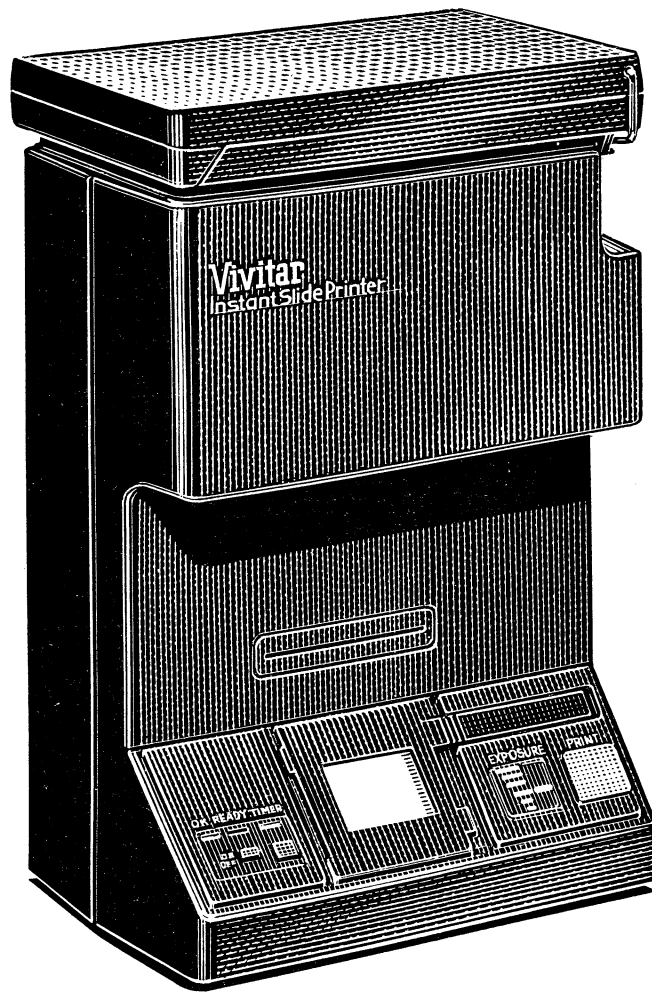


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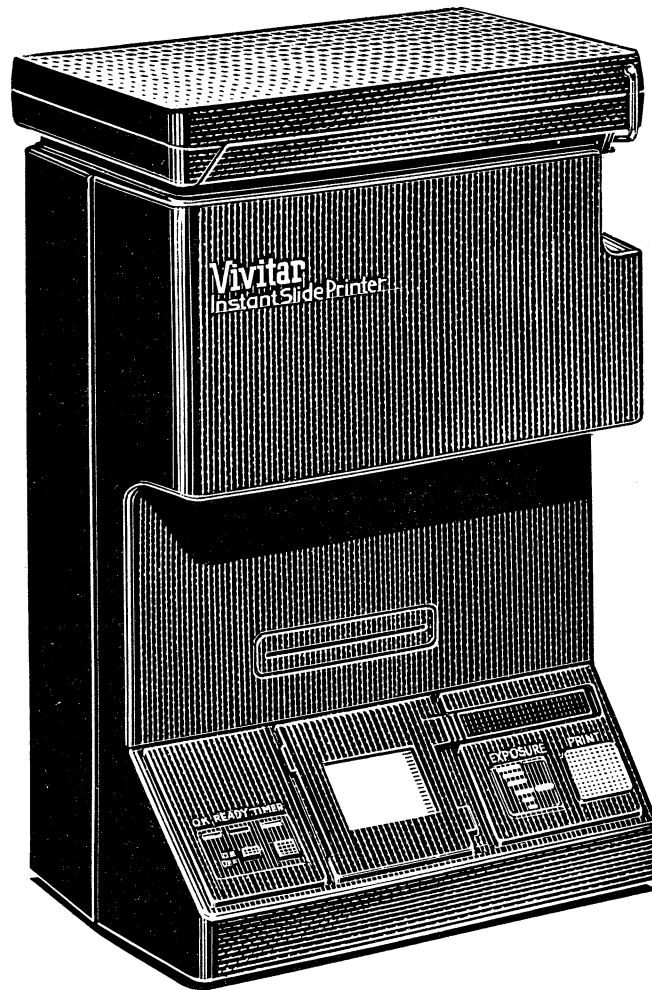


Instant Slide Printer

Publication No. 3746189 / March 1983

Vivitar®

Service Manual



Instant Slide Printer

Publication No. 3746189 / March 1983

This publication is the Service Manual which incorporates and supersedes the Illustrated Parts List previously supplied. The manual consists of the following pages:

Page	Revision	Date
Front Cover	Orig	3/83
Page A	Orig	3/83
i, ii, iii	Orig	3/83
1 – 31	Orig	3/83

For complete list of current manuals available, please request Vivitar Service Publications Index, Publication No. 3746068, from nearest Vivitar Service Center (See page i).

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CAUTION

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SECTION 1

INTRODUCTION AND IDENTIFICATION

1.1 SCOPE OF MANUAL

This publication is the Service Manual with Illustrated Parts List for the Vivitar Instant Slide Printer, which is identified by Vivitar Marketing Stock Number 0020008 and Vivitar Part Number 3900520.

The manual contains complete instructions for troubleshooting, disassembly and reassembly, and adjustment and calibration and incorporates and updates the Illustrated Parts List, Publication No. 3746184, which it supersedes.

1.2 SPECIFICATIONS

Slide Mounts	Accepts all standard cardboard, plastic, and glass mounts
Illumination	Vivitar automatic built-in electronic flash
Exposure Range	Balance for average exposed slide (equivalent, 0.9ND) Six stop range, 0.3 to 1.8ND
Exposure Adjustment	From normal setting: plus 1½ stops, minus 1 stop in ½-stop increments
Sensor	Center-weighted average
OK Light	Quench indicator
Safety Lock Out System	Slide must be in picture-taking position for flash/shutter to operate
Power Source	Four C-size alkaline cells; optional SB-6 AC Power Supply
Recycle Time	10 seconds
Shutter	Electronic solenoid
Composition Selector	Variable
Timer	Electronic/Audible — Two stage: Short beep at 35 seconds (Black & White film) Long beep at 70 seconds (Color print film)
Lens	Vivitar 29mm f/16 — Four elements, 2 groups
Filtration	Accepts 2x2 inch gelatin color filters
Magnification Ratio	3.435:1
Film Back	Polaroid CB-101 film back
Film	Polaroid Polacolor ER Land Pack Film type 669, Polacolor 2, and black & white type 665 Print and Negative film
Print Size	3¼ in. x 4¼ in. (83 x 108 cm)
Size	10 in. H x 6¾ in. W x 4-5/8 in. L (250mm H x 170mm W x 117mm L)
Weight	39 oz. (1106 grams)

Specifications subject to change without notice.

SECTION 2

PRINCIPLES OF OPERATION AND CIRCUIT DESCRIPTIONS

2.1 GENERAL

The Instant Slide Printer is a device for producing Polaroid Prints from standard 35mm slides by means of an automatically controlled electronic flash exposure from a completely self-contained illumination system. In addition to the illumination and exposure control system, the unit contains a high-quality projection lens, a slide viewing and holding system, and a Polaroid back that accommodates standard Polaroid 3¼ x 4¼ 8-exposure film packs. Prints can be made either in color or in negative/positive black and white.

The major circuits of the unit are oscillator, rectification and power storage, flash trigger, quench, light sensing, exposure and auto control, timer, shutter, and battery saver.

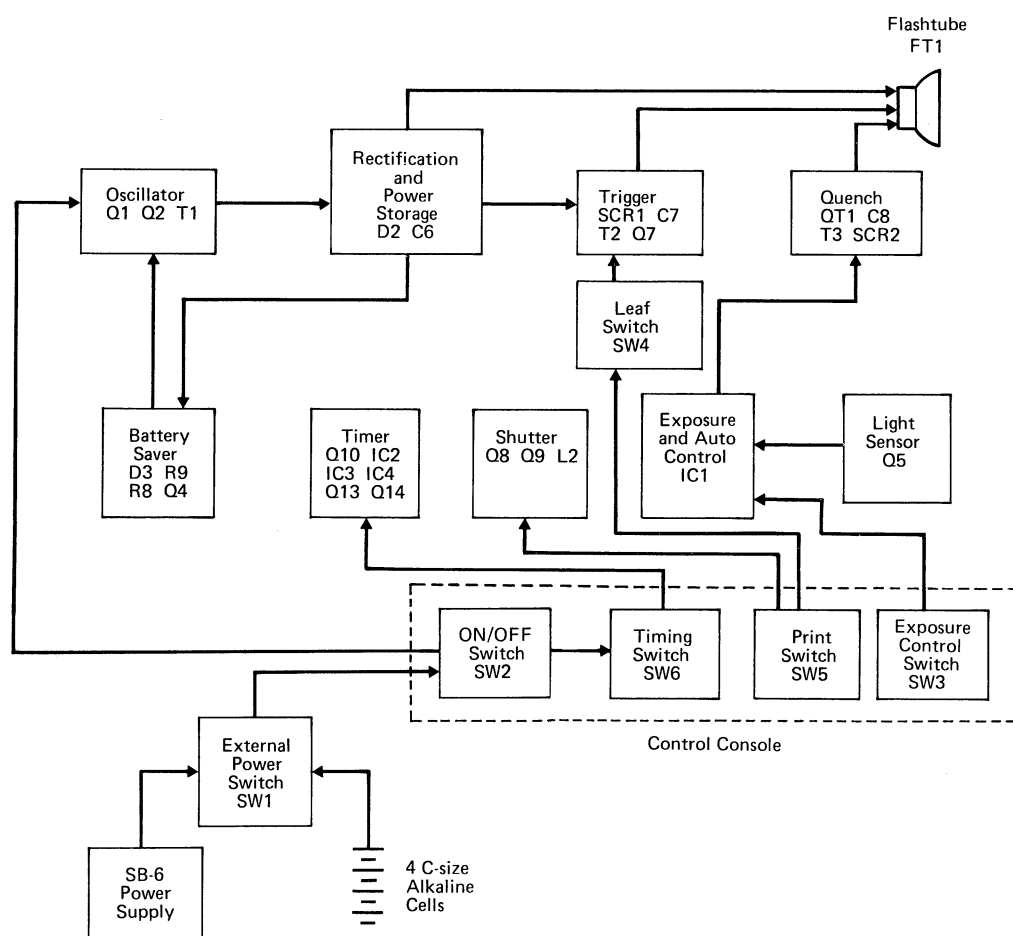


Figure 2-1. Block Diagram, Principles of Operation

2.2 POWER SOURCE

The Instant Slide Printer is designed to operate with either four C-size 1.5V alkaline cells or the Vivitar SB-6 AC adapter.

2.3 OSCILLATOR CIRCUIT

The major components of the oscillator circuit are the transistors Q1 and Q2 and the oscillator transformer T1. The transistors Q1 and Q2 act as an electronic switch that causes the power source voltage to pulsate. The pulsating DC, while passing through the primary winding of T1, induces a higher voltage in the secondary winding of the transformer. The transformer output current is rectified by diode D2 and used to charge the main capacitor C6.

2.4 BATTERY SAVER CIRCUIT

Variable resistor R9 is used to adjust the potential on zener diode D3 to a value which is a small percentage of the anode voltage. The voltage across main capacitor C6 will be 330VDC \pm 5VDC when fully charged using a regulated power supply or four fresh C-size alkaline cells. Transistor Q4 starts to conduct when zener voltage of D3 occurs as determined by the R9 adjustment. Q3 switches on and conducts to its saturation point, which stops the oscillation of Q1 and Q2.

Operation of the battery saver circuit can be verified when using the regulated power supply by observing the ammeter. The current will fluctuate between 200 and 650 mA once C6 is fully charged. This will not occur when the SB-6 power supply is used because its output is lower and will not trigger the circuit.

2.5 RECTIFIER AND POWER STORAGE CIRCUIT

The diode D2 rectifies the voltage produced by the oscillator circuit, and the power is stored in the main capacitor C6. The pulsating DC produced by the oscillator is stepped up by transformer T1. D2 also prevents C6 from discharging back into the secondary of T1 when input waveform goes in the negative direction.

