RTX3-EI05

MAGELLAN™

Wireless Expansion Module
RTX3 V1.4

Instructions

PARADOX®
SECURITY SYSTEMS

PARADOX.COM
Printed in Canada 06/2008

What's New with Version 1.4

- Added support for the REM3 Hand-Held 2-Way Remote Keypad (compatible with RTX3 V1.31 and higher)
- Added flexible PGM deactivation option (see Table 2)

Introduction

The RTX3 (previously MG-RTX3) is a 2-Way Wireless Expansion Module for use with any Digiplex EVO, Spectra SP, and Esprit series control panel. It is also compatible with the DGP-NE96 and DGP-848 control panels.

Compatibility

Hardware

	EVO	Spectra SP	Esprit	Stand-Alone
Zones:	32	32	-	32
Remotes:	32/96/999	32	32	32
Wireless PGMs:	8	16	-	-
Wireless Keypads:	-	8	-	-
2-Way Remote:	✓	✓	-	-
Wireless Repeater:	-	2	-	-
PX8:	-	-	-	4

Software

WinLoad:	(V4.5 or higher)

Before Programming

1. Connect the RTX3 according to the installation guide.
2. Write down the serial number of all wireless modules to be used with the RTX3. If this installation replaces another RTX3, ensure the programming can be transferred.
3. Ensure every wireless module works properly and that you have the latest version of the firmware for the RTX3 and panels.

System Reset

Press and hold the Programming button for 5 seconds, the BUS RX LED flashes. Release the button and press it again while the LED flashes to reset the module to its default values. The system reset feature only functions during the first 30 seconds after the RTX3 is powered up.

Programming with Spectra SP Series

When connected to a Spectra SP series panel, the RTX3 settings are programmed into the panel. Refer to the panel's Programming Guide. Requires version 2.0 or higher of the K32 or K10H/V keypads. Only one RTX3 can be connected to a Spectra SP Series panel.

Programming with Digiplex EVO

To enter programming mode with a Digiplex EVO panel:

1. Press and hold the **[0]** button. Enter the installer code and go to section **[4003]**.
2. Enter the RTX3's 8-digit serial number.
3. Enter the section number you wish to program.

After Programming with EVO

Program the zones, PGMs, and remotes into the EVO panel. For wireless transmitter supervision options, refer to EVO section **[3034]** and RTX3 section **[001]** options **[2]** and **[3]**.

WARNING: When used without an EVO641 or EVO641R keypad, enable EVO option [1] in section [3029].

