

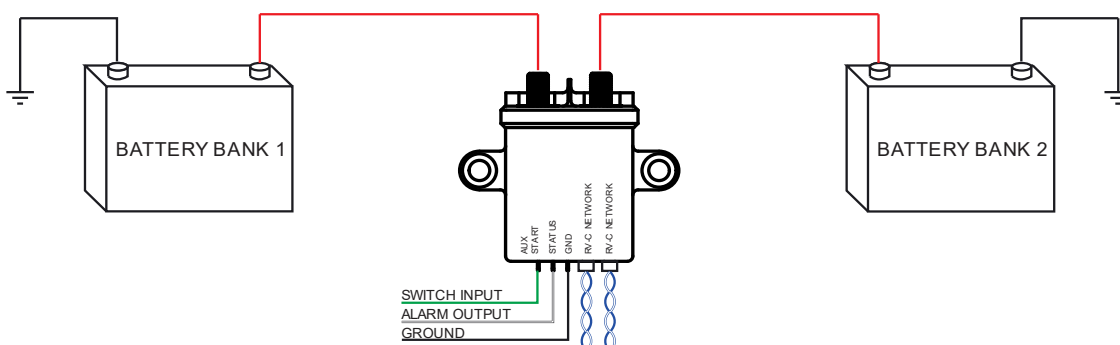
# HD Bi-Directional Isolator Relay Delay (B.I.R.D.®)

Part number: 00-01194-000



The HD B.I.R.D.® was designed to make installation simple. With its all-in-one integrated design, Intellitec brought the electronics to the source, eliminating additional wiring and simplifying the installation process. The HD B.I.R.D.® has two mounting holes located on either side of the unit and uses automotive standard connectors for peripheral connections.

These instructions contain all the information needed to help you install the Battery Disconnect. It is assumed the installer has basic skills in electrical wiring, mechanics, and carpentry. If you have any doubts about these techniques or instructions consult with someone BEFORE you connect a wire or cut a hole.



Wire Diagram illustrates the primary connections of the HD B.I.R.D.®. 3/8" bolts are used for both battery supplies and are capable of supporting 250A of current and additional connections on the HD B.I.R.D.®

### Application Connections:

| Signal                | Function   | Connection Type            |
|-----------------------|--|----------------------------|
| Switch Input (GND)    | Aux Start allows extra cranking power for starting the vehicle | 0.25" Quick Connect Female |
| Alarm Output (VBAT)   | 350 mA output indicating isolation and bridge condition        | 0.25" Quick Connect Female |
| Ground                | Ground supply for HD B.I.R.D.®                                 | 0.25" Quick Connect Female |
| RV-C Network Source 1 | RV-C communications with source 1 power                        | 4 pin Molex Mini-Fit       |
| RV-C Network Source 2 | RV-C communications with source 2 power                        | 4 pin Molex Mini-Fit       |
| Source 1              | Battery 1 source connection                                    | 3/8" Ring Term             |
| Source 2              | Battery 2 source connection                                    | 3/8" Ring Term             |

**RV-C Connectors:**

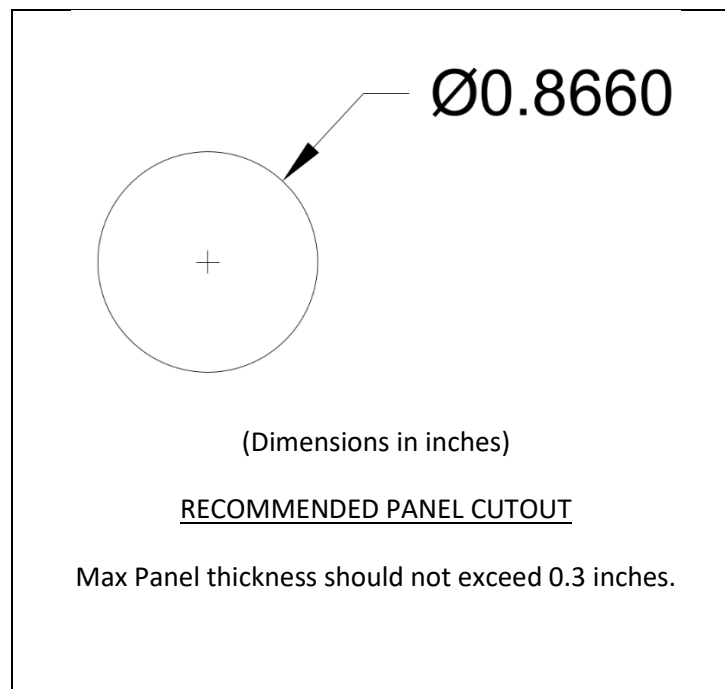
The RV-C network connections use 4 pin Mini-Fit connectors and follow the RV-C standard pin-out convention described in section “2.1.4 Connectors” of the RV-C guideline.

