KNIGHT

IDEX
IDEX CORPORATION
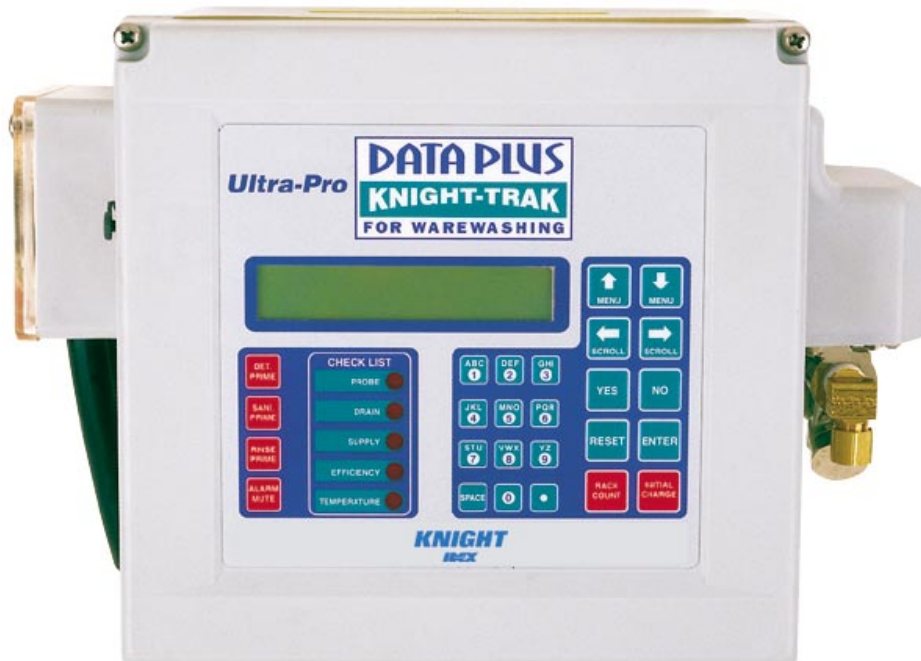
Data-Plus Programming Instruction Manual

TABLE OF CONTENTS

MENU MAP

1 ***   DISPENSER   ***
   MEMORY FUNCTIONS

- Clear Report Data
- Clear Rack Count
- Clear Setup Report
- Restore Default Settings
- Load Setup file

2 ***   DISPENSER   ***
   SETUP ROUTINES

- Change Main Access Code
- Set Date And Time
- Set Unit Of Measure
- Product Type
- Set Washer Type
- Set Pump Speed
- Set Supply Alarm
- Set Feed Limit
- Set Delays
- Set Wash Temp Tolerances

- Set Wash Temp Alarm
- Set Temp Alarm Delay
- Set Probe Alarm
- Set Soiled Water Alarm
- Set Alarm Volume
- Set Operating Mode
- Set Concentration
- Set Pulse Feed Percent
- Rinse Time Per Rack
- Set Temp Sampling

3 ***   DISPENSER   ***
   REPORT SETUP ROUTINES

- Set Shift Times
- Change Machine Make And Model
- Change Product Costs
- Change Report Name
- Change Chemical Names
- Set Display Name
- Set Hardness Info

4 ***   DISPENSER   ***
   MAINTENANCE SCHEDULE

- Date Dispenser Installed
- Date Conductivity Probe Installed
- Date Squeeze Tube Last Changed
- Date Squeeze Tube Last Lubed

