

READ ALL DIRECTIONS FIRST BEFORE PROCEEDING

650DC DUAL MOTOR CONTROLLER.

Please follow programming directions only if you need to reprogram. DO NOT REMOVE THE TRANSMITTER BATTERY. Always disconnect power and ground cable when not in use. Do not mount the receiver near a vibrator. Use rubber grommets when mounting receiver box. Never jump start or put a battery booster on the vehicle without first disconnecting power to the receiver unit. Failure to do so will permanently damage the unit (no warranty for burnt boards whatsoever).

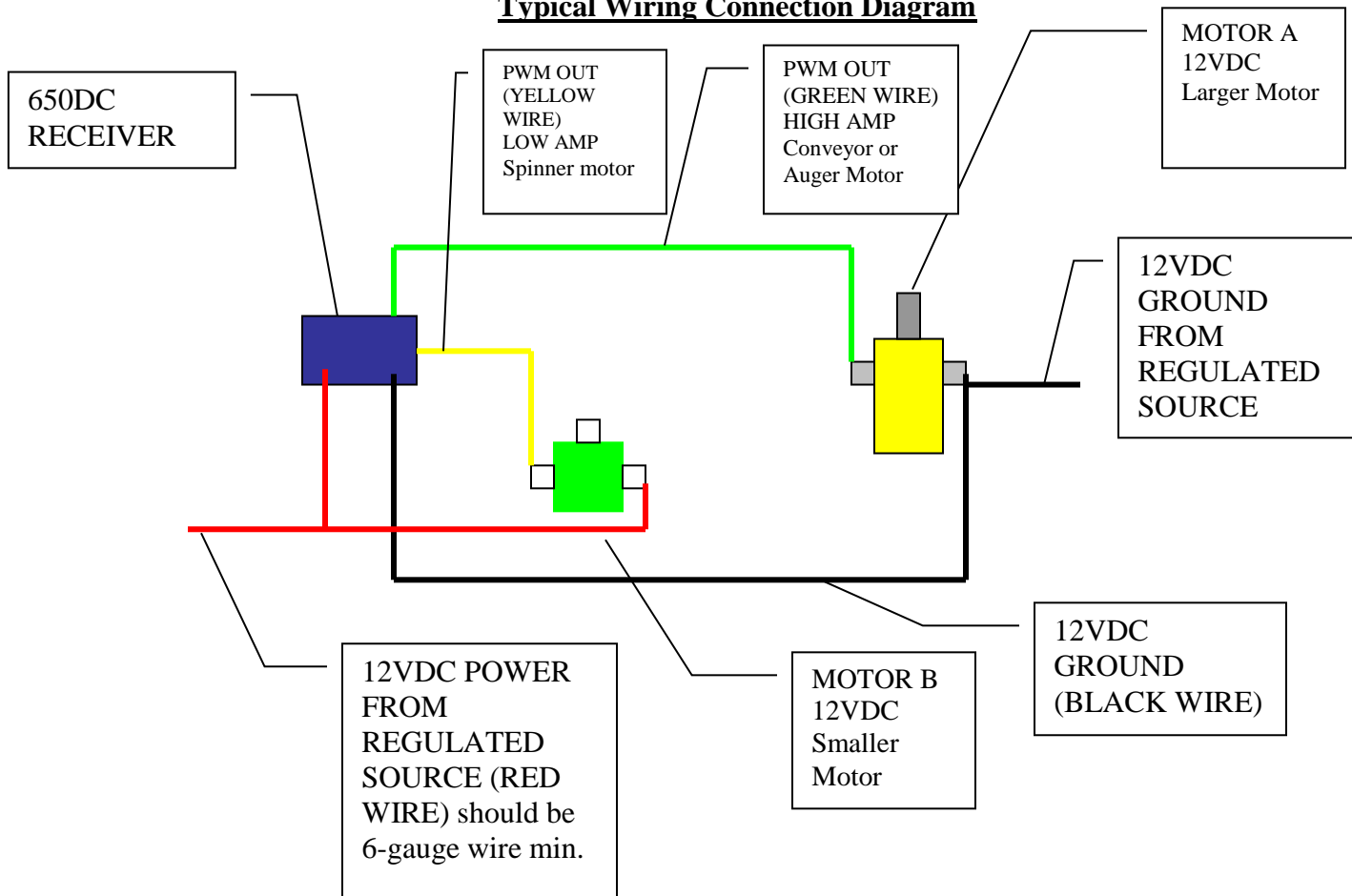
For use with 12 volt dc voltage only

How it Works:

The 650DC Wireless Dual DC Motor Controller that provides RPM control for 2 single DC motors A up to 75AMP (Larger motor or conveyor or auger motor) and up to 50 amps to Motor B (smaller motor or spinner motor) The RPM control is done by providing the user 2 separate outputs, approximately 1/3 of the maximum motor RPM for each motor. The 650DC incorporates a E-Stop to protect the motor and electronics, the 650DC has built-in safety circuits.

- Automatic shut down if motor is locked up. Unit will shut down for approx.30-60 seconds before you can attempt a restart.
- Automatic shut off if the current draws do not drop below the rated amps after 5 to 7 seconds. Once again, the receiver will shut down for 1 to 30 seconds. You will need to investigate the problem as if you continue to override the control you will cause permanent damage to the receiver or the motor being operated.

Typical Wiring Connection Diagram



WIRING DIRECTIONS

Note you must wire per directions it might look like you are applying power to both sides of Motor B but you are not. Use a disconnect on the main power wire when unit is not in use to avoid wire corrosion.

