

HEATPORT H2 / H4 DIGI START PRO



HEATPORT

The Wireless Controller is an additional accessory for controlling the heater and the Wired Switch can work fully without the Wireless Controller. The temperature sensor is integrated inside the Wired Switch.

Made in New Zealand

1. WAKE-UP AND INITIAL SETTINGS

WAKE UP OF WIRED SWITCH

In the OFF state, the LCD display of the Wired Switch is OFF. To wake up the display, short press the POWER button on the Wired Switch.

PAIRING OF THE WIRELESS CONTROLLER

In the OFF state, long press the RIGHT button on the wired Switch until the LCD display shows “HFA- “. Immediately after that, short press together the POWER and MIDDLE button on the Wireless Controller repeatedly until the display will show the Ambient Temperature and Voltage. Repeat the whole process if the pairing is unsuccessful.

WAKE UP OF WIRELESS CONTROLLER

The LCD display of the Wireless Controller is automatically going to sleep. To wake up the display, short press the POWER button on the Wireless Controller. If the display shows only “Connecting, Please wait.”, short press together the POWER and MIDDLE button until the LCD shows the normal working mode.

CHANGING OF LANGUAGE ON THE WIRELESS CONTROLLER

To change the language, long press the MIDDLE button on the Wireless Controller. You can choose from English and Chinese.

WIRELESS CONTROLLER



WIRED SWITCH



2. FUNCTIONS AND SETUP

PARAMETER SETTINGS MODE

This mode can be accessed in both ON and OFF state. Long press LEFT button on the Wired Switch to enter into settings state. If no button is pressed in 15 seconds, the display will automatically jump into the normal mode and you have to start again.

- **CLOCK SETTINGS**

Set the exact time in the 24h format. For example "19:21". Use the LEFT and RIGHT button on the Wired Switch to adjust the digit. Use the POWER button on the Wired Switch to confirm the value and jump into the next digit or settings.

- **TIMED START-UP (1)**

Set the countdown to automatically start up the heater from the OFF state. The display shows "1 oF". Once you change the value to "1 On" by pressing the LEFT button and POWER button to confirm, you can preset the exact time for the countdown in hours and minutes. To get in the next settings, press the POWER button.

- **TIMED SHUTDOWN (2)**

Set the countdown to automatically shut down the heater from the ON state. The display shows "2 oF". Once you change the value to "2 On" by pressing the LEFT button and POWER button to confirm, you can preset the exact time for the countdown in hours and minutes. To get into the next settings, press the POWER button.

- **MANAGEMENT OF THE INTERNAL SETTINGS (- - - -)**

Note: This mode is accessible only by the manufacturer of the unit and it is password protected. Any unauthorised edit of the firmware or the values is prohibited and may void the warranty. To jump back to the normal screen, please wait a couple of seconds.

STATUS DISPLAY

Short press the POWER button on the Wired Switch to query the system information. Any additional press of the POWER button changes the displayed value.

Time > Room temperature > Temperature of the heat exchanger > Voltage > Altitude > Historical error code > ... cycles through

MANUAL FUEL FILLING MODE

This mode is used after the first installation of the unit or if the unit shuts down because the fuel tank ran out of the diesel and the display shows error code E-10. This mode is not available if the unit was previously running with successful shutdown. To make this mode available again, you have to disconnect the main main power cords first to reset the settings.

To start manual filling, short press together the POWER and RIGHT button on the Wired Switch. The LCD will display "H oF" which indicates that the fuel filling mode is OFF. Short press the LEFT button to turn this mode into ON state. Display shows "H oN" and pump starts pumping the fuel thru the fuel line. To turn OFF this mode, short press the RIGHT button and then short press the POWER button to escape this mode.

Note: This process can only be done while you visually control the position of the diesel on the transparent fuel line. You must manually stop this mode before the fuel reaches the fuel inlet of the heating unit, otherwise the burner will be fulfilled with the fuel and the next startup will be unsuccessful with a lot of the white or black smoke. If you can not check this, do not use this mode and fulfill the lines with the normal Startup mode that automatically initiates the burning process once the fuel reaches the heater.

3. OPERATION

STARTUP

Once the LCD of the Wired Switch is ON, long press the POWER button of the Wired Switch OR Wireless Controller for 3 seconds until the top line of the LCD display starts flashing “oN”.

The unit will start pre-heating and once it reaches the required temperature, the fuel pump will start pumping fuel. After the successful ignition, the heater will start running in about 5 minutes. The settings of the working modes will not be initiated until completing the startup process which can take a couple of minutes.

Note: If the pump stops ticking and the display shows OFF, error code E-10, it means that the fuel did not reach the heater. You may fulfill the fuel lines using the fuel filling mode OR repeat this Start-up process again. If the unit continues providing the same error code, please review the placement of the fuel lines, fuel filter and fuel pump.