5 ***   DISPENSER   ***
   CALIBRATING ROUTINES

- Flow Rates Per Minute
- Calibrate Wash Temp
- Calibrate Rinse Temp

6 ***   DISPENSER   ***
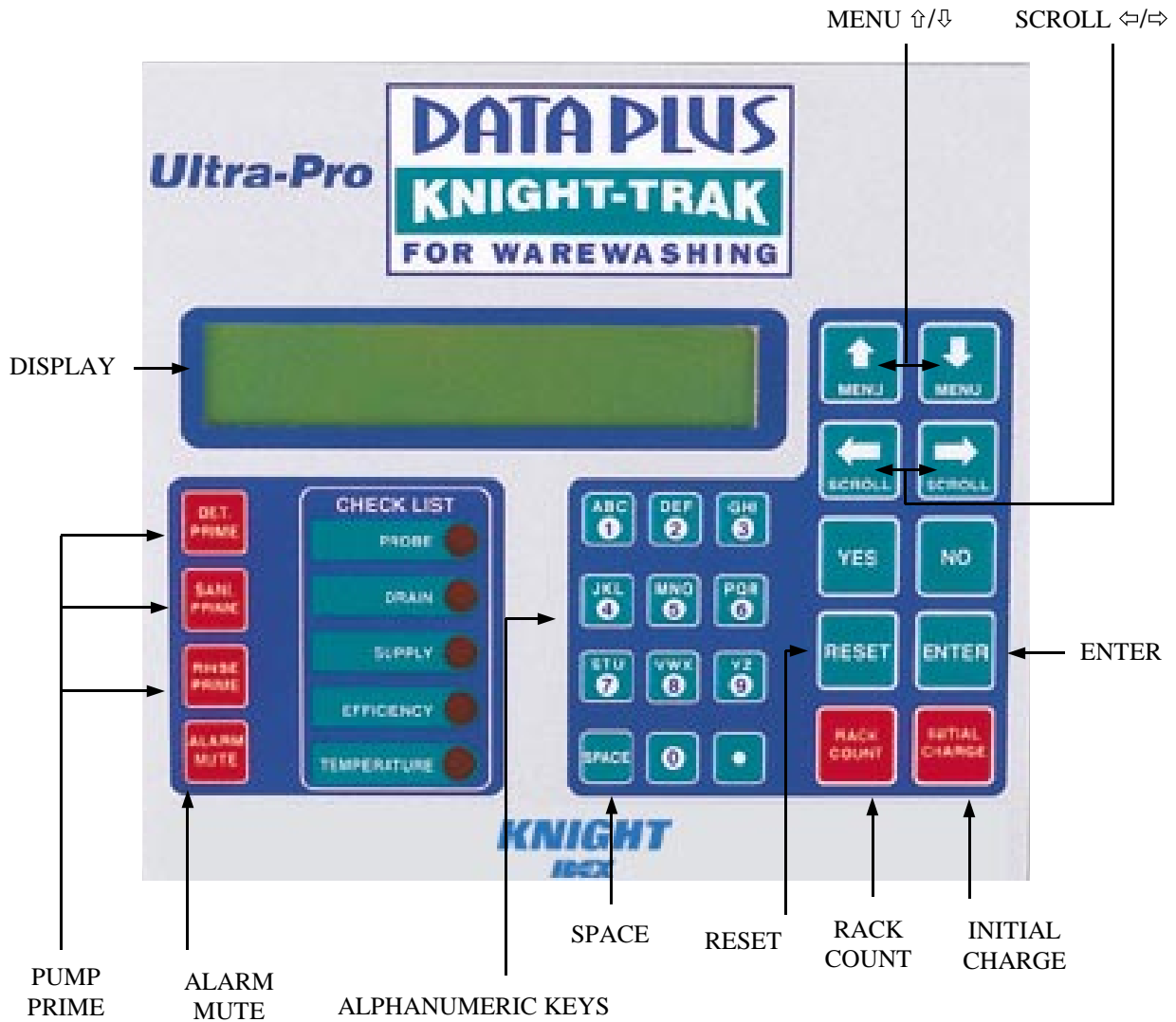   ON SCREEN REPORTS

- View Reports
- View Total Product Cost & Current Shift Data

7 ***   DISPENSER   ***
   PRINTING FUNCTIONS

- Print Reports Directly From Dispenser
- Save Files To The PTM-6000

KEYPAD DIAGRAM

MENU ⇧/⇩   SCROLL ⇦/⇨

DISPLAY

PUMP
PRIME

ALARM
MUTE

ALPHANUMERIC KEYS

SPACE   RESET   RACK   INITIAL
                    COUNT   CHARGE
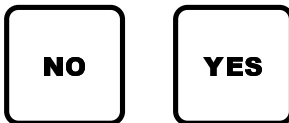
ENTER

KEYPAD DESCRIPTIONS

The DATA PLUS has been designed "USER FRIENDLY". The only two (2) keys you need to know are the MENU ⇩ and ENTER. Pressing either key will advance you through the screens. Read the screens and respond with one of the buttons below.
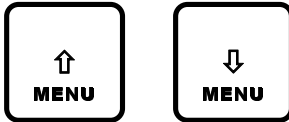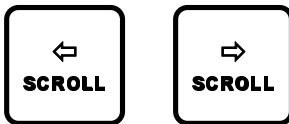
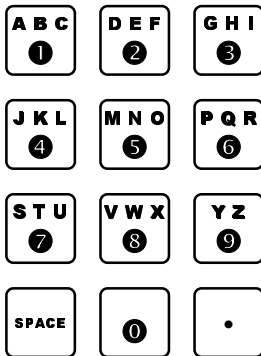|	
⇧ MENU ⇩ MENU	The MENU (DOWN) and MENU (UP) buttons allows you to move down and up through the menu selections and pick what you want to do.
ENTER	The ENTER key acknowledges input data and logs it into memory. It also takes you into a menu for programming.
NO YES	The YES and NO keys allow you to pick whether you want to do something or not.
⇦ SCROLL ⇨ SCROLL	The SCROLL keys allow you to move through a particular menu screen, and pick one of several items to change (like characters on a screen, etc).
A B C ❶ D E F ❷ G H I ❸ J K L ❹ M N O ❺ P Q R ❻ S T U ❼ V W X ❽ Y Z ❾ SPACE ⓪ •	The alphanumeric keys allow you to input numbers and letters. By repeatedly pressing any key, any of the letter characters (as well as the numeric character) can be entered into the menu selection you are working on.
RESET	The RESET key performs a number of functions. From any main menu HEADING, pressing the RESET key LOCKS YOU OUT and returns the screen to the main display. From any screen *within* a main menu that allows you to adjust something (i.e. setting a flow rate), pressing the RESET key takes you back to *that* main menu selection. **Subsequently, RESET can be used to halt pump operation; as desired or in an emergency situation.**

MOVING THROUGH THE MENUS

Data Plus programming is done through the use of menu selections. Any menu can be entered by pressing the ENTER button, or exited by pressing RESET (or in some cases MENU ⇩ or ⇧). Its that simple! Each of the main menu headings give an idea of what information can be found, entered, or changed. Within each main menu selection are several screen "prompts" that walk you through the complete programming process step-by-step.

ACCESS CODES

The system has an access code for protection:

- The access code, allows entry into ALL of the menus and functions of the system.
- Systems are shipped from the factory with access codes set to zero. (changing codes is explained later in this manual).

