ILFOLAB MG2950

FOR ADJUSTMENT OF
KEY PROCESSOR FUNCTIONS
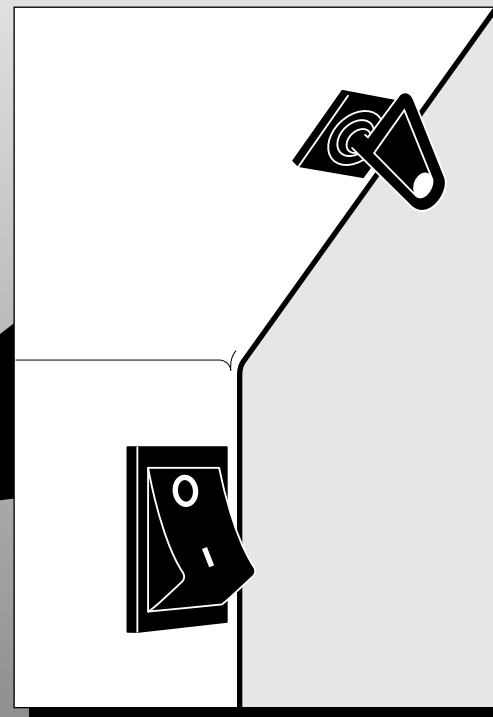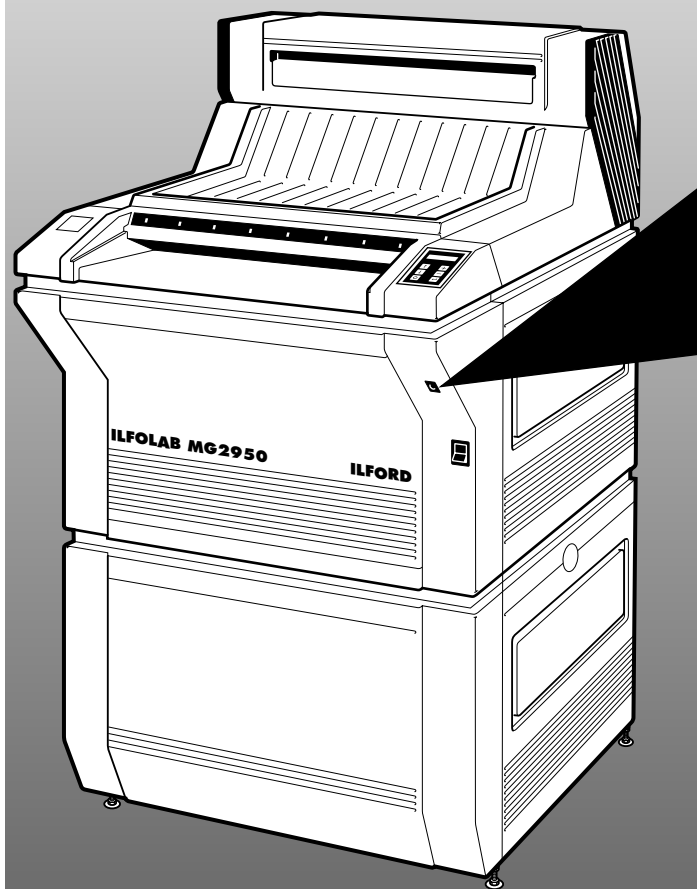
WARNING

The procedures detailed in this manual are not routine. It is strongly recommended that any adjustments are made in consultation with your nearest ILFORD Selling Company

IL942

CE   ETL LISTED 79038

SAFETY PRECAUTIONS

Your photographic equipment is powered by mains electricity, and is designed to comply with international electrical safety standards. However, basic safety precautions must always be followed when operating electrical equipment, including the following, where applicable:

1   Read and understand all instructions.

2   Observe labels on the equipment, particularly those advising of possible hazards.

3   Close supervision is necessary when the equipment is being used by inexperienced personnel.

4   Take care to avoid burns. Some internal parts of the equipment can become very hot with continuous use.

5   Do not operate equipment that has been dropped or damaged, or has damaged electrical leads. Have the equipment examined by qualified personnel.

