# *Installation and Operation Instructions*
# *FTA550 Series*
# *Jockey XG Pump Controllers*


NS550-01
ECN 237139

Firetrol®

EMERSON™
Network Power

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DANGER
DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON EQUIPMENT WHILE IT IS ENERGIZED! DEATH, PERSONAL INJURY, OR SUBSTANTIAL PROPERTY DAMAGE MAY RESULT FROM CONTACT WITH ENERGIZED EQUIPMENT. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING, AND ALWAYS FOLLOW GENERALLY ACCEPTED SAFETY PROCEDURES. CONTROLLER "ON-OFF" SWITCH MUST BE IN THE EXTREME "OFF" POSITION TO OPEN THE ENCLOSURE DOOR. FIRETROL BRAND PRODUCTS CANNOT BE LIABLE FOR ANY MISAPPLICATION OR INCORRECT INSTALLATION OF ITS PRODUCTS.

## *INTRODUCTION*

Firetrol® FTA550 XG Jockey Pump Controllers are intended for use with fire pump systems. They are used for pressure maintenance in fire pump installations to prevent unnecessary cycling of the main fire pump.

Firetrol jockey pump controllers are listed by Underwriters' Laboratories, Inc., in accordance with UL508, Standard for Industrial Controls, and CSA, Standard for Industrial Control Equipment. They are built to meet or exceed the requirements of the approving authorities as well as NEMA and the latest edition NFPA 70, National Electrical Code.

These instructions are intended to assist in the understanding of the installation and operation of these controllers. Read the instructions thoroughly prior to connecting or operating the controller. If there are any unanswered questions, please contact the local Firetrol representative or factory service department.

## *MOUNTING CONTROLLER*

NOTE—Consult the appropriate job plans to determine the controller mounting location. Tools and materials (all mounting) required:

1. Assortment of common hand tools of the type used to service electromechanical equipment.
2. Drill for drilling wall anchor holes.
3. Hole (conduit) punch.
4. Hand level.
5. Tape measure.
6. Four anchors with bolts and washers, per enclosure.

*Procedure—*

*Note*—Refer to the controller dimension drawing for necessary mounting dimensions.

The controller is wall mounted by using at least four (4) wall anchors, 2 anchors for the top mounting brackets and 2 anchors for the bottom mounting brackets. The brackets are dimensionally on the same center-line for ease in mounting.

1. Using either the dimension print or by measuring the distance between the center lines of the lower bracket slots, transcribe this dimension onto the wall. Note: The bottom edge of the enclosure should be a minimum of 12" (305 mm.) from the floor in case flooding of the pump room occurs.

2. Drill and put anchors into the wall for the lower mounting brackets.
3. Mark on the wall, the location of the holes in the upper mounting brackets.
4. Drill and put anchors into wall for the upper mounting brackets.
5. Install bolts and washers in lower anchors, leaving a gap between the washer and wall.
6. Align holes in upper mounting brackets and install bolts and washers in anchors.
7. Shim anchors as necessary to ensure rear of enclosure is vertically level and enclosure is not stressed. Tighten all anchor bolts.
8. Check to be sure enclosure door opens and closes freely and that enclosure is level.

***MAKING ELECTRICAL CONNECTIONS***

Important Precautions—

Prior to making any field connections:

1. Open door of enclosure and inspect internal components and wiring for any signs of frayed or loose wires or other visible damage.
2. Verify that the controller information is what is required on the project:
    - Firetrol catalog number
    - Motor voltage and horsepower
    - Incoming line voltage and frequency
    - Maximum system pressure
3. Project electrical contractor must supply all necessary wiring for field connections in accordance with the *National Electrical Code*, local electrical code and any other authority having jurisdiction.
4. Refer to the appropriate field connection drawing for wiring information.

Procedure—

All field connections, remote alarm functions and AC wiring are brought into the enclosure through the top, bottom, or side conduit entrances as indicated on the dimensional drawing.

1. Use a hole (conduit) punch, not a torch nor a drill, and punch a hole in the enclosure for the size conduit being used.
2. Install necessary conduit.
3. Pull all wires necessary for field connections, remote alarm functions, AC power and all other optional features. Allow enough excess wire inside the enclosure to make up connections to the appropriate line, load and control terminal block points. Be sure to consult the appropriate field connection diagram included with the manual. For proper wire sizing, refer to the *National Electrical Code*, NFPA 70.
4. Make all field connections to the remote alarm functions and any other optional features. Connect motor to controller load terminals.
5. Verify AC line voltage, phase and frequency with the controller data plate on the enclosure door prior to connecting. Connect AC power.
6. Check to see that all connections are both correctly wired (in accordance with the field connection diagram) and tight.
7. Close the enclosure door.