TO PROGRAM DISPENSER PRESS "MENU DOWN ARROW" ...

ENTER ACCESS CODE THEN PRESS ENTER	Press the "Down Arrow" button to access the system and the screen at left should appear. If the screen at left does not appear, wait 2 seconds, press RESET, then press MENU ⇩. When you see the screen at left, type in the access code and press ENTER. Remember, for a new system, the access code will be zero (until you change it later). Follow the programming steps for each section, starting on the next page.

IMPORTANT NOTES:

- Leading zeroes on access codes are not required to be entered. For example, an access code "010" can be typed in as "10", then press ENTER.
- Its **strongly recommended** to clear report data and setup report, See MEMORY FUNCTIONS [menu 1] for details.
- Its recommended to print the setup report each time its changed. See PRINTING FUNCTIONS [menu 7] for details.
- If at any time you get lost in the programming and are not sure what to do, press the RESET button until the section menu heading appears, then proceed.

| 1 *** DISPENSER *** MEMORY FUNCTIONS | • Clear Report Data
• Clear Setup Report
• Restore Default Settings
• Load Setup File |

| CLEAR REPORT DATA ?
PRESS: YES OR NO

YES   NO | This menu selection allows you to clear report information. PRESSING YES IS **STRONGLY RECOMMENDED** FOR A NEW INSTALLATION. Pressing NO will move you thru this menu selection. |

| "CLEARING REPORT DATA"
"PLEASE STAND BY" | This message indicates that the clearing process is active |

| CLEAR RACK COUNT ?
YES OR NO

YES   NO | This selection allows you to clear the rack counter. The rack counter stores the number of times the rinse signal has activated. Pressing NO moves you thru this menu selection. |

| "CLEARING RACK COUNT"
TOTAL | If you enter YES, rack counts will be cleared. |

| CLEAR THE SETUP REPORT
PRESS YES OR NO

YES   NO | This menu selection is used to clear the setup and load default settings is **STRONGLY RECOMMENDED**.

– Unit of measure is set to US
– Report name is cleared (blanked out)
– Shift start times are reset: 1 = 06:00 / 2 = 11:00 / 3 = 17:00
– Maintenance schedule dates are set to zero
– Clears Report settings
Press YES to begin loading defaults, or press NO to move on to the next menu selection without loading defaults. |

| ARE YOU SURE ?
PRESS: YES OR NO

YES   NO | If you enter YES, you are allowed to make sure that you REALLY want to clear and setup report data. Pressing NO ends this menu selection. |

| "CLEARING SETUP REPORT"
"PLEASE STAND BY" | This message indicates that the clearing process is active |

GO TO NEXT PAGE

1	*** DISPENSER *** MEMORY FUNCTIONS	• Continued

LOAD A PTM SETUP FILE? **PRESS: YES OR NO** `YES` `NO`	This menu selection is used to load a setup file from a PTM-6000 module. Press YES to load a file, or press NO to move on to the next menu selection without loading.

RECEIVING FILE NAME **PLEASE WAIT...**	After a few seconds, this message will appear indicating that file names are being read from the PTM module. When all available setup files have been read, the following prompt will appear...

EXAMPLE **<SCROLL> AND PRESS ENTER**	File names appear on the top line of the display. You can use the SCROLL buttons to browse through the names of other files on your PTM (if there is more than one setup file on the module). When the desired file name appears on the top line, press ENTER.

EXAMPLE **TRANSFERRING DATA**	The file transfer will begin, and will take a few minutes to complete. The display will show TRANSFER COMPLETE when finished.

2 *** DISPENSER *** SETUP ROUTINES	• Change Main AccessCode	• Set Wash Temp Alarm
	• Set Date And Time	• Set Temp Alarm Delay
	• Set Unit Of Measure	• Set Probe Alarm
	• Product Type	• Set Soiled Water Alarm
	• Set Washer Type	• Set Alarm Volume
	• Set Pump Speed	• Set Operating Mode
	• Set Supply Alarm	• Set Concentration
	• Set Feed Limit	• Set Pulse Feed Percent
	• Set Delays	• Rinse Time Per Rack
	• Set Wash Temp Tolerances	• Set Temp Sampling

CHANGE MAIN ACCESS CODE ? **PRESS: YES OR NO** YES NO	This menu selection allows you to change the main access code. Press YES to invoke the command, or press NO to move on to the next menu selection.

MAIN ACCESS CODE = 000 **THEN PRESS ENTER**	Use the number buttons to enter a 3-digit main access code, then press ENTER. Press the MENU ⇩ button to move on to the next menu selection.

SET DATE & TIME ? **PRESS: YES OR NO** YES NO	This menu selection allows you to set the time and date. Press YES to invoke the command, or press NO to move on to the next menu selection.

HOUR 00 MINUTE 00 **MONTH 00 DAY 00 YR 00**	Use the number buttons to set the date and time, then press ENTER. Press the MENU ⇩ button to move on to the next menu selection.

UNIT OF MEASURE = US **1= US 2= METRIC 3= IMPERIAL**	This menu selection allows you to change the unit of measure. Use the number buttons to choose the desired unit of measure. Press the MENU ⇩ button to move on to the next menu selection.

PRODUCT TYPE **1 = DRY 2 = LIQUID**	This menu selection allows you to pick the type of DETERGENT. Use the numbered keys to choose product type.

