

# SECTION 2

## INSTALLATION

### 2-1. UNPACKING

2-2. The EIP 371 Source Locking Autohet Microwave Counter arrives ready for operation. Carefully inspect the shipping carton before opening for any evidence of visible or concealed damage. If any seems apparent, ask that the shipper's agent be present when the instrument is unpacked.

2-3. Remove the packing carton and supports, being careful not to scar or damage the instrument. Make a complete visual inspection of the counter, checking for any damage or missing components. Check that all switches and controls operate mechanically. Report any damage to EIP immediately.

### 2-4. INSTALLATION

2-5. There are no special installation instructions for the 371 Microwave Counter. The unit is a self-contained bench or rack mounted instrument, which only requires connection to a standard, single-phase, 115/230 V, 50-60 Hz power line for operation. CAUTION: Check current rating of counter fuse and setting of rear panel 115/230 Vac slide switch before applying power to counter.

### 2-6. INCOMING OPERATIONAL CHECK

2-7. The following procedure outlines an operational check of the counter which may be conducted without special tools, signal generators, or test equipment. The internal TIME BASE CLOCK is used as the input signal to the 300 MHz counter, therefore it cannot check the operation of the Band II prescaler or the Band III comb generator.

- a. Turn counter POWER switch off. Check fuse rating and setting of 115/230 switch (on rear panel).
- b. Connect counter power cord to a source of 115 or 230 V, 50-60 Hz, single-phase power. The ground terminal on the power cord plug should connect to a reliable earth ground.
- c. Press POWER switch (on front panel) to turn counter on. The counter display should light, and

the internal cooling fan should operate.

d. Place the rear panel TIME BASE INT/EXT switch in the INT position.

e. Partially depress any one of the RESOLUTION switches and release it so no switch remains in the depressed position. All digits in the 11-digit display should indicate "0" (zero).

f. Depress the TEST switch on the front panel. The display should indicate 10 000 000 (10 MHz). Note that the three leading zeros are blanked (not lit).

g. Blank the 1 Hz digit by pressing the right hand RESOLUTION switch.

h. Depress the TEST button again. The display should still indicate 10 MHz, but with the final "0" blanked. Also note a decrease in the gate time evidenced by the shorter on-time of the GATE light.

i. Test each RESOLUTION switch in turn, starting with the 1 Hz digit. Note that the digit immediately above that switch, and all digits to the right of that switch, are blanked.

j. Unblank all display digits (see "e." above for procedure).

k. With no signal input, the entire display\* should show all zeros in all bands.

l. Depress both the TEST and RESET switches simultaneously. All display digits\* should show "8" (all segments of each display lighted).

m. Set counter to Band IB (10 MHz - 300 MHz range). Program the auxiliary display. (through keyboard entry) to read "10.0" MHz. Press LOCK button. LOCK indicator should light for 2-3 seconds then go out.

n. Set counter to Band III (850 MHz - 18 GHz range). Program the auxiliary display (as above) to read "10". Press PRESET button. Auxiliary display readout should now read "10000.0 (10 GHz), and PRESET indicator should light. Press CLR (Clear) button.

o. This completes the counter confidence check. All CW signals within the frequency range of the counter may be counter and locked. Refer to Section 1 for proper signal levels. If the counter fails to perform as described above, refer to Section 5.

\* Except those on the Auxiliary Display panel.