Table 1: Digiplex EVO Programming

Section	Feature
[001]	**RTX3 Options** Option [1]: Low battery supervision (default: ON) Option [2]: Check-in supervision (default: OFF) Option [3]: Check-in supervision time interval OFF = 24 hours (default) ON = 80 minutes Option [4]: RF jamming supervision (default: ON) Option [5]: On-board module tamper supervision (default: OFF) Option [6]: PGM1 Initial State OFF = Normally open (default) ON = Normally closed Option [7]: PGM2 Initial State OFF = Normally open (default) ON = Normally closed Option [8]: Ignore transmitter tamper signal OFF = RTX3 ignores tamper signal (default) ON = RTX3 reports tamper signal
	Remote Control Programming With EVO641/EVO641R keypad: Program 999 remotes with one RTX3 (refer to User Code and Remote Control programming in the Digiplex EVO *Programming Guide*). Without EVO641/EVO641R keypad: Program 32 remotes per RTX3 as detailed in Table 3.
[002]	**Remote Control Options** Option [1]: MG-REM2 Visual and auditory feedback compatibility options* OFF = Old visual and auditory feedback. (Supported by MG-REM2 V2.00 or higher) ON = New visual and auditory feedback. (MG-REM2 V2.01 or higher with EVO641 / EVO641R keypads.) (Default)
[030]	**View Transmitter, Remote and PGM Serial Numbers** To view a transmitter's 6-digit serial number, press and hold the transmitter's anti-tamper switch or press any remote control button.
[101] to [132]	**Assign Wireless Transmitters** [101] = Zone Input 1; [132] = Zone Input 32 Enter 6-digit serial number or press and release the transmitter's tamper switch. To delete an assigned transmitter, enter 000000 as a serial number.
[601] to [632]	**Transmitter Signal Strength** [601] = Zone Input 1; [632] = Zone Input 32 3 or less = weak (move transmitter); 4 to 10 = OK.
[701] to [732]	**Current Battery Life** [701] = Zone Input 1; [732] = Zone Input 32 View number of weeks the batteries have been in the transmitter.
[801] to [832]	**Previous Battery Life** [801] = Zone Input 1; [832] = Zone Input 32 View number of weeks the previous batteries were in the transmitter.
[671] to [678]	**Two-Way PGM Signal Strength** [671] = PGM 1; [678] = PGM 8 3 or less = weak (move transmitter); 4 to 10 = OK.
[901] to [908]	**Assign Two-Way PGMs** [901] = PGM 1; [908] = PGM 8 Enter 6-digit serial number or press and release the transmitter's tamper switch To delete an assigned Two-Way PGM, enter 000000 as a serial number. If a section between [901] to [904] is empty, the RTX3 will use the on-board PGM.
[910] to [989]	**PGM Programming** Program the Two-Way PGM activation event, deactivation event and PGM Delay options. Refer to Table 2.
[991]	View Two-Way PGM tamper trouble (PGM # in trouble will be displayed)
[992]	View Two-Way PGM supervision trouble (PGM # in trouble will be displayed)

* The new visual and auditory feedback includes the following system statuses: stay armed, instant armed and exit delay. Other status feedback has not changed. Note that for REM2 versions 1.04 or older, stay arm, instant arm and exit delay statuses are not supported, and a rejection beep will be heard when the system is in these statuses.

Table 2: Digiplex EVO PGM Programming

	PGM Activation*				PGM Deactivation*				PGM Delay	
	Event Group	Feature Group	Start #	End #	Event Group	Feature Group	Start #	End	Delay (000 to 255)	Options
PGM1	**[910]**	**[911]**	**[912]**	**[913]**	**[914]**	**[915]**	**[916]**	**[917]**	**[918]**	**[919]**
PGM2	**[920]**	**[921]**	**[922]**	**[923]**	**[924]**	**[925]**	**[926]**	**[927]**	**[928]**	**[929]**
PGM3	**[930]**	**[931]**	**[932]**	**[933]**	**[934]**	**[935]**	**[936]**	**[937]**	**[938]**	**[939]**
PGM4	**[940]**	**[941]**	**[942]**	**[943]**	**[944]**	**[945]**	**[946]**	**[947]**	**[948]**	**[949]**
PGM5	**[950]**	**[951]**	**[952]**	**[953]**	**[954]**	**[955]**	**[956]**	**[957]**	**[958]**	**[959]**
PGM6	**[960]**	**[961]**	**[962]**	**[963]**	**[964]**	**[965]**	**[966]**	**[967]**	**[968]**	**[969]**
PGM7	**[970]**	**[971]**	**[972]**	**[973]**	**[974]**	**[975]**	**[976]**	**[977]**	**[978]**	**[979]**
PGM8	**[980]**	**[981]**	**[982]**	**[983]**	**[984]**	**[985]**	**[986]**	**[987]**	**[988]**	**[989]**
Default Data	000	000	000	000	000	000	000	000	005	OFF

The following options apply to sections **[919]**, **[929]**... **[989]**:

Option [1]: PGM deactivation after:
See table on right

Option [2]: PGM base time:
ON = Minutes OFF = Seconds (default)

Option [8]: Flexible PGM deactivation**:
See table on right

[1]	[8]	
OFF	OFF	Deactivation Event
OFF	ON	Deactivation Event
ON	OFF	PGM Timer
ON	ON	PGM Timer or Deactivation Event

* For a complete list of events, refer to the PGM programming section of your Digiplex or Digiplex EVO control panel's *Programming Guide*.