WORKING MODE SELECTION

- **Fixed Power Mode:**

To switch into Fixed Power Mode, short press together the LEFT and POWER buttons on Wired Switch or the LEFT and RIGHT button on the Wireless Switch. The top line of the display will show “P” and the fuel pump frequency e.g. “P 2.0”.

Press the LEFT button to increase or the RIGHT button to decrease the heating power.

- **Thermostatic Mode**

To switch into the Thermostatic mode, short press together the LEFT and POWER buttons on Wired Switch or the LEFT and RIGHT button on the Wireless Switch. The top line of the display will show the preset temperature in degrees celsius.

Press the LEFT button to increase or RIGHT button to decrease the temperature. The range of the temperature is from 8 to 35 degrees celsius.

Note: The above modes are only available if the unit is in ON state. The thermostatic mode will automatically adjust the heating power within the range of the minimal heating power and maximal heating power. Once the room temperature reaches the preset temperature, the unit will lower the power and continue heating in the lowest power until the room temperature drops below the preset temperature. The temperature sensor is located in the wired LCD Switch.

SHUTDOWN

To shutdown, long press the POWER button on the Wired Switch or Wireless Controller to execute the shutdown command. The main display will show “Off” and the heating unit will initiate the cooling down process that can run a couple of minutes until the heat exchanger is fully cooled down.

Note: Never turn off the unit by disconnecting the power supply while the unit is running or before finishing the cooling process as it may cause permanent damage to the internal components. Warranty does not cover damages like this.

5. FAULT CODES / TROUBLESHOOTING

Note: This fault code book is designed for an easy identification of any issue. **Any repairs/replacements of the internal components of the heater unit described below must be consulted and pre-approved first with the supplier of the product.** The warranty will be voided if there are any repairs/modifications or unauthorised changes in the hardware or firmware of the product without the approval of the supplier or any replacement of non-original parts or components that are not supplied by the supplier.

E-01	UNDERVOLTAGE	<ul style="list-style-type: none"> ● Undervoltage <ul style="list-style-type: none"> ○ System minimum voltage is 10.5 volts. Verify battery voltage. Connect the multimeter to the positive and negative terminals of the wiring harness and set to volts DC. If the wiring harness has been extended for a longer distance, check the voltage at the main ECU connector. ○ Record the voltage. If the voltage is less than 12.6 (flooded cell) 12.8 (AGM), connect the battery charger and log off the job until the batteries are fully charged. Otherwise, turn on the unit while watching the multimeter. ● Wrong connection in connectors <ul style="list-style-type: none"> ○ Check the connector of the main ECU board for any dirt or corrosion or the positive and negative terminal at the wiring harness. ● Fault of wiring harness <ul style="list-style-type: none"> ○ Inspect wiring for damage or short circuiting with the chassis of the vehicle. Check continuity from ECU board to the connector of the wired switch. In case of wrong connection, replace a wiring harness. ● Fault of the ECU <ul style="list-style-type: none"> ○ Replace ECU
E-02	OVERVOLTAGE	<ul style="list-style-type: none"> ● Overvoltage <ul style="list-style-type: none"> ○ System maximum voltage is 15 volts for the 12V version and 30V for the 24V version. The possible causes of this code are: 1) Battery charger in boost mode 2) Alternator overcharging 3) Solar panel controller overcharging ● Fault of the ECU * please see above
E-03	GLOW PLUG	<ul style="list-style-type: none"> ● Short circuit of the wiring of glow plug <ul style="list-style-type: none"> ○ Replace the glow plug. ● Disconnection of the glow plug <ul style="list-style-type: none"> ○ Connect the glow plug to the ECU. ● Fault of glow plug <ul style="list-style-type: none"> ○ Replace the glow plug. ● Fault of the ECU * please see above
E-04	FUEL PUMP	<ul style="list-style-type: none"> ● Wrong connection in connectors <ul style="list-style-type: none"> ○ Check the connectors of the fuel pump or main ECU board for any dirt or corrosion. ● Fault of the wiring harness * please see above ● Fault of the Fuel Pump <ul style="list-style-type: none"> ○ Replace the Fuel Pump. ● Fault of the ECU * please see above
E-05	OVERHEAT	<ul style="list-style-type: none"> ● Excess temperature (235°C) is measured at the overheat sensor <ul style="list-style-type: none"> ○ Check if the fan is not blocked/damaged and is spinning without any suspicious noise. ○ Check airflow ensuring the ducting is free from obstructions. ● Wrong connection of the PT sensor <ul style="list-style-type: none"> ○ Remove the PT sensor, check connections, wiring and reinstall. ○ If the wiring is damaged or connection is corroded, replace the PT sensor. ● Faulty PT sensor <ul style="list-style-type: none"> ○ Replace the PT sensor ● Fault of the ECU * please see above
E-06	BLOWER MOTOR	<ul style="list-style-type: none"> ● Blower motor interrupted <ul style="list-style-type: none"> ○ Check heating air intake for obstructions, ensuring the blower turns freely. Run the unit and listen if there is any suspicious sound or rubbing. Turn the blower by hand checking for hard spots. ● Damage of the impeller <ul style="list-style-type: none"> ○ Possible causes: 1) Physical obstruction 2) Ducting clamp over-torqued 3) Floor mat or debris under the heater when mounted. Replace the blower motor.

