

Software Release Notes

MS-012550-001

Rev. AL, February 2017

Radio Personality Manager [RPM]

SK-104768-001 R14C

Compatible with Windows Server® 2008 R2, 2012, 2012 R2,
Windows® 7, Windows 8/8.1, and Windows 10



ACKNOWLEDGEMENT

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MANUAL REVISION HISTORY

REV	DATE	REASON FOR REVISION
N	Aug/11	New features and enhancements and resolved TRs.
P	Feb/12	New features and resolved TRs.
R	Apr/12	Resolve TRs.
T	Oct/12	Added support for XG-25M radios, added new options, resolved TRs.
U	Nov/12	Corrected typographical errors. No change in software.
V	Apr/13	New features and resolved TRs.
W	Jun/13	Changes to support P25T TDMA Phase 2 and resolved a TR.
Y	Jul/13	Resolved TR.
AA	Jan/14	Support for XGP R2 radios, added new features, removed ProGrammer™ and VIDA® Device Manager from kit, and resolved TRs.
AB	Apr/14	New features and resolved TRs.
AC	Feb/15	New features and resolved TRs.
AD	Apr/15	New features and resolved TRs.
AE	Oct/15	New features and resolved TRs.
AF	Oct/15	Resolved TRs.
AG	Dec/15	Resolved TRs.
AH	Mar/16	New feature added (AGC).
AJ	May/16	New features and resolved TRs.
AK	Aug/16	New features and resolved TRs.
AL	Feb/17	Resolved TRs, added VR Activation Tone, and added support for Windows 10 (x86 and x64) Operating Systems.

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1. SAFETY CONVENTIONS

The following conventions may be used in this manual to alert the user to general safety precautions that must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the product. Harris assumes no liability for the customer's failure to comply with these standards.



The **CAUTION** symbol calls attention to an operating procedure, practice, or the like, which, if not performed correctly or adhered to, could result in a risk of danger, damage to the equipment, or severely degrade the equipment performance.



The **NOTE** symbol calls attention to supplemental information, which may improve system performance or clarify a process or procedure.

2. INTRODUCTION

This document contains the Software Release Notes for Radio Personality Manger (RPM) R14C, product number SK-104768-001.

RPM is a software utility that allows the user to create, manage, read, and write XGP, XLP, and Unity radio personalities.

3. COMPATIBILITY

3.1 OPERATING SYSTEM REQUIREMENTS

RPM supports only the following versions of Microsoft Windows. RPM is only compatible with the U.S. versions of Windows.

- Microsoft Windows 7, 8.1 and 10
- Windows Server 2008 R2, 2012, 2012 R2

3.2 HARDWARE REQUIREMENTS

The Hardware Requirements to run the Operating System are sufficient to run RPM.

3.3 RADIO COMPATIBILITY

RPM supports the following radios and firmware versions:

Table 3-1: RPM Supported Radio Matrix

	ECP	XGP	XLP	
			R02x	R03+
Jaguar, 5100/7100 Series	No	No	No	No
P-Series	Yes	Yes	No	No
M-Series	Yes	Yes	No	No
XG Series and M7300	Yes	Yes	Yes	No
• XG-100P	Yes	Yes	Yes	Yes
• XG-25P Rev. A	Not supported in RPM. See notes below.			

- **Jaguar, 5100/7100 Series** – Jaguar 700P RU101219, Jaguar 725M, P7100, M7100, and P5100

A minimum of R14 Firmware.

- **P-Series** – P5200, P5300, P5400, P5500, P7200, M7200, and P7300,
- **M-Series** – M5300 and M7200
- **XG-Series and M7300** – XG-15P, XG-25P, XG-25M, XG-75P, XG-75Pe, XG-75M, and Unity XG-100 Mobile (CH-721 and CH-100)
 - M7300 is treated like an XG-75M.
 - Support for XLP R03A and later is available starting with RPM2 R3A.
- XG-25P Rev. A (or later)
 - Not supported in RPM. Only supported in RPM2 R3A or later.
 - ****DO NOT**** reflash this radio to earlier BurnApp or radio firmware.
 - See XLP Software Release Notes 14221-1800-8000 Rev J (or later) for more information about which Radio Part Numbers this applies to.
- **XG-100P** – Unity XG-100 Portable
 - Only supported in RPM; not supported in RPM2.