***MAKING SYSTEM PRESSURE CONNECTIONS***

The controller requires one (1) “System Pressure” connection from the system piping to the enclosure. The connection fitting, 1/2” FNPT, is provided on the bottom, external side of the enclosure for this purpose. Refer to NFPA 20 (or Publication GF100-30) for correct field piping procedure of the sensing line between the pumping system and the controller.

***GENERAL START UP OPERATION***

Voltage Check—

1. Put the HAND-OFF-AUTO Selector Switch in the “OFF” Position.
2. Energize the incoming power feeder.

**⚠ WARNING**

**RISK OF ELECTRICAL SHOCK**

**Personal injury could occur.**
**Service must be done with door open and power on. Personal Protective Equipment may be required.**

3. Measure the line voltage at L1, L2 and L3 at the top of the disconnect switch. Confirm that the measured voltage matches the voltage on the data plate.

Motor Rotation–

1. Close the enclosure door.
2. Quickly turn the HAND-OFF-AUTO Selector Switch to the “HAND” position then back to “OFF” position. This will “bump” the jockey pump motor - observe the rotation of the motor to confirm it is rotating in the proper direction. If motor rotation is incorrect, turn off jockey disconnecting means, open door, and switch position of any two of the connected motor leads. Repeat this step to confirm proper rotation.

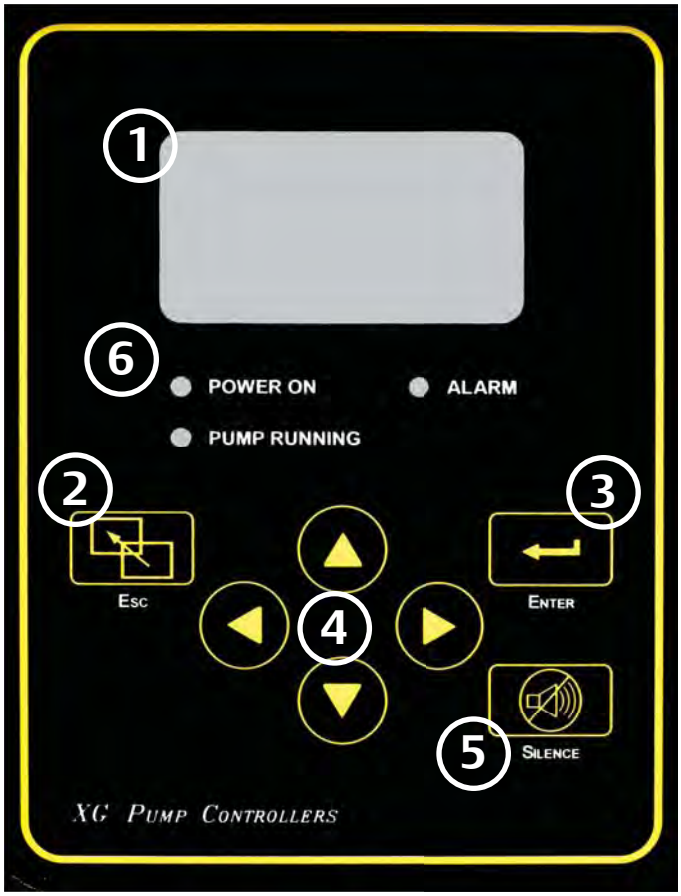
Controller Operation–

Each controller has a HAND-OFF-AUTO selector switch for selection of Manual or Automatic operation. When placed in HAND, the motor starter is energized and the motor will run until the switch is placed in OFF. When the switch is placed in AUTO, the motor starter is energized by the XG Pump Controller when the pressure reaches the “start” pressure setting. The motor stops depending on the timer settings in the XG Pump Controller.

Before placing controller in service, leave the HAND-OFF-AUTO switch in the “OFF” position. Follow the Programming Instructions included in this manual to set required pressure, timer and alarm settings. Place the selector switch in the “AUTO” position. If system pressure is below the “start” pressure setting, the pump will start.

