B-15
C308	A-2	C623	C-12	L406	D-7	R132	E-21	R425	E-26	R814	C-14
C351	E-28	C624	B-8	L501	A-25	R133	A-17	R425	E-26	R815	D-15
C352	A-4	C625	B-8	L502	B-26	R134	C-21	R427	E-5	R816	C-15
C353	A-5	C628	C-10	L601	B-8	R136	C-21	R428	D-7	RY101	A-25
C354	A-5	C631	B-8	OS101	A-17	R137	C-21	R429	E-7	RY101	C-22
C355	A-7	C632	D-14	Q101	B-18	R138	C-21	R431	D-5	SP351	A-8
C356	A-7	C801	D-15	Q102	B-18	R139	B-21	R432	E-4	SW101	A-18
C357	B-5	C802	C-16	Q103	C-21	R141	B-21	R434	C-12	SW102	A-18
C401	D-1	C804	B-14	Q104	C-21	R142	D-18	R435	E-2	SW103	A-18
C402	D-1	C805	D-14	Q105	B-4	R143	D-18	R436	E-2	SW104	A-19
C403	D-2	C806	C-14	Q106	D-18	R144	B-17	R437	E-2	SW105	A-19
C404	E-28	CD501	A-25	Q351	A-6	R145	B-21	R439	E-2	T401	E-4
C405	C-12	CF201	B-1	Q352	B-7	R146	B-18	R440	E-3	TH501	B-26
C406	C-12	CF202	C-5	Q353	A-5	R177	C-25	R441	E-3	V801	B-16
C407	C-12	CF301	A-3	Q401	E-5	R201	B-1	R443	E-27	X101	B-20
C408	C-12	CF401	D-2	Q402	E-3	R202	C-2	R445	E-9	X601	C-10
C410	E-1	D001	B-23	Q403	D-17	R204	C-2	R446	E-4		
C412	E-26	D002	A-23	Q601	B-7	R205	B-2	R447	E-4		
C414	D-5	D101	C-18	Q602	C-7	R206	B-2	R448	E-4		
C416	D-7	D103	D-27	Q603	D-14	R208	B-1	R501	B-25		
C417	D-4	D124	D-26	Q801	B-15	R209	B-5	R502	A-26		
C418	D-4	D125	C-21	Q802	C-15	R210	C-3	R506	B-27		

