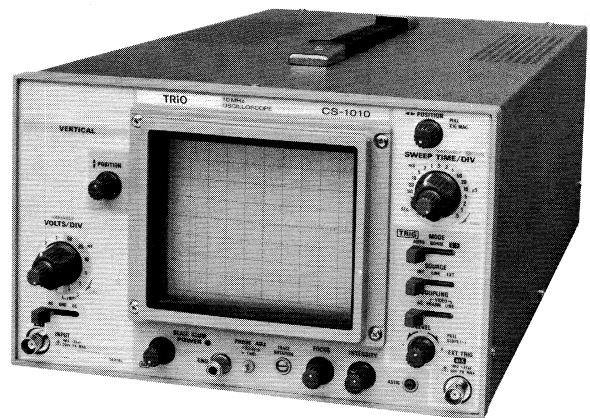
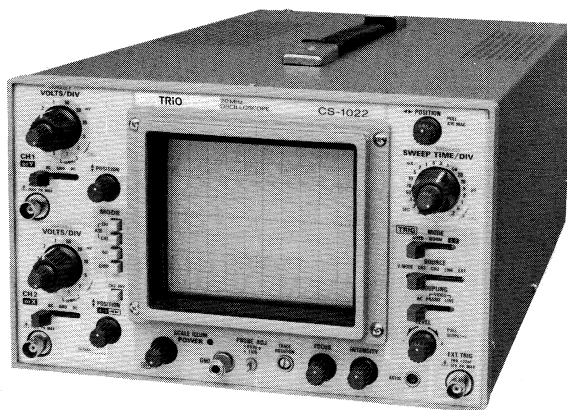


CS-1022, CS-1012
CS-1020, CS-1010



TRIO

SPECIFICATIONS

	CS-1022	CS-1012	CS-1020	CS-1010
CRT	150FTM31	150GTM31	150FTM31	150GTM31
Acceleration Voltage	6 kV	2 kV	6 kV	2 kV
Display Area	8 × 10 div (1 div = 10 mm)			
Type	Rectangular, with internal graticule			
VERTICAL AXIS	CH1 and CH2		—	
Sensitivity	1 mV/div to 5 V/div, ±3%			
Attenuator	12 steps, 1 mV/div to 5 V/div in 1-2-5 sequence. Vernier control for fully adjustable sensitivity between steps.			
Input Impedance	1 MΩ ±2%, approx 32 pF	1 MΩ ±2%, approx 35pF	1 MΩ ±2%, approx 32pF	1 MΩ ±2%, approx 35pF
Frequency Response 2 mV/div to 5 V/div 1 mV/div	DC; DC to 20 MHz, -3 dB AC; 5 Hz to 20 MHz, -3 dB DC; DC to 10 MHz, -3 dB AC; 5 Hz to 10 MHz, -3 dB	DC; DC to 10 MHz, -3 dB AC; 5 Hz to 10 MHz, -3 dB DC; DC to 7 MHz, -3 dB AC; 5 Hz to 7 MHz, -3 dB	DC; DC to 20 MHz, -3 dB AC; 5 Hz to 20 MHz, -3 dB DC; DC to 10 MHz, -3 dB AC; 5 Hz to 10 MHz, -3 dB	DC; DC to 10 MHz, -3 dB AC; 5 Hz to 10 MHz, -3 dB DC; DC to 7 MHz, -3 dB AC; 5 Hz to 7 MHz, -3 dB
Rise Time	17.5 nsec or less (20 MHz) 35 nsec or less (10 MHz)	35 nsec or less (10 MHz) 50 nsec or less (7 MHz)	17.5 nsec or less (20 MHz) 35 nsec or less (10 MHz)	35 nsec or less (10 MHz) 50 nsec or less (7 MHz)
Crosstalk	-40 dB minimum		—	
Operating Modes	CH1; single trace CH2; single trace ADD; CH1 + CH2 added display ALT; two waveforms alternating CHOP; two waveforms chopped		—	
Chop Frequency	Approx. 250 kHz		—	
Channel Polarity	Normal or inverted, CH2 only inverted		—	
 Maximum Input voltage	500 Vp-p or 250 V (DC + AC peak)			
Non-Distorted Maximum Amplitude	More than 8 div, DC to 20 MHz	More than 6 div, DC to 10 MHz	More than 8 div, DC to 20 MHz	More than 6 div, DC to 10 MHz
HORIZONTAL AXIS	(input thru CH2, ×10 MAG not included)		(×10 MAG not included)	
Operating Mode	With TRIG MODE switch, X-Y operation is selectable. CH1; Y axis CH2; X axis		With TRIG MODE switch, X-Y operation is selectable. VERT. INPUT; Y axis EXT TRIG INPUT; X axis	
Sensitivity	Same as vertical axis (CH2)		100 mV/div	
Input Impedance	Same as vertical axis (CH2)		1 MΩ ±2%, approx. 32pF	1 MΩ ±2%, approx. 35 pF
Frequency Response	DC; DC to 1 MHz, -3 dB AC; 5 Hz to 1 MHz, -3 dB	DC; DC to 500 kHz, -3 dB AC; 5 Hz to 500 kHz, -3 dB	DC; DC to 1 MHz, -3 dB	DC; DC to 500 kHz, -3 dB
X-Y Phase Difference	3° or less at 100 kHz	3° or less at 50 kHz	3° or less at 100 kHz	3° or less at 50 kHz
 Maximum Input Voltage	Same as vertical axis (CH2)		50 V (DC + AC peak)	
SWEEP				
Type	NORM	Triggering sweep		
	AUTO	Sweep free runs in absence of trigger		

SPECIFICATIONS

	CS-1022			CS-1012			CS-1020			CS-1010																																																						
Sweep Time	0.2 μs/div to 0.5 s/div, ±3% in 20 ranges, in 1-2-5 sequence. Vernier control provides fully adjustable sweep time between steps.			0.5 μs/div to 0.5 s/div, ±3% in 19 ranges, in 1-2-5 sequence. Vernier control provides fully adjustable sweep time between steps.			0.2 μs/div to 0.5 s/div, ±3% in 20 ranges, in 1-2-5 sequence. Vernier control provides fully adjustable sweep time between steps.			0.5 μs/div to 0.5 s/div, ±3% in 19 ranges, in 1-2-5 sequence. Vernier control provides fully adjustable sweep time between steps.																																																						
Sweep Magnification	× 10 (ten times) ± 5%																																																															
Linearity	± 3% all ranges, ± 5% on 0.2 μs/div range at × 10 magnification.																																																															
TRIGGERING																																																																
Internal Sync	V. MODE; Triggered by input signal selected by vertical MODE setting. CH1; Triggered by CH1 signal CH2; Triggered by CH2 signal LINE; Triggered by line voltage						INT; Triggered by vertical input signal LINE; Triggered by line voltage																																																									
External Sync	EXT; Triggered by signal applied to EXT TRIG INPUT jack						EXT; Triggered by signal applied to EXT TRIG INPUT jack																																																									
External sync Input Impedance	1 MΩ, ± 2% approx 32pF			1 MΩ, ± 2% approx 35pF			1 MΩ, ± 2% approx 30pF			1 MΩ, ± 2% approx 30pF																																																						
 Maximum External Trigger Voltage	50 V (DC + AC peak)																																																															
Coupling	AC, VIDEO FRAME, VIDEO LINE																																																															
Trigger Sensitivity	<table><tr><td></td><td>FREQ. RANGE</td><td>INT</td><td>EXT</td><td>FREQ. RANGE</td><td>INT</td><td>EXT</td><td>FREQ. RANGE</td><td>INT</td><td>EXT</td><td>FREQ. RANGE</td><td>INT</td><td>EXT</td></tr><tr><td>AUTO</td><td>20Hz to 20MHz</td><td>1div</td><td>0.1Vp-p</td><td>20Hz to 10MHz</td><td>1div</td><td>0.1Vp-p</td><td>20Hz to 20MHz</td><td>1div</td><td>0.1Vp-p</td><td>20Hz to 10MHz</td><td>1div</td><td>0.1Vp-p</td></tr><tr><td>NORM</td><td>10Hz to 20MHz</td><td>1div</td><td>0.1Vp-p</td><td>10Hz to 10MHz</td><td>1div</td><td>0.1Vp-p</td><td>10Hz to 20MHz</td><td>1div</td><td>0.1Vp-p</td><td>10Hz to 10MHz</td><td>1div</td><td>0.1Vp-p</td></tr><tr><td>VIDEO</td><td>FRAME, LINE</td><td>1div</td><td>0.1Vp-p</td><td>FRAME, LINE</td><td>1div</td><td>0.1Vp-p</td><td>FRAME, LINE</td><td>1div</td><td>0.1Vp-p</td><td>FRAME, LINE</td><td>1div</td><td>0.1Vp-p</td></tr></table>													FREQ. RANGE	INT	EXT	FREQ. RANGE	INT	EXT	FREQ. RANGE	INT	EXT	FREQ. RANGE	INT	EXT	AUTO	20Hz to 20MHz	1div	0.1Vp-p	20Hz to 10MHz	1div	0.1Vp-p	20Hz to 20MHz	1div	0.1Vp-p	20Hz to 10MHz	1div	0.1Vp-p	NORM	10Hz to 20MHz	1div	0.1Vp-p	10Hz to 10MHz	1div	0.1Vp-p	10Hz to 20MHz	1div	0.1Vp-p	10Hz to 10MHz	1div	0.1Vp-p	VIDEO	FRAME, LINE	1div	0.1Vp-p	FRAME, LINE	1div	0.1Vp-p	FRAME, LINE	1div	0.1Vp-p	FRAME, LINE	1div	0.1Vp-p
	FREQ. RANGE	INT	EXT	FREQ. RANGE	INT	EXT	FREQ. RANGE	INT	EXT	FREQ. RANGE	INT	EXT																																																				
AUTO	20Hz to 20MHz	1div	0.1Vp-p	20Hz to 10MHz	1div	0.1Vp-p	20Hz to 20MHz	1div	0.1Vp-p	20Hz to 10MHz	1div	0.1Vp-p																																																				
NORM	10Hz to 20MHz	1div	0.1Vp-p	10Hz to 10MHz	1div	0.1Vp-p	10Hz to 20MHz	1div	0.1Vp-p	10Hz to 10MHz	1div	0.1Vp-p																																																				
VIDEO	FRAME, LINE	1div	0.1Vp-p	FRAME, LINE	1div	0.1Vp-p	FRAME, LINE	1div	0.1Vp-p	FRAME, LINE	1div	0.1Vp-p																																																				
PROBE ADJ. VOLTAGE	0.5 V, ± 6%, square wave, positive polarity, approx 1 kHz																																																															
INTENSITY MODULATION																																																																
Sensitivity	TTL compatible Positive voltage increases brightness. Negative voltage decreases brightness.																																																															
Input Impedance	Approx 10 kΩ																																																															
Usable Frequency Range	DC to 2 MHz			DC to 1 MHz			DC to 2 MHz			DC to 1 MHz																																																						
 Maximum Input Voltage	50 V (DC + AC peak)																																																															
VERTICAL AXIS SIGNAL OUTPUT	CH1 SIGNAL OUTPUT						VERTICAL SIGNAL OUTPUT																																																									
Output Voltage	Approx 50 mV/div (50 Ω load)																																																															
Output Impedance	Approx 50 Ω																																																															
Frequency Response	100 Hz to 20 MHz, – 3 dB (50 Ω load)			100 Hz to 10 MHz, – 3 dB (50 Ω load)			100 Hz to 20 MHz, – 3 dB (50 Ω load)			100 Hz to 10 MHz, – 3 dB (50 Ω load)																																																						
TRACE ROTATION																																																																
Electrical, adjustable from front panel																																																																
POWER REQUIREMENT																																																																
AC 100/120/220/240 V ± 10% 50/60 Hz																																																																
Power Consumption	Approx 43 W			Approx 41W			Approx 38W			Approx 36W																																																						
DIMENSIONS																																																																
() dimensions include protrusions from basic outline dimensions.																																																																
	Width	260 mm (260 mm)																																																														
	Height	160 mm (180 mm)																																																														
	Depth	400 mm (460 mm)																																																														

SPECIFICATIONS

		CS-1022	CS-1012	CS-1020	CS-1010
WEIGHT		Approx. 8.8 kg	Approx. 8.4 kg	Approx. 8.4 kg	Approx. 8.1 kg
ENVIRONMENT					
Operating Temperature and Humidity for Guaranteed Specifications		0°C to 40°C, 85% maximum RH			
Full Operating Temperature and Humidity		0°C to 50°C, 90% maximum RH			
ACCESSORIES					
Probe		2		1	
Operators Manual		1			
Replacement Fuse	0.8 A	2			
	0.5 A	2			

■ Circuit and rating are subject to change without notice due to developments in technology.

STANDARD ACCESSORIES INCLUDED

Probe (PC-20)Y87-1840-00
 Attenuation.....1/10, 1/1
 Input Impedance
 1/1010 MΩ, 18pF or less
 1/11 MΩ, 100pF or less
 Operators ManualB50-2998-00
 Replacement Fuse
 0.8 AF05-8015-05
 0.5 AF05-5013-05

OPTIONAL ACCESSORIES

Probe Pouch (MC-78).....Y87-1600-00
 Service ManualB51-1033-00

SPECIFICATIONS

CRT 150FTM 31 SPECIFICATIONS (150GTM31)

Screen and Shape

Dimensions;

Overall length; 330 mm max. (355mm max)

Face plate dimensions; 149.3 ± 3 mm max.
(149 ± 3 mm)

Screen shape; Rectangular flat face, internal
graticule, non-metal back

Deflection and focusing
system; Electrostatic deflection,
electrostatic focusing and
post-deflection acceleration
(150FTM 31 only)

Color; Green

Persistence; Medium short

Useful display area Y axis.....80 mm

X axis.....100 mm

Heating

Heater voltage 6.0 V (6.3 V)

Heater current 75 mV (95 mA)

Weight

900 gr (920 gr)

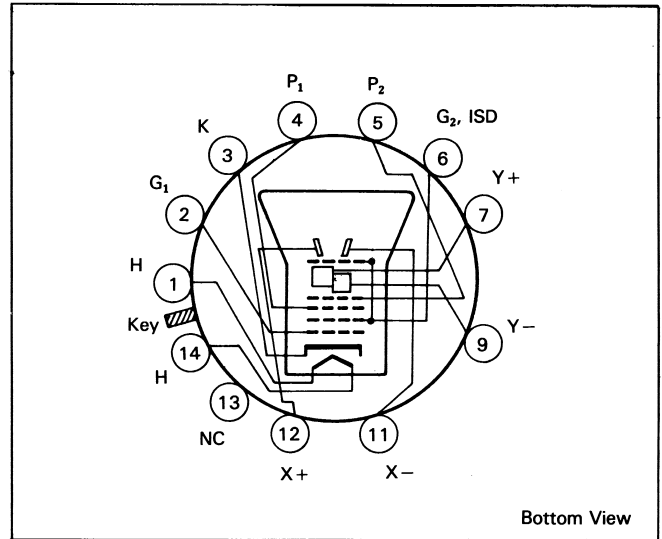


Fig. 2 150GTM31 Basing

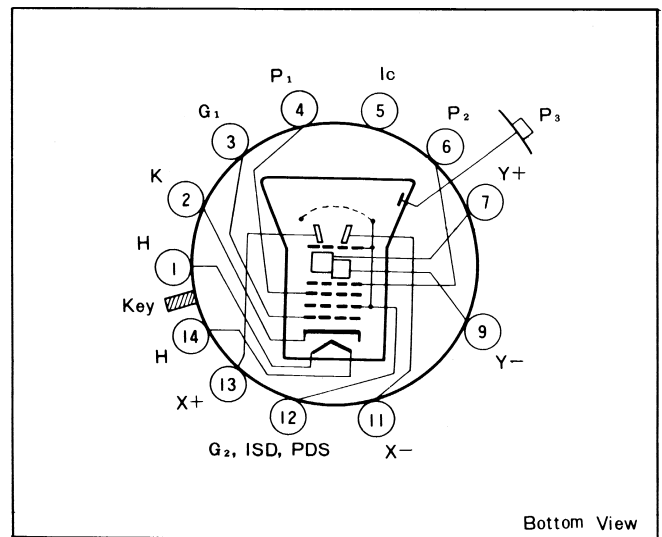


Fig. 3 150FTM31 Basing

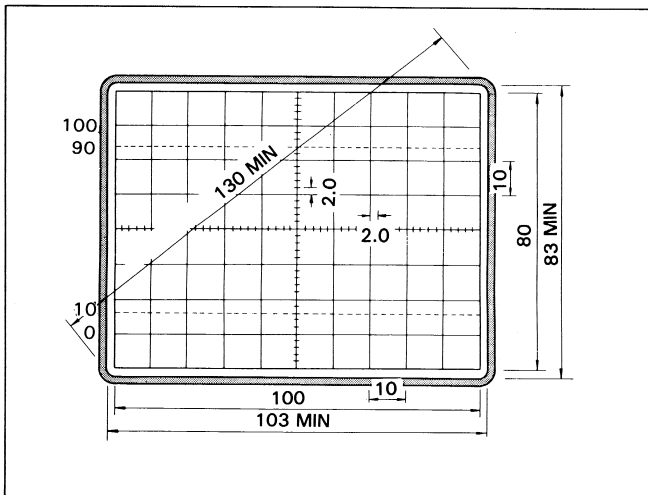


Fig. 1 150GTM31
150FTM31 Graticule

SAFETY

SAFETY

Before connecting the instrument to a power source, carefully read the following information, then verify that the proper power cord is used and the proper line fuse is installed for power source. The specified voltage is shown at the left side of the power cord on the rear panel. If the power cord is not applied for specified voltage, there is always a certain amount of danger from electric shock.

Line voltage

This instrument operates using ac-power input voltages that 100/120/220/240 V at frequencies from 50 Hz to 60 Hz.

Power cord

The ground wire of the 3-wire ac power plug places the chassis and housing of the oscilloscope at earth ground. Do not attempt to defeat the ground wire connection or float the oscilloscope; to do so may pose a great safety hazard. The appropriate power cord is supplied by an option that is specified when the instrument is ordered.

The optional power cords are shown as follows in Fig. 4.

Line fuse

The fuse holder is located on the rear panel and contains the line fuse. Verify that the proper fuse is installed by replacing the line fuse.

Voltage conversion

This oscilloscope may be operated from either a 100 V to 240 V, 50/60 Hz power source. Use the following procedure to change from 100- to 240 volt operation or vice versa.

1. Remove the top section of case.
2. Unplug the leadwire of the voltage selector P5 located on the connection unit (X77-1260).
3. Reinsert it for appropriate voltage range.
4. Replace fuse F 1 with a fuse of appropriate value, 0.8 amp for 100 VAC to 120 VAC operation, 0.5 amp for 220 VAC to 240 VAC operation.
5. When performing the reinsertion of leadwire for the voltage conversion the appropriate power cord should be used. (See Fig. 4.)

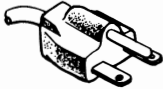
Plug configuration	Power cord and plug type	Factory installed instrument fuse	Line cord plug fuse	Parts No. for power cord and plate
	North American 120 volt/60 Hz Rated 15 amp (12 amp max; NEC)	0.8 A, 250 V Fast blow AGC/3AG	None	Cord: E30-1854-05 Plate: J21-2977-04
	Universal Europe 220 volt/50 Hz Rated 16 amp	0.5 A, 250 V Fast blow 5 × 20 mm	None	Cord: E30-1852-05 Plate: J21-2973-04
	U.K. 240 volt/50 Hz Rated 13 amp	0.5 A, 250 V Fast blow 5 × 20 mm	0.5 A Type C	—
	Australian 240 volt/50 Hz Rated 10 amp	0.5 A, 250 V Fast blow 5 × 20 mm	None	Cord: E30-1853-05 Plate: J21-2972-04
	North American 240 volt/60 Hz Rated 15 amp (12 amp max; NEC)	0.5 A, 250 V Fast blow AGC/3AG	None	—
	Switzerland 240 volt/50 Hz Rated 10 amp	0.5 A, 250 V Fast blow AGC/3AG 5 × 20 mm	None	—

Fig. 4 Power Input Voltage Configuration

CIRCUIT DESCRIPTION CS-1022, CS-1012

VERTICAL ATTENUATOR

The attenuators of channel 1 and channel 2 are mounted on two independent circuit board which are the same.

The vertical input signal coming to the BNC input receptacle enters a first-stage attenuator with path selected with the AC-GND-DC switch.

It then comes to one of the 1:1, 1:10, 1:100 attenuators which the vertical rotary switch selects before it enters the attenuator of the second stage. This attenuator consists of U1 and U2 and provides an attenuation sequence of 1-2-5. For the ranges of 1, 2, and 5mV/div, an amplifier consists of U3 and Q2 - 4 is used. For the adjustment of step ATT balance, VR2 is used in the ranges of 10 mV/div or more. For the ranges of 1, 2, 5mV/div, VR3 adjusts coarsely and VR4 does finely. VR2 and VR4 are accessible from the outside.

Trimmer TC 5 adjusts frequency response of the amplifier operating for ranges of 1, 2, and 5mV/div. It should be adjusted to obtain square wave and frequency response of the 10 mV/div range also in the other three ranges.

VERTICAL AMPLIFIER

The signal which has passed the attenuators comes to a preamplifier consisting of U1 and Q2 - 4 (CH2 ; U101 and Q102 - 104). Variable resistor VR1 (101) provided for the preamplifier allows to vary vertical position.

The preamplifier output comes to not only the vertical mode selector but in CH1, the CH1 OUTPUT circuit consisting of Q6 - 8 from which it is sent to the outside via a 22 μ F capacitor for AC coupling.

Another component of the preamplifier output comes to the base of Q5 (105) and after being selected with the TRIG SOURCE switch, passes through the emitter follower Q5 (105) over to a trigger amplifier which generates a trigger signal from the input. The channel 2 signal is used also as X-signal and VR102 adjusts offset for X POSITION centering.

The vertical mode switching circuit is a cascode amplifier comprising Q9 - 12 (107 - 110) whose outputs to Q13, 14 are controlled by two signals, CH1 - ENABLE and CH2 ENABLE, supplied from the vertical switching signal generator of the horizontal & high voltage unit.

Channel 2 is provided with the CH2 polarity inverter which comprises Q111, 112 and switched by switch S102.

VR104 allows to center during CH2 INVERT in relation to the condition during NORMAL.

Two cascode amplifiers of channel 1 and channel 2 of the vertical mode switching circuit are provided with trimmer capacitors TC101 (102) permitting adjustment of square wave and frequency response at high frequencies and semi-fixed variable resistor VR103 permitting to adjust channel 1 gain.

Since both channels are on during ADD, current is supplied to the vertical switching circuits from the circuits of Q113, 114 which are controlled by CH1-E and CH2-E signals. The

vertical switching output is given not only to the vertical output amplifier but also to the base of Q115 from which it goes as the V MODE trigger signal to the trigger amplifier. The output amplifier is a cascode amplifier comprising Q15 - 18 and provided with VR4 permitting CRT center adjustment, VR3 permitting operating level adjustment, VR5 permitting gain adjustment, and VR6 plus TC1, 2 permitting square wave and frequency response adjustment.

TRIGGER AND SWEEP CIRCUITS

The trigger (or X-axis) signal coming from the vertical amplifier enters the trigger amplifier of Q101 - 104 with path selected by the TRIG SOURCE switch. During X-Y mode, the channel 2 signal passes Q117 to the horizontal output amplifier comprising Q118 and Q120 - 127.

During sweep mode, the trigger signal entering the trigger amplifier divides into AC and VIDEO signals. The VIDEO signal passes the video-sync signal separator which separates vertical and horizontal sync signals from the video signal. Then it comes to the TRIG COUPLING switch and appears, after shaped by a Schmitt circuit, as the clock signal of sweep control gate U102b.

The auto-sweep circuit comprising U101a, b, d and U103a checks for the presence of the output of U101c and performs free-run operation if the signal is absent and mode is AUTO.

The output of the sweep control gate is controlled by the auto sweep and Schmitt circuits. When Q116 turns off, the Miller integrator starts to charge at the speed which time-base C and R determine. SWEEP VARIABLE VR103 permits to vary sweep speed. The sweep stop circuit of Q113, 114 detects the output voltage of the Miller integrator and controls a gate to invert state and stop sweep. The holdoff circuit Q119 determines when to stop sweep. The sawtooth wave output of the Miller integrator is, with sweep speed controlled by VR104, sent to the horizontal output amplifier.

VR111 and TC101 permit sweep time adjustment respectively of 10 msec/div and 50 μ sec/div ranges. VR106, 107 permit adjustment respectively of gain and center during $\times 10$ MAG mode. VR105 adjusts X-axis gain during X-Y mode.

CRT CIRCUIT

U104a ANDs the $\bar{Q}$ output of sweep control gate U102b with the CHOP blanking signal of U104c, d to generate the blanking signal.

Its amplitude is controlled in Q128, 129 by voltage coming from the INTENSITY control before the signal is sent to the blanking amplifier of Q1, 2. After amplified in the blanking amplifier and high acceleration DC component regenerated by D4 - 7, the blanking signal applies to a grid of the CRT. High voltages of 6 kV (for CS-1012, 2 kV) needed for trace in the CRT are generated by the DC - DC converter comprising T1 and Q3. Operational amplifier U1b performs

CIRCUIT DESCRIPTION / BLOCK DIAGRAM

feedback to obtain high stability.

POWER SUPPLY

The regulated power supply requires no adjustment.
+5, -15, and +15 V are generated by 3-terminal regulators. +100 and +140 V are stabilized against line voltage fluctuation by feedback applied by an operational amplifier.

CALIBRATION VOLTAGE

No adjustment is needed for the calibration voltage.
An oscillator composed of operational amplifier U1 generates a stable signal.

CS-1022 (1012) BLOCK DIAGRAM

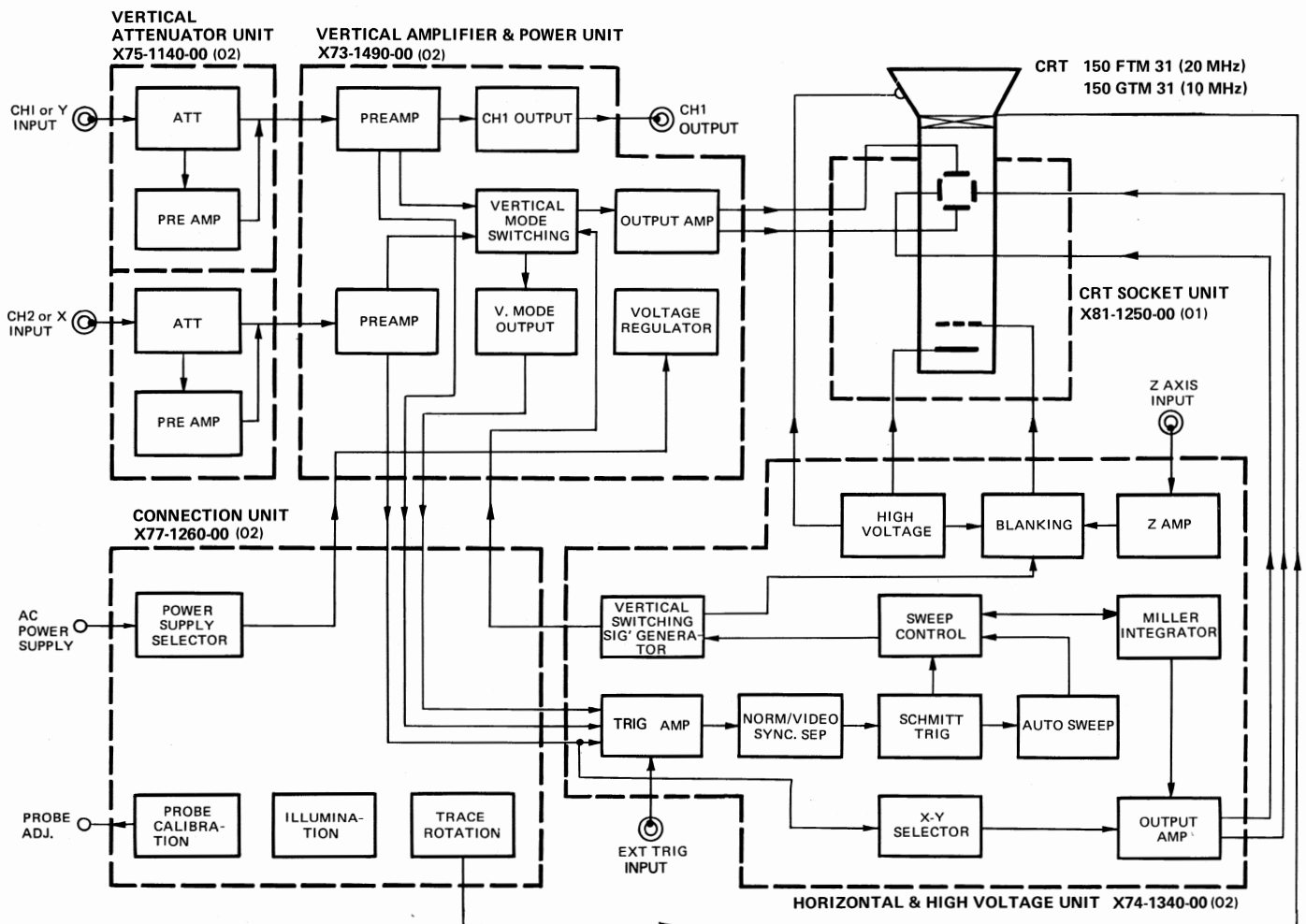


Fig. 5

CIRCUIT DESCRIPTION CS-1020, CS-1010

VERTICAL ATTENUATOR

The vertical input signal coming to the BNC input receptacle enters a first-stage attenuator with path selected with the AG-GND-DC switch.