| Pin Number | Description |
|------------|-------------|
| 1          | CAN H       |
| 2          | CAN L       |
| 3          | PS1 -       |
| 4          | PS1 +       |

| Pin Number | Description |
|------------|-------------|
| 1          | CAN H       |
| 2          | CAN L       |
| 3          | PS2 -       |
| 4          | PS2 +       |

**Locating the HD B.I.R.D.® Aux Start Switch:**

The HD B.I.R.D.® offers a direct switch input signal that allows the user to bridge the two batteries together for extra cranking power when necessary. This can become very useful if the chassis battery is low or depleted and the vehicle cannot be started. The switch should be readily accessible by the user. This switch not only controls the state of the isolator relay but also indicates the state and whether faults have occurred. Ensure the wall used for mounting the switch has enough clearance behind it to allow cables access. Typically, ¾” to 1” is required.



*Note: Drawing dimensions refer to the switch used in the Intellitec kit (part # 10-01194-000).*

### **Installing the HD B.I.R.D.®:**

***WARNING: Before proceeding, disconnect all sources of power. Unplug the shore power cable and turn off the generator. Disconnect the battery(s) negative (-) terminal.***

The HD B.I.R.D.® controls a relay that acts as an electro-mechanical switch that disconnects the battery. It should be located near the batteries for wiring simplicity. Once installed, the relay will be inserted "in-line" between the two battery banks' positive (+) terminals. Keep this in mind when choosing the installation location.

While holding the relay in place near the battery banks, mark the location of the two holes for the relay mounting bolts. Set the relay aside, and drill two mounting holes. Before bolting the relay in place, route the Control Cable near the mounting place. When installing in an engine compartment, be sure to provide sufficient space for airflow to allow for cooling.

### **Connecting the Cables:**

Locate the positive battery cable for the chassis and coach battery bank. Carefully cut the cable near the relay. Strip the cable insulation back about 1/2" on each end and crimp on the battery cable terminals defined in the Application Connections table. Remove Keps Nuts from both copper studs and connect the terminals to the copper studs on the relay. *Torque requirements for the high-power copper contact studs should be 5 – 7 FT-LBS, not to exceed 9 FT-LBS.*

If using the provided HD B.I.R.D.® Switch Harness Kit (10-01194-000), follow Wire Diagram for matching the wire harness colors to the connectors.

The HD B.I.R.D.® has 2 RV-C ports. One of these ports provides battery source 1 power while the other provides battery source 2 power. This feature offers a more advanced network management option. Refer to Wiring Diagram to ensure proper connection of the RV-C network.

After all wires have been connected and tightened properly, reconnect the batteries negative cable.

### **Verifying Operation:**

To verify the HD B.I.R.D.® is powered up, check for the green LED heartbeat on the device. This will illuminate at the bottom of the unit near the ground quick connect.

If using the provided switch with the Intellitec kit (10-01194-000), toggle the state of the disconnect. If the LED ring on the switch is illuminated then the isolator relay is closed, if the LED ring on the switch is not illuminated, then the isolator relay is open.

When using this device in an RV-C network, use the DC DISCONNECT DGN to change the state of the isolator relay. Refer to the 53-01194-300 - Integrators Guide for specific information regarding the status and control of the HD B.I.R.D.®.

Available Product Literature and Guides:

|                                |              |
|--------------------------------|--------------|
| Brochure:                      | 53-01194-000 |
| Product Specification:         | 53-01194-001 |
| User's Guide:                  | 53-01194-100 |
| Installation and Applications: | 53-01194-200 |
| Integrators Guide:             | 53-01194-300 |

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