		<ul style="list-style-type: none"> ● Blower motor short circuit <ul style="list-style-type: none"> ○ Connect the multimeter to the positive and negative terminals of the fan and check the resistance. Check if the wiring to the fan is not damaged. ● Blower motor speed failure <ul style="list-style-type: none"> ○ This motor speed varies from specification by more than 10% for longer than 30 seconds. ● A loose ECU casing <ul style="list-style-type: none"> ○ Wrongly positioned ECU or magnetic sensor on ECU can cause inaccurate readings. Fix the position of the ECU. If the ECU is loose, tighten the screw. ● Fault of the ECU * <i>please see above</i>
E-07	WIRED SWITCH	<ul style="list-style-type: none"> ● Wrong connection of wired switch <ul style="list-style-type: none"> ○ Check the connector of the wired switch and ECU board connector for any dirt. ● Fault of wiring harness * <i>please see above</i> ● Fault of wired switch <ul style="list-style-type: none"> ○ Replace the wired switch. This must be specially programmed for your version of the heater. ● Fault of the ECU * <i>please see above</i>
E-08	FLAME EXTINGUISHION	<ul style="list-style-type: none"> ● No fuel entering the heater unit <ul style="list-style-type: none"> ○ This can happen anytime after you run out of fuel in the individual fuel tank or the fuel level of the main tank dropped the fuel level just under the tip of the suction pipe. You must fill the tank and then fulfill the fuel lines using the fuel filling mode or repeat the start-up process again and again until the successful ignition or until you remove all the bubbles sitting on the fuel line. ● The wrong placement of fuel lines/fuel filter/fuel pump <ul style="list-style-type: none"> ○ Problem especially on the intake side of the fuel line before the fuel pump, which is the most vulnerable for creation of the airlock. Review the placement of fuel line /filter/ fuel pump exactly as per the provided instructions. If you are unsure if the problem is happening due to the placement of the fuel lines (this can be especially if you run longer distance in horizontal level), you may try to place the fuel pump directly under the heater and suck the fuel straight from the jerry can to determine if the problem is caused by the fuel line placement. ● Wrong diameter of the fuel lines <ul style="list-style-type: none"> ○ The fuel lines supplied are a special size with very small internal diameter. Never use any other type of fuel line. ● Blocked or compressed air intake / exhaust pipe <ul style="list-style-type: none"> ○ Check the air intake / exhaust pipe for the blockage, dirt, snow, mud ● Condensed / rain water staying in the air intake / exhaust pipe <ul style="list-style-type: none"> ○ Reinstall the pipes per instructions to allow water to escape naturally down. ● Blocked fuel line or fuel filter <ul style="list-style-type: none"> ○ Replace the fuel line or fuel filter. ● Bad quality of fuel <ul style="list-style-type: none"> ○ Replace the diesel for new. ● Carbon deposition inside the burner <ul style="list-style-type: none"> ○ Replace the burner. ● Carbon deposition in heat exchanger / exhaust pipe / exhaust silencer <ul style="list-style-type: none"> ○ Pressure clean with water the heat exchanger/ exhaust pipe / exhaust silencer. ● Dirt on the atomising net of the glow plug <ul style="list-style-type: none"> ○ Replace the atomising glow plug net ● Dirt on the glow plug <ul style="list-style-type: none"> ○ Replace the glow plug ● Faulty blower motor / heat exchanger gasket OR burner / heat exchanger gasket <ul style="list-style-type: none"> ○ Replace the gasket ● Fault of the Fuel Pump * <i>please see above</i> ● Fault of the ECU * <i>please see above</i>
E-09	PT SENSOR	<ul style="list-style-type: none"> ● Short circuit of the wiring of PT sensor <ul style="list-style-type: none"> ○ Replace the PT sensor. ● Wrong connection of the PT sensor * <i>please see above</i> ● Faulty PT sensor * <i>please see above</i> ● Fault of the ECU * <i>please see above</i>
E-10	FAILED IGNITION	*Same as E-08



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