MAIN BOARD - TOP VIEW

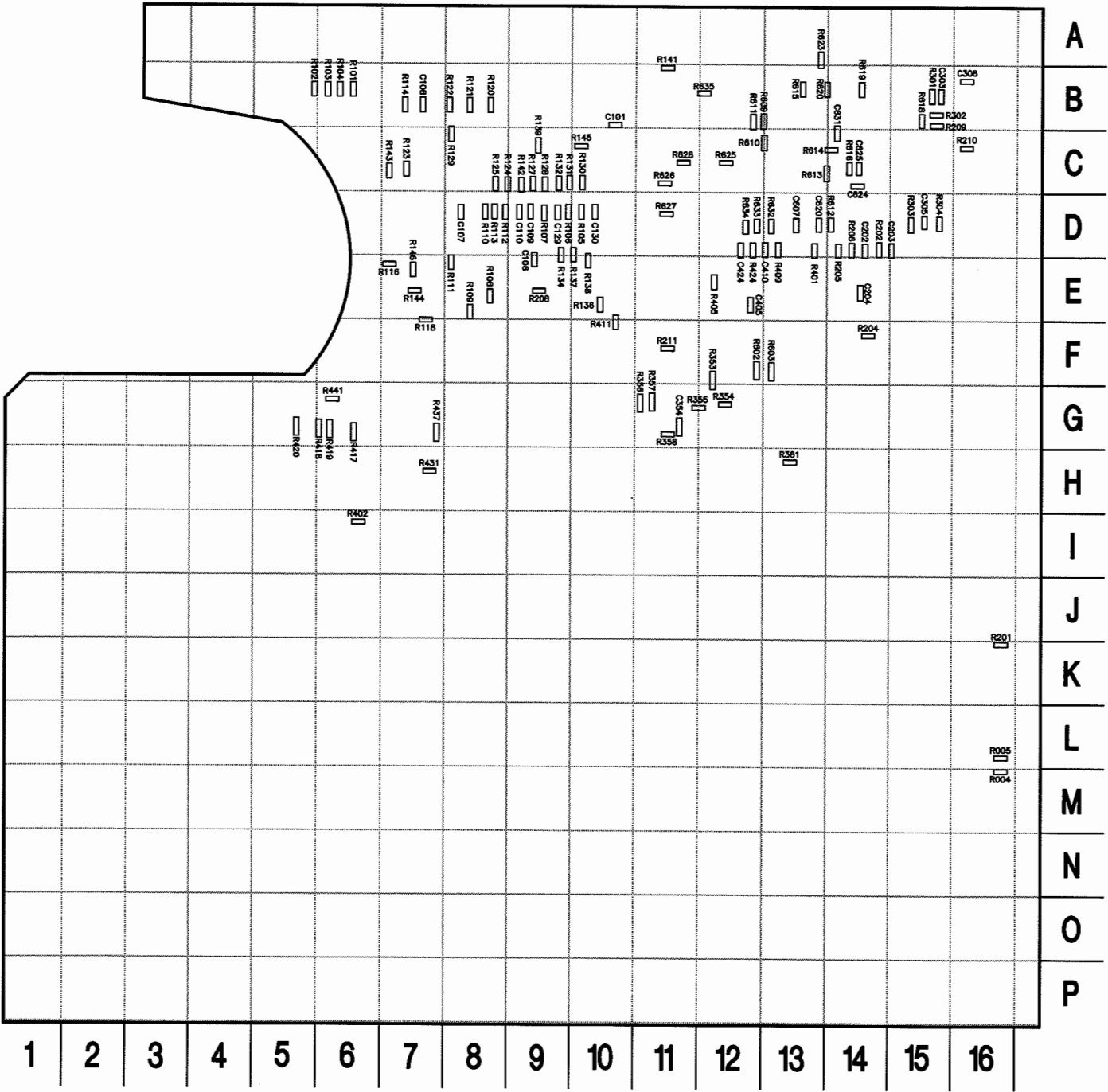


A HOWARD W. SAMS GridTRACE™ PHOTO

MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

C001	K-2	C435	M-7	D502	L-5	R410	F-12
C002	K-2	C437	H-13	D605	B-7	R413	F-13
C003	L-2	C439	J-11	F501	H-4	R414	E-10
C004	L-2	C440	J-11	FB401	L-12	R415	F-12
C008	M-3	C442	H-14	FH501	G-4	R416	G-11
C009	K-3	C443	H-12	FH502	H-4	R421	M-7
C102	E-8	C446	I-11	IC101	B-6	R422	E-8
C103	E-8	C448	L-10	IC102	F-7	R425	F-7
C105	D-7	C502	H-7	IC103	D-7	R427	I-12
C111	D-9	C503	K-5	IC104	C-7	R428	J-12
C119	B-7	C506	M-5	IC201	D-3	R429	L-9
C121	D-8	C507	J-10	IC401	G-11	R432	F-13
C123	B-9	C519	K-6	IC402	G-8	R434	F-8
C124	B-8	C601	F-4	IC501	L-7	R435	F-8
C131	D-9	C603	E-4	L201	D-1	R436	F-8
C132	K-6	C608	B-4	L202	E-2	R439	E-10
C133	I-7	C611	A-6	L203	E-2	R440	F-10
C134	A-6	C613	B-4	L204	C-2	R443	G-7
C201	E-1	C614	B-4	L301	A-1	R445	L-7
C205	E-3	C615	C-4	L302	C-1	R446	J-12
C207	F-3	C621	C-3	L406	J-11	R447	I-8
C208	E-8	C622	C-3	L501	H-6	R448	H-10
C209	B-1	C623	B-3	L601	C-3	R501	H-2
C301	E-2	C628	B-2	OS101	A-2	R502	K-5
C302	E-2	C632	C-6	PH001	H-14	R506	L-3
C304	C-1	CF201	E-2	Q101	D-9	R507	K-7
C351	F-6	CF202	C-2	Q102	D-9	R508	K-7
C352	C-1	CF301	B-1	Q103	K-9	R509	L-7
C353	F-5	CF401	D-4	Q104	K-9	R512	M-4
C355	F-4	CP101	M-1	Q105	F-5	R517	K-5
C356	G-4	CP351	G-3	Q106	B-8	R518	L-5
C357	F-3	CP410	F-13	Q351	G-5	R607	B-5
C401	E-4	CP501	H-2	Q352	F-5	RY101	H-5
C402	E-4	CP502	I-3	Q353	F-5	SW101	A-6
C403	E-5	CP802A	C-5	Q401	I-13	SW102	A-7
C404	J-10	CP803A	N-5	Q402	I-10	SW103	A-8
C406	D-4	D001	I-1	Q403	C-9	SW104	A-8
C407	D-5	D002	K-2	Q601	B-3	SW105	A-11
C408	D-5	D101	D-8	Q602	B-3	T401	I-11
C412	I-10	D103	D-7	Q603	C-6	TH501	J-4
C414	G-10	D124	J-7	R001	J-2	TU001	K-1