6   Do not allow any electrical lead to touch hot surfaces.

7   Ensure the leads are arranged such that they cannot be pulled or tripped over.

8   Ensure the air flow through the vents is not obstructed when operating the equipment. An obstructed air vent can lead to overheating.

9   Do not dismantle the equipment unless you are qualified to do so. Incorrect assembly can cause hazards both to yourself and to the equipment.

10   Always obey local codes of practice, particularly for installation requirements.

Do not destroy these instructions

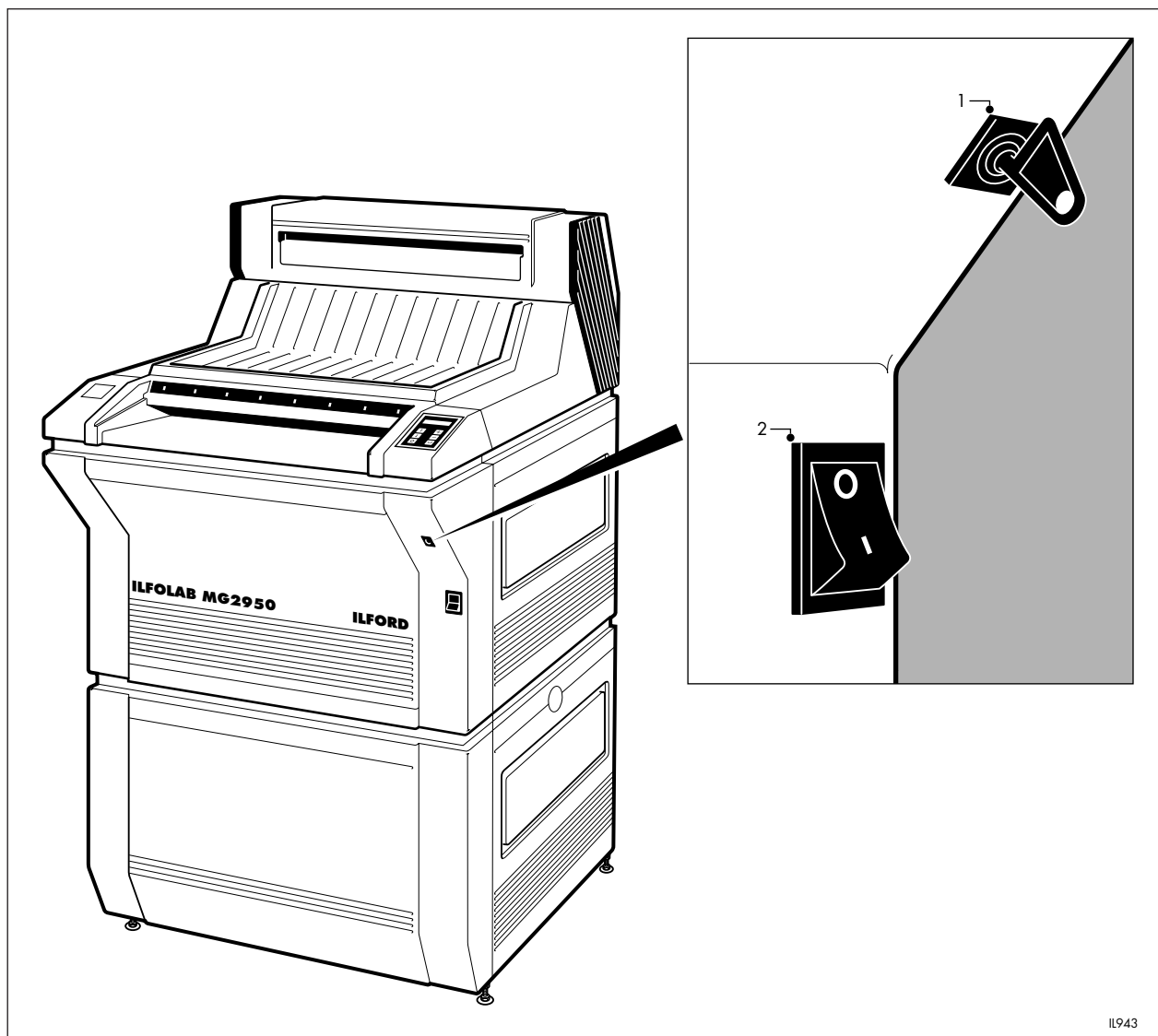# CONTENTS

Figure 1.1   Location of key switch

1
INTRODUCTION

Figure 1.1
1 Key switch
2 On/off switch

See figure 1.1.

