

LabCON-V

Version 4.x
Software Installation Instructions

1.0 Description

This document is intended to be used as a guide to update the LabCON computer system with the latest software update diskette.

2.0 Compatibility

The LabCON software Version 4.x is compatible with all previous shipping hardware configurations. For computers not equipped with a barometric pressure sensor the pressure calibration routine will alarm and manual entry is required. The update procedure is different depending on the computer model you have. If the disk is labeled "full installation" , make sure that you have the proper version for your computer model.

3.0 Prerequisite

To update the LabCON computer software you must have a 3.5" floppy disk drive installed and configured. The Emerald computer uses an external floppy controller interface on the back of the unit. The Dynapro computer uses the parallel floppy drive manufactured by BackPack.

4.0 Floppy Drive Configuration

4.1 Emerald Computer (Old Style, shipped prior to 6/95)

1. Power down the LabCON computer.
2. Remove rear cover of the LabCON computer unit.
3. Attach power cable from the external disk drive to the FDC terminal points +12v-red, +5v-green, and GND-black. If your drive is only equipped with a red and black wire connect to terminal points +5v-red and GND-black.
4. Attach ribbon connector to the floppy disk interface connector. The connector is keyed or marked for proper alignment.
5. Attach external keyboard to the front panel connector on the LabCON computer system. The connector is keyed for proper alignment.
6. With the external disk drive empty, power up the LabCON computer system.

7. From the LabCON-V main menu, press the <CTRL> <ALT> S keys simultaneously. This will display the BIOS system setup menu. Press <ENTER>. Verify that the following field displays as follows:

Diskette Drive 0: 1.44 MB, 3.5"

If this field does not match, then you must select the correct entry by pressing the F5 or F6 keys. Upon completion, press the F10 key to save the new value followed by the <ESC> key three times. This will enable the external floppy drive interface. At this time, the computer system will reboot automatically.

IMPORTANT: **Do NOT modify any other parameters while in this BIOS system setup. Failure to follow this guideline can result in system failure.**

8. Proceed to Section 5.0.

4.2 Dynapro Computer (New Style, after 6/95)

1. Power down the LabCON computer.
2. Connect the BackPack floppy drive cable to the parallel port on the computer, plug in the floppy drive and power on the floppy drive.
3. Power on the computer.
4. During the power on tests, the word SETUP will be displayed on the screen. Touch your finger to the circle on the upper left side of the membrane around the display. This will enter the computer into setup mode.
5. Touch X in center of screen to get to setup menu.
6. Touch Attached Devices box.
7. Touch OK Next 3 times until the screen appears which says Optional Local Floppy Drive A: type.
8. Touch Parallel Port 1.44M 3.5" box.

9. Touch OK Next 3 times until the main setup menu is displayed which displays Dynapro ErgoTouch Computer.
10. Touch Save & Exit box.
11. Touch Yes at the prompt Do You Wish To Save the Settings?
12. The computer will reboot and drive is configured.
13. Proceed to section 5.0.

4.3 Dynapro Computer Model TFT (New Color Style, after 6/95)

1. From the LabCON-V main menu press:

F3	- System Menu
F5	- System Data Display
F1	- Password Display
5226	- Password
2. Connect the BackPack floppy drive cable to the parallel port on the computer, plug in the floppy drive and power on the floppy drive.
3. Verify that the config.sys file has the following entry:

```
device=c:\backpack\backpack.sys nonstop
```

If the above line is not present in the config.sys then add the line and reboot the LabCON computer. The floppy disk drive will be assigned the drive letter AD:@ instead of AA:@.
4. Proceed to section 5.0.

4.4 PCS Computer Model

1. Open the back door to the LabCON and insert the floppy into the drive.
2. Proceed to section 5.0 .

4.5 Advantech Computer Model

1. Insert the floppy into the external drive on the left side of the computer.
2. Proceed to section 5.0 .

5.0 Software Installation

5.1 Upgrading from Version 1.x

1. After the reboot completes, touch following keys starting from the LabCON-V main menu:

F3	- System Menu
F5	- System Data Display
<CTRL> F1 Simultaneously	- Password Display
5226	- Password
	- Insert Update Disk
A: <ENTER>	- A diskette drive
INSTALL <ENTER>	- install program

Messages will appear stating

"Installing LabCON-V Version xx" ...

"Upgrade Complete.."