It then comes to one of the 1:1, 1:10, 1:100 attenuators which the vertical rotary switch selects before it enters the attenuator of the second stage. This attenuator consists of U1 and U2 and provides an attenuation sequence of 1-2-5. For the ranges of 1, 2, and 5 mV/div, an amplifier consists of U3 and Q2 - 4 is used.

For the adjustment of step ATT balance, VR2 is used in the ranges of 10 mV/div or more. For the ranges of 1, 2, 5 mV/div, VR3 adjusts coarsely and VR 4 does finely. VR2 and VR4 are accessible from the outside.

Trimmer TC 5 adjusts frequency response of the amplifier operating for ranges of 1, 2, and 5 mV/div. It should be adjusted to obtain square wave and frequency response of the 10 mV/div range also in the other three ranges.

VERTICAL AMPLIFIER

The signal which has passed the attenuators comes to a preamplifier consisting of U1 and Q2 - 4.

Variable resistor VR1 provided for the preamplifier allows to vary vertical position.

The preamplifier output comes to not only the vertical mode selector but in CH1, the VERT OUTPUT circuit consisting of Q6 - 8 from which it is sent to the outside via a 22 μ F capacitor for AC coupling. Another component of the preamplifier output comes to the base of Q5 and after being selected with the TRIG SOURCE switch, passes through the emitter follower Q5 over to a trigger amplifier which generates a trigger signal from the input.

The second stage amplifier is a cascode amplifier comprising Q9 - 12 whose switched to differential signal and it is fed to emitter follower of Q13 and 14.

The cascode amplifier is provided with trimmer capacitor TC101 permitting adjustment of square wave and frequency response at high frequencies.

The signal from Q13 and 14 is fed to vertical output amplifier.

The output amplifier is a cascode amplifier comprising Q15 - 18 and provided with VR4 permitting CRT center adjustment, VR3 permitting operating level adjustment, VR5 permitting gain adjustment, and VR6 plus TC1, 2 permitting square wave and frequency response adjustment.

TRIGGER AND SWEEP CIRCUITS

The trigger signal coming from the vertical amplifier enters the trigger amplifier of Q101 - 104 with path selected by the TRIG SOURCE switch. During X-Y mode, the signal applied to EXT TRIG input is X-signal which passes sweep X-Y selector consisting of S106, Q117, 130 and 131 and then applies to horizontal output amplifier comprising Q118 and Q120 - 127.

VR103a of X-Y selector adjusts X-axis gain coarsely and VR110 adjusts X-axis DC balance.

During sweep mode, the sync signal entering the sync amplifier divides into AC and VIDEO signals. The VIDEO signal passes the video-sync signal separator which separated vertical and horizontal sync signals from the video signal. Then it comes to the TRIG COUPLING switch and appears, after shaped by a Schmitt circuit, as the clock signal of sweep control gate U102b.

The auto-sweep circuit comprising U101a, b, d and U103a checks for the presence of the output of U101c and performs free-run operation if the signal is absent and mode is AUTO.

The output of the sweep control gate is controlled by the auto sweep and Schmitt circuits. When Q116 turns off, the Miller integrator starts to charge at the speed which time-base C and R determine. SWEEP VARIABLE VR103b permits to vary sweep speed. The sweep stop circuit of Q113, 114 detects the output voltage of the Miller integrator and controls a gate to invert state and stop sweep. The holdoff circuit Q119 determines when to stop sweep. The sawtooth wave output of the Miller integrator is, with sweep speed controlled by VR104, sent to the horizontal output amplifier.

VR111 and TC101 permit sweep time adjustment respectively of 10 msec/div and 50 μ sec/div ranges. VR106, 107 permit adjustment respectively of gain and center during $\times 10$ MAG mode. VR105 adjusts X-axis gain during X-Y mode.

CRT CIRCUIT

Q output of sweep control gate U102b generates the blanking signal.

Its amplitude is controlled in Q128, 129 by voltage coming from the INTENSITY control before the signal is sent to the blanking amplifier of Q1, 2.

After amplified in the blanking amplifier and high acceleration DC component of regenerated by D4 - 7, the blanking signal applies to a grid of the CRT. High voltages of 6 kV (for CS-1010, 2 kV) needed for trace in the CRT are generated by the DC-DC converter comprising T1 and Q 3. Operational amplifier U1b performs feedback to obtain high stability.

POWER SUPPLY

The regulated power supply requires no adjustment.

+5, -15, and +15 V are generated by 3-terminal regulators. +100 and +140 V are stabilized against line voltage fluctuation by feedback applied by an operational amplifier.

CALIBRATION VOLTAGE

No adjustment is needed for the calibration voltage.

An oscillator composed of operational amplifier U1 generates a stable signal.

BLOCK DIAGRAM

CS-1020 (1010) BLOCK DIAGRAM

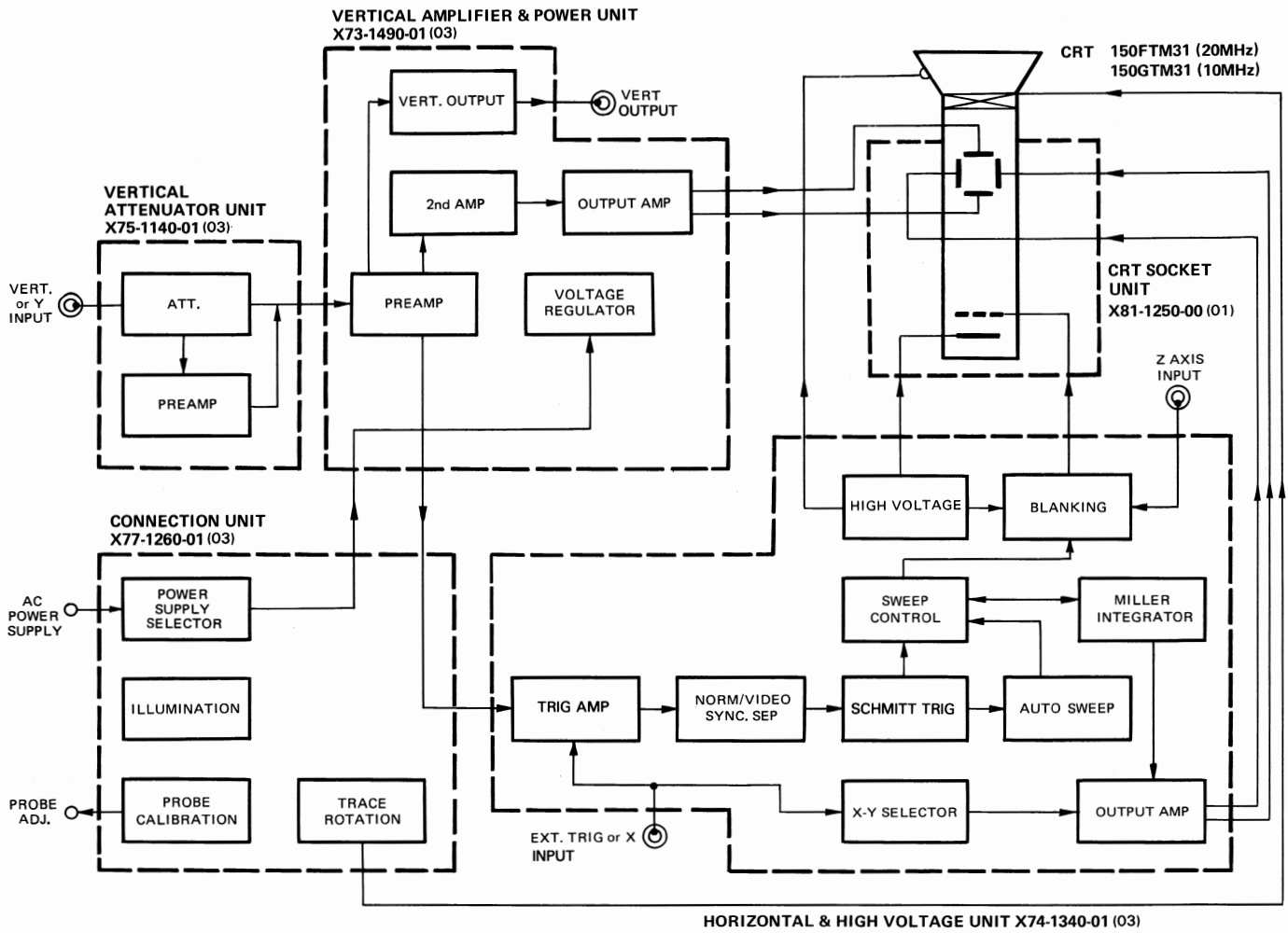


Fig. 6

ADJUSTMENT

To obtain the best performance, periodically calibrate the unit. Sometimes, only one mode need be calibrated, while at other times, all modes should be calibrated. When one mode is calibrated, it must be noted that the other modes may be affected. When calibrating all modes, perform the calibration in the specified sequence.

The following calibration required an accurate measuring instrument and an insulated adjusting flat blade screwdriver. If they are not available, contact your dealer. For optimum adjustment, turn the power on and warm up the this equipment sufficiently (more than 30 minutes) before starting.

Before calibrating the unit, check the power supply voltage.

TEST EQUIPMENT REQUIRED

The following instrument or their equivalent should be used for making adjustment.

Test Equipment	Model	Minimum Specification
Digital Multi-Meter	DL-706 (TRIO)	Impedance: More than 10 M Ω , Measuring range: 0.01 V to 199 V
Sine-Wave Generator	651 B (YHP)	Frequency: 10 Hz to 10 MHz, constant voltage over tuning range
Sine-Wave Generator	SG-503 (Tektronix)	Frequency: 50 kHz to 100 MHz, Output impedance: 50 Ω , constant voltage over tuning range.
Square-Wave Generator	PG-506 (Tektronix)	Output signal: 1 kHz, Amplitude: 10 mVp-p to 10 Vp-p, Accuracy: within $\pm 1\%$, Rise time: 35ns or less 100 kHz, Rise time: 1 ns or less
Q Meter	4343B (YHP)	—
Color Pattern Generator	CG-911A (TRIO)	—
Oscilloscope	CS-2100A (TRIO)	Sensitivity: more than 5 mV Frequency response: More than 100 MHz
Time-Marker Generator	TG-501 (Tektronix)	Time mark: 0.5 s to 0.1 μ s repetitive waveform
High-Voltage Probe	—	Input Impedance: 1000 M Ω
Termination	—	Impedance: 50 Ω Accuracy: within 3%
Termination	—	3 watts type impedance: 50 Ω
Attenuator	—	—20 dB attenuation (50 Ω)

PREPARATION FOR ADJUSTMENT

Control Setting

The control setting listed below must be used for each adjustment procedure.

Exceptions to these settings will be noted as they occur.

After completing a adjustment, return the controls to the following settings.

NAME OF KNOBS	POSITION
INTENSITY	3 o'clock
FOCUS	Optimum position
CH1, CH2 POSITION	Mechanical center
◀▶ H. POSITION/PULL $\times 10$ MAG	Mechanical center, push
VARIABLE	CAL
(SWEEP TIME/DIV, VOLTS/DIV)	
AC-GND-DC (CH1 and CH2)	DC (GND at no signal)
MODE	CH1
CH2 POLARITY	NORM
COUPLING	AC
SOURCE	V.MODE
TRIG. LEVEL	Mechanical center, push
TRIG. MODE	AUTO
VOLTS/DIV	10 mV/DIV
SWEEP TIME/DIV	0.2 ms/DIV

ADJUSTMENT

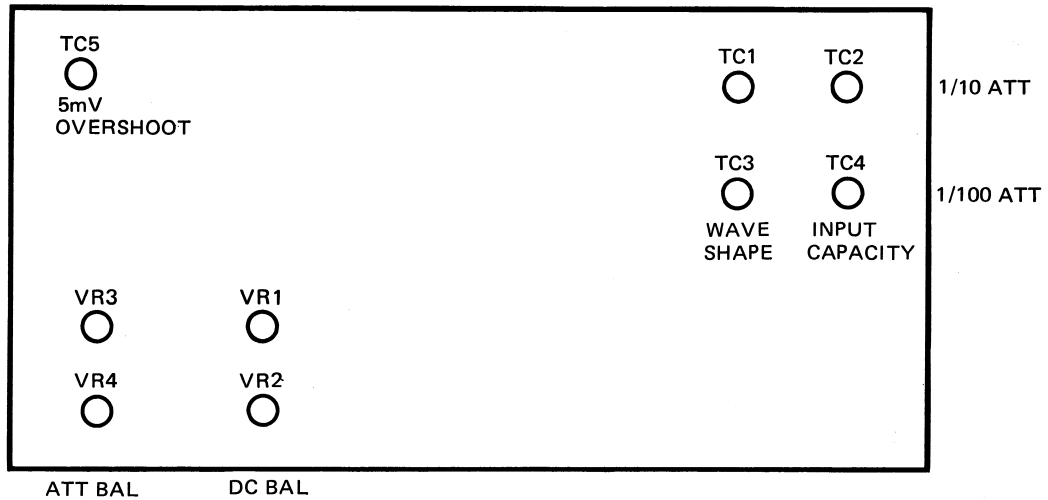
Item	Control setting	Test equ.	Adjustment control				P.C.B	Procedure
			1022	1012	1020	1010		
POWER SUPPLY SECTION ADJ.								
ASTIG, FOCUS	TRIG MODE; X-Y	—	ASTIG, FOCUS					For the sharpest and roundest spot.
INTENSITY	AC-GND-DC; GND TRIG MODE; X-Y	—	VR1				X74	Spot disappears in 9 to 10 o'clock position.
TRACE ROTATION	AC-GND-DC; GND	—	TRACE ROTATION VR					Trace is in parallel with horizontal graduation line.
CRT CENTER		DL-706	VR4				X73	Short the short terminal (P2). Trace should be in the CRT center.
58 V ADJ.		DL-706	VR3	—	VR3	—	X73	Short the short terminal (P2). The voltage of +Y (–Y) should be 58 V±0.5 V.
63 V ADJ.		DL-706	—	VR3	—	VR3	X73	Short the short terminal (P2). The voltage of +Y (–Y) should be 63 V±0.3 V.
VERTICAL AMPLIFIER SECTION ADJ.								
CH1 DC BAL	VOLTS/DIV; 10 mV AC-GND-DC; GND		VR2	VR2	VR2	VR2	X75	Trace does not move vertically when rotating CH1 variable control.
			—	VR1	—	VR1	X75	
CH2 DC BAL	VOLTS/DIV; 10 mV AC-GND-DC; GND		VR2	VR2	—	—	X75	Trace does not move vertically when rotating CH2 variable control.
			—	VR1	—	—	X75	
CH1 ATT BAL	VOLTS/DIV; 1 mV AC-GND-DC; GND		VR3	VR3	VR3	VR3	X75	Trace does not move vertically when rotating CH1 variable control.
			VR4	VR4	VR4	VR4	X75	
CH2 ATT BAL	VOLTS/DIV; 1 mV AC-GND-DC; GND		VR3	VR3	—	—	X75	Trace does not move vertically when rotating CH2 variable control.
			VR4	VR4	—	—	X75	
CH2 INVERT	MODE; CH2 AC-GND-DC; GND		VR104	VR104	—	—	X73	Trace should be overlapped in the center of the graduation.
CH2 GAIN	MODE; CH2 VOLTS/DIV; 10 mV		VR5	VR5	VR5 (CH1 GAIN)	VR5 (CH1 GAIN)	X73	When applying a 1 kHz, 50 mVp-p square wave signal, vertical amplitude should be 5 div.
CH1 GAIN	MODE; CH1 VOLTS/DIV; 10 mV		VR103	VR103	—	—	X73	When applying a 1 kHz, 50 mVp-p square wave signal, vertical amplitude should be 5 div.
CH1 WAVESHAPE		PG-506	TC1	TC1	TC1	TC1	X75	Same as 10 mV range, a best flat top waveform should be obtained. TC1.....0.1 V TC3.....1 V
			TC3	TC3	TC3	TC3	X75	
CH2 WAVESHAPE		PG-506	TC1	TC1	—	—	X75	Same as 10 mV range, a best flat top waveform should be obtained. TC1.....0.1 V TC3.....1 V
			TC3	TC3	—	—	X75	
CH2 INPUT CAPACITY		4343B	TC2	TC2	—	—	X75	Input capacity (CS-1022, 1020) should be 33pF ±3pF. (for CS-1012, 1010, 36pF ±3pF.) TC2.....0.1 V TC4.....1 V
			TC4	TC4	—	—	X75	
CH1 INPUT CAPACITY		4343B	TC2	TC2	TC2	TC2	X75	Input capacity (CS-1022, 1020) should be 33pF ±3pF. (for CS-1012, 1010, 36pF ±pF.) TC2.....0.1 V TC4.....1 V
			TC4	TC4	TC4	TC4	X75	

ADJUSTMENT

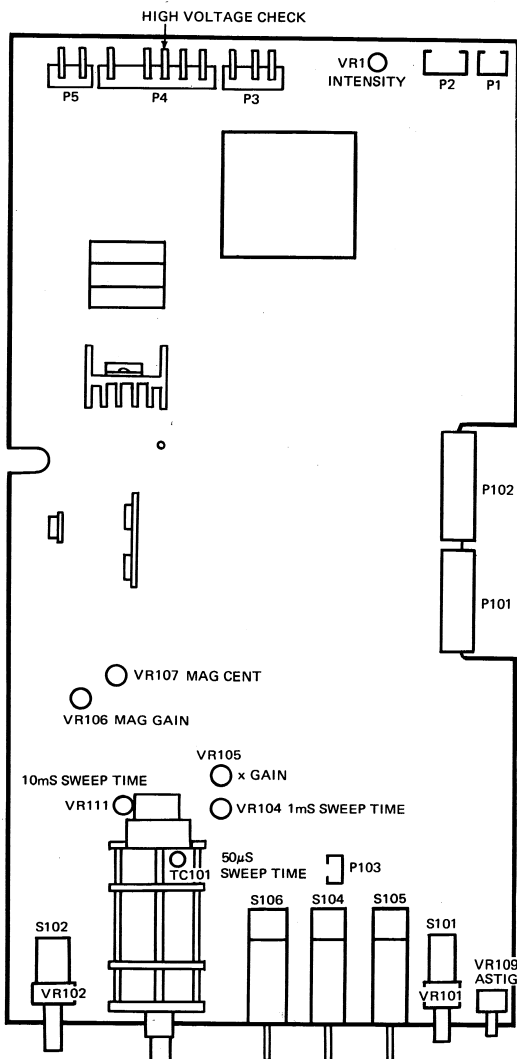
Item	Control setting	Test equ.	Adjustment control				P.C.B	Procedure
			1022	1012	1020	1010		
CH1 OVERSHOOT	SWEEP TIME/DIV; 2 μ s PULL $\times$ 10MAG; PULL VOLTS/DIV; 10 mV	PG-506	TC101	TC101	TC101	TC101	X73	When applying a 1 kHz, square wave signal, vertical amplitude should be 6 div. Set TC101 at mechanical center and with VR6, for the sharpest waveform. TC1...mid range flat top waveform TC2...high range flat top waveform Set VOLTS/DIV to 5 mV for 6 div $\pm$ 3% vertical amplitude waveform. Overshoot should be $\pm$ 3%. TC5...best flat top waveform.
			VR6	VR6	VR6	VR6	X73	
			TC1	TC1	TC1	TC1	X73	
			TC2	TC2	TC2	TC2	X73	
			TC5	TC5	TC5	TC5	X75	
CH2 OVERSHOOT	SWEEP TIME/DIV; 2 μ s	PG-506	TC102	TC102	—	—	X73	When applying a 1 kHz square wave signal for 6 div vertical amplitude, overshoot should be $\pm$ 3%.
HORIZONTAL HIGH VOLTAGE SECTION ADJ.								
1 ms SWEEP TIME	SWEEP TIME/DIV; 1 ms	TG-501	VR104	VR104	VR104	VR104	X74	Pulse should be on each division on the graduation line.
MAG GAIN	SWEEP TIME/DIV; 1 ms PULL $\times$ 10MAG; PULL	TG501	VR106	VR106	VR106	VR106	X74	Interval of pulses should be 10 div when applying a 1 ms time marker signal.
MAG CENTER	SWEEP TIME/DIV; 1 ms PULL $\times$ 10MAG; PUSH	TG-501	VR107	VR107	VR107	VR107	X74	The center of pulse should be center of the graduation scale when applying a 5 ms marker signal. H.POSITION...mechanical center.
10 ms SWEEP TIME	SWEEP TIME/DIV; 10 ms	TG-501	VR111	VR111	VR111	VR111	X74	11th pulse should correspond to the right end of the graduation line.
20 μ s SWEEP TIME	SWEEP TIME/DIV; 20 μ s	TG-501	TC101	TC101	TC101	TC101	X74	11th pulse should correspond to the right end of the graduation line.
X POSITION	TRIG MODE; X-Y $\rightarrow$ AUTO AC-GND-DC; GND		VR102	VR102	—	—	X73	(1) Adjust the trace for center graduation line. (2) Spot should be the center of the screen.
X GAIN	TRIG MODE; X-Y VOLTS/DIV; 10 mV (CH2)	PG-506	VR105	VR105	VR105	VR105	X74	When applying a 1 kHz, 50 mV square wave signal, horizontal amplitude should be 5 div.

ADJUSTMENT

VERTICAL ATTENUATOR UNIT (X75-1140)



HORIZONTAL & HIGH VOLTAGE UNIT (X74-1340)



VERTICAL AMPLIFIER & POWER UNIT (X73-1490)

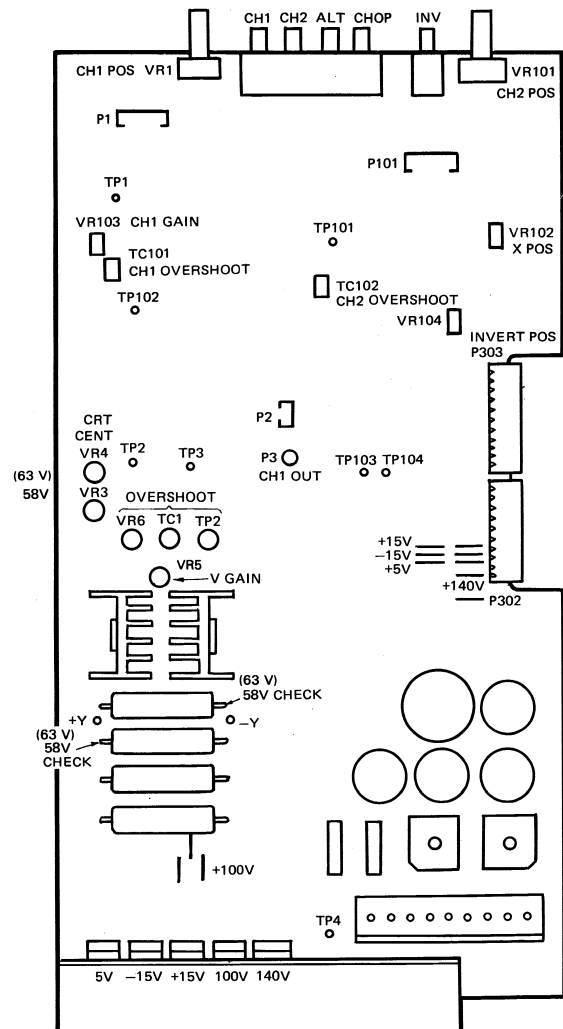
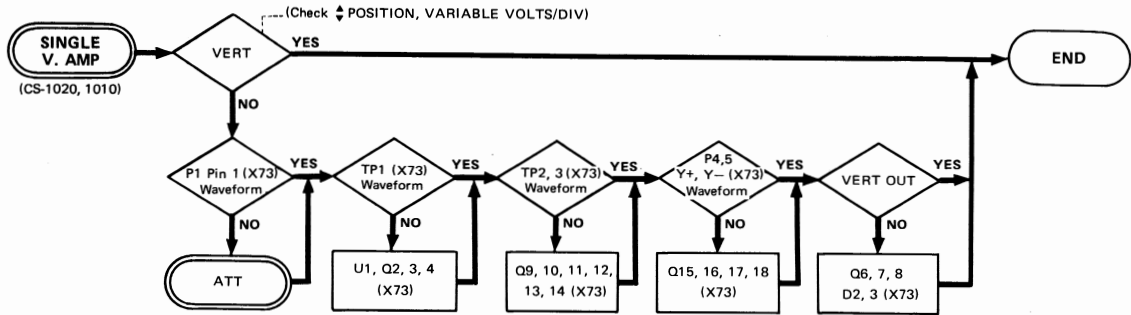
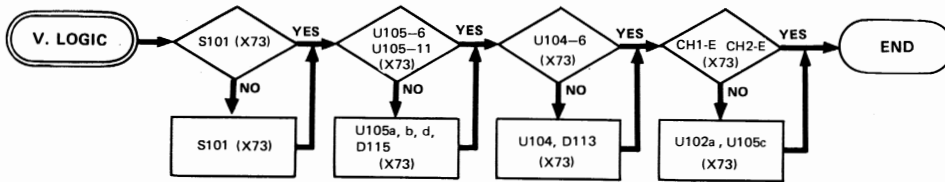
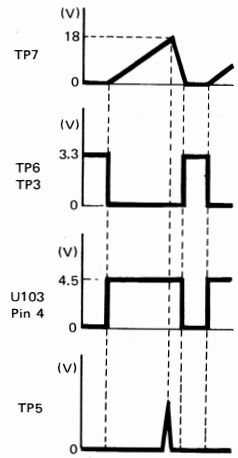
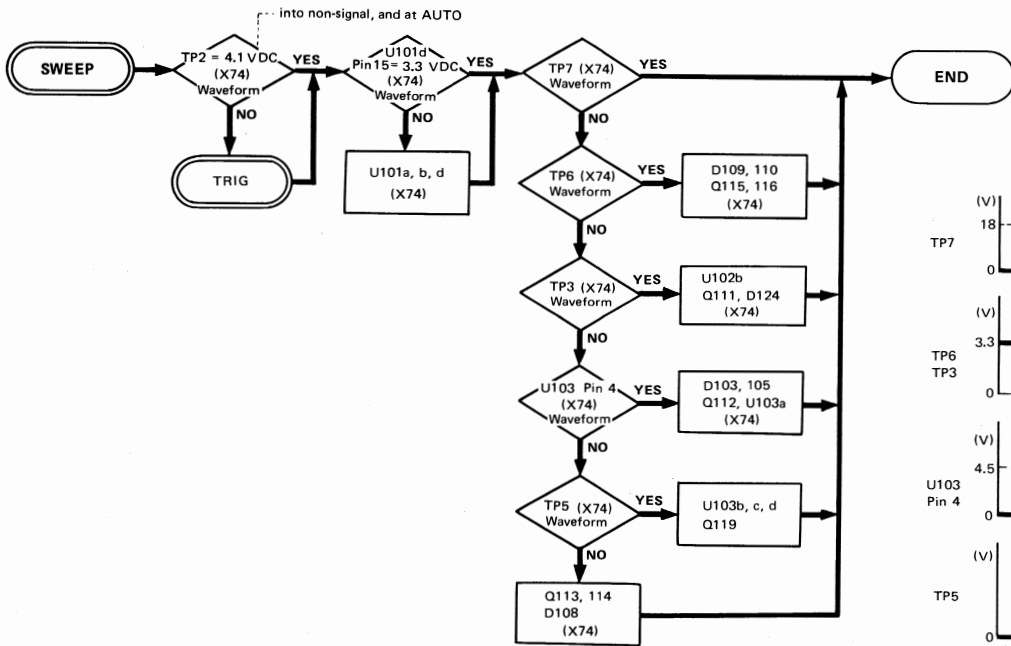


Fig. 7 Location of adjustment control



Note:
Waveforms of P1, Pin 1, TP1, TP2 and TP3,
are same as CH1 V. AMP.



