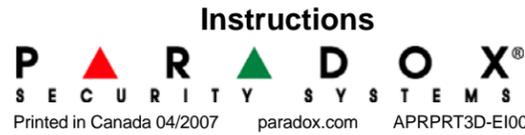
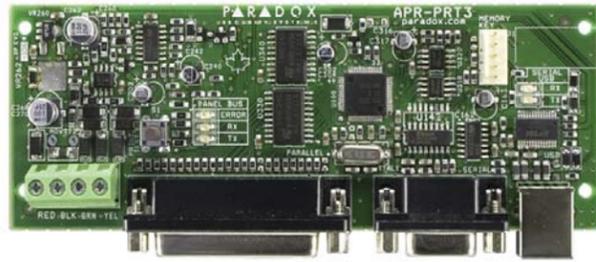


# DIGI PLEX

## EVO

### Printer Module V1.0 (APR-PRT3)



#### HOW DOES IT WORK?

The Printer Module (APR-PRT3) provides the ability to automatically print events as they occur in the system or to manually print the events stored in the Printer Module's 2048 event buffer. The events can be viewed and printed from a computer connected to the Printer Module's serial (9-pin) or USB port. The events can also be sent to a dot matrix printer connected to the Printer Module's parallel port (25-pin) or its serial port (9-pin). The following details will be printed with each event: Date, Time, Partition #, Event Description and Event Label. .

Sample Printout:					
2007/03/12	07:17	Partition 1	Arming with master	John Doe	
2007/03/12	18:09	Partition 1	Disarming with master	John Doe	

*Note: Any events that occurred before the Printer Module was installed are not accessible to the Printer Module.*

#### HOME AUTOMATION INTERFACE CAPABILITIES

When used with an EVO Series or DGP-848 (V4.11 or higher) control panel, the Printer Module can also be used as an interface between a home automation system and your control panel. If the Printer Module is being used in such a way, the printer must be connected through the Printer Module's parallel port while the home automation module must be connected to the Printer Module's serial port. For information on this feature and its related programming sections, refer to the *ASCII Protocol Programming Instructions* and/or *C-Bus Programming Instructions* available on our website at paradox.com.

#### TECHNICAL SPECIFICATIONS

Parallel Port:	Minimum 80 column printer
Serial Port:	1 start bit, 8 data bit, no parity and 1 stop bit (8N1)
Input Voltage:	9-16 Vdc
Current Consumption:	60mA maximum
Serial Port Baud Rates:	2400, 9600, 19200 or 57600 bps
Event Buffer:	2048 events
Compatibility:	Any EVO48, EVO96, EVO192*, DGP-848 or DGP-NE96 control panel Any Spectra control panel (V2.0 or higher) APR-PRT3 can be used to replace a APR3-PRT1 module.

\*When using the APR-PRT3 with the EVO192, the first 96 zones will be recognized.

#### INSTALLATION

The Printer Module connects directly to the control panel's combus. Connect the four terminals labeled red, black, green, and yellow of each module to the corresponding terminals on the control panel as shown in Figure 1.

It is recommended that only dot matrix printers that support a minimum of 80 columns be connected directly to the Printer Module. Only dot matrix printers can print individual events in real time and can be connected using the Printer Module's parallel port (25-pin/ DB-25 connector) or serial port (9-pin/ DB-9 connector).

Dot matrix, inkjet or laser printers can be connected through one of your computer's COM ports to the Printer Module's serial port. Events can be displayed and printed using communication software like **Procomm™**, **Telix®** and **HyperTerminal®**.

#### AUTO-PANEL RECOGNITION

This feature allows the Printer Module to be used with EVO, DGP-848, DGP-NE96 or Spectra (V2.0 or higher) control panels. When connected to the combus, the Printer Module will automatically detect the control panel and adjust its internal communication parameters accordingly.

If connecting the Printer Module to a Spectra control panel, refer to the *Spectra Printer Module Instructions (APR3PRT3S-EIxx)*.

#### LED FEEDBACK

ERROR:	RX:	TX:	Condition:
ON	OFF	OFF	Combus shorted (GND or VCC / No clock / No data)
ON	OFF	ON	Wrong data / Invalid combus address (Too many modules)
ON	ON	OFF	Reserved for future use
ON	ON	ON	Combus lines are reversed (Clock in Green / Data in Yellow)
FLASH	OFF	OFF	Low power

#### PROGRAMMING METHOD

To access the Printer Module's programming mode:

1. Press and hold the [0] key.
2. Enter the [installer code].
3. Enter section [953] (DGP-848) / [4003] (EVO Series / DGP-NE96).
4. Enter the Printer Module's 8-digit [serial number].
5. Enter the 3-digit [section] you want to program.
6. Enter the required data.