C416	J-12	D125	G-7	R002	J-2	X101	D-8
C417	F-10	D126	I-7	R003	M-2	X601	E-3
C418	F-10	D127	F-7	R006	M-2		
C420	M-6	D351	G-5	R007	M-2		
C421	D-5	D352	F-5	R008	K-2		
C422	G-12	D403	G-10	R117	E-9		
C423	F-6	D404	E-7	R119	E-9		
C425	G-11	D405	F-9	R133	B-9		
C426	G-9	D406	F-10	R177	I-5		
C427	F-11	D407	H-10	R212	E-3		
C428	G-8	D408	K-9	R359	F-4		
C429	G-11	D409	E-7	R360	F-5		
C430	F-11	D410	N-7	R403	G-10		
C431	D-5	D411	N-10	R404	E-7		
C433	F-9	D422	K-9	R406	E-8		
C434	M-10	D501	K-5	R407	F-11		

MAIN BOARD - BOTTOM VIEW



MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

C101	B-10	C624	C-14	R118	F-7	R143	C-7	R356	G-11	R610	C-13
C106	E-9	C625	C-14	R120	B-8	R144	E-7	R357	G-11	R611	B-12
C107	D-8	C631	C-14	R121	B-8	R145	C-10	R358	G-11	R612	D-14
C108	B-7	R004	M-16	R122	B-8	R146	E-7	R361	H-13	R613	C-13
C109	D-9	R005	L-16	R123	C-7	R201	K-16	R401	D-13	R614	C-14
C110	D-9	R101	B-6	R124	C-8	R202	D-14	R402	I-6	R615	B-13
C129	D-9	R102	B-5	R125	C-8	R204	F-14	R405	E-12	R616	C-14
C130	D-10	R103	B-6	R127	C-9	R205	D-14	R409	D-13	R618	B-15
C202	D-14	R104	B-6	R128	C-9	R206	D-14	R411	F-10	R619	B-14
C203	D-15	R105	D-10	R129	C-8	R208	E-9	R417	G-6	R620	B-14
C204	E-14	R106	D-9	R130	C-10	R209	B-15	R418	G-6	R623	A-13
C303	B-15	R107	D-9	R131	C-9	R210	C-16	R419	G-6	R625	C-12
C305	D-15	R108	E-8	R132	C-9	R211	F-11	R420	G-5	R626	C-11
C308	B-16	R109	E-8	R134	D-9	R301	B-15	R424	D-12	R627	D-11
C354	G-11	R110	D-8	R136	E-10	R302	B-15	R431	H-7	R628	C-11
C405	E-12	R111	E-8	R137	D-10	R303	D-15	R437	G-7	R632	D-13
C410	D-13	R112	D-8	R138	E-10	R304	D-15	R441	G-6	R633	D-12
C424	D-12	R113	D-8	R139	C-9	R353	F-12	R602	F-12	R634	D-12
C607	D-13	R114	B-7	R141	B-11	R354	G-12	R603	F-13	R635	B-12
C620	D-13	R116	E-7	R142	C-9	R355	G-12	R609	B-13		