3.4 PROFILE MANAGER COMPATIBILITY

See the ProFile Manager (PM) Release Notes, 14221-1100-8250, for more information about the radios supported by this version of RPM.

RPM supports the following radios:

Table 3-2: ProFile Manager Compatibility Matrix

Radio Series	PM/RPM		PM/RPM2	
	R9E/R14C	R10+/R14C	R9E/R2B	R10+/R3+
Jaguar, 5100/7100 Series	Yes	Yes	No	No
P-Series	Yes	Yes	No	No
M-Series	Yes	Yes	No	No
XG-Series (XGP Latest)	No	No	Yes	No
XG-Series (XLP R2)	Yes	No	Yes	Yes
XG-Series (XLP R3+)	XG-100P only		No	Yes
XL-Series	N/A		Yes	Yes

- **Jaguar, 5100/7100 Series:** P7100, M7100, P5100, Jaguar 700P RU101219, and Jaguar 725M
A minimum of ECP R14 radio code
- **P-Series:** P5200, P5300, P5400, P5500, P7200, and P7300
- **M-Series:** M5300 and M7200
- **XG-Series:** XG-15P, XG-25P, XG-25M, XG-75P, XG-75Pe, XG-75M/M7300, XG-100P (RPM only), XG-100M/CH-100, and XG-100M/CH-721
- **XL-Series:** XL-200P

4. FEATURES/ENHANCEMENTS

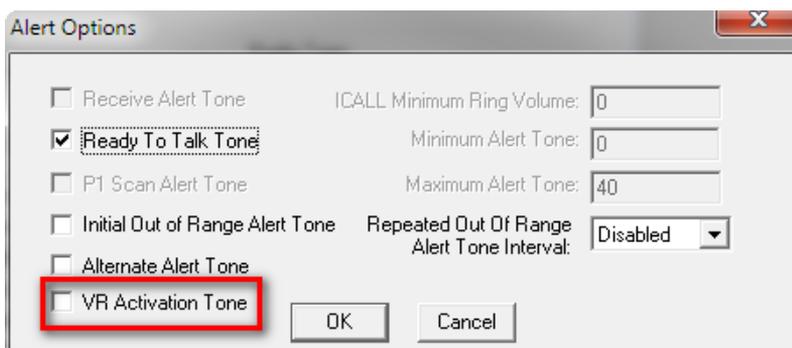
4.1 R-STATE R14C

4.1.1 Windows 10 Support

This version of RPM adds support for Windows 10 (x86 and x64) Operating Systems.

4.1.2 VR Activation Tone

RPM R14C added a checkbox in Alert Options called “VR Activation Tone”. When this checkbox is checked, the radio plays an alert tone when it successfully attaches to a Vehicular Repeater. This checkbox is only available on the Unity XG-100 Portable.



4.2 R-STATE R14B

RPM R14B adds the Suppress Microphone Click feature.

4.2.1 Supported Radios

- XG-100M/CH-721
- M7300
- XG-75M

4.2.2 Enhancement Details

A new checkbox has been added to the General Options screen (Figure 4-1).

- This control allows the user to suppress a mechanical noise associated with the unkeying of a mobile microphone.
- The default value for Suppress Microphone Click is ‘disabled.’

