VIVITAR ELECTRONIC FLASH MODEL 283

Similar models: 285 (differences covered in separate article)

Batteries: 4 ea. 1.5V AA alkaline or nicad

Fig. 1 — back of unit, cemented nameplate removed

Fig. 2 — side of unit and battery holder

Fig. 3 — flasholder case separated

Fig. 4 — body case separated

Fig. 5 — top side of trigger board

ADJUSTMENT LOCATIONS:

Flash output, auto	A
Main-capacitor voltage	B

FIGURE 1

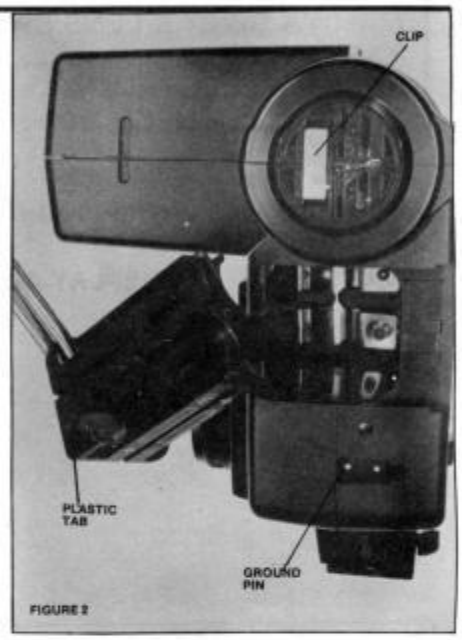

FIGURE 2

ADJUSTMENT AND TEST VALUES:

1. Battery-saver circuit (full charge on main capacitor) — 330V
2. Main-capacitor voltage at which neon ready lamp turns on — 260V
3. Light output in lux seconds, ASA 25, f/4:

Mode	Minimum	Optimum	Maximum
Blue	87.0	123	173.0
Red	21.7	30.8	43.5
Yellow	10.6	15.1	21.7
Purple	170.5	241.1	341.0

4. Bounce-correction circuit—flash output should increase from ¼ to ½ stop with reflector assembly in bounce position
5. Trigger voltage — 200V or more measured across hot shoe)

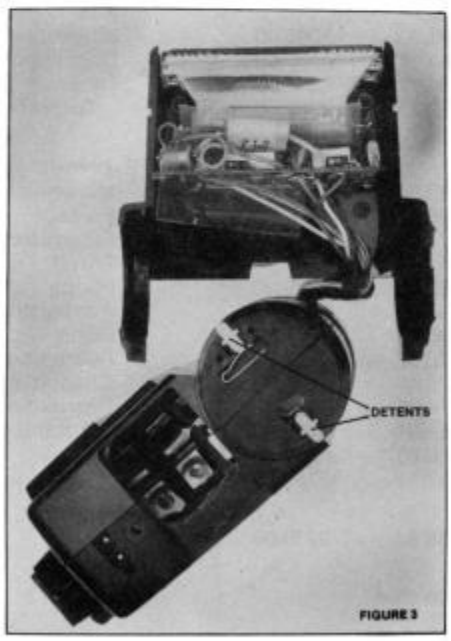

FIGURE 3

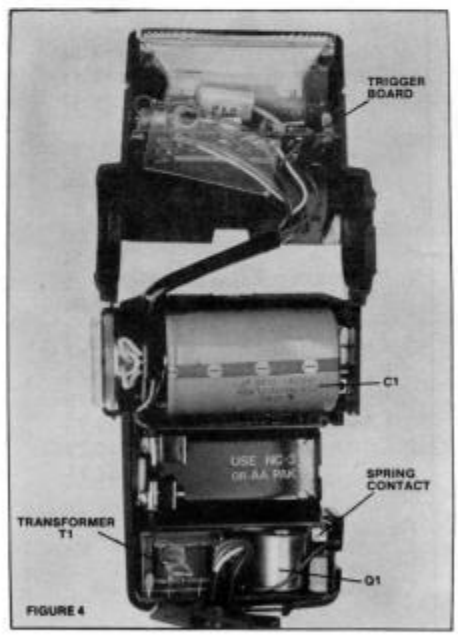

FIGURE 4

ADJUSTMENT SEQUENCE:

1. Remove the cemented nameplate at the back of the unit, Fig. 1. Then, with the unit fully charged, check the voltage on the main capacitor. Insert the positive voltmeter probe through the hole shown in Fig. 1; clip the negative voltmeter lead to the ground pin of the AC receptacle, Fig. 2. Adjust pot B, Fig. 1, so that the full main-capacitor voltage is 330V. The adjustment changes the cutoff of the oscillator (battery-saver circuit).
2. Check the flash output in the blue mode. Adjust pot A, Fig. 1, for the proper output. Then check the flash output in the other modes.
3. Tilt the reflector assembly to one of the bounce positions to check

the bounce-correction circuit. To keep the sensor in the same position as in step #2, use the remote-sensor cord. Check to make sure the flash output increases by ¼ to ½ stop.

