

Reporter for ILCS Instruction Manual

0900945 Rev: REL (5/99) Page 1 of 20

TABLE OF CONTENTS

Overview	3
Loading The Software	3
Connecting The PTM-6000I	3
Running Reporter Software	4
Getting Started Programming	5
On-line Programming	5
Memory Clearing	6
Setup Routines	6
Report Setup	7
Maintenance	9
Pump Programming	9
Printing Reports	11
Data Transfer	12
File Commands	13
More Selections	14
Remote Programming	15
Appendix A (other applications / device drivers)	16
Appendix B (archiving files)	16
Appendix C (modem communications)	17
Wiring Diagram	18
Warranty Information	20
Knight Locations	20

OVERVIEW

Reporter for ILCS is a software package that permits connection of an IBM-compatible personal computer or laptop computer with Knight-Trak II "based" ILCS systems. Installation of the software is simple and quick. Setup and programming features are performed by making menu selections and by following easy-to-read instructions.

Before you begin, check the following:

- The computer should be a 386 (family) or higher.
- Make sure the computer has an open com port, and that there are not any other devices already assigned to the com port (such as a mouse, modem, etc).
- Ensure that your screen is VGA compatible.
- If the program will be operated within a Windows environment, it is recommended that you close other programs when using or loading Reporter.

LOADING THE SOFTWARE

This process simply copies all the files contained on the Reporter diskette into your computer (PC). For help on the following steps, please refer to your Windows or DOS documentation — look for topics about creating directories and copying files.

To install the program on a hard disk using Windows:

- (1) Insert the Reporter program diskette into the floppy disk drive of your PC.
- (2) Open Windows 3.11 File Manager or Windows 95 Explorer, depending on which Windows product you're using. If you prefer, you may use any other file management program you like.
- (3) Create a directory called REPORTER on your PC's hard disk. For example, C:\REPORTER, where "C" represents the letter of the hard disk.
- (4) Copy all of the files from the Reporter diskette into the REPORTER directory that you created.
- (5) When copying is complete, remove the Reporter diskette and store it in a safe place.

(6) Create a program "icon" for Reporter. If you are unfamiliar with doing this, refer to your Windows documentation. Setup your icon to run the file REPORTER.EXE. Also, the file REPORTER.ICO is provided to be used as the program icon. Both files can be found in your REPORTER directory.

To install the program on a hard disk using DOS:

- (1) Insert the Reporter program diskette into the floppy disk drive of your PC.
- (2) Go to the hard disk root directory. For example, C:\ where "C" represents the letter of the hard disk.
- (3) Type the command *md reporter* and press ENTER. A directory called reporter will be created on the hard disk.
- (4) Type the command *cd reporter* and press ENTER. This will take you to the reporter directory that was created in the last step. The screen should then show C:\REPORTER.
- (5) Type the command *copy A:\ *.** (or *B:*.** if the floppy drive is letter "B").
- (6) When copying is complete, remove the Reporter diskette and store it in a safe place.

CONNECTING THE PTM-60001

- (1) Turn off your computer and all peripheral devices while performing the following steps. Be sure to turn your computer and peripheral devices back on when the following steps are complete.
- (2) Connect the MALE end of the 9-pin serial cable (that came with the Reporter software) to the TERMINAL PORT connection on the PTM-6000I.
- (3) Locate an unused serial port on the back of your computer, and connect the FEMALE end of the 9-pin cable to the serial port. The software will not work without the Reporter cable. You may need to use a 25-pin to 9-pin adapter (not supplied by Knight) to connect the cable to your computer.
- (4) Power-up the PTM-6000I by connecting to an ILCS dispenser with the stereo-jack network cable, or to a power-booster transformer to program remotely.

0900945 Rev: REL (5/99) Page 3 of 20

RUNNING REPORTER SOFTWARE

If running under Windows, shut down any other programs that are running, then start Reporter by clicking on the icon.

If running under DOS, type the command cd \reporter. Then type the command reporter.

After starting the program from one of the two methods above, the Knight Logo will be displayed, followed by the main menu selections of the Reporter. The following selections will then be displayed:

- Terminal Mode Allows communication with the PTM-6000I
- Dial Remote Allows you to perform modem operations (see the section titled APPENDIX C -MODEM COMMUNICATIONS for further information)
- Files Allows you to set default file names
- Configuration Allows you to perform configuration for the software (see more below)
- Exit program Allows you to exit the program

Within Files, you can perform the following:

- Capture Allows you to strip a file (for insertion into another program), print a file (on the printer connected to your PC), or view a file (on the screen). You can view a captured file, or an archived file (more on this below in the File/Dir setup of the Configuration menu).
- Print Allows you to print the capture file.
- View Allows you to view a file. You can view a captured file or an archived file (more on this below in the File/Dir setup of the Configuration menu).

Within Configuration, adjust the following options as required:

- File/Dir Setup Allows for renaming of default file names for the captured file, the stripped file, and the archive directory (where archived files will be stored on the hard disk). The default capture file name (used above in view and print selections) has a default name of CAPTURE. DAT. The default stripped file name is STRIPPED.DAT. The default archive directory is named ARCHIVE, and will be in the REPORTER directory set earlier. For normal operation, skip this step. (More on archiving can be found in APPENDIX B ARCHIVING FILES.)
- Comm. setup Allows for the selection of the communication port (default of COM1), the communication speed (default of 9600 baud), and the modem type (see the section titled APPENDIX C - MODEM COMMUNICATIONS for further information). Set the COM port to the port that you will use (typically, either COM 1 or COM 2) and skip the communication speed step (the default of 9600 baud will match the speed of the PTM-6000I).
- Printer setup Allows for the selection of the print type (Epson printer, Hewlett Packard printer, or none) and the print port that the printer on the PC is connected to (LPT1 or LPT2). Most laser printers will be able to emulate the Hewlett-Packard setting, while most other printers will be able to emulate the Epson setting. Set the print type according to the printer you have, and set the print port to the port used for printing (typically LPT1).
- Video mode Allows for the changing of the display mode. The default value is 25 lines per screen; changing this value to more lines per screen will allow more information to be displayed, but the characters will appear smaller. Adjust this value according to your liking.

