

EZYSPO**T**



Thank you for purchasing your EZYSPOT remote spotlight operating system. The system is controlled via a 4-axis joystick. The X and Y axis control the light turret movement. Moving the joystick left and right will move the turret left and right, pushing the joystick forward will tilt the turret down and pulling the joystick back will tilt the turret up. Both axes can move simultaneously. Movement of the joystick is proportional to the speed of movement of the turret. The system is tuned to give a proportional steady speed control with around 85% of the joystick movement. When pushed past this threshold the maximum speed of movement is obtained allowing fast movement of the turret. The Z axis is a twist knob on the joystick which is used to turn the two auxiliary functions on and off. Twisting and releasing either way will toggle an auxiliary output on, Twisting and releasing again will toggle the auxiliary function off. The 4th axis is a push button on top of the joystick. Pushing this button toggles the Spotlight on and off. There is also a system on / off switch and system on indicator light on the top face of the joystick module. This switch disables the ECU preventing the spotlight from being able to be switched on or the turret from moving. When on the road, the spotlight must be facing rearward and the system enable switch should be in the off position so it cannot be switched on accidentally blinding others behind.

Mount the ECU

To setup and install your system you first need to mount the ECU in a location that is out of the weather and protected from stone chips flying around under the vehicle / tray.

It is suggested that the main ECU (Figure 1) be located under the tray near the front where possible so that the cables to the light turret and into the cabin can reach. It is also a good idea to be able to access the cover of the ECU as there are Fuses and Relays inside that may need replacing from time to time. The ECU can be mounted Flat with the lid upper most or vertical with the 3 connector plugs at the bottom. If you feel the unit could be subject to excessive vibration / corrugated roads, a soft mounting system should also be used.

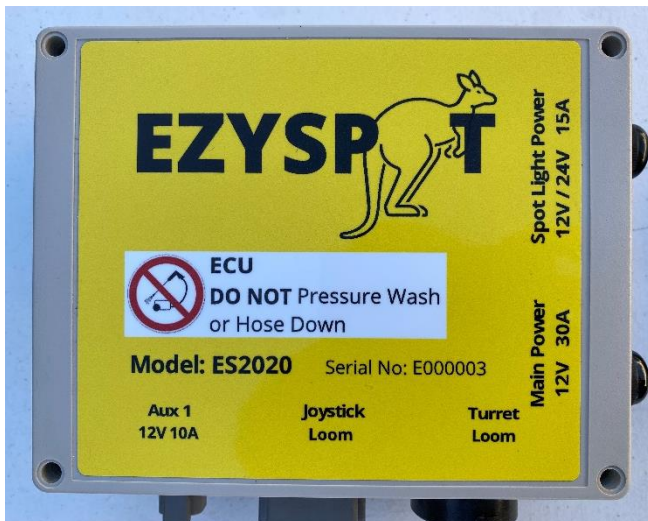


Figure 1

Spotlight Power Options

The spotlight on the turret is powered by separate wires and relay inside the ECU.

If running a 24V spotlight, then the Spot Power wires will need to be connected.

If running a 12V spotlight, terminals inside the ECU can be bridged so that the main feed power also powers the spotlight.

If powering the spotlight from the main power cable you may need to check you do not draw too much current. If you are operating the Aux 1 and Aux 2 lights as well as the spotlight all at once this may draw more current than the main feed is able to handle. The main feed cable is rated to 30A max.

The main feed power is 12V only and **must not** be connected to 24V. Connecting 24V will cause damage to the ECU that cannot be repaired.

The configuration for the Spotlight can be,

- a. 12V powered from the main power supply using bridging links inside the ECU
- b. 12V powered through the Spot Power cable
- c. 24V powered through the Spot Power cable

Connecting Power Cables

Run the main power wires to the battery and connect the spotlight power as required for the mode of operation you are using. It is recommended that a 30A inline fuse is fitted at the battery to protect the system from shorting out should the cable become damaged between the ECU and the Battery. For the Spot Power cable, use a fuse appropriate for your step-up transformer rating, or your spotlight. The maximum fuse rating that can be used for the Spot Power is 15A (12VDC or 24VDC).