Created with pride by the employees
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A HOWARD W. SAMS GridTrace™

PARTS LIST

SEMICONDUCTORS

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
D001	UZ-30BCC-TA	D9JT03001C	-	-	-
	UZ-30BCC	-	-	-	-
D002	MTZJ4.7CT-77	D97U04R71C	-	-	-
	MTZJ4.7C	-	-	-	-
D101	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
	1SS132	-	ECG519	NTE519	SK3100
D103	MTZJ5.6BT-77	D97U05R61B	-	-	-
	MTZJ5.6B	-	-	-	-
D124	UZP-15B	D9J011502B	ECG145A	NTE145A	SK15V
D125	1S2472T-77	D1VT024720	ECG177	NTE177	SK9091
	1S2472	-	ECG177	NTE177	SK9091
# D126	EM1CV1	D2BT0EM1C0	-	-	-
	EM1C	-	ECG558	NTE558	SK3998
	10E10-1-TA2B	D28T10E101	-	-	-
D127	11E1TA1B2	D28T011E10	-	-	-
	11E1	-	ECG116	NTE116	SK3313
D351, 52	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
	1SS132	-	ECG519	NTE519	SK3100
D403	11E1TA1B2	D28T011E10	-	-	-
	11E1	-	ECG116	NTE116	SK3313
D404	MTZJ12BT-77	D97U01201B	-	-	-
	MTZJ12B	-	-	-	-
# D405	UZ-27BCC-TA	D9JT02701C	-	-	-
	UZ-27BCC	-	-	-	-
# D406	UZ-11BCA-TA	D9JT01101A	-	-	-
	UZ-11BCA	-	-	-	-
# D407, 08	10ELS6TA1B2	D28T10ELS6	-	-	-
	10ELS6	-	ECG552	NTE552	SK9000
D409	UZ-7.5BCC-TA	D9JT07R51C	-	-	-
	UZ-7.5BCC	-	-	-	-
# D410, 11, 22	10ELS6TA1B2	D28T10ELS6	-	-	-
	10ELS6	-	ECG552	NTE552	SK9000
# D501, 02	RM11C	D2BTRM11C0	ECG125	NTE125	SK3081
D605	11E1TA1B2	D28T011E10	-	-	-
	11E1	-	ECG116	NTE116	SK3313
IC101	OEC3027B	I53D03027B	-	-	-
IC102	ST24C01	-	-	-	-
	ST24C01FB6	I53D01FB60	-	-	-
IC103	PST600C	I9UJ0T600C	-	-	-
# IC104	NJM78L05A	-	ECG977	NTE977	SK3462
	NJM78L05A(T3)	I0QT98L050	-	-	-
IC201	LA76070	I03DE76070	-	-	-
# IC401	LA7840	I03SD78400	-	-	-
# IC402	KIA7809PI	I1KA978090	ECG1966	NTE1966	-
	NJM78M09FA	I0QK98M090	-	NTE1966	-
# IC501	STR30110	I2B4901100	ECG7077	NTE7077	-
Q101, 02, 03	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
Q104	2SC2001(C)-TL	TCLT02001L	ECG85	NTE85	SK3849
Q105, 06	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
# Q351	2SC2120Y(TPE2)	TC5T021204	ECG289A	NTE289A	SK3849
# Q352	2SA950Y(TPE2)	TA5T009504	ECG290A	NTE290A	SK3841
Q353	2SC1815Y(TPE2)	TC5T018154	ECG85	NTE85	SK3124A
# Q401	2SD2089	TDUQ020890	ECG2331	NTE2331	SK10088
# Q402	2SC2271(D,E)-AE	TC3T022710	ECG399	NTE399	SK9352
Q403	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
Q601	2SA733(C)-T	TALT007330	ECG290A	NTE290A	SK3114A
	2SA733P,Q	-	ECG290A	NTE290A	SK3114A
# For SAFETY use only equivalent replacement part.					

SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
Q602	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
Q603	2SA733(C)-T	TALT007330	ECG290A	NTE290A	SK3114A
	2SA733P,Q	-	ECG290A	NTE290A	SK3114A
# Q801, 02, 03	2SC1473A-TA	TCKT1473A0	ECG399	NTE399	SK9352
# For SAFETY use only equivalent replacement part.					

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C111	1µF 20% 50V NP	E02ET5010M
C133	.001 10% 2kV	C13VB0713K
C352	33µF 20% 16V NP	E02ET2330M
C353	10µF 20% 16V NP	E02ET2100M
# C404	470µF 20% 16V	E02LT2471M
# C412	470µF 20% 16V	E02LT2471M
# C414	100µF 20% 35V	E02LT4101M
C420	.001 10% 1kV	C0JTB0613K
# C433	1000µF 20% 35V	E02LF4102M
# C434	22µF 20% 63V	E001T6220M
# C442	270pF 10% 2kV	C01BBP7K2K
	470pF 10% 2kV	C01BBP7Q2K
# C443	.0047 +50% -10% 1.6kV	P4N2F9472H
# C444 (1)	560pF 10% 2kV	C01BBP7S2K
# C446	1µF 20% 160V	E02LTB010M
# C448	10µF 20% 100V	E02LT8100M
# C502	.1 10% 250V	P2222B104K
C503	.0022 10% 2kV	C13VB07H3K
# C506	330µF 20% 200V	-
	330µF 20% 220V	E01V0C331M
# C507	33µF 20% 160V	E0E70B330M
C611	1µF 20% 50V NP	E02ET5010M
C802	.001 10% 2kV	C13VB0713K
# For SAFETY use only equivalent replacement part.		
(1) Used in model TVM1302A (Version C).		

CABINET PARTS

Item	Mfr. Part No.
Model TVM1302A (Versions B, C)	
Badge, SANSUI	7234650023
Cabinet Back	702WPA0427
Cabinet Front (1)	701WPJA176
Cabinet Front Assembly	A3F506A720
Front Plate (1)	711WPD0453
Guide - Button Frame (1)	735WPA0275
Guide - Remocon (1)	713WPA0065
Model TVM1302S (Version E)	
Badge, SANSUI	723465A001
Cabinet Back	702WPBA005
Cabinet Front (1)	701WPBA013
Cabinet Front Assembly	A3F508A720
Front Plate (1)	711WPDA056
Guide - Button Frame (1)	735WPA0275
Guide - Remocon (1)	713WPA0065
(1) Part of Cabinet Front Assembly.	

PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R008 (1)	56 5% 1/2W	R002T2560J	HW056
# R008 (2)	56 5% 1/2W Fusible	R635U2560J	-
# R177	1500 5% 10W Wirewound	R5Y2CF152J	10W215
# R359, 60 (1)	1 5% 1/2W	R002T2010J	HW1D0
# R359, 60 (2)	1 5% 1/2W Fusible	R635U2010J	-
# R404	3900 5% 2W	R3X18A392J	2W239
# R407 (1)	1.5 5% 1/2W	R002T21R5J	HW1D5
# R407 (2)	1.5 5% 1/2W Fusible	R635U21R5J	-
# R425 (1)	8.2 5% 1W	R3X1818R2J	1W8D2
# R425 (2)	8.2 5% 1W Fusible	R635818R2J	F1W8D2
# R429	2.7 5% 1W Fusible	R635812R7J	F1W2D7
# R434	3900 5% 2W	R3X18A392J	2W239
# R435	100K 1% 1/4W	R4X5T4104F	-
# R436	22K 1% 1/6W	R4X5T6223F	-
# R437	3300 5% 1/8W	R902N8332J	EW233
# R439, 40	15K 1% 1/6W	R4X5T6153F	-
# R441	1500 5% 1/8W	R902N8152J	EW215
# R443	5.6 5% 1W Fusible	R635815R6J	F1W5D6
R445	220K 1% 1/4W	R4X5T4224F	-
# R447	3900 5% 2W	R3U18A392J	2W239
# R448	3300 5% 2W	R3U18A332J	2W233
# R501 (1)	820K 5% 1/2W	R002T2824J	HW482
# R501 (2)	1M 10% 1/2W	R21202105K	HW510
# R502	2.2 5% 5W Wirewound	R5Y2CD2R2J	5W2D2
# R506	220 5% 15W Wirewound	R5Y2CG221J	-
# R507	47 5% 1/4W Fusible	R635U4470J	-
# R509	18K 1% 1/6W	R4X5T6183F	-
# R512	4.7 5% 3W	R3X28B4R7J	3W4D7
# R803, 05, 07	15K 5% 2W	R3X18A153J	2W315
# TH501	7.6 Cold PTC	DF20BG3R0Q	-