Note: Check the signal refer to table right.

TEST POINT	P303 (X73)			U105 (X74)	
	⑩ CH1	⑪ CH2	⑨ ALT Chop	Pin.6	Pin.11
CH1	L	H	H	L	L
CH2	H	L	H	L	H
ADD	L	L	H	L	L
ALT	H	H	L	L	H
CHOP	H	H	H	H	H
X-Y	-	-	-	L	L

PARTS LIST

MAIN CHASSIS

CS-1022 Y70-1400-21

REF.NO	PARTS NO	NAME & DESCRIPTION
1	A01-0897-12	CASE (TOP)
2	A01-0898-02	CASE (BOTTOM)
3	A10-1435-02	CHASSIS
4	A20-2761-02	PANEL
5	A21-1026-12	DECORATIVE PANEL
6	A22-0826-02	SUB PANEL
7	A22-0827-13	SUB PANEL
8	A23-1642-02	REAR PANEL
9	A33-0502-05	REFLECTOR (FOR LAMP ASS'Y)
10	A33-0503-05	REFLECTOR (FOR LAMP ASS'Y)
11	B07-0712-13	ESCUTCHEON FOR FILTER
12	B19-0726-04	FILTER
13	B30-0903-15	LED LAMP (RED)
14	B30-0940-05	LAMP ASS'Y
15	B30-0941-05	LAMP
16	B39-0407-04	SPACER
17	B40-2765-04	NAME PLATE (SERIAL NO)
18	B41-0710-04	CAUTION LABEL (HIGH VOLTAGE)
19	B41-0747-13	CAUTION LABEL
20	B50-2998-00	INSTRUCTION MANUAL
21	E04-0251-05	BNC RECEPTACLE
22	E21-0657-04	TERMINAL (GND)
23	E21-0660-04	TERMINAL (CAL)
24	E23-0043-04	EARTH LUG
25	E23-0513-05	EARTH LUG
26	E23-0524-04	EARTH LUG
27	E23-0525-14	EARTH PLATE
28	E30-0545-05	AC POWER CORD
29	E30-1851-05	POWER CORD ASS'Y (JIS)
30	E31-2371-05	LEAD WIRE WITH CONNECTOR
31	E31-2372-05	LEAD WIRE WITH CONNECTOR
32	E31-2373-15	LEAD WIRE WITH CONNECTOR
33	F05-5013-05	FUSE 0.5A
34	F05-8015-05	FUSE 0.8A
35	F11-0981-03	SHIELD CASE FOR CRT
36	F20-0622-05	INSULATOR
37	G02-0607-04	SPRING FOR CRT
38	G13-0716-04	CUSHION
39	G16-0602-04	REFLECTOR SHEET(L)
40	G16-0603-04	REFLECTOR SHEET(R)
41	G16-0607-04	REFLECTOR SHEET
42	H01-2986-04	CARTON BOX
43	H10-2815-02	FOAMED STYRENE PAD
44	H10-2816-02	FOAMED STYRENE PAD
45	H20-1719-04	VINYL COVER
46	H25-0029-04	BAG
47	J02-0089-05	LEG
48	J02-0510-14	LEG
49	J10-0100-12	BEZEL
50	J13-0033-15	FUSE HOLDER
51	J19-1313-05	LEAD HOLDER
52	J19-1633-03	HOLDER FOR CRT
53	J19-1634-04	HOLDER FOR LEAD
54	J19-1635-04	HOLDER FOR LED
55	J21-2573-04	HOLDER FOR LEG
56	J21-2970-13	BRACKET FOR CRT
57	J21-2972-04	PLATE FOR POWER CORD
58	J25-3000-05	P.C.BOARD (FOR LAMP ASS'Y)
59	J31-0603-04	COLLAR
60	J42-0083-05	BUSHING
61	J59-0403-05	NYLON RIVET
62	J61-0401-05	WIRE BAND
63	J61-0515-05	SUPPORT (I TYPE)
64	J61-0516-05	SUPPORT (T TYPE)
65	J61-0517-05	STADOFF CLIP
66	K01-0518-05	HANDLE
67	K21-0851-03	KNOB
68	K21-0853-03	KNOB
69	K21-0854-03	KNOB
70	K21-0855-14	KNOB
71	K21-0856-03	KNOB
72	K27-0526-04	KNOB FOR LEVER
73	K27-0528-04	KNOB FOR PUSH
74	L01-9344-15	POWER TRANSFORMER
75	L39-0518-05	ROTATOR COIL
76	N08-0611-04	DRESSED SCREW
77	N09-0715-04	SCREW, PAN HD M 4X31
78	N09-0716-05	SCREW
79	N09-0717-05	SCREW, TRUSS HD M 3X12
80	N09-0720-05	SCREW, SEMS PAN HD
81	N10-2070-46	NUT, HEX
82	N15-1030-41	WASHER, FLAT FOR M3
83	N15-1040-41	WASHER
84	N19-0191-05	WASHER NONMETAL
85	N30-3004-46	SCREW, PAN HD M 3X4
86	N30-3006-46	SCREW, PAN HD M 3X6
87	N33-4012-41	SCREW M 4X12
88	N88-3006-46	SCREW, FLAT HD TAP TITE
89	N89-3006-41	SCREW, BINDING TAP TITE
90	R03-3502-15	V.R. 10K B
91	R05-3504-05	V.R. 10K B

REF.NO	PARTS NO	NAME & DESCRIPTION
55	R05-3505-05	V.R. 20K B
56	R05-8001-05	V.R. 3M B
57	W01-0503-04	CORD WRAP
58	X73-1490-00	VERTICAL POWER SUPPLY UNIT
59	X74-1340-00	HORIZONTAL UNIT
60	X75-1140-00	VERTICAL ATTENUATOR UNIT
61	X77-1260-00	CONNECTION UNIT
62	X81-1250-00	C.R.T SOCKET UNIT
63	Y87-1840-00	PROBE PC-20
Q001	150FTM31	CRT
	2SD613(E)	TR. SI, NPN
R100	RD14BB2E331J	RES. CARBON 330 5% 1/4W

CS-1020 Y70-1410-21

REF.NO	PARTS NO	NAME & DESCRIPTION
	A01-0897-12	CASE (TOP)
	A01-0898-02	CASE (BOTTOM)
	A10-1435-02	CHASSIS
	A20-2761-02	PANEL
	A21-1027-12	DECORATIVE PANEL
	A22-0826-02	SUB PANEL
	A22-0827-13	SUB PANEL
	A23-1642-02	REAR PANEL
	A33-0502-05	REFLECTOR (FOR LAMP ASS'Y)
	A33-0503-05	REFLECTOR (FOR LAMP ASS'Y)
	B07-0712-13	ESCUTCHEON FOR FILTER
	B19-0726-04	FILTER
	B30-0903-15	LED LAMP (RED)
	B30-0940-05	LAMP ASS'Y
	B30-0941-05	LAMP
	B39-0407-04	SPACER
	B40-2765-04	NAME PLATE (SERIAL NO)
	B41-0710-04	CAUTION LABEL (HIGH VOLTAGE)
	B41-0748-13	CAUTION LABEL
	B50-2998-00	INSTRUCTION MANUAL
	E04-0251-05	BNC RECEPTACLE
	E21-0657-04	TERMINAL (GND)
	E21-0660-04	TERMINAL (CAL)
	E23-0043-04	EARTH LUG
	E23-0513-05	EARTH LUG
	E23-0524-04	EARTH LUG
	E23-0525-14	EARTH PLATE
	E30-0545-05	AC POWER CORD
	E30-1851-05	POWER CORD ASS'Y (JIS)
	E31-2371-05	LEAD WIRE WITH CONNECTOR
	E31-2372-05	LEAD WIRE WITH CONNECTOR
	E31-2373-15	LEAD WIRE WITH CONNECTOR
	F05-5013-05	FUSE 0.5A
	F05-8015-05	FUSE 0.8A
	F11-0981-03	SHIELD CASE FOR CRT
	F20-0622-05	INSULATOR
	G02-0607-04	SPRING FOR CRT
	G13-0716-04	CUSHION
	G16-0602-04	REFLECTOR SHEET(L)
	G16-0603-04	REFLECTOR SHEET(R)
	G16-0607-04	REFLECTOR SHEET
	H01-2987-04	CARTON BOX
	H10-2815-02	FOAMED STYRENE PAD
	H10-2816-02	FOAMED STYRENE PAD
	H20-1719-04	VINYL COVER
	H25-0029-04	BAG
	J02-0089-05	LEG
	J02-0510-14	LEG
	J10-0100-12	BEZEL
	J13-0033-15	FUSE HOLDER
	J19-1313-05	LEAD HOLDER
	J19-1633-03	HOLDER FOR CRT
	J19-1634-04	HOLDER FOR LEAD
	J19-1635-04	HOLDER FOR LED
	J21-2573-04	HOLDER FOR LEG
	J21-2970-13	BRACKET FOR CRT
	J21-2972-04	PLATE FOR POWER CORD
	J25-3000-05	P.C.BOARD (FOR LAMP ASS'Y)
	J31-0603-04	COLLAR
	J42-0083-05	BUSHING
	J59-0403-05	NYLON RIVET
	J61-0401-05	WIRE BAND
	J61-0515-05	SUPPORT (I TYPE)
	J61-0516-05	SUPPORT (T TYPE)
	J61-0517-05	STADOFF CLIP
	K01-0518-05	HANDLE
	K21-0851-03	KNOB
	K21-0853-03	KNOB
	K21-0854-03	KNOB
	K21-0855-14	KNOB
	K21-0856-03	KNOB
	K27-0526-04	KNOB FOR LEVER
	L01-9344-15	POWER TRANSFORMER
	L39-0518-05	ROTATOR COIL
	N08-0611-04	DRESSED SCREW

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
	N09-0715-04	SCREW, PAN HD M 4X31
	N09-0716-05	SCREW
	N09-0717-05	SCREW, TRUSS HD M 3X12
	N09-0720-05	SCREW, SEMS PAN HD
	N10-2070-46	NUT, HEX
	N15-1030-41	WASHER, FLAT FOR M3
	N15-1040-41	WASHER
	N19-0191-05	WASHER NONMETAL
	N30-3004-46	SCREW, PAN HD M 3X4
	N30-3006-46	SCREW, PAN HD M 3X6
	N33-4012-41	SCREW M 4X12
	N88-3006-46	SCREW, FLAT HD TAP TITE
	N89-3006-41	SCREW, BINDING TAP TITE
	R03-3502-15	V.R. 10K B
	R05-3504-05	V.R. 10K B
	R05-3505-05	V.R. 20K B
	R05-8001-05	V.R. 3M B
	W01-0503-04	CORD WRAP
	X73-1490-01	VERTICAL,POWER SUPPLY UNIT
	X74-1340-01	HORIZONTAL UNIT
	X75-1140-01	VERTICAL ATTENUATOR UNIT
	X77-1260-01	CONNECTION UNIT
	X81-1250-00	C.R.T SOCKET UNIT
	Y87-1840-00	PROBE PC-20
	150FTM31	CRT
Q001	2SD613(E)	TR. SI, NPN
R100	RD14BB2E331J	RES. CARBON 330 5% 1/4W

CS-1012 Y70-1420-21

REF.NO	PARTS NO	NAME & DESCRIPTION
	A01-0897-12	CASE (TOP)
	A01-0898-02	CASE (BOTTOM)
	A10-1435-02	CHASSIS
	A20-2761-02	PANEL
	A21-1028-12	DECORATIVE PANEL
	A22-0826-02	SUB PANEL
	A22-0827-13	SUB PANEL
	A23-1642-02	REAR PANEL
	A33-0502-05	REFLECTOR (FOR LAMP ASS'Y)
	A33-0503-05	REFLECTOR (FOR LAMP ASS'Y)
	B07-0712-13	ESCUTCHEON FOR FILTER
	B19-0726-04	FILTER
	B30-0903-15	LED LAMP (RED)
	B30-0940-05	LAMP ASS'Y
	B30-0941-05	LAMP
	B39-0407-04	SPACER
	B40-2765-04	NAME PLATE (SERIAL NO)
	B41-0749-13	CAUTION LABEL
	B50-2998-00	INSTRUCTION MANUAL
	E04-0251-05	BNC RECEPTACLE
	E21-0657-04	TERMINAL (GND)
	E21-0660-04	TERMINAL (CAL)
	E23-0043-04	EARTH LUG
	E23-0513-05	EARTH LUG
	E23-0524-04	EARTH LUG
	E23-0525-14	EARTH PLATE
	E30-0545-05	AC POWER CORD
	E30-1851-05	POWER CORD ASS'Y (JIS)
	E31-2371-05	LEAD WIRE WITH CONNECTOR
	E31-2372-05	LEAD WIRE WITH CONNECTOR
	E31-2373-15	LEAD WIRE WITH CONNECTOR
	F05-5013-05	FUSE 0.5A
	F05-8015-05	FUSE 0.8A
	F10-1565-04	SHIELDING PLATE
	F11-0982-03	SHIELD CASE
	F20-0622-05	INSULATOR
	G02-0607-04	SPRING FOR CRT
	G13-0716-04	CUSHION
	G16-0602-04	REFLECTOR SHEET(L)
	G16-0603-04	REFLECTOR SHEET(R)
	G16-0607-04	REFLECTOR SHEET
	H01-2988-04	CARTON BOX
	H10-2815-02	FOAMED STYRENE PAD
	H10-2816-02	FOAMED STYRENE PAD
	H20-1719-04	VINYL COVER
	H25-0029-04	BAG
	J02-0089-05	LEG
	J02-0510-14	LEG
	J10-0100-12	BEZEL
	J13-0033-15	FUSE HOLDER
	J19-1313-05	LEAD HOLDER
	J19-1633-03	HOLDER FOR CRT
	J19-1634-04	HOLDER FOR LEAD
	J19-1635-04	HOLDER FOR LED
	J21-2573-04	HOLDER FOR LEG
	J21-2970-13	BRACKET FOR CRT
	J21-2972-04	PLATE FOR POWER CORD
	J25-3000-05	P.C.BOARD (FOR LAMP ASS'Y)
	J31-0603-04	COLLAR

REF.NO	PARTS NO	NAME & DESCRIPTION
	J42-0083-05	BUSHING
	J59-0403-05	NYLON RIVET
	J61-0401-05	WIRE BAND
	J61-0515-05	SUPPORT (I TYPE)
	J61-0516-05	SUPPORT (T TYPE)
	J61-0517-05	STADOFF CLIP
	K01-0518-05	HANDLE
	K21-0851-03	KNOB
	K21-0853-03	KNOB
	K21-0854-03	KNOB
	K21-0855-14	KNOB
	K21-0856-03	KNOB
	K27-0526-04	KNOB FOR LEVER
	K27-0528-04	KNOB FOR PUSH
	L01-9344-15	POWER TRANSFORMER
	L39-0518-05	ROTATOR COIL
	N08-0611-04	DRESSED SCREW
	N09-0715-04	SCREW, PAN HD M 4X31
	N09-0716-05	SCREW
	N09-0717-05	SCREW, TRUSS HD M 3X12
	N09-0720-05	SCREW, SEMS PAN HD
	N10-2070-46	NUT, HEX
	N15-1030-41	WASHER, FLAT FOR M3
	N15-1040-41	WASHER
	N19-0191-05	WASHER NONMETAL
	N30-3004-46	SCREW, PAN HD M 3X4
	N30-3006-46	SCREW, PAN HD M 3X6
	N33-4012-41	SCREW M 4X12
	N88-3006-46	SCREW, FLAT HD TAP TITE
	N89-3006-41	SCREW, BINDING TAP TITE
	R03-3502-15	V.R. 10K B
	R05-3504-05	V.R. 10K B
	R05-3505-05	V.R. 20K B
	R05-8001-05	V.R. 3M B
	W01-0503-04	CORD WRAP
	X73-1490-02	VERTICAL,POWER SUPPLY UNIT
	X74-1340-02	HORIZONTAL UNIT
	X75-1140-02	VERTICAL ATTENUATOR UNIT
	X77-1260-02	CONNECTION UNIT
	X81-1250-01	C.R.T SOCKET UNIT
	Y87-1840-00	PROBE PC-20
	150GTM31	CRT
Q001	2SD613(E)	TR. SI, NPN
R100	RD14BB2E431J	RES. CARBON 430 5% 1/4W

CS-1010 Y70-1430-21

REF.NO	PARTS NO	NAME & DESCRIPTION
	A01-0897-12	CASE (TOP)
	A01-0898-02	CASE (BOTTOM)
	A10-1435-02	CHASSIS
	A20-2761-02	PANEL
	A21-1029-12	DECORATIVE PANEL
	A22-0826-02	SUB PANEL
	A22-0827-13	SUB PANEL
	A23-1642-02	REAR PANEL
	A33-0502-05	REFLECTOR (FOR LAMP ASS'Y)
	A33-0503-05	REFLECTOR (FOR LAMP ASS'Y)
	B07-0712-13	ESCUTCHEON FOR FILTER
	B19-0726-04	FILTER
	B30-0903-15	LED LAMP (RED)
	B30-0940-05	LAMP ASS'Y
	B30-0941-05	LAMP
	B39-0407-04	SPACER
	B40-2765-04	NAME PLATE (SERIAL NO)
	B41-0750-13	CAUTION LABEL
	B50-2998-00	INSTRUCTION MANUAL
	E04-0251-05	BNC RECEPTACLE
	E21-0657-04	TERMINAL (GND)
	E21-0660-04	TERMINAL (CAL)
	E23-0043-04	EARTH LUG
	E23-0513-05	EARTH LUG
	E23-0524-04	EARTH LUG
	E23-0525-14	EARTH PLATE
	E30-0545-05	AC POWER CORD
	E30-1851-05	POWER CORD ASS'Y (JIS)
	E31-2371-05	LEAD WIRE WITH CONNECTOR
	E31-2372-05	LEAD WIRE WITH CONNECTOR
	E31-2373-15	LEAD WIRE WITH CONNECTOR
	F05-5013-05	FUSE 0.5A
	F05-8015-05	FUSE 0.8A
	F10-1565-04	SHIELDING PLATE
	F11-0982-03	SHIELD CASE
	F20-0622-05	INSULATOR
	G02-0607-04	SPRING FOR CRT
	G13-0716-04	CUSHION
	G16-0602-04	REFLECTOR SHEET(L)
	G16-0603-04	REFLECTOR SHEET(R)
	G16-0607-04	REFLECTOR SHEET
	H01-2989-04	CARTON BOX

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
	H10-2815-02	FOAMED STYRENE PAD
	H10-2816-02	FOAMED STYRENE PAD
	H20-1719-04	VINYL COVER
	H25-0029-04	BAG
	J02-0089-05	LEG
	J02-0510-14	LEG
	J10-0100-12	BEZEL
	J13-0033-15	FUSE HOLDER
	J19-1313-05	LEAD HOLDER
	J19-1633-03	HOLDER FOR CRT
	J19-1634-04	HOLDER FOR LEAD
	J19-1635-04	HOLDER FOR LED
	J21-2573-04	HOLDER FOR LEG
	J21-2970-13	BRACKET FOR CRT
	J21-2972-04	PLATE FOR POWER CORD
	J25-3000-05	P.C.BOARD (FOR LAMP ASS'Y)
	J31-0603-04	COLLAR
	J42-0083-05	BUSHING
	J59-0403-05	NYLON RIVET
	J61-0401-05	WIRE BAND
	J61-0515-05	SUPPORT (I TYPE)
	J61-0516-05	SUPPORT (T TYPE)
	J61-0517-05	STADOFF CLIP
	K01-0518-05	HANDLE
	K21-0851-03	KNOB
	K21-0853-03	KNOB
	K21-0854-03	KNOB
	K21-0855-14	KNOB
	K21-0856-03	KNOB
	K27-0526-04	KNOB FOR LEVER
	L01-9344-15	POWER TRANSFORMER
	L39-0518-05	ROTATOR COIL
	N08-0611-04	DRESSED SCREW
	N09-0715-04	SCREW, PAN HD M 4X31
	N09-0716-05	SCREW
	N09-0717-05	SCREW, TRUSS HD M 3X12
	N09-0720-05	SCREW, SEMS PAN HD
	N10-2070-46	NUT, HEX
	N15-1030-41	WASHER, FLAT FOR M3
	N15-1040-41	WASHER
	N19-0191-05	WASHER NONMETAL
	N30-3004-46	SCREW, PAN HD M 3X4
	N30-3006-46	SCREW, PAN HD M 3X6
	N33-4012-41	SCREW M 4X12
	N88-3006-46	SCREW, FLAT HD TAP TITE
	N89-3006-41	SCREW, BINDING TAP TITE
	R03-3502-15	V.R. 10K B
	R05-3504-05	V.R. 10K B
	R05-3505-05	V.R. 20K B
	R05-8001-05	V.R. 3M B
	W01-0503-04	CORD WRAP
	X73-1490-03	VERTICAL POWER SUPPLY UNIT
	X74-1340-03	HORIZONTAL UNIT
	X75-1140-03	VERTICAL ATTENUATOR UNIT
	X77-1260-03	CONNECTION UNIT
	X81-1250-01	C.R.T SOCKET UNIT
	Y87-1840-00	PROBE PC-20
	150GTM31	CRT
Q001	2SD613(E)	TR. SI, NPN
R100	RD14BB2E431J	RES. CARBON 430 5% 1/4W

VERTICAL ATTENUATOR UNIT (X75-1140-00)

REF.NO	PARTS NO	NAME & DESCRIPTION
1	A22-0828-03	SUB PANEL
2	E04-0251-05	BNC RECEPTACLE
	E33-4038-00	WIRE ASSY
3	F10-1564-04	SHIELD PLATE
	F10-1566-04	SHIELD PLATE
	J25-2997-13	PCB (UNMOUNTED)
4	K21-0852-03	KNOB
5	K21-0855-14	KNOB
	N30-3006-46	SCREW, PAN HD M 3X6
	N89-3006-41	SCREW, BINDING TAP TITE
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C91-0501-05	CAP. METAL FILM 0.047 10% 630V
C002	CM93BD2A470J	CAP. MICA 47P 5% 100V
C003	CM93BD2A471J	CAP. MICA 470P 5% 100V
C004	C91-0502-05	CAP. METAL FILM 0.01 20% 630V
C005	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C006	CC45CH1H0R5C	CAP. CERAMIC 0.5P 0.25P 50V
C009	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V
C010	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C011	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C012	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C013	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C014	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C015	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C016	CE04W1E470M	CAP. ELECTRO 47 20% 25V

REF.NO	PARTS NO	NAME & DESCRIPTION
C017	CC45CH1H030C	CAP. CERAMIC 3P 0.25P 50V
C018	CC45CH1H010C	CAP. CERAMIC 1P 0.25P 50V
C019	CE04BW1H010M	CAP. ELECTRO 1 20% 50V
C020	CK45B1H152K	CAP. CERAMIC 1500P 10% 50V
C021	NO USE	
C022	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C023	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
D001	WZ-090	DIODE
D002	WZ-090	DIODE
J001	E31-2367-15	LEAD WIRE WITH CONNECTOR
Q001	2SK30A(D)	FET. N-CHANNEL
Q002	2SA1005(K)	TR. SI, PNP
Q003	2SA1005(K)	TR. SI, PNP
Q004	2SC2786(K)	TR. SI, NPN
Q005	2SC2786(K)	TR. SI, NPN
R	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R001	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R002	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
R003	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R004	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R005	RN14BK2E9003F	RES. METAL FILM 900K 1% 1/4W
R006	RN14BK2E1113F	RES. METAL FILM 111K 1% 1/4W
R007	RD14BB2E820J	RES. CARBON 82 5% 1/4W
R008	RN14BK2E9903F	RES. METAL FILM 990K 1% 1/4W
R009	RN14BK2E1012F	RES. METAL FILM 10.1K 1% 1/4W
R010	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R011	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R012	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R013	RN14BK2E3900F	RES. METAL FILM 390 1% 1/4W
R014	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R015	RN14BK2E3900F	RES. METAL FILM 390 1% 1/4W
R016	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R017	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
R018	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R019	RD14BB2E271J	RES. CARBON 270 5% 1/4W
R020	NO USE	
R021	RD14BB2E274J	RES. CARBON 270K 5% 1/4W
R022	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R023	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R024	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R025	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R026	RD14BB2E753J	RES. CARBON 75K 5% 1/4W
R027	RD14BB2E754J	RES. CARBON 750K 5% 1/4W
R028	RD14BB2E122J	RES. CARBON 1.2K 5% 1/4W
R029	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R030	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R031	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R032	RD14BB2C561J	RES. CARBON 560 5% 1/6W
R033	RN14BK2E9100F	RES. METAL FILM 910 1% 1/4W
R034	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
R035	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R036	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R037	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R038	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R039	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R040	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R041	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R042	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R043	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R044	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R045	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R046	RD14BB2E333J	RES. CARBON 33K 5% 1/4W
R047	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R048	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R049	RD14BB2C163J	RES. CARBON 16K 5% 1/6W
R050	RD14BB2C131J	RES. CARBON 130 5% 1/6W
R051	NO USE	
R052	RD14BB2C910J	RES. CARBON 91 5% 1/6W
R053	RD14BB2C111J	RES. CARBON 110 5% 1/6W
S001	S32-4007-05	SLIDE SWITCH
S002	S02-3501-15	ROTARY SWITCH
TC001	C05-0427-05	CAP. TRIMMER 10P
TC002	C05-0428-05	CAP. TRIMMER 20P
TC003	C05-0427-05	CAP. TRIMMER 10P
TC004	C05-0428-05	CAP. TRIMMER 20P
TC005	C05-0427-05	CAP. TRIMMER 10P
U001	M47F(C)	FET, DUAL SI, N-CHANNEL
U002	2SA884	TR. SI, PNP
U003	M47F(B)	FET
VR002	R12-3502-05	RES. SEMI FIXED 33K B
VR003	R12-3502-05	RES. SEMI FIXED 33K B
VR004	R12-3502-05	RES. SEMI FIXED 33K B

PARTS LIST

VERTICAL ATTENUATOR UNIT

(X75-1140-01)

