

FAULT FINDING

Tables 13.1 to 13.4 provide a list of checks to make should there be any problems with the equipment; these checks can be made by any competent person. If the checks prove to be ineffective, contact your nearest ILFORD selling company, the address of which can be found on the back cover of this manual.

CAUTION

If in doubt about making any of the following checks, consult a competent engineer. Any further repair work carried out by unqualified personnel will invalidate any warranty applicable to the equipment.



Figure 13.1

13.1 MULTIGRADE 500H enlarger head

Symptom	Possible cause and recommended action
1 One lamp not working	Lamp defective or blown Replace lamp (see section 12.2).
2 Both lamps and fan not working	Poor connection between power supply and enlarger head Check enlarger head is plugged correctly into the power supply. Door open Close enlarger head door.
3 Both lamps switch off during use	Safety cut-out has operated The cut-out operates under abnormal operating conditions, for example, fan failure, and is self resetting. If the fault persists, contact your nearest ILFORD selling company.
4 Uneven illumination on the enlarger baseboard	Light mixing box and/or register plate incorrectly positioned or damaged Examine light mixing box and register plate for damage. Clean the light mixing box (see section 12.1).
5 Change in print density with change in contrast selection. Incorrect grade	Incorrect program selected on control unit Select alternative program (see section 4.6). Lamps incorrectly positioned Check lamp slides are correctly positioned relative to the light mixing box (see section 4.1a). Incorrect lamps fitted Check all lamps are of the correct ANSI code (ELH for MULTIGRADE 500H enlarger heads, and ELB for MULTIGRADE 500HLZ enlarger heads).
6 Lamps blow frequently or light output is low	Incorrect program selected on control unit See symptom 5.
7 Lamp contacts black or pitted	Defective lampholder Replace lamp and lampholder. Contact your nearest ILFORD selling company.

13.2 MULTIGRADE 500CPM control unit

Symptom	Possible cause and recommended action
1 Display and key pad fail to illuminate	Failure of power supply See table 13.3. Poor connection between power supply and control unit Check control unit is plugged correctly into the power supply.
2 'HELP 1' is displayed when control unit is switched on (see figure 13.1)	Mains frequency measured to be out of limits Mains frequency may not be within the range 45-65Hz. Switch the equipment off then on again.
3 'HELP' is displayed when exposure probe is being used	See table 13.4
4 Display becomes inoperative	Severe interference on the mains supply Switch power off and on again. If the fault persists, it is recommended to power the equipment via a mains interference filter. See section 4.3f.
5 No audible signal	'Bleep' signal switched off Adjust position of 'bleep' switch (see section 3.6).

13.3 MULTIGRADE 500S power supply

Symptom	Possible cause and recommended action
1 On/off switch fails to illuminate. No power to output sockets	<p>Poor connection between electrical mains and power supply Ensure plug at each end of mains cord is pushed fully into socket.</p> <p>Mains fuse blown Replace fuse (see section 12.4).</p>
2 Mains fuse blown	<p>Incorrect mains fuse fitted Check and replace fuse (see section 12.4). If fault persists, contact your nearest ILFORD selling company.</p> <p>Faulty power supply Contact your nearest ILFORD selling company.</p>

13.4 MULTIGRADE 500P exposure probe

Symptom	Possible cause and recommended action
1 'HELP 2' displayed	<p>Calibration knob is set between two numbers Move the calibration knob to the nearest whole number.</p> <p>Faulty probe Return probe to your nearest ILFORD selling company.</p> <p>Note To cancel the 'HELP' display, press 'expose-cancel'.</p>
2 'HELP 3' or 'HELP 5' displayed	<p>Light intensity too high for probe to measure Close enlarger lens aperture.</p> <p>Note To cancel the 'HELP' display, press 'expose-cancel'.</p>
3 'HELP 4' displayed	<p>Light intensity too low for probe to measure Open enlarger lens aperture.</p> <p>Note To cancel the 'HELP' display, press 'expose-cancel'.</p>
4 Incorrect or erratic results	<p>a Probe moved during measurement period Do not move probe until the recommended time is displayed on control unit. The measurement period will take about 5 seconds (see section 10.1).</p> <p>b Operator moved during measurement period Do not move or lean over the probe during the measurement period. Changes in background illumination will cause errors (see section 10.1).</p> <p>c Safelights too bright See section 10.1.</p> <p>d Unsuitable area on projected image chosen to take measurements Select a shadow area towards the centre of the projected image (see section 10.1).</p>

Symptom	Possible cause and recommended action
	<p>e Unsuitable negative Negatives should be correctly exposed and processed with a good tonal range (see section 10.1). Some negatives, for example, those used in electron microscopy, are unsuitable for taking probe measurements.</p>
5 Probe cannot be calibrated within the range of the calibration knob	<p>Coarse adjustment incorrect See leaflet supplied with probe.</p>
6 Grade and density incorrect on final print	<p>Wrong grade chosen on control unit Select new grade. Note When using the probe, exposure time must be determined every time the grade is changed.</p>
7 Probe switch LED fails to illuminate	<p>Poor connection between probe and control unit Check probe is plugged correctly into the control unit.</p>