**NOTE**: The “STOP” pressure setting must be set at a pressure less than the jockey pump “churn” pressure (including minimum suction pressure), otherwise the pump will run continuously once started.

# *Jockey XG User Interface and Display*




**1** ***Informational Display***
Status and System Pressure
User Choice 1
User Choice 2
Switch Position
Active Alarms - Primary Status Notification
Date-Time or Active Timer

**2** ***ESC Button***
Used to go backwards through menu screens

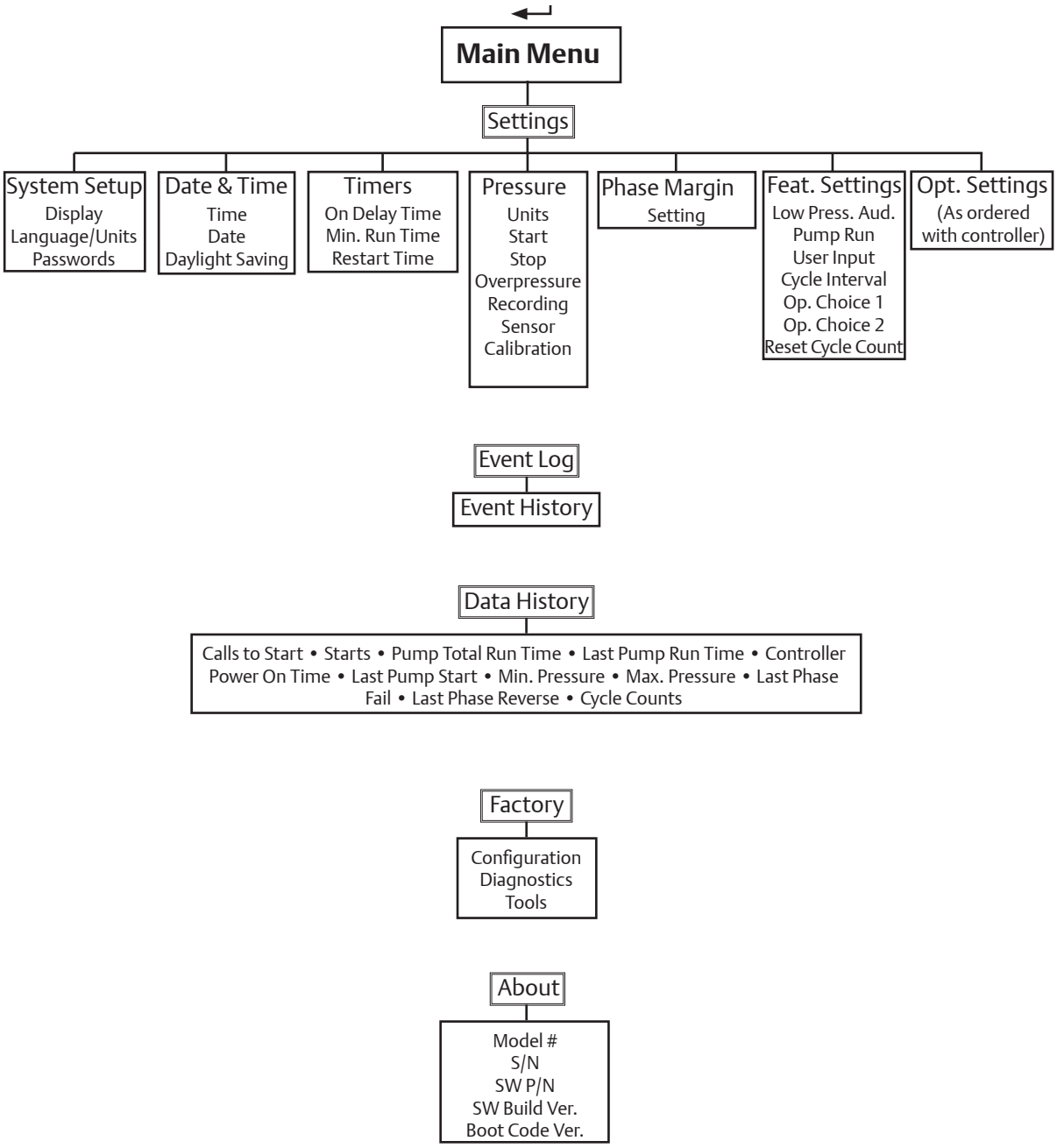
**3** ***Enter Button***
Used to go forwards through menu screens and save user defined settings

**4** ***Directional Arrows***
Used to go up and down in menu screens and change user defined values

**5** ***Silence Alarm Button***
Used to silence audible alarm

**6** ***System Status LED's***
Provide visual indication of important system information

# *Mark IIXG User Menu Structure*



# Programming Notes

The Firetrol JockeyXG is multi-level password protected. User programmable functions are protected by a Level 1 password.

