

WATERMAX PULSE QUICKSTART GUIDE



WARNING: Initial station startup must be performed by a certified Watertronics Pump Service Network Technician to validate warranty.

WaterMax Pulse factory defaults have been established and are highlighted respectively throughout this document. Please be aware of the potential performance impact if you chose to modify settings.

Severe injury or death may occur if operating this equipment without proper training and safety gear.



Scan code to view the **Installation & Startup Video.**

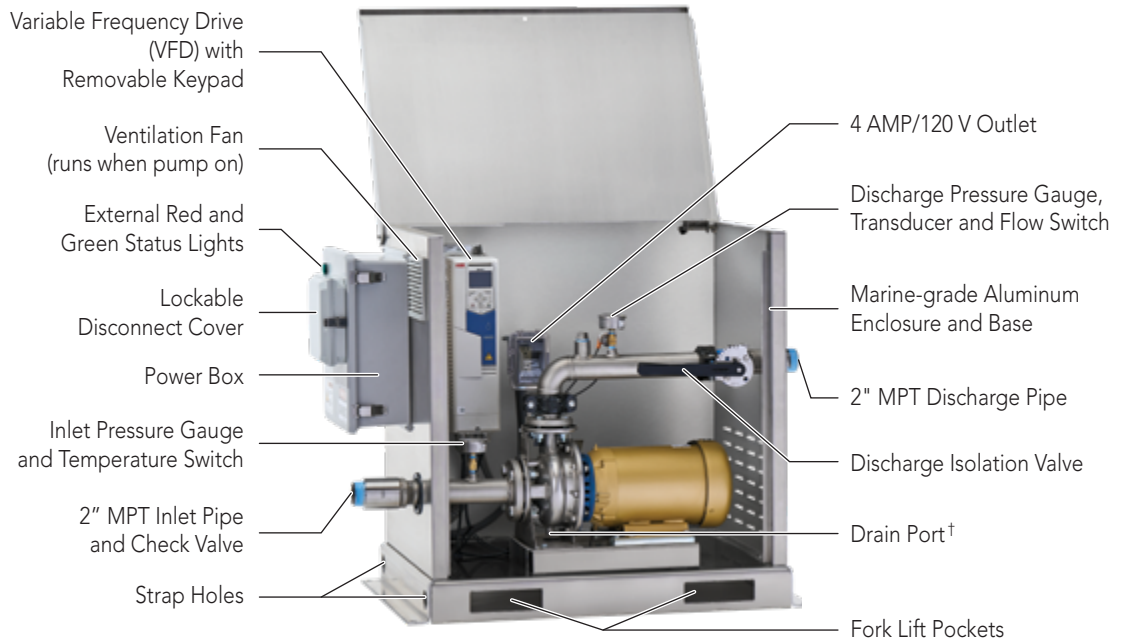
STATION IDENTIFICATION

FACTORY DEFAULT SETTINGS

- Flow Stop
- Pressure Drop Start

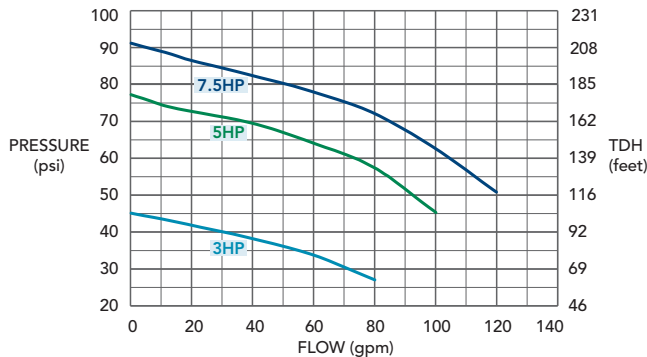
INCLUDED WITH STATION

1. Anchoring Bolts
2. Quickstart Guide
3. Electrical Schematic [Select appropriate schematic]
4. Keypad Cable
5. Padlock (Qty. 2)



† 3HP and 5HP pumps have socket hex drain plugs and require a 5mm standard or T-handle hex key (Allen) wrench to remove.
7.5HP pump has a hex head drain plug, and requires a 12mm socket to remove.

