ME6008M Batch Monitor Printer Driver Unit

**FEATURES**

- Prints QA batch totals automatically (programmable delay), or manually.
- Internally logs 500 batch events, downloadable to your laptop/PC via optional front-access DB9 RS232 connector (that also comes with a RS232-to-USB adapter).
- Monitors up to 8 channels of water and admixture.
- Channel units in millilitres or Litres.
- Batch number ID, time and date.
- Real time clock.
- Grand Totals and batch history can also be printed (or dumped to a PC) on demand.
- User-friendly menu tree.
- Programmable pulse scaling (K-Factor).
- IP65-rated touchpad.

The Manu Electronics ME6008M has been designed to interface from Batch Controllers to loggers or serial printers, and will provide automatic end-of-batch printing and datalogging of 500 batch events. All records are time-stamped from the unit’s Real Time Clock.

The unit is operated from a front panel keypad with a LCD 2-line display. Selections are made from a four-function “soft-key” tree structured menu.

**SAMPLE PRINTOUTS**

![Printouts Image]
SETUP

1 The printer supplied by ManuFlo will have its serial port settings already configured as described on Page 8. If using another serial printer then check, and if necessary adjust, its serial port settings (refer to the printer's User Manual).

2 Ensure that power is off to the serial printer, to the ME6008M, and to your existing Batch Controllers from which the flowmeter signals will be obtained.

3 Connect the supplied RS232 Communication Cable (see Page 8) between the ME6008M’s DB9 RS232 port and the DB25 port of the LX300+II or DP8340 serial printer (or another serial printer).

4 Parallel from the back of your existing Batch Controllers (or ME2000, or flowmeters), to connect 0 Volts and Pulse signals from flowmeters to the ME6008M (see pages 3 and 4).

IMPORTANT:
If using a paddlewheel-type flowsensor, then connect the flowsensor to either Channel 1 or to Channel 2 only of the ME6008M, as these channels have specialised inputs for paddlewheel water measurement pulses.

5 Connect power to the ME6008M:
   • if an ac-powered unit, then connect 240 vac mains power to the ME6008M;
   • if a DC-powered unit, then connect 12 VDC power.

6 Turn power on to the serial printer, and to the ME6008M. The printer “online” indicator will come on. The ME6008M will show the power on screen for about 3 seconds, then will show Screen 1 (see the Menu Tree section on page 5).

7 Ensure that the correct printer model is selected (menu screen 11B). This is usually pre-configured by ManuFlo.

8 Parameters including input pulse scaling are factory set to 1 pulse per unit (L). Parameters including pulse scaling can be reprogrammed to suit your specific installation (see menus 10A and 10B) e.g. if using 25mm MES25 admixture flowmeter, set pulses/unit to 0555.00 and units to Litres if using 50mm RPFS-P water flowmeter, set pulses/unit to 0020.00 and units to Litres.

9 Power up the Batch Controllers (or ME2000, or flowmeters), and perform normal batching operations. At completion of each batch (after a programmable delay time), another record will print, logging the batch.

IMPORTANT: PRINT MODE
For the ME6008M to automatically print out batch quantities, the RUN key must be selected. The unit is then in Count Mode (Screen 2 on the Menu Tree diagram on Page 5).

To Read Batch Log via a Personal Computer (PC), using the PC serial port:

To read the entire batch log via a PC:
• connect a communications cable (see page 8) between the ME6008M serial port and the PC’s port (using the serial to USB adapter if necessary).
• start HyperTerminal software on the PC. HyperTerminal is supplied as a part of Windows up to Windows XP, or can be downloaded from the Internet, at sites such as:
• ensure the PC’s serial port settings are as described page 8.
• ensure printer is switched off to avoid the event log also printing out on the printer.

On the ME6008M, go to Screen 5 “PRINT FLOW HIST?” (see page 5) and press ALL, and the ME6008M will dump the batch log to the PC.
The flowmeter PULSE and 0 V are paralleled from the back of the Batch Controllers to the ME6008M.
ME2008 2-channel module

ME6008M

The flowmeter PULSE and 0 V are paralleled from the 2-channel modules to the ME6008M.

Typically existing MES-type flowmeters

240vac

PRINTER
EPSON
LX300+II

240vac

DB25 Male

DB9 Female

RS232

FUSE

FLOWMETER 1

FLOWMETER 2

(existing wiring)
OPERATING INSTRUCTIONS

SCREEN 0: POWER-ON SCREEN.
- LASTS APPROXIMATELY 3 SECONDS. GIVES CURRENT FIRMWARE VERSION.

