

Digital Interface Board (DIB) Manual



UL File #E218225

Installation

Make Sure All Power is OFF & 9V battery is removed (pressure systems) before Installing DIB!

With future expansion in mind, every RK and Titan Series panel has a removable expansion board face plate to add a display module if it is not factory installed or to upgrade a display module to a model with more features. To install just remove the faceplate from above the control center on the sub-door (or remove the old module if you are upgrading) and insert the DIB module from the back of the sub-door. Be sure the protective film on the display screen has been removed. Next, screw in the four corner screws. **With the power off and 9V battery removed (pressure systems)** attach the ribbon from the DIB module to the control board. Once everything is installed turn the power on. It may take up to 10 seconds for the circuit boards to complete the program update. Once the circuit boards have completed the program update normal operation will begin.

Note: RKE boards are not compatible with the DIB.

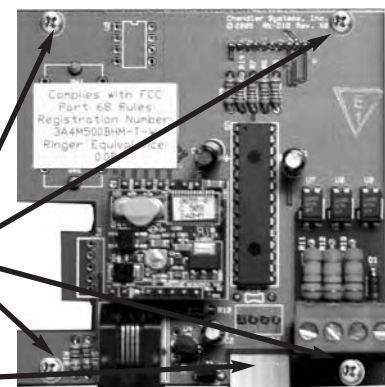
Removable Face Plate



Back of DIB Module

Installation Screws

Connecting Ribbon



Shown with Optional Modem

Menu

Menu Navigation

To advance to the next menu, press the "Menu/Enter" button. To go to the settings menu from the display menu, push and hold "Menu/Enter" until you see the "Level Cntrl Menu" appear on the LCD screen. When in the Settings Menu press "Menu/Enter" to cycle thru the fields, to select a submenu, press the "Set/Change" button.

Editing Fields

To edit the setting currently being displayed on the screen, press the "Set/Change" button. The value that is now being edited will begin to flash. To change this value, press the "Set/Change" button. To move to the next edit digit, or to finish editing the setting, press the "Menu/Enter" button.