Mount your spotlight on the turret. There are two 12mm holes on top that can be used. I have used both the 9" Powa Beam 12V 100W and the FYRLYT Hellfyr 24V 250W spotlights. If required there is also a light deflector plate that can be fitted which helps stop glare from the spotlight, particularly if you have it mounted a fair way forward on the roof rack. An M6 fastener pack is supplied to mount the deflector plate to the top plate. The top plate is threaded so no nuts are required. (Do not over tighten).

The Turret system is designed to mount on to a Rhino Rack pioneer platform. The unit mounts using 4 of the M10 Eye bolts and "T" nuts that Rhino Rack have engineered for their System. They also come with heavy duty washers to ensure a solid mount.

The number of planks on your Rhino Rack will determine the setup configuration of the light turret. The standard setup us for 4 planks. If you have 5 Planks, the base is indexed around 90 Degrees and picks up on the central plank and the next Plank on the left still maintaining 4 mounting points.

There is also an optional under mount system for 5 Plank Rhino Racks that lower the overall height by 120mm. To use this mount a 320mm portion of the centre plank is removed to allow for the turret motor to fit between and cabling underneath. A gap of approximately 120mm is required from the top of the Rhino Rack plank to the roof of the vehicle to allow the motor and cable to fit in place.

Connect Turret Cable

Run the Turret loom from the ECU to the Turret. The loom is 5m in length, some cable may need to be coiled up and zip tied out of the way. If required custom length cables can be made.

The connectors for the Turret and light are connected to the sockets moulded into the loom. The 31 Pin connector connects to the ECU.

If you are not using the Auxiliary outlet on the Turret Loom, ensure you fit the blanking plug supplied to keep water from getting in.

Joystick Setup

The joystick can sit in a cup holder in the vehicle, or you can position it as you need to with other mounts such as RAM mounts. There is an M5 Thread in the bottom of the Joystick assembly that can be used for mounting the unit.

With a Ford Ranger the Joystick sits snugly in the cupholder without and additional mounts. In a Landcruiser 200 Series and 79 Series Dual Cab, the Joystick can be mounted to a RAM mount that sits snugly in the cup holder.

The Joystick itself has a 600mm fly lead that plugs in to the Joystick Loom from the ECU. The plug can be positioned under the front passenger seat and allows for easy removal when not required.

The joystick loom from the ECU is supplied without the Deutsch plug connection that plugs in to the Joystick. This is so you can feed the cable through the supplied 20mm Gland that brings the cable from outside the cab to inside. It is up to the installer to find a suitable location for this. Once the cable has been routed inside the cab, the plug can be populated with the wires. (The pins will already be crimped on). Connect Wire 1 to Pin 1, Wire 2 to Pin 2 Wire 8 to pin 8. When all the pins (Sockets) are correctly installed, fit the Wedge Lock to hold them in place. Then connect to the joystick connector.

Auxiliary Outputs

There are blanking plugs supplied for the Aux 1 and Aux 2 outlets. If these outlets are not being used, it is recommended to fit the blanking plugs to help keep water and moisture out.

Aux 1 is located at the ECU and is rated to 12V 10A. It can be used to run working lights.



Aux 2 is located on the Turret connector loom at the Turret. It is rated to 12V 20A and can be used for work lights or a handheld spotlight.

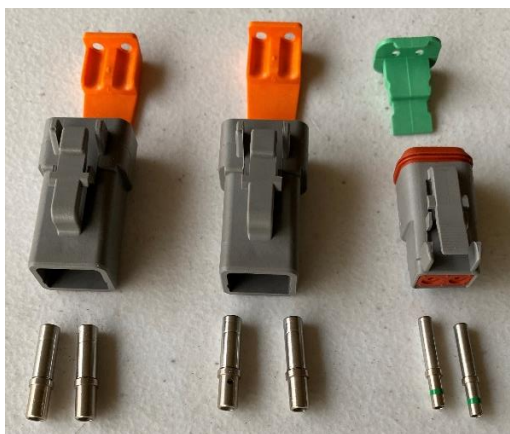


Accessory Pack

Supplied is an accessory pack which contains the plugs and pins that you will need to connect your light and Auxiliary functions.

Connectors for the Spotlight and Aux 2 are Deutsch DTP series, whilst the Aux 1 is a Deutsch DT series. Connector kits for these are supplied.

The connection for the Spotlight on the turret is under the top mounting plate. A short cable from the Spotlight to the connector is required. This is not included.



DTP - Spot Light DTP - Aux 2 DT - Aux 1