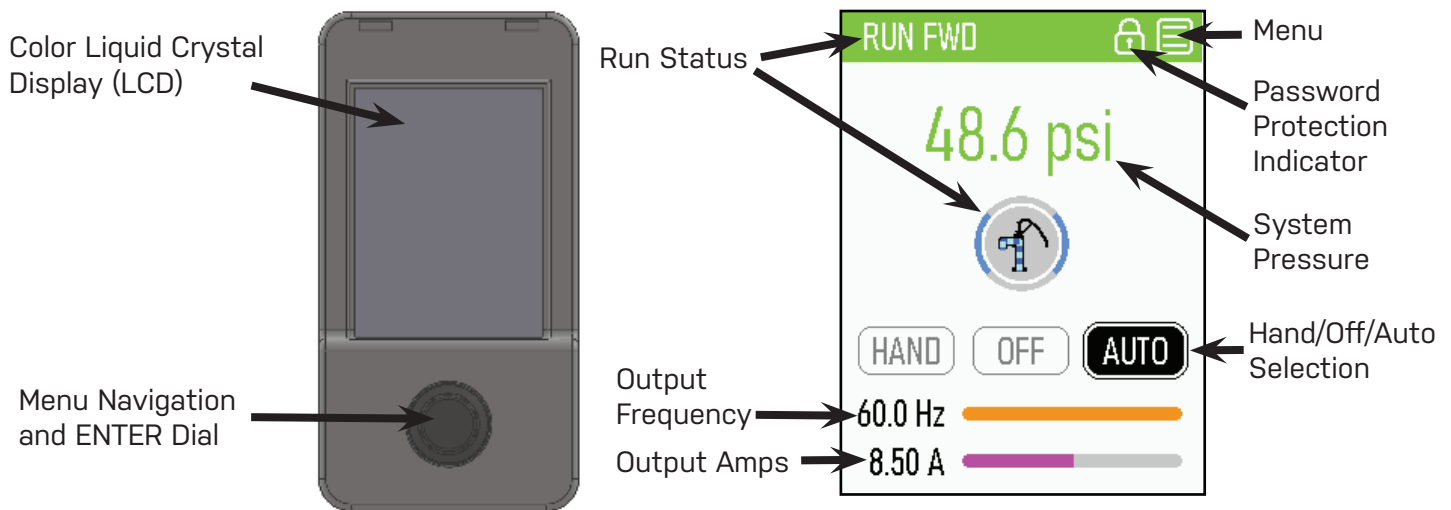


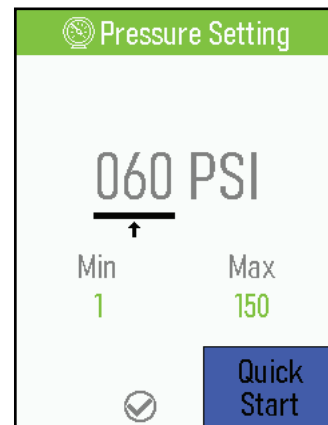
# Quick Programming Guide for H2O Drive® Control Panel



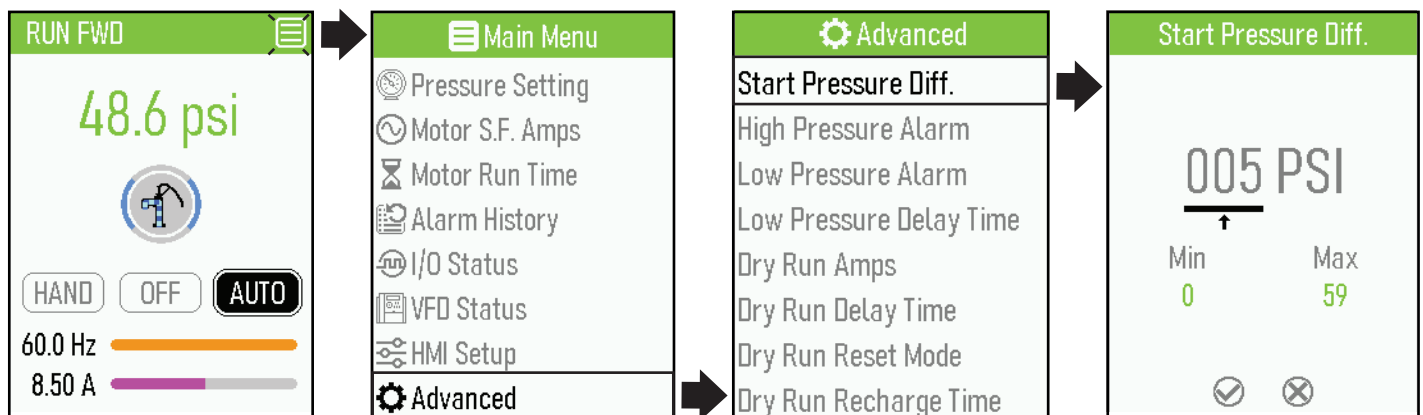
## QUICK START MENU

This Quick Start wizard will appear on the first power-up and after a factory reset.