Page 4 of 20 0900945 Rev: REL (5/99)

GETTING STARTED PROGRAMMING

Ensure that the Comm Setup and Printer Setup parameters, have been set before continuing. From Reporter's main menu, select Terminal Mode - W/capture and press ENTER. You will see a menu bar across the top of the screen with the following information:

```
(CAPT.TO FILE:CAPTURE.DAT)[F1]HELP, [F2] MODEM,[F4]CAPTURE,[F10]MAIN MENU
```

Press ENTER when you see the menu bar shown above, and the following should appear:

```
WELCOME TO PTM-6000 MAIN MENU
1 ILCS KNIGHT TRAK II DISPENSER
2 REMOTE PROGRAMMING
3 PTM-6000 SET UP
0 EXIT
PLEASE ENTER SELECTION?
```

If the above screen is not displayed, then communication has not been established. Go back and verify that all cable connections are correct, and that the Comm. Setup information is correct. If only parts of the above screen show up, see APPENDIX A - OTHER APPLICATIONS AND DEVICE DRIVERS.

If the above screen is displayed correctly, your ready to begin programming. The following section takes you right in to on-line programming. Remote programming is detailed in a later section of this manual (see table of contents for page number).

ON-LINE PROGRAMMING

From the screen WELCOME TO PTM-6000 MAIN MENU, type 1 and press ENTER (for ILCS KNIGHT TRAK II DISPENSER). You will see the following:

```
ENTER DISPENSER ID# ?___
```

Enter dispenser # and press return. Note: If invalid dispenser ID appears, wait for screen that displays "press enter to continue" then press enter.

```
ENTER DISPENSER ACCESS CODE# ?
```

Enter dispenser access code # and press enter

```
WELCOME TO DISPENSER XX

PRESS ANY KEY TO CONTINUE

CURRENT TIME CURRENT DATE

XX:XX:XX XX/XX/XX
```

Press enter to continue, the following screen will appear and is known as the ILCS KNIGHT-TRAK II MAIN MENU:

```
1 MEMORY CLEARING 6 PRINTING REPORTS
2 SET UP ROUTINES 7 DATA TRANSFER
3 REPORT SETUP 8 FILE COMMANDS
4 MAINTENANCE 9 MORE SELECTIONS
5 PUMP PROGRAMMING 0 EXIT
```

0900945 Rev: REL (5/99) Page 5 of 20

MEMORY CLEARING MENU

NOTES: When installing a new dispenser, or when re-programming an existing dispenser, its important that the memory be cleared to ensure proper dispenser function and avoid problems. Clearing memory also sets up batch tracking to gather report data correctly.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 1 and press ENTER to go into the MEMORY CLEARING menu. You will see the following:

- 1 CLEAR PUMP VOLUMES
- 2 CLEAR SUMMARY/CYCLE REPORTS
- 3 CLEAR BATCH COUNT
- 4 LOAD FACTORY DEFAULTS
- O RETURN TO MAIN MENU

Type 1 and press ENTER.

```
ABOUT TO CLEAR PUMP VOLUMES
ARE YOU SURE Y=YES N= NO
```

This selection allows you to decide if you are sure about clearing all pump volumes.

Y = Continue and return to menu when finished. N = Return to menu without clearing volumes.

- 1 CLEAR PUMP VOLUMES
- 2 CLEAR SUMMARY/CYCLE REPORTS
- 3 CLEAR BATCH COUNT
- 4 LOAD FACTORY DEFAULTS
- O RETURN TO MAIN MENU

Type 2 and press ENTER. The summary and cycle report memory will be cleared and you will be returned to the menu when the process is finished.

- 1 CLEAR PUMP VOLUMES
- 2 CLEAR SUMMARY/CYCLE REPORTS
- 3 CLEAR BATCH COUNT
- 4 LOAD FACTORY DEFAULTS
- 0 RETURN TO MAIN MENU

Type 3 and press ENTER. The batch count will be cleared and you will be returned to menu when process is finished.

- 1 CLEAR PUMP VOLUMES
- 2 CLEAR SUMMARY/CYCLE REPORTS
- 3 CLEAR BATCH COUNT
- 4 LOAD FACTORY DEFAULTS
- O RETURN TO MAIN MENU

Type 4 and press ENTER if you wish to load factory default values.

```
ABOUT TO LOAD FACTORY DEFAULTS ARE YOU SURE?
```

This selection allows you to decide if you are sure about loading factory default values.

Y = Continue with command and return to menu when process is finished.

N = Return to menu without loading defaults.

- 1 CLEAR PUMP VOLUMES
- 2 CLEAR SUMMARY/CYCLE REPORTS
- 3 CLEAR BATCH COUNT
- 4 LOAD FACTORY DEFAULTS
- O RETURN TO MAIN MENU

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

SETUP ROUTINES MENU

NOTES: This menu is used for programming critical setup parameters for dispenser operation.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 2 and press ENTER to go into the SETUP ROUTINES menu. You will see the following:

- 1 CHANGE ID #
- 2 MAIN ACCESS CODE
- 3 SET TIME AND DATE
- 4 UNIT OF MEASURE
- 5 FLUSH PUMP TIME

0 MAIN MENU

Type 1 and press ENTER to change ID number.

```
CURRENT DISPENSER ID # = 00
CHANGE SETTING Y=YES N=NO ?
```

Y = Enter new dispenser # and press ENTER. N = Return to menu.

- 1 CHANGE ID #
- 2 MAIN ACCESS CODE
- 3 SET TIME AND DATE
- 4 UNIT OF MEASURE
- 5 FLUSH PUMP TIME

0 MAIN MENU

Type 2 and press ENTER to change Main Access Code.

```
CURRENT MAIN ACCESS CODE # = 0
CHANGE SETTING Y=YES N=NO ?
```

Y = Enter new dispenser # and press ENTER.

N = Return to menu.

- 1 CHANGE ID #
- 2 MAIN ACCESS CODE
- 3 SET TIME AND DATE
- 4 UNIT OF MEASURE
- 5 FLUSH PUMP TIME

0 MAIN MENU

Type 3 and press ENTER to set time and date.

Y = Type in Month and press ENTER, type in Day and press ENTER, type in Year and press ENTER, type in Hour and press ENTER, type in Minutes and press ENTER.

N = Return to menu.