** In order to use the "Flexible PGM deactivation" option (option [8]), the PGM deactivation after option (option [1]) must be ON.

Table 3: Programming without an EVO641/EVO641R

[040] to [043]	**View or Delete Used Remotes** [040] = remotes 1 to 8; [043] = remotes 25 to 32. To delete a remote, press the corresponding number until it is no longer displayed in these sections.
[201] to [232]	**Assigning Remote Controls to the System** [201] = remote 01; [232] = remote 32 Enter the desired section and then press and hold a button on the remote control until you hear a confirmation beep.
[301] to [332]	**Assign Remotes Controls to Users** Assign the remote controls to users by entering a user number (001 to 255) in the appropriate section (Users 001 to 255, Section [301] = remote 01, section [332] = remote 32.)
[401] to [432]	**Program or Delete Remote Control Button Configuration** [401] = remote 01; [432] = remote 32 _____/_____/_____/_____/_____/_____/_____/_____ (default: 15000000) N/A N/A N/A see *Figure 1* N/A N/A N/A see *Figure 2* [0] = Button Disabled [8] = Panic 2 (Auxiliary or Medical) [1] = Regular Arm [9] = Panic 3 (Fire) [2] = Stay Arm [STAY] = Smoke reset [3] = Instant Arm [FORCE] = Utility Key 1 [4] = Force Arm [ARM] = Utility Key 2 [5] = Disarm [DISARM] = Utility Key 3 [6] = Stay/Instant Disarm [BYP] = Utility Key 4 [7] = Panic 1 (Police) [MEM] = Utility Key 5 [CLEAR] = Exit without saving [ENTER] = Save data

Figure 1: REM1

Figure 2: REM2

Esprit and Stand-Alone Programming

The RTX3 can also be connected to an Esprit panel or function in Stand Alone mode. To enter programming mode:

1. Connect an Esprit 636 or 646 to the “Program” connector.
2. Press the “Esprit Mode Programming” button.
3. Press [ENTER] on your Esprit keypad and enter the installer code (default: 757575).
4. Enter the desired section number.

When programing in Stand Alone mode, The programming sections are the same as when used with an Esprit panel with the following exceptions:

- In Stand Alone mode, section **[001]**, option **[1]** and option **[2]** will not affect system use
- Panic alarms can only be used to toggle PGMs on the RTX3
- Sections **[301]** to **[332]** do not have to be programmed

