

POWER TOUCH

HPDC Hydraulic Control System

All Models

**READ ME FIRST OR
VOID YOUR WARRANTY!**

**POWER UP PRODUCTS
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**BEFORE YOU START:
READ THE ENTIRE MANUAL**

Rev. 0

YOUR POWER TOUCH HPDC KIT INCLUDES THE FOLLOWING:

- **8 OR 15 FUNCTION POWER PAL REMOTE KEYPAD WITH 25ft.
HEAVY DUTY COILED CORD**
- **8 OR 15 FUNCTION POWER PAL WIRELESS REMOTE KEYPAD
(Optional or Network System Only)**
- **6 FUNCTION IN-CAB CONTROL KEYPAD
(Optional or Network System Only)**
- **8 or 16 OUTPUT HYDRAULIC POWER DISTRIBUTION CENTER**
- **POWER AND OUTPUT HARNESS**
- **RECEIVER ANTENNA WITH MOUNTING HARDWARE
(Optional or Network System Only)**
- **MOUNTING FEET AND SCREWS**
- **WARRANTY CARD (BACK OF MANUAL)**

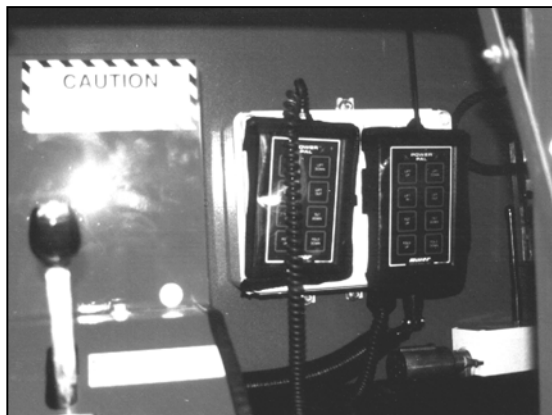
STARTING YOUR INSTALLATION

Installation time: Approximately 60 minutes

Mount the Hydraulic Power Distribution Center (HPDC)

Choose a suitable location to mount the Power Touch HPDC. The ideal location is in the rear of the truck inside the toolbox. The four mounting feet can be mounted to the sides or the top and bottom of the HPDC enclosure. It is best to mount the HPDC with the strain reliefs and wired/wireless button facing down.

NOTE: Leave enough clearance to route all of your input and output wires to the PDC enclosure.



Typical mounting location of the HPDC

Install Power and Output Harness

Connect the ends of the Power and Output Harness to the terminal strip where the solenoid valves are wired. Utilize the following table in determining where to make each connection. Make sure all connections are tight.

Hydraulic Function	8 Function Power Touch HPDC Color Code	14 Function Power Touch HPDC Color Code
Lift Up / Boom Up	Pink	Green
Lift Down / Boom Down	Blue	Red
Lift In	Orange	Pink
Lift Out	Black	Blue
Tilt Up	Yellow	Black
Tilt Down	White	Yellow
Fold Up	Green	Yellow/Black
Fold Down	Red	White/Black
Boom In		Blue/White
Boom Out		Orange/Black
Left Winch In		Orange
Left Winch Out		White
Right Winch In		Pink/White
Right Winch Out		Black/White
Power		Red
Ground		Black

Install the ground wire

If one does not exist, install a #10 AWG ground wire from the 'ground' terminal on the terminal strip to the chassis frame, not to the sub frame or wrecker frame. **THIS IS VERY IMPORTANT!** Protect the chassis ground connection with a coating of grease to prevent corrosion.

Install the Wired Remote Keypad

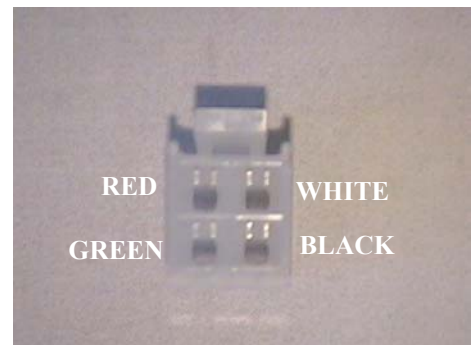
Route the end of the coiled cord through a strain-relief at the HPDC and plug the connector into the telephone cord receptacle on the HPDC circuit board.

Install the 6 Function In-Cab Control Keypad

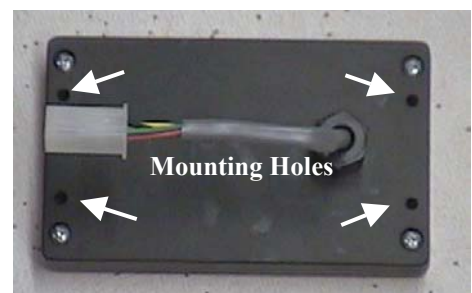
Route the 4-conductor gray-jacketed communication cable from the Power Touch HPDC to the mounting location of the 6 function control keypad. Strip back about 1 inch of the gray jacket, exposing the 4 colored strands. Strip off 1/8" insulation from each conductor and crimp the network connector pins to each wire. Insert each wire into the correct location in the Molex connector housing.