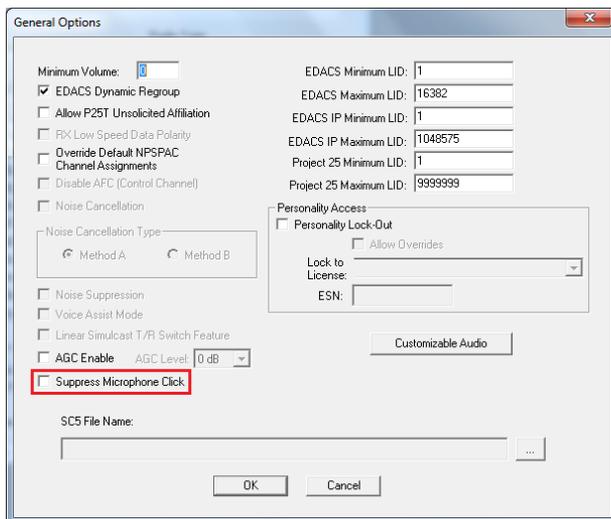


Figure 4-1: Suppress Microphone Click

4.3 R-STATE R14A

Support has been added for XLP R2 features, including the following:



NOTE

Starting with XGP R5A, new features will NOT be supported on the following radio hardware platforms: P5200, P5300 800 MHz, P5400, P5500 VHF and 700/800 MHz, P/M7200, P7300 VHF and 700/800 MHz.

4.3.1 Parallel Audio Mode

4.3.1.1 Supported Systems

- P25 Trunked
- P25 Conventional
- Analog Conventional

4.3.1.2 Supported Radios

XG-100M with CH-100

A new checkbox has been added to the Audio Settings Options screen (Figure 4-2) allowing the user to enable/disable Parallel Audio mode.

The default value for Parallel Audio mode is ‘disabled.’

When “Parallel Audio Mode” is enabled in RPM; when a call is initiated from one of the control heads connected to the mobile radio, the audio is routed locally to other Control Heads and also transmitted over-the-air.

When “Parallel Audio Mode” is disabled in RPM; when a call is initiated from one of the control heads connected to the mobile radio, the audio is routed over-the-air only. Audio is not routed to the other control heads connected to the mobile radio.

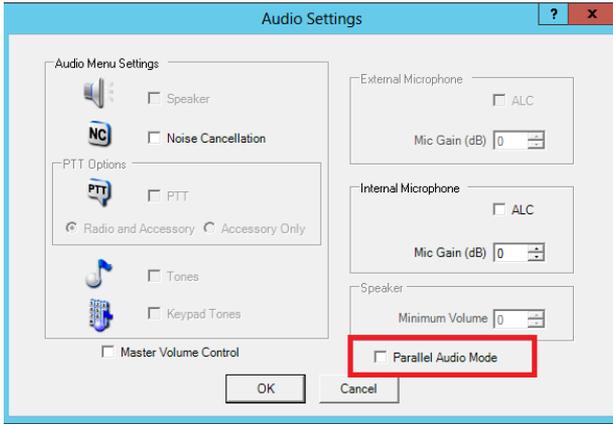


Figure 4-2: Parallel Audio Mode

4.3.2 Unity XG-100P Supports File Name with XLP

Prior to this release, the Unity XG-100P only allowed personalities to be written via RPM when the firmware version contained “XGP.” Now it allows personalities to be written when the firmware version contains “XLP” as well.