GO TO NEXT PAGE

2 *** **DISPENSER** *** **SETUP ROUTINES**	• Continued

WASHER TYPE = —— **1 = DOOR** **2 = CONVEYOR**	This menu selection allows you to pick the type of dishwasher system. Use the numbered keys to enter the desired system.

RINSE SPEED = —— **RANGE IS 0 – 99**	This selection allows you to enter the speed of the rinse pump. Use the numbered keys to enter the relative value between 00 – 99, and press ENTER when done.

The rinse pump output is 7-38 milliliters/minute. For applications that require less than 7 ml of rinse aid, replace the standard T-53 tubing (3/6" I.D.) and blue tri-roller assembly with T-51 tubing (1/8" I.D.) and a brown tri-roller assembly. Actual operating speed of the rinse pump is also dependent on the flow rate. For setting the flow rate see Pg 20.

RINSE SUPPLY ALARM = <u>OFF</u> **1 = OFF 2 = ON**	This selection allows you to enable (or disable) the rinse supply alarm Enter the desired selection and press MENU ⇩ to move through this menu selection.

RINSE FEED LIMIT = 0:00 **RANGE IS 0 – 3:59 MINUTES**	This selection allows you to determine the length of the continuous rinse feed before shutoff. Limiting the of the amount of time the rinse product can be continuously fed reduce the possibility of chemical overuse on machines that fill thru the rinse solenoid valve. Use the number keys to enter the desired value and press ENTER when done.

RINSE ON DELAY = __:__ **RANGE IS 0 –3:59**	This selection allows you to determine the length of the delay time between the rinse signal and the activation of the rinse pump. The rinse delay is used to limit rinse consumption. Use the number keys to enter the desired value and press ENTER when done.

Typically, any delay time+the limit time+ any extra time in the cycle = the total rinse time/rack.

| 2   ***   DISPENSER   ***
SETUP ROUTINES | • Continued |

| SANITIZER SPEED =
RANGE IS 0 – 99 | This selection allows you to enter the speed of the sanitizer pump (if connected). Use the number keys to enter a relative value between 00 – 99, press ENTER when done. |

| SANI SUPPLY ALARM = <u>OFF</u>
1 = OFF   2 = ON | This selection allows you to enable (or disable) the sanitizer alarm. Enter the desired selection and press MENU to move through the menu selection. |

| SANI WITH =
1 =   RINSE   2 = DETERGENT | This selection shows whether the sanitizer pump (if equipped) will operate in conjunction with the detergent or the rinse pump. Use the number keys to enter the new data. |

| RINSE TIME PER RACK = 01
RANGE IS 1 – 59 SECONDS | This selection allows you to determine the length of the rinse time per rack. Use the number keys to enter the new data. |

You must enter the <u>actual</u> time that the rack takes to pass thru the rinse section of a conveyor machine. When racks are run continuously (back-to-back), this is how the DataPlus counts racks.

| WASH TEMP SAMPLING =
1 = OFF   2 = ON | This menu selection allows you to decide if the system should monitor (and log onto the printed report) if the wash temperature falls outside of a given sampling range. Use the numbered keys to enter the value and press MENU ⇓ to move through this menu. For the operator an "out of range" condition can result in an audible and visual alert. You decide whether or not you want to alert the operator, or simply record the events on the report. |

| WASH TEMP TOLERANCES =
HI = ___ LOW = ___ F | This menu selection allows you to enter the range, or tolerance, of wash water temperature. Use the numbered keys to enter the desired value and press ENTER when done. Press MENU ⇓ to move through this menu. Set realistic tolerances for each system. Observe the operation of each machine and note average temperatures that would indicate an equipment breakdown or a source temperature problem. |

WASH TEMP ALARM ? **1 = OFF 2 = ON**	Enter the desired selection and press MENU ⇩ to move through this menu.

WASH TEMP ALARM DELAY **RANGE IS 0 – 8 MINUTES**	This menu selection will allow you to enter the wash temp delay period. Use the numbered keys to enter the desired value and press ENTER when done. Press MENU ⇩ to move through this selection. Once the detergent signal is received, the wash temperature probe can begin sensing. First, determine how long it takes the tank heater to raise the water temperature to the LOW tolerance temperature level. For most applictions, enter the period from the time the wash signal is received to the time that the LOW tolerance temperature is satisfied. If the system has a tendency to exceed acceptable high temperature levels, determine how long this condition should exist before the alarm sounds. Readjust the delay value as appropriate.

RINSE TEMP SAMPLING = **1 = OFF 2 = ON**	This selection allows you to decide if the system should monitor (and log on to the printed report) if the rinse water temperature falls outside of a given sampling range. Use the numbered keys to enter the desired value and press MENU ⇩ to move through this menu selection.

RINSE TEMP TOLERANCES = **HI = ___ LOW = ___ F**	This menu selection allows you to enter the range, or tolerance, of rinse water temperatures. Use the numbered keys to enter the desired value and press ENTER when done. Press MENU ⇩ to move through this menu. Set realistic tolerances for each system. Observe the operation of each machine and note average temperatures that would indicate an equipment breakdown or a source temperature problem.

RINSE TEMP ALARM ? **1 = OFF 2 = ON**	Enter the desired selection and press MENU ⇩ to move through this menu.

If the rinse temperature is too high/low this message will be displayed. In addition, the TEMPERATURE light on the front panel of the DataPlus will be lit and the alarm will sound.