## LEVEL 1 PASSWORD
## 2 - 1 - 1 - 2

1 Indicates the level of password required to modify a setting.

**Note:** Many menu settings feature an "enable/disable" option. These options are indicated by a "✓" for enabled or a "X" for disabled. In many cases this can also be interpreted as "✓" for yes or a "X" for no.

**WARNING**

**RISK OF PROPERY LOSS, DEATH OR INJURY**

**Incorrect or inappropriate controller settings could render the fire protection system inoperable. Only qualified and knowledgeable personnel should operate this equipment.**

# *Jockey XG User Menu Settings*

**Note:** Many menu settings feature an “enable/disable” option. These options are indicated by a "✓” for enabled or a “x” for disabled.

🔒1 Indicates the level of password required to modify setting.

### *System Setup - Display*

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ *DISPLAY* ↵ ***BRIGHTNESS*** ↵ 🔒1

Use ▲ and ▼ arrows to set desired display brightness. Press ↵ to confirm.

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ *DISPLAY* ↵ ▼ ***CONTRAST*** ↵ 🔒1

Use ▲ and ▼ arrows to set desired display contrast. Press ↵ to confirm.

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ *DISPLAY* ↵ ▼ ***INVERT*** ↵ 🔒1

Use ▲ or ▼ arrows to enable/disable inverted display (bright background with dark letters). Press ↵ to confirm.

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ *DISPLAY* ↵ ▼ ***KEYBOARD*** ↵ 🔒1

Use ▲ or ▼ arrows to set the amount of time of keyboard inactivity before the display returns to the main screen. Press ↵ to confirm.

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### *System Setup - Language & Units*

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ ▼ *LANGUAGE & UNITS* ↵ ***LANGUAGE*** ↵ 🔒1

Use ▲ and ▼ arrows to select preferred display language. Press ↵ to confirm.

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ ▼ *LANGUAGE & UNITS* ↵ ▼ ***PRESSURE*** ↵ 🔒1

Use ▲ and ▼ arrows to select preferred pressure unit display (psi, bar kPa). Press ↵ to confirm.

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### *System Setup - Passwords*

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ ▼ *PASSWORDS* ↵ ***LEVEL 1*** ↵ 🔒1

Use ▲▼◀▶ arrows to set preferred password for level 1 access. Press ↵ to confirm.

↵ *SETTINGS* ↵ *SYSTEM SETUP* ↵ ▼ *PASSWORDS* ↵ ▼ ***LEVEL 2*** ↵ 🔒2

Use ▲▼◀▶ arrows to set preferred password for level 2 access. Press ↵ to confirm.

NOTE: A higher level can change a lower level password (level 2 can change level 1). If passwords are changed from factory default and forgotten, charges my be incurred to reset the passwords.

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### *Settings - Date & Time*

↵ *SETTINGS* ▼ *DATE & TIME* ↵ ***TIME*** ↵ 🔒1

Use ▲▼◀▶ arrows to set current local time (24 hr format). Press ↵ to confirm.

↵ *SETTINGS* ▼ *DATE & TIME* ↵ ▼ ***DATE*** ↵ 🔒1

Use ▲▼◀▶ arrows to set current date (YYYY-MM-DD). The day of week will automatically update as required. Press ↵ to confirm.

↵ *SETTINGS* ▼ *DATE & TIME* ↵ ▼ ***DATE FORMAT*** ↵ 🔒1

Use ▲▼ arrows to set current date format (YYYY-MM-DD, DD-MM-YYYY, MM-DD-YYYY). Press ↵ to confirm.

↵ *SETTINGS* ⓥ *DATE & TIME* ↵ ⓥ ***DAYLIGHT SAVING*** ↵ 🔒1

Use ⓐⓥ arrows to enable or disable automatic Daylight Saving time adjustments. Press ↵ to confirm.

