

Forward and Reverse Lighting Outputs

As stated earlier, the exact function of the automatic **Forward** and **Reverse** lighting outputs is dependent upon the model of **GigaRad** Receiver/Controller in use.

For all Receiver/Controllers, the lighting direction does not change from its previous state when the **Reverser** is set to **Stop**. It will change only when the direction is reversed.

- When used with a **GRX1** Receiver/Controller, the **Forward** and **Reverse** lighting outputs will function **only** if the **Aux 1** transmitter switch is also **On**.

If you do not intend to use directional lighting, you can gain an additional uncommitted [**Aux 1**] auxiliary output by connecting the **Forward** [orange] and **Reverse** [green] lighting outputs of the **GAC1** together, as one output is always **On** when the **Aux 1** transmitter switch is **On**.

- When used with a **GRX2** or **GRX3** Receiver/Controller, **Forward** and **Reverse** lighting outputs function at all times, as the **Aux 1** transmitter switch is dedicated to servo operation.



This auxiliary controller is designed to connect to the serial data output of any **GigaRad** Receiver/Controller.

It converts the reverser and auxiliary switch state data within that data stream to five individual switched outputs.

Each output is an uncommitted solid state switch, connected on one side to **0V**, rated at **200 mA** for supply voltages of up to **24 V**.

Two outputs are dedicated to directional **Forward / Reverse** lighting.

The remaining **three** outputs are controlled directly by the **Aux 2**, **Aux 3** and **Aux 4** transmitter switches.

Features

- Five individually controlled switched outputs.
- Each output rated at 200 mA, 24 V supply.
- Control power derived directly from **GigaRad** Receiver/Controller.
- Plug and socket terminations for connections, with wired output connectors supplied.
- Size: 36 mm [over pins] x 17 mm x 12 mm

Introduction

The **GAC1 GigaRad Auxiliary Controller** is designed to be used with any **GigaRad** radio control system.

It provides **five** identical switched **on/off** auxiliary outputs, each rated at **200 mA**, for supply voltages of up to **24 V**.

Control inputs to the **GAC1** are decoded from the serial data output provided on all models of **GigaRad** Receiver/Controllers.

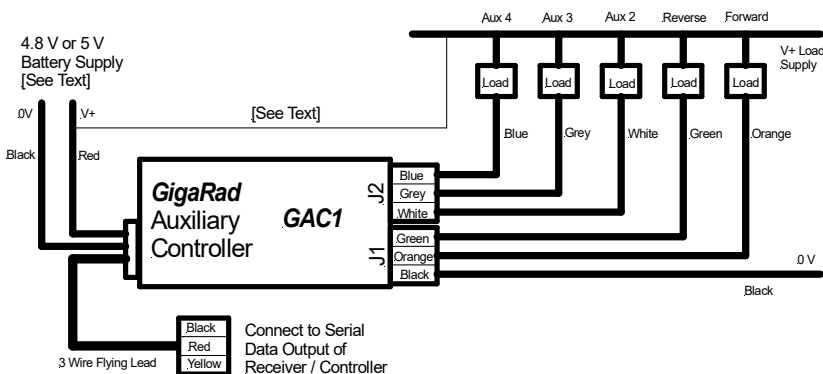
Power supplies for the control circuits of the **GAC1** are normally derived from the Receiver/Controller. However, the **GAC1** also has an optional power supply input to permit 4.8 V or 5 V battery supplies to be connected to a **GRX2 GigaRad** Receiver/Controller when all connectors to that unit are already in use for control purposes.

Each output from the **GAC1** is a single pole solid state **on/off** switch, connected on one side to the system **0V** supply. **Positive** voltage supplies to connected loads may be derived either from the system 4.8 V or 5 V supply, if sufficient power is available, or directly from the vehicle battery supply.

Two of the **five** outputs of the **GAC1** are intended for automatic directional lighting, controlled by the setting of the vehicle **Reverser**. The exact function of these two outputs depends on the model of **GigaRad** Receiver/Controller used, and is described on Page 4.

The other **three** outputs are directly controlled by the **Aux 2**, **Aux 3** and **Aux 4** switches on the **GigaRad** transmitter and may be used to control the operation of any other auxiliary functions such as horns, sound cards or additional lighting.

Wiring and Connections



Notes on Wiring and Connections

- 1 Plug the connector on the 3 wire flying lead directly to the Serial Data Output connector of your **GigaRad** Receiver/Controller. Check that the polarity is correct, by referring to the user manual of the Receiver/Controller.
- 2 Connect each auxiliary load between the required output connector wire and a positive voltage supply. If the load is polarity sensitive, remember that the **negative** side of the load must be connected to the **GAC1**.
- 3 All 0V connections from the **GAC1** [black wires] are internally connected within the **GAC1**, and the V+ [Red] flying supply lead is internally connected to the **GigaRad** system +5V supply.
- 4 No connections are required to the **Red** and **Black** battery supply flying leads shown in the wiring diagram, unless:
 - You are using a **GRX2** Receiver/Controller **and**
 - You are already using the **Aux 1** output of that Receiver/Controller to drive a servo.

In this case, the 4.8 V battery supplies to the **GigaRad** control system must be connected to these two leads. Refer to the **GRX2** user manual for more details.

- 5 If you do not require to use the battery supply wires, described in Note 4, for supply purposes, they may be taped back or cut off, but see Note 6.
- 6 Provided that the total load current of all of your loads is small, you may use the system 4.8 V or 5 V supplies to provide the load supply. This may be connected to the **red** battery supply flying lead. Remember, however, that if you are deriving system power supplies from the BEC of an electronic speed controller these have a limited current capacity.
- 7 For lighting loads using **LEDs**, you must connect a suitable current limiting resistor in series with each **LED**. A current of about 5 mA is recommended for each **LED**. On a 5 V supply, a suitable resistor value is 560 ohm, and for a 12 V supply, 2.2 kilohm. Multiple **LEDs** may be connected in parallel, provided that each has its own series resistor. Make sure that the **cathode** of the **LED** is towards the **GAC1**.