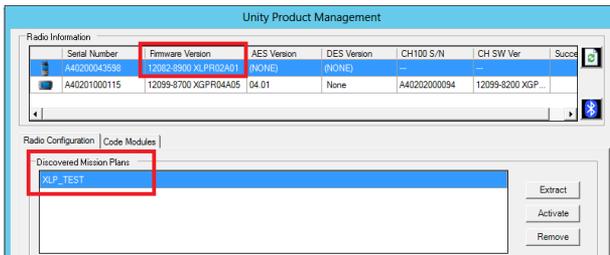


Figure 4-3: Unity XG-100P Support file name with XLP

4.3.3 Encryption Lite

4.3.3.1 Supported Systems

- P25 Trunked
- P25 Conventional

4.3.3.2 Supported Radios

- XG-75P
- XG-75Pe
- XG-25P
- XG-25M
- XG-15P
- M5300 800 MHz
- M5300 900 MHz
- XG-75M/M7300
- XG-100M/CH-721
- XG-100M/CH-100
- RPM allows the user to enter up to 8 ARC4 keys.
- RPM specifies the algorithm ID for ARC4 keys using the ID value 0xAA.
- RPM allows the user to enter a key as a three-tuple (Key Number, Key ID, and Key Value).
- RPM limits key number entry to be in the range of 1 to 4095.
- RPM verifies that the key number for each of the entered keys is unique within the set of keys entered. (That is, a key number can be used only once within a personality.)
- RPM limits key ID entry to the range 0x0000 to 0xFFFF.
- RPM verifies that the key ID for each of the entered keys is unique within the set of keys entered. (That is, a key ID can be used only once within a personality.)
- For key value entry, RPM allows for entry of a 10-digit hex value.
- RPM verifies that the entered key value is exactly 10 hex digits in length.

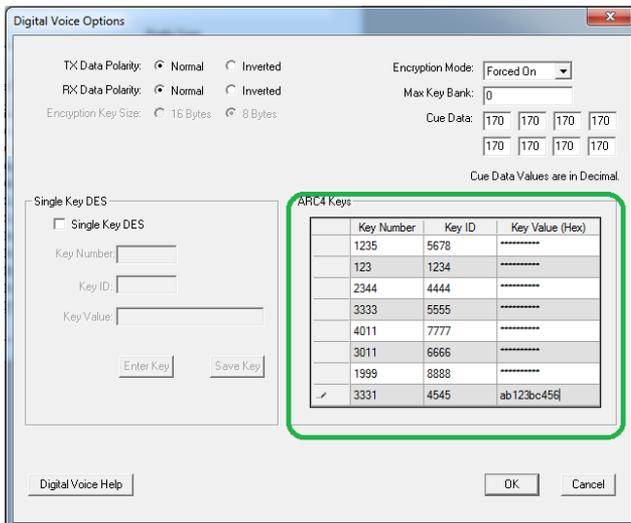


Figure 4-4: ARC 4 Keys added in Digital Voice Options Dialog Window

- When defining a P25 System (Trunking or Conventional), RPM provides a mechanism by which a user can specify an ARC4 key as a System Key.

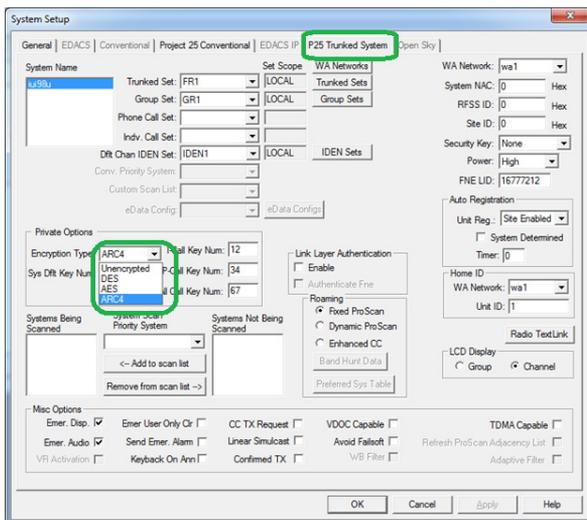


Figure 4-5: ARC4 Key added for P25T System as Encryption Types

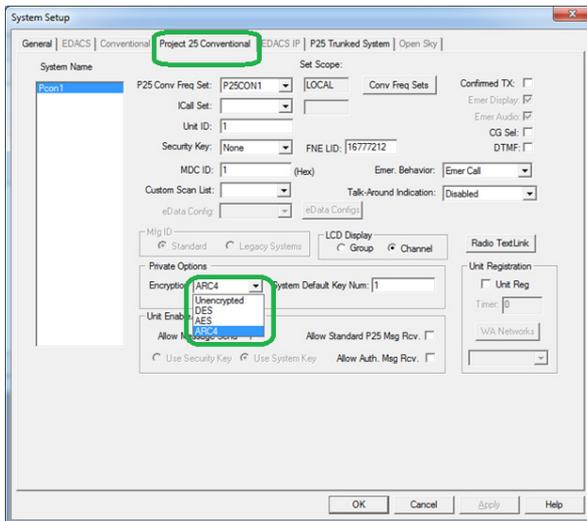


Figure 4-6: ARC4 Key added for P25C System as Encryption Types

- When defining a P25 Group (Trunking or Conventional), RPM provides a mechanism by which a user can specify an ARC4 key as a Group Key.