2.6 TRIGGER CIRCUIT

When C6 is charged, the trigger capacitor C7 is also charged to the same potential through resistor R11. When print switch SW5 is depressed, with a slide inserted to close leaf switch SW4, transistor Q7 conducts through resistor R36. This applies the gate voltage to SCR1 which begins to conduct, permitting C7 to discharge through it. The discharge of C7 produces a momentary high voltage pulse in the secondary of transformer T2, which ionizes the gas in the flashtube. This provides a path for C6 to discharge through the flashtube and inductor L1. L1 is a current limiting device which controls the discharge rate of C6.

2.7 EXPOSURE CONTROL AND AUTO CIRCUIT

The light from the flashtube passing through the slide strikes phototransistor Q5, causing a current change. This results in a voltage change at pin 5 of amplifier IC1. A thin slide will yield a higher voltage than a dense slide. The input at IC1 pin 6 is from exposure control switch SW3 and light volume variable resistor R24. R24 acts as a ranging resistor to adjust the scale of the exposure control. Resistor R26 acts as a voltage divider between diode D6 and IC1 pin 3 which with IC1 pin 2 form a voltage reference circuit. Zener diodes D4 and D7 regulate the supply voltage to IC1.

A voltage reference circuit is comprised of resistors R30 through R33.

2.8 QUENCHTUBE

The trigger for quenchtube QT1 comes from operational amplifier IC1 pin 7 which applies the gate voltage to SCR2 which begins to conduct. Capacitor C8 discharges through SCR2 producing a momentary high voltage pulse in the secondary of transformer T3, which ionizes the gas in QT1. The internal resistance of QT1 is a small percentage of the flashtube resistance so that current is shunted through QT1 and L1 until C6 is almost completely discharged. This drop in voltage retriggers the oscillator circuit through Q3.

QT1 also serves as the OK light, which is the sufficient light indicator.

2.9 SHUTTER CONTROL CIRCUIT

Depressing print switch SW5 also causes transistors Q9 and Q8 to conduct. This energizes shutter solenoid L2, which removes the shutter blade from the light path. Capacitor C20 delays the output of transistor Q7. This assures that the shutter opens before flashtube FT1 fires. Q7 also causes diode D9 to conduct to the base of Q8, turning both Q8 and Q9 off and de-energizing L2.

Diode D11 acts as a clamping diode to allow current to bypass L2 after Q8 and Q9 turn off in order to suppress the potentially damaging high kickback EMF.

2.10 TIMER CIRCUIT

Depressing timer switch SW6 connects the power source to transistor Q10. Oscillator IC2 and binary counter IC3 start, and transistor Q12 turns on LED D12. Variable resistor R47 adjusts the frequency of oscillation to set the times when the beeps are heard. Refer to Timer Circuit Adjustment, Section 4.4.3, Page 9. IC4 controls the length of the beep signals generated by transistors Q13 and Q14, which send an oscillating signal to the beeper BZ1.

2.11 READY LIGHT NEON INDICATOR CIRCUIT

The neon indicator circuit Ne1 consists of resistor R6 and neon lamp Ne1. The voltage induced in T1 secondary passes current through diode D2, charging main capacitor C6. Ne1 will illuminate when C6 has reached a set potential, which is approximately 80 percent of its energy storage capacity or 265V. Refer to Main Capacitor Voltage Adjustment, Section 4.4.1, Page 8. Resistor R6 controls the neon current when the gas in Ne1 ionizes.

SECTION 3

DISASSEMBLY AND REASSEMBLY

3.1 GENERAL

This section contains procedures for disassembly, cleaning, electronic and mechanical component removal, and reassembly of the Vivitar Instant Slide Printer.

Disassemble the unit only to the extent necessary for operational checkout, troubleshooting, and repair. Complete exploded views, PC board layout wiring diagram, and schematic are provided in Sections 4 and 5, Figures 4-2, 5-1A, 5-1B, 5-2 and 5-3. Reference numbers used in this section correspond with reference numbers used in the exploded view drawings.

3.2 DISASSEMBLY

Remove batteries and/or disconnect SB-6 power supply to remove all power from printer. Refer to Figure 5-1A and 5-1B, pages 22 and 23, for parts reference.

3.3 CROPPING SELECTION ASSEMBLY REMOVAL

- 1) Lift up hinged viewing window of cropping selection assembly (4) and pry off ribbed slide bar by inserting a small flat blade screwdriver from the left side.
- 2) Lift out preview panel diffuser (13) exposing preview lamp La1.

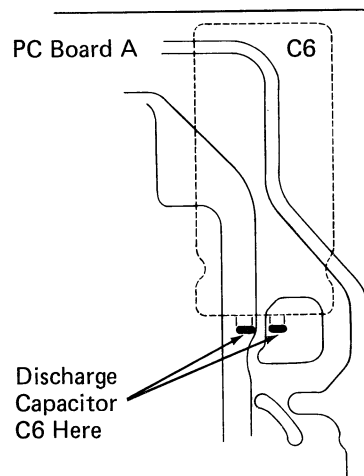
3.4 REAR COVER REMOVAL

- 1) Remove four screws (41) from rear cover.
- 2) Remove two screws (44) and rubber feet (19) from bottom of front cover.
- 3) Lift rear cover straight up and set to one side, being careful not to strain the interconnecting wires.

WARNING

Main capacitor C6 presents a serious shock hazard even when the power source is removed. Be sure that capacitor C6 is fully discharged through a 100 ohm, 10 watt resistor before continuing disassembly.

Figure 3-1. Capacitor C6, Showing Terminal Points for Discharging



3.5 BATTERY TERMINAL HOLDER REMOVAL

Remove one screw (45) and lift battery terminal holder (12) straight out.

3.6 PRINTED CIRCUIT BOARD (B) ASSEMBLY REMOVAL

Remove two screws (35) from the PC board assembly (47).

3.7 FLASHTUBE / REFLECTOR ASSEMBLY REMOVAL

Insert a small flat blade screwdriver between reflector assembly (9) and focus stage (5) and gently pry reflector assembly tab away from slot in focus stage.

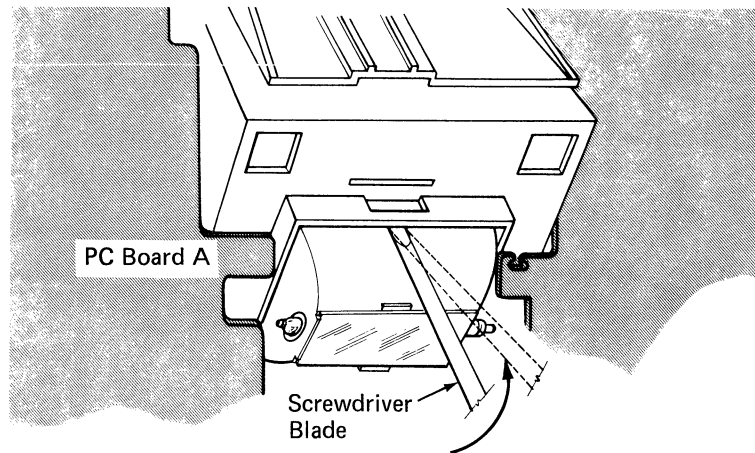


Figure 3-2. Removal of Flashtube/ Reflector Assembly

3.8 PREVIEW REFLECTOR ASSEMBLY REMOVAL

The preview reflector assembly (11) may be glued to the front cover. Break the upper glue seal with a knife blade and pry tab out using a small flat blade screwdriver. Pry the lower tab out by inserting screwdriver blade from the front of the printer.

3.9 PRINTED CIRCUIT BOARD (A) ASSEMBLY REMOVAL

- 1) Remove one screw (35) and support plate (27).
- 2) Remove two screws (37) from the PC board assembly (46).
- 3) Remove beeper BZ1 from inside front cover. Two side adhesive is used. Adhere beeper to corner of PC board.
- 4) Pivot PC board down to clear on/off switch cover (16) and exposure control switch cover (14) from front cover.
- 5) Disconnect two wires from shutter solenoid L2, two wires from phototransistor Q5, and two wires from leaf switch SW4.
- 6) Remove PC board from printer.

3.10 LIGHT EXCLUDING CHAMBER REMOVAL

- 1) Remove filter frame (23) and (24).
- 2) Remove two screws (40) holding light excluding chamber (3) to front cover.

3.11 POLAROID FILM BACK REMOVAL

- 1) Remove two screws (38) and six screws (39) to separate film back (34) from light excluding chamber.
- 2) Spread film back cover slightly and unclip from film pack holder.

3.12 FOCUS STAGE REMOVAL

CAUTION

Scribe a reference line on the focus stage (5) where it comes in contact with the light excluding chamber, Figure 3.3. This will allow the focus stage to be returned to the established focus position. If the focus stage or lens assembly is replaced, it will be necessary to refocus the printer. This should be performed by a Vivitar repair facility.

3.13 SLIDE HOLDER REMOVAL

Insert a small flat blade screwdriver in the square openings of focus stage (5) and pry between focus stage and slide holder (6). (Slide holder contains leaf switch SW4.)

3.14 SHUTTER ASSEMBLY REMOVAL

Remove six screws (36) from the shutter assembly (25). (Shutter solenoid L2 plunger is retained by shutter assembly.)

3.15 SHUTTER SOLENOID REMOVAL

Remove two screws (42) from shutter solenoid L2.

NOTE

Diagram shown with Support Plate (27) removed.

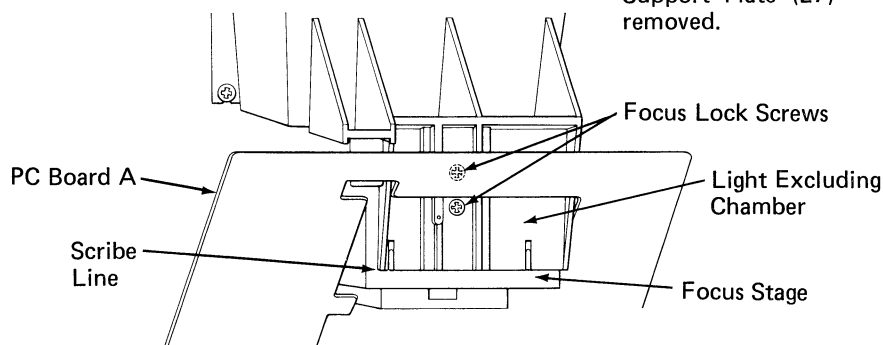


Figure 3-3. Location of Focusing Reference Line

- 1) Loosen, but do not remove, two focus lock screws (43).
- 2) Slide focus stage (5) straight out. Refer to Figure 5-1A, Page 22 for orientation of position plate washer (31).

3.16 PHOTOTRANSISTOR REMOVAL

Break the glue seal with a knife blade and remove phototransistor Q5 from the rear of the mounting bracket. Note polarity of Q5.

3.17 REASSEMBLY

Reassemble the unit by reversing the disassembly procedures and by following the precautions below.

- 1) Upper flange of light excluding chamber fits into channel in front cover.
- 2) Refer to Figure 5-2, Page 27 for connector locations of shutter solenoid L2, phototransistor Q5, and leaf switch SW4 on PC board (A).
- 3) Fit print button (15) and timer button (17) into front cover and place exposure control switch cover (14) and on/off switch cover (16) over their respective switches before installing PC board (A). Check that switch covers protrude through control panel and operate properly.

3.18 CLEANING

3.18.1 Mechanical and Electronic Components

Wipe the large surfaces with a clean, lint-free cloth. Use low pressure, compressed air to blow dust from hard-to-reach places.

3.18.2 Reflector Assembly and Flashtube Lens

To clean the diffuser lens, untape and remove from reflector, immerse in warm, soapy water and wipe gently with a clean piece of cotton. Rinse in cold water and BLOT dry (do not wipe) with a clean, lint-free cloth or tissue. Do not allow the surface to air dry, which results in water marks. Avoid touching the reflector surface; use dry air or a lens brush to remove dust or lint. Retape diffuser lens to reflector.

3.19 ELECTRONIC COMPONENT REMOVAL

When removing and replacing electronic components, observe the following precautions.

- 1) When applying heat, use a heat sink to avoid damaging the components or circuit board due to heat conduction of component leads.
- 2) Apply heat sparingly to the component lead to be removed and lift the lead clear of the junction.
- 3) Ensure that new components are placed and dressed the same as the originals.