ⓥ (***+/-***) ↵ Use ⓐⓥ arrows to set number of minutes to adjust for at the beginning or end of Daylight Saving time. Press ↵ to confirm.

ⓥ (***DST +***) "Begin" - ***HOUR*** ↵ Use ⓐⓥ arrows to set the hour of day that Daylight Saving time begins. Press ↵ to confirm.

ⓥ (***DST +***) "Begin" - ***DAY*** ↵ Use ⓐⓥ arrows to set the day of the month that Daylight Saving time begins. Press ↵ to confirm.

ⓥ (***DST +***) "Begin" - ***MONTH*** ↵ Use ⓐⓥ arrows to set the month of the year that Daylight Saving time begins. Press ↵ to confirm.

(Example: Hour=2:00, Day=2nd Sun, Month=Mar means Daylight Saving time would begin at 2:00a.m. on the 2nd Sunday in March)

ⓥ (***DST -***) "End" - ***HOUR*** ↵ Use ⓐⓥ arrows to set the hour of day that Daylight Saving time ends. Press ↵ to confirm.

ⓥ (***DST -***) "End" - ***DAY*** ↵ Use ⓐⓥ arrows to set the day of the month that Daylight Saving time ends. Press ↵ to confirm.

ⓥ (***DST -***) "End" - ***MONTH*** ↵ Use ⓐⓥ arrows to set the month of the year that Daylight Saving time ends. Press ↵ to confirm.

(Example: Hour=2:00, Day=1st Sun, Month=Nov means Daylight Saving time would end at 2:00a.m. on the 1st Sunday in November)

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## *Timers*

↵ *SETTINGS* ↵ ⓥ *TIMERS* ↵ ***ON DELAY*** ↵ 🔒1

Use ⓐⓥⓛⓡ arrows to set preferred on delay time. Press ↵ to confirm.

Note: On Delay (also known as sequential start) time, delays the starting of the motor when an automatic call to start is received.

↵ *SETTINGS* ↵ ⓥ *TIMERS* ↵ ⓥ ***MIN RUN*** ↵ 🔒1

Use ⓐⓥ arrows to set desired min. run time minutes. Press ⓡ key and use ⓐⓥ keys to set desired min. run time seconds. Press ↵ to confirm.

Note: Minimum Run time will begin when motor starts. If minimum run timer is set to 00:00, no run time will occur and pump will cycle on and off via the start and stop pressure settings.

↵ *SETTINGS* ↵ ⓥ *TIMERS* ↵ ⓥ ***RESTART*** ↵ 🔒1

Use ⓐⓥ arrows to set desired restart delay time in seconds. Press ↵ to confirm.

Note: The restart timer will begin when the motor stops. The motor will not start automatically until the timer expires. The timer is intended to prevent short-cycling of the pump motor.

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## *Pressure*

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ***UNITS*** ↵ 🔒1

Use ⓐⓥ arrows to set preferred pressure unit system (psi, bar, kPa). Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***START*** ↵ 🔒1

Use ⓐⓥ arrows to set desired pump start pressure. Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***STOP*** ↵ 🔒1

Use ⓐⓥ arrows to set desired pump stop pressure. Press ↵ to confirm.

Note: Pump stop pressure must be set below the pump "churn" pressure (including minimum suction pressure), otherwise the pump will run continuously once started.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***OVERPRESSURE ALARM*** ↵ 🔒1

Use ⓐⓥ arrows to enable or disable the overpressure alarm feature. Press ↵ to confirm.

ⓥ Limit ↵ Use ⓐⓥ arrows to set the pressure limit for the overpressure alarm. Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***RECORDING - DELTA*** ↵ 🔒1

Use ⓐⓥ arrows to set pressure delta recording limit. Press ↵ to confirm.

Note: Pressure will be recorded whenever pressure changes by more than set limit.

ⓥ ***HOURLY*** ↵ Use ⓐⓥ arrows to enable or disable hourly pressure recording. Press ↵ to confirm.

Note: Pressure will be recorded every hour, on the hour.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***SENSOR***

The maximum operating pressure of the installed pressure sensor (transducer) is shown. This value cannot be modified from this location.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***CALIBRATION - SET TO ZERO*** ↵ 🔒2

Note: Before proceeding, place jumper wire between field terminals #1 & 10 to prevent starting of the motor. A calibrated pressure gauge will be required to correctly adjust the settings.