All processor functions are supplied factory set. Under normal operating conditions it is unlikely that adjustments will be necessary. However, adjustments may be necessary in some operating conditions, or when some electronic components are changed during maintenance. To make adjustments, two keys are supplied with this manual. The keys and these instructions are to be used by trained operators only. It is recommended all adjustments are made in consultation with your nearest ILFORD Selling Company.

Under normal operating conditions the 'operator pages' are displayed on the control panel. These pages are described in the ILFOLAB MG2950 Operating manual. The key switch provides access to an additional 35 pages. These pages are the 'key holder pages' and are listed in section 4 of this manual. With a key holder page displayed, the operating parameter of that particular processor function can be adjusted. The adjustment procedures are described in section 3 of this manual.

2
USING THE KEY

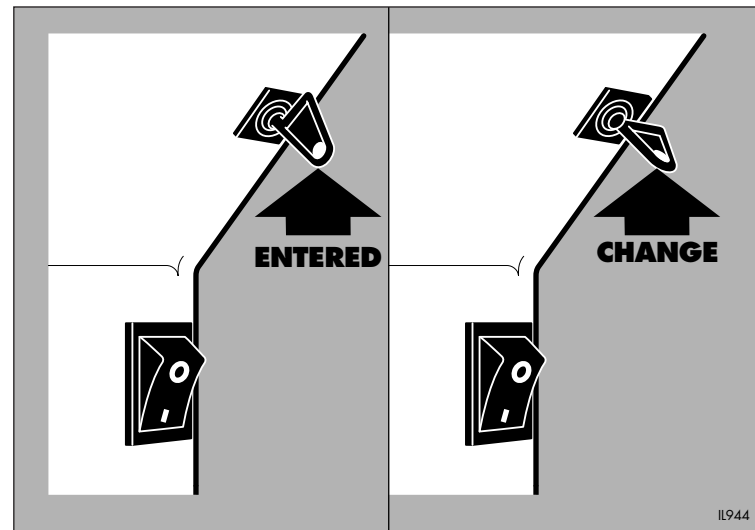See figure 2.1.

Figure 2.1   Using the key switch

Insert the key into the key switch located above the processor on/off switch. The key switch has two positions 'entered' and 'change'.

Note
On processors up to and including serial numbers B030020 (220V, 50Hz) and B040008 (240V, 50Hz), the key switch is located inside the electrical compartment. In this instance take extreme care, when operating the key switch, not to touch any live electrical components. Do not leave the processor unattended while the electrical cover is removed.

2.1 ENTERED POSITION
The key switch is turned to the vertical position. This is the normal operating position, and the key should be removed to prevent tampering by untrained operators.

2.2 CHANGE POSITION
The key switch is turned to the horizontal position. This is the position for making changes to the operating parameters of the ILFOLAB MG2950 processor. In this position, the key is locked and cannot be removed. When the key is turned to this position, the display reads

```
          SETTING
        PROCEDURE
```

for three seconds. The display then reads key holder page 1

```
        DRYER P1
    HEATER AC% = 7 2
```

3
MAKING ADJUSTMENTS

In the following sections, some figures in the displays are shown for example only. They have been included for clarity and may not be the same figures displayed on your processor. Adjustments can be made at any time during the processor cycle, but ideally they should be made with the processor in 'standby off'.