REF.NO	PARTS NO	NAME & DESCRIPTION
	A22-0828-03	SUB PANEL
	E04-0251-05	BNC RECEPTACLE
	E33-4038-00	WIRE ASSY
	F10-1564-04	SHIELD PLATE
	F10-1566-04	SHIELD PLATE
	J25-2997-13	PCB (UNMOUNTED)
	K21-0852-03	KNOB
	K21-0855-14	KNOB
	N30-3006-46	SCREW, PAN HD M 3X6
	N89-3006-41	SCREW, BINDING TAP TITE
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C91-0501-05	CAP. METAL FILM 0.047 10% 630V
C002	CM93BD2A470J	CAP. MICA 47P 5% 100V
C003	CM93BD2A471J	CAP. MICA 470P 5% 100V
C004	C91-0502-05	CAP. METAL FILM 0.01 20% 630V
C005	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C006	CC45CH1H0R5C	CAP. CERAMIC 0.5P 0.25P 50V
C009	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V
C010	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C011	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C012	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C013	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C014	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C015	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C016	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C017	CC45CH1H030C	CAP. CERAMIC 3P 0.25P 50V
C018	CC45CH1H010C	CAP. CERAMIC 1P 0.25P 50V
C019	CE04BW1H010M	CAP. ELECTRO 1 20% 50V
C020	CK45B1H152K	CAP. CERAMIC 1500P 10% 50V
C021	NO USE	
C022	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C023	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
D001	WZ-090	DIODE
D002	WZ-090	DIODE
J001	E31-2367-15	LEAD WIRE WITH CONNECTOR
Q001	2SK30A(D)	FET, N-CHANNEL
Q002	2SA1005(K)	TR. SI, PNP
Q003	2SA1005(K)	TR. SI, PNP
Q004	2SC2786(K)	TR. SI, NPN
Q005	2SC2786(K)	TR. SI, NPN
R001	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R002	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
R003	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R004	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R005	RN14BK2E9003F	RES. METAL FILM 900K 1% 1/4W
R006	RN14BK2E1113F	RES. METAL FILM 111K 1% 1/4W
R007	RD14BB2E820J	RES. CARBON 82 5% 1/4W
R008	RN14BK2E9903F	RES. METAL FILM 990K 1% 1/4W
R009	RN14BK2E1012F	RES. METAL FILM 10.1K 1% 1/4W
R010	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R011	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R012	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R013	RN14BK2E3900F	RES. METAL FILM 390 1% 1/4W
R014	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R015	RN14BK2E3900F	RES. METAL FILM 390 1% 1/4W
R016	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R017	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
R018	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R019	RD14BB2E271J	RES. CARBON 270 5% 1/4W
R020	NO USE	
R021	RD14BB2E274J	RES. CARBON 270K 5% 1/4W
R022	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R023	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R024	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R025	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R026	RD14BB2E753J	RES. CARBON 75K 5% 1/4W
R027	RD14BB2E754J	RES. CARBON 750K 5% 1/4W
R028	RD14BB2E122J	RES. CARBON 1.2K 5% 1/4W
R029	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R030	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R031	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R032	RD14BB2C561J	RES. CARBON 560 5% 1/6W
R033	RN14BK2E9100F	RES. METAL FILM 910 1% 1/4W
R034	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
R035	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R036	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R037	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R038	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R039	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R040	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R041	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R042	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R043	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R044	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R045	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R046	RD14BB2E333J	RES. CARBON 33K 5% 1/4W
R047	RD14BB2E473J	RES. CARBON 47K 5% 1/4W

REF.NO	PARTS NO	NAME & DESCRIPTION
R048	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R049	RD14BB2C163J	RES. CARBON 16K 5% 1/6W
R050	RD14BB2C131J	RES. CARBON 130 5% 1/6W
R051	NO USE	
R052	RD14BB2C910J	RES. CARBON 91 5% 1/6W
R053	RD14BB2C111J	RES. CARBON 110 5% 1/6W
S001	S32-4007-05	SLIDE SWITCH
S002	S02-3501-15	ROTARY SWITCH
TC001	C05-0427-05	CAP. TRIMMER 10P
TC002	C05-0428-05	CAP. TRIMMER 20P
TC003	C05-0427-05	CAP. TRIMMER 10P
TC004	C05-0428-05	CAP. TRIMMER 20P
TC005	C05-0427-05	CAP. TRIMMER 10P
U001	M47F(C)	FET, DUAL SI, N-CHANNEL
U002	2SA884	TR. SI, PNP
U003	M47F(B)	FET
VR002	R12-3502-05	RES. SEMI FIXED 33K B
VR003	R12-3502-05	RES. SEMI FIXED 33K B
VR004	R12-3502-05	RES. SEMI FIXED 33K B

VERTICAL ATTENUATOR UNIT

(X75-1140-02)

REF.NO	PARTS NO	NAME & DESCRIPTION
	A22-0828-03	SUB PANEL
	E04-0251-05	BNC RECEPTACLE
	F10-1564-04	SHIELD PLATE
	F10-1566-04	SHIELD PLATE
	J25-2997-13	PCB (UNMOUNTED)
	K21-0852-03	KNOB
	K21-0855-14	KNOB
	N30-3006-46	SCREW, PAN HD M 3X6
	N89-3006-41	SCREW, BINDING TAP TITE
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C91-0501-05	CAP. METAL FILM 0.047 10% 630V
C002	CM93BD2A470J	CAP. MICA 47P 5% 100V
C003	CM93BD2A471J	CAP. MICA 470P 5% 100V
C004	C91-0502-05	CAP. METAL FILM 0.01 20% 630V
C005	NO USE	
C006	CC45CH1H1R5C	CAP. CERAMIC 1.5P 0.25P 50V
C007	NO USE	
C008	CC45CH1H040C	CAP. CERAMIC 4P 0.25P 50V
C009	CC45CH1H680J	CAP. CERAMIC 68P 5% 50V
C010	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C011	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C012	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C013	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C014	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C015	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C016	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C017	CC45CH1H270J	CAP. CERAMIC 27P 5% 50V
C018	CC45CH1H020C	CAP. CERAMIC 2P 0.25P 50V
C024	CC45CH1H270J	CAP. CERAMIC 27P 5% 50V
D001	WZ-090	DIODE
D002	WZ-090	DIODE
J001	E31-2367-15	LEAD WIRE WITH CONNECTOR
Q001	2SK30A(D)	FET, N-CHANNEL
Q002	2SA1005(K)	TR. SI, PNP
Q003	2SA1005(K)	TR. SI, PNP
Q004	2SC2786(K)	TR. SI, NPN
R001	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R002	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
R003	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R004	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R005	RN14BK2E9003F	RES. METAL FILM 900K 1% 1/4W
R006	RN14BK2E1113F	RES. METAL FILM 111K 1% 1/4W
R007	RD14BB2E820J	RES. CARBON 82 5% 1/4W
R008	RN14BK2E9903F	RES. METAL FILM 990K 1% 1/4W
R009	RN14BK2E1012F	RES. METAL FILM 10.1K 1% 1/4W
R010	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R011	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R012	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R013	RN14BK2E27R0F	RES. METAL FILM 27.0 1% 1/4W
R014	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R015	RN14BK2E27R0F	RES. METAL FILM 27.0 1% 1/4W
R016	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R017	NO USE	
R018	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R019	RD14BB2E121J	RES. CARBON 120 5% 1/4W
R020	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R021	RD14BB2E474J	RES. CARBON 470K 5% 1/4W
R022	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R023	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R024	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R025	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
R026	RD14BB2E753J	RES. CARBON 75K 5% 1/4W
R027	RD14BB2E754J	RES. CARBON 750K 5% 1/4W
R028	RD14BB2E122J	RES. CARBON 1.2K 5% 1/4W
R029	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R030	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R031	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R032	NO USE	
R033	RN14BK2E9100F	RES. METAL FILM 910 1% 1/4W
R034	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
R035	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R036	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R037	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R038	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R039	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R040	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R041	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R042	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R043	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R044	RD14BB2E161J	RES. CARBON 160 5% 1/4W
R045	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R046	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R051	RD14BB2E361J	RES. CARBON 360 5% 1/4W
R052	RD14BB2C910J	RES. CARBON 91 5% 1/6W
R053	RD14BB2C111J	RES. CARBON 110 5% 1/6W
S001	S32-4007-05	SLIDE SWITCH
S002	S02-3501-15	ROTARY SWITCH
TC001	C05-0427-05	CAP. TRIMMER 10P
TC002	C05-0428-05	CAP. TRIMMER 20P
TC003	C05-0427-05	CAP. TRIMMER 10P
TC004	C05-0428-05	CAP. TRIMMER 20P
TC005	C05-0427-05	CAP. TRIMMER 10P
U001	M47F(C)	FET, DUAL SI, N-CHANNEL
U002	NO USE	
U003	M47F(B)	FET
VR001	R12-3502-05	RES. SEMI FIXED 33K B
VR002	R12-3502-05	RES. SEMI FIXED 33K B
VR003	R12-3502-05	RES. SEMI FIXED 33K B
VR004	R12-3502-05	RES. SEMI FIXED 33K B

VERTICAL ATTENUATOR UNIT (X75-1140-03)

REF.NO	PARTS NO	NAME & DESCRIPTION
	A22-0828-03	SUB PANEL
	E04-0251-05	BNC RECEPTACLE
	F10-1564-04	SHIELD PLATE
	F10-1566-04	SHIELD PLATE
	J25-2997-13	PCB (UNMOUNTED)
	K21-0852-03	KNOB
	K21-0855-14	KNOB
	N30-3006-46	SCREW, PAN HD M 3X6
	N89-3006-41	SCREW, BINDING TAP TITE
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C91-0501-05	CAP. METAL FILM 0.047 10% 630V
C002	CM93BD2A470J	CAP. MICA 47P 5% 100V
C003	CM93BD2A471J	CAP. MICA 470P 5% 100V
C004	C91-0502-05	CAP. METAL FILM 0.01 20% 630V
C005	NO USE	
C006	CC45CH1H1R5C	CAP. CERAMIC 1.5P 0.25P 50V
C007	NO USE	
C008	CC45CH1H040C	CAP. CERAMIC 4P 0.25P 50V
C009	CC45CH1H680J	CAP. CERAMIC 68P 5% 50V
C010	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C011	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C012	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C013	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C014	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C015	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C016	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C017	CC45CH1H270J	CAP. CERAMIC 27P 5% 50V
C018	CC45CH1H020C	CAP. CERAMIC 2P 0.25P 50V
C024	CC45CH1H270J	CAP. CERAMIC 27P 5% 50V
D001	WZ-090	DIODE
D002	WZ-090	DIODE
J001	E31-2367-15	LEAD WIRE WITH CONNECTOR
Q001	2SK30A(D)	FET, N-CHANNEL
Q002	2SA1005(K)	TR. SI, PNP
Q003	2SA1005(K)	TR. SI, PNP
Q004	2SC2786(K)	TR. SI, NPN
R001	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R002	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
R003	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R004	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R005	RN14BK2E9003F	RES. METAL FILM 900K 1% 1/4W

REF.NO	PARTS NO	NAME & DESCRIPTION
R006	RN14BK2E1113F	RES. METAL FILM 111K 1% 1/4W
R007	RD14BB2E820J	RES. CARBON 82 5% 1/4W
R008	RN14BK2E9903F	RES. METAL FILM 990K 1% 1/4W
R009	RN14BK2E1012F	RES. METAL FILM 10.1K 1% 1/4W
R010	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R011	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R012	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R013	RN14BK2E27R0F	RES. METAL FILM 27.0 1% 1/4W
R014	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R015	RN14BK2E27R0F	RES. METAL FILM 27.0 1% 1/4W
R016	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R017	NO USE	
R018	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R019	RD14BB2E121J	RES. CARBON 120 5% 1/4W
R020	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R021	RD14BB2E474J	RES. CARBON 470K 5% 1/4W
R022	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R023	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R024	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R025	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R026	RD14BB2E753J	RES. CARBON 75K 5% 1/4W
R027	RD14BB2E754J	RES. CARBON 750K 5% 1/4W
R028	RD14BB2E122J	RES. CARBON 1.2K 5% 1/4W
R029	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R030	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R031	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R032	NO USE	
R033	RN14BK2E9100F	RES. METAL FILM 910 1% 1/4W
R034	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
R035	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R036	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R037	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R038	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R039	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R040	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R041	RN14BK2E3000F	RES. METAL FILM 300 1% 1/4W
R042	RN14BK2E1800F	RES. METAL FILM 180 1% 1/4W
R043	RN14BK2E1200F	RES. METAL FILM 120 1% 1/4W
R044	RD14BB2E161J	RES. CARBON 160 5% 1/4W
R045	RD14BB2E560J	RES. CARBON 56 5% 1/4W
R046	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R051	RD14BB2E361J	RES. CARBON 360 5% 1/4W
R052	RD14BB2C910J	RES. CARBON 91 5% 1/6W
R053	RD14BB2C111J	RES. CARBON 110 5% 1/6W
S001	S32-4007-05	SLIDE SWITCH
S002	S02-3501-15	ROTARY SWITCH
TC001	C05-0427-05	CAP. TRIMMER 10P
TC002	C05-0428-05	CAP. TRIMMER 20P
TC003	C05-0427-05	CAP. TRIMMER 10P
TC004	C05-0428-05	CAP. TRIMMER 20P
TC005	C05-0427-05	CAP. TRIMMER 10P
U001	M47F(C)	FET, DUAL SI, N-CHANNEL
U002	NO USE	
U003	M47F(B)	FET
VR001	R12-3502-05	RES. SEMI FIXED 33K B
VR002	R12-3502-05	RES. SEMI FIXED 33K B
VR003	R12-3502-05	RES. SEMI FIXED 33K B
VR004	R12-3502-05	RES. SEMI FIXED 33K B

VERTICAL AMP & POWER UNIT (X73-1490-00)

REF.NO	PARTS NO	NAME & DESCRIPTION
	CC45CH1H050C	CAP. CERAMIC 5P 0.25P 50V
	E33-4031-00	WIRE ASSY
	F01-0835-05	HEAT SINK
	F01-0836-04	HEAT SINK
	J25-2999-03	PCB (UNMOUNTED)
	J61-0517-05	STADOFF CLIP
	N19-0191-05	WASHER NONMETAL
	N30-3008-46	SCREW, PAN HD M 3X8
	R92-0150-05	JUMPING RES. ZERO OHM
	212-2014-05	TUBE (PLASTIC)
	212-2014-05	TUBE (PLASTIC)
C002	CC45CH1H1R5C	CAP. CERAMIC 1.5P 0.25P 50V
C006	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V
C007	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C008	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C009	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C010	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C011	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C012	NO USE	
C013	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V
C014	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C015	NO USE	
C016	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C017	CE04BW1E220M	CAP. ELECTRO 22 20% 25V

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
C020	CC45CH1H1R5C	CAP. CERAMIC 1.5P 0.25P 50V	Q107	2SC2786(K)	TR. SI, NPN
C102	CC45CH1H010C	CAP. CERAMIC 1P 0.25P 50V	Q108	2SC2786(K)	TR. SI, NPN
C103	NO USE		Q109	2SC2786(K)	TR. SI, NPN
C104	CE04W1E470M	CAP. ELECTRO 47 20% 25V	Q110	2SC2786(K)	TR. SI, NPN
C105	CE04W1E470M	CAP. ELECTRO 47 20% 25V	Q111	2SC2786(K)	TR. SI, NPN
C106	CE04W1E470M	CAP. ELECTRO 47 20% 25V	Q112	2SC2786(K)	TR. SI, NPN
C107	CE04W1E470M	CAP. ELECTRO 47 20% 25V	Q113	2SA1175(F)	TR. SI, PNP
C108	NO USE		Q114	2SC2785(F)	TR. SI, NPN
C109	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V	Q115	2SC2786(K)	TR. SI, NPN
C110	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V	Q301	2SA1009(L,K)	TR. SI, PNP
C111	CE04BW1H010M	CAP. ELECTRO 1 20% 50V	Q302	2SA1009(L,K)	TR. SI, PNP
C112	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V	Q303	2SA1175(F)	TR. SI, PNP
C115	CC45CH1H020C	CAP. CERAMIC 2P 0.25P 50V	Q304	2SA1175(F)	TR. SI, PNP
C301	CE04W1V222M	CAP. ELECTRO 2200 20% 35V	Q305	2SC2271(E)	TR. SI, NPN
C302	CE04W1V222M	CAP. ELECTRO 2200 20% 35V	Q306	2SC2271(E)	TR. SI, NPN
C303	CE04W1E222M	CAP. ELECTRO 2200 20% 25V	R001	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
C304	C90-0910-05	CAP. ELECTRO 100 20% 200V	R002	RD14BB2E220J	RES. CARBON 22 5% 1/4W
C305	CE04W2E470M	CAP. ELECTRO 47 20% 250V	R003	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
C306	CE04W1A101M	CAP. ELECTRO 100 20% 10V	R004	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
C307	CE04W1E101M	CAP. ELECTRO 100 20% 25V	R005	RD14BB2E120J	RES. CARBON 12 5% 1/4W
C308	CE04W1E101M	CAP. ELECTRO 100 20% 25V	R006	RD14BB2E510J	RES. CARBON 51 5% 1/4W
C309	CE04W2C100M	CAP. ELECTRO 10 20% 160V	R007	RD14BB2E510J	RES. CARBON 51 5% 1/4W
C310	CE04W2E010M	CAP. ELECTRO 1 20% 250V	R008	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
C311	CE04BW1H010M	CAP. ELECTRO 1 20% 50V	R009	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
C312	CE04W1H010M	CAP. ELECTRO 1 20% 50V	R010	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
C313	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V	R011	RD14BB2E220J	RES. CARBON 22 5% 1/4W
C314	CE04W1H010M	CAP. ELECTRO 1 20% 50V	R012	RD14BB2E243J	RES. CARBON 24K 5% 1/4W
C315	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V	R013	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
C316	CE04W1H010M	CAP. ELECTRO 1 20% 50V	R014	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
C317	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V	R015	RN14BK2E1301F	RES. METAL FILM 1.3K 1% 1/4W
C318	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V	R016	RD14BB2E220J	RES. CARBON 22 5% 1/4W
C319	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V	R017	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
C320	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V	R018	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
D001	DS442X	DIODE	R019	RD14BB2E220J	RES. CARBON 22 5% 1/4W
D002	DS442X	DIODE	R020	RD14BB2E331J	RES. CARBON 330 5% 1/4W
D003	DS442X	DIODE	R021	RD14BB2E331J	RES. CARBON 330 5% 1/4W
D101	DS442X	DIODE	R022	NO USE	
D102	DS442X	DIODE	R023	RD14BB2E220J	RES. CARBON 22 5% 1/4W
D103	DS442X	DIODE	R024	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D104	DS442X	DIODE	R025	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D105	DS442X	DIODE	R026	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
D106	DS442X	DIODE	R027	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
D107	DS442X	DIODE	R028	RD14BB2E270J	RES. CARBON 27 5% 1/4W
D108	WZ-100	DIODE, ZENER 10V	R029	RD14BB2E270J	RES. CARBON 27 5% 1/4W
D301	S2VB40F	DIODE, BRIDGE	R030	RD14BB2E100J	RES. CARBON 10 5% 1/4W
D302	S2VB40F	DIODE, BRIDGE	R031	RD14BB2E221J	RES. CARBON 220 5% 1/4W
D303	S10B60	DIODE	R032	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D304	S10B60	DIODE	R033	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D305	DS442X	DIODE	R034	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D306	DS442X	DIODE	R035	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D307	V06B	DIODE	R036	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
L001	L40-1025-03	FERRI INDUCTOR	R037	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
L002	L40-1025-03	FERRI INDUCTOR	R038	RD14BB2E750J	RES. CARBON 75 5% 1/4W
P001	E40-0473-05	PIN CONNECTOR 4P	R039	RD14BB2E431J	RES. CARBON 430 5% 1/4W
P002	E40-0273-05	PIN CONNECTOR 2P	R040	RD14BB2E682J	RES. CARBON 6.8K 5% 1/4W
P003	E04-0154-05	BNC RECEPTACLE	R041	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
P004	E23-0046-04	TERMINAL	R042	RD14BB2E471J	RES. CARBON 470 5% 1/4W
P005	E23-0046-04	TERMINAL	R043	RD14BB2E471J	RES. CARBON 470 5% 1/4W
P101	E40-0473-05	PIN CONNECTOR 4P	R044	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P301	E40-0930-05	PIN CONNECTOR 9P	R045	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P302	E40-1116-05	PIN CONNECTOR 11P	R046	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P303	E40-1116-05	PIN CONNECTOR 11P	R047	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
Q002	2SA1005(K)	TR. SI, PNP	R048	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q003	2SA1005(K)	TR. SI, PNP	R049	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
Q004	2SC2786(K)	TR. SI, NPN	R050	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
Q005	2SC2786(K)	TR. SI, NPN	R051	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q006	2SC2786(K)	TR. SI, NPN	R052	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q007	2SC2786(K)	TR. SI, NPN	R053	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q008	2SA1005(K)	TR. SI, PNP	R054	RD14BB2E201J	RES. CARBON 200 5% 1/4W
Q009	2SC2786(K)	TR. SI, NPN	R055	RD14BB2E201J	RES. CARBON 200 5% 1/4W
Q010	2SC2786(K)	TR. SI, NPN	R056	RD14BB2E121J	RES. CARBON 120 5% 1/4W
Q011	2SC2786(K)	TR. SI, NPN	R057	NO USE	
Q012	2SC2786(K)	TR. SI, NPN	R058	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q013	2SC2786(K)	TR. SI, NPN	R059	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q014	2SC2786(K)	TR. SI, NPN	R060	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q015	2SC2407	TR. SI, NPN	R061	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q016	2SC2407	TR. SI, NPN	R062	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q017	2SC2912(R,S)	TR. SI, NPN	R063	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q018	2SC2912(R,S)	TR. SI, NPN	R064	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
Q102	2SA1005(K)	TR. SI, PNP	R065	RD14BB2E201J	RES. CARBON 200 5% 1/4W
Q103	2SA1005(K)	TR. SI, PNP	R066	RD14BB2E511J	RES. CARBON 510 5% 1/4W
Q104	2SC2786(K)	TR. SI, NPN	R067	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
Q105	2SC2786(K)	TR. SI, NPN	R068	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
Q106	2SC2785(F)	TR. SI, NPN	R069	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
Q107	2SC2786(K)	TR. SI, NPN	R101	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
Q108	2SC2786(K)	TR. SI, NPN	R102	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q109	2SC2786(K)	TR. SI, NPN	R103	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
Q110	2SC2786(K)	TR. SI, NPN	R104	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
Q111	2SC2786(K)	TR. SI, NPN	R105	RD14BB2E120J	RES. CARBON 12 5% 1/4W
Q112	2SC2786(K)	TR. SI, NPN	R106	RD14BB2E510J	RES. CARBON 51 5% 1/4W
Q113	2SA1175(F)	TR. SI, PNP	R107	RD14BB2E510J	RES. CARBON 51 5% 1/4W
Q114	2SC2785(F)	TR. SI, NPN	R108	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
Q115	2SC2786(K)	TR. SI, NPN	R109	RD14BB2E102J	RES. CARBON 1K 5% 1/4W

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
R110	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R111	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R112	RD14BB2E243J	RES. CARBON 24K 5% 1/4W
R113	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R114	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
R115	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R116	RN14BK2E1301F	RES. METAL FILM 1.3K 1% 1/4W
R117	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R118	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R119	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
R120	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R121	RD14BB2E561J	RES. CARBON 560 5% 1/4W
R122	NO USE	
R123	RD14BB2E333J	RES. CARBON 33K 5% 1/4W
R124	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R125	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R126	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R127	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R128	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R129	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R130	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R131	RD14BB2E750J	RES. CARBON 75 5% 1/4W
R132	RN14BK2E2001F	RES. METAL FILM 2K 1% 1/4W
R133	RN14BK2E2001F	RES. METAL FILM 2K 1% 1/4W
R134	RD14BB2E510J	RES. CARBON 51 5% 1/4W
R135	RD14BB2E511J	RES. CARBON 510 5% 1/4W
R136	RD14BB2E123J	RES. CARBON 12K 5% 1/4W
R137	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R138	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R139	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R140	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R141	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R142	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R143	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R144	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
R145	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R146	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R147	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
R148	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
R149	RD14BB2E682J	RES. CARBON 6.8K 5% 1/4W
R150	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R151	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R152	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R153	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R154	NO USE	
R155	RD14BB2E470J	RES. CARBON 47 5% 1/4W
R156	NO USE	
R157	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R158	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R159	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R301	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R302	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R303	RD14BB2E3R3J	RES. CARBON 3.3 5% 1/4W
R304	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R305	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R306	RD14BB2E822J	RES. CARBON 8.2K 5% 1/4W
R307	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R308	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R309	RN14BK2E1502F	RES. METAL FILM 15K 1% 1/4W
R310	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R311	RN14BK2E1602F	RES. METAL FILM 16K 1% 1/4W
R312	RN14BK2E1503F	RES. METAL FILM 150K 1% 1/4W
R313	RD14BY2H104J	RES. CARBON 100K 5% 1/2W
R314	RD14BY2H104J	RES. CARBON 100K 5% 1/2W
S101	S42-4509-05	PUSH SWITCH
TC001	C05-0425-05	CAP. TRIMMER 70P
TC002	C05-0425-05	CAP. TRIMMER 70P
TC101	C05-0434-05	CAP. TRIMMER 20P
TC102	C05-0434-05	CAP. TRIMMER 20P
TP001	E23-0046-04	TERMINAL
TP002	E23-0046-04	TERMINAL
TP003	E23-0046-04	TERMINAL
TP004	E23-0046-04	TERMINAL
TP101	E23-0046-04	TERMINAL
TP102	E23-0046-04	TERMINAL
TP103	E23-0046-04	TERMINAL
TP104	E23-0046-04	TERMINAL
U001	M47F(B)	FET
U101	M47F(B)	FET
U301	#PC7805H	IC
U302	#PC7915HA	IC
U303	NJM7815	IC
U304	NJM4558D	IC
VR001	R05-3506-05	V.R. 10K B
VR002	NO USE	
VR003	R12-0539-05	RES. SEMI FIXED 200 B

REF.NO	PARTS NO	NAME & DESCRIPTION
VR004	R12-0421-05	RES. SEMI FIXED 100 B
VR005	R12-0421-05	RES. SEMI FIXED 100 B
VR006	R12-0421-05	RES. SEMI FIXED 100 B
VR101	R05-3506-05	V.R. 10K B
VR102	R12-3523-05	RES. SEMI FIXED 20K B
VR103	R12-0541-05	RES. SEMI FIXED 100 B
VR104	R12-0543-05	RES. SEMI FIXED 500 B

VERTICAL AMP & POWER UNIT (X73-1490-01)

REF.NO	PARTS NO	NAME & DESCRIPTION
E33-4032-00	WIRE ASSY	
F01-0835-05	HEAT SINK	
F01-0836-04	HEAT SINK	
J25-2999-03	PCB (UNMOUNTED)	
J61-0517-05	STADOFF CLIP	
N19-0191-05	WASHER NONMETAL	
N30-3008-46	SCREW, PAN HD M 3X8	
R92-0150-05	JUMPING RES. ZERO OHM	
Z12-2014-05	TUBE (PLASTIC)	
CC45CH1H1R5C	CAP. CERAMIC 1.5P 0.25P 50V	
C002		
C006	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V
C007	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C008	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C009	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C010	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C011	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C012	NO USE	
C013	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C014	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C015	NO USE	
C016	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C017	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C020	CC45CH1H1R5C	CAP. CERAMIC 1.5P 0.25P 50V
C301	CE04W1V222M	CAP. ELECTRO 2200 20% 35V
C302	CE04W1V222M	CAP. ELECTRO 2200 20% 35V
C303	CE04W1E222M	CAP. ELECTRO 2200 20% 25V
C304	C90-0910-05	CAP. ELECTRO 100 20% 200V
C305	CE04W2E470M	CAP. ELECTRO 47 20% 250V
C306	CE04W1A101M	CAP. ELECTRO 100 20% 10V
C307	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C308	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C309	CE04W2C100M	CAP. ELECTRO 10 20% 160V
C310	CE04W2E010M	CAP. ELECTRO 1 20% 250V
C311	CE04BW1H010M	CAP. ELECTRO 1 20% 50V
C312	CE04W1H010M	CAP. ELECTRO 1 20% 50V
C313	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C314	CE04W1H010M	CAP. ELECTRO 1 20% 50V
C315	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C316	CE04W1H010M	CAP. ELECTRO 1 20% 50V
C317	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C318	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V
C319	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V
C320	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V
D001	DS442X	DIODE
D002	DS442X	DIODE
D003	DS442X	DIODE
D301	S2VB40F	DIODE, BRIDGE
D302	S2VB40F	DIODE, BRIDGE
D303	S10B60	DIODE
D304	S10B60	DIODE
D305	DS442X	DIODE
D306	DS442X	DIODE
D307	V06B	DIODE
L001	L40-1025-03	FERRI INDUCTOR
L002	L40-1025-03	FERRI INDUCTOR
P001	E40-0473-05	PIN CONNECTOR 4P
P002	E40-0273-05	PIN CONNECTOR 2P
P003	E04-0154-05	BNC RECEPTACLE
P301	E40-0930-05	PIN CONNECTOR 9P
P302	E40-1116-05	PIN CONNECTOR 11P
P303	E40-1116-05	PIN CONNECTOR 11P
Q002	2SA1005(K)	TR. SI, PNP
Q003	2SA1005(K)	TR. SI, PNP
Q004	2SC2786(K)	TR. SI, NPN
Q005	2SC2786(K)	TR. SI, NPN
Q006	2SC2786(K)	TR. SI, NPN
Q007	2SC2786(K)	TR. SI, NPN
Q008	2SA1005(K)	TR. SI, PNP
Q009	2SC2786(K)	TR. SI, NPN
Q010	2SC2786(K)	TR. SI, NPN
Q011	2SC2786(K)	TR. SI, NPN