Example

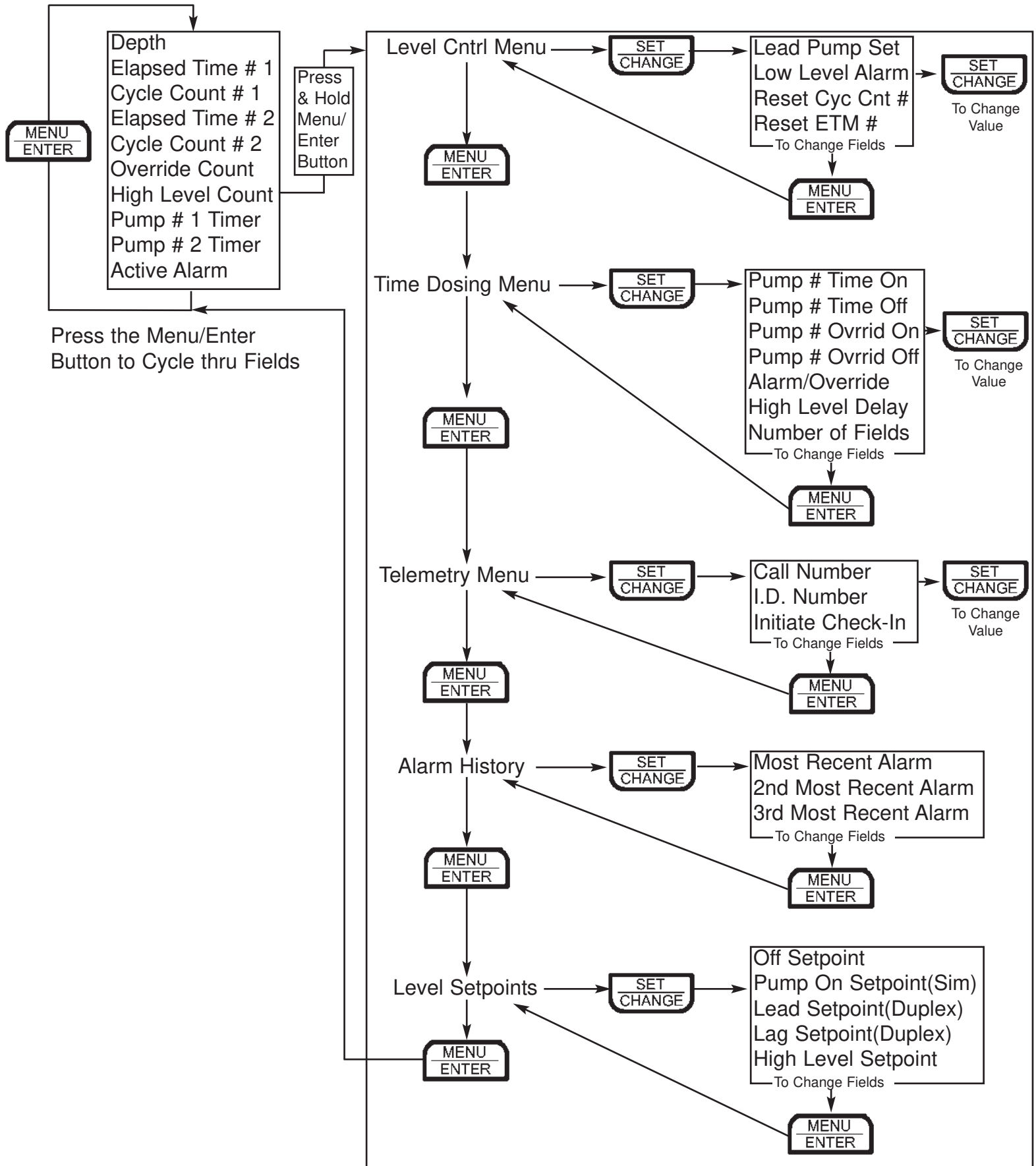
To Change Pump Alternation Features: (Duplex Systems Only)

From the Display Menu press and hold the "Menu/Enter" button until "Level Cntrl Menu" appears on the LCD screen. Next press the "Set/Change" button to enter into the Level Control sub-menu. The first field is "Lead Pump Set". Press the "Set/Change" button again to change this field. The field being edited will flash. Press the "Set/Change" button to change the field and press the "Menu/Enter" button to accept the setting. (See Menu diagram on next page)



Display Menu

Settings Menu



Display Menu

Press Menu/Enter Button to change between menu fields

Depth - (Pressure type panels only): Reads out liquid level in inches. (Max value: 49.99")

Elapsed Time # - (# is Pump number (1 or 2)): Reads out the total elapsed run time of the corresponding pump. (Max Value 999999:59:59)
Time shown is in the format of [Hours:Minutes:Seconds]

Cycle Count # - (# is Pump number (1 or 2)): Reads out the number of cycles the corresponding pump has run. (Max Value: 999999)

Override Count - (Time Dose DIBs only): Reads out the number of times the panel has gone into override mode. (Max Value: 999999)

High Level Count - Reads out the number of times the liquid level has reached high level. (Max Value: 999999)

Field #1 Timer - (Time Dose DIBs only): Reads out the remaining time in the current time cycle. If the pump(s) are running then it indicates the time remaining until the pump(s) shut off. If the pump(s) are off then it indicates time remaining until the pump(s) may run again.

Active Alarm - Reads out what alarm condition the panel is currently experiencing. If there are no alarms, it will read "None."

User Settings Menu

Press and hold Menu/Enter Button for 3 seconds while in the Display Menu to enter into this menu. Press the Menu/Enter Button to change between the following menu fields:

Level Cntrl Menu - (Level Control Options Menu):
Press Set/Change button to enter into this sub-menu.

Time Dosing Menu - (Time Dosing Options Menu, Time Dose DIBs only):
Press Set/Change button to enter into this sub-menu.