ANDERSON QUICK DISCONNECT POWER GROUND CONNECTOR IS INSTALLED

You will connect red power wire to one wire on your spinner motor (MOTOR B), yellow wire from receiver will go to the other spinner motor wire, (note you will need to check for proper rotation of the spinner if backwards just reverse the wires . The black wire from the receiver connects to one wire of the paddle or conveyor auger motor (MOTOR B) the green wire from the receiver connects to the other paddle motor wire, check rotation if its backwards just flip the wires on the motor for proper rotation.

Use at least a 6 Gauge wire from your 12vdc battery to the wireless receiver. A good rule is to use one or two sizes larger gauge wire than what the larger motor takes for your main power feed.

Do not use the transmitter if frozen, warm it up before use or it may not operate properly.

Limited 90 day warranty on electronics see wireless warranty on the website for details
Check online for any updated directions at www.snowplowsplus.com or
www.controlallwireless.com

*****User must maintain good, clean properly connected connections for proper operation and to avoid damage to the receiver and void the warranty. It is recommended that you use a battery disconnect when the unit is not in use as continuous powered wiring will enhance corrosion of wiring.**

OPERATION:



650DC STANDARD TRANSMITTER

Shown above is a typical transmitter for wireless operation of a 12VDC motor. The button functions are as follows:

Conveyor or motor 1 slow medium fast 1/3 increments between speeds.

Spinner or motor 2 slow medium fast 1/3 increments between speeds.

Blast/ A timed 6 to 8 second moderate speed to large motor

ON/OFF/ Shuts down the receiver unit. Must be turned on again using on/off

******** It is recommended that when the DC motor/s is under high loads that the control first be started at medium to high speed for the first 1 to 5 seconds of operation to avoid damage to the motor or control and may void the warranty**** On spreaders always start your spinner motor first

Programming Transmitter to Receiver: [Video link](#)

The following are the step by step procedures for setting the unique address between the transmitter and receiver or adding extra transmitters to the receiver.

Note you need to be next to the receiver and the receiver needs to have verified 12-volt power and ground connected and the cover off of it.

On the backside of the standard Transmitter, use a paperclip and **GENTLY** insert it in the hole next to the clear blue window. Once the programming button is depressed, a blue LED will begin to blink for 15 seconds. Flip the keychain remote over and push and release each button individually.

MAKE SURE THE BLUE LIGHT GOES OUT BEFORE PROCEEDING. Look inside the box next to the red LED depress the black programming button. The red LED will begin to flash for 15 seconds. While the red LED is flashing Push and release any single button and release on the keychain remote. The red light will stop blinking and you are now programmed.

Before removing the battery, you can check it by using the paperclip method above and if the blue light starts flashing your battery is fine. You will then need to complete the programming process.

Warning: If a time out situation continues to re-occur beyond two times the operator needs to check for reasons why the motors will not turn. Continually trying to start a jammed motor will cause damage to the receiver and motor.
Note: 1 yr limited warranty, does not cover burnt circuit boards. Units are potted for durability and circuit protection and are not repairable. The only way they can burn out is by taking a voltage spike from what they are hooked up to or incorrect connections.
Transmitters are a wearable part.

More info: see www.controlallwireless.com or email sales@controlallwireless.com

READ***Troubleshooting.**

DO NOT CHANGE YOUR TRANSMITTER BATTERY UNLESS YOU HAVE FOLLOWED PROPER TROUBLESHOOTING.see transmitter programming above. Always test your functions before loading your spreader so you can visually see and hear the different rpm functions. Make sure your discharge chutes are open and baffles adjusted to the material you are using.

Keep transmitter out of extreme cold or warm up before using.

To verify power to the receiver remove cover press the black button if it blinks red there is power to the unit.

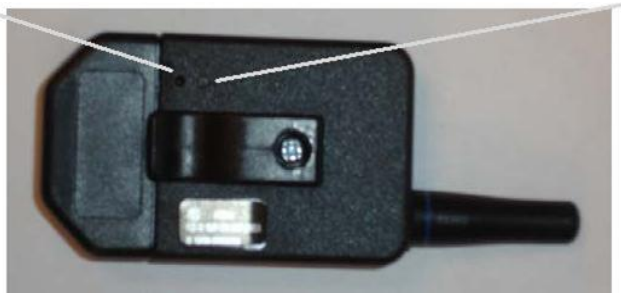
Keep power/ ground connections clean and tight, use dielectric grease, seal backside of connections.

Always disconnect power and ground cable when not in use

Always start spinner motor first before starting auger.

Add button

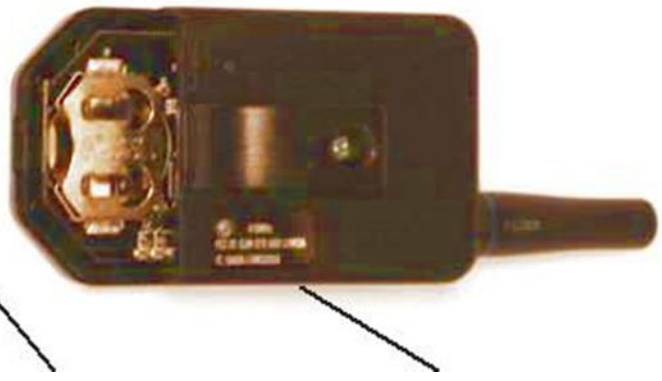
Blue light



COVER



2032 battery



TRANSMITTER

User must maintain good, clean connections, proper wire sizing, for proper operation and to avoid damage to the receiver and void the warranty We have no control over the method the end user may take to install our controllers. For any warranty consideration, all units must be sent back for inspection and testing. Burnt boards of any type means that failure to follow the proper installation has occurred. We are sorry but with any type of electronics, care needs to be taken and directions need to be followed.



Picture of receiver button with red LED Light