Pick a suitable flat area to mount the 6 function In-Cab Control Keypad. (If no flat location can be found, an optional Pedestal Mount (P/N: 0306674) can be used.) Mark and drill the locations of the four mounting holes and the hole for the communication cable. De-burr any rough edges. Feed the communication cable from the Power Touch HPDC through the larger hole and plug it into the connector on the pigtail of the In-Cab Control Keypad. Mount the keypad to the surface using the four mounting holes and supplied hardware.



Remove the lid from the Power Touch HPDC. Feed the gray communication cable from the In-Cab Control Keypad into the HPDC. Crimp a 1/4" spade connector onto the ends of the four wires in the cable and connect them to the appropriate location inside the HPDC.



Programming the 6 Function In-Cab Control Keypad

The In-Cab Control Keypad works with all versions of the Power Touch HPDC System, but must first be programmed before it will operate properly. With the 'control' switch off, press and hold button 1 and 4 on the keypad. Turn on the control switch. The keypad will go through a power-up routine, then beep. Release button 1 and 4. According to the following chart, an LED will indicate how the keypad is programmed.



To program the keypad, press the appropriate button for the Power Touch HPDC System you have installed. The keypad will do a lamp test, then reset itself.

BUTTON	PROGRAM MODE
1	8 Function HPDC System
2	14 Function HPDC System
3	Vulcan HPDC System

Wireless Keypad, Receiver, and Antenna Installation

The Power Touch HPDC System comes with the receiver card already installed on the HPDC circuit board. Use of the wireless keypad will give you freedom of movement around the vehicle and work site.

Note: Care must be taken and instructions followed properly during installation of the wireless system to ensure reliable operation. Not all conditions are suitable for wireless operation. High tension power lines and areas of high Radio Frequency (RF) traffic may shorten the range or hinder the operation of the wireless keypad transmitter.

Install the Antenna

Install the antenna using the provided 90° antenna-mounting bracket. An ideal location for mounting the antenna is on the rear deck of the rear toolbox where the HPDC is located. When mounting the antenna to the toolbox, make sure the toolbox is grounded to the chassis. If you are unsure about how good the ground connection to the toolbox is, run a small gauge wire from the antenna mounting bracket to the vehicle's chassis.

Attach the antenna base end of the co-ax cable to the mounting bracket and tighten the antenna to the threaded mount on the bracket. A loose antenna will cause intermittent operation and limit the distance of operation. Route the other end of the antenna cable through the black strain relief in the HPDC enclosure. Attach the cable connector to the antenna connector on the receiver board. Be careful not to over tighten the cable connector.

Install the Batteries into the Transmitter

Remove the wireless keypad from its pouch and place it face down on a table or bench. Remove the two screws on the battery cover. Install the 'AA' alkaline batteries into the battery holder and replace the battery cover.

Program the Receiver Board

Apply power to the Power Touch HPDC by turning on the control function. Be sure the 'wired/wireless' button is in the 'wireless' mode. (When in the wireless mode, the wired remote will not function.) The transmitter keypad will not display a green light like the wired keypad. Instead, the wireless keypad will display a RED flashing light a key is pressed and the wireless keypad is transmitting.

Located on the receiver board is the programming button. Press and hold the programming button. A red LED indicator on the receiver board will turn on solid. While holding the button, press the top left-most position on the wireless transmitter keypad. When the programming is accepted, the indicator light will begin to flash. Release the transmitter button, and then release the button on the receiver board. If the red indicator on the receiver board goes out when attempting to program, release both buttons and repeat the procedure. Be sure that all antenna connections and grounds are good and tight.

Test the Power Touch HPDC System

Turn on the 'control' switch providing power to the Power Touch HPDC System. A green indicator LED on the HPDC circuit board will turn on. If the green LED on the circuit board does not come on, consult the troubleshooting section and correct the problem before proceeding.

Make sure that the wired/wireless switch on the HPDC is in the 'wired' mode. Test that each position on the wired keypad turns on the correct output. If the function does not come on, check the indicator LED at the output on the PDC circuit board. If the red LED comes on when you press a button, there is an overload or short circuit in the wiring for that output. Locate and correct the problem as necessary.

Put the wired/wireless switch into 'wireless' mode to test the wireless handheld keypad. There are over 10 billion transmit codes available, so there will never be two transmitters that will operate the same truck. Transmitter codes are unique. Test the operation of all the functions of the wireless keypad. Test the operating range of the wireless keypad. If the wireless keypad does not function properly, consult the wireless troubleshooting section.

Test the operation of the 6 function in-cab control keypad. If the keypad operates the wrong functions, check the programming of the keypad and make sure that it is correct.

