

## Installation Instructions for PowerCommand Control 1301 Communications Kit 541-1199

### GENERAL INFORMATION

This instruction sheet describes the installation of a PowerCommand® Control 1301 (PCC) Communications Kit. The converter included in this kit is for RS-232 to RS-485 communications. This kit is used to program the PCC 1301 control board and display.

The following parts are included in this kit.

| Part Description         | Qty |
|--------------------------|-----|
| Interface Wiring Harness | 1   |
| Converter                | 1   |

### SAFETY PRECAUTIONS

Read these installation instructions completely and become familiar with safety warnings, cautions, and the installation procedure before starting.

**⚠ WARNING** *Incorrect service or replacement of parts can result in severe personal injury or death, and/or equipment damage. Service personnel must be trained and experienced to perform electrical and mechanical service.*

Turn off or remove AC power from the battery charger and then remove the negative (–) battery cable from the set starting battery. This is to make sure the genset will not start while working on it.

**⚠ CAUTION** *Always disconnect a battery charger from its AC source before disconnecting the battery cables. Otherwise, disconnecting the cables can result in voltage spikes high enough to damage the DC control circuits of the generator set.*

**⚠ WARNING** *Accidental starting of the generator set while working on it can cause severe personal injury or death. Prevent accidental starting by disconnecting the starting battery cables (negative [–] first).*

***Make certain the battery area has been well-ventilated before servicing the battery. Arcing can ignite explosive hydrogen gas given off by batteries, causing severe personal injury. Arcing can occur when a cable is removed or re-attached, or when the negative (–) battery cable is connected and a tool used to connect or disconnect the positive (+) battery cable touches the frame or other grounded metal part of the generator set. Always remove the negative (–) cable first, and reconnect it last. Make certain hydrogen from the battery, engine fuel, and other explosive fumes are fully dissipated. This is especially important if the battery has been connected to a battery charger.***

### KIT INSTALLATION

Only connect the interface wiring harness to one device at a time (see Figure 1). For example, if you wish to use a PC to communicate with the display, disconnect the harness from the control board and connect the harness to the back of the display.

#### PCC 1301 Control Board

1. Place the Manual Run/Off/Auto switch of the PCC 1301 in the Off mode.

**⚠ WARNING** *Ignition of explosive battery gases can cause severe personal injury. Do not smoke or cause any spark, arc, or flame while servicing batteries.*

2. Disconnect the battery charger (if equipped). Remove all electrical supply sources.
3. Disconnect the engine battery cable(s). Disconnect the negative (–) cable(s) first to reduce the risk of arcing.
4. If a display is connected to the control board, disconnect the wire from TB1-3 on the board.
5. Connect the interface wiring harness to the TB2 connector on the PCC 1301 control board.

6. Install the converter on the RS-232 port of your PC.

**⚠ CAUTION** *The converter will not function properly if it is installed backwards. Make sure the RS-232 end of the converter is installed on the PC.*

7. Connect the interface wiring harness to the RS-485 end on the converter.
8. Use cable ties, as necessary, to secure the harness.

**⚠ WARNING** *Accidental starting of the generator set can cause severe personal injury or death. Make sure that the PCC is in the OFF mode before connecting the battery cables.*

9. Connect the generator starting battery cables (positive [+] cable first).
10. Reconnect the battery charger (if equipped).
11. If the control is in sleep mode, wake it up. (The control should've been awakened when the interface wiring harness was installed in step 5.)
  - a. If a display is not connected, move the toggle switch to Auto and then back to the Off position.
  - b. If a display is connected and is used to start and stop the genset, press the Off button .
12. When programming is completed, remove the interface wiring harness.
13. If removed in step 4, reconnect the wire to TB1-3 on the control board.
14. Place the Manual Run/Off/Auto switch in the desired position.

## PCC 1301 Display

To use this kit to communicate with the display, make sure the display remains connected to the control board.

1. Place the Manual Run/Off/Auto switch of the PCC 1301 in the Off mode.

**⚠ WARNING** *Ignition of explosive battery gases can cause severe personal injury. Do not smoke or cause any spark, arc, or flame while servicing batteries.*