3.1 DRYER HEAT

See figure 3.1.
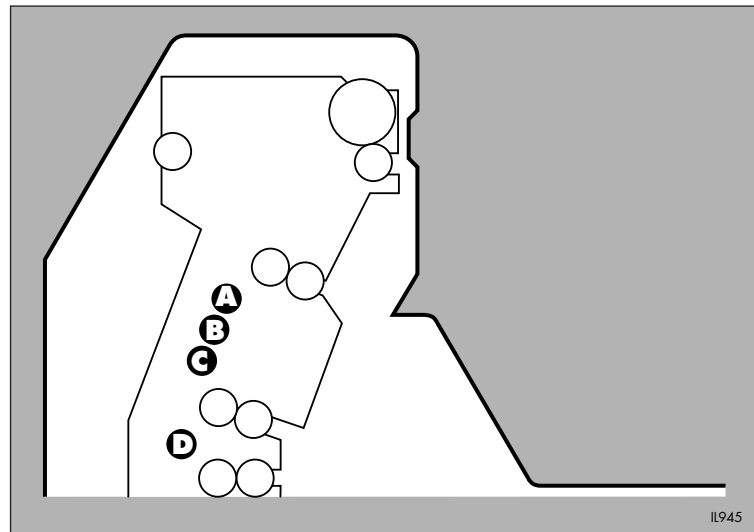
Figure 3.1   Configuration of dryer heaters

1   Turn the key switch to the 'change' (horizontal) position. Ensure the display reads

```
          SETTING
         PROCEDURE
```

for three seconds.

2   Use the select display buttons (↑) or (↓) to move through the 'key holder pages' until the dryer program requiring adjustment is displayed. For example, press (↑) four times to display key holder page 5

```
         DRYER P2
      HEATER AC% = 82
```

In this example, dryer program P2 is selected. In addition, heaters **A** and **C** are selected (heaters **A** and **C** work in unison). Each dryer program P1 to P6 is extended over four pages. The

other three pages (in sequence) are heater **B**, heater **D** and Temp (B). For further clarification, refer to the key holder pages in section 4. The dryer heaters are shown in figure 3.1.

3   Press the adjustment buttons (+) or (-) to adjust the percentage of power applied to dryer heaters **A** and **C**, and therefore, increase or decrease the heat at these points in the dryer section. Adjustments are made in increments of 1%.

4   Press (↑) once to display key holder page 6

```
          DRYER  P2
    HEATER  B%  =  8 2
```

5   Heater **B** is thermostatically controlled by the temperature control system, set to Temp (B) (see operation 8). Repeat operation 3 if necessary to adjust the percentage of power applied to dryer heater **B** in program P2. Adjustments are made in increments of 1%.

6   Press (↑) once to display key operator page 7

```
          DRYER  P2
    HEATER  D%  =  0 0
```

7   Heater **D** is controlled separately and is for roll processing only. This is why it is important to select the correct dryer program for processing rolls. In this example, program P2 is incorrect for processing rolls (power is set at zero). Repeat operation 3 if necessary to adjust the percentage of power applied to dryer heater **D** in program P2.

8   Press (↑) once to display key operator page 8

```
          DRYER  P2
    TEMP  (B)  =  7 2
```

This is the temperature setting for switching heater **B** (the only thermostatically controlled heater). Press the adjustment buttons (+) or (-) to adjust this setting in increments of 1°C.

9   This completes the adjustment of all dryer parameters for dryer program P2. If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display reads

```
       END  SETTING
         PROCEDURE
```

for 10 seconds. During this time the new data is saved in the processor memory.

Note
All new data is entered automatically when the key switch is reselected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.2 DRYER TRIM
See figure 3.2.

Adjustments to dryer trim are divided into two kinds; temperature steps and power steps. For each program P1 to P6, temperature steps are applied to heater **B** and power steps to heaters **A**, **B** and **C**. The right combination of both temperature and power trims results in the optimum drying performance of the processor.

3.2a Dryer trim temperature steps
This adjustment provides fine or coarse tuning to the dryer trim temperature for heater **B**. It is applied across all programs P1 to P6.