Remove/relieve system pressure from the controller sensing line. If gauge shows 0 psi, no adjustments are required; otherwise set zero calibration to same value as displayed on pressure gauge. (Example: With system pressure removed the gauge reads 3 psi, set zero calibration value to 3).

Use ⓐⓥ arrows to set zero calibration value. Press ↵ to confirm.

Using calibrated gauge, restore pressure to controller sensing line. Adjust span setting to match the value shown on the gauge.

ⓥ ***SET TO SPAN*** ↵ Use ⓐⓥ arrows to set span calibration value. Press ↵ to confirm.

Note: Remove interlock jumper wire when calibration is complete.

↵ *SETTINGS* ↵ ⓥ *PRESSURE* ↵ ⓥ ***RESET TO DEFAULT*** ↵ 🔒2

Use ⓐⓥ arrows to enable the reset (pressure) to default option. Press ↵ to confirm. All user calibration settings will be reset to factory defaults and reset setting will revert back to disabled.

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## *Phase Margin*

↵ *SETTINGS* ↵ ⓥ *PHASE MARGIN* ↵ 🔒1

Use ⓐⓥ arrows to set the percentage of differential between phases to initiate a phase imbalance alarm. Press ↵ to confirm.

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## *Feature Settings*

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ⓥ ***LOW PRESSURE AUD*** ↵ 🔒1

Use ⓐⓥ arrows enable or disable the audible alarm for Low System Pressure. Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ⓥ ***PUMP RUN ALARM*** ↵

ⓥ ***AUDIBLE*** ↵ 🔒1

Use ⓐⓥ arrows to enable or disable the Pump Run Alarm. Press ↵ to confirm.

ⓥ ***COMMON ALARM*** ↵ 🔒1

Use ⓐⓥ arrows to enable or disable the common alarm output for the Pump Run Alarm. Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ***USER INPUT***

↵ ***ENABLE*** 🔒1

Use ⓐⓥ arrows to enable or disable the user defined alarm. Press ↵ to confirm.

ⓥ ↵ ***ON DELAY*** 🔒1

Use ⓐⓥ arrows to select an on delay time before the alarm is acknowledged (0-99 seconds).
Press ↵ to confirm.

ⓥ ↵ ***AUDIBLE*** 🔒1

Use ⓐⓥ arrows to select if the user input activates the audible alarm. Press ↵ to confirm.

ⓥ ↵ ***COMMON ALARM*** 🔒1

Use ⓐⓥ arrows to select if the user input activates the common alarm output. Press ↵ to confirm.

ⓥ ↵ ***ON MESSAGE TEXT*** 🔒1

Use ⓐⓥⓛⓡ arrows to program the message that is displayed and recorded when the user defined alarm is activated. Press ↵ to confirm.

ⓥ ↵ ***OFF MESSAGE TEXT*** 🔒1

Use ⓐⓥⓛⓡ arrows to program the message that is displayed and recorded when the user defined alarm is deactivated. Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ***CYCLE INTERVAL***

↵ ***ENABLE*** 🔒1

Use ⓐⓥ arrows to enable or disable the cycle interval counter (number of start/stop cycles during a specific time period). Press ↵ to confirm.

ⓥ ↵ ***DATE FORMAT*** 🔒1

Use ⓐⓥ arrows to select required date format (mm-dd-yyyy, dd-mm-yyyy, yyyy-mm-dd).
Press ↵ to confirm.

ⓥ ***START DATE AND TIME***

↵ 🔒1 Use ⓐⓥⓛⓡ arrows to select the desired start date. Press ↵ to confirm.

ⓥ ↵ 🔒1 Use ⓐⓥⓛⓡ arrows to select the desired start time. Press ↵ to confirm.

ⓥ ***END DATE AND TIME***

↵ 🔒1 Use ⓐⓥⓛⓡ arrows to select the desired end date. Press ↵ to confirm.