If all outputs function correctly, turn off power to the Power Touch HPDC and replace the cover. Tighten the strain reliefs. The handheld remotes come with a protective pouch and an adhesive Velcro™ strip, which may be used for mounting the keypads.

This completes the installation of the Power Touch HPDC System.

WIRED KEYPAD TROUBLESHOOTING SECTION

The power LED on the HPDC circuit board does not come on.

- The HPDC is not getting power. Make sure that the power and ground wire are connected properly.
- Using a DC test lamp, check that there is power applied to the BATT terminal of the HPDC.
- Check with a voltage meter the power applied is 12 volts.
- Check for a tight, metal to metal chassis ground.

There is no green light in the upper right hand corner of my wired keypad.

- Make sure the coiled cord is properly inserted to the jack on the HPDC circuit board.
- Check the 'wired/wireless' switch; switch to the 'wired' position.

Some or no outputs function when I press a button on the remote.

- Check for the green indicator light on the keypad.
- Make sure all output wires are properly connected to their destination.
- Check suspected output wire for a secure connection at the terminal strip for the electrical controls.
- Short or overload condition. While pressing the position on the keypad, look at the indicator LED on the HPDC board that is associated with the suspected function. If the RED LED is lit, there is an overload condition or a short circuit in the output wiring. Correct the condition.
- If only the green LED is lit, there is an open connection somewhere between the output of the circuit board and the solenoid valve. Check your output wiring harness.
- If no LED's light up, contact Power Up Products for further assistance.

I press a button and the wrong function comes on.

- Check that the output wires of the harness are connected to the correct output position.
- Follow the wiring scheme on page 3.

If you require further assistance, contact Power Up Products Technical Assistance.
Monday to Friday from 8:00 to 4:00 PST. (775) 336 – 2400

WIRELESS KEYPAD TROUBLESHOOTING SECTION

The red light on the receiver card does not come on when the program button is pressed.

- Check to make sure the receiver card is properly mounted and seated into the connector on the HPDC board, secured with three (3) screws.
- Make sure that there is power going to the HPDC. A green LED on the HPDC board labeled 'Power' should be on.
- Check to make sure that your 'control' switch is turned on.
- Using a voltmeter, check that there is power on the 'Batt.' Terminal and that the HPDC has a good chassis ground. Inspect the receiver antenna cable.

The program light stays on solid or goes out when I attempt to program the receiver card.

- Use the top left position of the transmitter keypad to program. Any other position does not allow the unit to program.
- Remove the receiver antenna from the connector on the receiver card. Hold the transmitter close to the receiver card and attempt to program again. If the program is accepted, THOROUGHLY check your antenna for loose connections and kinked or broken cabling.
- Check the status of your batteries. Replace them with alkaline 'AA' batteries if needed.

I programmed the receiver to the transmitter, but the unit still won't function.

- Check to make sure the 'wired / wireless' switch is in the wireless position.
- Try moving around the vehicle and operating the transmitter. If the unit operates intermittently, check your antenna connections thoroughly.
- Remove the antenna cable from the receiver card. Hold the transmitter near the receiver. If the unit operates correctly, inspect the entire antenna system for poor connections, kinked, broken, or excessive coiled cable.

The transmitter works, but it is intermittent and / or the range is not what it should be.

- The area you are operating in may have a high amount of radio frequency (RF) noise. Try the transmitter in other areas and see if the intermittence stops or changes.
- Check your batteries. Use only alkaline 'AA' batteries.
- Make sure that the antenna connections are tight and clean. DO NOT splice the antenna cable to extend or shorten it. Make sure that the antenna is tight and secure on its base and that the antenna base is free from oil, dirt, and corrosion inside and out.
- Check to make sure that the transmitter antenna is securely screwed into the transmitter.
- check the power and ground connections into the HPDC system. Make sure ground goes to the chassis.

- If it is always the same function that is intermittent check the output wire coming from the HPDC to the distant function.

NOTE: If there is another truck that is operating wireless nearby the two signals will cancel each other becoming intermittent, or cease to operate.

If you need further assistance, our technical assistance department can be reached Monday through Friday, 8:00 a.m. to 4:00 p.m. Pacific Time. 775-336-2400

WARRANTY REGISTRATION

The Power Pal™ System is guaranteed for one year against defects in material and workmanship. This registration form must be returned within 30 days of vehicle purchase to validate the warranty.

Customer information:

Name _____
Address _____
City _____ State _____ Zip Code _____
Phone _____ Fax _____

Power Pal™ Serial Numbers:

PDC serial number _____
Wired Keypad serial number _____
Wireless Keypad serial number _____

Purchased From:

Name _____
Address _____
City _____ State _____ Zip Code _____
Date of Purchase _____

Type of Vehicle:

Make _____
Model _____
Year _____

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