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
Q012	2SC2786(K)	TR. SI, NPN
Q013	2SC2786(K)	TR. SI, NPN
Q014	2SC2786(K)	TR. SI, NPN
Q015	2SC2407	TR. SI, NPN
Q016	2SC2407	TR. SI, NPN
Q017	2SC2912(R,S)	TR. SI, NPN
Q018	2SC2912(R,S)	TR. SI, NPN
Q301	2SA1009(L,K)	TR. SI, PNP
Q302	2SA1009(L,K)	TR. SI, PNP
Q303	2SA1175(F)	TR. SI, PNP
Q304	2SA1175(F)	TR. SI, PNP
Q305	2SC2271(E)	TR. SI, NPN
Q306	2SC2271(E)	TR. SI, NPN
R001	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
R002	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R003	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R004	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R005	RD14BB2E120J	RES. CARBON 12 5% 1/4W
R006	RD14BB2E510J	RES. CARBON 51 5% 1/4W
R007	RD14BB2E510J	RES. CARBON 51 5% 1/4W
R008	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R009	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R010	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R011	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R012	RD14BB2E243J	RES. CARBON 24K 5% 1/4W
R013	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R014	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
R015	RN14BK2E1301F	RES. METAL FILM 1.3K 1% 1/4W
R016	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R017	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R018	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R019	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R020	RD14BB2E331J	RES. CARBON 330 5% 1/4W
R021	RD14BB2E331J	RES. CARBON 330 5% 1/4W
R022	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R023	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R024	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R025	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R026	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
R027	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
R028	RD14BB2E270J	RES. CARBON 27 5% 1/4W
R029	RD14BB2E270J	RES. CARBON 27 5% 1/4W
R030	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R031	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R032	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R033	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R034	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R035	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R036	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R037	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R038	RD14BB2E750J	RES. CARBON 75 5% 1/4W
R039	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R040	RD14BB2E682J	RES. CARBON 6.8K 5% 1/4W
R041	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R042	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R043	RD14BB2E471J	RES. CARBON 470 5% 1/4W
R044	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
R045	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
R046	RD14BB2E162J	RES. CARBON 1.6K 5% 1/4W
R047	NO USE	
R048	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R049	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R050	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
R051	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R052	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R053	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R054	RD14BB2E201J	RES. CARBON 200 5% 1/4W
R055	RD14BB2E201J	RES. CARBON 200 5% 1/4W
R056	RD14BB2E121J	RES. CARBON 120 5% 1/4W
R057	NO USE	
R058	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R059	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R060	RS14GB3F681J	RES. METAL FILM 680 5% 3W
R061	RS14GB3F681J	RES. METAL FILM 680 5% 3W
R062	RS14GB3F681J	RES. METAL FILM 680 5% 3W
R063	RS14GB3F681J	RES. METAL FILM 680 5% 3W
R064	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R065	RD14BB2E201J	RES. CARBON 200 5% 1/4W
R066	RD14BB2E511J	RES. CARBON 510 5% 1/4W
R067	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R068	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R069	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
R301	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R302	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R303	RD14BB2E3R3J	RES. CARBON 3.3 5% 1/4W
R304	RD14BB2E100J	RES. CARBON 10 5% 1/4W
R305	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R306	RD14BB2E822J	RES. CARBON 8.2K 5% 1/4W
R307	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R308	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R309	RN14BK2E1502F	RES. METAL FILM 15K 1% 1/4W
R310	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R311	RN14BK2E1602F	RES. METAL FILM 16K 1% 1/4W
R312	RN14BK2E1503F	RES. METAL FILM 150K 1% 1/4W

REF.NO	PARTS NO	NAME & DESCRIPTION
R313	RD14BY2H104J	RES. CARBON 100K 5% 1/2W
R314	RD14BY2H104J	RES. CARBON 100K 5% 1/2W
TC001	C05-0425-05	CAP. TRIMMER 70P
TC002	C05-0425-05	CAP. TRIMMER 70P
TC101	C05-0434-05	CAP. TRIMMER 20P
TP001	E23-0046-04	TERMINAL
TP002	E23-0046-04	TERMINAL
TP003	E23-0046-04	TERMINAL
TP004	E23-0046-04	TERMINAL
TP005	E23-0046-04	TERMINAL
U001	M47F(B)	FET
U301	#PC7805H	IC
U302	#PC7915HA	IC
U303	NJM7815	IC
U304	NJM4558D	IC DUAL OP AMP.
VR001	R05-3506-05	V.R. 10K B
VR002	NO USE	
VR003	R12-0539-05	RES. SEMI FIXED 200 B
VR004	R12-0421-05	RES. SEMI FIXED 100 B
VR005	R12-0421-05	RES. SEMI FIXED 100 B
VR006	R12-0421-05	RES. SEMI FIXED 100 B

VERTICAL AMP & POWER UNIT

(X73-1490-02)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E33-4031-00	WIRE ASSY
	F01-0835-05	HEAT SINK
	F01-0836-04	HEAT SINK
	J25-2999-03	PCB (UNMOUNTED)
	J61-0517-05	STADOFF CLIP
	N19-0191-05	WASHER NONMETAL
	N30-3008-46	SCREW, PAN HD M 3X8
	R92-0150-05	JUMPING RES. ZERO OHM
	212-2014-05	TUBE (PLASTIC)
	212-2014-05	TUBE (PLASTIC)
C006	CC45SL1H471J	CAP. CERAMIC 470P 5% 50V
C007	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C008	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C009	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C010	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C011	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C012	NO USE	
C013	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V
C014	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C015	NO USE	
C016	CE04W1E220M	CAP. ELECTRO 22 20% 25V
C017	CE04BW1E220M	CAP. ELECTRO 22 20% 25V
C021	CC45CH1H050C	CAP. CERAMIC 5P 0.25P 50V
C103	CC45CH1H150J	CAP. CERAMIC 15P 5% 50V
C104	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C105	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C106	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C107	CE04W1E470M	CAP. ELECTRO 47 20% 25V
C108	NO USE	
C109	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V
C110	CC45CH1H470J	CAP. CERAMIC 47P 5% 50V
C111	CE04BW1H010M	CAP. ELECTRO 1 20% 50V
C112	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C116	CC45CH1H050C	CAP. CERAMIC 5P 0.25P 50V
C301	CE04W1V222M	CAP. ELECTRO 2200 20% 35V
C302	CE04W1V222M	CAP. ELECTRO 2200 20% 35V
C303	CE04W1E222M	CAP. ELECTRO 2200 20% 25V
C304	C90-0910-05	CAP. ELECTRO 100 20% 200V
C305	CE04W2E470M	CAP. ELECTRO 47 20% 250V
C306	CE04W1A101M	CAP. ELECTRO 100 20% 10V
C307	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C308	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C309	CE04W2C100M	CAP. ELECTRO 10 20% 160V
C310	CE04W2E010M	CAP. ELECTRO 1 20% 250V
C311	CE04BW1H010M	CAP. ELECTRO 1 20% 50V
C312	CE04W1H010M	CAP. ELECTRO 1 20% 50V
C313	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C314	CE04W1H010M	CAP. ELECTRO 1 20% 50V
C315	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C316	CE04W1H010M	CAP. ELECTRO 1 20% 50V
C317	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
C318	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V
C319	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V
C320	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V
D001	DS442X	DIODE
D002	DS442X	DIODE

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
D003	DS442X	DIODE	R023	RD14BB2E220J	RES. CARBON 22 5% 1/4W
D101	DS442X	DIODE	R024	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D102	DS442X	DIODE	R025	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D103	DS442X	DIODE	R026	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
D104	DS442X	DIODE	R027	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
D105	DS442X	DIODE	R028	RD14BB2E270J	RES. CARBON 27 5% 1/4W
D106	DS442X	DIODE	R029	RD14BB2E270J	RES. CARBON 27 5% 1/4W
D107	DS442X	DIODE	R030	RD14BB2E220J	RES. CARBON 22 5% 1/4W
D108	WZ-100	DIODE, ZENER 10V	R031	RD14BB2E470J	RES. CARBON 47 5% 1/4W
D301	S2VB40F	DIODE, BRIDGE	R032	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D302	S2VB40F	DIODE, BRIDGE	R033	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D303	S10B60	DIODE	R034	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D304	S10B60	DIODE	R035	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D305	DS442X	DIODE	R036	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
D306	DS442X	DIODE	R037	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
D307	V06B	DIODE	R038	RD14BB2E750J	RES. CARBON 75 5% 1/4W
L001	L40-1025-03	FERRI INDUCTOR	R039	RD14BB2E431J	RES. CARBON 430 5% 1/4W
L002	L40-1025-03	FERRI INDUCTOR	R040	RD14BB2E682J	RES. CARBON 6.8K 5% 1/4W
P001	E40-0473-05	PIN CONNECTOR 4P	R041	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
P002	E40-0273-05	PIN CONNECTOR 2P	R042	RD14BB2E471J	RES. CARBON 470 5% 1/4W
P003	E04-0154-05	BNC RECEPTACLE	R043	RD14BB2E471J	RES. CARBON 470 5% 1/4W
P004	E23-0046-04	TERMINAL	R044	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P005	E23-0046-04	TERMINAL	R045	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P101	E40-0473-05	PIN CONNECTOR 4P	R046	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P301	E40-0930-05	PIN CONNECTOR 9P	R047	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W
P302	E40-1116-05	PIN CONNECTOR 11P	R048	RD14BB2E101J	RES. CARBON 100 5% 1/4W
P303	E40-1116-05	PIN CONNECTOR 11P	R049	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
Q002	2SA1005(K)	TR. SI, PNP	R050	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
Q003	2SA1005(K)	TR. SI, PNP	R051	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q004	2SC2786(K)	TR. SI, NPN	R052	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q005	2SC2785(F)	TR. SI, NPN	R053	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q006	2SC2785(F)	TR. SI, NPN	R054	RD14BB2E221J	RES. CARBON 220 5% 1/4W
Q007	2SC2785(F)	TR. SI, NPN	R055	RD14BB2E221J	RES. CARBON 220 5% 1/4W
Q008	2SA1005(K)	TR. SI, PNP	R056	RD14BB2E750J	RES. CARBON 75 5% 1/4W
Q009	2SC2785(F)	TR. SI, NPN	R057	RD14BB2E121J	RES. CARBON 120 5% 1/4W
Q010	2SC2785(F)	TR. SI, NPN	R058	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q011	2SC2785(F)	TR. SI, NPN	R059	RD14BB2E101J	RES. CARBON 100 5% 1/4W
Q012	2SC2785(F)	TR. SI, NPN	R060	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q013	2SC2785(F)	TR. SI, NPN	R061	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q014	2SC2785(F)	TR. SI, NPN	R062	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q015	2SC1973	TR. SI, NPN	R063	RS14GB3F681J	RES. METAL FILM 680 5% 3W
Q016	2SC1973	TR. SI, NPN	R064	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
Q017	2SC2912(R,S)	TR. SI, NPN	R065	RD14BB2E201J	RES. CARBON 200 5% 1/4W
Q018	2SC2912(R,S)	TR. SI, NPN	R066	RD14BB2E471J	RES. CARBON 470 5% 1/4W
Q102	2SA1005(K)	TR. SI, PNP	R067	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
Q103	2SA1005(K)	TR. SI, PNP	R068	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
Q104	2SC2786(K)	TR. SI, NPN	R101	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
Q105	2SC2785(F)	TR. SI, NPN	R102	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q106	2SC2785(F)	TR. SI, NPN	R103	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
Q107	2SC2785(F)	TR. SI, NPN	R104	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
Q108	2SC2785(F)	TR. SI, NPN	R105	RD14BB2E120J	RES. CARBON 12 5% 1/4W
Q109	2SC2785(F)	TR. SI, NPN	R106	RD14BB2E510J	RES. CARBON 51 5% 1/4W
Q110	2SC2785(F)	TR. SI, NPN	R107	RD14BB2E510J	RES. CARBON 51 5% 1/4W
Q111	2SC2785(F)	TR. SI, NPN	R108	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
Q112	2SC2785(F)	TR. SI, NPN	R109	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
Q113	2SA1175(F)	TR. SI, PNP	R110	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
Q114	2SC2785(F)	TR. SI, NPN	R111	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q115	2SC2785(F)	TR. SI, NPN	R112	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
Q301	2SA1009(L,K)	TR. SI, PNP	R113	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
Q302	2SA1009(L,K)	TR. SI, PNP	R114	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
Q303	2SA1175(F)	TR. SI, PNP	R115	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
Q304	2SA1175(F)	TR. SI, PNP	R116	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
Q305	2SC2271(E)	TR. SI, NPN	R117	RD14BB2E220J	RES. CARBON 22 5% 1/4W
Q306	2SC2271(E)	TR. SI, NPN	R118	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R001	RD14BB2E105J	RES. CARBON 1M 5% 1/4W	R119	NO USE	
R002	RD14BB2E220J	RES. CARBON 22 5% 1/4W	R120	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R003	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W	R121	RD14BB2E561J	RES. CARBON 560 5% 1/4W
R004	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W	R122	NO USE	
R005	RD14BB2E120J	RES. CARBON 12 5% 1/4W	R123	RD14BB2E333J	RES. CARBON 33K 5% 1/4W
R006	RD14BB2E510J	RES. CARBON 51 5% 1/4W	R124	RD14BB2E470J	RES. CARBON 47 5% 1/4W
R007	RD14BB2E510J	RES. CARBON 51 5% 1/4W	R125	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R008	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W	R126	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R009	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	R127	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R010	RD14BB2E302J	RES. CARBON 3K 5% 1/4W	R128	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R011	RD14BB2E220J	RES. CARBON 22 5% 1/4W	R129	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R012	RD14BB2E223J	RES. CARBON 22K 5% 1/4W	R130	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R013	RD14BB2E302J	RES. CARBON 3K 5% 1/4W	R131	RD14BB2E750J	RES. CARBON 75 5% 1/4W
R014	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W	R132	RN14BK2E2001F	RES. METAL FILM 2K 1% 1/4W
R015	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W	R133	RN14BK2E2001F	RES. METAL FILM 2K 1% 1/4W
R016	RD14BB2E220J	RES. CARBON 22 5% 1/4W	R134	RD14BB2E510J	RES. CARBON 51 5% 1/4W
R017	RD14BB2E302J	RES. CARBON 3K 5% 1/4W	R135	RD14BB2E511J	RES. CARBON 510 5% 1/4W
R018	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	R136	RD14BB2E123J	RES. CARBON 12K 5% 1/4W
R019	RD14BB2E220J	RES. CARBON 22 5% 1/4W	R137	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R020	RD14BB2E331J	RES. CARBON 330 5% 1/4W	R138	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R021	RD14BB2E331J	RES. CARBON 330 5% 1/4W	R139	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
R022	NO USE		R140	RD14BB2E471J	RES. CARBON 470 5% 1/4W
			R141	RD14BB2E471J	RES. CARBON 470 5% 1/4W
			R142	RD14BB2E471J	RES. CARBON 470 5% 1/4W
			R143	RD14BB2E471J	RES. CARBON 470 5% 1/4W
			R144	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
			R145	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
			R146	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
			R147	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
			R148	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
			R149	RD14BB2E682J	RES. CARBON 6.8K 5% 1/4W

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
R150	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	C301	CE04W1V222M	CAP. ELECTRO 2200 20% 35V
R151	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	C302	CE04W1V222M	CAP. ELECTRO 2200 20% 35V
R152	RD14BB2E151J	RES. CARBON 150 5% 1/4W	C303	CE04W1E222M	CAP. ELECTRO 2200 20% 25V
R153	RD14BB2E101J	RES. CARBON 100 5% 1/4W	C304	C90-0910-05	CAP. ELECTRO 100 20% 200V
R154	NO USE		C305	CE04W2E470M	CAP. ELECTRO 47 20% 250V
R155	RD14BB2E470J	RES. CARBON 47 5% 1/4W	C306	CE04W1A101M	CAP. ELECTRO 100 20% 10V
R156	NO USE		C307	CE04W1E101M	CAP. ELECTRO 100 20% 25V
R157	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W	C308	CE04W1E101M	CAP. ELECTRO 100 20% 25V
R158	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	C309	CE04W2C100M	CAP. ELECTRO 10 20% 160V
R159	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W	C310	CE04W2E010M	CAP. ELECTRO 1 20% 250V
			C311	CE04BW1H010M	CAP. ELECTRO 1 20% 50V
R301	RD14BB2E473J	RES. CARBON 47K 5% 1/4W	C312	CE04W1H010M	CAP. ELECTRO 1 20% 50V
R302	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	C313	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
R303	RD14BB2E3R3J	RES. CARBON 3.3 5% 1/4W	C314	CE04W1H010M	CAP. ELECTRO 1 20% 50V
R304	RD14BB2E100J	RES. CARBON 10 5% 1/4W	C315	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
R305	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W	C316	CE04W1H010M	CAP. ELECTRO 1 20% 50V
R306	RD14BB2E822J	RES. CARBON 8.2K 5% 1/4W	C317	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
R307	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	C318	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V
R308	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	C319	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V
R309	RN14BK2E1502F	RES. METAL FILM 15K 1% 1/4W	C320	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V
R310	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W			
R311	RN14BK2E1602F	RES. METAL FILM 16K 1% 1/4W	D001	DS442X	DIODE
R312	RN14BK2E1503F	RES. METAL FILM 150K 1% 1/4W	D002	DS442X	DIODE
R313	RD14BY2H104J	RES. CARBON 100K 5% 1/2W	D003	DS442X	DIODE
R314	RD14BY2H104J	RES. CARBON 100K 5% 1/2W			
S101	S42-4509-05	PUSH SWITCH	D301	S2VB40F	DIODE, BRIDGE
TC001	C05-0425-05	CAP. TRIMMER 70P	D302	S2VB40F	DIODE, BRIDGE
TC002	C05-0425-05	CAP. TRIMMER 70P	D303	S10B60	DIODE
			D304	S10B60	DIODE
TC101	C05-0434-05	CAP. TRIMMER 20P	D305	DS442X	DIODE
TC102	C05-0434-05	CAP. TRIMMER 20P	D306	DS442X	DIODE
			D307	V06B	DIODE
TP001	E23-0046-04	TERMINAL	L001	L40-1025-03	FERRI INDUCTOR
TP002	E23-0046-04	TERMINAL	L002	L40-1025-03	FERRI INDUCTOR
TP003	E23-0046-04	TERMINAL			
TP004	E23-0046-04	TERMINAL	P001	E40-0473-05	PIN CONNECTOR 4P
			P002	E40-0273-05	PIN CONNECTOR 2P
TP101	E23-0046-04	TERMINAL	P003	E04-0154-05	BNC RECEPTACLE
TP102	E23-0046-04	TERMINAL			
TP103	E23-0046-04	TERMINAL	P301	E40-0930-05	PIN CONNECTOR 9P
TP104	E23-0046-04	TERMINAL	P302	E40-1116-05	PIN CONNECTOR 11P
			P303	E40-1116-05	PIN CONNECTOR 11P
U001	M47F(B)	FET			
U101	M47F(B)	FET			
U301	#PC7805H	IC	Q002	2SA1005(K)	TR. SI, PNP
U302	#PC7915HA	IC	Q003	2SA1005(K)	TR. SI, PNP
U303	NJM7815	IC	Q004	2SC2786(K)	TR. SI, NPN
U304	NJM4558D	IC	Q005	2SC2785(F)	TR. SI, NPN
		DUAL OP AMP.	Q006	2SC2785(F)	TR. SI, NPN
VR001	R05-3506-05	V.R. 10K B	Q007	2SC2785(F)	TR. SI, NPN
VR002	NO USE		Q008	2SA1005(K)	TR. SI, PNP
VR003	R12-0539-05	RES. SEMI FIXED 200 B	Q009	2SC2785(F)	TR. SI, NPN
VR004	R12-0421-05	RES. SEMI FIXED 100 B	Q010	2SC2785(F)	TR. SI, NPN
VR005	R12-0421-05	RES. SEMI FIXED 100 B	Q011	2SC2785(F)	TR. SI, NPN
VR006	R12-0421-05	RES. SEMI FIXED 100 B	Q012	2SC2785(F)	TR. SI, NPN
			Q013	2SC2785(F)	TR. SI, NPN
VR101	R05-3506-05	V.R. 10K B	Q014	2SC2785(F)	TR. SI, NPN
VR102	R12-3523-05	RES. SEMI FIXED 20K B	Q015	2SC1973	TR. SI, NPN
VR103	R12-0541-05	RES. SEMI FIXED 100 B	Q016	2SC1973	TR. SI, NPN
VR104	R12-0543-05	RES. SEMI FIXED 500 B	Q017	2SC2912(R,S)	TR. SI, NPN
			Q018	2SC2912(R,S)	TR. SI, NPN
			Q301	2SA1009(L,K)	TR. SI, PNP
			Q302	2SA1009(L,K)	TR. SI, PNP
			Q303	2SA1175(F)	TR. SI, PNP
			Q304	2SA1175(F)	TR. SI, PNP
			Q305	2SC2271(E)	TR. SI, NPN
			Q306	2SC2271(E)	TR. SI, NPN

VERTICAL AMP & POWER UNIT

(X73-1490-03)

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
	E33-4032-00	WIRE ASSY	R001	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
	F01-0835-05	HEAT SINK	R002	RD14BB2E220J	RES. CARBON 22 5% 1/4W
	F01-0836-04	HEAT SINK	R003	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
	J25-2999-03	PCB (UNMOUNTED)	R004	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
	J61-0517-05	STADOFF CLIP	R005	RD14BB2E120J	RES. CARBON 12 5% 1/4W
	N19-0191-05	WASHER NONMETAL	R006	RD14BB2E510J	RES. CARBON 51 5% 1/4W
	N30-3008-46	SCREW, PAN HD M 3X8	R007	RD14BB2E510J	RES. CARBON 51 5% 1/4W
	R92-0150-05	JUMPING RES. ZERO OHM	R008	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
	212-2014-05	TUBE (PLASTIC)	R009	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
C006	CC45SL1H471J	CAP. CERAMIC 470P 5% 50V	R010	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
C007	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V	R011	RD14BB2E220J	RES. CARBON 22 5% 1/4W
C008	CE04W1E470M	CAP. ELECTRO 47 20% 25V	R012	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
C009	CE04W1E470M	CAP. ELECTRO 47 20% 25V	R013	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
C010	CE04W1E470M	CAP. ELECTRO 47 20% 25V	R014	RN14BK2E1000F	RES. METAL FILM 100 1% 1/4W
C011	CE04W1E470M	CAP. ELECTRO 47 20% 25V	R015	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
C012	NO USE		R016	RD14BB2E220J	RES. CARBON 22 5% 1/4W
C013	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V	R017	RD14BB2E302J	RES. CARBON 3K 5% 1/4W
C014	CE04W1E220M	CAP. ELECTRO 22 20% 25V	R018	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
C015	NO USE		R019	RD14BB2E220J	RES. CARBON 22 5% 1/4W
C016	CE04W1E220M	CAP. ELECTRO 22 20% 25V	R020	RD14BB2E331J	RES. CARBON 330 5% 1/4W
C017	CE04BW1E220M	CAP. ELECTRO 22 20% 25V	R021	RD14BB2E331J	RES. CARBON 330 5% 1/4W
			R022	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
			R023	RD14BB2E220J	RES. CARBON 22 5% 1/4W
			R024	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
C021	CC45CH1H050C	CAP. CERAMIC 5P 0.25P 50V	R025	RD14BB2E101J	RES. CARBON 100 5% 1/4W
			R026	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
			R027	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
R028	RD14BB2E270J	RES. CARBON 27 5% 1/4W		E23-0046-04	TERMINAL
R029	RD14BB2E270J	RES. CARBON 27 5% 1/4W		E31-2170-05	JUMPING WIRE
R030	RD14BB2E220J	RES. CARBON 22 5% 1/4W		E33-4028-00	WIRE ASSY
R031	RD14BB2E470J	RES. CARBON 47 5% 1/4W		F01-0230-04	HEAT SINK
R032	RD14BB2E101J	RES. CARBON 100 5% 1/4W		F01-0820-04	HEAT SINK
R033	RD14BB2E101J	RES. CARBON 100 5% 1/4W		F01-0835-05	HEAT SINK
R034	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W		F15-0727-04	HOLDER (NEON TUBE)
R035	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W		F20-0622-05	INSULATOR
R036	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W		J25-2998-13	PCB (UNMOUNTED)
R037	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W		J31-0604-04	COLLAR
R038	RD14BB2E750J	RES. CARBON 75 5% 1/4W		J31-0604-04	COLLAR
R039	RD14BB2E471J	RES. CARBON 470 5% 1/4W		N19-0191-05	WASHER NONMETAL
R040	RD14BB2E682J	RES. CARBON 6.8K 5% 1/4W		N30-3006-46	SCREW, PAN HD M 3X6
R041	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W		N30-3008-46	SCREW, PAN HD M 3X8
R042	RD14BB2E471J	RES. CARBON 470 5% 1/4W		R92-0150-05	JUMPING RES. ZERO OHM
R043	RD14BB2E471J	RES. CARBON 470 5% 1/4W		212-3013-05	TUBE (PLASTIC)
R044	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W	C001	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V
R045	RN14BK2E8200F	RES. METAL FILM 820 1% 1/4W	C002	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
R046	RD14BB2E162J	RES. CARBON 1.6K 5% 1/4W	C003	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
R047	NO USE		C004	CE04FW1H100M	CAP. ELECTRO 10 20% 50V
R048	RD14BB2E101J	RES. CARBON 100 5% 1/4W	C005	CE04W2E100M	CAP. ELECTRO 10 20% 250V
R049	RD14BB2E302J	RES. CARBON 3K 5% 1/4W	C006	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V
R050	RD14BB2E302J	RES. CARBON 3K 5% 1/4W	C007	CQ93FM1H153K	CAP. MYLAR 0.015 10% 50V
R051	RD14BB2E101J	RES. CARBON 100 5% 1/4W	C008	CE04W1V471M	CAP. ELECTRO 470 20% 35V
R052	RD14BB2E220J	RES. CARBON 22 5% 1/4W	C009	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V
R053	RD14BB2E220J	RES. CARBON 22 5% 1/4W	C010	CQ93FM1H223K	CAP. MYLAR 0.022 10% 50V
R054	RD14BB2E221J	RES. CARBON 220 5% 1/4W	C011	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
R055	RD14BB2E221J	RES. CARBON 220 5% 1/4W	C012	CK45E3D103P	CAP. CERAMIC 0.01 2K
R056	RD14BB2E750J	RES. CARBON 75 5% 1/4W	C013	CK45E3D103P	CAP. CERAMIC 0.01 2K
R057	RD14BB2E121J	RES. CARBON 120 5% 1/4W	C014	NO USE	
R058	RD14BB2E101J	RES. CARBON 100 5% 1/4W	C015	CE04W2E010M	CAP. ELECTRO 1 20% 250V
R059	RD14BB2E101J	RES. CARBON 100 5% 1/4W	C016	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V
R060	RS14GB3F681J	RES. METAL FILM 680 5% 3W	C017	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
R061	RS14GB3F681J	RES. METAL FILM 680 5% 3W	C018	CE04FW1E470M	CAP. ELECTRO 47 20% 25V
R062	RS14GB3F681J	RES. METAL FILM 680 5% 3W	C019	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V
R063	RS14GB3F681J	RES. METAL FILM 680 5% 3W	C020	CE04W1E101M	CAP. ELECTRO 100 20% 25V
R064	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	C021	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V
R065	RD14BB2E201J	RES. CARBON 200 5% 1/4W	C022	CE04W1E101M	CAP. ELECTRO 100 20% 25V
R066	RD14BB2E112J	RES. CARBON 1.1K 5% 1/4W	C023	CE04W1E101M	CAP. ELECTRO 100 20% 25V
R067	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W	C024	C90-0912-05	CAP. ELECTRO 220 20% 35V
R068	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	C025	C90-0912-05	CAP. ELECTRO 220 20% 35V
R301	RD14BB2E473J	RES. CARBON 47K 5% 1/4W	C026	CK45F1H103Z	CAP. CERAMIC 0.01 50V
R302	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	C027	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
R303	RD14BB2E3R3J	RES. CARBON 3.3 5% 1/4W	C028	CE04FW2A3R3M	CAP. ELECTRO 3.3 20% 100V
R304	RD14BB2E100J	RES. CARBON 10 5% 1/4W	C029	C91-0571-05	CAP. CERAMIC 0.01 2KV
R305	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W	C030	CK45E3D102P	CAP. CERAMIC 1000P 2K
R306	RD14BB2E822J	RES. CARBON 8.2K 5% 1/4W	C031	CC45FCH1H180J	CAP. CERAMIC 18P 5% 50V
R307	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	C101	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V
R308	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	C102	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V
R309	RN14BK2E1502F	RES. METAL FILM 15K 1% 1/4W	C103	CK45F1H103Z	CAP. CERAMIC 0.01 50V
R310	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W	C104	CK45F1H103Z	CAP. CERAMIC 0.01 50V
R311	RN14BK2E1602F	RES. METAL FILM 16K 1% 1/4W	C105	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V
R312	RN14BK2E1503F	RES. METAL FILM 150K 1% 1/4W	C106	CE04FW1H100M	CAP. ELECTRO 10 20% 50V
R313	RD14BY2H104J	RES. CARBON 100K 5% 1/2W	C107	NO USE	
R314	RD14BY2H104J	RES. CARBON 100K 5% 1/2W	C108	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
TC001	C05-0425-05	CAP. TRIMMER 70P	C109	CK45B1H472K	CAP. CERAMIC 4700P 10% 50V
TC002	C05-0425-05	CAP. TRIMMER 70P	C110	CK45F1H103Z	CAP. CERAMIC 0.01 50V
TC101	C05-0434-05	CAP. TRIMMER 20P	C111	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V
TP001	E23-0046-04	TERMINAL	C112	CK45F1H103Z	CAP. CERAMIC 0.01 50V
TP002	E23-0046-04	TERMINAL	C113	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V
TP003	E23-0046-04	TERMINAL	C114	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
TP004	E23-0046-04	TERMINAL	C115	CE04FW1A101M	CAP. ELECTRO 100 20% 10V
TP005	E23-0046-04	TERMINAL	C116	CK45F1H103Z	CAP. CERAMIC 0.01 50V
			C117	CK45F1H103Z	CAP. CERAMIC 0.01 50V
			C118	CC45CH2H100D	CAP. CERAMIC 10P 0.5P 500V
			C119	CC45CH2H040C	CAP. CERAMIC 4P 0.25P 500V
U001	M47F(B)	FET	C120	CF93AN2A105J	CAP. POLYESTHEL 1 5% 100V
U301	#PC7805H	IC	C121	CQ93BP2A103F	CAP. MYLAR 0.01 1% 100V
U302	#PC7915HA	IC	C122	CM93BD2A900J	CAP. MICA 90P 5% 100V
U303	NJM7815	IC	C123	CK45FB1H102K	CAP. CERAMIC 1000P 10% 50V
U304	NJM4558D	IC			
		DUAL OP AMP.			
VR001	R05-3506-05	V.R. 10K B	C123	CQ93FM1H102K	CAP. MYLAR 1000P 10% 50V
VR002	NO USE		C124	CK45F1H103Z	CAP. CERAMIC 0.01 50V
VR003	R12-0539-05	RES. SEMI FIXED 200 B	C125	CK45F1H103Z	CAP. CERAMIC 0.01 50V
VR004	R12-0421-05	RES. SEMI FIXED 100 B	C126	CK45F1H103Z	CAP. CERAMIC 0.01 50V
VR005	R12-0421-05	RES. SEMI FIXED 100 B	C127	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V
VR006	R12-0421-05	RES. SEMI FIXED 100 B	C128	CE04FW1E470M	CAP. ELECTRO 47 20% 25V
			C129	CE04FW1H010M	CAP. ELECTRO 1 20% 50V
			C130	NO USE	
			C131	CK45F1H103Z	CAP. CERAMIC 0.01 50V
			C132	NO USE	
			C133	CK45F1H103Z	CAP. CERAMIC 0.01 50V
			C134	CC45FCH1H270J	CAP. CERAMIC 27P 5% 50V
			C135	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
			C135	CC45CH2H030C	CAP. CERAMIC 3P 0.25P 500V
			C136	CM93BD2A151J	CAP. MICA 150P 5% 100V
			C137	CC45CH1H680J	CAP. CERAMIC 68P 5% 50V
			C138	CC45CH2H060D	CAP. CERAMIC 6P 0.5P 500V
			C139	CC45CH2H060D	CAP. CERAMIC 6P 0.5P 500V
			C140	CK45F1H103Z	CAP. CERAMIC 0.01 50V
			C141	CK45FB1H102K	CAP. CERAMIC 1000P 10% 50V
			C142	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V
			C143	CK45F1H103Z	CAP. CERAMIC 0.01 50V