- 1 CHANGE ID #
- 2 MAIN ACCESS CODE
- 3 SET TIME AND DATE
- 4 UNIT OF MEASURE
- 5 FLUSH PUMP TIME

0 MAIN MENU

Page 6 of 20 0900945 Rev: REL (5/99)

Type 4 and press ENTER to change unit of measure.

```
CURRENT UNIT OF MEASURE = U.S. CHANGE SETTING Y=YES N=NO?
```

Y = 1-US 2-Metric 3- Imperial. Make your selection and press ENTER.

N = Return to menu.

```
1 CHANGE ID #
2 MAIN ACCESS CODE
3 SET TIME AND DATE
4 UNIT OF MEASURE
```

5 FLUSH PUMP TIME 0 MAIN MENU

Type 5 and press ENTER to change flush pump time.

```
FLUSH PUMP TIME = 10 SECS
CHANGE SETTING Y=YES N=NO ?
```

Y = Flush pump time in seconds__? Type in the desired number of seconds and press ENTER. N = Return to menu.

```
1 CHANGE ID #
2 MAIN ACCESS CODE
3 SET TIME AND DATE
4 UNIT OF MEASURE
5 FLUSH PUMP TIME 0 MAIN MENU
```

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

REPORT SETUP MENU

NOTES: This menu allows you "customize" your dispenser with individual chemical names and formula names, as well as the report name that appears on the top line of a print-out. Other parameters, such as product costs, shift times, are used for generating summary reports from batch tracking data.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 3 and press ENTER to go into the REPORT SETUP menu. You will see the following:

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 1 to change the user access code.

```
CURRENT USER ACCESS CODE # = XXX CHANGE SETTING Y=YES N=NO ?
```

Y = Type in new code and press ENTER. N = Return to menu.

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 2 and press ENTER to change the report name.

```
REPORT NAME
CHANGE SETTING Y=YES N=NO ?
```

Y = Allows you to type in new report name (24 characters max per line).

N = Return to menu.

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 3 and press ENTER to change chemical names.

```
CHEMICAL NAMES

PUMP 1 = PUMP-01 PUMP 6 = PUMP-06

PUMP 2 = PUMP-02 PUMP 7 = PUMP-07

PUMP 3 = PUMP-03 PUMP 8 = PUMP-08

PUMP 4 = PUMP-04 PUMP 9 = FLUSH

PUMP 5 = PUMP-05 PUMP 10 = FLUSH

CHANGE SETTING Y=YES N=NO?
```

Y = Chemical Names

Pump ___?
Enter Pump #, press ENTER
Pump# X = Pump 01
Chemical Name _____?(7 Char max)
Enter new name and press ENTER
N = Return to menu.

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 4 and press ENTER to change formula names.

```
FORMULA NAMES

FORMULA 1 = FORMULA 01

FORMULA 2 = FORMULA 02

FORMULA 3 = FORMULA 03

FORMULA 4 = FORMULA 04

FORMULA 5 = FORMULA 05

CHANGE SETTING Y=YES N=NO ?
```

Y = Enter formula to change, press ENTER Formula xx= Formula xx

```
Formula Name____?
```

Enter new formula name (15 Char max) and press ENTER Change new formula name Y=Yes N=No.

N = Next five formulas until all fifty formulas are reviewed, returns to menu.

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 5 and press ENTER to change product cost.

```
PRODUCT COSTS (GAL)
PIIMP
      1 = $0.00
                    PUMP
                           6 = $
                                 0.00
      2 = $ 0.00
                          7 = $
PUMP
                    PUMP
                                 0.00
PUMP
      3 = $0.00
                    PUMP
                          8 = $
                                 0.00
                         9 = $ 0.00
PIIMP
      4 = $0.00
                    PIIMP
PUMP
    5 = $ 0.00
                    PUMP 10 = $0.00
   CHANGE SETTING
                   Y=YES N=NO ?
```

Y = Chemical Names.

Pump ?

Enter Pump #, press ENTER

Pump# X = Pump 01

Chemical Name _____?(7 Char max)

Enter new name and press ENTER.

N = Return to menu

1	USER ACCESS CODE	6	SHIFT TIMES
2	REPORT NAME	7	USER I.D. CODE
3	CHEMICAL NAMES	8	FORMULA ACCESS
4	FORMULA NAMES	9	OPERATING ZONE
5	PRODUCT COSTS	0	MAIN MENU

Type 6 and press ENTER to change shift start times.

Y = Change shift start time.

N = Returns to menu.

1 USER ACCESS CODE	6 SHIFT TIMES
2 REPORT NAME	7 USER I.D. CODE
3 CHEMICAL NAMES	8 FORMULA ACCESS
4 FORMULA NAMES	9 OPERATING ZONE
5 PRODUCT COSTS	0 MAIN MENU

Type 7 and press ENTER to change user ID code

USER#	CODE	NA	AME		
1	0	USER	ID	NAME	01
2	0	USER	ID	NAME	02
3	0	USER	ID	NAME	03
4	0	USER	ID	NAME	04
5	0	USER	ID	NAME	05
CHANGE	SETTING	Y=3	ŒS	N=N(? (

Y = User I	D Codes - User N	lumber?
User#	Code	Name
1	0	User ID Name O1
Enter Use	r ID Codes	_, Press Enter
15 Char M	ax User Name _	?, Press Enter
N = List al	50 ID Codes, 5	at a time. Returns you
to menu w	hen done.	

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 8 and press ENTER to set formula access; This restricts users access to specific formulas and limits the number of times each user can access a formula per shift.

Type user number and press ENTER.

```
USER # USER NAME FORMULA ACCESS

1 USER ID NAME FORMULA 1 2 3 4 - 10

(FORM 1-10)SHIFT BATCH 99 99 99 99

FORMULA (1-50) (99=ALL FORMULAS) (0=NO CHANGE) ?
```

Type formula number and press ENTER.

```
SHIFT BATCH LIMIT FOR USER ID NAME FORMULA _ (0-99)?
```

Type the number of times this user will use the chosen formula and press ENTER.