Telemetry Menu - (Modem DIBs only):
Press Set/Change button to enter into this sub-menu.

Alarm History
Press Set/Change button to enter into this sub-menu.

Level Setpoints - (Displays on Pressure Panels only):
Press Set/Change button to enter into this sub-menu.

Level Control Options Menu

Lead Pump Set (Duplex Panels Only):

Press Set/Change button to change this field.

Possible Settings:

- Alternate = Alternates which pump turns on at the lead setpoint every time a pump runs
- Pump 1 is Lead = Pump #1 Always turns on at the lead pump setpoint.
Pump #2 Always turns on at the lag pump setpoint.
- Pump 2 is Lead = Pump #2 Always turns on at the lead pump setpoint.
Pump #1 Always turns on at the lag pump setpoint.

Low Level Alarm - Occurs if liquid level reads below 3.5" (Pressure Panels Only):

Press Set/Change button to change this field.

Possible Settings:

- Alarm Off = Low Level Alarm Off
- Light Only = Flash Alarm Light only for Low Level Alarm
- Light & Audible = Flash Alarm Light and sound audible for Low Level Alarm

Reset Cyc Cnt # - This is the cycle count that can be viewed in the Display Menu (Reset Cycle Counter to zero, # is Pump number (1 or 2))

Press Set/Change button to change this field.

Possible Settings:

- Do Not Reset = Cycle Counter will not reset
- Reset Counter = Cycle Counter will reset to 0

Reset E.T.M. # - This is the Elapsed time that can be viewed in the Display Menu (Reset Elapsed Time to zero, # is Pump number (1 or 2))

Press Set/Change button to change this field.

Possible Settings:

- Do Not Reset = Elapsed Time will not reset
- Reset Counter = Elapsed Time will reset to 0

Time Dosing Options Menu (Time Dose Versions Only)

Pump 1 Time On - (Pump Enable Time Setting) This is the amount of time the pump will be enabled to run once the level reaches the "Pump On"(simplex) or "Lead On"(duplex) setpoint. Note: If the level reaches the pump off setpoint before time expires, the pump will shut off and the Pump Disable time will begin.

Time shown is in [Minutes:Seconds] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Pump 1 Time Off - (Pump Disable Time Setting) This is the amount of time the pump must wait after it completes a run cycle before it may run again. Note: If the level reaches the override (lag) setpoint the pump will begin to run regardless of Pump Disable Time.

Time shown is in [Hours:Minutes] (Maximum time setting is 99:59)

To disable Time Dosing, set this field to 00:00.

Press Set/Change button to change this field.

Pump 1 Ovrrid On - (Pump Enable Time Setting for Override) This is the amount of time the pump will be enabled to run once the level reaches the override setpoint at which time the system enters Override Time Dosing mode.

Time shown is in [Minutes:Seconds] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Pump 1 Ovrriid Off - (Pump Disable Time Setting for Override) This is the amount of time the pump must wait after it completes an Override run cycle before it may run again. Note: The pump will continue to cycle in override time dosing mode until the level is below the "Pump On" setpoint when the Override Pump Disable Time expires.

Time shown is in [Hours:Minutes] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Pump 2 Time On - (Pump Enable Time Setting) *See Pump 1 Time On Description*

Time shown is in [Minutes:Seconds] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Pump 2 Time Off - (Pump Disable Time Setting) *See Pump 1 Time Off Description*

Time shown is in [Hours:Minutes] (Maximum time setting is 99:59)

To disable Time Dosing, set this field to 00:00.

Press Set/Change button to change this field.

Pump 2 Ovrriid On - (Pump Enable Time Setting for Override) *See Pump 1 Ovrriid On Description*

Time shown is in [Minutes:Seconds] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Pump 2 Ovrriid Off - (Pump Disable Time Setting for Override) *See Pump 1 Ovrriid On Description*

Time shown is in [Hours:Minutes] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Alarm/Override - This setting controls 3 functions of Time Dosing:

Override: When the basin level reaches the Override float (High Level setpoint on simplex, Lag setpoint on duplex), the panel will override the Off Timer, and run the pump(s) using the override On and Off times.

