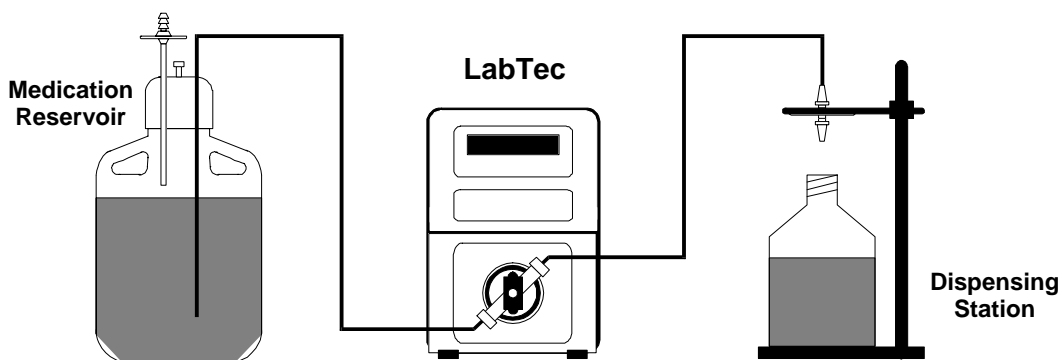


## Computer Controlled Dispensing of Medication in a Clinic

### SUMMARY:

The LabTec Methadone Dispensing Pump provides high precision, high accuracy, programmable medication dispensing capability by volume or weight. The LabTec utilizes an optically encoded, servo-controlled motor, assuring a highly reproducible pump performance. The LabTec dispensing pump comes with RH1 piston pump head which is powered by 3400 RPM motor, and is typically controlled via "client" based software on a PC. Existing software from several sources are currently used with the LabTec in methadone clinics nationwide.



### CALIBRATION AND INVENTORY CONTROL:

Most clinics measure their medication inventory at the beginning and end of the day or bottle. SciLog has balances available for this and for use with the LabTec Methadone Dispenser if dispensing by weight is desired.

A three point Calibration procedure (at 100 mg, 20 mg and 200 mg) assures accurate long term volumetric dispensing. Application Note AN1008 covers calibration in detail. When combined with a routine thorough cleaning procedure, the system needs to be serviced and recalibrated at the factory only once every 12-18 months.

### PERFORMANCE VALIDATION:

Each LabTec is shipped with a Performance Validation that provides a statistical analysis of the system's calibration:

Aliquot	2ml	5ml	10ml	20ml
1	2.01	4.99	10.00	20.03
2	1.99	4.99	9.99	20.02
3	2.01	5.00	9.97	20.03
4	1.98	4.99	10.00	20.00
5	2.01	5.00	10.00	20.01
Ave:	2.00	5.00	9.99	20.02
SD(+/-):	0.01	0.01	0.01	0.01
RSD(%):	0.71	0.11	0.13	0.07

OVER

## CONTROL COMMANDS:

The LabTec Methadone Dispensers are serially controlled via the Printer port and the Com Port on the PC with a fixed command set. Each command must be followed by a **carriage return** and a **line feed** character:

- \* **A**            **Abort**, this stops the dispensing cycle immediately.
- \* **Vxxx**        **Volume** to be dispensed. This is a three-digit value. For example, this should be stated as V050 for 5.0ml; V070 to dispense 7.0ml. The dispensing cycle starts in the current pump direction.
- \* **Wxxxx**      **Weight** to be dispensed. (Default parameters are set in the Weight Dispensing Mode). This is a four-digit value, example: W0200, unit will dispense 2.00 grams.
- \* **X**            **Repeat**, begins a dispensing cycle for the current dispense volume or weight
- \* **F**            **Forward**, sets the current pump direction in the clockwise direction, the display will show **CW**.
- \* **R**            **Reverse**, sets the current pump direction counter-clockwise, the display will show **CCW**.
- \* **P**            **Prime**, sets the dispenser to "Prime", i.e. fills the system for a programmed time "T".
- \* **E**            **Empty**, empties the system by reversing the flow back to the reservoir for a programmed time interval "T".
- \* **Cxx**         **Command**, sets the prime/empty time to a value between 1-99. This must be a two-digit number.
- \* **T**            **Time**, current time interval for prime/empty cycle.
- \* **S**            **Status**, dispenser reports status

Communication of these ASCII commands is done via RS-232 and the PC Com Port. An RS-232 Cable (P/N 080-073) that connects to the Printer Port of the LabTec is required. The following settings are necessary for proper RS-232 communication:

Baud Rate: 9600 bps  
Word Length: 8 bits  
Stop Bits: 1  
Flow Control: None

## CLEANING & MAINTENANCE:

Flushing the pump head with a **cleaning solution** and **distilled water** **before** shutdown at the end of the day is critical for long-term trouble free use of your LabTec or Clinitec Dispenser.

The LabTec or CliniTec Dispensing Pump should be shipped to SciLog once every 12-18 months for preventative maintenance that can not be done in the clinic. The head contains seals that must be replaced periodically. Please refer to Application Note AN1007 for more details on this subject.

Please contact SciLog if additional information is required to incorporate this into your clinical setting. The system integrates with several existing software packages, and SciLog will provide any assistance your programmer needs if you are creating your own software. A complete description of the cleaning and calibration procedures are available upon request.

AN1006, Copyrighted. Last Updated: 12/29/05 Last Reviewed: 12/29/05

**Scilog Inc**, 8845 S. Greenview Drive #4, Middleton, WI 53562-2562  
Web: [www.scilog.com](http://www.scilog.com) Tel: 800-955-1993 Fax: 608-824-0509