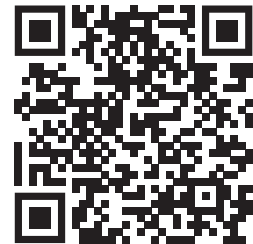
WATERMAX PULSE PERFORMANCE CURVE

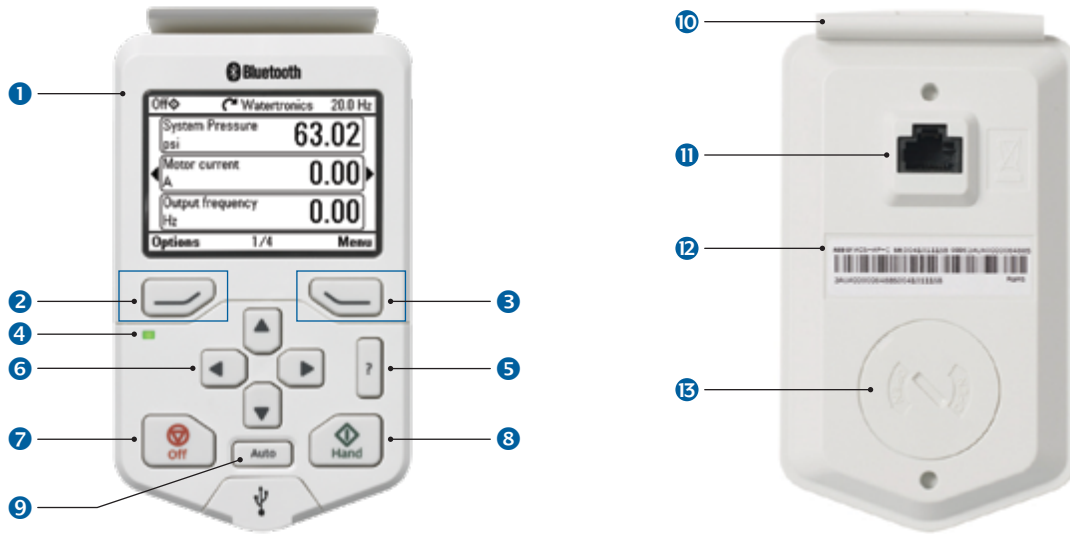


IMPORTANT: SCAN BEFORE STARTUP

NOTICE:

A startup report must be created prior to any additional setup. Scan this QR code to begin startup report.





1	Display (not a touchscreen)
2	Left Softkey: used to select action choice above it.
3	Right Softkey
4	Status LED: SOLID GREEN = good standing FLASHING GREEN = warning RED = fault

5	Help
6	Arrow Keys: used to navigate through setup menus, home screens, and adjusting speed when in Hand Mode.
7	Off: station not running
8	Hand: runs at selected frequency
9	Auto: runs at user setup

10	Clip
11	RJ45 Connector
12	Type Code Label on the Control Panel
13	Battery Cover

OPERATING UNIT AS SUCTION LIFT

The standard configuration for a WaterMax Pulse is a Booster. Unit can be used for suction lift operation with purchase of Suction Lift Kit. Contact PSN to order.

WMP Suction Lift Kit (Part# 52-16-7860) contains: inlet reducer assembly with threaded union, 3" foot valve and float switch.

1 Remove check valve; not needed for suction lift.

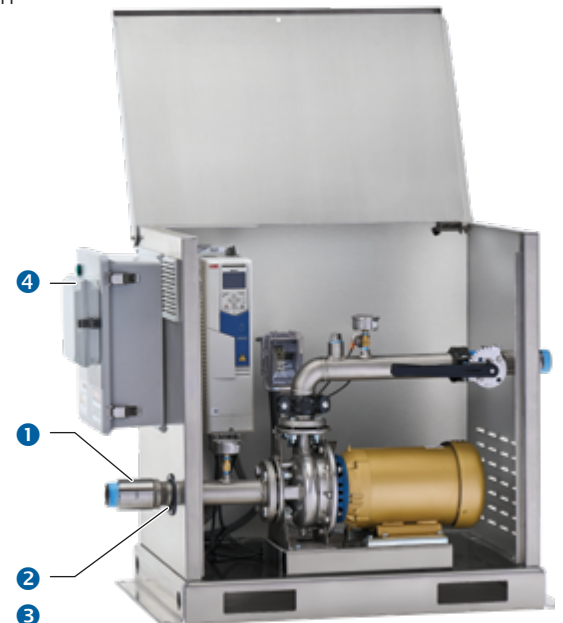
2 Install reducer assembly at 2" inlet connection using threaded union.