SCREEN 1: MAIN MENU
- PRESS RUN TO ENABLE COUNTING TO COMMENCE.
- PRESS SHW TO DISPLAY THE CURRENT GRAND TOTALS FOR EACH CHANNEL.
- PRESS SET TO CONFIGURE THE BATCH MONITOR.

SCREEN 2: COUNT MODE
- PRESS PRT TO PRINT THE CURRENT BATCH DATA.
- PRESS NXT TO DISPLAY THE NEXT CHANNEL.
- PRESS RST TO CLEAR THE CURRENT BATCH DATA.
- PRESS DNE TO RETURN TO THE PREVIOUS SCREEN.

SCREEN 3: CLEAR BATCH
- PRESS YES TO CLEAR THE CURRENT BATCH DATA ONLY.
- PRESS DNE TO RETURN TO THE PREVIOUS SCREEN.

SCREEN 4: SHOW CURRENT GRAND TOTALS
- PRESS PRT TO ENABLE PRINTING.
- PRESS NXT TO DISPLAY THE NEXT CHANNELS GRAND TOTAL.
- PRESS RST TO CLEAR EITHER THE GRAND TOTALS OR BATCH HISTORY
- PRESS DNE TO RETURN TO THE PREVIOUS SCREEN.

SCREEN 5: PRINT FLOW HISTORY
- PRESS LST TO PRINT THE LAST BATCH RECORDED.
- PRESS ALL TO PRINT THE TOTAL BATCH HISTORY RECORDED.
- PRESS SUM TO PRINT THE GRAND TOTALS.
- PRESS DNE TO RETURN TO SCREEN 1.

SCREEN 6A: RESET GRAND TOTALS
- PRESS YES TO RESET THE GRAND TOTALS.
- PRESS NXT TO RESET THE BATCH HISTORY.
- PRESS DNE TO RETURN TO SCREEN 1.

SCREEN 6B: RESET BATCH HISTORY
- PRESS YES TO RESET THE BATCH HISTORY.
- PRESS NXT TO RESET THE GRAND TOTALS.
- PRESS DNE TO RETURN TO SCREEN 1.

SCREEN 7: CONFIGURE THE BATCH MONITOR
- PRESS BAT TO ENTER THE NEXT BATCH NUMBER REQUIRED.
- PRESS FLW TO ENTER THE K FACTORS FOR EACH CHANNEL.
- PRESS PRS TO ENTER THE PRINT DELAY OR PRINTER MODEL.
- PRESS TME TO ENTER THE DATE OR TIME.
SCREEN 8: ENTER BATCH NUMBER
- The underscore indicates which digit is currently selected.
- Press Inc to increment the digit currently selected.
- Press Shf to move the underscore to the next digit.
- Press Dne to return to screen 1.

SCREEN 9: CHANGE FLOW SETTINGS (OR K-FACTOR)
- Press Set to set the K-factor for each channel (see Table 2 on Page 8).
- Press Dne to return to screen 1.

SCREEN 10A: ENTER THE K-FACTOR FOR EACH CHANNEL
- The underscore indicates which digit is currently selected.
- Press Inc to increment the digit currently selected.
- Press Shf to move the underscore to the next digit.
- Press Nxt to select channel unit (L or mL).
- Press Dne to return to screen 1.

SCREEN 10B: ENTER THE UNIT FOR EACH CHANNEL
- Press inc to select l (Litres) or mL (milliliters).
- Press nxt to go to the next channel.
- Press dne to return to screen 1.

SCREEN 10C: PULSE THRESHOLD BEFORE PRINTING A BATCH (default is 40 pulses)
- Press Inc to increment the digit currently selected.
- Press Shf to move the underscore to the next digit.
- Press Nxt to go to the next channel.
- Press Dne to return to screen 1.

SCREEN 11A: ENTER THE PRINT DELAY
- The print delay is the time of inactivity on all channels that indicates the end of a batch.
- It can be set from 2 to 99 seconds.
- Press Inc to increment the digit currently selected.
- Press Shf to move the underscore to the next digit.
- Press Nxt to enter Prt (printer model).
- Press Dne to return to screen 1.

SCREEN 11B: ENTER THE PRINTER MODEL
- Press Inc to select either the Lx300+II or the DP8340 printer.
- Press Nxt to return to screen 11A.
- Press Dne to return to screen 1.

SCREEN 12A: ENTER THE DATE
- The underscore indicates which digit is currently selected.
- Press Inc to increment the digit currently selected.
- Press Shf to move the underscore to the next digit.
- Press Nxt to enable a change of the time.
- Press Dne to save date changes and return to screen 1.