ⓥ ↵ 🔒1 Use ⓐⓥⓛⓡ arrows to select the desired end time. Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ⓥ ***OPERATORS CHOICE 1*** ↵ 🔒1

The operator can choose 2 lines of information to be shown on the main screen of the display. Available options are; stop pressure setting, start pressure setting, cycles/period, cycles/month, cycles/day, cycles/hour, total cycle count, pump total run time.
Use ⓐⓥ arrows to select the desired information to be displayed on line 1 (below status and pressure information).
Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ⓥ ***OPERATORS CHOICE 2*** ↵ 🔒1

The operator can choose 2 lines of information to be shown on the main screen of the display. Available options are; stop pressure setting, start pressure setting, cycles/period, cycles/month, cycles/day, cycles/hour, total cycle count, pump total run time.
Use ⓐⓥ arrows to select the desired information to be displayed on line 2 (below status and pressure information).
Press ↵ to confirm.

↵ *SETTINGS* ↵ ⓥ *FEATURE SETTINGS* ↵ ⓥ ***RESET CYCLE COUNTS*** ↵ 🔒1

Use ⓐⓥ arrows to enable or disable the reset cycle counts option. Press ↵ to confirm.
Note: Once cycle counts are reset to zero, the previous cycle counts cannot be recovered.

## *Option Settings*

↵ *SETTINGS* ↵ ⓥ ***OPTION SETTINGS*** ↵

**NOTE:** The list of available options and the settings associated with them will vary with each controller. Below are the most common user defined settings that may appear.

↵ ***AUDIBLE*** 🔒1

Use ⓐⓥ arrows to enable or disable the audible alarm for selected option. Press ↵ to confirm.

ⓥ ↵ ***COMMON ALARM*** 🔒1

Use ⓐⓥ arrows to enable or disable the common alarm output for selected option.
Press ↵ to confirm.

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## *Event Log*

↵ ⓥ ***EVENT LOG*** ↵

The Event Log is a record of events (pressure recording, alarms, starts, etc...) that are stored in the memory of the Mark IIxg. The last 3000 events are kept in this memory. The events are stored in the order that they occur, with the most recent being "first" (the last event that occurred will be event #1). The following keys are used to browse through the event log:

ⓡ Move forward through the events one at a time (1 - 2 - 3....etc)
ⓛ Move backward through the events one at a time (55 - 54 - 53....etc)
ⓐ Move forward through the events ten at a time (60 - 70 - 80....etc)
ⓥ Move backward through the events ten at a time (91 - 81 - 71....etc)

Pressing and holding of the arrow keys will allow the scrolling to move faster.

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## *Data History*

↵ ⓥ ***DATA HISTORY*** ↵

The Data History is a record of important data and events that are kept throughout the life of the controller.

Use ⓐⓥ arrows to scroll through the information stored in the Data History log. The available information is: Numbers of calls to start • Number of actual starts • Pump total run time • Pump last run time • Total controller power on time • Last pump start time/date • Minimum system pressure • Maximum system pressure • Last phase failure • Last phase reversal • Total Cycle Count • Average Cycle Count/Hour • Cycle Count Last Hour • Average Cycle Count/Day • Cycle Count Last Day • Average Cycle Count/Month • Cycle Count Last Month • Cycle Count/Set Interval

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## *Configuration - Model*

↵ ⓥ *FACTORY* ↵ *CONFIGURATION* ↵ ***MODEL*** ↵

***SERIAL NUMBER*** ↵ 🔒3

Use ⓐⓥⓛⓡ arrows to enter the controller serial number. Press ↵ to confirm.
NOTE: This is a factory set parameter and under normal circumstances would never be changed.

ⓥ ***MODEL*** ↵ 🔒3

Use ⓐⓥ arrows to select required model number. Press ↵ to confirm.
NOTE: This is a factory set parameter and under normal circumstances would never be changed.

ⓥ ***HP (HORSEPOWER)*** ↵ 🔒3

Use ⓐⓥ arrows to select required motor horsepower. Press ↵ to confirm.
NOTE: This is a factory set parameter and under normal circumstances would never be changed.

ⓥ ***VOLTAGE*** 🔒3 ↵

Use ⓐⓥ arrows to select required voltage. Press ↵ to confirm.
NOTE: This is a factory set parameter and under normal circumstances would never be changed.

⓿ ***PHASE SEQUENCE*** ↵ 🔒1

Use ⓿⓿ to select required phase sequence (1~, abc, cba). Press ↵ to confirm.

⓿ ***PRESSURE SENSOR*** ↵ 🔒3

Use ⓿⓿ to enable or disable the use of a pressure sensor (transducer). Press ↵ to confirm.

NOTE: This is a factory set parameter and under normal circumstances would never be changed.

