# Precision Circuits Inc

Precision ⌐Plex brings to one central location the control of many of the RV's low voltage appliances. In a typical RV wiring scheme, the battery is wired to a fuse block, which distributes power to individual switches mounted throughout the RV. These switches are then wired directly to the various appliances to turn them on and off, or provide other control operations. The Precision ⌐Plex differs in that the battery is wired to a Master Control, which not only distributes power, but also turns the appliances on and off, or controls the appliances directly.
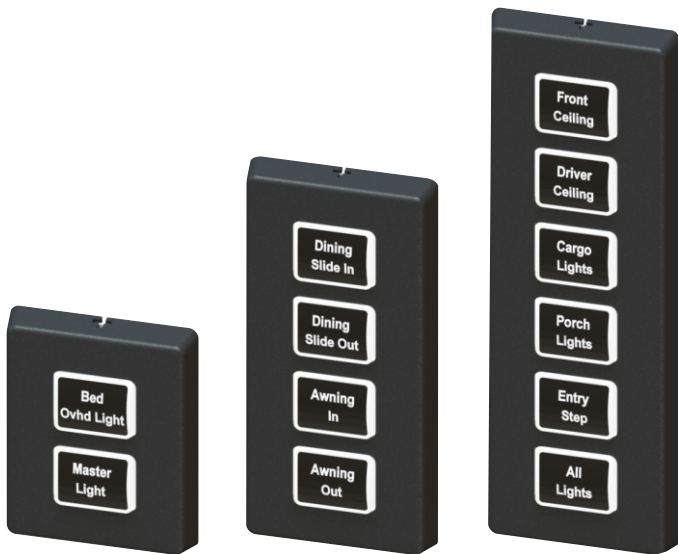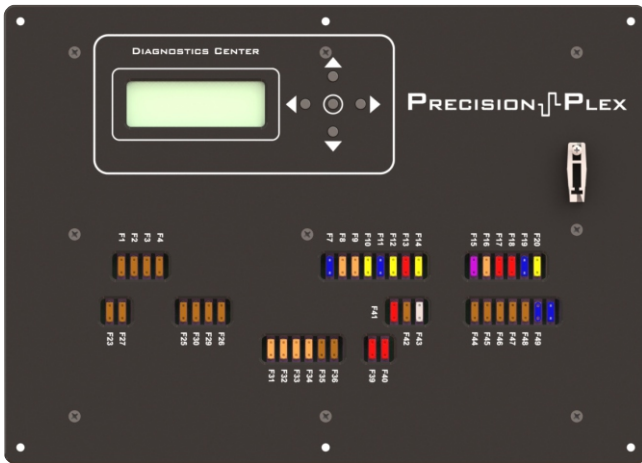
Precision ⌐Plex then uses smart switch panels, which connect over a data cable to the Master Control. These switch panels have large buttons and large legends to make it easy to read and operate. All the buttons of the RV can look and feel the same no matter if the switch is operating a light, dimmer, awning, slide-out, etc.

Switch Panels are available in sizes with 2, 4, and 6 buttons. Legends can be made to meet your preferences.

Customized with the knowledge of the RV layout, the Master Control interprets the various button presses, and controls the appliances in the RV.

Automatic operation and operation lock-outs can be programed into the Master Control to assist the owner in RV living.

Precision Circuits Inc

```
      Precision
      Circuits
        Inc.
  SW Version 1.23X
```

This is the home screen. It identifies the software version your PRECISION⌐ᴸ PLEX operates. To enter the factory diagnostics mode, press and hold the up and down buttons for about a second.

```
1 Fuse Status
2 Inputs Monitor
3 Single Power Ctrl
4 Group Power Ctrl
```

While in the factory diagnostic mode this, along with the 2 following screens, will appear. The technician can scroll down through the options by pressing the down button.

```
5 Motor Control
6 Hi/Lo Signal Ctrl
7 Dimmer Control
8 Sitch Panel Diag
```

Once the choice has been made, be sure the cursor is blinking over the number desired and press the center button. This will take you to a sub-menu of the choice made.

```
9 Module Status
```