SECTION 4

CHECKOUT AND TROUBLESHOOTING

4.1 GENERAL

When checking out or adjusting the Vivitar Instant Slide Printer, ensure that all electrical connections are good, that main capacitor C6 has been formed, and that the battery or power supply is of the correct potential.

4.2 OPERATIONAL CHECKOUT

4.2.1 Tools and Test Equipment

No special tools are required for maintenance of the Instant Slide Printer. Screwdrivers, diagonal cutters, long nose pliers, soldering irons, and other common hand tools are adequate for repair and replacement of parts.

The following test equipment is required:

- Digital Multimeter
- Regulated DC Power Supply (5.6V, 4.0A)
- Pulse Photometer
- Stopwatch
- 0.9 ND Test Slide

The following test equipment is optional:

- Oscilloscope
- Ground Glass

4.2.2 Main Storage Capacitor Forming

Before performing any operational checkout, form the main storage capacitor C6 by switching the unit on, and, after the ready light glows, firing the flash 5 times by depressing the print switch. Wait at least 20 seconds between flashes.

4.3 EXTERNAL CHECKOUT

Before opening the unit, establish or verify the nature of the trouble. For a quick external check of operations, use a reliable DC power source, and check all the operational functions of the unit.

If you find that the trouble appears to be in the circuitry, first look for obvious signs of defects such as broken wires, broken or discolored components, and arcing or burnt-out transistors or transformers before going through a detailed circuit checkout. Common circuit troubles can often be isolated through voltage, current, and resistance measurements. Circuit checkpoints and normal voltage readings are given in Section 4.6, Pages 15 through 20:

4.3.1 Power Switch

Insert four C-size alkaline cells in the battery compartment as indicated. Turn power switch ON and OFF three times, and check that the unit responds accordingly. Repeat this step using SB-6 power supply.

4.3.2 Ready Light

Check that the red ready light illuminates when the voltage across main capacitor C6 rises to approximately 265VDC, or eighty percent of full charge.

4.3.3 Shutter Release Interlock

Exposure should not occur when print switch is depressed after ready light illuminates if there is no slide in printing slot.

4.3.4 Flash

When the ready light illuminates, it must be possible to fire the flash by depressing the print switch, with a slide in printing slot. Flash should synchronize with shutter tripping.

4.3.5 OK Light

The green OK light should illuminate with the flash to signify that the film received a sufficient amount of light.

4.3.6 Timer

The light green timer light should illuminate by depressing the timing button. After approximately 35 seconds, a short beep should be heard (for black & white film) and after approximately 70 seconds, a long beep should be heard (for color film). The timer light should then go out.

Timer should restart any time during the timing cycle by depressing the timer switch again with power switch turned on. Timer should remain activated even after power switch is turned off.

4.3.7 Measurement of Exposure

Let the unit flash according to the operational instructions of exposure meter. Confirm that the light output is within the tolerances of the specified exposure values. Refer to Exposure Control Adjustment, Section 4.4.4, Page 9.

4.3.8 External Power

With the Vivitar SB-6 power supply connected to the printer, check that the battery continuity is cut off.

4.4 ADJUSTMENTS AND CALIBRATION

4.4.1 Main Capacitor Voltage Adjustment

- 1) Supply rated power (5.6V, 4.0A) with regulated DC power supply.
- 2) Adjust variable resistor R9 so that voltage across main capacitor C6 will be 330 ± 5 VDC. Additional voltage information in Principles of Operation and Circuit Descriptions, Section 2.4. Troubleshooting information found in Section 4.5.

4.4.2 Main Capacitor Leakage Check

- 1) Disconnect main capacitor C6 from the circuit (after discharging it through a 100 ohm, 10W resistor) and connect it to the test circuit as shown in Figure 4-1.
- 2) Form the capacitor for two minutes (switch closed, power supply set to 330 VDC).
- 3) Open switch and read the leakage current by measuring voltage across the 1000 ohm resistor. Voltage should measure less than 1 volt, which corresponds to a leakage current of less than 1mA.
- 4) If the leakage current is greater than 1mA, main capacitor C6 should be replaced.

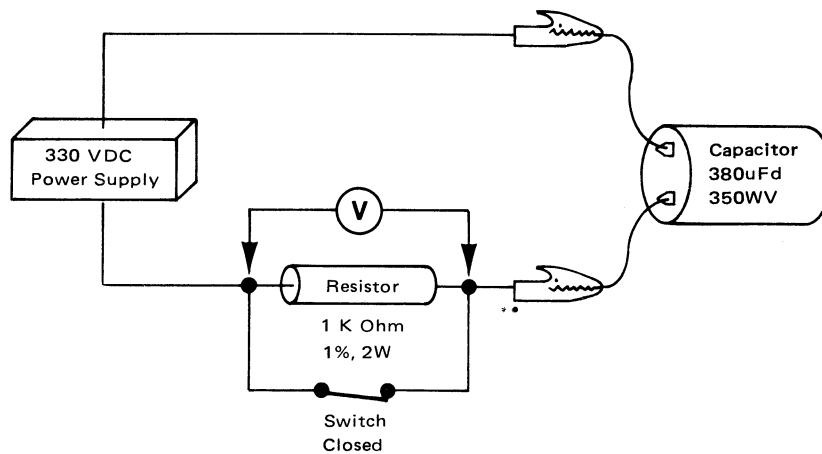


Figure 4-1. Main Capacitor Leakage Test

4.4.3 Timer Circuit Adjustment

- 1) Supply rated power (5.6V, 4.0A) with regulated DC power supply.
- 2) Press the timer switch and measure the time with a stopwatch until the beeps (short and long) are heard.
- 3) Adjust variable resistor R47 so that the first beep (for black & white film) is heard at 35 ± 2.5 seconds and the second beep (for color film) is heard at 70 ± 5 seconds. Troubleshooting information is in Section 4.5.

4.4.4 Exposure Control Adjustment

- 1) Supply rated power (5.6V, 4.0A) with regulated DC power supply.
- 2) Set up photometer according to its operational instructions.
- 3) Insert 0.9 ND test slide into printing slot and set exposure control switch at normal position. Filter frame should be in position if a thin slide mount is used.
- 4) Wait approximately ten seconds after the ready light illuminates and depress print switch. Measure light output at the focal plane with a photometer. A piece of ground glass can be cut to fit an empty Polaroid film pack to accomplish this.
- 5) To determine whether readings are within tolerance, refer to the Lux Second Tolerance Chart, Table 4-1. Adjust variable resistor R24 so that the light output is within tolerance. R24 is accessible from the front of slide printer by removing cropping selection assembly as described in Section 3.3, Page 4. Troubleshooting information is in Section 4.5.

Table 4-1. Lux Second Tolerance Chart
Slide Printer Exposure in Lux Sec with Acceptable Tolerances

		Nominal	Maximum	Minimum	Plus/Minus
1.	Plus 1.5 EV	0.566	0.802	0.401	0.5 EV
2.	Plus 1.0 EV	0.401	0.500	0.330	0.3 EV
3.	Plus 0.5 EV	0.283	0.354	0.233	0.3 EV
4.	Normal	0.200	0.225	0.185	0.15 EV
5.	Minus 0.5 EV	0.142	0.176	0.118	0.3 EV
6.	Minus 1.0 EV	0.101	0.142	0.071	0.5 EV

All readings are made with a 0.9 ND test slide in the printer. When adjusting exposure, set the slide printer to the normal setting (position 4) and adjust as closely as possible to nominal value (0.200 Lux Sec). The other exposure positions 1 through 6 should fall within tolerance variations in the above chart.

4.5 TROUBLESHOOTING

The charts in this section present step-by-step procedures for determining and correcting some of the most common troubles that can occur with the Vivitar Instant Slide Printer. In troubleshooting, also refer to the circuit diagram and operational checkout in Section 4, and the principles of operation and circuit descriptions in Section 2. Check the unit with four fresh C-size alkaline cells.

Table 4-2. Troubleshooting Procedure Chart

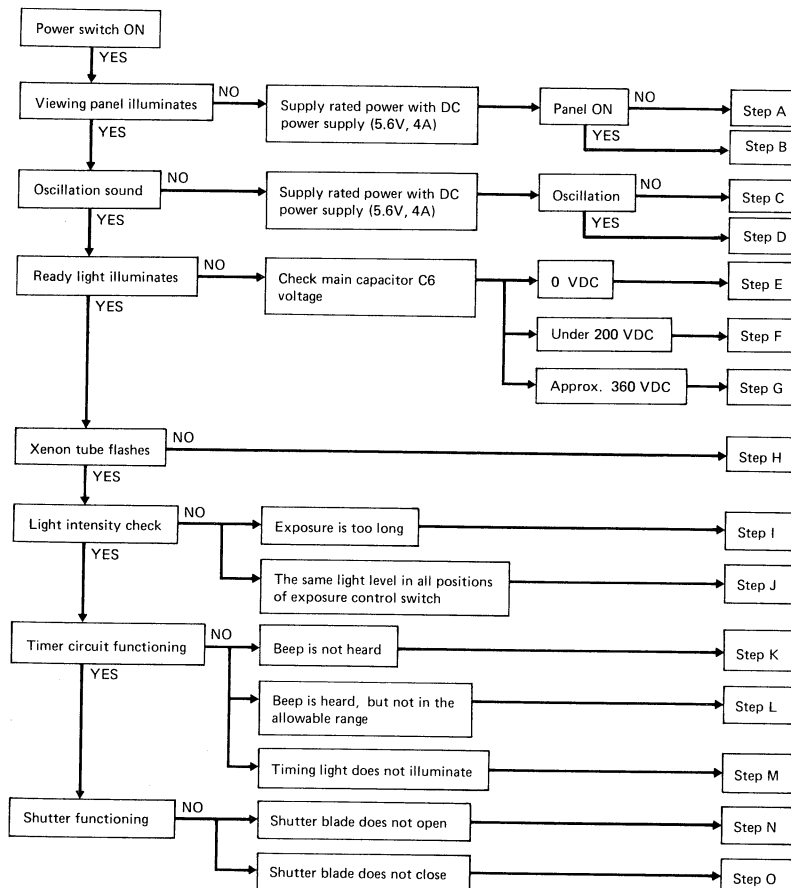


Table 4-3. Troubleshooting Data Chart

STEP	ACTION	INDICATION	REMARKS
A	Replace tungsten lamp La1	Panel illuminates	Malfunction of La1
		Panel does not illuminate	Wire(s) to viewing reflector broken
B	Check battery terminals	Terminals are corroded or their positions are inverted	Clean, replace or reposition
	Check polarity of batteries	Batteries installed incorrectly	Polarity designations molded into battery compartment
C	Check transistors Q1 and Q2	Open Circuit *	Replace Q1 and Q2
	Check transformer T1	Open Circuit *	Replace T1
	Check ON/OFF switch (SW2) continuity	Bad	Repair or replace SW2
	*If Q1, Q2, and T1 are bad, check transistor Q3, diode D2, and thyristor SCR1 also. This condition indicates high current flow through the oscillator circuit, caused by the use of nickel cadmium batteries or a power supply other than the SB-6.		
D	Check external power switch SW1 continuity in both battery and SB-6 power supply modes	Switch not making contact	Bend SW1 contacts or replace switch
E	Check diode D2	Open	Replace D2
	Check solder connections of main capacitor C6	Cold solder joint	Resolder C6
F	Check main capacitor C6 for leakage (See Sec. 4.4.2)	Leaks	Replace C6
G	Check neon tube Ne1	Bad	Replace Ne1
H	Check continuity of leaf switch SW4 with slide and filter frame inserted	Open Circuit	Repair or replace SW4
	Short the anode and cathode terminals of SCR1 momentarily	FT1 flashes	Replace SCR1 (Open) Replace Q7 (Open)
		No flash, but a spark occurs	Replace T2 (Open secondary) Replace FT1
		No flash, no spark	Replace T2 (Open primary) Replace C7 Replace SCR1
I	Check phototransistor Q5 and interconnecting wires	Open	Repair or replace Q5
	Check IC1 for malfunction	Bad	Replace IC1
	Check SCR2	Open	Replace SCR2
	Check quenchtube QT1	Bad	Replace QT1