The Printer Module can also be programmed using the WinLoad Security Software (V2.62 or higher) or using the control panel's *Module Broadcast* feature. Refer to the *EVO or DGP-848 Reference & Installation Manual* for more details. Please note that the serial number can be located on the Printer Module's PC board.

#### PROGRAMMING SECTIONS

##### Section [001] - Options [1] to [8] Partition Assignment

Only the events occurring in a partition that has been assigned to the Printer Module will be printed. The Printer Module will ignore any events generated in a partition not assigned to the Printer Module. Section [001] options [1] to [8] represent partitions 1 through 8 respectively. To assign the Printer Module to a partition, enable the option that corresponds to the desired partition. Partition 1 is enabled by default.

##### Sections [002] to [013] - Options [1] to [8]

##### Automatic Printing of Zone Status

When the option representing a zone is enabled, the Printer Module will immediately print any zone events that occur. The following zone events can be printed: Zone Open, Zone Closed, Zone Tamper, Zone Fire Loop. To print the Alarm, Alarm Restore, Zone Tamper Restore, and Zone Fire Loop Restore events refer to *Automatic Printing of Event Groups* (section [014] options [1] to [7]) or *Manual Event Group Printing* (sections [027] to [058]). The Printer Module must be assigned to the same partition as the desired zone (see *Partition Assignment*).

**! If a zone is not enabled, events originating from that zone will not be printed.**

**! Sections [008] to [013] can only be programmed if connected to an EVO control panel.**

##### Section [014] - Options [1] to [7]

##### Automatic Printing of Event Groups

Each option represents an event group. When the option representing an event group is enabled, the Printer Module will automatically print the event as it occurs. The following event groups can be printed:

- [1] Miscellaneous Events \*
- [2] Arming/Disarming Events
- [3] Alarm and Alarm Restore Events
- [4] Tamper and Tamper Restore Events
- [5] Trouble and Trouble Restore Events
- [6] Special Events\*\*
- [7] Access Events \*\*\*

See the *EVO or DGP-848 Installation & Reference Manual* for more information on the event groups.

\* Fire Reset, Contact Module Access, Remote Access, PC Fail To Com, User Code Entered, Bypass Programmed, Delay before Transmitting and Utility Key Pressed

\*\* Cold Start, Warm Start, Test Reports, WinLoad Login/Logout, Installer In/Out.

\*\*\* Access Granted/Denied, Request For Exit, Door Left Open Alarm, Door Left Open Restore, Door Forced Alarm, Door Forced Restore.

##### Section [015] - Option [1]

##### Enable Parallel Port

When this option is enabled, you may connect any dot matrix printer directly to the Printer Module's parallel port (25-pin).

##### Section [015] - Options [3] to [6]

##### Printer Status Options

Some printers do not support these printer conditions:

EVO / DigiplexNE Printer Status Mask Options:

- [3] Off-Line Status Mask
- [4] Paper-Empty Status Mask
- [5] Printer Fault Status Mask
- [6] Printer Busy Status Mask

If your printer does not support these printer conditions it is highly recommended that you enable the printer status mask options.

**! If the Printer Status Mask options are ignored, printer troubles will not be displayed by the control panel. These options apply only to the parallel port.**

##### Section [016] - Option [1]

##### Enable Serial Port

When this option is enabled, you can connect a serial printer directly to the Printer Module's serial port (9-pin). You can also connect the Printer Module's serial or USB port to your computer's serial COM port so that the events can be displayed on the computer screen and then printed from the printer connected to the computer.

The Printer Module can use the HyperTerminal® communication program that comes installed with Windows®. Using HyperTerminal®, the Printer Module will display events as they occur on your computer's monitor. To use HyperTerminal® it must first be set up. To set up for the first time:

1. Click **Start** (from the Windows® taskbar) ⇒ **Programs** ⇒ **Accessories** ⇒ **Communications** and then click on **HyperTerminal®**. The **Connection Description** window is displayed.
2. Enter a name in the **Name** text box and select an icon for your connection file. Click **OK**. The **Connect To** window is displayed.
3. From the **Connect Using** drop-down list select the **COM** port connected to the Printer Module. Click **OK**. The **COM Properties** window is displayed.
4. Click on the **Bits per second** drop-down list and select the baud rate that is set in the Printer Module (Section [016] Options [2] & [3]). By default, HyperTerminal® sets the **Data bits** at **8**, the **Parity** at **None** and the **Stop bits** at **1**. Click **OK**.
5. The HyperTerminal® display will appear already connected to the Printer Module. Click on the **Properties** icon (or select **Properties** from the **File** menu). The communication file's Properties window is displayed. Click the **Settings** tab. Under **Emulation**, verify that it is set as **Auto Detect**. If not, select **Auto Detect** from the drop-down list. Click **OK**.