Once in a sub-menu, use the up and down buttons to scroll to desired option. Pressing the center button will select and/or operate the function.

```
F01 Dim Liv Room CHK
F02 Dim Liv Room OK
F03 Dim Bed Ovhd OK
F04 Dim Bed Ceil OK
```

After selecting "1 Fuse Status", all fuses, along with their statuses, will be listed. This diagram shows the fuse statuses for dimmers. It also shows that Fuse # 1 needs to be checked and that fuses 2, 3, and 4 are ok. If the status is listed as ok, there is no need to perform any work.

```
F31 gA ConvenIec PWR
F32 gA Storage 2 PWR
F33 gA Storage 1 PWR
F34 gA GarageBth PWR
```

This diagram shows an example of items powered as a group. This is indicated by the letters gA, in this case - group A. The display will read PWR when scrolling through fuses. Pressing the right button will give a status: either OK or CHK (check). It will also power on the group associated with group A. Pressing the right direction button again will turn off the group.

```
F31 gA ConvenIec OK
F32 gA Storage 2 OK
F33 gA Storage 1 CHK
F34 gA GarageBth OK
```

Here is the same screen as shown above, after having pushed the right directional button. The statuses have changed from PWR (power) to OK, or CHK (check). In the diagram, fuse 33 for Storage 1 must be checked.

PRECISION⌐ᴸ PLEX ™

PRECISION ᒐ᠍ᒑ PLEX ™

```
1 Fuse Status
2 Inputs Monitor
3 Single Power Ctrl
4 Group Power Ctrl
```

Here is the main menu again. In the next few sections we'll be referring to choices 2, 3, and 4 from this portion of the main menu. Selecting number 2, Inputs Monitor, will allow you to scroll through low side and high side inputs.

Inputs 1 through 8 are low side inputs and inputs 9 through 12 are high side inputs.

```
J12-1 Water Pump LO
J12-2 Entry Door  HI
J12-3 Lo Spare 1 HI
J12-4 Awning In   HI
```

This screen indicates that the Water Pump switch is on by showing that a signal is being pulled low. Entry Door being HI indicates that the door is closed. When the door is open, the signal will go low.

```
J12-9  Brake Lite HI
J12-10 Hi  Spare 1 LO
J12-11 WtrHtr Flt LO
J12-12 Hi  Spare 2 LO
```

This screen indicates that the Brake Light is on by showing that a signal is being pulled high.
The most important part is to see the signal change when the input changes its state.

```
J3-1 FuelIng Lt  Off
J3-2 Gar Ceil Lt Off
J3-3 Gar Ovhd Lt Off
J3-4 Step Lights On
```

This screen appears after selecting, "3 Single Power Ctrl" from the main menu. In this menu, you'll be able to see if items are on or off. If you'd like to turn something on or off from the PRECISION PLEX board, press the center button. Here, "step lights" are on.

```
J5-1:4 Group A    On
J5-5:8 Group B    Off
J4-1:2 Group C    Off
```

This screen appears after selecting, "4 Group Power Ctrl" from the main menu. In this menu, you'll be able to see if groups of items are on or off. If you'd like to turn something on or off from the PRECISION PLEX board, press the center button. Here, group A is on.

```
5 Motor Control
6 Hi/Lo Signal Ctrl
7 Dimmer Control
8 Switch Panel Diag
```

Here is another view of the main menu screen. In the next few sections we'll be referring to choices 5, 6, 7, and 8 from this portion of the main menu screen.

```
J8-2 Living Blue Off
J8-3 HBrdg N/A 1 Off
J8-5 Loft/TVBlu   Off
J8-6 Loft/CTBlu   Off
```

This screen appears after selecting, "5 Motor Control" from the second screen of the main menu. From this menu you'll be able to see if the power is on or off for each motor.
Pressing the center button will turn an item on or off.

```
J6-5 Sofa 2 In    Off
J6-6 Sofa 2 Out   Off
J6-7 RrAwning In Off
J6-8 RrAwning Ot Off
```

This screen appears after selecting, "6 Hi/Lo Signal Ctrl"from the second menu screen. From this you'll be able to see if the power is on or off. To turn an item on or off press the center button.

```
1 Front Ceiling  On
2 Rear Ceiling   Off
3 Hall Ceiling   Off
4 Bedrm Ceiling Off
```