GO TO NEXT PAGE

• Continued

RINSE TEMP ALARM DLY **RANGE IS 1 – 59 SECONDS**	This menu selection will allow you to enter the rinse temp delay period. Use the numbered keys to enter the desired value and press ENTER when done. Press MENU ⇩ to move through this selection.

Once the rinse signal is received, the rinse temperature probe can begin sensing, First, determine how long it takes to flood the rinse line and read the true booster heater temperature (on most machines the low rinse temp tolerance is more important). For most applications, enter the period from the time the rinse signal is received to the time that the low tolerance temperature is satisfied.

If the machine has a tendency to exceed acceptable high temperature levels, determine how long this condition should exist before the alarm sounds. Readjust the delay value as appropriate.

SOILED WATER ALARM = **1 = OFF 2 = ON**	This selection allows you to enable (or disable) the soiled water alarm. Enter the desired selection and press MENU to move through this menu selection.

SOILED WATER ALARM = 000 **RANGE IS 000 – 999 RACKS**	Enter the desired selection and press MENU ⇩ to move through this menu selection.

Standard operating procedure for dishwashing operations require the wash water to be changed at least once every shift. Calculate the average number of racks for each shift and enter the value. After you run the first report, compare the figures with actual operations and adjust as appropriate.

2 * DISPENSER *** SETUP ROUTINES**	• Continued

IDLE TIME ALARM = 1 = OFF 2 = ON	This selection is provided for conveyor machines, and allows you to enable (or disable) the Idle time alarm. Enter the desired selection and press MENU to move through this menu selection.

IDLE TIME = RANGE IS 1 – 59 MINUTES	Enter the desired selection and press MENU⇩ to move through this menu selection.

SET ALARM VOLUME RANGE IS 0 –7	This sets the alarm volume between 0 (lowest) - 7 (highest) press MENU⇩ to move through this menu selection.

OPERATING MODE = 1 = PROBE 2 = PROBELESS	This selection allows you to set the system for probe control or probless control. Use the numbered keys to enter the desired value and press MENU⇩ to move through this selection.

INITIAL CHARGE = 1 = MANUAL 2 = AUTO	This selection allows you to choose the method by which the initial amount of detergent will be fed. If it is desired to manually fill the detergent at the beginning of a wash day, press 1. If the system will automatically feed this amount instead, press 2. Press MENU⇩ to move through this menu selection.

The INITIAL CHARGE button on the front of the system will be used to manually charge the machine if manual charge is selected.

ACCUMULATED TIME RANGE IS 0 – 59 SECONDS	This selection allows you to determine how much rinse time you wish to expire before a detergent recharge occurs. Use the numbered keys to enter the desired value and Press ENTER when done. Press MENU⇩ to move through this menu selection.

• Continued

SET CHARGE TIME
CHOOSE 0:01 – 3:59

This selection allows you to enter the length of time that the detergent pump will run, when the activation signal is received (or the INITIAL CHARGE button is depress). Use the numbered keys to enter the desired value and press ENTER when done. Press MENU⇩ to move through this menu selection.

SET RECHARGE TIME
CHOOSE 0:01 – 3:59

This selection allows you to enter the length of time that the detergent pump will run when the rinse activation signal is received (or the Rinse pressure switch is closed). Use the numbered keys to enter the desired value and press ENTER when done. Press MENU⇩ to move through this menu selection.

USING HOBART AM-14 =
1 = NO   2 = YES

If connected to a Hobart AM-14 (or similar) machine, press 2 for YES. Otherwise, press 1 for NO and press MENU ⇩ to end this menu selection.

If YES, the DataPlus will "recharge" the tank with the initial charge amount anytime the machine is refilled with fresh wash water. In addition to setting this selection to YES, the WASHER TYPE must be set to DOOR, and the INITIAL CHARGE must be set to AUTO.

CONCENTRATION   45
AT   60

This selection allows you to enter the concentration level. Use number keys to enter the desired value, be sure to set concentration at "normal" wash tank temperature. Wash temperature does affect conductivity of the solution. As wash temperatures change, the digital number of concentration units can be affected. However, concentration itself will remain stable.

DET. CONC. DISPLAY = OFF
1 = OFF   2 = ON

This selection allows you to determine if the concentration levels are to be displayed during normal operation. Use numbered keys to enter the correct selection and press MENU⇩ to move through this selection.

GO TO NEXT PAGE

2 *** DISPENSER *** SETUP ROUTINES	• Continued

PULSE FEED PERCENT = ___ RANGE IS 0 – 99	This menu selection allows you to enter the concentration level at which the pulse feed feature will activate. Use the numbered keys to enter the desired value and press ENTER when done. Press MENU ⇩ to move through this menu. The percentage that is entered determines when the UDP will begin to Pulse Feed. For example, if 10% is entered, UDP will feed continuously up to 90% of the selected concentration setting (or within 10% of the setpoint) and will then pulse feed until the setpoint is achieved.

DET. FEED LIMIT = 1 = OFF 2 = ON	Limiting the continuous feeding of detergent reduces the possibility of chemical overuse. Use the number keys to enter the desired value and press ENTER when done.

This section allows you to terminate detergent feed when the detergent alarm delay time has counted down twice its value. For example, if the SET ALARM DELAY value (as set below) is 1:30 sec, then the Data Plus will terminate detergent feed after 3:00 min (or twice the set value). If you select feed limit OFF, Data Plus will continue to feed detergent until the setpoint is satisfied. Feed limit should be used on all conveyor or flyte-type machines.