1   Turn the key switch to the 'change' (horizontal) position. Ensure the display reads

```
          SETTING
        PROCEDURE
```

for three seconds.

2   Press (↓) once to obtain key holder page 31

```
        DRYER TRIM T
      TEMP (B) = 01·0
```

where the temperature trim step is shown on the bottom line of the display in °C. There are four steps available: 0·5, 1·0, 1·5 or 2·0. See figure 3.2 for the effect on temperature to heater **B**, when using the dryer trim operator pages.

3   Press the adjustment buttons (+) or (-) to select the required temperature step.

4   If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display reads

```
        END SETTING
         PROCEDURE
```

		DRYER TRIM SETTING (operator pages)										
		-5	**-4**	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**	**+4**	**+5**
DRYER TRIM TEMPERATURE STEPS (°C)	**2**	-10	-8	-6	-4	-2	0	+2	+4	+6	+8	+10
	1·5	-7·5	-6·0	-4·5	-3·0	-1·5	0	+1·5	+3·0	+4·5	+6·0	+7·5
	1	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
	0·5	-2·5	-2·0	-1·5	-1·0	-0·5	0	+0·5	+1·0	+1·5	+2·0	+2·5
DRYER TRIM POWER STEPS (%)	**1·5**	-7·5	-6·0	-4·5	-3·0	-1·5	0	+1·5	+3·0	+4·5	+6·0	+7·5
	1	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
	0·5	-2·5	-2·0	-1·5	-1·0	-0·5	0	+0·5	+1·0	+1·5	+2·0	+2·5

DRYER TRIM TEMPERATURE

2 TRIM STEP — +10°C / -10°C

1.5 TRIM STEP — +7.5°C / -7.5°C

1 TRIM STEP — +5°C / -5°C

0.5 TRIM STEP — +2.5°C / -2.5°C

DRYER TRIM POWER

1.5 TRIM STEP — +7.5% / -7.5%

1 TRIM STEP — +5% / -5%

0.5 TRIM STEP — +2.5% / -2.5%

-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 **TRIM SETTING** -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

Figure 3.2 Dryer trim steps

for 10 seconds. During this time the new data is saved in the processor memory.

Note

All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.2b **Dryer trim power steps**

This adjustment provides fine or coarse tuning to the dryer trim power for heaters **A**, **B** and **C**. It is applied across all programs P1 to P6.

1   Turn the key switch to the 'change' (horizontal) position. Ensure the display reads

```
SETTING
PROCEDURE
```

for three seconds.

2   Press (↓) twice to obtain key holder page 30

```
DRYER TRIM P
ABC% = 01·0
```

where the power trim step is shown on the bottom line of the display in %. There are three steps available: 0·5, 1·0 or 1·5. See figure 3.2 for the effect on power applied to heaters **A**, **B** and **C**, when using the dryer trim operator pages.