Table 4-3. Troubleshooting Data Chart, continued

STEP	ACTION	INDICATION	REMARKS
J	Check exposure control switch SW3	Bad	Replace SW3
K	Check beeper BZ1 and interconnecting wires	Bad	Repair or replace BZ1
	Check IC4 for malfunction	Bad	Replace IC4
L	Adjust variable resistor R47	Beep is heard in the allowable range, 35 sec. \pm 2.5 sec., and 70 sec. \pm 5 sec.	R47 out of adjustment
		No change in time	Replace IC3
M	Check transistor Q12	Bad	Replace Q12
	Check LED D12	Bad	Replace D12
N	Check solenoid L2, its connection to the shutter assembly, and interconnecting wires	Bad	Repair or replace L2
		Good	Check transistors Q8 and Q9, diode D11
O	Check shutter blade spring	Bad or disconnected	Repair or replace

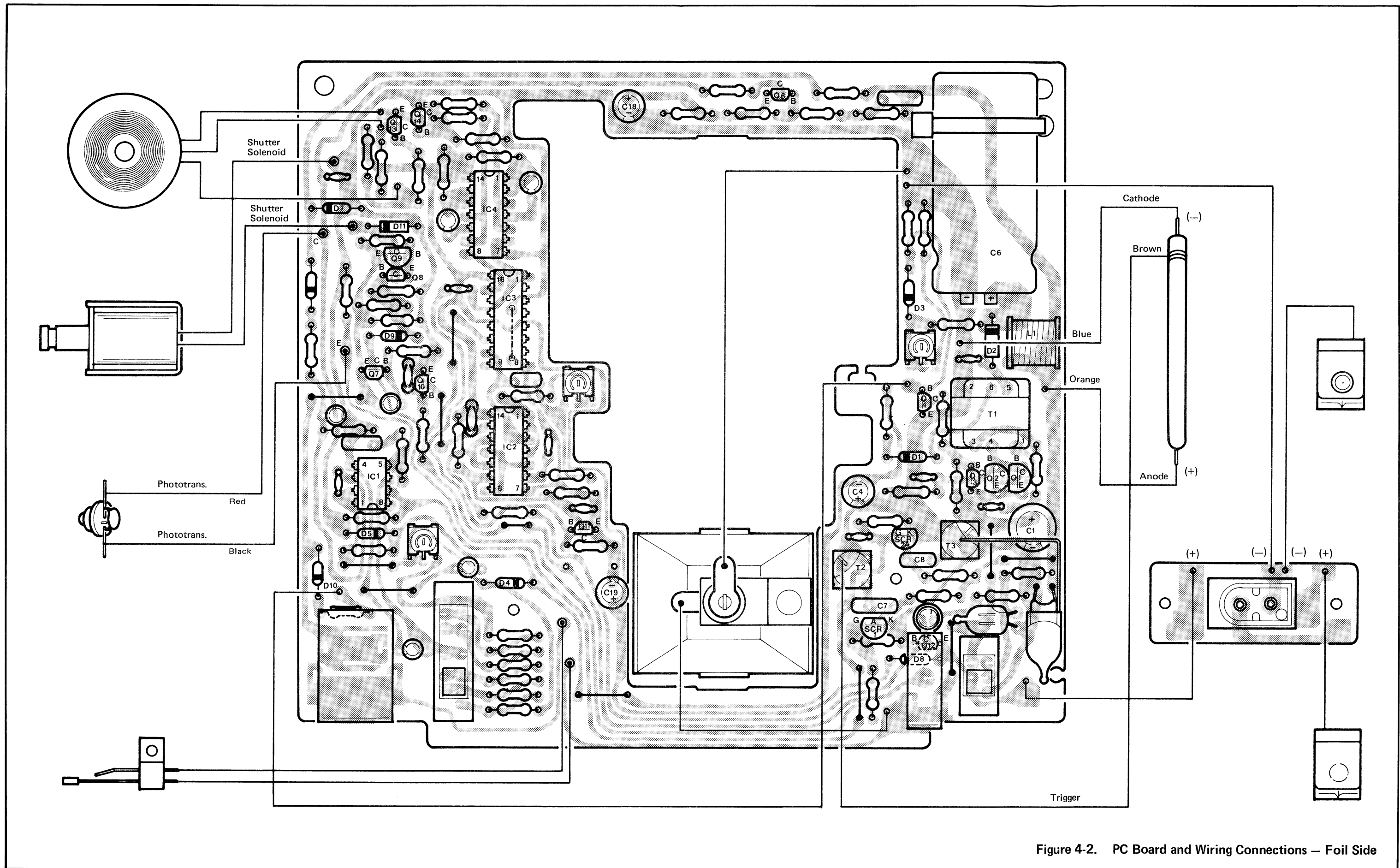


Figure 4-2. PC Board and Wiring Connections — Foil Side

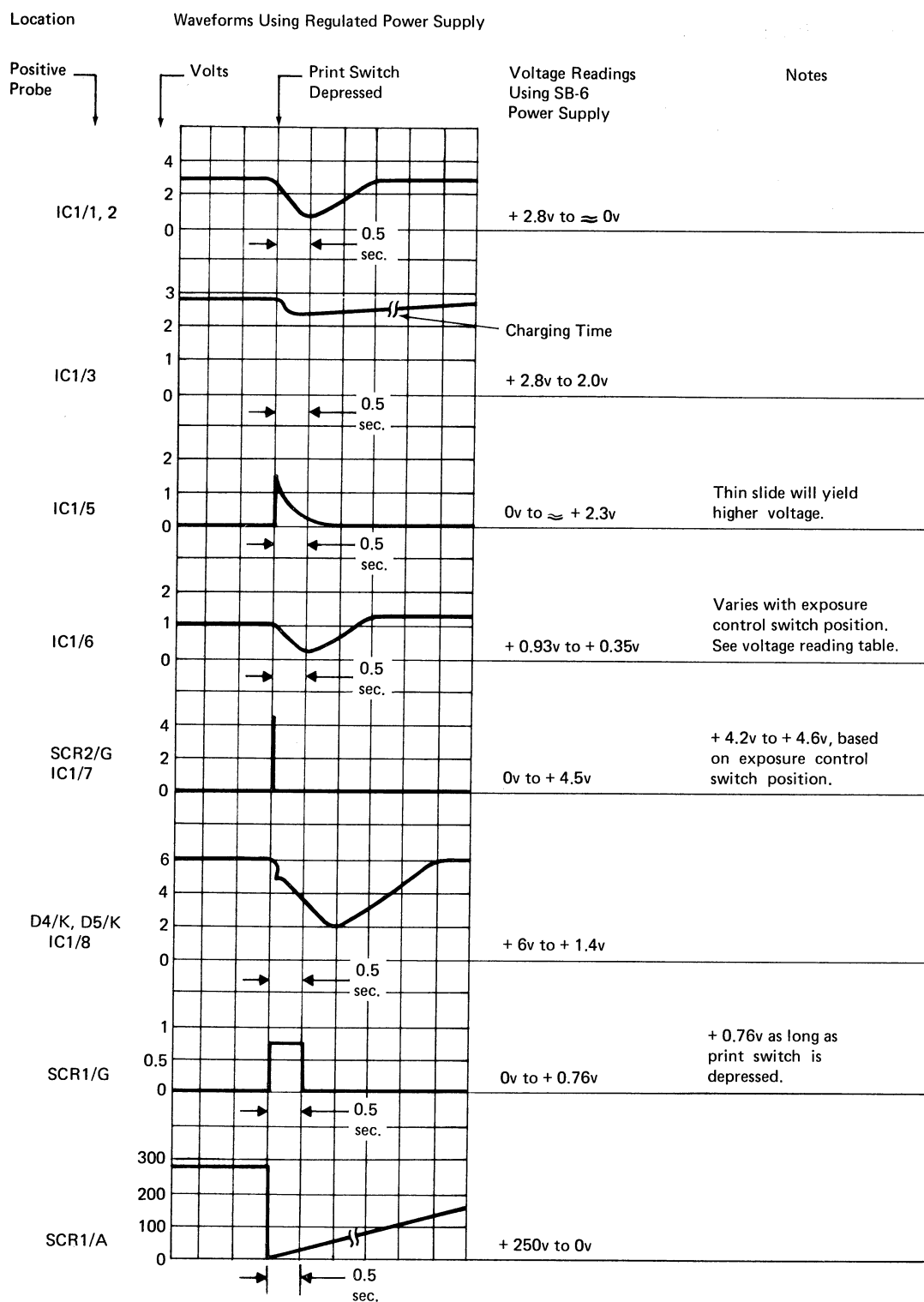
4.6 WAVEFORM AND VOLTAGE READINGS

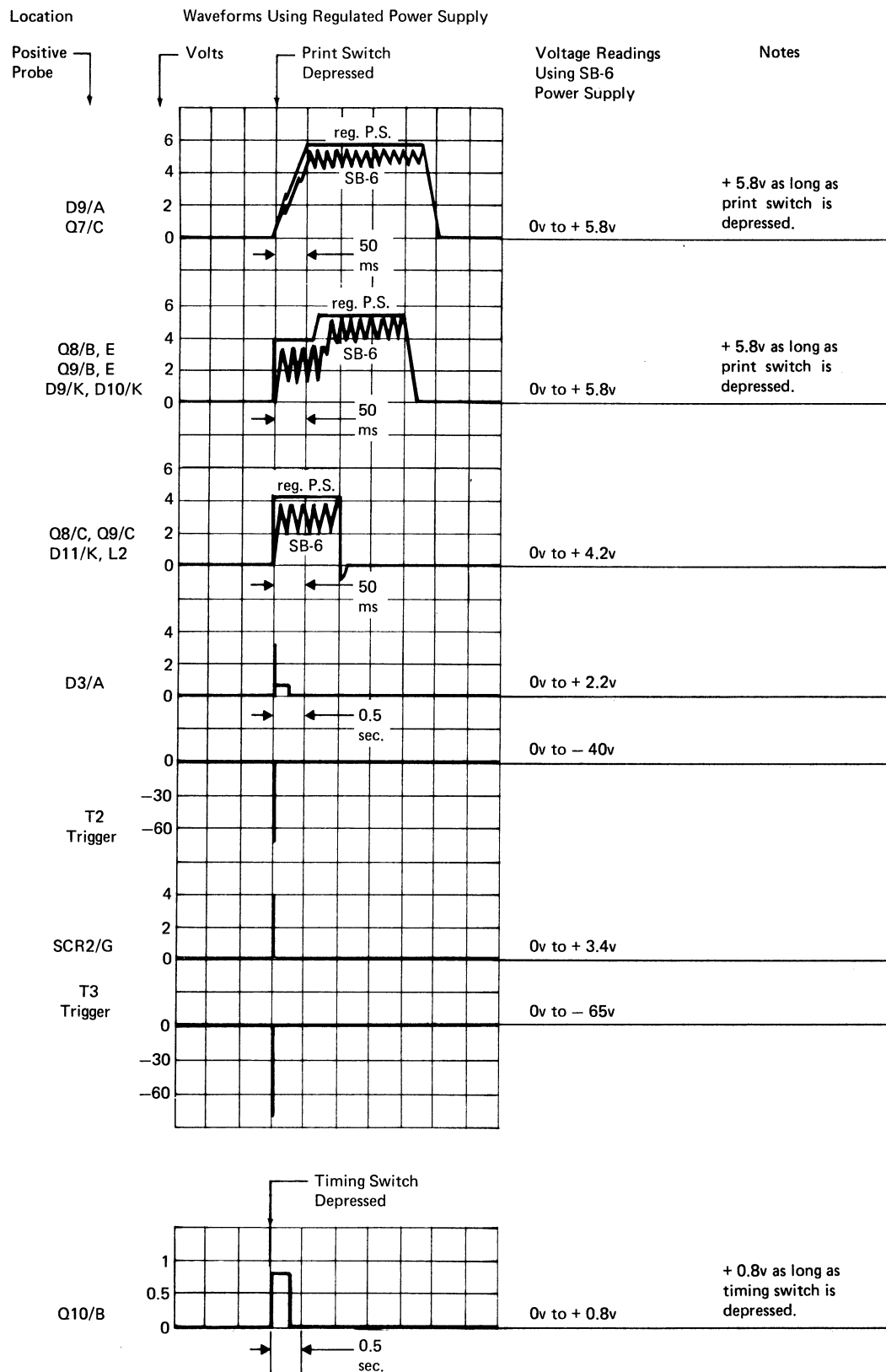
The following are waveform and voltage readings taken with an oscilloscope. Some of the pulses occur too fast for a volt-ohm meter to read, however, a voltage change will be noticed except for trigger pulses. Readings were taken using both a regulated power supply (5.6V, 4.0A) and a Vivitar SB-6 power supply.