SET ALARM DELAY = __:__ RANGE IS 0 – 3:59 MUNITES	This selection allows you to determine the length of the delay time before the detergent alarm is activated. Use the number keys to enter the desired value then press ENTER when done.

Calculate the alarm delay period by starting with a fresh tank of water and time how long it takes the Data Plus to achieve the concentration setpoint. Enter this value as your delay time.

For screen feed detergent, add 25% to 35% to this value to compensate for detergent hardening during periods of nonuse. For single-rack machines, set the alarm delay of 10 seconds *less* than the wash cycle time.

PROBE ALARM 1 = OFF 2 = ON	This menu selection allows you to decide whether the probe alarm will be active. Use the numbered keys to enter the desired value and press MENU ⇩ to move through this menu.

This function is designed to alert the operator to a probe condition that affects results or detergent consumption. Variable probe conditions such as scale can insulate the probe tips and inhibit the sensitivity of the probe, causing over-consumption of detergent and associated wash result problems. If a probe wire is disconnected or damaged, the Data Plus will recognize this as a probe failure also. Data Plus will log the event in the report with the probe alarm in the on or off state.

3 *** DISPENSER *** REPORT SETUP ROUTINES	• Change Washer Make And Model • Set Shift Times • Change Product Costs • Change Report Name	• Change Chemical Names • Set Display Name • Set Hardness Info

SET MAKE OF MACHINE MAKE	This menu selection allows you to enter the make (manufacturers name) of the wash machine. Using the SCROLL and number keys enter the new data and press ENTER. Press MENU ⇩ to move through this menu. (Max of 10 characters.)

SET MODEL OF MACHINE MODEL	This menu selection allows you to enter the model number of the wash machine. Use the SCROLL and number keys of enter the new data, and press ENTER when done. Press MENU ⇩ to move through this menu. (Max of 10 characters.)

SHIFT START #1 06:00 #2 11:00 #3 17:00	This menu selection allows you to enter shift times. Use the number buttons to enter the shift start times, then press ENTER. Time must be in military format (i.e. 13:00 = 1:00 PM) Press the MENU ⇩ button to move on to the next menu selection.

SET SHIFT NAME SHIFT #1	This menu selection allows you to enter the shift names (i.e. Breakfast, Lunch, Dinner, etc.) for the report. Use the SCROLL and number keys to enter the new data, and press ENTER when done. Press MENU ⇩ to move through this menu selection.

CHANGE PRODUCT COST ? YES OR NO YES NO	Pressing YES allows you to change the cost for the product. Use the SCROLL and numbered keys to enter the new data, and press ENTER. Press MENU ⇩ to move through this menu.

DETERGENT $0.00 / GAL	If you enter YES, you can change the cost for each chemical. Select each pump to change. (Use the SCROLL and number keys to enter the data, and press ENTER when done). Press the MENU ⇩ button to move through this menu selection.

GO TO NEXT PAGE

3 *** DISPENSER *** REPORT SETUP ROUTINES	• Continued

SET REPORT NAME ? PRESS YES OR NO	This selection allows you to enter the report name. Pressing NO advances through the menu. Press YES then enter the new report name and press ENTER. Press MENU ⇩ when finished. Max of 46 characters.

YES   NO

SET DISPLAY NAME	This menu selection allows you to change the name on the display (what shows on the display when the system is idle). Use the numbered keys to enter the new name and press ENTER. Press MENU ⇩ to move through this menu. Max of 24 characters.

WATER HARDNESS = GRAINS ────	This menu selection enables you to enter the number of GRAINS of hardness (for report purposes). Press ENTER when done, then MENU ⇩ to move through this menu.

| 4 *** DISPENSER *** MAINTENANCE SCHEDULE | • Date Dispenser Installed
• Date Conductivity Probe Installed
• Date Squeeze Tube Last Changed
• Date Squeeze Tube Last Lubed |

| DISPENSER INSTALLED 00/00/00 | This menu selection allows you to set the installation date. Use the number buttons to set the date, then press ENTER. Press the MENU ⇩ button to move on to the next menu selection. |

| DISPENSER BATTERIES CHANGED 00/00/00 | This menu selection allows you to enter the date that the batteries in the dispenser were last changed. Use the number buttons to set the date, then press ENTER. Press the MENU ⇩ button to

Note: This is for older dispensers only. |

| SQUEEZE TUBES LAST LUBED RINSE 00/00/00 | This menu selection allows you to set the date that the squeeze tubes were last lubed. Use the number buttons to set the date, then press ENTER. Do this for each pump in the system Press the MENU ⇩ button to move on to the next menu selection. |

The DETERGENT option will only be displayed if the type of detergent is LIQUID (as determined in the SETUP ROUTINES).

| SQUEEZE TUBES CHANGED RINSE 00/00/00 | This menu selection allows you to set the date that the squeeze tubes were last changed. Use the number buttons to set the date, then press ENTER. Do this for each pump in the system Press the MENU ⇩ button to move on to the next menu selection. |

The DETERGENT option will only be displayed if the type of detergent is LIQUID (as determined in the SETUP ROUTINES).

| COND PROBE INSTALLED 00/00/00 | This menu selection allows you to set the probe installation date. Use the number buttons to set the date, then press ENTER. Press the MENU ⇩ button to move on to the next menu selection. |

5 *** DISPENSER *** CALIBRATING ROUTINES	• Calibrate Chemical Amounts • Set Pump Flow Rates • Set Dry Detergent Container Feed Time

AUTO CALIBRATE ? PRESS: YES OR NO YES NO	This menu selection allows you to automatically calibrate the amount of liquid that passes thru a pump. (Different chemical viscosity will result in different flow rates.) For new installations, the answer will be YES. Otherwise, press NO.