HORIZONTAL & HIGH VOLTAGE UNIT (X74-1340-00)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E23-0015-04	EARTH LUG

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
C144	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q102	2SK117(Y)	FET. N-CHANNEL
C145	C91-0572-05	CAP. CERAMIC 0.1 12V	Q103	2SC2785(F)	TR. SI, NPN
C146	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q104	2SC2785(F)	TR. SI, NPN
C147	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q105	2SC2785(F)	TR. SI, NPN
C148	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q106	2SC2785(F)	TR. SI, NPN
C149	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q107	2SA1175(F)	TR. SI, PNP
C150	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q108	2SA1175(F)	TR. SI, PNP
C151	CE04W1A221M	CAP. ELECTRO 220 20% 10V	Q109	2SA838(C)	TR. SI, PNP
C152	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q110	2SA838(C)	TR. SI, PNP
C153	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q111	2SA1175(F)	TR. SI, PNP
C154	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V	Q112	2SA1175(F)	TR. SI, PNP
C155	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	Q113	2SC2785(F)	TR. SI, NPN
C158	CC45FCH1H150J	CAP. CERAMIC 15P 5% 50V	Q114	2SC2785(F)	TR. SI, NPN
C159	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q115	2SK117(Y)	FET. N-CHANNEL
C160	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q116	2SC2785(F)	TR. SI, NPN
C161	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q117	2SC2785(F)	TR. SI, NPN
C162	NO USE		Q118	2SC2785(F)	TR. SI, NPN
C163	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V	Q119	2SC2785(F)	TR. SI, NPN
C164	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q120	2SC2785(F)	TR. SI, NPN
C165	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	Q121	2SA1175(F)	TR. SI, PNP
C166	NO USE		Q122	2SA1175(F)	TR. SI, PNP
C167	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	Q123	2SA1175(F)	TR. SI, PNP
C168	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q124	2SC2912(S)	TR. SI, NPN
C169	NO USE		Q125	2SA1210(S)	TR. SI, PNP
C170	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q126	2SC2785(F)	TR. SI, NPN
C171	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q127	2SC2912(S)	TR. SI, NPN
C172	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q128	2SC2785(F)	TR. SI, NPN
C173	C91-0572-05	CAP. CERAMIC 0.1 12V	Q129	2SC2785(F)	TR. SI, NPN
C174	C91-0572-05	CAP. CERAMIC 0.1 12V			
D001	DS442X	DIODE	R001	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
D002	DS442X	DIODE	R002	RD14BB2E221J	RES. CARBON 220 5% 1/4W
D003	W02-0408-05	HIGH VOLTAGE POWER BLOCK	R003	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
D004	W06C	DIODE SILICON RECTIFIER	R004	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
D005	W06C	DIODE SILICON RECTIFIER	R005	RN14BK2E4702F	RES. METAL FILM 47K 1% 1/4W
D006	1SS83	DIODE SILICON SWITCHING	R006	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D007	1SS83	DIODE SILICON SWITCHING	R007	RN14BK2E3303F	RES. METAL FILM 330K 1% 1/4W
D008	DS442X	DIODE	R008	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
D009	DS442X	DIODE	R009	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
D101	DS442X	DIODE	R010	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
D102	NO USE		R011	RD14BB2E221J	RES. CARBON 220 5% 1/4W
D103	DS442X	DIODE	R012	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
D104	DS442X	DIODE	R013	R92-1033-05	RES. FIXED 33M
D105	DS442X	DIODE	R014	RD14BB2E334J	RES. CARBON 330K 5% 1/4W
D106	DS442X	DIODE	R015	R92-1034-05	RES. METAL FILM 47M
D107	DS442X	DIODE	R016	R92-1031-05	RES. FIXED 4.7M
D108	DS442X	DIODE	R017	R92-0800-05	RES. FIXED 10M
D109	DS442X	DIODE	R018	RD14BB2E823J	RES. CARBON 82K 5% 1/4W
D110	DS442X	DIODE	R019	RD14BB2E393J	RES. CARBON 39K 5% 1/4W
D111	DS442X	DIODE	R020	RD14BB2E333J	RES. CARBON 33K 5% 1/4W
D112	DS442X	DIODE	R021	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
D113	DS442X	DIODE	R022	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
D114	NO USE		R023	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D115	DS442X	DIODE	R024	RN14BK2E6800F	RES. METAL FILM 680 1% 1/4W
D116	NO USE		R025	RN14BK2E2402F	RES. METAL FILM 24K 1% 1/4W
D117	WZ-050	DIODE, ZENER 5V	R026	RN14BK2E1302F	RES. METAL FILM 13K 1% 1/4W
D121	DS442X	DIODE	R027	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
D124	DS442X	DIODE	R028	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
D125	DS442X	DIODE	R029	RD14BB2E4R7J	RES. CARBON 4.7 5% 1/4W
L001	L40-1011-13	FERRI INDUCTOR	R030	NO USE	
L002	L40-1011-13	FERRI INDUCTOR	R031	RD14BB2E470J	RES. CARBON 47 5% 1/4W
L003	L40-1021-03	FERRI INDUCTOR	R032	RD14BB2E224J	RES. CARBON 220K 5% 1/4W
L004	L40-1021-13	FERRI INDUCTOR	R033	RD14BB2E563J	RES. CARBON 56K 5% 1/4W
L005	L40-1021-13	FERRI INDUCTOR			
L006	L40-1021-13	FERRI INDUCTOR	R101	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
L007	L40-1021-13	FERRI INDUCTOR	R102	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
L008	L40-4791-02	FERRI INDUCTOR	R103	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
L101	L40-1011-13	FERRI INDUCTOR	R104	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
NL001	NE-2B	NEON LAMP	R105	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
NL002	NE-2B	NEON LAMP	R106	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
P001	E40-0274-05	PIN CONNECTOR 2P	R107	RN14BK2E3301F	RES. METAL FILM 3.3K 1% 1/4W
P002	E40-0374-05	PIN CONNECTOR 3P	R108	RN14BK2E3300F	RES. METAL FILM 330 1% 1/4W
P003	E40-0335-05	PIN CONNECTOR 3P	R109	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W
P004	E40-0535-05	PIN CONNECTOR 5P	R110	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
P005	E40-0233-05	PIN CONNECTOR 2P	R111	RN14BK2E5101F	RES. METAL FILM 5.1K 1% 1/4W
P101	E40-1116-05	PIN CONNECTOR 11P	R112	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
P102	E40-1116-05	PIN CONNECTOR 11P	R113	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
P103	E40-0273-05	PIN CONNECTOR 2 CONTACT	R114	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
Q001	2SC2912(S)	TR. SI, NPN	R115	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
Q002	2SA1210(S)	TR. SI, PNP	R116	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
Q003	2SD613(E)	TR. SI, NPN	R117	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
Q004	2SC2785(F)	TR. SI, NPN	R118	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
Q005	2SC2271(D)	TR. SI, NPN	R119	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
Q101	2SK117(Y)	FET. N-CHANNEL	R120	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
			R121	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
			R122	RN14BK2E2701F	RES. METAL FILM 2.7K 1% 1/4W
			R123	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W
			R124	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W
			R125	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
			R126	RN14BK2E1801F	RES. METAL FILM 1.8K 1% 1/4W
			R127	RN14BK2E2701F	RES. METAL FILM 2.7K 1% 1/4W
			R128	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
			R129	RD14BB2E561J	RES. CARBON 560 5% 1/4W
			R130	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
			R131	RD14BB2E681J	RES. CARBON 680 5% 1/4W
			R132	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
R133	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R134	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R135	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R136	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R137	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R138	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R139	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R140	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R141	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R142	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R143	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R144	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R145	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R146	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R147	RN14BK2E3302F	RES. METAL FILM 33K 1% 1/4W
R148	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R149	RN14BK2E3602F	RES. METAL FILM 36K 1% 1/4W
R150	RS14GB3D183J	RES. METAL FILM 18K 5% 2W
R151	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R152	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R153	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R154	RD14BB2E133J	RES. CARBON 13K 5% 1/4W
R155	RD14BB2C182J	RES. CARBON 1.8K 5% 1/6W
R156	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
R157	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
R158	RN14BK2E4301F	RES. METAL FILM 4.3K 1% 1/4W
R159	RN14BK2E9101F	RES. METAL FILM 9.1K 1% 1/4W
R160	RN14BK2E3004F	RES. METAL FILM 3M 1% 1/4W
R161	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R162	RN14BK2E5003F	RES. METAL FILM 500K 1% 1/4W
R163	RN14BK2E3003F	RES. METAL FILM 300K 1% 1/4W
R164	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R165	RN14BK2E5002F	RES. METAL FILM 50K 1% 1/4W
R166	RN14BK2E3002F	RES. METAL FILM 30K 1% 1/4W
R167	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R168	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R169	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R170	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R171	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
R172	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R173	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R174	RD14BB2E391J	RES. CARBON 390 5% 1/4W
R175	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R176	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R177	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R178	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R179	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R180	RN14BK2E9101F	RES. METAL FILM 9.1K 1% 1/4W
R181	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R182	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R183	RD14BB2E683J	RES. CARBON 68K 5% 1/4W
R184	RD14BB2E621J	RES. CARBON 620 5% 1/4W
R185	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R186	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R187	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
R188	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R189	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R190	RS14GB3D103J	RES. METAL FILM 10K 5% 2W
R191	RD14BB2E683J	RES. CARBON 68K 5% 1/4W
R192	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R193	RD14BB2E122J	RES. CARBON 1.2K 5% 1/4W
R194	RD14BB2E122J	RES. CARBON 1.2K 5% 1/4W
R195	RD14BB2E821J	RES. CARBON 820 5% 1/4W
R196	RD14BB2E821J	RES. CARBON 820 5% 1/4W
R197	NO USE	
R198	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R199	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R205	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R206	RD14BB2E363J	RES. CARBON 36K 5% 1/4W
R207	RN14BK2E1202F	RES. METAL FILM 12K 1% 1/4W
R210	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R211	RD14BB2E470J	RES. CARBON 47 5% 1/4W
R212	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R213	NO USE	
R214	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R217	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
R221	RD14BB2E133J	RES. CARBON 13K 5% 1/4W
R222	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
S101	R01-3510-05	V.R. WITH SW. 10K B
S102	R01-3510-05	V.R. WITH SW. 10K B
S103	S02-2505-05	ROTARY SWITCH
S104	S33-2501-05	LEVER SWITCH
S105	S32-2012-05	LEVER SWITCH
S106	S32-4007-05	SLIDE SWITCH
T001	L19-0412-05	CONVERTOR TRANSFORMER
TC101	C05-0422-05	CAP. TRIMMER 20P
U001	NJM4558D	IC, DUAL OP-AMP

REF.NO	PARTS NO	NAME & DESCRIPTION
U101	MC10103L	IC, QUAD 2-INPUT OR GATE
U102	SN74LS112N	IC, DUAL J-K FLIP-FLOP
U103	SN74LS02N	IC, QUAD 2-INPUT NOR GATE
U104	SN74LS00N	IC, QUAD 2-INPUT NAND GATE
U105	SN74LS08N	IC, QUAD 2-INPUT AND GATE
VR001	R12-5516-05	RES. SEMI FIXED 100K OHM B
VR101	R01-3510-05	V.R. WITH SW. 10K B
VR102	R01-3510-05	V.R. WITH SW. 10K B
VR103	S02-2505-15	ROTARY SWITCH WITH VR.2KB
VR104	R12-3520-05	RES. SEMI FIXED 10K OHM B
VR105	R12-1518-05	RES. SEMI FIXED 2K B
VR106	R12-0421-05	RES. SEMI FIXED 100 B
VR107	R12-1517-05	RES. SEMI FIXED 1KB
VR108	NO USE	
VR109	R12-5518-05	RES. SEMI FIXED 200K OHM B
VR110	NO USE	
VR111	R12-0540-05	RES. SEMI FIXED 500 B

HORIZONTAL & HIGH VOLTAGE UNIT

(X74-1340-01)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E23-0015-04	EARTH LUG
	E23-0046-04	TERMINAL
	E31-2170-05	JUMPING WIRE
	E33-4029-00	WIRE ASSY
	F01-0230-04	HEAT SINK
	F01-0820-04	HEAT SINK
	F01-0835-05	HEAT SINK
	F15-0727-04	HOLDER (NEON TUBE)
	F20-0622-05	INSULATOR
	J25-2998-13	PCB (UNMOUNTED)
	J31-0604-04	COLLAR
	J31-0604-04	COLLAR
	N19-0191-05	WASHER NONMETAL
	N30-3006-46	SCREW, PAN HD M 3X6
	N30-3008-46	SCREW, PAN HD M 3X8
	R92-0150-05	JUMPING RES. ZERO OHM
	W02-0408-05	HIGH VOLTAGE POWER BLOCK
	212-3013-05	TUBE (PLASTIC)
C001	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V
C002	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
C003	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
C004	CE04FW1H100M	CAP. ELECTRO 10 20% 50V
C005	CE04W2E100M	CAP. ELECTRO 10 20% 250V
C006	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V
C007	CQ93FM1H153K	CAP. MYLAR 0.015 10% 50V
C008	CE04W1V471M	CAP. ELECTRO 470 20% 35V
C009	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V
C010	CQ93FM1H223K	CAP. MYLAR 0.022 10% 50V
C011	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C012	CK45E3D103P	CAP. CERAMIC 0.01 2K
C013	CK45E3D103P	CAP. CERAMIC 0.01 2K
C014	NO USE	
C015	CE04W2E010M	CAP. ELECTRO 1 20% 250V
C016	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V
C017	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
C018	CE04FW1E470M	CAP. ELECTRO 47 20% 25V
C019	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V
C020	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C021	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V
C022	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C023	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C024	C90-0912-05	CAP. ELECTRO 220 20% 35V
C025	C90-0912-05	CAP. ELECTRO 220 20% 35V
C026	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C027	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
C028	CE04FW2A3R3M	CAP. ELECTRO 3.3 20% 100V
C029	C91-0571-05	CAP. CERAMIC 0.01 2KV
C030	CK45E3D102P	CAP. CERAMIC 1000P 2K
C031	CC45FCH1H180J	CAP. CERAMIC 18P 5% 50V
C101	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V
C102	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V
C103	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C104	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C105	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V
C106	CE04FW1H100M	CAP. ELECTRO 10 20% 50V
C107	NO USE	
C108	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C109	CK45B1H472K	CAP. CERAMIC 4700P 10% 50V
C110	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C111	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V
C112	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C113	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V
C114	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C115	CE04FW1A101M	CAP. ELECTRO 100 20% 10V
C116	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C117	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C118	CC45CH2H100D	CAP. CERAMIC 10P 0.5P 500V

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
C119	CC45CH2H040C	CAP. CERAMIC 4P 0.25P 500V	L008	L40-4791-02	FERRI INDUCTOR
C120	CF93AN2A105J	CAP. POLYESTHEL 1 5% 100V	L101	L40-1011-13	FERRI INDUCTOR
C121	CQ93BP2A103F	CAP. MYLAR 0.01 1% 100V	NL001	NE-2B	NEON LAMP
C122	CM93BD2A900J	CAP. MICA 90P 5% 100V	NL002	NE-2B	NEON LAMP
C123	CQ93FM1H102K	CAP. MYLAR 1000P 10% 50V	P001	E40-0274-05	PIN CONNECTOR 2P
C124	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P002	E40-0374-05	PIN CONNECTOR 3P
C125	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P003	E40-0335-05	PIN CONNECTOR 3P
C126	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P004	E40-0535-05	PIN CONNECTOR 5P
C127	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V	P005	E40-0233-05	PIN CONNECTOR 2P
C128	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	P101	E40-1116-05	PIN CONNECTOR 11P
C129	CE04FW1H010M	CAP. ELECTRO 1 20% 50V	P102	E40-1116-05	PIN CONNECTOR 11P
C130	NO USE		P103	E40-0273-05	PIN CONNECTOR 2 CONTACT
C131	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q001	2SC2912(S)	TR. SI, NPN
C132	NO USE		Q002	2SA1210(S)	TR. SI, PNP
C133	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q003	2SD613(E)	TR. SI, NPN
C134	CC45FCH1H270J	CAP. CERAMIC 27P 5% 50V	Q004	2SC2785(F)	TR. SI, NPN
C135	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V	Q005	2SC2271(D)	TR. SI, NPN
C135	CC45CH2H030C	CAP. CERAMIC 3P 0.25P 500V	Q101	2SK117(Y)	FET. N-CHANNEL
C136	CM93BD2A151J	CAP. MICA 150P 5% 100V	Q102	2SK117(Y)	FET. N-CHANNEL
C137	CC45CH1H680J	CAP. CERAMIC 68P 5% 50V	Q103	2SC2785(F)	TR. SI, NPN
C138	CC45CH2H060D	CAP. CERAMIC 6P 0.5P 500V	Q104	2SC2785(F)	TR. SI, NPN
C139	CC45CH2H060D	CAP. CERAMIC 6P 0.5P 500V	Q105	2SC2785(F)	TR. SI, NPN
C140	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q106	2SC2785(F)	TR. SI, NPN
C143	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q107	2SA1175(F)	TR. SI, PNP
C144	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q108	2SA1175(F)	TR. SI, PNP
C145	C91-0572-05	CAP. CERAMIC 0.1 12V	Q109	2SA838(C)	TR. SI, PNP
C146	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q110	2SA838(C)	TR. SI, PNP
C147	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q111	2SA1175(F)	TR. SI, PNP
C148	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q112	2SA1175(F)	TR. SI, PNP
C149	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q113	2SC2785(F)	TR. SI, NPN
C150	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q114	2SC2785(F)	TR. SI, NPN
C151	CE04W1A221M	CAP. ELECTRO 220 20% 10V	Q115	2SK117(Y)	FET. N-CHANNEL
C152	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q116	2SC2785(F)	TR. SI, NPN
C153	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q117	2SC2785(F)	TR. SI, NPN
C154	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V	Q118	2SC2785(F)	TR. SI, NPN
C155	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	Q119	2SC2785(F)	TR. SI, NPN
C156	NO USE		Q120	2SC2785(F)	TR. SI, NPN
C157	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V	Q121	2SA1175(F)	TR. SI, PNP
C158	CC45FCH1H150J	CAP. CERAMIC 15P 5% 50V	Q122	2SA1175(F)	TR. SI, PNP
C159	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q123	2SA1175(F)	TR. SI, PNP
C160	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q124	2SC2912(S)	TR. SI, NPN
C161	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q125	2SA1210(S)	TR. SI, PNP
C162	NO USE		Q126	2SC2785(F)	TR. SI, NPN
C163	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V	Q127	2SC2912(S)	TR. SI, NPN
C164	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q128	2SC2785(F)	TR. SI, NPN
C165	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	Q129	2SC2785(F)	TR. SI, NPN
C166	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V	Q130	2SK117(Y)	FET. N-CHANNEL
C167	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	Q131	2SA1175(F)	TR. SI, PNP
C168	CE04W1E101M	CAP. ELECTRO 100 20% 25V	R001	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
C169	NO USE		R002	RD14BB2E221J	RES. CARBON 220 5% 1/4W
C170	CK45F1H103Z	CAP. CERAMIC 0.01 50V	R003	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
C171	CK45F1H103Z	CAP. CERAMIC 0.01 50V	R004	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
C172	NO USE		R005	RN14BK2E4702F	RES. METAL FILM 47K 1% 1/4W
C173	C91-0572-05	CAP. CERAMIC 0.1 12V	R006	RD14BB2E101J	RES. CARBON 100 5% 1/4W
C174	C91-0572-05	CAP. CERAMIC 0.1 12V	R007	RN14BK2E3303F	RES. METAL FILM 330K 1% 1/4W
D001	DS442X	DIODE	R008	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
D002	DS442X	DIODE	R009	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
D003	NO USE		R010	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
D004	W06C	DIODE SILICON RECTIFIER	R011	RD14BB2E221J	RES. CARBON 220 5% 1/4W
D005	W06C	DIODE SILICON RECTIFIER	R012	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
D006	1SS83	DIODE SILICON SWITCHING	R013	R92-1033-05	RES. FIXED 33M
D007	1SS83	DIODE SILICON SWITCHING	R014	RD14BB2E334J	RES. CARBON 330K 5% 1/4W
D008	DS442X	DIODE	R015	R92-1034-05	RES. METAL FILM 47M
D009	DS442X	DIODE	R016	R92-1031-05	RES. FIXED 4.7M
D101	DS442X	DIODE	R017	R92-0800-05	RES. FIXED 10M
D102	NO USE		R018	RD14BB2E823J	RES. CARBON 82K 5% 1/4W
D103	DS442X	DIODE	R019	RD14BB2E393J	RES. CARBON 39K 5% 1/4W
D104	DS442X	DIODE	R020	RD14BB2E333J	RES. CARBON 33K 5% 1/4W
D105	DS442X	DIODE	R021	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
D106	DS442X	DIODE	R022	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
D107	DS442X	DIODE	R023	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
D108	DS442X	DIODE	R024	RN14BK2E6800F	RES. METAL FILM 680 1% 1/4W
D109	DS442X	DIODE	R025	RN14BK2E2402F	RES. METAL FILM 24K 1% 1/4W
D110	DS442X	DIODE	R026	RN14BK2E1302F	RES. METAL FILM 13K 1% 1/4W
D111	DS442X	DIODE	R027	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
D117	WZ-050	DIODE, ZENER 5V	R028	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
D118	DS442X	DIODE	R029	RD14BB2E4R7J	RES. CARBON 4.7 5% 1/4W
D119	NO USE		R030	NO USE	
D120	DS442X	DIODE	R031	RD14BB2E470J	RES. CARBON 47 5% 1/4W
D121	DS442X	DIODE	R032	RD14BB2E224J	RES. CARBON 220K 5% 1/4W
D124	DS442X	DIODE	R033	RD14BB2E563J	RES. CARBON 56K 5% 1/4W
D125	DS442X	DIODE	R101	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
L001	L40-1011-13	FERRI INDUCTOR	R102	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
L002	L40-1011-13	FERRI INDUCTOR	R103	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
L003	L40-1021-03	FERRI INDUCTOR	R104	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
L004	L40-1021-13	FERRI INDUCTOR	R105	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
L005	L40-1021-13	FERRI INDUCTOR	R106	RD14BB2E223J	RES. CARBON 22K 5% 1/4W
L006	L40-1021-13	FERRI INDUCTOR	R107	RN14BK2E3301F	RES. METAL FILM 3.3K 1% 1/4W
L007	L40-1021-13	FERRI INDUCTOR			

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
R108	RN14BK2E3300F	RES. METAL FILM 330 1% 1/4W
R109	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W
R110	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
R111	RN14BK2E5101F	RES. METAL FILM 5.1K 1% 1/4W
R112	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R113	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
R114	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R115	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R116	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R117	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R118	RD14BB2E105J	RES. CARBON 1M 5% 1/4W
R119	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W
R120	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R121	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R122	RN14BK2E2701F	RES. METAL FILM 2.7K 1% 1/4W
R123	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W
R124	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W
R125	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R126	RN14BK2E1801F	RES. METAL FILM 1.8K 1% 1/4W
R127	RN14BK2E2701F	RES. METAL FILM 2.7K 1% 1/4W
R128	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R129	RD14BB2E561J	RES. CARBON 560 5% 1/4W
R130	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R131	RD14BB2E681J	RES. CARBON 680 5% 1/4W
R132	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R133	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R134	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R135	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R136	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R137	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R138	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R139	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R140	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R141	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R142	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R143	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R144	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R145	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R146	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R147	RN14BK2E3302F	RES. METAL FILM 33K 1% 1/4W
R148	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R149	RN14BK2E3602F	RES. METAL FILM 36K 1% 1/4W
R150	RS14GB3D183J	RES. METAL FILM 18K 5% 2W
R151	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R152	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R153	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R154	RD14BB2E133J	RES. CARBON 13K 5% 1/4W
R155	RD14BB2E152J	RES. CARBON 1.5K 5% 1/6W
R156	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
R157	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
R158	RN14BK2E6801F	RES. METAL FILM 6.8K 1% 1/4W
R159	RN14BK2E9101F	RES. METAL FILM 9.1K 1% 1/4W
R160	RN14BK2E3004F	RES. METAL FILM 3M 1% 1/4W
R161	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R162	RN14BK2E5003F	RES. METAL FILM 500K 1% 1/4W
R163	RN14BK2E3003F	RES. METAL FILM 300K 1% 1/4W
R164	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R165	RN14BK2E5002F	RES. METAL FILM 50K 1% 1/4W
R166	RN14BK2E3002F	RES. METAL FILM 30K 1% 1/4W
R167	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R168	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R169	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R170	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R171	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
R172	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R173	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R174	RD14BB2E391J	RES. CARBON 390 5% 1/4W
R175	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R176	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R177	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R178	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R179	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R180	RN14BK2E9101F	RES. METAL FILM 9.1K 1% 1/4W
R181	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R182	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R183	RD14BB2E683J	RES. CARBON 68K 5% 1/4W
R184	RD14BB2E621J	RES. CARBON 620 5% 1/4W
R185	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R186	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R187	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
R188	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R189	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R190	RS14GB3D103J	RES. METAL FILM 10K 5% 2W
R191	RD14BB2E683J	RES. CARBON 68K 5% 1/4W
R192	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R195	RD14BB2E821J	RES. CARBON 820 5% 1/4W
R196	RD14BB2E821J	RES. CARBON 820 5% 1/4W
R197	NO USE	
R198	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R199	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R200	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R201	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R202	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R203	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W