- **Pressure Setting:** Default = 60 PSI  
The pressure target to maintain (Set Pressure)
- **Motor S.F. Amps:**  
Set to the motor Service Factor Amps (SFA) for well pumps and to Full Load Amps (FLA) for booster pumps.



## ADVANCED MENU



- **Start Pressure Diff:** Default = 5 PSI  
This is the pressure drop needed below the Pressure Setting to start the pump (Wake up).



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- **High Pressure Alarm:** Default = 80 PSI  
Will be set 20 PSI above the Pressure Setting during the Quick Start. Can be adjusted at any time thereafter.
- **Low Pressure Alarm:** Default = 15 PSI
- **Sleep Frequency:** Default = 35 Hz  
The Sleep Frequency needs to be set above the frequency at which the pump no longer builds pressure and there is no flow. The VFD will enter the "sleep" mode when the output frequency (Hz) drops below the Sleep Frequency for a preset time (Sleep Time).  
Test Process:  
Open a faucet and run the water at a low flow (Low flow, but not a trickle).  
This should be the only open faucet on the pump discharge, and there should be no leaks in the piping system. The H2O Drive® control panel must be in AUTO. If the pump is stopped, the pressure will slowly drop until the pump starts automatically. As the pump runs, wait until the pressure is stabilized and the Frequency (Hz) has slowed down to its lowest value. This may take 30 seconds or more. Record the lowest operating frequency (Hz). Set the Sleep Frequency 2Hz above this value.  
Notes:  
The Sleep Frequency is not the Minimum Speed. The pump will run slower than the Sleep Frequency while the Sleep Time is counting down.  
In most cases, the Sleep Frequency should be < 50Hz. If >50Hz, reduce the Pressure Setting.  
Any changes to the Pressure Setting will impact the Sleep Frequency and the required pre-charge setting of the pressure tank. After changing Pressure Setting, adjust the pressure tank pre-charge to (Pressure Setting x 0.7), then run the Sleep Frequency test process again.
- **Sleep Time:** Default = 10 seconds  
The Sleep Time is the pump run duration after the output frequency drops below the Sleep Frequency.  
Default value is 10 sec.  
Adjustments  
Make sure the Sleep Frequency is set correctly first.  
If the pump cycles ON and OFF too frequently. Increase the Sleep Time and the Start Pressure Diff.; increase the size of the pressure tank if necessary.
- **No-Flow Detect Bump:** Default = Enable  
The purpose of this function is to detect no-flow situations by raising the Pressure Setting briefly and thus causing the pump to go to sleep.  
The No-Flow Detect Bump activates under the following conditions:
  - 1) The pump has been running for at least 60 seconds.
  - 2) The system pressure is held within  $\pm 1.0$  PSI of the Pressure Setpoint.
  - 3) The output frequency is  $\leq 55.0$  Hz.
  - 4) The output frequency is not varying more than  $\pm 1.0$  Hz.
 If all conditions are met for more than 20 seconds (editable in Bump Timer), the Pressure Setpoint will be temporarily bumped by 3.0 PSI (editable in Bump Pressure Diff.).  
"BUMP" will be displayed on the main screen during this time.  
This will cause the pump output frequency to increase, thereby increasing the system pressure.  
If there are no leaks in the system, the pump will go to sleep shortly after the bump.  
This function is not a replacement for properly setting up the Sleep Frequency.  
Ensure that the pressure tank is properly sized and pre-charged.
- **Dry Run Amps:** Default = 0.0A **Caution - This function is disabled by default!**  
The Dry Run Amps alarm will activate when all three of the following conditions persist for the amount of time defined in Dry Run Delay Time:
  - 1) The pump is running at Max. Frequency.
  - 2) The measured pressure is below the Pressure Setting.
  - 3) The pump current is below the Dry Run Amps setting.
 This alarm will stop the pump, and can be reset manually or automatically, depending on the Dry Run Reset Mode setting. While the above three conditions are true, a Dry Run warning will be displayed on screen, showing a timer counting down to the Dry Run Alarm trip. Set Dry Run Amps to 0.00 to disable Dry Run detection (Default).
- **Dry Run Delay Time:** Default = 20 sec  
Delay before stopping the pump on a Dry Run Alarm.
- **Dry Run Reset Mode:** Default = Auto-Reset  
If Dry Run Reset Mode is set to Auto-Reset, once a Dry Run Alarm is active, a countdown timer will begin according to the Dry Run Recharge Time setting. After that timer reaches zero, the Dry Run alarm will be cleared, and the pump will be allowed to run again. If Dry Run Reset Mode is set to Manual Reset, then the user must reset a Dry Run Alarm manually through the main screen.
- **Dry Run Recharge Time:** Default = 1.0 h  
Delay before automatically re-starting the pump after a Dry Run Alarm. Valid for Auto-Reset mode only.

**Consult the USER MANUAL for installation instructions, wiring, and complete programming instructions.**