Calibrating dry detergents is performed on page 21 (in the TIME PER CONTAINER section).

CALIBRATION – HOLD PRIME UNTIL 1 OUNCE DISPENSED	For each liquid chemical, depress the corresponding PRIME button until one ounce of chemical has been dispensed. The Data Plus will calculate the flow-rate based on how long it takes to dispense one ounce.

Calibrating rinse/sanitizer is performed below.

CALIBRATING RINSE/SANITIZER FOR DOOR OR CONVEYOR MACHINES –

With the rinse/sanitizer lines primed, fill a container with one ounce of product and place the container under the suction tube of the pump. Disconnect the rinse, sani signal from the Data Plus dispenser (terminals are marked Rinse). Activate the rinse solenoid on the machine, then depress the RINSE PRIME OR SANITIZER PRIME button until the container with one ounce of product is empty.

Optional Calculation:

a) 3 ml dispensed/15 sec. Rinse cycle time = .20 ml/second dispensed

b) .20 ml/second dispensed X 60 seconds = 12 ml/minute flow rate

c) 12 ml/minute flow / 29.6 ml/oz = .40 oz/minute flow rate (in ounces)

In this example, enter a flow rate of 0.40 OZ/MIN

FLOW RATE PER MINUTE DETERGENT —.— OZ/MIN	This selection allows you to view the flow rate for each pump. The Data Plus dispenser will perform the mathematical calculations necessary to establish flow rates per minute.

Depress the MENU ⇩ button to view the AUTOCALIBRATE screen in order to enter a value for each pump.

5 ******* **DISPENSER** ******* **CALIBRATING ROUTINES**	• Continued

TIME PER CONTAINER **DETERGENT ___ MIN**	If the detergent is dry or powdered, this selection allows you to enter the amount of time that is required for the solenoid to flush the contents of the container. Enter the value and press ENTER when done.

To determine actual dry detergent consumption, count the number of dry detergent containers consumed during the report period. Proceed to Menu #6 (On Screen Reports) and view the total detergent on time for the report period you needed. Add the total detergent on time for each shift and divide by the total; number of containers used. This is your actual time per container. Re-enter this value as the TIME PER CONTAINER.

CALIBRATE WASH TEMP ? **PRESS: YES OR NO** [YES] [NO]	This menu selection allows you to calibrate the wash temperature. Press YES to invoke the command, or press NO to move on to the next menu selection.

PUT IN SENSOR, **PRESS** **ENTER WHEN STABLE 000 MV**	Insert the probe into the wash tank enter the value when the temperature stabilizes then press ENTER.

CALIBRATE RINSE TEMP ? **PRESS: YES OR NO** [YES] [NO]	This menu selection allows you to calibrate the rinse temperature. Press YES to invoke the command, or press NO to move on to the next menu selection.

PUT IN SENSOR, **PRESS** **ENTER WHEN STABLE 000 MV**	Insert the probe into the rinse line enter the value when the temperature stabilizes then press ENTER.

6 * DISPENSER *** ON SCREEN REPORTS**	• On Screen Reports • View Concentration And Temperature • View Shift Pump Time • Shift Alarm Total

ON SCREEN REPORTS ? **PRESS: YES OR NO** [YES] [NO]	This selection allows you to view report information for a given period. Pressing NO moves you thru this menu selection.

Selecting NO permits you to view information pertaining to the current shift (the shift that is presently in the kitchen). **Current shift data will not be logged onto the report until the current shift ends.**

START DATE MO 01 DA 01 **END DATE MO 12 DA 31**	Once selected, the system will ask for the start and end dates (the date range) of the desired report information. Use the number keys to enter the information and Press ENTER.

SORTING DATA ***PLEASE WAIT***	Once selected, the data in the system will be sorted for viewing. After approximately a minute, this screen will show COMPLETE; pressing MENU ⇩ to continue thru this menu selection

VIEW TOTAL RACKS? **PRESS YES OR NO** [YES] [NO]	This selection allows you to view cumulative rack information. Pressing NO allows you to move through this menu selection.

SHIFT __1 **___ RACK X100**	The screen will show the selected information press MENU ⇩ to view information for each shift, then press MENU ⇩ to move through this menu selection.

• Continued

VIEW PUMP ON TIME:
PRESS YES OR NO

| YES | NO |

This selection allows you to view cumulative pump time information. Pressing NO allows you to move through this menu selection.

SHIFT __1 DET __:__ H/M
RIN __:__ SANI __:__

This screen will show the information. Press MENU ⇩ to view information for each shift, then press MENU ⇩ to move through this menu selection.

TEMP ALARM TOTALS?
PRESS: YES OR NO

| YES | NO |

This selection allows you to view cumulative pump alarm information resulting from temperature range violation. Pressing NO allows you to move through this menu selection.

SHIFT __1 WSH H 0000
RIN H 0000 L 0000

This screen will show the selected information. Press MENU ⇩ to view information for each shift, then press MENU ⇩ to move through this menu selection.

LOW LEVEL ALARM TOTALS?
PRESS: YES OR NO

| YES | NO |

This selection allows you to view cumulative pump alarm information resulting from low level occurrences. Pressing NO allows you to move through this menu selection.