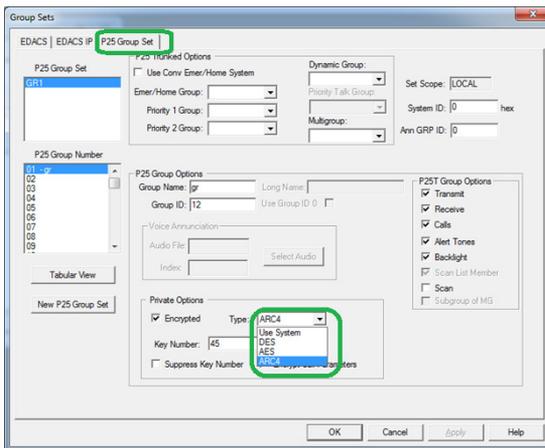


Figure 4-7: ARC4 Key added for P25 Group Set as Encryption Types

4.3.4 AGC

Refer to Appendix A for more information on the AGC feature.

4.3.4.1 Supported Radios

- XG-75P
- XG-75Pe
- XG-15P
- XG-25P
- XG-25M
- XG-100P
- XG-100M/CH-721
- XG-100M/CH-100
- XG-75M/M7300
- RPM adds an “AGC Enable” check box to the General Options screen. The default for the AGC Enable checkbox is Disabled (unchecked).
- When reading an older personality file, the AGC Enable checkbox is initialized to AGC disabled (unchecked).
- The AGC Enable checkbox is grayed out for unsupported radios. When the AGC Enable checkbox is grayed out, the AGC Enable bit value is set to 0 (AGC Disabled), even for unsupported radio types.
- For radios that support the AGC Enable control, the default value of the AGC Level control is 0 dB.
- For radios that support AGC Enable, RPM grays out the existing AGC Level drop-down control on the General Options screen when the AGC Enable checkbox is unchecked, and un-grays it when checked.
- The AGC Level drop-down control is always un-grayed, and the AGC Enable checkbox is always grayed for P7100, M7100, Jaguar 700P, and Jaguar 725M radios.
- For all other radio types both the AGC Level and AGC Enable controls are grayed out.
- XG-100P: If either the Internal or External Microphone ALC is enabled in Audio Settings for the XG-100P and the user enables AGC, a warning box is displayed that states: “You cannot enable both AGC and ALC (Audio Settings) at the same time. Disable one or the other before writing personality.”
- XG-100P: If AGC is enabled for the XG-100P and the user selects either Internal or External Microphone ALC in Audio Settings, a warning box is displayed that states: “You cannot enable both AGC (General Options) and ALC at the same time. Disable one or the other before writing personality.”
- XG-100P: On personality write, RPM performs a check to see if both AGC (General Options) and ALC (Audio Settings, internal or external

microphone) are enabled at the same time. If they are both enabled, RPM will not write the personality and a warning box is displayed that states: “You cannot enable both AGC (General Options) and ALC (Audio Settings) at the same time. Disable one or the other before writing personality.”