3 Install foot valve at the end of suction line (suction line not provided).



4 Install float switch (optional). Float switch wired to terminals 500 & 503.

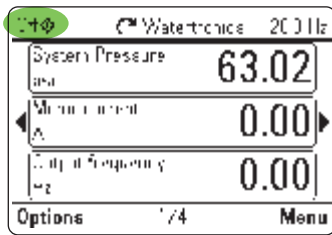


STEP 1. SETTING UP POWER

For safety, do not remove any of the finger guards and ensure disconnect handle is in the OFF position. Please review the electrical schematic sent with station before doing any work.



RECOMMEND VFD IS
IN THE OFF STATE
DURING SETUP.



OPERATOR MUST REMAIN
WITH STATION AT ALL
TIMES WHEN OPERATING
IN HAND STATE.

A. VOLTAGE

WaterMax Pulse is capable of operating with 208V, 230V or 460V.

Transformer is wired for either 230V or 460V from the factory. If unit is 208V, wire will need to be moved.

B. BRINGING POWER TO BOX

Preferred entry point at lower right side of power box, run wires up right side to top of disconnect.

C. GROUNDING LOCATION

Ground appropriately to grounding lug.

D. INCOMING POWER (SUPPLY/FUSES)

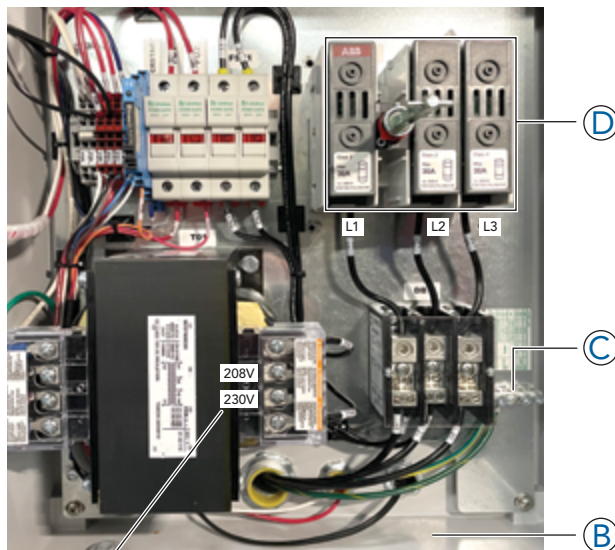
WaterMax Pulse is capable of operating on 1 or 3 phase.

If running station on 1 phase, the 3rd fuse (feeding L3) should be removed and stored for replacement use.

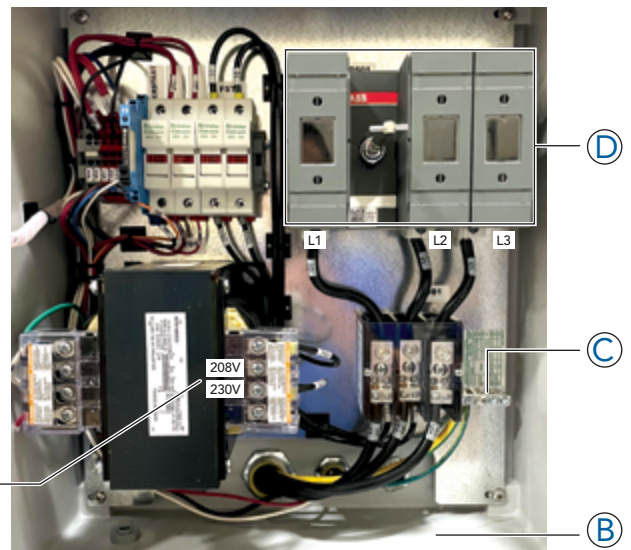
1 PHASE (208V or 230V): Connect supply voltage to L1, L2 and ground to grounding lug (C).