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 9 and press ENTER to set operating zone.

```
OPERATING ZONE
START TIME = 00 : 00
END TIME = 24 : 00
CHANGE SETTING Y=YES N=NO ?
```

Y = Please enter selection 1 = S, 2 = E Enter Hour, Press ENTER. Enter Minutes, Press ENTER. N = Returns to menu

```
1 USER ACCESS CODE 6 SHIFT TIMES
2 REPORT NAME 7 USER I.D. CODE
3 CHEMICAL NAMES 8 FORMULA ACCESS
4 FORMULA NAMES 9 OPERATING ZONE
5 PRODUCT COSTS 0 MAIN MENU
```

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

Page 8 of 20 0900945 Rev: REL (5/99)

MAINTENANCE MENU

NOTES: This menu is used for keeping a log of various maintenance information. The information appears on the dispenser's setup report, however is not used for any actual dispenser functions or calculations (used for reference only).

From the ILCS KNIGHT-TRAK II MAIN MENU, type 4 and press ENTER to go into the MAINTENANCE menu. You will see the following:

```
KNIGHT-TRAK II MAINTENANCE

1 DISPENSER INSTALLED

2 SQUEEZE TUBES INSTALLED

3 SQUEEZE TUBES LUBED 0 MAIN MENU
```

Type 1 and press ENTER to input the date that the dispenser was installed.

```
DISPENSER INSTALLED
00 / 00 / 00
CHANGE SETTING Y=YES N=NO?
```

Y = Enter Month, Press ENTER. Enter Day, Press ENTER. Enter Year, Press ENTER. N = Returns to menu.

```
KNIGHT-TRAK II MAINTENANCE

1 DISPENSER INSTALLED

2 SQUEEZE TUBES INSTALLED

3 SQUEEZE TUBES LUBED 0 MAIN MENU
```

Type 2 and press ENTER to input the dates that the squeeze tubes were installed.

```
SQUEEZE TUBES INSTALLED

PUMP 1 = 00/00/00 PUMP 6 = 00/00/00

PUMP 2 = 00/00/00 PUMP 7 = 00/00/00

PUMP 3 = 00/00/00 PUMP 8 = 00/00/00

PUMP 4 = 00/00/00 PUMP 9 = 00/00/00

PUMP 5 = 00/00/00 PUMP 10 = 00/00/00

CHANGE SETTING Y=YES N=NO ?
```

Y = Squeeze Tubes Installed. Enter Pump #, Press ENTER. Enter month, press ENTER. Enter day, press ENTER. Enter year, press ENTER. N = Return to menu.

```
KNIGHT-TRAK II MAINTENANCE

1 DISPENSER INSTALLED

2 SQUEEZE TUBES INSTALLED

3 SQUEEZE TUBES LUBED 0 MAIN MENU
```

Type 3 and press ENTER to input the dates that the squeeze tubes were last lubed

```
SQUEEZE TUBES LUBED

PUMP 1 = 00/00/00 PUMP 6 = 00/00/00

PUMP 2 = 00/00/00 PUMP 7 = 00/00/00

PUMP 3 = 00/00/00 PUMP 8 = 00/00/00

PUMP 4 = 00/00/00 PUMP 9 = 00/00/00

PUMP 5 = 00/00/00 PUMP 10 = 00/00/00

CHANGE SETTING Y=YES N=NO ?
```

Y = Squeeze Tubes Lubed. Enter Pump # , Press ENTER. Enter month, press ENTER. Enter day, press ENTER. Enter year, press ENTER. N = Return to menu.

```
KNIGHT-TRAK II MAINTENANCE

1 DISPENSER INSTALLED

2 SQUEEZE TUBES INSTALLED

3 SQUEEZE TUBES LUBED 0 MAIN MENU
```

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

PUMP PROGRAMMING MENU

NOTES: When auto calibrating pumps, use a container with specific volume markings (i.e. measuring cup, or beaker). A larger container will yield greater accuracy than a smaller container.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 5 and press ENTER to go into the PUMP PROGRAMMING menu. You will see the following:

```
PUMP PROGRAMMING

1 PRIME PUMP

2 VIEW PUMP FLOW RATES

3 AUTO CALIBRATE PUMP

4 MANUALLY CALIBRATE PUMP

9 MORE SELECTIONS

0 MAIN MENU
```

Type 1 and press ENTER to prime pumps.

```
PRIME PUMP # ?
```

Type in pump number you wish to prime and press ENTER. Then press ENTER to start the pump. Press ENTER again to stop the pump

```
PRIME ANOTHER PUMP Y=YES N=NO ?
```

Y = Allows priming of other pumps. N = Returns to menu.

```
PUMP PROGRAMMING

1 PRIME PUMP

2 VIEW PUMP FLOW RATES

3 AUTO CALIBRATE PUMP

4 MANUALLY CALIBRATE PUMP

9 MORE SELECTIONS

0 MAIN MENU
```

Type 2 and press ENTER to view pump flow rates.

```
        PUMP
        FLOW
        RATES
        PER
        MINUTE

        PUMP
        =
        1
        0.00
        GALS
        MIN

        PUMP
        =
        2
        0.00
        GALS
        MIN

        PUMP
        =
        3
        0.00
        GALS
        MIN

        PUMP
        =
        4
        0.00
        GALS
        MIN

        PUMP
        =
        5
        0.00
        GALS
        MIN

PRESS ENTER TO CONTINUE
```

0900945 Rev: REL (5/99) Page 9 of 20

Press ENTER to see flow rates for pumps 6 - 10. When complete, you will be returned to the menu.

```
PUMP PROGRAMMING
1 PRIME PUMP
2 VIEW PUMP FLOW RATES
3 AUTO CALIBRATE PUMP
4 MANUALLY CALIBRATE PUMP
9 MORE SELECTIONS
0 MAIN MENU
```

Type 3 and press ENTER to auto calibrate pumps.

```
AUTO CALIBRATE PUMP # ?
```

Type in pump number you wish to auto calibrate and press ENTER. Then press ENTER to start the pump. Press ENTER again to stop the pump

```
ENTER VOLUME PUMPED ?
```

Type in the actual volume that was dispensed. You will then be prompted for what unit of measure you used for the volume pumped (i.e. ounces or gallons). After the unit of measure is selected, the resulting flow rate will then be calculated. Below is an example:

```
FLOW RATE
PUMP 1 = 196.2 OZS MIN
CALIBRATE ANOTHER PUMP Y=YES N=NO ?
```

Y = Allows auto calibrating of other pumps using same method described.