3   Press the adjustment buttons (+) and (-) to select the required power step.

4   If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display reads
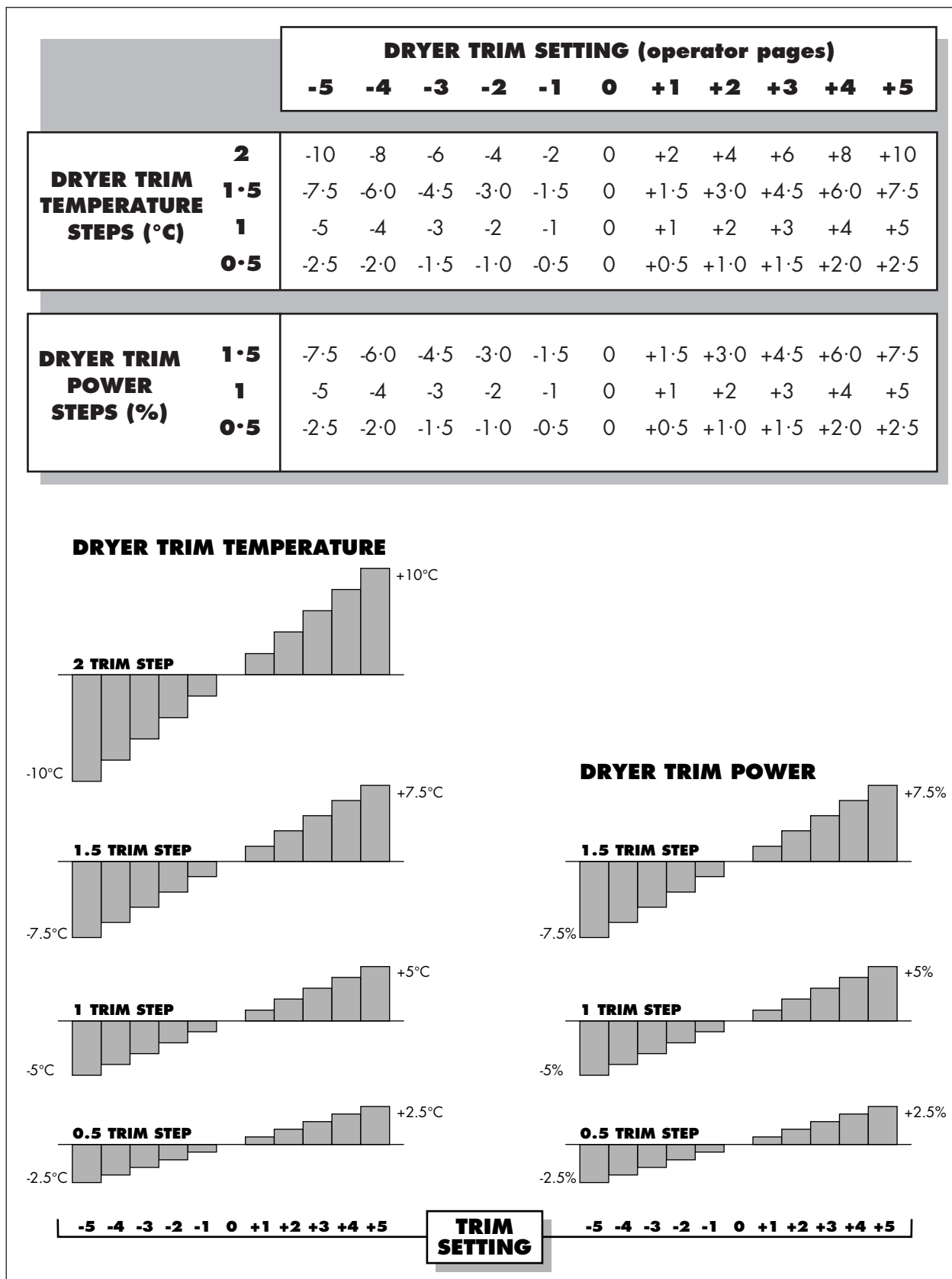
```
END SETTING
PROCEDURE
```

for 10 seconds. During this time the new data is saved in the processor memory.

Note

All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.3 SOLUTION TEMPERATURE

Adjustments to solution temperature are divided into two kinds: temperature and temperature offset.

3.3a Temperature

This adjustment is made when, for example, you are processing papers or are using chemicals that are not manufactured by ILFORD.

1   Scroll through the operator pages until the solution temperature page is displayed (see the ILFOLAB MG2950 Operating manual)

```
SET T DEV = 40·0
REAL T DEV = 40·0

        or

SET T FIX = 40·0
REAL T FIX = 40·0
```

where the temperatures are measured in °C.

2   Turn the key switch to the 'change' (horizontal) position within 10 seconds of the required operator page being selected (remember, after 10 seconds the operator page display resets to the processor cycle page). Ensure the display remains the same as operation 1.

3   Press the adjustment buttons (+) or (-) to select the required temperature for the top line SET T DEV or SET T FIX. Adjustments are made in increments of 0·1°C.

4   If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display resets to the processor cycle page after 10 seconds. During this time the new data is saved in the processor memory.

Note

All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.3b Temperature offset

This adjustment is made to calibrate the solution temperature system against a known temperature when, for example, the thermistors are replaced.