3 PHASE (208V, 230V or 460V): Connect supply voltage to L1, L2, L3 and ground to grounding lug (C).

30 AMP Power Box: Used for 3HP 208/230V and 5HP, 7.5 HP 460V configurations



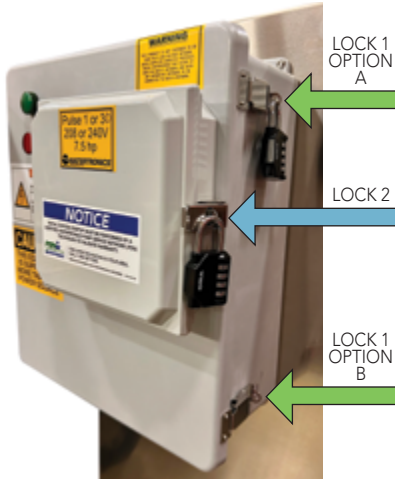
60 AMP Power Box: Used for 5HP, 7.5HP 208/230V configurations



(A) Transformer will not be labeled for the 460V variant.

E. LOCKING POWER BOX

Lock power box using the 2 provided padlocks (shipped inside the power box). Arrows on the photo show the 3 location options to use padlocks.



The locks are preset at the factory to operate at 0-0-0-0. To set your own combination:

- ❶ Leave dials at 0-0-0-0 and pull out shackle.
- ❷ Turn 90° counter clockwise and press down.
- ❸ Firmly depress shackle until it can be rotated another 90° counter clockwise, so the shackle remains in the down position.
- ❹ Set the dials from top to bottom to your personal combination.
- ❺ Once you have selected your combination, turn the shackle clockwise back to the original 90° position. Lift and return shackle to closed position. Dials to lock.

Your lock will now open to your personal combination. To change simply repeat procedure substituting your personal combination in Step #1.

Record your combination in a safe and accessible place for future reference.

STEP 2. PLUMBING SETUP FOR BOOSTER STATION

Connect intake and discharge field plumbing to threaded station connections. Do NOT remove check valve on station intake.

STEP 3. SETTING REGULATE PRESSURE (OUTPUT PSI)

Factory default has low pressure alarm set to 20PSI below Regulate Set Point and high pressure alarm set to 10PSI above Regulate Set Point. *These factory alarm defaults should not be adjusted.*

❶

Choose **MENU** from home screen using Softkey.

❷

Highlight **Pump** menu and choose **SELECT** using Softkey.

❸

Highlight **PSI Regulate Setpoint** and choose **SELECT** using Softkey.

❹

Highlight **PSI** and use **Right Arrow Key** to advance to Value Entry Screen.

❺

First set PSI Regulate Setpoint to desired PSI using **Arrow Keys**, then choose **SAVE** using Softkey.

❻

Confirm set point you entered was applied, and choose **SAVE** using Softkey.

STEP 4. SETTING START METHOD | FACTORY DEFAULT IS PRESSURE DROP START

There are 3 starting options for the WaterMax Pulse Booster:

- A) Pressure Drop Start (Start Below PSI)
- B) Flow Start (Start Above GPM)
- C) Remote Relay Start (Start Remote Relay)

Factory default is Pressure Drop Start (Start Below PSI). The station can use more than one start method.



If you are operating in Pressure Drop Start (Start Below PSI) no further action is needed for Step 4; proceed to Step 5.

A) PRESSURE DROP START (START BELOW PSI)

Pressure Drop Start (Start Below PSI) is the factory default start method. It is set to 10PSI, which means the system will start when the pressure drops 10PSI below the chosen Pressure Regulate PSI Setpoint entered in Step 3.

1

Highlight **Start Below PSI** and choose **SELECT** using Softkey.

2

Highlight **PSI** and choose **SAVE** using Softkey.

3

Set PSI to desired value and choose **SAVE** using Softkey.

4

Confirm entry was applied and choose **SAVE** using Softkey.

B) FLOW START (START ABOVE GPM) (0000 = OFF; 0005 = ON)

If operating as a Suction Lift Station, Flow Based Start (Start Above PSI) method is not available.

1

Highlight **Start Above GPM** and choose **SELECT** using Softkey.

2

Highlight **GPM** and use **Right Arrow Key** to advance to Value Entry Screen.

3

Set GPM to 5 and choose **SAVE** using Softkey.

4

Confirm entry of 5 GPM was applied and choose **SAVE** using Softkey.

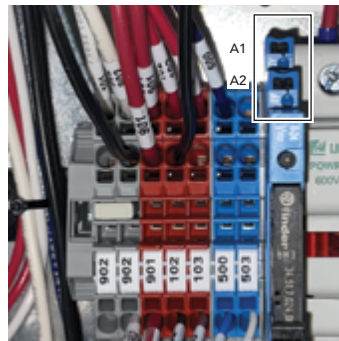
C) REMOTE RELAY START (START REMOTE RELAY)

1

Highlight **Start Remote Relay** and choose **SELECT** using Softkey.