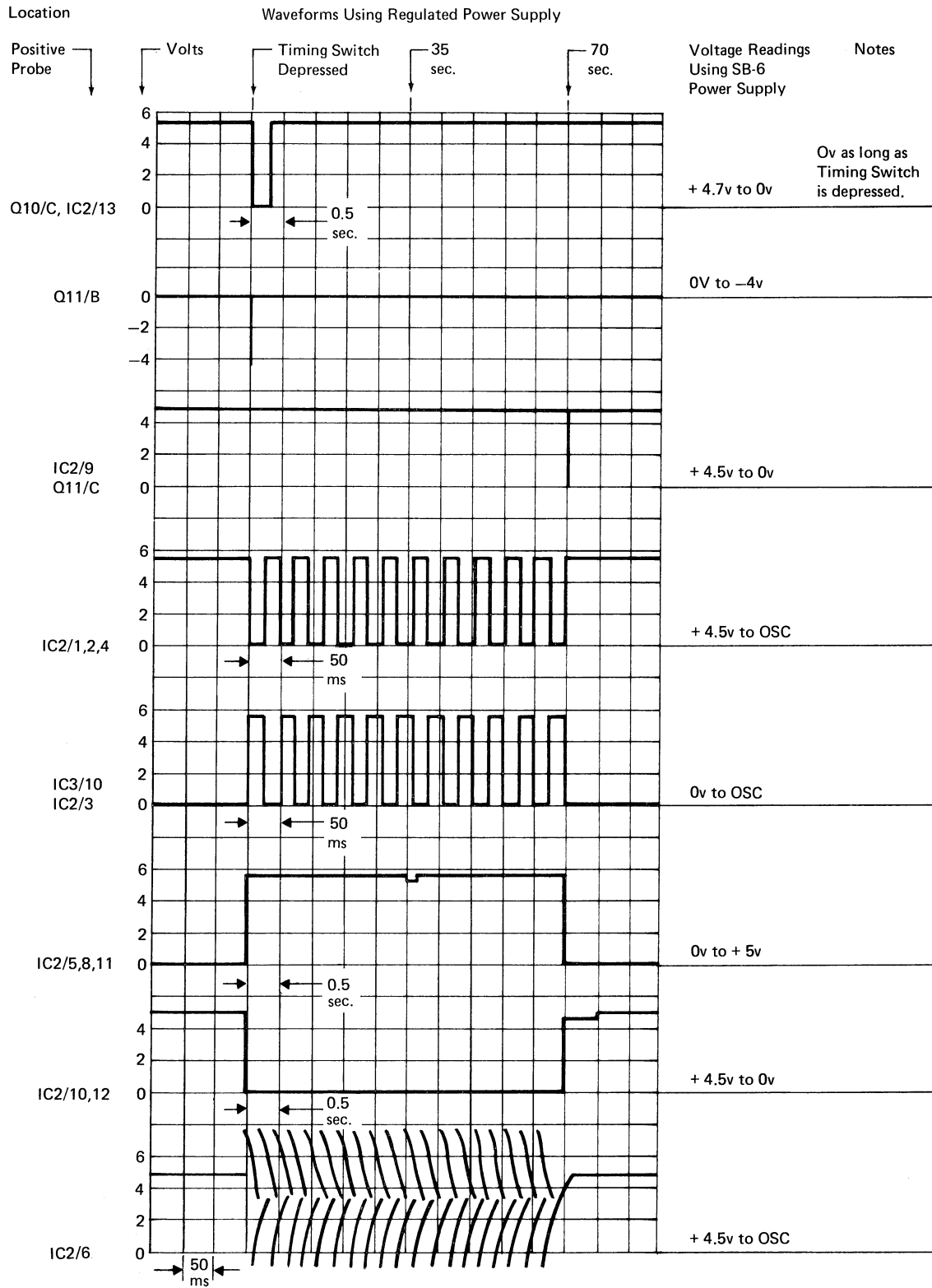
Waveform lengths of timing circuit may not be to scale. Readings were taken with the unit operating, with negative probe connected to the main capacitor negative terminal. The positive probe is as indicated.

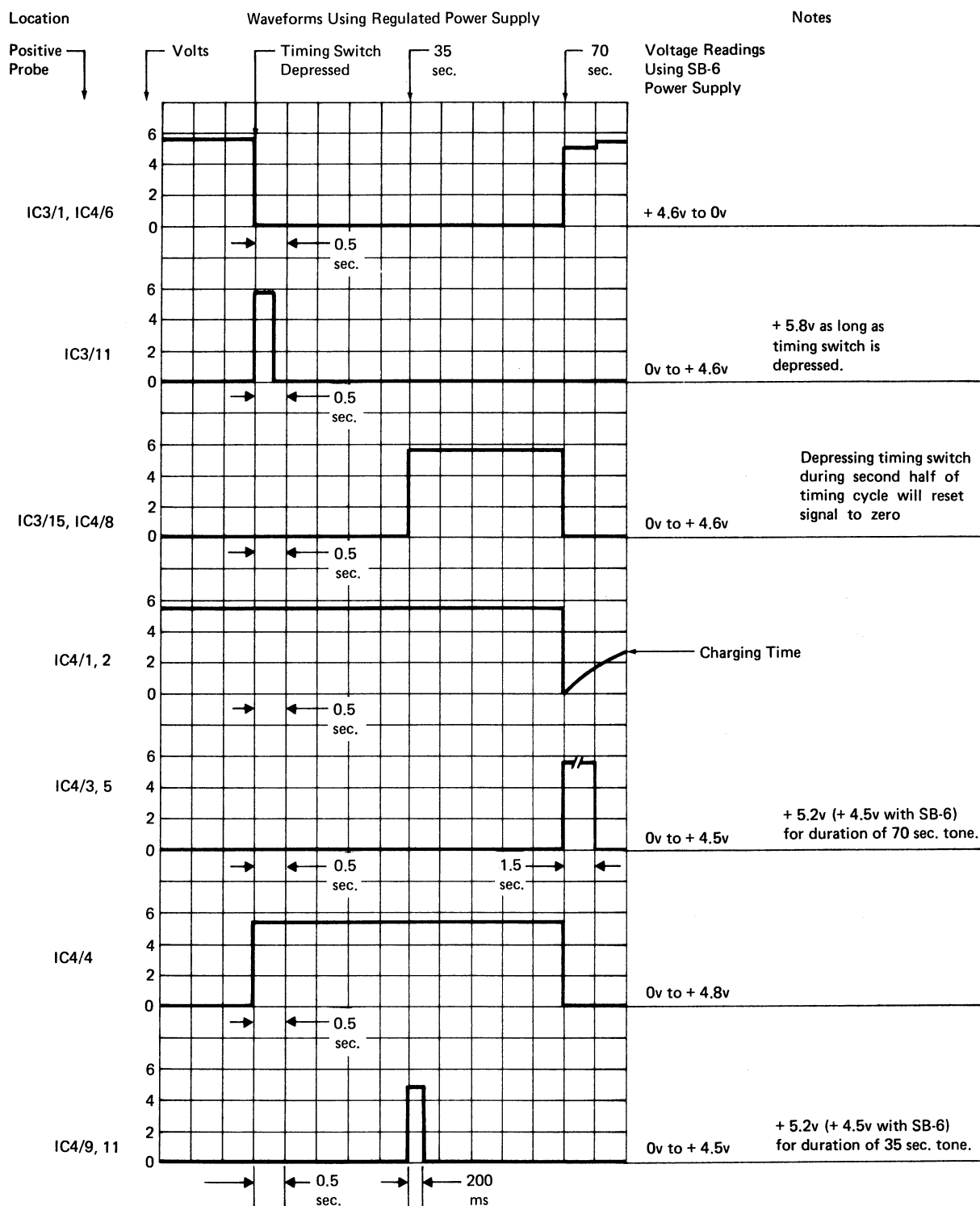
Table 4-4. Voltage Readings — Exposure Control Switch Resistors

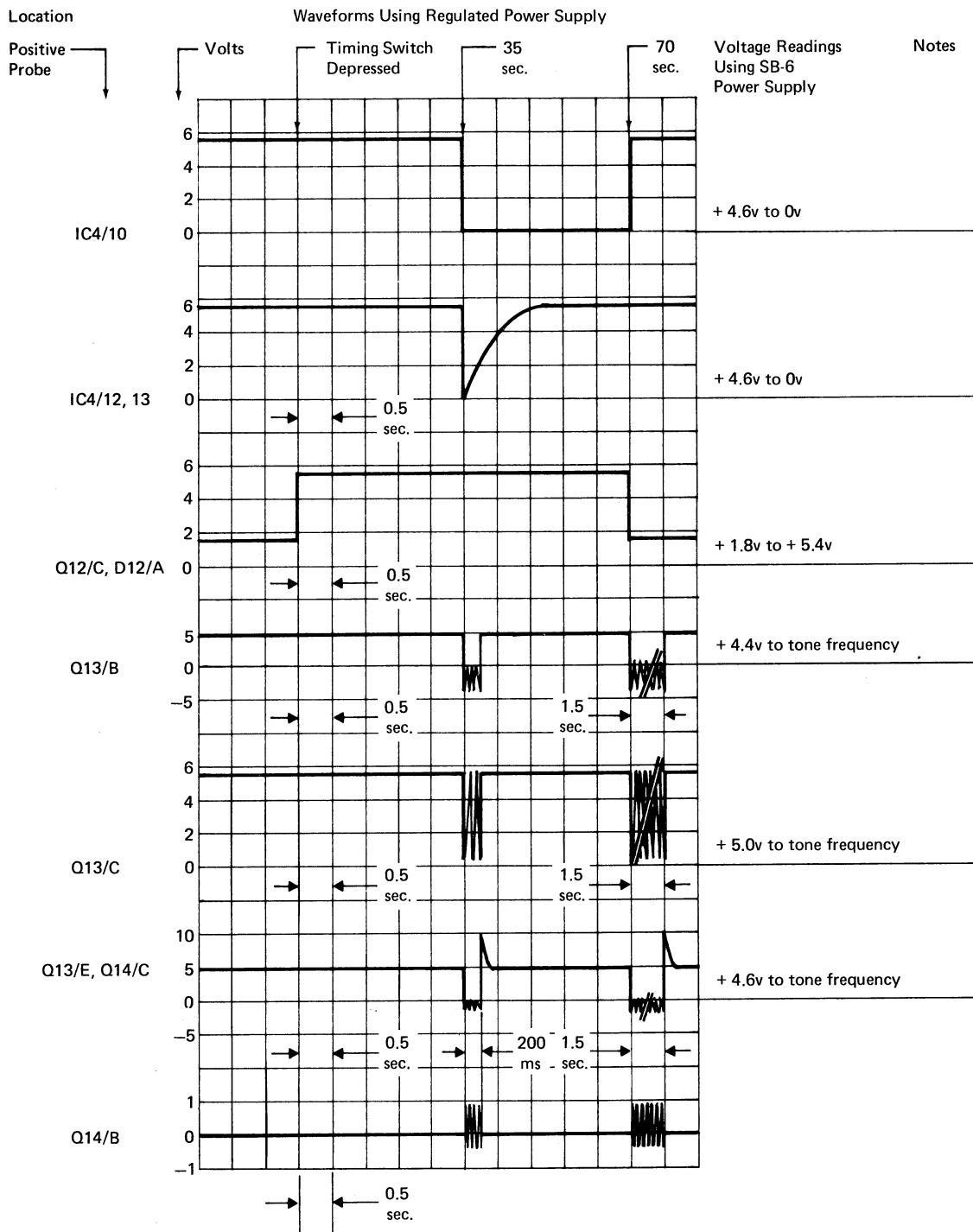
R18	+ 2.39 VDC
R19	+ 1.71 VDC
R20	+ 1.22 VDC
R21	+ 0.88 VDC
R22	+ 0.63 VDC
R23	+ 0.47 VDC











SECTION 5

ILLUSTRATED PARTS LIST

5.1 GENERAL

This section contains an exploded view of the mechanical and functional parts that comprise the printer and a wiring diagram of the circuit boards and their interconnections. Associated with each illustration is a parts list providing part numbers, descriptions, and quantities for each part. Mechanical parts are indexed to the exploded view with reference numbers. Electronic parts are indexed to the wiring diagram by electronic reference designators.