1   Turn the key switch to the 'change' (horizontal) position. Ensure

the display reads

<div align="center">

SETTING
PROCEDURE

</div>

for three seconds.

2   Press (↓) five times to obtain key holder page 27

<div align="center">

TEMP OFFSET
DEV **=+**0 0 0 · 0**°**C

</div>

or

press (↓) six times to obtain key holder page 26

<div align="center">

TEMP OFFSET
FIX **=+**0 0 0 · 0**°**C

</div>

3   The range of adjustment for both developer and fixer is +001·0 to -001·0 in increments of 0·1°C. Press the adjustment buttons (+) or (-) to select the required temperature offset.

4   If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display reads

<div align="center">

END SETTING
PROCEDURE

</div>

for 10 seconds. During this time the new data is saved in the processor memory.

Note
All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.4   SOLUTION REPLENISHMENT
Adjustments to solution replenishment are divided into two kinds: rate of delivery and replenishment offset.

3.4a   Rate of delivery
This adjustment is made when, for example, you are processing papers or are using chemicals that are not manufactured by ILFORD.

1   Scroll through the operator pages until the solution replenishment

page is displayed (see the ILFOLAB MG2950 Operating manual)

```
DEV REP RATE = 1 4 4
 PUMP TIME = 0 0 0
```

or

```
FIX REP RATE = 2 4 0
 PUMP TIME = 0 0 0
```

here the replenishment rate is shown in ml/m2.

2   Turn the key switch to the 'change' (horizontal) position within 10 seconds of the required operator page being selected (remember, after 10 seconds the operator page resets to the processor cycle page). Ensure the display remains the same as operation 1.

3   Press the adjustment buttons (+) or (-) to select the required replenishment rate for the top line `DEV REP RATE` or `FIX REP RATE`. Adjustments are made in increments of 1ml/m2. The pump time is calculated and adjusted automatically by the processor.

4

If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display resets to the processor cycle page after 10 seconds. During this time the new data is saved in the processor memory.

Note
All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.4b

Replenishment offset
This adjustment is made to calibrate the solution replenishment system to the processor software when, for example, the replenishment pumps are replaced.

1

Turn the key switch to the 'change' (horizontal) position. Ensure the display reads

```
SETTING
PROCEDURE
```

for three seconds.

2

Press (↓) three times to obtain key holder page 29

```
          REPLENISH OFFSET
            DEV = 0 7 5 %
```

or

press (↓) four times to obtain key holder page 28

```
          REPLENISH OFFSET
            FIX = 0 7 5 %
```

3

The range of adjustment for both developer and fixer is 050% to 150% in increments of 1%. Press the adjustment buttons (+) or (-) to select the required value.

4

If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display reads

```
            END SETTING
             PROCEDURE
```

for 10 seconds. During this time the new data is saved in the processor memory.

Note
All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

3.5

TO RESET THE ANTIOX COUNTER
The antiox counter is reset when the processor is commissioned or when a major component is replaced, such as the replenishment pump assembly.

1

Turn the key switch to the 'change' (horizontal) position. Ensure the display reads

```
             SETTING
             PROCEDURE
```

for three seconds.

2

Press (↓) seven times to obtain key holder page 25

```
          ANTIOX: 02:12:03
          AREA M: 00.100
```

where the elapsed time of the current antiox period is shown on the top line, and total area processed in a 16 hour period is shown on the bottom line (measured in m2).

3

Press the enter (↵) button. Ensure the audible alarm sounds twice and the display reads

```
ANTIOX: 00:00:00
 AREA M:  00.000
```

within 5 seconds.

Note

Both lines are reset and the time starts to count immediately.

4

If no further changes are required to any other processor function, turn the key switch to the 'entered' (vertical) position. Ensure the display reads

```
END SETTING
 PROCEDURE
```

for 10 seconds. During this time the new data is saved in the processor memory.

Note

All new data is entered automatically when the key switch is re-selected to the 'entered' position. It is not necessary to press the enter (↵) button.