- XG-100M with CH-100: If the Internal Microphone ALC is enabled in Audio Settings for the XG-100M with CH-100 and the user enables AGC, a warning box is displayed that states: “You cannot enable both AGC and ALC (**Unity CH100 Mobile Control Head Options → Audio Settings**) at the same time. Disable one or the other before writing personality.”
- XG-100M with CH-100: If AGC is enabled for the XG-100M with CH-100 and the user selects Internal Microphone ALC in **Unity CH100 Mobile Control Head Options → Audio Settings**, a warning box is displayed that states: “You cannot enable both AGC (General Options) and ALC at the same time. Disable one or the other before writing personality.”
- XG-100M with CH-100: On personality write, RPM performs a check to see if both AGC (**General Options**) and ALC (**Unity CH100 Mobile Control Head Options → Audio Settings, internal microphone**) are enabled at the same time. If they are both enabled, RPM will not write the personality and a warning box is displayed that states: “You cannot enable both AGC (**General Options**) and ALC (**Unity CH100 Mobile Control Head Options → Audio Settings**) at the same time. Disable one or the other before writing personality.”

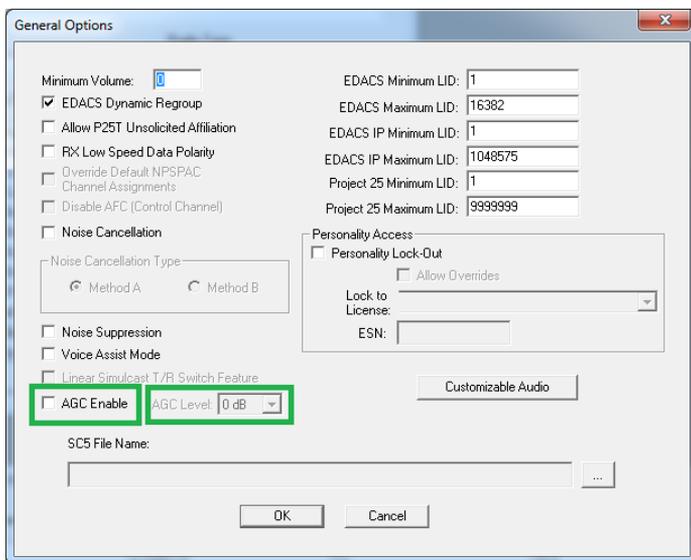


Figure 4-8: AGC Enabled in General Options Dialog Window

Radio Type	AGC Enable	AGC Level
XG-75P XG-75Pe XG-15P XG-25P XG-25M XG-100M with CH-721 XG-75M/M7300	Un-grayed	Un-grayed only when AGC Enable is checked
P7100 M7100 Jaguar 700P Jaguar 725M	Grayed	Un-grayed
All other radios	Grayed	Grayed

4.3.5 Mission Fill Export\Import Feature

4.3.5.1 Supported Radios

Radio01

4.3.5.2 Supported Systems

- P25 Conventional
- P25 Trunked

4.3.5.3 Support Information

“Radio01” is a new radio configuration that is now supported in RPM. For more information on “Radio01,” please contact the Harris Technical Assistance Center (TAC) at TAC@harris.com or call (866) 264-8040.

4.3.5.4 Feature Information

- Mission Plan Configuration
- Personality Parameters Support
- Mission Plan Conversion
- Creation of GUI for Mission Plan Export/Import
- Export of Single/Multiple Mission Plan(s)
- Import of Single/Multiple XMZ file(s)
- AAC Rules Compliance
- Overrides Support

4.3.6 Updated USB Radio Drivers

In providing a fix for PROD00133266, the Harris Unity Radio Driver has been upgraded to add support for the new XL Series Radios in addition to the XG Unity Radios and is called the Harris Radio USB driver. This update includes the addition of a new folder in the installation media called “Harris Radio USB Driver” that contains two files:

- HRUD_32.exe – Installs the USB drivers on supported x86 (32-bit) Windows Operating Systems.
- HRUD_64.exe – Installs the USB drivers on supported x64 (64-bit) Windows Operating Systems.

When the user runs the setup.exe, one of the above files is installed if they don't already exist.

4.4 R-STATE R13E

This release adds the AGC Enable checkbox to the General Options screen. This allows the user to enable and disable Automatic Gain Control (AGC) of the AMBE+2 vocoder for P25 and ProVoice digital voice.