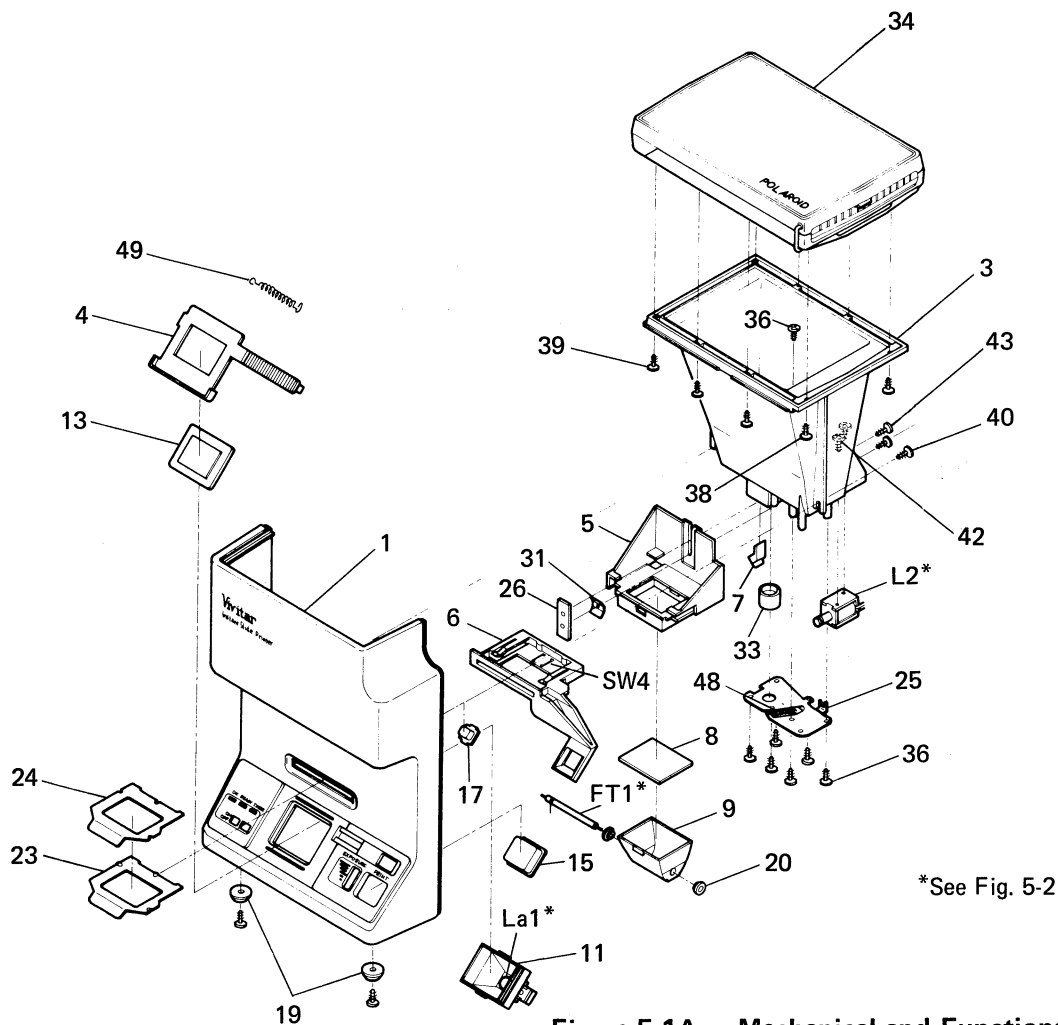


Figure 5-1A. Mechanical and Functional Parts

Parts List for Figures 5-1A and 5-1B

Ref.	Vivitar Part No.	Description	Quantity	Part Code
1	3110799	FRONT COVER ASSY	1	ES901-18
2	3110800	COVER, REAR	1	ES002-81
3	3110801	CHAMBER, LIGHT EXCLUDING	1	ES000-15
4	3110802	CROPPING SELECTION ASSY	1	ES908-12
5	3110803	STAGE, FOCUS	1	ES024-98
6	3110804	HOLDER, SLIDE	1	ES024-99
7	3110805	SENSOR HOLDER ASSY	1	ES914-25
8	3110806	DIFFUSER	1	ES005-11
9	3110807	REFLECTOR ASSY	1	ES932-04
10	3110808	COVER, BATTERY COMPARTMENT	1	ES001-10
11	3110809	PREVIEW REFLECTOR ASSEMBLY	1	ES932-05
12	3110810	HOLDER, BATTERY TERMINAL	1	ES074-02
13	3110811	DIFFUSER, PREVIEW PANEL	1	ES914-26
14	3110812	COVER, EXPOSURE CONTROL SWITCH	1	ES014-45
15	3110813	BUTTON, PRINT	1	ES013-23
16	3110814	COVER, ON/OFF SWITCH	1	ES014-46
17	3110815	BUTTON, TIMER	1	ES014-47
18	3110816	CAP, EXTERNAL POWER CONNECTION	1	ES074-05
19	3110817	FOOT, RUBBER	4	ES011-06
20	3400052	BUSHING, FLASHTUBE	2	ES011-01
21	3110818	HOLDER, LED	1	SS020-51
22	3110977	BAND, MAIN CAPACITOR RTNG	1	SS018-05
23	3110819	FRAME (A), FILTER	1	ES137-04
24	3110820	FRAME (B), FILTER	1	ES137-05
25	3110821	SHUTTER ASSY	1	ES904-22

Continued on page 23

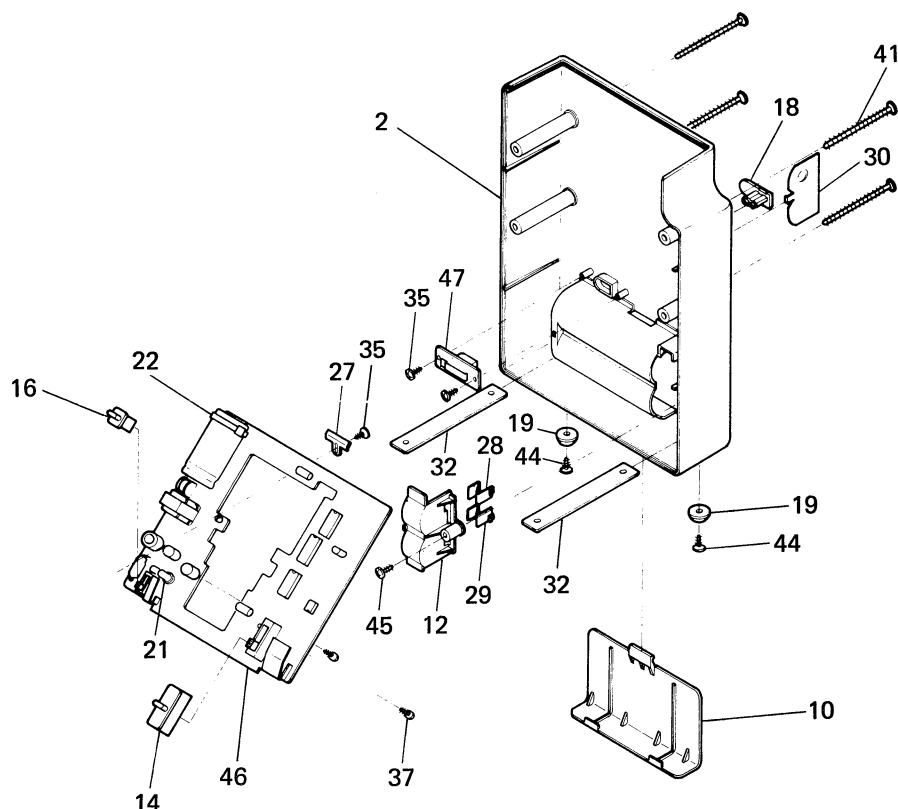


Figure 5-1B. Mechanical and Functional Parts

Parts List for Figures 5-1A and 5-1B (continued)

Ref.	Vivitar Part No.	Description	Quantity	Part Code
26	3110822	PLATE, FOCUS STAGE POSITION	1	ES117-09
27	3110883	PLATE, PC BOARD SUPPORT	1	ES117-10
28	3600259	TERMINAL, BATTERY +	1	SS109-64
29	3600260	TERMINAL, BATTERY -	1	SS109-65
30	3110823	TERMINAL, BATTERY, COMMON	1	ES109-25
31	3110824	WASHER, POSITION PLATE	1	ES113-04
32	3110825	PLATE, ATTACHING	2	ES117-13
33	3110826	LENS ASSY, 24mm f16	1	ES271-27
34	3110882	POLAROID FILM BACK	1	Not Issued
35	3110827	SCREW, PANHD, TAP, 1.7x3.5, BRN	3	SG022-67
36	3110323	SCREW, PANHD, 2.0x5.0, BRN	7	SG022-56
37	3110607	SCREW, PANHD, TAP, 2.0x6.0, BRN	2	SG023-10
38	3110828	SCREW, FLTHD, TAP, 2.3x8.0, BRN	2	SG025-18
39	3110829	SCREW, PANHD, TAP, 2.3x10.0, BRN	6	SG023-20
40	3110830	SCREW, TRUSS, TAP, 3.5x8.0, BRN	2	SG003-06
41	3110831	SCREW, PANHD, TAP, 4.0x63.0, BRN	4	SG023-31
42	3110832	SCREW, PANHD, 2.0x4.0, BRN	2	SG000-24
43	3110833	SCREW, PANHD, 3.0x10.0, BRN	2	SG000-62
44	3110834	SCREW, PANHD, 3.0x8.0, BRN	4	SG000-63
45	3104137	SCREW, PANHD, TAP, 1.7x6.0, BLK	1	SG022-49
46	3110835	PRINTED CIRCUIT BOARD (A) ASSEMBLY	1	ES950-29
47	3110836	PRINTED CIRCUIT BOARD (B) ASSEMBLY	1	ES950-30
48	3110837	SPRING, SHUTTER BLADE	1	ES160-86
49	3110838	SPRING, CROPPING SELECTION ASSY	1	ES160-87