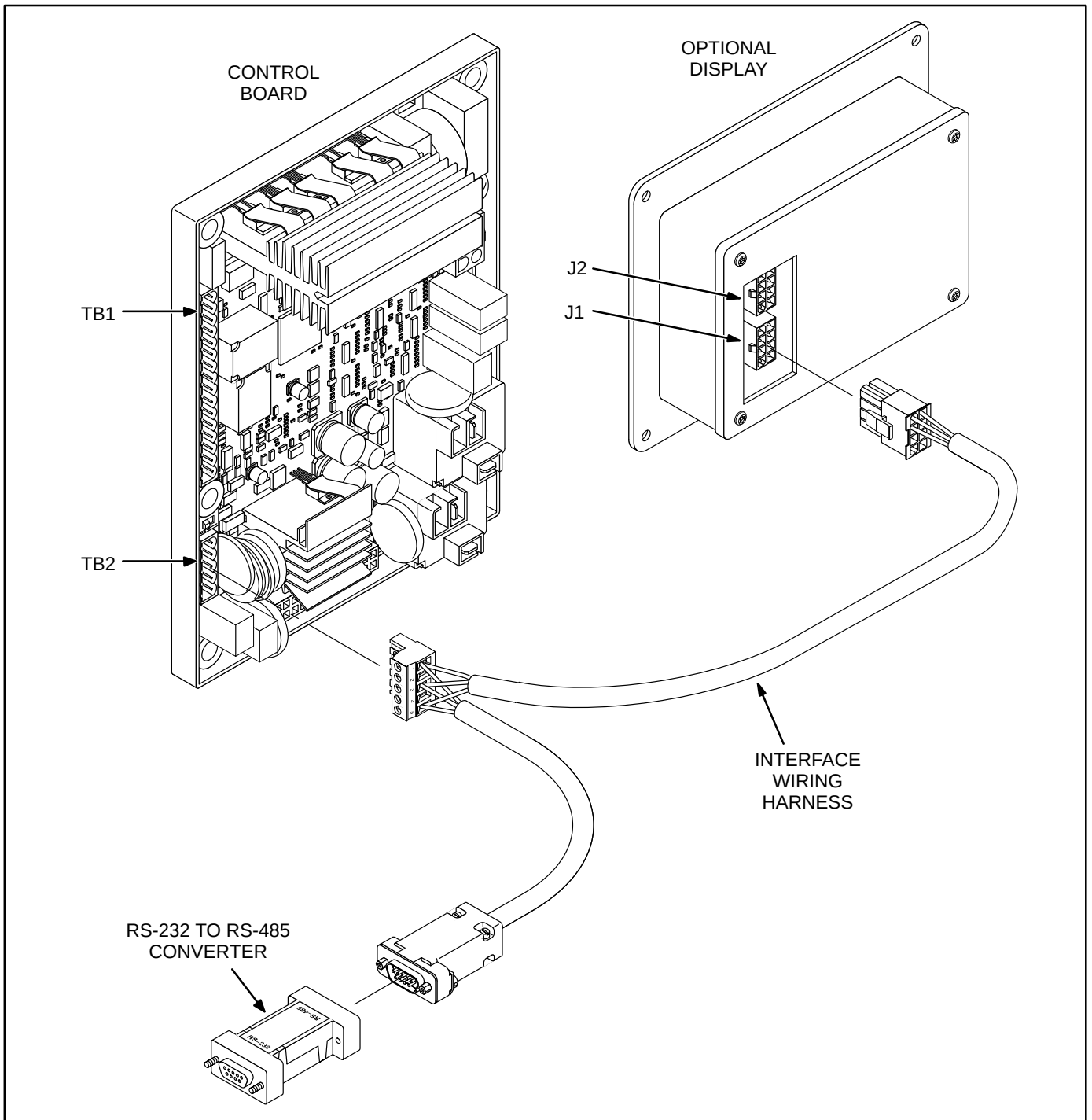
2. Disconnect the battery charger (if equipped). Remove all electrical supply sources.
3. Disconnect the engine battery cable(s). Disconnect the negative (-) cable(s) first to reduce the risk of arcing.
4. Disconnect the wire from TB1-3 on the PCC 1301 control board.
5. Connect the interface wiring harness to either the J1 or the J2 connector (whichever one is not being used by the control) on the back of the display.
6. Install the converter on the RS-232 port of your PC.

**⚠ CAUTION** *The converter will not function properly if it is installed backwards. Make sure the RS-232 end of the converter is installed on the PC.*

7. Connect the interface wiring harness to the RS-485 end on the converter.
8. Use cable ties, as necessary, to secure the harness.

**⚠ WARNING** *Accidental starting of the generator set can cause severe personal injury or death. Make sure that the PCC is in the OFF mode before connecting the battery cables.*

9. Connect the generator starting battery cables (positive [+] cable first).
10. Reconnect the battery charger (if equipped).
11. Wake up the display by pressing the Off button .
12. When programming is completed, remove the interface wiring harness, reconnect the wire to TB1-3 on the control board, and place the Manual Run/Off/Auto switch in the desired position.



**FIGURE 1. KIT INSTALLATION**