SCREEN 12B: ENTER THE TIME
- The underscore indicates which digit is currently selected.
- Press Inc to increment the digit currently selected.
- Press Shf to move the underscore to the next digit.
- Press Nxt to enable a change of the date.
- Press Dne to save time changes and return to screen 1.
RS232 Communication Cable
ME6008M to Printer
(via back serial port)

RS232 Communication Cable
ME6008M to Computer
(usually via ME6008M’s front serial port but can use the back serial port after disconnecting printer)

The serial port of the attached printer (or PC terminal) must be set to the following:

<table>
<thead>
<tr>
<th>Baud rate</th>
<th>9600</th>
</tr>
</thead>
<tbody>
<tr>
<td>data bits</td>
<td>8</td>
</tr>
<tr>
<td>stop bit</td>
<td>1</td>
</tr>
<tr>
<td>parity</td>
<td>none</td>
</tr>
</tbody>
</table>

Printer Serial Port Settings

### ME6008M Pulses Per Unit setting

<table>
<thead>
<tr>
<th>Flowmeter</th>
<th>Pulses/Litre</th>
<th>to print Litres</th>
<th>to print ml(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPFS-P (25mm)</td>
<td>75</td>
<td>0075.00</td>
<td>0000.08</td>
</tr>
<tr>
<td>RPFS-P (32mm)</td>
<td>46</td>
<td>0046.00</td>
<td>0000.05</td>
</tr>
<tr>
<td>RPFS-P (40mm)</td>
<td>30</td>
<td>0030.00</td>
<td>0000.03</td>
</tr>
<tr>
<td>RPFS-P (50mm)</td>
<td>20</td>
<td>0020.00</td>
<td>0000.02</td>
</tr>
<tr>
<td>MES20</td>
<td>1000</td>
<td>1000</td>
<td>0001.00</td>
</tr>
<tr>
<td>MES25</td>
<td>555</td>
<td>0555.00</td>
<td>0000.56</td>
</tr>
<tr>
<td>any</td>
<td>1</td>
<td>0001.00</td>
<td>do not use</td>
</tr>
<tr>
<td>any</td>
<td>0.1</td>
<td>0000.10</td>
<td>do not use</td>
</tr>
</tbody>
</table>

Pulses Per Unit settings

Notes:
- To avoid possible noise causing bad records, there is a default threshold of 40 pulses before a batch is logged.
TECHNICAL SPECIFICATIONS - ME6008M Printer Driver Unit

<table>
<thead>
<tr>
<th>Power supply options</th>
<th>240 vac, 110 vac, 12-24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage output</td>
<td>+12VDC (to flowmeters, if no Batch Controllers)</td>
</tr>
<tr>
<td>Input Channels</td>
<td>8 (Channels 1 &amp; 2 will accept ManuFlo RPFS-P paddlewheel sensors or NAMUR sensors)</td>
</tr>
<tr>
<td>Inputs from Flowmeters</td>
<td>Sinking pulse (connect between Pulse and 0v). NPN input.</td>
</tr>
<tr>
<td>Inputs - max. frequency</td>
<td>1.5 kHz, each channel</td>
</tr>
<tr>
<td>Memory</td>
<td>500 batches (circular buffer)</td>
</tr>
<tr>
<td>Communications port</td>
<td>RS232 Serial DB9, 9600 baud*</td>
</tr>
<tr>
<td></td>
<td>Optional RS232 to USB adapter.</td>
</tr>
<tr>
<td>Display</td>
<td>LCD 2-line 16-character LCD display, with backlight</td>
</tr>
<tr>
<td>Keypad</td>
<td>Membrane over back switch</td>
</tr>
<tr>
<td>Connector Inputs</td>
<td>10-pin 5.08mm plug and socket</td>
</tr>
<tr>
<td>Power connector</td>
<td>IEC male chassis connector</td>
</tr>
<tr>
<td>Operating current</td>
<td>150 mA</td>
</tr>
<tr>
<td>Power consumption</td>
<td>36 W</td>
</tr>
<tr>
<td>Max. operating temperature</td>
<td>50 ºC</td>
</tr>
<tr>
<td>Mounting</td>
<td>Panel mount</td>
</tr>
<tr>
<td>Instrument housing</td>
<td>ABS hi-impact case mould. IP65 front face</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>206 L, 130 H, 90 D</td>
</tr>
<tr>
<td>Cutout (mm)</td>
<td>190 L, 122 H</td>
</tr>
<tr>
<td>Weight</td>
<td>1 kg</td>
</tr>
</tbody>
</table>