Override Warning: When an override occurs, the panel will sound an Override Warning Alarm, to signal that an override event is occurring.

High Level Alarm: When the basin level reaches the High Level setpoint, the panel will sound a High Level Alarm, to signal that the liquid level is much higher than expected.

Press Set/Change button to change this field.

Setting	Override	Override Warning	High Level Alarm
Override w/Alarms	ON	ON	ON
Override-No Warn	ON	OFF	ON
Override-No Alrms	ON	OFF	OFF
Alarm-No Override	OFF	OFF	ON

High Level Delay - (High Level Time Delay, Simplex Panels Only):

The High Level Alarm will delay according to the set time. If the fluid level is above the High Level set point for this length of time without interruption the alarm will begin to sound. Time shown is in

[Minutes:Seconds] (Maximum time setting is 99:59)

Press Set/Change button to change this field.

Number of Fields - (Duplex Panels Only)

The Time Dosing operation can be set up for One Field or Two Fields.

- When set to "Two Fields" each pump will be able to run as soon as its corresponding Off Timer is complete. During override the two pumps may run at the same time.
- When set to "One Field" each pump will only be able to run when the Off Timer for *both* pumps is complete. The two pumps will never run at the same time.

Telemetry Menu (Modem Versions Only)

Call Number - Displays the telephone number the modem will call to report alarms and to check in monthly. This field may hold from 1 to 11 digits.

Press Set/Change button to change this field.

Enter the number 1 digit at a time. If entering less than 11 digits, enter a blank character to signify when the telephone number has been entered completely.

I.D. Number - Displays the unique identification number assigned to the control panel. This field will not normally need to be edited. (May contain the numbers 0-9 and the characters A-F.)

Press Set/Change button to change this field.

Initiate Check-In - Press Set/Change button to force the modem to call in. Emails and text messages will not be sent for this notification. This menu will also display the status of the modem connection.

Alarm History Menu

This menu displays the last three alarms that have occurred, beginning with the most recent alarm. On DIBs equipped with a modem, this menu will also display the date and time the alarm condition occurred.

Level Setpoint Menu (Pressure Versions Only)

When the dials are adjusted, DIB will jump to display this menu for 10 seconds to aid in precision.

Off Setpoint - Displays the level in inches to which the Pump(s) Off dial is set.

Pump On Setpoint (Simplex)-Displays the level in inches to which the Pump On dial is set.

Lead Setpoint (Duplex) - Displays the level in inches to which the Lead dial is set.

Lag Setpoint (Duplex) - Displays the level in inches to which the Lag dial is set.

Hi Level Setpoint - Displays the level in inches to which the High Level dial is set.

Auxiliary Inputs

There are three Auxiliary Inputs on the DIB, each with its own alarm. Each has a 120Vac input, and all three share a common Neutral. (Input Rating: 120 Vac, 10mA each)

Flash Codes

Each different alarm is annunciated on the LCD screen. The audible and alarm light also flash at different rates for each alarm. The flash rates are explained below:

2 Flashes per second: High Level Alarm

On 1 second, Off 1 second: Low Level Alarm

2 Flashes every other second: Auxiliary Inputs

1 Flash every other second: Float Failure

1 Flash every 4 seconds: Override Warning, Alarm Power Failure, Control Power Failure

FCC Information

The Federal Communication Commission (FCC) has established rules, which permits this device to be directly connected to the telephone network. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service. The telephone company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. If the telephone company requests information on what equipment is connected to their lines, inform them of the following:

- The telephone number the device is connected to.
- The ringer equivalence number (REN).
- The device uses an RJ11 type jack.
- The FCC Registration Number.

The REN (Ringer Equivalence Number) is used to determine the number of devices that may be connected to the telephone line. Excessive RENs on a telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of the REN should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.