2. At this point the update is complete. Remove the diskette from the disk drive and reboot LabCON.
3. After the reboot is complete, the revision number is displayed next to the graphical knock meter display.

4. At this time it will be necessary to re-generate the system file by running the System Setup.
5. Before disconnecting the keyboard or the floppy drive, please power down the computer system.

5.2 Upgrading from Version 2.x , 3.x and 4.x

1. After the reboot completes, touch following keys starting from the LabCON-V main menu:
 - F3 - System Menu
 - F5 - System Data Display
 - F1 - Password Display
 - 5226 - Password
 - **Insert Update Disk**
 - A: or D: <ENTER> - floppy diskette drive
 - INSTALL <ENTER> - install program

Messages will appear stating

"Installing LabCON-V Version xx" ...

"Upgrade Complete.."

2. At this point the update is complete. Remove the diskette from the disk drive and reboot LabCON.
3. After the reboot is complete, the software revision number is displayed next to the main logo display.
4. Before disconnecting the keyboard or the floppy drive, please power down the computer system.

6.0 Configuration Options

6.1 Automatic Form Feed

LabCON by default automatically issues a printer form feed at the end of printing each rating report. This feature can be disabled by defining the DOS environment variable *FORMFEED* to the off state. This is accomplished by adding the following line to the autoexec.bat file.

```
SET FORMFEED=OFF
```

This line can be added to the autoexec.bat file by using the standard DOS text editor.

6.2 Automatic Printing

LabCON will not automatically print the rating report at the completion of a rating unless configured to do so. This automatic print option is turned on by defining the DOS environment *AUTOPRINT* to the yes state. This is accomplished by adding the following line to the autoexec.bat file.

```
SET AUTOPRINT=YES
```

This line can be added to the autoexec.bat file by using the standard DOS text editor.

6.3 Laboratory Information Management (LIMS) Option

LabCON has the ability to automatically send octane number rating data to a LIMS system using a generic TCP/IP or RS-232 interface. Contact Core Lab Refinery Systems for further details.

7.0 Technical Support

If you have problems with any of the procedures defined in this document contact your nearest Core Lab Refinery Systems representative or you can reach our engineers by email:

support@refinerysystems.com

Appendix A - LabCON-V Emerald External Floppy Disk Interface Specifications

Disk Type: IBM Compatible 3.5" - 1.44M (external)

Interface

Voltage: 5vdc, 12vdc

Data: 34 pin double row keyed connector as per following:

Floppy Interface Connector Pinout

GND	1	2	Reduced Write Current
GND	3	4	N/A
GND	5	6	N/A
GND	7	8	Index
GND	9	10	Motor Enable A
GND	11	12	Drive Select B
GND	13	14	Drive Select A
GND	15	16	Motor Enable B
GND	17	18	Direction
GND	19	20	Step Pulse
GND	21	22	Write Data
GND	23	24	Write Enable
GND	25	26	Track 0
GND	27	28	Write Protect
GND	29	30	Read Data
GND	31	32	Select Head 1
GND	33	34	Disk Change

Appendix B - Recommended Emerald Configuration Files**CONFIG.SYS**

```
SHELL=C:\COMMAND.COM C:\ /P /E:512
DEVICE=C:\DRDOS\EMM386.SYS /F=AUTO /K=384 /B=AUTO /R=AUTO BREAK=ON
BUFFERS=30
FILES=30
FCBS=4,4
HIDOS=ON
```

AUTOEXEC.BAT

```
@ECHO OFF
@cls
@echo Loading LabCON-V ...
path c:\drdos;
MEMMAX -U
PROMPT $P$G
graphics
loa
```

Appendix C - Recommended Dynapro Configuration Files (P/N 12002M)**CONFIG.SYS**

```
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH,UMB
SHELL=C:\COMMAND.COM C:\ /P /E:512
BUFFERS=20
FILES=30
DEVICE = C:\ERGO\ETS.EXE
```

AUTOEXEC.BAT

```
@ECHO OFF
REM Autoexec.bat for LabCON and DynaPro 12002M Computer
CLS
ECHO Loading LabCON-V ...
ctty nul
path c:\dos;
PROMPT $P$G
c:\ergo\ets /file=c:\ergo\corelab.def
if not exist c:\emouse.com goto nomouse
emouse
:nomouse
graphics
ctty con
set 87=N
loa
```