This screen appears after selecting, "7 Dimmer Control" from the second menu screen. From here you'll be able to see if a light is powered on or off and have the ability to turn on, off, and dim lights. Here, the front ceiling lights are on.

```
 1 Front Ceiling  Dim
 2 Rear Ceiling   Off
 3 Hall Ceiling   Off
 4 Bedrm Ceiling Off
```

In this example, the front ceiling lights are dimmed, or being dimmed. By pressing the center button the lights will turn on or off in a soft on/soft off function.

```
 1 Front Ceiling  DIm
 2 Rear Ceiling   Off
 3 Hall Ceiling   Off
 4 Bedrm Ceiling Off
```

To dim the lights to a particular point of brightness, press and hold the right directional button until the desired brightness is achieved.
Each time the right directional button is released the function will switch (from either dimming up to dimming down or from dimming down to dimming up).

```
101───────102───────
103─────── 104───────
105─────── 106NoComm
107─────── 108───────
```

This screen appears after, "8 Switch Panel Diag" is selected. The screen is indicating which switch panels are communicating with the PRECISION⌐⌐PLEX. The example shows that 106 is not in communication.

```
101─────── 102───C───
103─────── 104───────
105─────── 106───────
107─────── 108───────
```

This diagram shows that someone is pressing the third button down on the switch panel connected to position 102. As they press each button each 'dash' will change to a letter that corresponds to a button's position (A = 1, B = 2, etc.).

If the screen shows that none of the switch panels are communicating, unplug the data cables from the PRECISION⌐⌐PLEX one at a time, until some of the switch panels show communication.

```
101NoComm 102NoComm
103NoComm 104NoComm
105NoComm 106NoComm
107NoComm 108NoComm
```

Because they are in a daisy chain unplugging the 'bad' data cable should then show communication in the other lines.

Precision Circuits Inc

```
9 Module Status
```

This is the final menu option to select.

```
Touch Panel     NoComm
Pwr Cntrl Sys   NoComm
One Place Mon   NoComm
Wireless TP     NoComm
```

This screen simply shows if the Precision⌐⌐Plex is in communication with each apparatus listed.

Precision⌐⌐Plex™

PRECISION CIRCUITS INC

Operation:
Controls low voltage appliances

Dimmer - Each press of a Dimmer type button will change the light from off to on and back to off again. Pressing and holding button changes the brightness level. Releasing the button and pressing again changes whether the light is getting brighter or dimmer.

On/Off - Each press of the Light On/Off type button will change the light from off to on and back to off again.

Vent Lid - Pressing and holding the Lid Up/Down button raises and lowers the Vent Lid. Releasing the button and pressing again moves the lid in the opposite direction.

Vent Fan - Each press of the Fan On/Off button will change the fan motor from off to on and back to off again.

Awning - Pressing and holding the awning out button extends the awning as long as Ignition is off, or Ignition is On and Park Brake is set . Pressing and awning in button will fully retract awning, no matter the state of Ignition or Park Brake. (note: button must be held for 1 sec minimum)

Slide-Out - Pressing and holding the slide-out button extends the slide as long as Ignition is On and Park Brake is set. Pressing and holding slide-in in button will retract slide as long as Ignition is On. (note: button must be held for 1 sec minimum)

All Lights - Pressing All Lights button will turn all the lights off. Pressing All Lights button again will resume or restore the lights to their settings, including dimmer levels. (Note: pressing any light button while All Lights are off, cancels the previous settings of the lights to restore, and the system begins to learn the new settings.

Standard Features::

Switch Panels
    2-Button, 4-Button, and 6-Button Switch Panels

Multiplex Master Control & Power Distribution Panel

Dimmer Circuits	4	(Lights)
On/Off Circuits	16	(Lights, Step, Fans)
On/Off Group	1	(Lights fixtures with integral switches)
H-Bridge	4	(Powered Roof Vents, reverse direction motor control of lids)
Constant Hot	10	(Direct Fuse Connections)
Signal Outputs	12	(Slides, Awning)
Inputs	6	(Ignition, Park Brake, Door, Bed Position)

PRECISION⌁PLEX™