Table 4: Esprit / Stand Alone Programming

Section	Feature
[000]	**Installer Code** Set Installer Code (4 or 6 digits, default: 757575)
[301] to [332]	**User Code Assignment** Assign a valid user code from the Esprit Panel into the RTX3. [301] = user 01; [332] = user 32. To delete a user code, press [2ND] and then [Enter]
[201] to [232]	**Remote Control Assignment** [201] = remote control 01; [232] = remote control 32 Press [Enter]. After the confirmation beep, press and hold any button on the remote until you hear two beeps. To delete a remote control, press [2ND] followed by [Enter].
[401] to [432]	**Remote Control Button Options** [401] = remote control 01; [432] = remote control 32 Options [1] to [3]: See Table 5. Option [4]: Enable button 🔒 for PGM activation (see section [011]) default = ON Option [5]: Enable button 🔓 for PGM activation (see section [012]) default = ON Option [6]: Enable button ⏻ for PGM activation (see section [013]) default = ON Option [7]: Enable button → for PGM activation (see section [014]) default = ON Option [8]: Enable button ⏻ + → for Panic Alarm
[011] to [014]	**PGM Output Activation** [011] = Remote Button 🔒 [012] = Remote Button 🔓 [013] = Remote Button ⏻ [014] = Remote Button → Option [1]: Activate PGM 1 output (Default ON in section [011]) Option [2]: Activate PGM 2 output (Default ON in section [012]) Option [3]: Activate PGM 3 output (Default ON in section [013]) Option [4]: Activate PGM 4 output (Default ON in section [014]) Refer to section **[401]** to **[432]**
[021] to [024]	**PGM Latch/Delay** [021] = PGM1; [024] = PGM 4 Option [0]: Latched — Option [5]: 40 seconds Option [1]: 1 second — Option [6]: 60 seconds Option [2]: 5 seconds (default) — Option [7]: 2 minutes Option [3]: 10 seconds — Option [8]: 4 minutes Option [4]: 20 seconds
[001]	**Code Length** Option [1]: ON = 6-digit access code length (default) OFF = 4-digit access code length **Panic Alarm** Option [2]: ON = Panic Alarm toggles PGM and panic alarm. (default) OFF = Panic Alarm toggles the PGM
[002]	**PGM Output on Panic** Option [0]: No PGM output on panic alarm Option [1]: Toggle PGM 1 on panic alarm Option [2]: Toggle PGM 2 on panic alarm Option [3]: Toggle PGM 3 on panic alarm (default) Option [4]: Toggle PGM 4 on panic alarm
[003]	**RF Lockout on Panic** Option [0]: No RF signal lockout on panic alarm (default) Option [1]: 30-second RF signal lockout on panic alarm Option [2]: 60-second RF signal lockout on panic alarm Option [3]: 90-second RF signal lockout on panic alarm Option [4]: 120-second RF signal lockout on panic alarm
[004]	Option [6]: PGM1 Initial State OFF = Normally Open (default) ON = Normally Closed Option [7]: PGM2 Initial State OFF = Normally Open (default) ON = Normally Closed

Table 5: Remote Control Arming Options [401] to [432], Options [1] to [3]

Option **[1]**	Option **[2]**	Option **[3]**	Definition
Off	Off	Off	No Arm or Disarm
On	Off	Off	Button 🔒 = Regular Arm***** (default)
Off	On	Off	Button 🔓 = Regular Arm*****
On	On	Off	Button 🔒 = Regular Arm***** Button 🔓 = Regular Arm*****
Off	Off	On	Button 🔒 = Force Arm*****
On	Off	On	Button 🔒 = Force Arm***** Button 🔓 = Stay Arm*****
Off	On	On	Button 🔒 = Regular Arm***** Button 🔓 = Stay Arm*****
On	On	On	Button 🔒 = Stay Arm*****

* Buttons used to arm are also used to disarm the system

Installation Information

Table 6: Mounting and Connection

Figure 3: Mounting	
A	Back Cover
B	Antennas: The vertical antenna is the default antenna. Connect the horizontal antenna to improve reception and range.
C	PCB Mounting Holes (x 9)
D	Mounting clip (x 4)
E	Wiring Slot
Figure 4: PCB and Connection	
F	ERROR (Red): Indicates a problem with the module. BUS RX (Green): Flashes when receiving information from the panel. BUS TX (Green): Flashes when transmitting information to the panel. RF RX(Green): Flashes when receiving wireless information. RF TX(Yellow): Flashes when transmitting wireless information. **Special Display (Digiplex EVO and Spectra SP Series only):** BUS RX / BUS TX / Error / Condition OFF / OFF / ON / Short on GRN or YEL / Fail to Com OFF / ON / ON / Wrong data / Invalid Combus address (Too many modules) ON / OFF / ON / Future Use ON / ON / ON / Combus lines reversed ---- / ---- / Flash / Combus power is too low
G	Connect to a 307USB and use WinLoad’s In-Field Firmware Upgrade Application to upgrade the firmware. Connect the PX8 to a serial port. See the PX8 installation manual for additional information.
H	Anti-Tamper Switch
I	Esprit Programming: Press to enter programming mode in Esprit mode. System Reset: Press and hold the Programming button for 5 seconds, the BUS RX LED will flash. Release the button and press it again while the LED flashes to reset the module to its default values. This is only possible in the first 30 seconds after the RTX3 is powered up.
J	Connect the Esprit 636/646 LED keypad to the “Program” connector to program in Esprit and Stand Alone mode.
K	If the current draw exceeds 150mA on PGM1 or PGM2, use a relay. Connect the RTX3’s RED connector to the relay’s RED connector, and the PGM connector (PGM1 or PGM2) to the relay’s BLK connector.
L	Connect PGM3 and PGM4 to external power supplies if you need additional power. A PS-817 is recommended. Connect the PGM’s N/O connector to the external power supply’s + connection. Connect the power supply’s - connector to the device’s - connector. Connect the PGM’s COM connector to the device’s + connector.