N = Returns to menu.

```
PUMP PROGRAMMING
1 PRIME PUMP
2 VIEW PUMP FLOW RATES
3 AUTO CALIBRATE PUMP
4 MANUALLY CALIBRATE PUMP
9 MORE SELECTIONS
0 MAIN MENU
```

Type 4 and press ENTER to manually calibrate pump.

```
MANUALLY CALIBRATE PUMP # ?
```

Type in pump number you wish to manually calibrate and press ENTER. At the prompt, type in the new flowrate and press ENTER. You will then be prompted for what unit of measure is desired (i. e. ounces or gallons). After the unit of measure is selected, the new flow rate will then shown. Below is an example:

```
FLOW RATE
PUMP 1 = 100.0 OZS MIN
CALIBRATE ANOTHER PUMP Y=YES N=NO ?
```

Y = Allows manually calibrating of other pumps. N = Returns to menu.

Type 9 and press ENTER for MORE **SELECTIONS**

```
1 VIEW PUMP PROGRAMMING
2 PROGRAM PUMPS BY FORMULA
3 COPY FORMULA
9 PUMP PROGRAMMING MENU
```

O MATN MENU

Type 1 and press ENTER to view pump programming. You will be prompted for the formula and pump number. The programmed information will then be shown. The following is an example:

```
FORMULA 1 PUMP
VOLUME
       0.0 OZS
   PRESS ENTER TO CONTINUE
```

Press ENTER and you will be prompted if you wish to view another pump.

Y = Allows viewing other pump/formula combinations.

N = Returns to menu.

```
1 VIEW PUMP PROGRAMMING
2 PROGRAM PUMPS BY FORMULA
3 COPY FORMULA
9 PUMP PROGRAMMING MENU
O MAIN MENU
```

Type 2 and press ENTER to program pumps by formula number. You will be prompted for the formula and pump number. After entering the pump and formula number, you will be prompted for the volume. Below is an example:

```
FORMULA
        1 римр
VOLUME
      0.0 OZS
   ENTER VOLUME
```

Type in the volume and press ENTER. You will then be prompted for what unit of measure is desired (i.e. ounces or gallons). After the unit of measure is selected, you will be prompted if you wish to program another pump.

Y = Allows you to program other pumps using the method described.

N = Returns to menu.

```
1 VIEW PUMP PROGRAMMING
2 PROGRAM PUMPS BY FORMULA
3 COPY FORMULA
9 PUMP PROGRAMMING MENU
0 MAIN MENU
```

Type 3 and press ENTER to copy entire formulas. You will be prompted for the source formula number and destination formula number. After the formula has been copied you will be prompted if you wish to copy other formulas.

Y = Allows you to copy other formulas. N = Returns to menu.

Page 10 of 20 0900945 Rev: REL (5/99)

- 1 VIEW PUMP PROGRAMMING
- 2 PROGRAM PUMPS BY FORMULA
- 3 COPY FORMULA
- 9 PUMP PROGRAMMING MENU
- O MAIN MENU

Type 9 and press ENTER to return to the PUMP PROGRAMMING menu if you wish to repeat any pump programming steps. Otherwise, Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

PRINTING REPORTS MENU

NOTES: The easiest method of printing reports is to print them on-site using the PRINTING FUNCTIONS menu in the dispenser (and directing the print to the PRINTER). More information on this is available in the PRINTING FUNCTIONS section of the ILCS Programming Manual.

For remote (off-site) printing, a file must first be "printed" to the PTM-6000I from the ILCS dispenser. Use the PRINTING functions menu in the dispenser and direct the print to FILE. The report will be stored in the memory of the PTM and will be listed by the date and time it was created. More information on this is available in the PRINTING FUNCTIONS section of the ILCS Programming Manual.

Printing *on-line* refers to printing data from a dispenser that you are logged-on to and communicating with.

Printing reports from your PC, whether on-line or remote, can be done in three possible ways; 1) to a printer connected directly to the PTM-6000I, 2) to a printer connected to the PC, or 3) to the screen of the PC for viewing, without using a printer. The only method that does not require the "capture" function is when you print directly from the PTM to a printer. Be sure to choose Terminal with Capture from the Reporter program's main menu if you will be printing to the PC's printer, or to view reports on the PC screen.

There are three report *types* that can be selected:

SETUP - contains all programming parameters for the dispenser to operate, as well as pump names, formula names, shift times, and product costs.

SUMMARY - shows a breakdown of product usage by shift, by formula, and other categories. This report is generated from data in the setup and cycle memory.

CYCLE - also known as "batch tracking", contains product usage data. This data is used to calculate the information shown on the summary report.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 6 and press ENTER to go into the PRINTING REPORTS menu. You will see the following:

PRINTING REPORTS

1 FILE DIRECTORY 2 FILE
3 ONLINE REPORT 0 MAIN MENU

1 = Allows you to print or view a file directory, which is a listing of all files in the PTM-6000I.

2 = Allows you to print or view an individual file in the PTM -6000I. You will be prompted to pick a file, and then the report type (setup, summary, or cycle, as described previously in this section).

3 = Allows you to print or view an on-line report, therefore you must be logged onto a dispenser. You will be prompted for the report type (setup, summary, or cycle, as described previously).

Type the number for your selection and press ENTER. Then follow the prompts for choosing what you wish to print, until you see the following:

```
DIRECT PRINTER OUTPUT TO 1=PRINTER PORT 2=TERMINAL PORT ?
```

Type 1 and press ENTER if you wish to print to the printer connected to the PRINTER PORT on the PTM-6000I. You will be prompted to ensure your printer is ready (i.e. plugged in to the PTM, power on, and that printer has paper). When the report is complete, you will be returned to the menu.

Type 2 and press ENTER if you wish to view the report on the PC screen, or print to a printer connected to the PC. You will then see the following:

```
ARE YOU READY TO CAPTURE Y=YES N=NO ?
```

Look in the upper left corner of the screen and make sure it shows "capt. to File: CAPTURE. DAT". If it does not, press the F4 key on your keyboard and you will be ready to capture.

Y = Ready to capture. The report will scroll by the screen very rapidly, when it is finished, press ENTER to return to the menu. Then press F10 on your keyboard to go to Reporter's main menu. N = Returns to menu.

When the screen shows "Closing capture file: CAPTURE.DAT" press ENTER.

- To print the file: from Reporter Main Menu, select Files, select Print, select Capture file.
- To view the file: from Reporter Main Menu, select Files, select View, select Capture file. Use the UP/DOWN keys on the keyboard to view the report.