REF.NO	PARTS NO	NAME & DESCRIPTION
R204	RD14BB2E751J	RES. CARBON 750 5% 1/4W
R205	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R206	RD14BB2E363J	RES. CARBON 36K 5% 1/4W
R207	RN14BK2E1202F	RES. METAL FILM 12K 1% 1/4W
R210	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R211	RD14BB2E470J	RES. CARBON 47 5% 1/4W
R212	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R213	NO USE	
R214	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R217	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
R221	RD14BB2E133J	RES. CARBON 13K 5% 1/4W
R222	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
S103	S02-2506-05	ROTARY SWITCH
S104	S32-2012-05	LEVER SWITCH
S105	S32-2012-05	LEVER SWITCH
S106	S32-4007-05	SLIDE SWITCH
T001	L19-0412-05	CONVERTOR TRANSFORMER
TC101	C05-0422-05	CAP. TRIMMER 20P
U001	NJM4558D	IC, DUAL OP-AMP
U101	MC10103L	IC, QUAD 2-INPUT OR GATE
U102	SN74LS112N	IC, DUAL J-K FLIP-FLOP
U103	SN74LS02N	IC, QUAD 2-INPUT NOR GATE
VR001	R12-5516-05	RES. SEMI FIXED 100K OHM B
VR101	R01-3510-05	V.R. WITH SW. 10K B
VR102	R01-3510-05	V.R. WITH SW. 10K B
VR103	S02-2506-15	ROTARY SWITCH WITH VR.2K,10KB
VR104	R12-3520-05	RES. SEMI FIXED 10K OHM B
VR105	R12-1518-05	RES. SEMI FIXED 2K B
VR106	R12-0421-05	RES. SEMI FIXED 100 B
VR107	R12-1517-05	RES. SEMI FIXED 1KB
VR108	NO USE	
VR109	R12-5518-05	RES. SEMI FIXED 200K OHM B
VR110	R12-1517-05	RES. SEMI FIXED 1KB
VR111	R12-0540-05	RES. SEMI FIXED 500 B

HORIZONTAL & HIGH VOLTAGE UNIT (X74-1340-02)

REF.NO	PARTS NO	NAME & DESCRIPTION
E23-0015-04	EARTH LUG	
E23-0046-04	TERMINAL	
E31-2170-05	JUMPING WIRE	
E33-4028-00	WIRE ASSY	
F01-0230-04	HEAT SINK	
F01-0820-04	HEAT SINK	
F01-0835-05	HEAT SINK	
F15-0727-04	HOLDER (NEON TUBE)	
F20-0622-05	INSULATOR	
J25-2998-13	PCB (UNMOUNTED)	
J31-0604-04	COLLAR	
J31-0604-04	COLLAR	
N19-0191-05	WASHER NONMETAL	
N30-3006-46	SCREW, PAN HD M 3X6	
N30-3008-46	SCREW, PAN HD M 3X8	
R92-0150-05	JUMPING RES. ZERO OHM	
W02-0409-05	HIGH VOLTAGE POWER BLOCK	
212-3013-05	TUBE (PLASTIC)	
C001	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V
C002	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
C003	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
C004	CE04FW1H100M	CAP. ELECTRO 10 20% 50V
C005	CE04W2E100M	CAP. ELECTRO 10 20% 250V
C006	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V
C007	CQ93FM1H153K	CAP. MYLAR 0.015 10% 50V
C008	CE04W1V471M	CAP. ELECTRO 470 20% 35V
C009	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V
C010	CQ93FM1H223K	CAP. MYLAR 0.022 10% 50V
C011	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C012	CK45E3F332P	CAP. CERAMIC 3300P 3.1K
C013	CK45E3F332P	CAP. CERAMIC 3300P 3.1K
C014	NO USE	
C015	CE04W2E010M	CAP. ELECTRO 1 20% 250V
C016	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V
C017	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V
C018	CE04FW1E470M	CAP. ELECTRO 47 20% 25V
C019	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V
C020	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C021	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V
C022	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C023	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C024	C90-0912-05	CAP. ELECTRO 220 20% 35V
C025	C90-0912-05	CAP. ELECTRO 220 20% 35V

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
C026	CK45F1H103Z	CAP. CERAMIC 0.01 50V	D109	DS442X	DIODE
C027	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	D110	DS442X	DIODE
C028	CE04FW2A3R3M	CAP. ELECTRO 3.3 20% 100V	D111	DS442X	DIODE
C029	C91-0570-05	CAP. CERAMIC 4700P 3KV	D112	DS442X	DIODE
C030	CK45E3F102P	CAP. CERAMIC 1000P 3.1K	D113	DS442X	DIODE
C031	CC45FCH1H180J	CAP. CERAMIC 18P 5% 50V	D114	NO USE	
			D115	DS442X	DIODE
C101	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V	D116	1SS83	DIODE SILICON SWITCHING
C102	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V	D117	WZ-050	DIODE, ZENER 5V
C103	CK45F1H103Z	CAP. CERAMIC 0.01 50V			
C104	CK45F1H103Z	CAP. CERAMIC 0.01 50V	D121	DS442X	DIODE
C105	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V	D122	1SS83	DIODE SILICON SWITCHING
C106	CE04FW1H100M	CAP. ELECTRO 10 20% 50V	D123	1SS83	DIODE SILICON SWITCHING
C107	NO USE		D124	DS442X	DIODE
C108	CE04HW1H010M	CAP. ELECTRO 1 20% 50V	D125	DS442X	DIODE
C109	CK45B1H472K	CAP. CERAMIC 4700P 10% 50V			
C110	CK45F1H103Z	CAP. CERAMIC 0.01 50V	L001	L40-1011-13	FERRI INDUCTOR
C111	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	L002	L40-1011-13	FERRI INDUCTOR
C112	CK45F1H103Z	CAP. CERAMIC 0.01 50V	L003	L40-1021-03	FERRI INDUCTOR
C113	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	L004	L40-1021-13	FERRI INDUCTOR
C114	CE04HW1H010M	CAP. ELECTRO 1 20% 50V	L005	L40-1021-13	FERRI INDUCTOR
C115	CE04FW1A101M	CAP. ELECTRO 100 20% 10V	L006	L40-1021-13	FERRI INDUCTOR
C116	CK45F1H103Z	CAP. CERAMIC 0.01 50V	L007	L40-1021-13	FERRI INDUCTOR
C117	CK45F1H103Z	CAP. CERAMIC 0.01 50V	L008	L40-4791-02	FERRI INDUCTOR
C118	CC45CH2H100D	CAP. CERAMIC 10P 0.5P 500V			
C119	CC45CH2H100D	CAP. CERAMIC 10P 0.5P 500V	L101	L40-1011-13	FERRI INDUCTOR
C120	CF93AN2A105J	CAP. POLYESTHEL 1 5% 100V			
C121	CQ93BP2A103F	CAP. MYLAR 0.01 1% 100V	NL001	NE-2B	NEON LAMP
C122	CM93BD2A900J	CAP. MICA 90P 5% 100V	NL002	NE-2B	NEON LAMP
C123	CQ93FM1H102K	CAP. MYLAR 1000P 10% 50V			
C124	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P001	E40-0274-05	PIN CONNECTOR 2P
C125	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P002	E40-0374-05	PIN CONNECTOR 3P
C126	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P003	E40-0335-05	PIN CONNECTOR 3P
C127	NO USE		P004	E40-0535-05	PIN CONNECTOR 5P
C128	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	P005	E40-0233-05	PIN CONNECTOR 2P
C129	CE04FW1H010M	CAP. ELECTRO 1 20% 50V			
C130	NO USE		P101	E40-1116-05	PIN CONNECTOR 11P
C131	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P102	E40-1116-05	PIN CONNECTOR 11P
C132	NO USE		P103	E40-0273-05	PIN CONNECTOR 2 CONTACT
C133	CK45F1H103Z	CAP. CERAMIC 0.01 50V			
C134	CC45FCH1H470J	CAP. CERAMIC 47P 5% 50V	Q001	2SC2912(S)	TR. SI, NPN
C135	CC45CH2H030C	CAP. CERAMIC 3P 0.25P 500V	Q002	2SA1210(S)	TR. SI, PNP
C136	CM93BD2A151J	CAP. MICA 150P 5% 100V	Q003	2SD613(E)	TR. SI, NPN
			Q004	2SC2785(F)	TR. SI, NPN
			Q005	2SC2271(D)	TR. SI, NPN
C140	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q101	2SK117(Y)	FET. N-CHANNEL
C141	CK45B1H102K	CAP. CERAMIC 1000P 10% 50V	Q102	2SK117(Y)	FET. N-CHANNEL
C142	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V	Q103	2SC2785(F)	TR. SI, NPN
C143	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q104	2SC2785(F)	TR. SI, NPN
C144	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q105	2SC2785(F)	TR. SI, NPN
C145	C91-0572-05	CAP. CERAMIC 0.1 12V	Q106	2SC2785(F)	TR. SI, NPN
C146	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q107	2SA1175(F)	TR. SI, PNP
C147	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q108	2SA1175(F)	TR. SI, PNP
C148	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q109	2SA1175(F)	TR. SI, PNP
C149	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q110	2SA1175(F)	TR. SI, PNP
C150	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q111	2SA1175(F)	TR. SI, PNP
C151	CE04W1A221M	CAP. ELECTRO 220 20% 10V	Q112	2SA1175(F)	TR. SI, PNP
C152	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q113	2SC2785(F)	TR. SI, NPN
C153	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q114	2SC2785(F)	TR. SI, NPN
C154	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V	Q115	2SK117(Y)	FET. N-CHANNEL
C155	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	Q116	2SC2785(F)	TR. SI, NPN
			Q117	2SC2785(F)	TR. SI, NPN
C158	CC45FCH1H150J	CAP. CERAMIC 15P 5% 50V	Q118	2SC2785(F)	TR. SI, NPN
C159	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q119	2SC2785(F)	TR. SI, NPN
C160	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q120	2SC2785(F)	TR. SI, NPN
C161	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q121	2SA1175(F)	TR. SI, PNP
C162	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q122	2SA1175(F)	TR. SI, PNP
C163	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V	Q123	2SA1175(F)	TR. SI, PNP
C164	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q124	2SC2912(S)	TR. SI, NPN
C165	CC45CH1H151J	CAP. CERAMIC 150P 5% 50V	Q125	2SA1210(S)	TR. SI, PNP
C166	NO USE		Q126	2SC2785(F)	TR. SI, NPN
C167	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V	Q127	2SC2912(S)	TR. SI, NPN
C168	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q128	2SC2785(F)	TR. SI, NPN
C169	CC45FCH1H050C		Q129	2SC2785(F)	TR. SI, NPN
C173	C91-0572-05	CAP. CERAMIC 0.1 12V	R001	RN148K2E4701F	RES. METAL FILM 4.7K 1% 1/4W
C174	C91-0572-05	CAP. CERAMIC 0.1 12V	R002	RD14BB2E221J	RES. CARBON 220 5% 1/4W
			R003	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
D001	DS442X	DIODE	R004	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
D002	DS442X	DIODE	R005	RN148K2E4702F	RES. METAL FILM 47K 1% 1/4W
D003	NO USE		R006	RD14BB2E101J	RES. CARBON 100 5% 1/4W
D004	W06C	DIODE SILICON RECTIFIER	R007	RN148K2E2403F	RES. METAL FILM 240K 1% 1/4W
D005	W06C	DIODE SILICON RECTIFIER	R008	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
D006	1SS83	DIODE SILICON SWITCHING	R009	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
D007	1SS83	DIODE SILICON SWITCHING	R010	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W
D008	DS442X	DIODE	R011	RD14BB2E221J	RES. CARBON 220 5% 1/4W
D009	DS442X	DIODE	R012	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
			R013	R92-1033-05	RES. FIXED 33M
D101	DS442X	DIODE	R014	RD14BB2E334J	RES. CARBON 330K 5% 1/4W
D102	NO USE		R015	R92-1034-05	RES. METAL FILM 47M
D103	DS442X	DIODE	R016	R92-1026-05	RES. METAL FILM 3.3M
D104	DS442X	DIODE	R017	R92-1032-05	RES. FIXED 22M
D105	DS442X	DIODE	R018	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
D106	DS442X	DIODE	R019	RD14BB2E393J	RES. CARBON 39K 5% 1/4W
D107	DS442X	DIODE			
D108	DS442X	DIODE			

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION				REF.NO	PARTS NO	NAME & DESCRIPTION			
R020	RD14BB2E333J	RES. CARBON 33K	5%	1/4W		R181	RD14BB2E822J	RES. CARBON 8.2K	5%	1/4W	
R021	RD14BB2E473J	RES. CARBON 47K	5%	1/4W		R182	RD14BB2E103J	RES. CARBON 10K	5%	1/4W	
R022	RD14BB2E103J	RES. CARBON 10K	5%	1/4W		R183	RD14BB2E124J	RES. CARBON 120K	5%	1/4W	
R023	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W		R184	RD14BB2E621J	RES. CARBON 620	5%	1/4W	
R024	RN14BK2E6800F	RES. METAL FILM 680	1%	1/4W		R185	RD14BB2E102J	RES. CARBON 1K	5%	1/4W	
R025	RN14BK2E2402F	RES. METAL FILM 24K	1%	1/4W		R186	RD14BB2E473J	RES. CARBON 47K	5%	1/4W	
R026	RN14BK2E1302F	RES. METAL FILM 13K	1%	1/4W		R187	RD14BB2E183J	RES. CARBON 18K	5%	1/4W	
R027	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		R188	RD14BB2E103J	RES. CARBON 10K	5%	1/4W	
R028	RD14BB2E562J	RES. CARBON 5.6K	5%	1/4W		R189	RD14BB2E102J	RES. CARBON 1K	5%	1/4W	
R029	RD14BB2E4R7J	RES. CARBON 4.7	5%	1/4W		R190	RS14GB3D103J	RES. METAL FILM 10K	5%	2W	
R030	NO USE					R191	RD14BB2E124J	RES. CARBON 120K	5%	1/4W	
R031	RD14BB2E470J	RES. CARBON 47	5%	1/4W		R192	RD14BB2E103J	RES. CARBON 10K	5%	1/4W	
R032	RD14BB2E224J	RES. CARBON 220K	5%	1/4W		R193	RD14BB2E122J	RES. CARBON 1.2K	5%	1/4W	
R033	RD14BB2E563J	RES. CARBON 56K	5%	1/4W		R194	RD14BB2E122J	RES. CARBON 1.2K	5%	1/4W	
						R195	RD14BB2E821J	RES. CARBON 820	5%	1/4W	
R101	RN14BK2E1004F	RES. METAL FILM 1M	1%	1/4W		R196	RD14BB2E821J	RES. CARBON 820	5%	1/4W	
R102	RD14BB2E104J	RES. CARBON 100K	5%	1/4W		R197	NO USE				
R103	RD14BB2E153J	RES. CARBON 15K	5%	1/4W		R198	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W	
R104	RD14BB2E153J	RES. CARBON 15K	5%	1/4W		R199	RD14BB2E221J	RES. CARBON 220	5%	1/4W	
R105	RD14BB2E152J	RES. CARBON 1.5K	5%	1/4W							
R106	RD14BB2E223J	RES. CARBON 22K	5%	1/4W		R205	RD14BB2E102J	RES. CARBON 1K	5%	1/4W	
R107	RN14BK2E3301F	RES. METAL FILM 3.3K	1%	1/4W		R206	NO USE				
R108	RN14BK2E3300F	RES. METAL FILM 330	1%	1/4W		R207	RN14BK2E9101F	RES. METAL FILM 9.1K	1%	1/4W	
R109	RN14BK2E3600F	RES. METAL FILM 360	1%	1/4W							
R110	RN14BK2E4701F	RES. METAL FILM 4.7K	1%	1/4W		R210	RD14BB2E101J	RES. CARBON 100	5%	1/4W	
R111	RN14BK2E5101F	RES. METAL FILM 5.1K	1%	1/4W		R211	RD14BB2E470J	RES. CARBON 47	5%	1/4W	
R112	RD14BB2E103J	RES. CARBON 10K	5%	1/4W		R212	RD14BB2E101J	RES. CARBON 100	5%	1/4W	
R113	RD14BB2E183J	RES. CARBON 18K	5%	1/4W		R213	RD14BB2E152J	RES. CARBON 1.5K	5%	1/4W	
R114	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W		R214	RN14BK2E3601F	RES. METAL FILM 3.6K	1%	1/4W	
R115	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W							
R116	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W		R217	RD14BB2E562J	RES. CARBON 5.6K	5%	1/4W	
R117	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W		R218	RD14BB2E563J	RES. CARBON 56K	5%	1/4W	
R118	RD14BB2E105J	RES. CARBON 1M	5%	1/4W							
R119	RD14BB2E272J	RES. CARBON 2.7K	5%	1/4W		R221	RD14BB2E133J	RES. CARBON 13K	5%	1/4W	
R120	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		R222	RD14BB2E102J	RES. CARBON 1K	5%	1/4W	
R121	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W		R223	RD14BB2E103J	RES. CARBON 10K	5%	1/4W	
R122	RN14BK2E2701F	RES. METAL FILM 2.7K	1%	1/4W							
R123	RN14BK2E3600F	RES. METAL FILM 360	1%	1/4W		S103	S02-2507-05	ROTARY SWITCH			
R124	RN14BK2E3600F	RES. METAL FILM 360	1%	1/4W		S104	S33-2501-05	LEVER SWITCH			
R125	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		S105	S32-2012-05	LEVER SWITCH			
R126	RN14BK2E1801F	RES. METAL FILM 1.8K	1%	1/4W		S106	S32-4007-05	SLIDE SWITCH			
R127	RN14BK2E2701F	RES. METAL FILM 2.7K	1%	1/4W							
R128	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		T001	L19-0413-05	CONVERTOR TRANSFORMER			
R129	RD14BB2E561J	RES. CARBON 560	5%	1/4W							
R130	RD14BB2E182J	RES. CARBON 1.8K	5%	1/4W		TC101	C05-0422-05	CAP. TRIMMER 20P			
R131	RD14BB2E681J	RES. CARBON 680	5%	1/4W							
R132	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W		U001	NJM4558D	IC, DUAL OP-AMP			
R133	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W							
R134	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		U101	MC10103L	IC, QUAD 2-INPUT OR GATE			
R135	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W		U102	SN74LS112N	IC, DUAL J-K FLIP-FLOP			
R136	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W		U103	SN74LS02N	IC, QUAD 2-INPUT NOR GATE			
R137	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		U104	SN74LS00N	IC, QUAD 2-INPUT NAND GATE			
R138	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		U105	SN74LS08N	IC, QUAD 2-INPUT AND GATE			
R139	RD14BB2E562J	RES. CARBON 5.6K	5%	1/4W							
R140	RD14BB2E221J	RES. CARBON 220	5%	1/4W		VR001	R12-5516-05	RES. SEMI FIXED 100K OHM B			
R141	RD14BB2E221J	RES. CARBON 220	5%	1/4W							
R142	RD14BB2E220J	RES. CARBON 22	5%	1/4W		VR101	R01-3510-05	V.R. WITH SW. 10K B			
R143	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W		VR102	R01-3510-05	V.R. WITH SW. 10K B			
R144	RD14BB2E103J	RES. CARBON 10K	5%	1/4W		VR103	S02-2507-15	ROTARY SWITCH WITH VR.2KB			
R145	RD14BB2E182J	RES. CARBON 1.8K	5%	1/4W		VR104	R12-3520-05	RES. SEMI FIXED 10K OHM B			
R146	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W		VR105	R12-1518-05	RES. SEMI FIXED 2K B			
R147	RN14BK2E3302F	RES. METAL FILM 33K	1%	1/4W		VR106	R12-0421-05	RES. SEMI FIXED 100 B			
R148	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		VR107	R12-1517-05	RES. SEMI FIXED 1KB			
R149	RN14BK2E3602F	RES. METAL FILM 36K	1%	1/4W		VR108	NO USE				
R150	RS14GB3D183J	RES. METAL FILM 18K	5%	2W		VR109	R12-5518-05	RES. SEMI FIXED 200K OHM B			
R151	RD14BB2E102J	RES. CARBON 1K	5%	1/4W		VR110	NO USE				
R152	RD14BB2E153J	RES. CARBON 15K	5%	1/4W		VR111	R12-0540-05	RES. SEMI FIXED 500 B			
R153	RD14BB2E153J	RES. CARBON 15K	5%	1/4W							
R154	RD14BB2E133J	RES. CARBON 13K	5%	1/4W							
R155	RD14BB2C182J	RES. CARBON 1.8K	5%	1/6W							
R156	RN14BK2E1201F	RES. METAL FILM 1.2K	1%	1/4W							
R157	RN14BK2E1201F	RES. METAL FILM 1.2K	1%	1/4W							
R158	RN14BK2E4301F	RES. METAL FILM 4.3K	1%	1/4W							
R159	RN14BK2E9101F	RES. METAL FILM 9.1K	1%	1/4W							
R160	RN14BK2E3004F	RES. METAL FILM 3M	1%	1/4W							
R161	RN14BK2E1004F	RES. METAL FILM 1M	1%	1/4W							
R162	RN14BK2E5003F	RES. METAL FILM 500K	1%	1/4W							
R163	RN14BK2E3003F	RES. METAL FILM 300K	1%	1/4W							
R164	RN14BK2E1003F	RES. METAL FILM 100K	1%	1/4W							
R165	RN14BK2E5002F	RES. METAL FILM 50K	1%	1/4W							
R166	RN14BK2E3002F	RES. METAL FILM 30K	1%	1/4W							
R167	RN14BK2E2002F	RES. METAL FILM 20K	1%	1/4W							
R168	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W							
R169	RD14BB2E222J	RES. CARBON 2.2K	5%	1/4W							
R170	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W							
R171	RN14BK2E4701F	RES. METAL FILM 4.7K	1%	1/4W							
R172	RD14BB2E472J	RES. CARBON 4.7K	5%	1/4W							
R173	RD14BB2E101J	RES. CARBON 100	5%	1/4W							
R174	RD14BB2E391J	RES. CARBON 390	5%	1/4W							
R175	RN14BK2E2201F	RES. METAL FILM 2.2K	1%	1/4W							
R176	RN14BK2E2201F	RES. METAL FILM 2.2K	1%	1/4W							
R177	RD14BB2E182J	RES. CARBON 1.8K	5%	1/4W							
R178	RD14BB2E182J	RES. CARBON 1.8K	5%	1/4W							
R179	RD14BB2E103J	RES. CARBON 10K	5%	1/4W							
R180	RN14BK2E1202F	RES. METAL FILM 12K	1%	1/4W							

HORIZONTAL & HIGH VOLTAGE UNIT (X74-1340-03)

REF.NO	PARTS NO	NAME & DESCRIPTION			
	E23-0015-04	EARTH LUG			
	E23-0046-04	TERMINAL			
	E31-2170-05	JUMPING WIRE			
	E33-4029-00	WIRE ASSY			
	F01-0230-04	HEAT SINK			
	F01-0820-04	HEAT SINK			
	F01-0835-05	HEAT SINK			
	F15-0727-04	HOLDER (NEON TUBE)			
	F20-0622-05	INSULATOR			
	J25-2998-13	PCB (UNMOUNTED)			
	J31-0604-04	COLLAR			
	J31-0604-04	COLLAR			
	N19-0191-05	WASHER NONMETAL			
	N30-3006-46	SCREW, PAN HD M 3X6			
	N30-3008-46	SCREW, PAN HD M 3X8			
	R92-0150-05	JUMPING RES. ZERO OHM			
	W02-0409-05	HIGH VOLTAGE POWER BLOCK			
	212-3013-05	TUBE (PLASTIC)			
C001	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V			
C002	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V			