Figure 3: Mounting

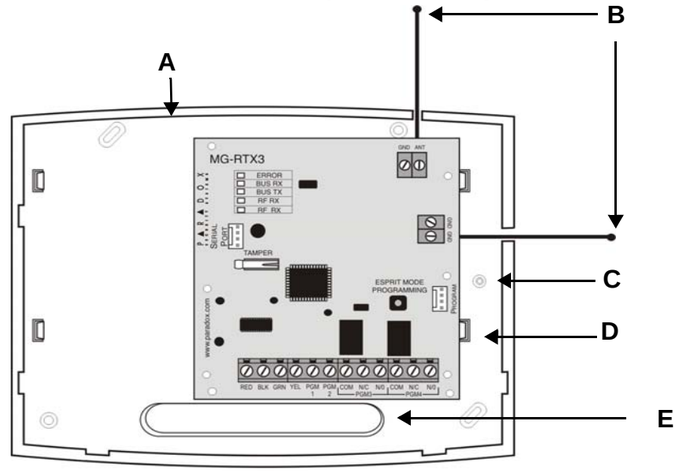
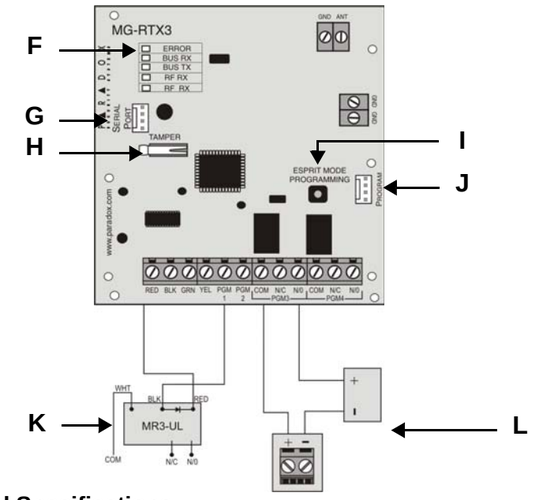


Figure 4: PCB and Connection



Technical Specifications

DC Power	12VDC
Frequency:	433MHz or 868MHz
Sensitivity:	-120 dBm
Current consumption:	50 mA
Dimensions (no antenna):	15cm x 16cm x 3cm (6in x 6.5in x 1.1in)
Operating temperature:	0°C to 49°C (32°F to 120°F)
PGM outputs:	PGM1 and PGM2 - 150mA PGM transistor outputs PGM3 - form C relay output rated at 5A/28VDC, N.O./N.C. (PGM4 optional)
Range	Refer to the appropriate transmitter *Instructions*
Other:	Di-pole antenna; Error Correction Algorithm
Approvals	For the latest information on product approvals, visit our Web site at paradox.com

Warranty

For complete warranty information on this product please refer to the Limited Warranty Statement found on the website www.paradox.com/terms. Your use of the Paradox product signifies your acceptance of all warranty terms and conditions.