0900945 Rev: REL (5/99) Page 11 of 20

DATA TRANSFER MENU

NOTES: Transferring data is similar to the terms "uploading" and "downloading". This selection allows you to transfer setup information between the PTM-6000I and the ILCS dispenser, and vice versa. By doing this, you can create a library of dispenser setups that are used often. This can be helpful by saving time when installing a new dispenser, or re-programming an existing one.

Also, dispenser setup files stored in the PTM can be edited remotely (see REMOTE PROGRAMMING section of this manual).

When transferring data to a dispenser, its recommended that the dispenser memory be cleared first to ensure a smooth transfer (see MEMORY CLEARING section for more details).

From the ILCS KNIGHT-TRAK II MAIN MENU, type 7 and press ENTER to go into the DATA TRANSFER menu. You will see the following:

```
DATA TRANSFER
1 TO DISPENSER 2 FROM DISPENSER
0 MAIN MENU
```

To transfer data to a dispenser, type 1 and press ENTER. The first directory of the PTM-6000I will be displayed. The following is an example:

```
PTM-6000 FILE DIR 1 MEM AVAL = 15901
1 05/27 11:12 7
2 05/13 10:33 8
3 TEST 9
4 ACCOUNT 1 10
5 11
6 12
FILE TO TRANSFER (0=NEXT DIR)?
```

Type the number of the file you wish to transfer and press ENTER. Type 0 and press ENTER if you wish to view the files in the next directory (the PTM has a total of 3 file directories). How many files you have, and their file names, will vary, depending on how you use your PTM-6000I to store files.

If you see the message "FILE SELECTED IS NOT COMPATIBLE WITH THE CURRENT DISPENSER" this means that the file you selected is not a setup-only file (is either a summary or cycle file).

When the data transfer is complete, or if you reviewed all 3 directories and did not choose a file, you will be returned to the menu.

```
1 TO DISPENSER 2 FROM DISPENSER 0 MAIN MENU
```

To transfer data from the dispenser, type 2 and press ENTER. You will be prompted for REPORT TYPE:

```
REPORT TYPE

1 SETUP
2 SUMMARY
3 CYCLE
0 MAIN MENU
```

Type the number that corresponds to what report data you wish to transfer and press ENTER. For more information on what the various report types include, see the PRINTING REPORTS section of this manual.

You will next be prompted to give the file a name. Type in the name you wish to give the file (12 characters max) and press ENTER.

If you are transferring summary or cycle information, you will be prompted for the start and end dates for the report, then for the formula numbers. If transferring a setup, you will only be prompted for formula number.

When the transfer is complete, you will be returned to the menu.

```
DATA TRANSFER

1 TO DISPENSER 2 FROM DISPENSER

0 MAIN MENU
```

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

Page 12 of 20 0900945 Rev: REL (5/99)

FILE COMMANDS MENU

NOTES: This selection allows you to review, delete, or clear files in the PTM. It also allows you to transfer information between the PTM and the terminal device.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 8 and press ENTER to go into the FILE COMMANDS menu. You will see the following:

```
FILE COMMANDS

1 REVIEW FILES 4 COPY FILE
2 DELETE FILE
3 CLEAR MEMORY 0 MAIN MENU
```

Type 1 and press ENTER to review files. The first directory of the PTM-6000l will be displayed. The following is an example:

```
PTM-6000 FILE DIR 1 MEM AVAL = 15901
1 05/27 11:12 7
2 05/13 10:33 8
3 TEST 9
4 ACCOUNT 1 10
5 11
6 12
PRESS ENTER TO CONTINUE
```

Press ENTER again to review files in the next directory. You will be returned to the menu after all 3 directories have been reviewed.

```
FILE COMMANDS

1 REVIEW FILES 4 COPY FILE
2 DELETE FILE
3 CLEAR MEMORY 0 MAIN MENU
```

Type 2 and press ENTER to delete a file. The first directory of the PTM-6000I will be displayed. The following is an example:

```
PTM-6000 FILE DIR 1 MEM AVAL = 15901
1 05/27 11:12 7
2 05/13 10:33 8
3 TEST 9
4 ACCOUNT 1 10
5 11
6 12
FILE TO DELETE (0=NEXT DIR)?
```

Type the number of the file you wish to delete and press ENTER. Type 0 and press ENTER to delete a file in another directory. When the file has been deleted, or if you reviewed all 3 directories and did not choose a file, you will be returned to the menu.

```
FILE COMMANDS

1 REVIEW FILES 4 COPY FILE
2 DELETE FILE
3 CLEAR MEMORY 0 MAIN MENU
```

Type 3 and press ENTER to clear memory. This function allows you to clear an entire PTM directory, or all 3 directories, in one command.

```
AVAIL DIRECTORYS 1 TO 3 0 = ALL PTM DIRECTORY NUMBER TO CLEAR ?
```

Type the number of the directory (1, 2, 3, or 0 for all three) you wish to clear and press ENTER. You will be prompted to make sure you wish to proceed with clearing the directory:

Y = Clear directory and return to menu.

N = Return to menu.

```
FILE COMMANDS

1 REVIEW FILES 4 COPY FILE
2 DELETE FILE
3 CLEAR MEMORY 0 MAIN MENU
```

Type 4 and press ENTER to copy a file. At the next prompt, type 1 and ENTER to copy from one directory to another. The first directory of the PTM-6000I will be displayed. The following is an example:

```
PTM-6000 FILE DIR 1 MEM AVAL = 15901
1 05/27 11:12 7
2 05/13 10:33 8
3 TEST 9
4 ACCOUNT 1 10
5 11
6 12
FILE NUMBER TO COPY (0=NEXT DIR)?
```

Type the number of the file you wish to copy and press ENTER. Type 0 and press ENTER if you wish to view the files in the next directory.

After selecting the file to copy, you will be prompted for the directory number to copy the file into. Type the desired directory number and press ENTER. You may also be prompted to convert the file to a setup (if the file is a summary or cycle). Type Y and press ENTER if you wish to convert it, otherwise, simply press ENTER and the file will be copied "as is" with all data intact.