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
C003	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	C169	CC45FCH1H050C	
C004	CE04FW1H100M	CAP. ELECTRO 10 20% 250V	C173	C91-0572-05	CAP. CERAMIC 0.1 12V
C005	CE04W2E100M	CAP. ELECTRO 10 20% 250V	C174	C91-0572-05	CAP. CERAMIC 0.1 12V
C006	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V	D001	DS442X	DIODE
C007	CQ93FM1H153K	CAP. MYLAR 0.015 10% 50V	D002	DS442X	DIODE
C008	CE04W1V471M	CAP. ELECTRO 470 20% 35V	D003	NO USE	
C009	CQ93FM1H104K	CAP. MYLAR 0.1 10% 50V	D004	W06C	DIODE SILICON RECTIFIER
C010	CQ93FM1H223K	CAP. MYLAR 0.022 10% 50V	D005	W06C	DIODE SILICON RECTIFIER
C011	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V	D006	1SS83	DIODE SILICON SWITCHING
C012	CK45E3F332P	CAP. CERAMIC 3300P 3.1K	D007	1SS83	DIODE SILICON SWITCHING
C013	CK45E3F332P	CAP. CERAMIC 3300P 3.1K	D008	DS442X	DIODE
C014	NO USE		D009	DS442X	DIODE
C015	CE04W2E010M	CAP. ELECTRO 1 20% 250V	D101	DS442X	DIODE
C016	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V	D102	NO USE	
C017	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	D103	DS442X	DIODE
C018	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	D104	DS442X	DIODE
C019	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V	D105	DS442X	DIODE
C020	CE04W1E101M	CAP. ELECTRO 100 20% 25V	D106	DS442X	DIODE
C021	CK45B2H103K	CAP. CERAMIC 0.01 10% 500V	D107	DS442X	DIODE
C022	CE04W1E101M	CAP. ELECTRO 100 20% 25V	D108	DS442X	DIODE
C023	CE04W1E101M	CAP. ELECTRO 100 20% 25V	D109	DS442X	DIODE
C024	C90-0912-05	CAP. ELECTRO 220 20% 35V	D110	DS442X	DIODE
C025	C90-0912-05	CAP. ELECTRO 220 20% 35V	D111	DS442X	DIODE
C026	CK45F1H103Z	CAP. CERAMIC 0.01 50V	D116	1SS83	DIODE SILICON SWITCHING
C027	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	D117	WZ-050	DIODE, ZENER 5V
C028	CE04FW2A3R3M	CAP. ELECTRO 3.3 20% 100V	D118	DS442X	DIODE
C029	C91-0570-05	CAP. CERAMIC 4700P 3KV	D119	NO USE	
C030	CK45E3F102P	CAP. CERAMIC 1000P 3.1K	D120	DS442X	DIODE
C031	CC45FCH1H180J	CAP. CERAMIC 18P 5% 50V	D121	DS442X	DIODE
C101	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V	D122	1SS83	DIODE SILICON SWITCHING
C102	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V	D123	1SS83	DIODE SILICON SWITCHING
C103	CK45F1H103Z	CAP. CERAMIC 0.01 50V	D124	DS442X	DIODE
C104	CK45F1H103Z	CAP. CERAMIC 0.01 50V	D125	DS442X	DIODE
C105	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V	L001	L40-1011-13	FERRI INDUCTOR
C106	CE04FW1H100M	CAP. ELECTRO 10 20% 50V	L002	L40-1011-13	FERRI INDUCTOR
C107	NO USE		L003	L40-1021-03	FERRI INDUCTOR
C108	CE04HW1H010M	CAP. ELECTRO 1 20% 50V	L004	L40-1021-13	FERRI INDUCTOR
C109	CK45B1H472K	CAP. CERAMIC 4700P 10% 50V	L005	L40-1021-13	FERRI INDUCTOR
C110	CK45F1H103Z	CAP. CERAMIC 0.01 50V	L006	L40-1021-13	FERRI INDUCTOR
C111	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	L007	L40-1021-13	FERRI INDUCTOR
C112	CK45F1H103Z	CAP. CERAMIC 0.01 50V	L008	L40-4791-02	FERRI INDUCTOR
C113	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	L101	L40-1011-13	FERRI INDUCTOR
C114	CE04HW1H010M	CAP. ELECTRO 1 20% 50V	NL001	NE-2B	NEON LAMP
C115	CE04FW1A101M	CAP. ELECTRO 100 20% 10V	NL002	NE-2B	NEON LAMP
C116	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P001	E40-0274-05	PIN CONNECTOR 2P
C117	CK45F1H103Z	CAP. CERAMIC 0.01 50V	P002	E40-0374-05	PIN CONNECTOR 3P
C118	CC45CH2H100D	CAP. CERAMIC 10P 0.5P 500V	P003	E40-0335-05	PIN CONNECTOR 3P
C119	CC45CH2H100D	CAP. CERAMIC 10P 0.5P 500V	P004	E40-0535-05	PIN CONNECTOR 5P
C120	CF93AN2A105J	CAP. POLYESTHEL 1 5% 100V	P005	E40-0233-05	PIN CONNECTOR 2P
C121	CQ93BP2A103F	CAP. MYLAR 0.01 1% 100V	P101	E40-1116-05	PIN CONNECTOR 11P
C122	CM93BD2A900J	CAP. MICA 90P 5% 100V	P102	E40-1116-05	PIN CONNECTOR 11P
C123	CQ93FM1H102K	CAP. MYLAR 1000P 10% 50V	P103	E40-0273-05	PIN CONNECTOR 2 CONTACT
C124	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q001	2SC2912(S)	TR. SI, NPN
C125	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q002	2SA1210(S)	TR. SI, PNP
C126	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q003	2SD613(E)	TR. SI, NPN
C127	NO USE		Q004	2SC2785(F)	TR. SI, NPN
C128	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q005	2SC2271(D)	TR. SI, NPN
C129	CE04FW1H010M	CAP. ELECTRO 1 20% 50V	Q101	2SK117(Y)	FET. N-CHANNEL
C130	NO USE		Q102	2SK117(Y)	FET. N-CHANNEL
C131	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q103	2SC2785(F)	TR. SI, NPN
C132	NO USE		Q104	2SC2785(F)	TR. SI, NPN
C133	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q105	2SC2785(F)	TR. SI, NPN
C134	CC45FCH1H470J	CAP. CERAMIC 47P 5% 50V	Q106	2SC2785(F)	TR. SI, NPN
C135	CC45CH2H030C	CAP. CERAMIC 3P 0.25P 500V	Q107	2SA1175(F)	TR. SI, PNP
C136	CM93BD2A151J	CAP. MICA 150P 5% 100V	Q108	2SA1175(F)	TR. SI, PNP
C140	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q109	2SA1175(F)	TR. SI, PNP
C143	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q110	2SA1175(F)	TR. SI, PNP
C144	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q111	2SA1175(F)	TR. SI, PNP
C145	C91-0572-05	CAP. CERAMIC 0.1 12V	Q112	2SA1175(F)	TR. SI, PNP
C146	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q113	2SC2785(F)	TR. SI, NPN
C147	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q114	2SC2785(F)	TR. SI, NPN
C148	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q115	2SK117(Y)	FET. N-CHANNEL
C149	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q116	2SC2785(F)	TR. SI, NPN
C150	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q117	2SC2785(F)	TR. SI, NPN
C151	CE04W1A221M	CAP. ELECTRO 220 20% 10V	Q118	2SC2785(F)	TR. SI, NPN
C152	CE04W1E101M	CAP. ELECTRO 100 20% 25V	Q119	2SC2785(F)	TR. SI, NPN
C153	CK45F1H103Z	CAP. CERAMIC 0.01 50V	Q120	2SC2785(F)	TR. SI, NPN
C154	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V	Q121	2SA1175(F)	TR. SI, PNP
C155	CK45B2H472K	CAP. CERAMIC 4700P 10% 500V	Q122	2SA1175(F)	TR. SI, PNP
C156	NO USE		Q123	2SA1175(F)	TR. SI, PNP
C157	CQ93FM1H103K	CAP. MYLAR 0.01 10% 50V	Q124	2SC2912(S)	TR. SI, NPN
C158	CC45FCH1H150J	CAP. CERAMIC 15P 5% 50V	Q125	2SA1210(S)	TR. SI, PNP
C159	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q126	2SC2785(F)	TR. SI, NPN
C160	CE04FW1E470M	CAP. ELECTRO 47 20% 25V	Q127	2SC2912(S)	TR. SI, NPN
C161	CE04FW1E470M	CAP. ELECTRO 47 20% 25V			
C162	CK45F1H103Z	CAP. CERAMIC 0.01 50V			
C163	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V			
C164	CK45F1H103Z	CAP. CERAMIC 0.01 50V			
C165	CC45CH1H151J	CAP. CERAMIC 150P 5% 50V			
C166	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V			
C167	CC45CH1H221J	CAP. CERAMIC 220P 5% 50V			
C168	CE04W1E101M	CAP. ELECTRO 100 20% 25V			

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
Q128	2SC2785(F)	TR. SI, NPN	R157	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W
Q129	2SC2785(F)	TR. SI, NPN	R158	RN14BK2E6801F	RES. METAL FILM 6.8K 1% 1/4W
Q130	2SK117(Y)	FET. N-CHANNEL	R159	RN14BK2E9101F	RES. METAL FILM 9.1K 1% 1/4W
Q131	2SA1175(F)	TR. SI, PNP	R160	RN14BK2E3004F	RES. METAL FILM 3M 1% 1/4W
R001	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W	R161	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R002	RD14BB2E221J	RES. CARBON 220 5% 1/4W	R162	RN14BK2E5003F	RES. METAL FILM 500K 1% 1/4W
R003	RD14BB2E183J	RES. CARBON 18K 5% 1/4W	R163	RN14BK2E3003F	RES. METAL FILM 300K 1% 1/4W
R004	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	R164	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R005	RN14BK2E4702F	RES. METAL FILM 47K 1% 1/4W	R165	RN14BK2E5002F	RES. METAL FILM 50K 1% 1/4W
R006	RD14BB2E101J	RES. CARBON 100 5% 1/4W	R166	RN14BK2E3002F	RES. METAL FILM 30K 1% 1/4W
R007	RN14BK2E2403F	RES. METAL FILM 240K 1% 1/4W	R167	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R008	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	R168	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R009	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	R169	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R010	RD14BB2E332J	RES. CARBON 3.3K 5% 1/4W	R170	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R011	RD14BB2E221J	RES. CARBON 220 5% 1/4W	R171	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W
R012	RD14BB2E103J	RES. CARBON 10K 5% 1/4W	R172	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R013	R92-1033-05	RES. FIXED 33M	R173	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R014	RD14BB2E334J	RES. CARBON 330K 5% 1/4W	R174	RD14BB2E391J	RES. CARBON 390 5% 1/4W
R015	R92-1034-05	RES. METAL FILM 47M	R175	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R016	R92-1026-05	RES. METAL FILM 3.3M	R176	RN14BK2E2201F	RES. METAL FILM 2.2K 1% 1/4W
R017	R92-1032-05	RES. FIXED 22M	R177	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R018	RD14BB2E473J	RES. CARBON 47K 5% 1/4W	R178	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W
R019	RD14BB2E393J	RES. CARBON 39K 5% 1/4W	R179	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R020	RD14BB2E333J	RES. CARBON 33K 5% 1/4W	R180	RN14BK2E1202F	RES. METAL FILM 12K 1% 1/4W
R021	RD14BB2E473J	RES. CARBON 47K 5% 1/4W	R181	RD14BB2E822J	RES. CARBON 8.2K 5% 1/4W
R022	RD14BB2E103J	RES. CARBON 10K 5% 1/4W	R182	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R023	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	R183	RD14BB2E124J	RES. CARBON 12K 5% 1/4W
R024	RN14BK2E6800F	RES. METAL FILM 680 1% 1/4W	R184	RD14BB2E621J	RES. CARBON 620 5% 1/4W
R025	RN14BK2E2402F	RES. METAL FILM 24K 1% 1/4W	R185	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R026	RN14BK2E1302F	RES. METAL FILM 13K 1% 1/4W	R186	RD14BB2E473J	RES. CARBON 47K 5% 1/4W
R027	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	R187	RD14BB2E183J	RES. CARBON 18K 5% 1/4W
R028	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W	R188	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R029	RD14BB2E4R7J	RES. CARBON 4.7 5% 1/4W	R189	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R030	NO USE		R190	RS14GB3D103J	RES. METAL FILM 10K 5% 2W
R031	RD14BB2E470J	RES. CARBON 47 5% 1/4W	R191	RD14BB2E124J	RES. CARBON 120K 5% 1/4W
R032	RD14BB2E224J	RES. CARBON 220K 5% 1/4W	R192	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R033	RD14BB2E563J	RES. CARBON 56K 5% 1/4W	R195	RD14BB2E821J	RES. CARBON 820 5% 1/4W
R101	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W	R196	RD14BB2E821J	RES. CARBON 820 5% 1/4W
R102	RD14BB2E104J	RES. CARBON 100K 5% 1/4W	R197	NO USE	
R103	RD14BB2E153J	RES. CARBON 15K 5% 1/4W	R198	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R104	RD14BB2E153J	RES. CARBON 15K 5% 1/4W	R199	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R105	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W	R200	RN14BK2E1004F	RES. METAL FILM 1M 1% 1/4W
R106	RD14BB2E223J	RES. CARBON 22K 5% 1/4W	R201	RD14BB2E104J	RES. CARBON 100K 5% 1/4W
R107	RN14BK2E3301F	RES. METAL FILM 3.3K 1% 1/4W	R202	RD14BB2E153J	RES. CARBON 15K 5% 1/4W
R108	RN14BK2E3300F	RES. METAL FILM 330 1% 1/4W	R203	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W
R109	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W	R204	RD14BB2E751J	RES. CARBON 750 5% 1/4W
R110	RN14BK2E4701F	RES. METAL FILM 4.7K 1% 1/4W	R205	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R111	RN14BK2E5101F	RES. METAL FILM 5.1K 1% 1/4W	R206	NO USE	
R112	RD14BB2E103J	RES. CARBON 10K 5% 1/4W	R207	RN14BK2E9101F	RES. METAL FILM 9.1K 1% 1/4W
R113	RD14BB2E183J	RES. CARBON 18K 5% 1/4W	R210	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R114	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	R211	RD14BB2E470J	RES. CARBON 47 5% 1/4W
R115	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	R212	RD14BB2E101J	RES. CARBON 100 5% 1/4W
R116	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	R213	RD14BB2E152J	RES. CARBON 1.5K 5% 1/4W
R117	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W	R214	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R118	RD14BB2E105J	RES. CARBON 1M 5% 1/4W	R217	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W
R119	RD14BB2E272J	RES. CARBON 2.7K 5% 1/4W	R218	RD14BB2E563J	RES. CARBON 56K 5% 1/4W
R120	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	R221	RD14BB2E133J	RES. CARBON 13K 5% 1/4W
R121	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W	R222	RD14BB2E102J	RES. CARBON 1K 5% 1/4W
R122	RN14BK2E2701F	RES. METAL FILM 2.7K 1% 1/4W	R223	NO USE	
R123	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W	R224	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R124	RN14BK2E3600F	RES. METAL FILM 360 1% 1/4W	S103	S02-2508-05	ROTARY SWITCH
R125	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	S104	S32-2012-05	LEVER SWITCH
R126	RN14BK2E1801F	RES. METAL FILM 1.8K 1% 1/4W	S105	S32-2012-05	LEVER SWITCH
R127	RN14BK2E2701F	RES. METAL FILM 2.7K 1% 1/4W	S106	S32-4007-05	SLIDE SWITCH
R128	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	T001	L19-0413-05	CONVERTOR TRANSFORMER
R129	RD14BB2E561J	RES. CARBON 560 5% 1/4W	TC101	C05-0422-05	CAP. TRIMMER 20P
R130	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W	U001	NJM4558D	IC, DUAL OP-AMP
R131	RD14BB2E681J	RES. CARBON 680 5% 1/4W	U101	MC10103L	IC, QUAD 2-INPUT OR GATE
R132	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W	U102	SN74LS112N	IC, DUAL J-K FLIP-FLOP
R133	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	U103	SN74LS02N	IC, QUAD 2-INPUT NOR GATE
R134	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	VR001	R12-5516-05	RES. SEMI FIXED 100K OHM B
R135	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W	VR101	R01-3510-05	V.R. WITH SW. 10K B
R136	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W	VR102	R01-3510-05	V.R. WITH SW. 10K B
R137	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	VR103	S02-2508-15	ROTARY SWITCH WITH VR.2K,10KB
R138	RD14BB2E102J	RES. CARBON 1K 5% 1/4W	VR104	R12-3520-05	RES. SEMI FIXED 10K OHM B
R139	RD14BB2E562J	RES. CARBON 5.6K 5% 1/4W	VR105	R12-1518-05	RES. SEMI FIXED 2K B
R140	RD14BB2E221J	RES. CARBON 220 5% 1/4W	VR106	R12-0421-05	RES. SEMI FIXED 100 B
R141	RD14BB2E221J	RES. CARBON 220 5% 1/4W	VR107	R12-1517-05	RES. SEMI FIXED 1KB
R142	RD14BB2E220J	RES. CARBON 22 5% 1/4W	VR108	NO USE	
R143	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W	VR109	R12-5518-05	RES. SEMI FIXED 200K OHM B
R144	RD14BB2E103J	RES. CARBON 10K 5% 1/4W	VR110	R12-1517-05	RES. SEMI FIXED 1KB
R145	RD14BB2E182J	RES. CARBON 1.8K 5% 1/4W	VR111	R12-0540-05	RES. SEMI FIXED 500 B
R146	RD14BB2E472J	RES. CARBON 4.7K 5% 1/4W			
R147	RN14BK2E3302F	RES. METAL FILM 33K 1% 1/4W			
R148	RD14BB2E102J	RES. CARBON 1K 5% 1/4W			
R149	RN14BK2E3602F	RES. METAL FILM 36K 1% 1/4W			
R150	RS14GB3D183J	RES. METAL FILM 18K 5% 2W			
R151	RD14BB2E102J	RES. CARBON 1K 5% 1/4W			
R152	RD14BB2E153J	RES. CARBON 15K 5% 1/4W			
R153	RD14BB2E153J	RES. CARBON 15K 5% 1/4W			
R154	RD14BB2E133J	RES. CARBON 13K 5% 1/4W			
R155	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W			
R156	RN14BK2E1201F	RES. METAL FILM 1.2K 1% 1/4W			

PARTS LIST

CONNECTION UNIT

(X77-1260-00)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E33-4037-00	WIRE ASSY
	J25-2995-03	PCB (UNMOUNTED)
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C093M1H103J	CAP. MYLAR 0.01 5% 50V
C002	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
D001	DS442X	DIODE
D002	DS442X	DIODE
D003	S10B40	DIODE
D004	WZ-120	DIODE
J001	E31-2374-05	LEAD WIRE WITH CONNECTOR
P001	E40-0373-05	PIN CONNECTOR 3P
P001	E40-7203-05	PIN CONNECTOR 3P
P002	E40-7204-05	PIN CONNECTOR 4P
P003	E40-0604-05	PIN CONNECTOR 6P
P004	E40-0804-05	PIN CONNECTOR 8P
P005	E40-0804-05	PIN CONNECTOR 8P
P006	E40-1111-05	PIN CONNECTOR 11P
P007	E40-1111-05	PIN CONNECTOR 11P
P008	E40-1111-05	PIN CONNECTOR 11P
P009	E40-1111-05	PIN CONNECTOR 11P
P010	E40-0273-05	PIN CONNECTOR 2P
P011	NO USE	
P012	E40-0273-05	PIN CONNECTOR 2P
P013	E40-0273-05	PIN CONNECTOR 2P
P014	E40-0273-05	PIN CONNECTOR 2P
P015	E40-0673-05	PIN CONNECTOR 6P
Q001	2SC1384	TR. SI, NPN
Q002	2SA684	TR. SI, PNP
R001	RD14BB2E331J	RES. CARBON 330 5% 1/4W
R002	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R003	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R004	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R005	RD14BB2E330J	RES. CARBON 33 5% 1/4W
R006	RN14BK2E1300F	RES. METAL FILM 130 1% 1/4W
R007	RN14BK2E4302F	RES. METAL FILM 43K 1% 1/4W
R008	RN14BK2E9102F	RES. METAL FILM 91K 1% 1/4W
R009	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R010	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R011	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R012	NO USE	
R013	RD14BY2H100J	RES. CARBON 10 5% 1/2W
U001	NJM4558D	IC DUAL OP AMP.

REF.NO	PARTS NO	NAME & DESCRIPTION
R001	RD14BB2E331J	RES. CARBON 330 5% 1/4W
R005	RD14BB2E330J	RES. CARBON 33 5% 1/4W
R006	RN14BK2E1300F	RES. METAL FILM 130 1% 1/4W
R007	RN14BK2E4302F	RES. METAL FILM 43K 1% 1/4W
R008	RN14BK2E9102F	RES. METAL FILM 91K 1% 1/4W
R009	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R010	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R011	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R012	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R013	RD14BY2H100J	RES. CARBON 10 5% 1/2W
U001	NJM4558D	IC DUAL OP AMP.

CONNECTION UNIT

(X77-1260-02)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E33-4037-00	WIRE ASSY
	J25-2995-03	PCB (UNMOUNTED)
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C093M1H103J	CAP. MYLAR 0.01 5% 50V
C002	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
D001	DS442X	DIODE
D002	DS442X	DIODE
D003	S10B40	DIODE
D004	WZ-120	DIODE
J001	E31-2374-05	LEAD WIRE WITH CONNECTOR
P001	E40-0373-05	PIN CONNECTOR 3P
P001	E40-7203-05	PIN CONNECTOR 3P
P002	E40-7204-05	PIN CONNECTOR 4P
P003	E40-0604-05	PIN CONNECTOR 6P
P004	E40-0804-05	PIN CONNECTOR 8P
P005	E40-0804-05	PIN CONNECTOR 8P
P006	E40-1111-05	PIN CONNECTOR 11P
P007	E40-1111-05	PIN CONNECTOR 11P
P008	E40-1111-05	PIN CONNECTOR 11P
P009	E40-1111-05	PIN CONNECTOR 11P
P010	E40-0273-05	PIN CONNECTOR 2P
P011	NO USE	
P012	E40-0273-05	PIN CONNECTOR 2P
P013	E40-0273-05	PIN CONNECTOR 2P
P014	E40-0273-05	PIN CONNECTOR 2P
P015	E40-0673-05	PIN CONNECTOR 6P
Q001	2SC1384	TR. SI, NPN
Q002	2SA684	TR. SI, PNP
R001	RD14BB2E331J	RES. CARBON 330 5% 1/4W
R002	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R003	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R004	RD14BB2E103J	RES. CARBON 10K 5% 1/4W
R005	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R006	RN14BK2E1300F	RES. METAL FILM 130 1% 1/4W
R007	RN14BK2E4302F	RES. METAL FILM 43K 1% 1/4W
R008	RN14BK2E9102F	RES. METAL FILM 91K 1% 1/4W
R009	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R010	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R011	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R012	NO USE	
R013	RD14BY2H100J	RES. CARBON 10 5% 1/2W
U001	NJM4558D	IC DUAL OP AMP.

CONNECTION UNIT

(X77-1260-01)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E33-4037-00	WIRE ASSY
	J25-2995-03	PCB (UNMOUNTED)
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C093M1H103J	CAP. MYLAR 0.01 5% 50V
C002	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
D001	DS442X	DIODE
D002	DS442X	DIODE
D003	S10B40	DIODE
D004	WZ-120	DIODE
J001	E31-2374-05	LEAD WIRE WITH CONNECTOR
P001	E40-0373-05	PIN CONNECTOR 3P
P001	E40-7203-05	PIN CONNECTOR 3P
P002	E40-7204-05	PIN CONNECTOR 4P
P003	E40-0604-05	PIN CONNECTOR 6P
P004	E40-0804-05	PIN CONNECTOR 8P
P005	E40-0804-05	PIN CONNECTOR 8P
P006	E40-1111-05	PIN CONNECTOR 11P
P007	E40-1111-05	PIN CONNECTOR 11P
P008	E40-1111-05	PIN CONNECTOR 11P
P009	E40-1111-05	PIN CONNECTOR 11P
P010	E40-0273-05	PIN CONNECTOR 2P
P011	NO USE	
P012	E40-0273-05	PIN CONNECTOR 2P
P013	E40-0273-05	PIN CONNECTOR 2P
P014	E40-0273-05	PIN CONNECTOR 2P
P015	E40-0673-05	PIN CONNECTOR 6P
Q001	2SC1384	TR. SI, NPN
Q002	2SA684	TR. SI, PNP

CONNECTION UNIT

(X77-1260-03)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E33-4037-00	WIRE ASSY
	J25-2995-03	PCB (UNMOUNTED)
	R92-0150-05	JUMPING RES. ZERO OHM
C001	C093M1H103J	CAP. MYLAR 0.01 5% 50V
C002	CK45B1H103K	CAP. CERAMIC 0.01 10% 50V
D001	DS442X	DIODE
D002	DS442X	DIODE
D003	S10B40	DIODE
D004	WZ-120	DIODE
J001	E31-2374-05	LEAD WIRE WITH CONNECTOR
P001	E40-0373-05	PIN CONNECTOR 3P
P001	E40-7203-05	PIN CONNECTOR 3P
P002	E40-7204-05	PIN CONNECTOR 4P
P003	E40-0604-05	PIN CONNECTOR 6P

PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
P004	E40-0804-05	PIN CONNECTOR 8P
P005	E40-0804-05	PIN CONNECTOR 8P
P006	E40-1111-05	PIN CONNECTOR 11P
P007	E40-1111-05	PIN CONNECTOR 11P
P008	E40-1111-05	PIN CONNECTOR 11P
P009	E40-1111-05	PIN CONNECTOR 11P
P010	E40-0273-05	PIN CONNECTOR 2P
P011	NO USE	
P012	E40-0273-05	PIN CONNECTOR 2P
P013	E40-0273-05	PIN CONNECTOR 2P
P014	E40-0273-05	PIN CONNECTOR 2P
P015	E40-0673-05	PIN CONNECTOR 6P
Q001	2SC1384	TR. SI, NPN
Q002	2SA684	TR. SI, PNP
R001	RD14BB2E331J	RES. CARBON 330 5% 1/4W
R005	RD14BB2E221J	RES. CARBON 220 5% 1/4W
R006	RN14BK2E1300F	RES. METAL FILM 130 1% 1/4W
R007	RN14BK2E4302F	RES. METAL FILM 43K 1% 1/4W
R008	RN14BK2E9102F	RES. METAL FILM 91K 1% 1/4W
R009	RN14BK2E1003F	RES. METAL FILM 100K 1% 1/4W
R010	RN14BK2E3601F	RES. METAL FILM 3.6K 1% 1/4W
R011	RD14BB2E392J	RES. CARBON 3.9K 5% 1/4W
R012	RD14BB2E222J	RES. CARBON 2.2K 5% 1/4W
R013	RD14BY2H100J	RES. CARBON 10 5% 1/2W
U001	NJM4558D	IC DUAL OP AMP.

CRT SOCKET UNIT

(X81-1250-00)

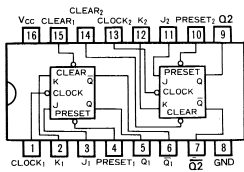
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	E01-0103-05	CRT SOCKET
	J25-2996-14	PCB (UNMOUNTED)
	R92-0150-05	JUMPING RES. ZERO OHM
J016	E31-2366-05	LEAD WIRE WITH CONNECTOR
J017	E31-2366-05	LEAD WIRE WITH CONNECTOR
J018	NO USE	
J019	E31-2364-05	LEAD WIRE WITH CONNECTOR
J020	NO USE	
J021	E31-2363-05	LEAD WIRE WITH CONNECTOR
J022	NO USE	
J023	E31-2365-05	LEAD WIRE WITH CONNECTOR
L001	L40-2292-13	FIXED INDUCTOR 2.2UH
L002	L40-2292-13	FIXED INDUCTOR 2.2UH
R001	RD14BB2E151J	RES. CARBON 150 5% 1/4W
R002	RD14BB2E151J	RES. CARBON 150 5% 1/4W

CRT SOCKET UNIT

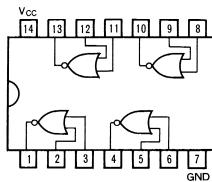
(X81-1250-01)

REF.NO	PARTS NO	NAME & DESCRIPTION
	E01-0103-05	CRT SOCKET
	J25-2996-14	PCB (UNMOUNTED)
C001	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
C002	CC45SL1H050C	CAP. CERAMIC 5P 0.25P 50V
J016	E31-2366-05	LEAD WIRE WITH CONNECTOR
J017	E31-2366-05	LEAD WIRE WITH CONNECTOR
J018	NO USE	
J019	E31-2364-05	LEAD WIRE WITH CONNECTOR
J020	NO USE	
J021	E31-2363-05	LEAD WIRE WITH CONNECTOR
J022	NO USE	
J023	E31-2365-05	LEAD WIRE WITH CONNECTOR
L001	L40-2792-13	FIXED INDUCTOR 2.7UH
L002	L40-2792-13	FIXED INDUCTOR 2.7UH
R001	RD14BB2E681J	RES. CARBON 680 5% 1/4W
R002	RD14BB2E681J	RES. CARBON 680 5% 1/4W

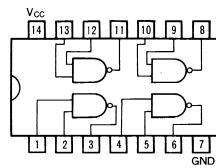
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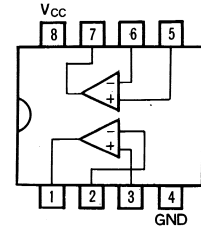
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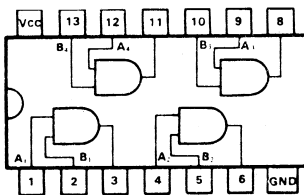
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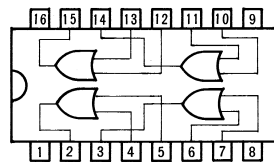
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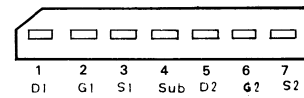
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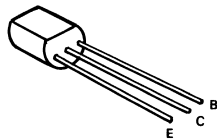
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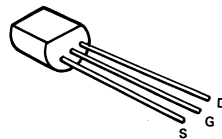
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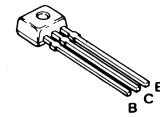
M47F(B)
M47F(C)
Bottom View



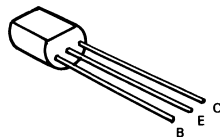
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2SA838 (C) 2SC2271 (E)
2SA1005 (K)



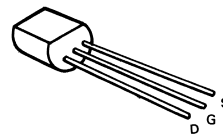
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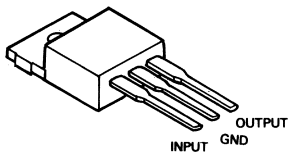
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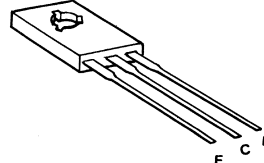
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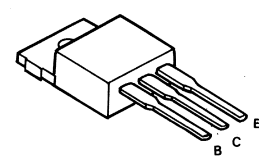
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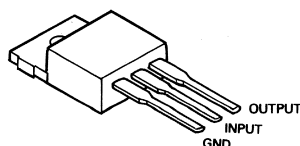
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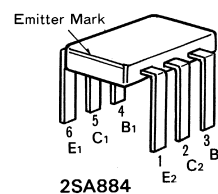
2SA1210
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2SA1009 (L, K)
2SD613E



μPC7915HA



2SA884