Parts List for Figure 5-2. PC Board and Wiring Connections

Ref.	Vivitar Part No.	Description	Quantity	Part Code
R1	3110667	RESISTOR, CRBN COMP, 8.2K, 1/4W	1	SC039-76
R2	3110840	RESISTOR, CRBN COMP, 27K, 1/4W	1	SC039-97
R3	3110841	RESISTOR, CRBN COMP, 15K, 1/4W	1	SC007-61
R4	3108933	RESISTOR, CRBN COMP, 150, 1/4W	1	SC039-20
R5	3110381	RESISTOR, CRBN COMP, 1K, 1/4W	1	SC007-57
R6	3109735	RESISTOR, CRBN COMP, 750K, 1/4W	1	SC039-50
R7	3110372	RESISTOR, CRBN COMP, 56K, 1/4W	1	SC039-71
R8	3110847	RESISTOR, CRBN COMP, 1.8M, 1/4W	1	SC039-45
R9	3110842	RESISTOR, VARIABLE, 20K	1	SC015-75
R10	3110642	RESISTOR, CRBN COMP, 47K, 1/4W	1	SC009-47
R11	3110623	RESISTOR, CRBN COMP, 2.2M, 1/4W	1	SC007-52
R12	3110381	RESISTOR, CRBN COMP, 1K, 1/4W	1	SC007-57
R13	3110623	RESISTOR, CRBN COMP, 2.2M, 1/4W	1	SC007-52
R14	3110843	RESISTOR, CRBN COMP, 3.3K, 1/4W	1	SC007-55
R15	3110381	RESISTOR, CRBN COMP, 1K, 1/4W	1	SC007-57
R16	3110844	RESISTOR, CRBN COMP, 330K, 1/4W	1	SC007-59
R17	3110625	RESISTOR, CRBN COMP, 22, 1/4W	1	SC007-93
R18	3110845	RESISTOR, CRBN COMP, 8.2K, 1/4W, 1%	1	SC039-99
R19	3110846	RESISTOR, CRBN COMP, 5.9K, 1/4W, 1%	1	SC049-01
R20	3110848	RESISTOR, CRBN COMP, 4.1K, 1/4W, 1%	1	SC049-02
R21	3110849	RESISTOR, CRBN COMP, 3.0K, 1/4W, 1%	1	SC049-03
R22	3110850	RESISTOR, CRBN COMP, 2.0K, 1/4W, 1%	1	SC049-04
R23	3110851	RESISTOR, CRBN COMP, 5.6K, 1/4W, 1%	1	SC049-05
R24	3110852	RESISTOR, VARIABLE, 30K	1	SC015-53
R25	3110841	RESISTOR, CRBN COMP, 15K, 1/4W	1	SC007-61
R26	3110371	RESISTOR, CRBN COMP, 100K, 1/4W	1	SC007-63
R27	3110371	RESISTOR, CRBN COMP, 100K, 1/4W	1	SC007-63
R28	3110567	RESISTOR, CRBN COMP, 820K, 1/4W	1	SC009-33
R29	3110376	RESISTOR, CRBN COMP, 470, 1/4W	1	SC039-44
R30	3110847	RESISTOR, CRBN COMP, 1.8M, 1/4W	1	SC039-45
R31	3110378	RESISTOR, CRBN COMP, 22K, 1/4W	1	SC007-96
R32	3110379	RESISTOR, CRBN COMP, 10K, 1/4W	1	SC007-82
R33	3110854	RESISTOR, CRBN COMP, 150K, 1/4W	1	SC007-73
R34	3110372	RESISTOR, CRBN COMP, 56K, 1/4W	1	SC039-71
R35	3110855	RESISTOR, CRBN COMP, 33K, 1/4W	1	SC009-46
R36	3110381	RESISTOR, CRBN COMP, 1K, 1/4W	1	SC007-57
R37	3110381	RESISTOR, CRBN COMP, 1K, 1/4W	1	SC007-57
R38	3110372	RESISTOR, CRBN COMP, 56K, 1/4W	1	SC039-71
R39	3110376	RESISTOR, CRBN COMP, 470, 1/4W	1	SC039-44
R40	3110855	RESISTOR, CRBN COMP, 33K, 1/4W	1	SC009-46
R41	3110376	RESISTOR, CRBN COMP, 470, 1/4W	1	SC039-44
R42	3110642	RESISTOR, CRBN COMP, 47K, 1/4W	1	SC009-47
R43	3110384	RESISTOR, CRBN COMP, 560K, 1/4W	1	SC039-51
R44	3110843	RESISTOR, CRBN COMP, 3.3K, 1/4W	1	SC007-55
R45	3110371	RESISTOR, CRBN COMP, 100K, 1/4W	1	SC007-63
R46	3110856	RESISTOR, CRBN COMP, 120K, 1/4W	1	SC039-96
R47	3110857	RESISTOR, VARIABLE, 500K	1	SC015-76
R48	3110642	RESISTOR, CRBN COMP, 47K, 1/4W	1	SC009-47
R49	3110858	RESISTOR, CRBN COMP, 200, 1/4W	1	SC039-98
R50	3110854	RESISTOR, CRBN COMP, 150K, 1/4W	1	SC007-73
R51	3110859	RESISTOR, CRBN COMP, 180K, 1/4W	1	SC039-07
R52	3110372	RESISTOR, CRBN COMP, 56K, 1/4W	1	SC039-71
R53	3110372	RESISTOR, CRBN COMP, 56K, 1/4W	1	SC039-71
R54	3110371	RESISTOR, CRBN COMP, 100K, 1/4W	1	SC007-63
R55	3110376	RESISTOR, CRBN COMP, 470, 1/4W	1	SC039-44

Continued on page 25

Parts List for Figure 5-2 (continued). PC Board and Wiring Connections

Ref.	Vivitar Part No.	Description	Quantity	Part Code
R56	3110860	RESISTOR, CRBN COMP, 200K, 1/4W	1	SC007-56
R57	3110379	RESISTOR, CRBN COMP, 10K, 1/4W	1	SC007-82
C1	3110861	CAPACITOR, ELECTRO, 220uF, 16V	1	SC000-81
C2	3100218	CAPACITOR, SEMICON, 0.1uF, 12V	1	SC004-04
C3	3100218	CAPACITOR, SEMICON, 0.1uF, 12V	1	SC004-04
C4	3110863	CAPACITOR, ELECTRO, 100uF, 10V	1	SC000-82
C5	3101330	CAPACITOR, CERAMIC, 300pF, 500V	1	SC002-18
C6	3110864	CAPACITOR, MAIN, 380uF, 350V	1	SC505-10
C7	3110391	CAPACITOR, MD, 0.033uF (M35-IID)	1	SC101-51
C8	3110391	CAPACITOR, MD, 0.033uF (M35-IID)	1	SC101-51
C9	3100097	CAPACITOR, CERAMIC, 1000pF, 50V	1	SC002-11
C10	3108904	CAPACITOR, TF, 0.47uF (J05-IID)	1	SC103-12
C11	3100319	CAPACITOR, CERAMIC, 220pF, 50V	1	SC002-22
C12	3108893	CAPACITOR, ELECTRO, 10uF, 16V	1	SC000-47
C13	3108893	CAPACITOR, ELECTRO, 10uF, 16V	1	SC000-47
C14	3102805	CAPACITOR, CERAMIC, 3300pF, 50V	1	SC002-08
C15	3108893	CAPACITOR, ELECTRO, 10uF, 16V	1	SC000-47
C16	3100218	CAPACITOR, SEMICON, 0.1uF, 12V	1	SC004-04
C17	3108896	CAPACITOR, MD, 0.047uF (M35-IID)	1	SC101-57
C18	3109739	CAPACITOR, ELECTRO, 4.7uF, 50V	1	SC000-06
C19	3110863	CAPACITOR, ELECTRO, 100uF, 10V	1	SC000-82
C20	3108893	CAPACITOR, ELECTRO, 10uF, 16V	1	SC000-47
C21	3100043	CAPACITOR, SEMICON, 0.05uF, 12V	1	SC004-01
C22	3100097	CAPACITOR, CERAMIC, 1000pF, 50V	1	SC002-11
C23	3110579	CAPACITOR, TF, 0.047uF 50V	1	SC101-11
C24	3110862	CAPACITOR, SEMICON, 0.1uF, 12V	1	SC004-04
C25	3108893	CAPACITOR, ELECTRO, 10uF, 16V	1	SC000-47
C26	3110866	CAPACITOR, ELECTRO, 1uF, 50V	1	SC000-72
CR1	3110395	C-R COMBINATION, 470/3300pF	1	SC031-04
CR2	3110867	C-R COMBINATION, 5.6K/3300pF	1	SC031-05
Q1	3109740	TRANSISTOR, 2SB873	1	SC003-66
Q2	3109740	TRANSISTOR, 2SB873	1	SC003-66
Q3	3104146	TRANSISTOR, 2SA1115	1	SC003-49
Q4	3104147	TRANSISTOR, 2SC2603	1	SC003-50
Q5	3100352	TRANSISTOR, PHOTO PN-121S	1	SS512-08
Q6	3104146	TRANSISTOR, 2SA1115	1	SC003-49
Q7	3104146	TRANSISTOR, 2SA1115	1	SC003-49
Q8	3104146	TRANSISTOR, 2SA1115	1	SC003-49
Q9	3109740	TRANSISTOR, 2SB873	1	SC003-66
Q10	3104147	TRANSISTOR, 2SC2603	1	SC003-50
Q11	3104147	TRANSISTOR, 2SC2603	1	SC003-50
Q12	3104146	TRANSISTOR, 2SA1115	1	SC003-49
Q13	3104147	TRANSISTOR, 2SC2603	1	SC003-50
Q14	3104147	TRANSISTOR, 2SC2603	1	SC003-50
SCR1	3100038	SCR, CR02AM-8	1	SC023-04
SCR2	3100038	SCR, CR02AM-8	1	SC023-04
IC1	3110868	IC, AN-6914 OR C393	1	SS514-33
IC2	3110869	IC, HD14011B	1	SS514-17
IC3	3110870	IC, HD14040B	1	SS514-53
IC4	3110871	IC, HD14001B	1	SS514-52
D1	3100353	DIODE, SILICON, MA-150	1	SC005-48
D2	3100003	DIODE, S1R-150	1	SC005-31
D3	3110872	DIODE, ZENER, MA-1091	1	SC006-08
D4	3110873	DIODE, ZENER, MA-1062	1	SC006-34
D5	3100353	DIODE, SILICON, MA-150	1	SC005-48

Continued on page 26

Parts List for Figure 5-2 (continued). PC Board and Wiring Connections

Ref.	Vivitar Part No.	Description	Quantity	Part Code
D6	3100353	DIODE, SILICON, MA-150	1	SC005-48
D7	3110873	DIODE, ZENER, MA-1062	1	SC006-34
D8	3100353	DIODE, SILICON, MA-150	1	SC005-48
D9	3100353	DIODE, SILICON, MA-150	1	SC005-48
D10	3100353	DIODE, SILICON, MA-150	1	SC005-48
D11	3102815	DIODE, SILICON, 10D-1	1	SC005-04
D12	3110874	LED, LN-31YPH	1	SC025-41
T1	3110875	TRANSFORMER, OSC, 16KS	1	SS506-98
T2	3108906	TRANSFORMER, TRIGGER, SN-500L	1	SS508-40
T3	3104584	TRANSFORMER, TRIGGER, SN-500	1	SS508-33
L1	3110876	INDUCTOR, 4541L1	1	SC021-17
L2	3110877	SOLENOID, TDS-05B-W	1	SS521-01
FT1	3100340	FLASHTUBE, D-301CS	1	SS500-39
QT1	3110638	QUENCHTUBE, W07-1N	1	SS513-27
Ne1	3110878	TUBE, NEON, NE-270VS	1	SS502-38
La1	3110879	LAMP, TUNGSTEN, 250mA, 6.3V	1	SS502-39
BZ1	3109804	BEEPER, PKM12-6AO	1	SS518-03
SW2	3110880	SWITCH, SLIDE, SKM-22-03P	1	SC300-38
SW3	3108910	SWITCH, SLIDE, SKM-24-045P	1	SC300-47
SW4	3110881	SWITCH, LEAF, MSW-1273	1	SC304-10
SW5	(NOT AVAILABLE AS A PART)			
SW6	(NOT AVAILABLE AS A PART)			