To disconnect, click the **Disconnect** icon (or select **Disconnect** from the **Call** menu). To reconnect, click on the **Connect** icon (or select **Connect** from the **Call** menu). To access your HyperTerminal® communication file, perform step 1 and select your communication file.

##### Section [016] - Options [2] & [3]

##### Baud Settings

Both the Printer Module and serial port should have the same baud rate. Refer to the printer's instruction manual for the correct baud rate.

Baud Rate Settings		[2]	[3]
OFF	OFF	—	2400 Baud
ON	OFF	—	9600 Baud
OFF	ON	—	19200 Baud
ON	ON	—	57600 Baud

##### Section [016] - Option [4]

##### Serial Port Usage

Set the Printer Module's serial port usage to either Event Reporting or Home Automation. When option [4] is OFF, the Printer Module is set to Event Reporting only. When option [4] is ON, the Printer Module is set to Home Automation.



For information on using the Printer Module as an interface for a home automation system, refer to the *ASCII Protocol Programming Instructions* and/or *C-Bus Programming Instructions* available on our website at paradox.com.

**Sections [027] to [058]**

**Manual Event Group Printing**

The event groups are represented by sections:

- Sections [027] to [030]: Miscellaneous Events
- Sections [031] to [034]: Arming/Disarming Events
- Sections [035] to [038]: Alarm/Alarm Restore Events
- Sections [039] to [042]: Tamper/Tamper Restore Events
- Sections [043] to [046]: Trouble/Trouble Restore Events
- Sections [047] to [050]: Special Events
- Sections [051] to [054]: Access Events
- Sections [055] to [058]: All Events

Each group of sections from [027] to [058] represents event groups that can be printed when a specified action from the PGM Programming Table occurs (see the *Digiplex Modules' Programming Guide*), such as pressing Utility Keys or when Access is granted. Therefore, whenever the PGM action occurs, the Printer Module will print all the events from the event group associated with the PGM action.

Program the manual printing feature as you would a PGM. The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # set the range within the Feature Group. Use the PGM Programming Table in the *Digiplex Modules' Programming Guide* to program the Manual Event Group Printing feature. Enter the sections that correspond to the Event Group, Feature Group, Start # and End # of the event group and enter the required data

	Event Group	Feature Group	Start #	End #
Miscellaneous Events	[027]	[028]	[029]	[030]
Arming/Disarming Events	[031]	[032]	[033]	[034]
Alarm/Alarm Restore Events	[035]	[036]	[037]	[038]
Tamper/Tamper Restore Events	[039]	[040]	[041]	[042]
Trouble/Trouble Restore Events	[043]	[044]	[045]	[046]
Special Events	[047]	[048]	[049]	[050]
Access Events	[051]	[052]	[053]	[054]
All Events	[055]	[056]	[057]	[058]

Example: To print all Arming/Disarming Events (sections [031] to [034]) when User Code 04 is entered, enter the following into sections [031] to [034]:

- Section [031]: 0 0 5
- Section [032]: 0 0 0
- Section [033]: 0 0 4
- Section [034]: 0 0 4

Result: Whenever User Code 04 is entered, the Printer Module will print all the Arming/Disarming Events that have occurred.

**Event Groups 000 to 055 can be used to program the Printer Module's Manual Printing feature. Event groups 062 and 063 can only be used when using an EVO control panel.**

**Section [080] and [090]**

**Paradox Memory Key (Not to be used with UL Listed systems)**

The Paradox Memory Key can copy the programmed contents of one APR-PRT3 into as many others as needed. Downloading is completed in less than 5 seconds.