In the final phase of the file copy process, the following message will appear to allow you to change the name of the new (copied) file.

```
CHANGE NAME OF COPIED FILE ?
```

Type Y and press ENTER if you wish to change it otherwise, simply press ENTER and the file will be copied "as is" with its existing name. If you typed Y to change it, you will then be prompted for the new file name (12 characters max).

When the file copy process is complete, or if you reviewed all 3 directories and did not choose a file, you will be returned to the menu.

```
FILE COMMANDS

1 REVIEW FILES 4 COPY FILE
2 DELETE FILE
3 CLEAR MEMORY 0 MAIN MENU
```

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

MORE SELECTIONS MENU

NOTES: This is a utility menu that allows you to view live pump activity or test the function of the pumps while on-line with a dispenser. It does not perform any functions during REMOTE PROGRAMMING.

The PUMP TESTS selection checks two different pump functions (PRIME and SIGNAL). The main difference between the two, is that priming a pump simply turns it on or off at your command, whereas signaling a pump "launches" its programmed volume amount.

Strategic use of these two functions can help narrow down where a problem is when troubleshooting because the PRIME function verifies the electrical and mechanical operation and the SIGNAL function verifies your pump programming.

From the ILCS KNIGHT-TRAK II MAIN MENU, type 9 and press ENTER to go into the MORE SELECTIONS menu. You will see the following:

- 1 RUN TIME DISPLAY
- 2 PUMP TESTS
- 0 MAIN MENU

Type 1 and press ENTER to view the run time display. The display will show when a pump runs (actual volume dispensing) and on what formula the pump is running. Press any key to return to the menu.

Type 2 and press ENTER to test pumps. The following selections allow you to prime or signal a pump.

- 1 SIGNAL PUMP
- 2 PRIME PUMP
- 0 MAIN MENU

Type 1 and press ENTER to SIGNAL PUMP. Type the pump number and press ENTER. Press ENTER again to signal. The pump will run the programmed volume amount for the formula currently displayed in the formula number window. If the pump does not run, make sure the formula shown has volume amounts programmed and the pump has a correct flow rate.

Type 2 and press ENTER to PRIME PUMP. Type the pump number and press ENTER. Press ENTER to start the pump ... press ENTER again to stop the pump. If the pump does not turn, there may be an electrical or mechanical problem.

Type 0 and press ENTER to return to the menu.

- 1 RUN TIME DISPLAY
- 2 PUMP TESTS
- 0 MAIN MENU

Type 0 and press ENTER to return to the ILCS KNIGHT-TRAK II MAIN MENU.

Page 14 of 20 0900945 Rev: REL (5/99)

REMOTE PROGRAMMING

In addition to printing report information off-site and managing files within the PTM-6000I, Remote Programming also allows you to create and/or edit setup files. Setup files contain operational parameters for an ILCS system. When a file is programmed, it can later be transferred into an ILCS system. Setup files can be derived in the following ways.

- One way is to create a new file. A new file is equal to a setup file in a dispenser that has just had the memory cleared. Once this is done, you then "edit" the file by entering values which will be transferred into a dispenser at a later date.
- Another way of creating a setup file is to make a copy of an existing setup file and "edit" it. This is particularly convenient when the file you intend to put into a dispenser at a later date is very similar to a file that presently exists. In order to do this, the file must first be transferred into the PTM-6000I. Once this is done, you then "edit" the file by entering values which will be transferred into a dispenser at a later date.
- The file can simply be an existing file on the PTM-6000l that you wish to edit.

Remote programming is much like programming the dispenser on-line, except that certain menu selections will not be available remotely — they are selections that are only valid when logged onto a dispenser and programming on-line. Otherwise, all programming instructions listed in this manual will apply for on-line or remote programming.

To begin remote programming functions, go to the section GETTING STARTED - PROGRAMMING for details on how to get to the following screen. Type 2 and press ENTER for REMOTE PROGRAMMING.

```
WELCOME TO PTM-6000 MAIN MENU
1 ILCS KNIGHT TRAK II DISPENSER
2 REMOTE PROGRAMMING
3 PTM-6000 SET UP
0 EXIT
PLEASE ENTER SELECTION?
```

You will then see:

```
PTM-6000 REMOTE PROGRAMMING
1 ILCS KNIGHT TRAK II REMOTE PROGRAMMING
0 RETURN TO MAIN MENU
```

Type 1 and press ENTER. The display and menu selections will look just like they do for on-line programming except for the top line of the display.

```
FILE = SELECT FILE

ILCS KNIGHT-TRAK II MAIN MENU

FILE SELECTION 6 PRINTING REPORTS

SETUP ROUTINES 7 DATA TRANSFER

REPORT SETUP 8 FILE COMMANDS

MAINTENANCE 9 MORE SELECTIONS

PUMP PROGRAMMING 0 EXIT
```

A file must be selected (new or existing) for setup programming. Otherwise, you can only print, view, or manage files, using PRINTING REPORTS and FILE COMMANDS. Type 1 and press ENTER to continue.

```
REMOTE PROGRAMMING
1 CREATE NEW FILE
2 EDIT AN EXISTING FILE
0 RETURN TO MAIN MENU
```

To create a new file, type 1 and press ENTER. You will be prompted for a file name (12 characters max). Type in the name you wish to create and press ENTER.

To edit an existing file, type 2 and press ENTER. You will be prompted to choose a file from the PTM-6000I. Follow the on-screen prompts to make your selection.

Whichever way you selected a file (created a new one or chose an existing one) the display will then show the file name in the top line. The following is an example:

```
FILE = TEST

ILCS KNIGHT-TRAK II MAIN MENU

1 FILE SELECTION 6 PRINTING REPORTS
2 SETUP ROUTINES 7 DATA TRANSFER
3 REPORT SETUP 8 FILE COMMANDS
4 MAINTENANCE 9 MORE SELECTIONS
5 PUMP PROGRAMMING 0 EXIT
```

Now that we know we're working with a file (named "TEST" in this example) we can use all of the programming menus as we normally would if online. Previous sections of this manual detail each of the menus, and can be used as reference for programming remotely. When finished programming, type 0 and press ENTER to exit. Your file will be saved on the PTM-6000I exactly as you left it upon exiting.

APPENDIX A — OTHER APPLICATIONS & DEVICE DRIVERS.

If running Reporter under Windows, some characters may not appear if certain background applications are running. If this is the case, turn off all background applications before operating Reporter.