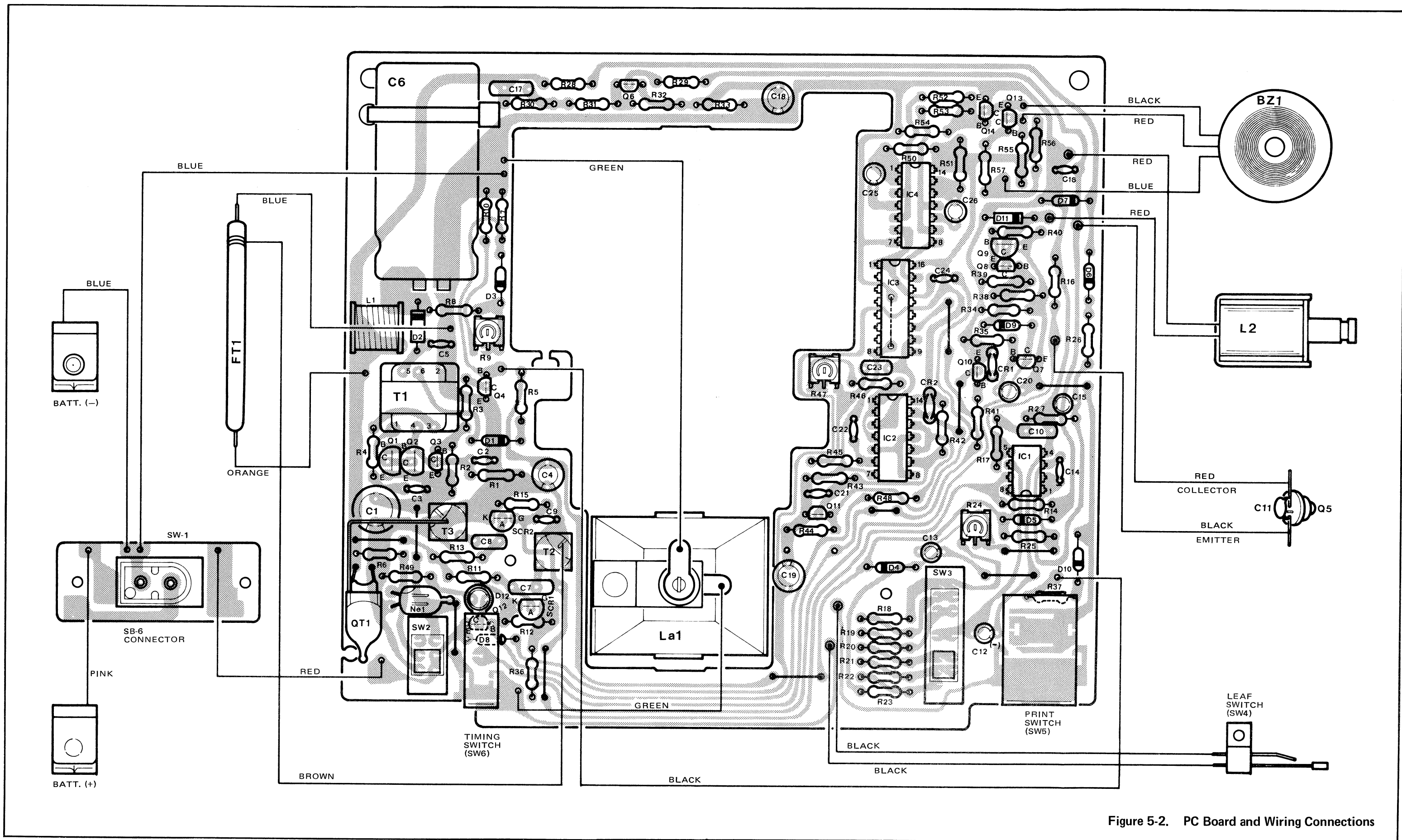


Figure 5-2. PC Board and Wiring Connections

COMPLETE PARTS LIST

Vivitar Part No.	Part Code	Description	Quantity
3100003	SC005-31	DIODE, S1R-150	1
3100038	SC023-04	SCR, CR02AM-8	2
3100043	SC004-01	CAPACITOR, SEMICON, 0.05uF, 12V	1
3100097	SC002-11	CAPACITOR, CERAMIC, 1000pF, 50V	2
3100218	SC004-04	CAPACITOR, SEMICON, 0.1uF, 12V	4
3100319	SC002-22	CAPACITOR, CERAMIC, 220pF, 50V	1
3100340	SS500-39	FLASHTUBE, D-301CS	1
3100352	SS512-08	TRANSISTOR, PHOTO PN-121S	1
3100353	SC005-48	DIODE, SILICON, MA-150	6
3101330	SC002-18	CAPACITOR, CERAMIC, 300pF, 500V	1
3102805	SC002-08	CAPACITOR, CERAMIC, 2200pF, 50V	1
3102815	SC005-04	DIODE, SILICON, 10D-1	1
3104137	SG022-49	SCREW, PANHD, TAP, 1.7x6.0, BLK	1
3104146	SC003-49	TRANSISTOR, 2SA1115	5
3104147	SC003-50	TRANSISTOR, 2SC2603	5
3104584	SS508-33	TRANSFORMER, TRIGGER, SN-500	1
3108893	SC000-47	CAPACITOR, ELECTRO, 10uF, 16V	5
3108896	SC101-57	CAPACITOR, MD, 0.047uF (M35-IID)	1
3108904	SC103-12	CAPACITOR, TF, 0.047uF (J05-IID)	1
3108906	SS508-40	TRANSFORMER, TRIGGER, SN-500L	1
3108910	SC300-47	SWITCH, SLIDE, SKM-24-045P	1
3108933	SC039-20	RESISTOR, CRBN COMP, 150, 1/4W	1
3109735	SC039-50	RESISTOR, CRBN COMP, 750K, 1/4W	1
3109739	SC000-06	CAPACITOR, ELECTRO, 4.7uF, 50V	1
3109740	SC003-66	TRANSISTOR, 2SB873	3
3109804	SS518-03	BEEPER, PKM12-6AO	1
3110323	SG022-56	SCREW, PANHD, 2.0x5.0, BRN	7
3110371	SC007-63	RESISTOR, CRBN COMP, 100K, 1/4W	4
3110372	SC039-71	RESISTOR, CRBN COMP, 56K, 1/4W	5
3110376	SC039-44	RESISTOR, CRBN COMP, 470, 1/4W	4
3110378	SC007-96	RESISTOR, CRBN COMP, 22K, 1/4W	1
3110379	SC007-82	RESISTOR, CRBN COMP, 10K, 1/4W	2
3110381	SC007-57	RESISTOR, CRBN COMP, 1K, 1/4W	5
3110384	SC039-51	RESISTOR, CRBN COMP, 560K, 1/4W	1
3110391	SC101-51	CAPACITOR, MD, 0.033uF (M35-IID)	2
3110395	SC031-04	C-R COMBINATION, 470/3300pF	1
3110567	SC009-33	RESISTOR, CRBN COMP, 820K, 1/4W	1
3110579	SC101-11	CAPACITOR, TF, 0.047uF, 50V	1
3110607	SG023-10	SCREW, PANHD, TAP, 2.0x6.0, BRN	2
3110623	SC007-52	RESISTOR, CRBN COMP, 2.2M, 1/4W	2
3110625	SC007-93	RESISTOR, CRBN COMP, 22, 1/4W	1
3110638	SS513-27	QUENCHTUBE, W07-1N	1
3110642	SC009-47	RESISTOR, CRBN COMP, 47K, 1/4W	3
3110667	SC039-76	RESISTOR, CRBN COMP, 8.2K, 1/4W	1
3110799	ES901-18	FRONT COVER ASSEMBLY	1
3110800	ES002-81	COVER, REAR	1
3110801	ES000-15	CHAMBER, LIGHT EXCLUDING	1
3110802	ES908-12	CROPPING SELECTION ASSEMBLY	1
3110803	ES024-98	STAGE, FOCUS	1
3110804	ES024-99	HOLDER, SLIDE	1
3110805	ES914-25	SENSOR HOLDER ASSEMBLY	1
3110806	ES005-11	DIFFUSER	1
3110807	ES932-04	REFLECTOR ASSEMBLY	1
3110808	ES001-10	COVER, BATTERY COMPARTMENT	1
3110809	ES932-05	PREVIEW REFLECTOR ASSEMBLY	1
3110810	ES074-02	HOLDER, BATTERY TERMINALS	1
3110811	ES914-26	DIFFUSER, PREVIEW PANEL	1
3110812	ES014-45	KNOB, EXPOSURE CONTROL	1
3110813	ES013-23	BUTTON, PRINT	1
3110814	ES014-46	KNOB, ON/OFF	1

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COMPLETE PARTS LIST, Continued

Vivitar Part No.	Part Code	Description	Quantity
3110815	ES014-47	BUTTON, TIMER	1
3110816	ES074-05	CAP, EXTERNAL POWER CONNECTION	1
3110817	ES011-06	FOOT, RUBBER	4
3110818	SS020-51	HOLDER, LED	1
3110819	ES137-04	FRAME (A), SLIDE	1
3110820	ES137-05	FRAME (B), SLIDE	1
3110821	ES904-22	SHUTTER ASSEMBLY	1
3110822	ES117-09	PLATE, FOCUS STAGE POSITION	1
3110823	ES109-25	TERMINAL, BATTERY, COMMON	1
3110824	ES113-04	WASHER, POSITION PLATE	1
3110825	ES117-13	PLATE, ATTACHING	2
3110826	ES271-27	LENS ASSEMBLY, 24mm f16	1
3110827	SG022-67	SCREW, PANHD, TAP, 1.7x3.5, BRN	3
3110828	SG025-18	SCREW, FLTHD, TAP, 2.3x8.0, BRN	2
3110829	SG023-20	SCREW, PANHD, TAP, 2.3x10.0, BRN	6
3110830	SG003-06	SCREW, TRUSS, TAP, 3.5x8.0, BRN	2
3110831	SG023-31	SCREW, PANHD, TAP, 4.0x63.0, BRN	4
3110832	SG000-24	SCREW, PANHD, 2.0x4.0, BRN	2
3110833	SG000-62	SCREW, PANHD, 3.0x10.0, BRN	2
3110834	SG000-63	SCREW, PANHD, 3.0x8.0, BRN	4
3110835	ES950-29	PRINTED CIRCUIT BOARD (A) ASSEMBLY	1
3110836	ES950-30	PRINTED CIRCUIT BOARD (B) ASSEMBLY	1
3110837	ES160-86	SPRING, SHUTTER BLADE	1
3110838	ES160-87	SPRING, CROPPING SELECTION ASSEMBLY	1
3110840	SC039-97	RESISTOR, CRBN COMP, 27K, 1/4W	1
3110841	SC007-61	RESISTOR, CRBN COMP, 15K, 1/4W	2
3110842	SC015-75	RESISTOR, VARIABLE, 20K	1
3110843	SC007-55	RESISTOR, CRBN COMP, 3.3K, 1/4W	2
3110844	SC007-59	RESISTOR, CRBN COMP, 330K, 1/4W	1
3110845	SC039-99	RESISTOR, CRBN COMP, 8.2K, 1/4W, 1%	1
3110846	SC049-01	RESISTOR, CRBN COMP, 5.9K, 1/4W, 1%	1
3110847	SC039-45	RESISTOR, CRBN COMP, 1.8M, 1/4W	2
3110848	SC049-02	RESISTOR, CRBN COMP, 4.1K, 1/4W, 1%	1
3110849	SC049-03	RESISTOR, CRBN COMP, 3.0K, 1/4W, 1%	1
3110850	SC049-04	RESISTOR, CRBN COMP, 2.0K, 1/4W, 1%	1
3110851	SC049-05	RESISTOR, CRBN COMP, 5.6K, 1/4W, 1%	1
3110852	SC015-53	RESISTOR, VARIABLE, 30K	1
3110854	SC007-73	RESISTOR, CRBN COMP, 150K, 1/4W	2
3110855	SC009-46	RESISTOR, CRBN COMP, 33K, 1/4W	2
3110856	SC039-96	RESISTOR, CRBN COMP, 120K, 1/4W	1
3110857	SC015-76	RESISTOR, VARIABLE, 500K	1
3110858	SC039-98	RESISTOR, CRBN COMP, 200, 1/4W	1
3110859	SC039-07	RESISTOR, CRBN COMP, 180K, 1/4W	1
3110860	SC007-56	RESISTOR, CRBN COMP, 200K, 1/4W	1
3110861	SC000-81	CAPACITOR, ELECTRO, 220uF, 16V	1
3110863	SC000-82	CAPACITOR, ELECTRO, 100uF, 10V	2
3110864	SC505-10	CAPACITOR, MAIN, 380uF, 350V	1
3110866	SC000-72	CAPACITOR, ELECTRO, 1uF, 50V	1
3110867	SC031-05	C-R COMBINATION, 5.6K/3300pF	1
3110868	SS514-33	IC, AN-6914 OR C393	1
3110869	SS514-17	IC, HD14011B	1
3110870	SS514-53	IC, HD14040B	1
3110871	SS514-52	IC, HD14001B	1
3110872	SC006-08	DIODE, ZENER MA-1091	1
3110873	SC006-34	DIODE, ZENER MA-1062	2
3110874	SC025-41	LED, LN-31YPH	1
3110875	SS506-98	TRANSFORMER, OSC, 16KS	1
3110876	SC021-17	INDUCTOR, 4541L1	1
3110877	SS521-01	SOLENOID, TDS-058-W	1
3110878	SS502-38	TUBE, NEON, NE-270VS	1

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COMPLETE PARTS LIST, Continued

Vivitar Part No.	Part Code	Description	Quantity
3110879	SS502-39	LAMP, TUNGSTEN, 250mA, 6.3V	1
3110880	SC300-38	SWITCH, SLIDE, SKM-22-03P	1
3110881	SC304-10	SWITCH, LEAF, MSW-1273	1
3110882	Not Issued	POLAROID FILM BACK	1
3110883	ES117-10	PLATE, PC BOARD SUPPORT	1
3110977	SS018-05	BAND, MAIN CAPACITOR RTNG	1
3400052	ES011-01	BUSHING, FLASHTUBE	2
3600259	SS109-64	TERMINAL, BATTERY +	1
3600260	SS109-65	TERMINAL, BATTERY -	1



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