⓿ ***USER INPUT NUMBER*** ↵ 🔒3

Use ⓿⓿ to select input used for user defined option. Press ↵ to confirm.

⓿ ↵ ***SCREEN SAVER*** 🔒1

Use ⓿⓿ arrows to enable or disable the screen saver function. Press ↵ to confirm.

NOTE: The display screen is designed to automatically dim 5 minutes after returning to the home screen and without any activity. The screen will "wake up" or return to set brightness on a key press or any event that would cause a message to appear on the screen. This feature is designed to prolong the life of the display. It is not recommended that this function be disabled.

## *Configuration - Options*

↵ ⓿ *FACTORY* ↵ *CONFIGURATION* ↵ ⓿ ***OPTIONS*** ↵ 🔒3

This is area where ordered options are added by the factory. Any user defined parameters for these options would appear in the SETTING/OPTION SETTINGS menu.

## *Configuration - ADC Calibration*

↵ ⓿ *FACTORY* ↵ *CONFIGURATION* ↵ ⓿ ***ADC CALIBRATION*** ↵ 🔒4

This area displays the values of the Analog to Digital Converter calibrations. This calibration is done by the manufacturer. Any changes to these settings would have to be made by the factory.

## *Diagnostics*

↵ ⓿ *FACTORY* ↵ ⓿ ***DIAGNOSTICS*** ↵

***RAW INPUT: ANALOG*** ↵

Input values are shown. This information is for factory level troubleshooting purposes.

⓿ ***RAW INPUT: DISCRETE*** ↵

Input values are shown. This information is for factory level troubleshooting purposes.

⓿ ***RAW INPUT: KEYS*** ↵

Input values are shown. This information is for factory level troubleshooting purposes.

⓿ ***RAW OUTPUT: DISCRETE*** ↵

Output values are shown. This information is for factory level troubleshooting purposes.

⓿ ***JOCKEY XG STARTS***

Displays the total number of times the Jockey XG has been booted.

⓿ ***LAMP TEST*** ↵ 🔒1

Use ⓿⓿ arrows to enable the lamp test. Press ↵ to begin test. All System Status LED's should illuminate.

↵ Use ⓿⓿ arrows to disable the lamp test. Press ↵ to end test. System Status LED's should turn off and return to normal indications.

⓿ ***AUDIBLE TEST*** ↵ 🔒1

Use ⓿⓿ arrows to enable the audible test. Press ↵ to begin test. The audible alarm should sound.

↵ Use ⓿⓿ arrows to disable the audible test. Press ↵ to end test. The audible alarm will turn off.

▼ ***PHASE FAIL*** ↵ 🔒2

Use ▲▼ arrows to enable the phase failure test. Press ↵ to begin test. The phase failure should be indicated. ↵ Use ▲▼ arrows to disable the phase failure test. Press ↵ to end test. The phase failure should clear.

▼ ***PHASE REVERSE*** ↵ 🔒2

Use ▲▼ arrows to enable the phase reversal test. Press ↵ to begin test. The phase reversal should be indicated. ↵ Use ▲▼ arrows to disable the phase reversal test. Press ↵ to end test. The phase reversal should clear.

▼ ***FLAGS***

These flags are a part of a manufacturer level testing tool.

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## *Tools*

↵ ▼ *FACTORY* ↵ ▼ ***TOOLS*** ↵

↵ ***CLEAR DATA HISTORY*** 🔒3

Use ▲▼ arrows to enable this option. Press ↵ to confirm. Data History will be cleared and option will automatically revert back to disabled.

NOTE: Once cleared, this data cannot be recovered.

▼ ↵ ***CLEAR EVENT LOG*** 🔒3

Use ▲▼ arrows to enable this option. Press ↵ to confirm. The Event Log will be cleared and option will automatically revert back to disabled.

NOTE: Once cleared, this data cannot be recovered.

▼ ↵ ***RESET TO DEFAULTS*** 🔒3

Use ▲▼ arrows to enable this option. Press ↵ to confirm. The Mark IIXG will be reset to "out of the box" default settings.

***NOTE:*** All user and factory configuration settings will be lost.

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## *About*

↵ ▼ ***ABOUT*** ↵

Information is shown for: Model Number, Serial Number, Software (Part Number, Build Number, Date), and Boot Code (Part Number, Version Information and Checksum Information).