TECHNICAL SPECIFICATIONS - PRINTERS

<table>
<thead>
<tr>
<th>LX300+II Printer</th>
<th>DP8340 Printer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Narrow carriage dot matrix impact printer, 9 pins, 80 columns</td>
</tr>
<tr>
<td></td>
<td>Dot matrix printer, 9-pins, 40 columns, 115mm paper width</td>
</tr>
<tr>
<td>Paper feed</td>
<td>Continuous, friction</td>
</tr>
<tr>
<td>Interfaces</td>
<td>1x Serial (set to 9600 baud*), 1x Parallel</td>
</tr>
<tr>
<td></td>
<td>1x Serial (set to 9600 baud*)</td>
</tr>
<tr>
<td>memory</td>
<td>8kb buffer</td>
</tr>
<tr>
<td></td>
<td>1.5 kb buffer</td>
</tr>
<tr>
<td>Speed</td>
<td>337cps high speed draft @12cpi, 270cps draft @12cpl, 67cps NLQ @12cpl</td>
</tr>
<tr>
<td></td>
<td>2 lines per second bi-directional</td>
</tr>
<tr>
<td>Size</td>
<td>366 (w) x 275 (d) x 159 (h) mm</td>
</tr>
<tr>
<td></td>
<td>202 (w) x 200 (d) x 98 (h) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4.4 kg</td>
</tr>
<tr>
<td></td>
<td>1.9 kg</td>
</tr>
<tr>
<td>Power supply</td>
<td>240vac powered.</td>
</tr>
<tr>
<td></td>
<td>Standard: 12 VDC (2 Amps)</td>
</tr>
<tr>
<td></td>
<td>Optional: 100 vac or 240 vac powered.</td>
</tr>
</tbody>
</table>

* as from Aug 2015

Order Code | Description |
-----------|-------------|
ME6008M    | 8-channel Batch Monitor Printer Driver Unit, 240 vac powered |
ME6008M-110 | 8-channel Batch Monitor Printer Driver Unit, 110 vac powered |
ME6008M-DC | 8-channel Batch Monitor Printer Driver Unit, 12-24 VDC powered |
-FP        | RS232 port on front of ME6008M (includes RS232 to USB converter cable), in addition to the RS232 port at the back of ME6008M, for easy access to download data to laptop. |
LX300+II   | Wide printer. Dot matrix, tractor feed. 1 line report. 204mm wide printout, 80 characters. |
DP8340     | Compact printer. Dot matrix, paper roll. 2 line report. 84mm wide printout. 12 VDC powered. |
DP-AC      | Transformer pack for DP8340 printer: 100 – 240vac input, 12 VDC output. |

Due to continuous product improvement, specifications are subject to change without notice.
Water Batching Equipment

Typical batching installation

Water Storage Tank

Batch Controller

The entered quantity (e.g. 50 L) is automatically dispensed.

• Simple.
• Accurate.
• Reliable - thousands in use.
• Available ex-stock.

RPFS-P Paddlewheel Flow Sensor

• economical.
• simple insertion flowmeter, with a range of pipe adapters in various sizes and materials.
• easy to clean.
• for fresh or mild recycled water.

PMS Electromagnetic flowmeter

• for heavy recycled water.
• obstructionless bore, virtually maintenance free.
• robust construction.
• high level of performance.
• available in various sizes.

ME995-7 Batch Controller

• simple to use and calibrate.
• set batch quantity via rotary dials.
• select up to 9999 Litres.
• easy to connect/disconnect.

ME3000 Batch Controller

• ideal for outdoor use (IP64 front face).
• set batch quantity via touchpad.
• fully programmable. Many safety features.
• displays in either Litres or millilitres.
• easy to connect/disconnect.
• interchangeable with ME995-7 (same size and connection).

The entered quantity (e.g. 50 L) is automatically dispensed.

• Simple.
• Accurate.
• Reliable - thousands in use.
• Available ex-stock.

ManuFlo®TM
Flow Measurement & Control Products
a division of
MANU ELECTRONICS PTY LTD

41 Carter Road, Brookvale
Sydney NSW 2100 Australia
Ph: + 61 2 9905-4324, 9938-1425
Fax: + 61 2 9938-5852
Web: www.manuelectronics.com.au
Email: sales@manuelectronics.com.au

Please see our website www.manuelectronics.com.au for full specifications and other products.