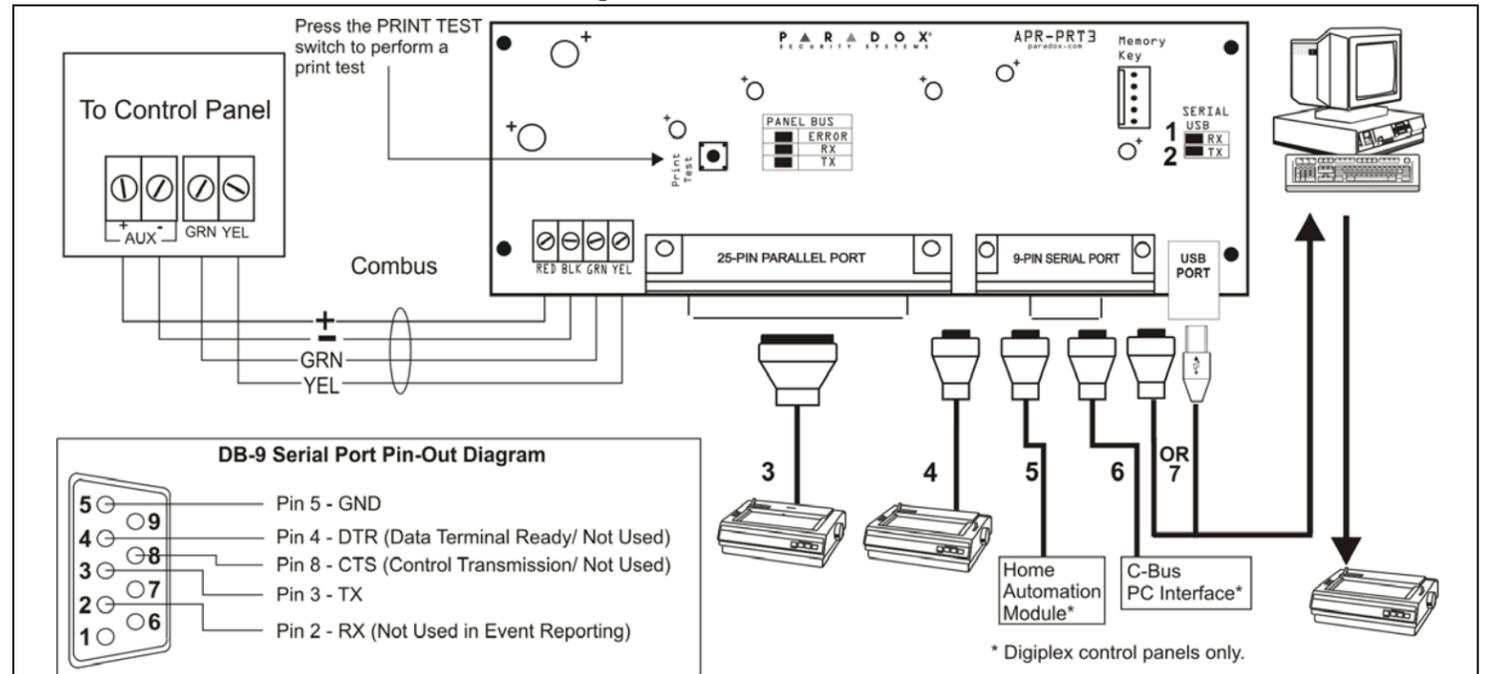
**Copy to Memory Key**

1. Install the Memory Key on the APR-PRT3's connector labeled MEMORY KEY. Make sure that the write protect jumper is **ON**.
2. Enter section [090] to copy the APR-PRT3 sections [001] to [903] and zone labels to the Memory Key.
3. When the APR-PRT3 emits a confirmation beep, wait for a second confirmation beep and then remove the Memory Key. Remove the jumper to prevent accidentally overwriting the Memory Key's contents.

**Copy to the APR-PRT3**

1. Install the Memory Key on the APR-PRT3's connector labeled MEMORY KEY.
2. Enter section [080] to copy the Memory Key's contents to the APR-PRT3.
3. When the APR-PRT3 emits a confirmation beep, wait for a second confirmation beep and then remove the Memory Key.

**Figure 1: APR-PRT3 Connection**



1. Green "RX" LED: Flashes when the Printer Module is receiving data through the serial port only.
2. Red "TX" LED: Flashes when the Printer Module is transmitting data through the serial port only.
3. 25-Pin Parallel Port: Connect the Printer Module's 25-pin parallel port to any dot matrix printer. Note: The dot matrix printer must support a minimum of 80 columns.
4. 9-Pin Serial Port: Connect the Printer Module's 9-Pin serial port to a dot matrix printer. Note: The dot matrix printer must support a minimum of 80 columns.
5. 9-pin Serial Port: Connect the Printer Module's 9-pin serial port to a home automation module.
6. 9-pin Serial Port: Connect C-Bus to the Printer Module using a **null modem cable**.
7. 9-pin Serial Port: Connect either the Printer Module's USB or 9-pin serial port to a computer's COM port to view the control panel's events on the computer's monitor. The events display on the monitor can then be printed through the printer connected to the computer.

**Warning:** Remove AC power and battery before adding a module to the system. Do not connect any modules more than 76m (250ft) from the control panel. Only one APR-PRT3 can be connected per Spectra control panel.

**Warning:** Printer cable length must not exceed 25ft.

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