For SAFETY use only equivalent replacement part.

(1) Used in model TVM1302A (Versions B, C).

(2) Used in model TVM1302S (Version E).

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY (1)	Yoke Horiz 3.43mH Vert 29mH	-
# FB401 (2)	Horizontal Output	043214024F
L201	Video IF	0336020378
L202	.47µH	021LA6R47M
L203	.91µH	021S05R91K
L204	15µH	021LA6150K
L301	15µH	021LA6150K
L302	Sound IF	03361A0108
L406	18µH	02186G180M
# L501	Line Filter	029K000074
# L502	Degaussing	028R140023
L601	33µH	021LA6330K
# T401	Horizontal Driver	03305Y001W

For SAFETY use only equivalent replacement part.

(1) Bonded to CRT.

(2) Focus and screen controls are part of FB401.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# ATC001	Antenna Unit	0632400007	-
# BL001	Plug	0634200015	Antenna
# CD501	Line Cord	120R614304	AC, Polarized
CF201	Filter	1027045R7D	SAW
CF202	Trap	1011T4R517	4.5MHz
CF301	Filter	1011T4R504	4.5MHz
CF401	Oscillator	1002AR5002	503kHz
# F501	Fuse	081PC04003	4Amp, 125V, Slow Blow
FH501, 02	Fuse Holder	06710T0006	For F501
# J801	Socket	066X120014	CRT
	Socket	0666120011	CRT
OS101	Receiver	0779014002	Remote, GP1U281Q
# RY101	Relay	0560V20114	Power
SP351	Speaker	070J123011	3" Round, 8 Ohms
SW101	Switch	0504101T32	Channel Up
SW102	Switch	0504101T32	Channel Down
SW103	Switch	0504101T32	Volume Up
SW104	Switch	0504101T32	Volume Down
SW105	Switch	0504101T32	Power
TM101 (2)(3)	Transmitter	076R074040	Remote, R25-7345
TM101 (4)	Transmitter	076R074050	Remote, R25-7346
# TU001 (1)	Tuner	0145100043	UHF/VHF, ENV56D21G3
# V801 (2)	CRT	098Y140468	A34JXV70X26N45
# V801 (3)	CRT	09DQ140470	370KSB22-TC78(SYB)K
# V801 (4)	CRT	098W140472	A34JFQ90X21(W)
X101	Oscillator	1002AR5001	503kHz
X601	Crystal	100W357903	3.58MHz
	Antenna	125C108024	Rod
	PC Board (2)(3)	A3F403B11A	CRT, TC6239A
	PC Board (4)	A3F508A11A	CRT, TC6239A
	PC Board (2)	A3F506C01A	Main, TM6370A
	PC Board (3)	A3F506A01A	Main, TM6370A
	PC Board (4)	A3F506A01A	Main, TM6370A

For SAFETY use only equivalent replacement part.

(1) Contact TNI Electronics for replacement; order by part number on tuner.

(2) Used in model TVM1302A (Version B).

(3) Used in model TVM1302A (Version C).

(4) Used in model TVM1302S (Version E).