Some characters may not appear also if certain device drivers are running. These devices typically appear in the CONFIG.SYS file that is read when the PC is turned on. If this is the case, you can correct this by creating a clean "boot" disk that will have no device drivers on it.

Refer to your PC's documentation for creating a boot disk, and starting your PC using the boot disk.

APPENDIX B — ARCHIVING FILES

As noted earlier, the ARCHIVE directory is where files can be stored for future use. Captured files - files that have been "printed" to the PC - can be saved in the ARCHIVE directory. The capture option is provided when using Terminal Mode - W/capture (discussed previously in this manual).

When leaving the program (by depressing F10), the screen will show that the captured file (CAPTURE.DAT) is being closed, meaning that it will be stored in your PC. By renaming the file (as an example, NEW.DAT), a file named NEW.DAT will be stored in the ARCHIVE directory. This file can be viewed or printed by using the Files selection of the Reporter Main Menu. Select View, select Archive (for archived files) and select the file NEW.DAT when an option for entering a file name is provided. The file will then be displayed; use the arrow keys on your PC keyboard to look at the entire file. When finished, press F10 to go back to the main menu.

Page 16 of 20 0900945 Rev: REL (5/99)

APPENDIX C — MODEM COMMUNICATIONS

Modem communication requires that a modem device (consult Knight) be connected to the TERMINAL port of the PTM at the dispenser site. Communication to the dispenser is made from a PC with a modem at the remote site. In order to do this, the on-site (dispenser site) modem, PTM, and Reporter software must first be set up for modem access.

SETTING THE MODEM

Apply power to the modem to be used on-site and gain access to the operational settings (refer to the operational manual of the modem device for further information). The following settings apply to most modems. Consult Knight for details:

COMMAND PREFIX STRING

ANSWER ON FIRST RING
TRACK CARRIER DETECT
MONITOR DTR SIGNAL
ENABLE XON/XOFF FLOW CONTROL AT&K4
POWER UP USING USER PROFILE 0
AT&Y0
DO NOT RETURN RESULT CODES
STORE IN USER PROFILE 0
AT&W0

When finished, type ATZ0 to initialize modem for current settings. Remove power and set modem aside.

SETTING THE PTM

Connect the PTM to your PC and go to Terminal Mode - W/Capture. Enter the Module Setup parameters and adjust as follows:

PARAMETER - SETTING

BAUD RATE - 19200 (or the speed of the modem) TERMINAL DEVICE - Modem ACCESS CODE - Set the access code to a number you will remember.

Leave Terminal Mode and return to the main menu of the Reporter software. Once there, adjust the Comm Setup settings as follows:

PARAMETER - SETTING

COMM PORT - Set to the port of the modem connected to the PC COMM SPEED - Set to the speed of the modem MODEM TYPE - Set to the type of modem used

When finished, exit the Reporter software and remove the PTM-6000I.

CONNECTING THE COMPONENTS AND DIALING THE PTM:

Locate the PTM-6000I and modem so that the PTM can be connected to the dispenser, and so that the modem can receive AC power. Connect the modem to a phone line and to the PTM (via the TERMINAL PORT; cable is available from Knight Inc.) and connect the PTM to the dispenser (via the DISPENSER INTERFACE PORT). The on-site installation is now ready to be called from a remote PC.

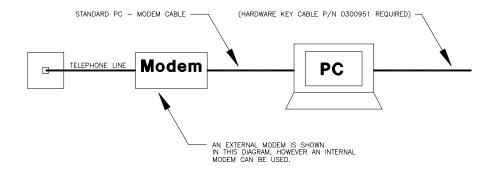
Call the on-site installation as follows:

Open the Reporter software. Select Dial Remote (W/capture) and once communication is established, you will see a dialing directory. In it, you can dial numbers that have been created. Create the number by typing C change /edit) and enter the name of the installation and the phone number.

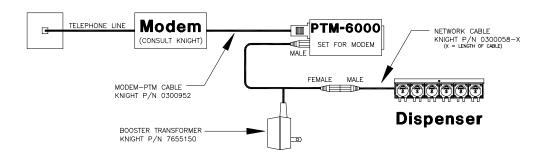
- Select D (to dial a number) and select number to dial. When communication is established, press ENTER until you are prompted for PTM access code. Enter access code and proceed.
- (2) When you are finished, go back to the main menu and select 0 to hang-up the modem.

0900945 Rev: REL (5/99) Page 17 of 20

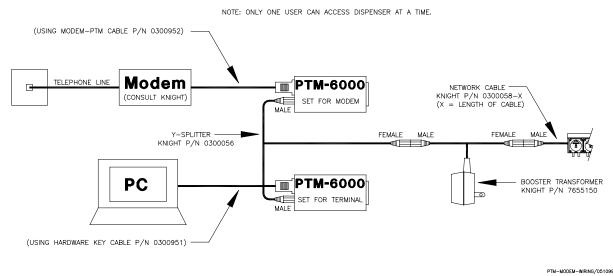
Remote PC Location Diagram



Dispenser Location Modem Diagram



Dispenser Location Modem Diagram With On-Site PC



Page 18 of 20 0900945 Rev: REL (5/99)

NOTES

0900945 Rev: REL (5/99) Page 19 of 20

DISCLAIMER

Knight Inc. does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight Inc.

WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

KNIGHT INC. A Unit of IDEX Corporation

World Headquarters: 20531 Crescent Bay Dr. Lake Forest, CA 92630-8825 USA TEL: (949) 595-4800 FAX: (949) 595-4801 Atlanta Branch: 8111 Technology Dr. NE Covington, GA 30014 USA TEL: (770) 787-9400 FAX: (770) 787-1155 Toronto Branch: 2283 Argentia Road Mississauga, Ontario L5N 5Z2 Canada TEL: (905) 542-2333 FAX: (905) 542-1536 London Branch: #15 Brunel Centre Newton Road, Crawley West Sussex UK RH102UB TEL: (44) 1293-615570 FAX: (44) 1293-615585 Sydney Branch: Unit 28, 317-321 Woodpark Rd., Smithfield NSW Australia 2164 TEL: 61-29-725-2588 FAX: 61-29-725-2025 Amsterdam Branch: Marssteden 68 7547 TD Enschede The Netherlands TEL: 31-53-428-58-00 FAX: 31-53-428-58-09