SHIFT __1 DETER ____
RINSE ____ SANI ____

This screen will show the selected information. Press MENU ⇩ to view information for each shift, then press MENU ⇩ to move through this menu selection.

DRAIN AND IDLE TOTALS?
PRESS: YES OR NO

| YES | NO |

This selection allows you to view cumulative wash tank drains and probe occurrence information. Pressing NO allows you to move through this menu selection.

SHIFT __1 DRAIN ____
IDLE ___

This screen will show the selected information. Press MENU ⇩ to view information for each shift, then press MENU ⇩ to move through this menu selection.

• Continued

VIEW PRODUCT USAGE
PRESS: YES OR NO

| YES | NO |

This selection allows you to view product usage. Pressing NO allows you to move through this menu selection.

DETERGENT   BREAKFAST
_____ GALS COST$ ___.___

This screen will show the selected information. Press MENU ⇩ to view information for each chemical on every shift, then press MENU ⇩ to move through this menu selection.

If the detergent is solid or powder, the liquid value will be replaced by a CONT value – the amount of chemical used out of the CONTainer.

VIEW CONCENTRATION AND
TEMP? PRESS: YES OR NO

| YES | NO |

This selection allows you to view current conductivity and temperature information. Pressing NO allows you to move through this menu selection.

CONCENT _____ WASH TEMP
RINSE TEMP _____

If you pressed YES, current conductivity and temperature information will be displayed. Press MENU ⇩ to move this menu selection.

VIEW SHIFT PUMP ON TIME?
PRESS: YES OR NO

| YES | NO |

This selection allows you to view current alarm information. Pressing NO allow you move through this selection.

DETERGENT__:__ MIN/SEC
RIN__:__ SANI __:__

If you press YES, current pump time information will be displayed. Press MENU ⇩ to move through this selection.

SHIFT ALARM TOTALS?
PRESS: YES OR NO

| YES | NO |

This selection allows you to view current shift pump times. Pressing NO allows you to move through this menu selection.

WSH TEMP HI___ LO ___
RIN TEMP HI ___ LO ___

If you pressed YES, current alarm information will be displayed. Press MENU ⇩ to move through this selection.

GO TO NEXT PAGE

6   *   DISPENSER   ***
ON SCREEN REPORTS**

• Continued

**SHIFT MACHINE ON TIME?
PRESS: YES OR NO**

YES   NO

This menu selection allows you to view current machine on time information. Pressing NO allows you move through this selection.

**MACHINE ON TIME
___:___ MIN/SEC**

If you pressed YES, current on time information will be displayed. Press MENU ⇩ to move through this selection.

**SHIFT EFFICIENCY?
PRESS: YES OR NO**

YES   NO

This menu selection allows you to view relative machine efficiency information. Pressing NO allows you move through this selection.

**SHIFT EFFICIENCY =
PERCENT ____**

If you pressed YES, current relative efficiency information will be displayed. Press MENU ⇩ to move through this selection.

---

7 *** DISPENSER *** PRINTING FUNCTIONS	• Print Reports • Select Report Ranges By Date

BEFORE PRINTING, MAKE SURE

- THE DATA PLUS UNIT IS CONNECTED TO A PTM-6000,
- (if onsite) THE PRINTER IS CONNECTED TO THE PTM-6000,
- (if onsite) THE PERFORATION (SPLIT) IN THE PAPER IS IN LINE WITH THE PRINTHEAD,
- (if onsite) PAPER WILL BE ABLE TO FLOW FREELY THRU THE PRINTER
- (if onsite) THE PRINTER "ON" LIGHTS ON.

PRINT-> 1 = SETUP 2) SUM 3) CYCLE 4) 7 DAY	This selection allows you to print the desired report. Make the correct choice by pressing the corresponding number on the key pad.

START DATE MO 01 DA 01 END DATE MO 12 DA 31	If you choose SUM, CYCLE, or 7-DAY, you will be asked to select the time period the report will cover. Enter the time period dates, then press ENTER. If you choose 7-DAY, a seven-column report will be printed with the days of the week heading each column. Ensure that the START DATE entered is a Sunday.

DIRECT PRINT -> 1) PRINTER 2) FILE	This selection allows the user to decide whether the information should be directed to the printer or to the file memory of the PTM-6000 ITSELF. Use the number keys to enter the correct choice.

If you select PRINTER, the information will be directed to the printer, but will not be stored in memory of the PTM-6000. If you select FILE, directing the print to the PTM permits off-site printing of reports (if you have a terminal device, I.e. a personal or palmtop computer). For remote printing, please consult the PTM-6000 installation manual.

The PTM-600 has a fixed file capacity. If you select to print off-site, it is recommended that you print *all* files in the PTM-6000. If the PTM-6000 is full, the report memory will be deleted. Files printed to the PTM will be listed in the off-site terminal device by date and time.

7 *** DISPENSER *** PRINTING FUNCTIONS	• Continued

INCLUDE PRODUCT COSTS ?
PRESS: YES OR NO

YES   NO

This selection allows you to choose if you want product costs to be included on the printed report. This prompt will only appear if "PRINTER" is chosen in the previous step.

ASSURE PTM-6000 READY
THEN PRESS ENTER

This selection allows you to check and see if the PTM-6000 is connected to the Data Plus, and if the printer is connected to the PTM.

PTM-6000 NOW PROCESSING

This message indicates that your request is being processed. If you get an error message that the PTM is not responding, check the cable connection between the PTM and the Data Plus for loose jacks, or damage to the cable.

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.