4
KEY HOLDER PAGES

Some figures in the displays are shown for example only. They have been included for clarity and may not be the same figures displayed on your processor.

PAGE 1	PAGE 2
DRYER P1	DRYER P1
HEATER AC% = 7 2	HEATER B% = 7 2

PAGE 3	PAGE 4
DRYER P1	DRYER P1
HEATER D% = 0 0	TEMP (B) = 6 2

PAGE 5	PAGE 6
DRYER P2	DRYER P2
HEATER AC% = 8 2	HEATER B% = 8 2

PAGE 7	PAGE 8
DRYER P2	DRYER P2
HEATER D% = 0 0	TEMP (B) = 7 2

PAGE 9	PAGE 10
DRYER P3	DRYER P3
HEATER AC% = 7 2	HEATER B% = 7 2

PAGE 11	PAGE 12
DRYER P3	DRYER P3
HEATER D% = 5 0	TEMP (B) = 6 2

PAGE 13	PAGE 14
DRYER P4	DRYER P4
HEATER AC% = 8 2	HEATER B% = 8 2

PAGE 15	PAGE 16
DRYER P4	DRYER P4
HEATER D% = 6 5	TEMP (B) = 7 2

PAGE 17	PAGE 18
DRYER P5	DRYER P5
HEATER AC% = 5 0	HEATER B% = 5 0

PAGE 19	PAGE 20
DRYER P5	DRYER P5
HEATER D% = 0 0	TEMP (B) = 5 0

PAGE 21	PAGE 22
DRYER P6	DRYER P6
HEATER AC% = 5 0	HEATER B% = 5 0

PAGE 23	PAGE 24
DRYER P6	DRYER P6
HEATER D% = 0 0	TEMP (B) = 5 0

PAGE 25
```
ANTIOX: 02:12:03
AREA M: 00.100
```

PAGE 26
```
TEMP OFFSET
FIX = +000.0
```

PAGE 27
```
TEMP OFFSET
DEV = +000.0
```

PAGE 28
```
REPLENISH OFFSET
FIX = 075%
```

PAGE 29
```
REPLENISH OFFSET
DEV = 075%
```

PAGE 30
```
DRYER TRIM P
ABC% = 01.0
```

PAGE 31
```
DRYER TRIM T
TEMP (B) = 01.0
```

In addition to the above 31 pages, the key switch gives access to the following operator pages for adjustment purposes:

```
SET T DEV
SET T FIX
DEV REP RATE
FIX REP RATE
```

Australia
ILFORD Imaging Australia Pty Limited
Cnr. Ferntree Gully & Forster Roads
PO Box 144
Mt Waverley
Victoria 3149

Benelux
ILFORD Imaging Nederland BV
Nieuwenhuizenweg 10
Postbus 1125
NL-2302 BC Leiden
Holland

Canada
ILFORD Imaging Canada Limited
361 Steelcase Road West
Unit No.4
Markham
Ontario L3R 3V8

Nordic
ILFORD Imaging Denmark
Tordenskjoldsgade 19
DK-1055 Copenhagen K
Denmark

France
ILFORD Imaging France SA
14 rue Galilée Cité Descartes
77420 Champs-sur-Marne

Germany/Austria
ILFORD Imaging GmbH
Heinrich-Hertz-Str 1
POB 10 11 68
D-63265 Dreieich

Italy
ILFORD Imaging Italia SpA
Corso Italia 13
21047 Saronno (VA)

Sweden
ILFORD Imaging Sweden
PO Box 55066
S-400 53 Göteborg

Switzerland
ILFORD Imaging Switzerland GmbH
Industriestrasse 15
1701 Fribourg

United Kingdom
ILFORD Imaging UK Limited
Town Lane
Mobberley
Cheshire WA16 7JL

USA
ILFORD Imaging USA Inc
West 70 Century Road
Paramus
New Jersey 07653

If your country is not shown here, please
contact:
Export Eastern Hemisphere
ILFORD Imaging UK Limited
Mobberley
Cheshire WA16 7JL
England

Web
www.ILFORD.com

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