DISASSEMBLY HIGHLIGHTS:

Precautions: After separating the body case, discharge the main capacitor C1, Fig. 4, and the reverse-bias capacitor C11, Fig. 5, through a 100-ohm wirewound resistor. You can reach the C11 terminals from the underside of the trigger board, Fig. 4.

Sequence:

1. battery cover
2. battery holder
3. unplug sensor
4. round cover plate at hinge point of reflector assembly, battery-compartment side (use heat from a soldering iron to soften the cement)
5. pry out attaching plate (clip) located under round cover plate, Fig. 2
6. 2 screws, bottom of reflector assembly, and 2 screws at bottom of hinge
7. separate and remove two sections of reflector-assembly case
8. remove bounce-angle detents from body case, Fig. 3
9. 2 body-case screws near hinge
10. 2 screws holding mounting shoe
11. separate two sections of body case
12. discharge C1 and C11, Fig. 4 and Fig. 5
13. 2 screws holding sensor receptacle

FREQUENTLY REPAIRED SECTIONS:

1. Mounting shoe broken from impact. Part #3600221.
2. Spring contact inside flashcord receptacle, Fig. 4, damaged as a result of using the wrong type of flashcord (mini-plug rather than Vivitar flashcord). Symptom — flash won't fire with a flashcord but will fire from hot shoe.
3. Unit will not work with some types of nicad batteries, but works properly with alkaline batteries or with Vivitar's nicad pack. The positive terminal of many nicad batteries is too large; the terminal catches on the plastic tab in the battery holder (the tab that holds down the holder's contact, Fig. 2). As a result, the positive terminal of the battery can't come against the battery-holder contact. Correct by cutting off the plastic tabs; then cement the contact in place.
4. Self-indicating light (green LED) pulses on even though flash has not been fired. Replace diode CR9, Fig. 5. If the diode is leaking, the self-indicating light turns on.

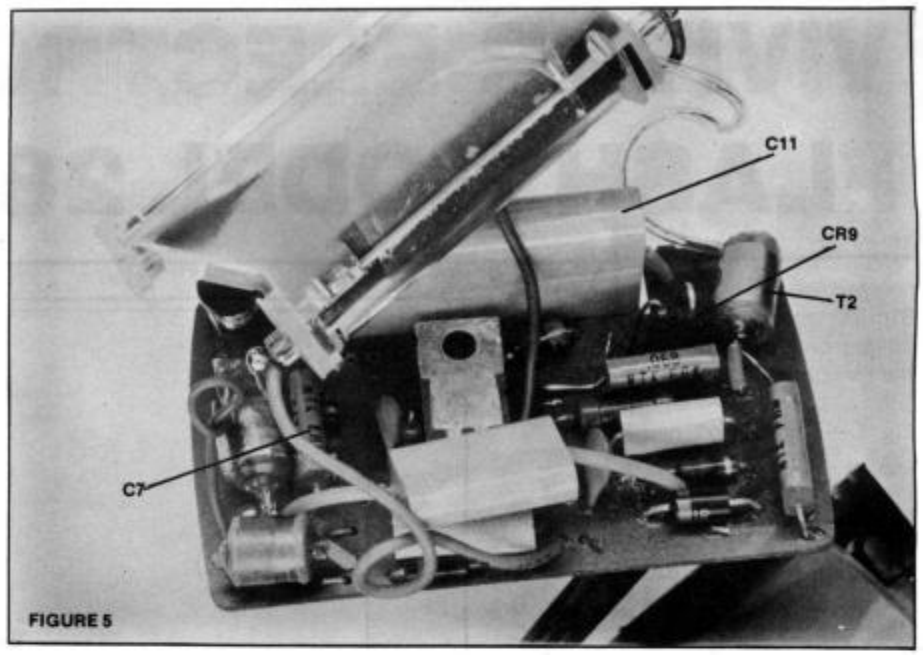

FIGURE 5

REVISED PARTS:

Early models have an additional diode (CR10) and resistor (R16) on the trigger board. Later models, such as the one illustrated, leave out CR10 and R16.

PART NUMBERS, MAIN REPLACEMENT COMPONENTS:

1. Power transistor Q1 — 3100184
   Symptom if defective — no hum from the oscillator, neon ready lamp never turns on.
2. Main capacitor C1 — 3100178
   Symptom if defective — oscillator hums, but neon ready lamp never turns on; C1 will not reach full charge.
3. Flashtube — 3100181
   Symptom if defective — neon ready lamp turns on, but flashtube won't fire; verify by connecting a substitute flashtube across the unit's flashtube, Fig. 3.
4. Trigger transformer T2 — 3100108; trigger capacitor C7 — 3100153
   Symptom if defective — neon ready lamp turns on, but flash will not fire; substitute flashtube hooked in parallel also will not fire. Verify by substituting a trigger capacitor (250V, .047 μf).