2

Highlight **YES** and choose **SAVE** using Softkey.



Wire to relay terminals A1 & A2.

STEP 5. SETTING STOP CONDITIONS | FACTORY DEFAULT IS FLOW STOP (STOP BELOW GPM)

There are 4 stop conditions for the WaterMax Pulse Booster:

- A) Stop Below Frequency (Hz)
- B) Stop Below Current (AMP)
- C) Flow Stop (Stop Below GPM)
- D) Remote Relay Stop (Stop Remote Relay)

Factory default is Flow Stop (Stop Below GPM).

The station can only use **1 stop condition**. If you turn on a condition and later want to switch to a different condition, you must deactivate the original condition by setting it back to 0.00/No for Remote Start Relay.



If you are operating in Flow Stop (Stop Below GPM) no further action is needed for Step 5; proceed to Step 6.

A) STOP BELOW FREQUENCY (STOP BELOW Hz)

1

Highlight **Stop Below Hz** and choose **SELECT** using Softkey.

2

Highlight **Hz** and use **Right Arrow Key** to advance to Value Entry Screen.

3

Select desired Hz and choose **SAVE** using Softkey.

4

Confirm Hz entry was applied and choose **SAVE** using Softkey.

B) STOP BELOW CURRENT (STOP BELOW AMP)

1

Highlight **Stop Below Amp** and choose **SELECT** using Softkey.

2

Highlight **AMP** and use **Right Arrow Key** to advance to Value Entry Screen.

3

Select desired AMP and choose **SAVE** using Softkey.

4

Confirm AMP entry was applied and choose **SAVE** using Softkey.

C) FLOW STOP (STOP BELOW GPM) | FACTORY DEFAULT IS 5 GPM (0000 = OFF; 0005 = ON)

1

Highlight **Stop Below GPM** and choose **SELECT** using Softkey.

2

Highlight **GPM** and use **Right Arrow Key** to advance to Value Entry Screen.

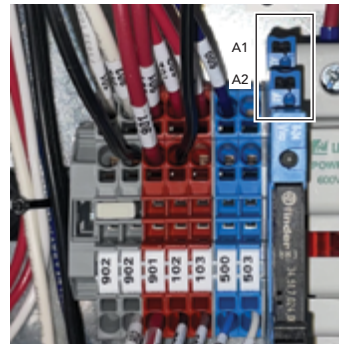
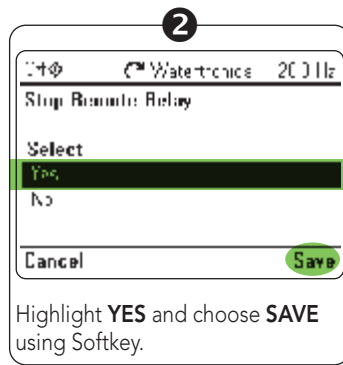
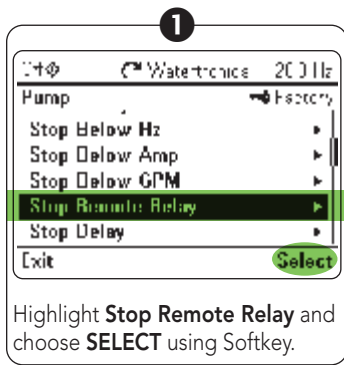
3

Select desired GPM and choose **SAVE** using Softkey.

4

Confirm GPM entry was applied and choose **SAVE** using Softkey.

D) REMOTE RELAY STOP (STOP REMOTE RELAY)



Wire to relay terminals A1 & A2.

PART NUMBERS

ITEM	PART NUMBER
Suction Lift Kit (Foot Valve, Float Switch, Inlet Reducer)	52-16-7860
Fuses (208V, 230V, 460V)	
208/230V, 3HP, 30AMP Fuse	21-30-0030
460V, 3HP, 10AMP Fuse	21-30-0010
208/230V, 5HP, 45AMP Fuse	21-30-0045
460V, 5HP, 12AMP Fuse	21-30-0012
208/230V, 7.5HP, 60AMP Fuse	21-30-0060
460V, 7.5HP, 15AMP Fuse	21-30-0015
Suction Line	Consult Factory
Inlet Drop Pipes	
2" MPT x 2" MPT – 24" Bury	52-16-7888
2" MPT x 3" MPT – 24" Bury	52-16-7892
Discharge Drop Pipes	
2" MPT x 2" MPT – 24" Bury	52-16-7889
2" MPT x 3" MPT – 24" Bury	52-16-7893
Threaded Flange	
2" Flange	56-07-3075
3" Flange	56-07-2060



To order parts or for technical information and support, call 262-367-1000.

COMMON FAULT CODES/WARNINGS

When the system faults, the light on keypad and power box will turn red.

In the event of a power outage, the system will resume in AUTO when power is restored. If the system was running in either HAND or OFF prior to outage, it will resume in OFF once power restored.



Light will be green when system is running

During system faults, power box light will turn red.

During system faults, VFD LED light will turn red.




FAULT/WARNING	SCREENSHOT OF ERROR STATE	STATES ACTIVE IN	DESCRIPTION	CORRECTIVE ACTION
High Pump Temp Fault		AUTO HAND	When water in pump or intake piping reaches 150°F or higher, the station will enter a fault state and stop running.	Diagnose problem. Fault must be manually reset.
Low Pressure Fault		AUTO	When the station runs at or below the low pressure fault setting for 240 seconds, the station will enter a fault state and stop running.	Diagnose problem. Fault must be manually reset.
High Pressure Fault		AUTO HAND	When the station runs at or above the high pressure fault setting for 60 seconds, the station will enter a fault state and stop running.	Diagnose problem. Fault must be manually reset.
Low Water Level Warning (Suction Lift Only)		AUTO OFF	When the source water reaches an unsafe pumping level based on position of float switch, the station will enter a warning state and stop running.	Diagnose problem. Once the source water reaches safe pumping level as determined by position of float switch, the station will be allowed to run again.
		HAND	When the source water reaches an unsafe pumping level based on position of float switch, the station will enter a warning state, but station will NOT stop running. Operator must remain with station when operating in HAND.	Diagnose problem. Once the source water reaches safe pumping level as determined by position of float switch, the station will be allowed to run again.

COMMON FAULT CODES/WARNINGS

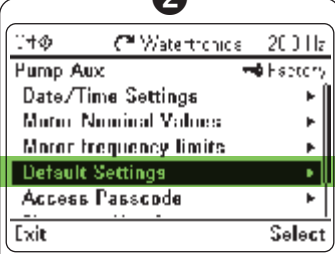
To restore WaterMax Pulse factory defaults, follow these steps. Once restored, cycle power on station.

1




Highlight **Pump Aux** and choose **SELECT** using Softkey.

2



Highlight **Default Settings** and choose **SELECT** using Softkey.

3



Highlight **Yes** and choose **SELECT** using Softkey.


4

Cycle power to station.

HOW TO CLEAR FAULTS

Once a fault has been resolved, you can clear one of two ways.

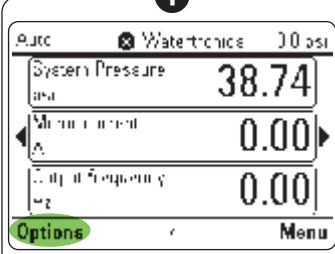
1



Choose **RESET** using Softkey.


METHOD A
Immediately at the screen

1




Select **OPTIONS** using Softkey.

2



Highlight **Active Faults** and choose **SELECT** using Softkey.

3



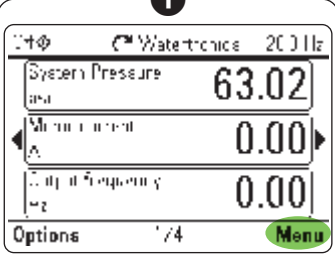
Choose **RESET** using Softkey.

METHOD B
Hide and clear later – Hiding does not make fault go away.

FAULT/WARNING EVENT LOG


To view previous faults/event history, follow these steps.

1




Choose **Menu** from Home Screen using Softkey.

2




Highlight **Diagnostics** and choose **SELECT** using Softkey.

3



Highlight **Fault & Event Log** and choose **SELECT** using Softkey.

4



Highlight either **Faults** or **Other Events** and choose **SELECT** using Softkey.