For radios that support this feature, when AGC Enable is checked, the AGC Level drop-down is enabled; select 0 dB, 6 dB, or 12 dB.

Supported Radios:

- XG-75P
- XG-75Pe
- XG-15P
- XG-25P
- XG-25M
- XG-75M/M7300
- XG-100P
- XG-100M/CH-721
- XG-100M/CH-100



NOTE

For Unity XG-100P and XG-100M with CH-100, if this control is enabled, Internal Mic and External Mic ALC must be disabled.

4.5 R-STATE R13C

There are no new features or enhancements for RPM R13C.

This version of RPM is a Standard Released maintenance build to R13B.

4.6 R-STATE R13B

There are no new features or enhancements for RPM R13B.

This version of RPM is a Limited Released maintenance build to R13A.

4.7 R-STATE R13A

Support has been added for XGP R6 features, including the following:



Starting with XGP R5A, new features will NOT be supported on the following radio hardware platforms: P5200, P5300 800MHz, P5400, P5500 VHF and 700/800 MHz, P/M7200, P7300 VHF and 700/800 MHz.

4.7.1 In-Band GPS

This feature was added to control the inclusion of the GPS information in the voice stream.

A drop-down was added to the **Data Options** screen (Figure 4-9) to control the inclusion of the GPS information in the voice stream.

- DISABLED – Do not include GPS.
- PTT – Include GPS when PTT in emergency or PTT not in emergency.
- EMERGENCY – Include GPS when in emergency only.
- Default = DISABLED



Figure 4-9 - InBand GPS

4.7.2 Encrypted Data (eData)

A new dialog has been added to **Options** under “eData Configurations” that allows the user to configure eData (see Figure 4-10). You can also access this dialog via the P25 Trunked System and P25 Conventional System dialogs (see Figure 4-11).

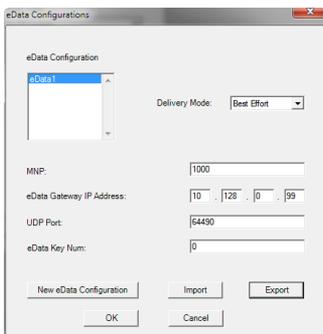


Figure 4-10: eData Configuration Screen

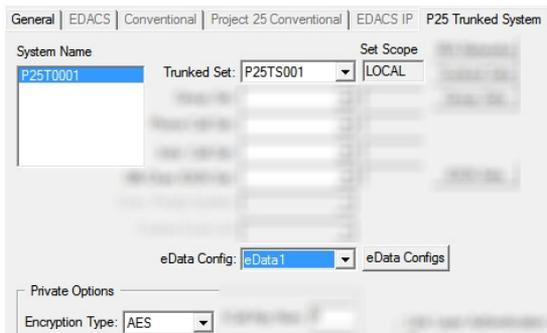


Figure 4-11: eData Config - P25 Trunked System

4.7.2.1 eData Configurations Fields and Ranges

The following defines ranges and defaults on the eData Configurations dialog:

- | | |
|------------------------------|--|
| eData Gateway IP Address: | Default = 10.128.0.99 |
| Message Number Period (MNP): | Range = 1 - 16777215
Default = 1000 (decimal) |
| UDP port: | Range = 0 - 65535
Default = 64490 |
| eData Key Num.: | Range = 0 - 4095
Default = 0 (use the System Default Key) |

4.7.2.2 eData Import and Export

Import and **Export** buttons on the eData Config screen allow the user to import or export eData configurations. “.edt” is the file extension type for eData configuration files.

4.7.3 Use Conventional Emergency

A new checkbox has been added to the P25 Group Sets screen (Figure 4-12). This allows the user to select to use the Global Conventional Emergency/Home System and Channel to transmit emergencies.

This option is not available until a valid Conventional System and Channel have been assigned in the **Conventional Emergency/Home Channel Options** dialog.

If this control is enabled, the Emergency/Home Group (P25T) is disabled and cannot be selected.

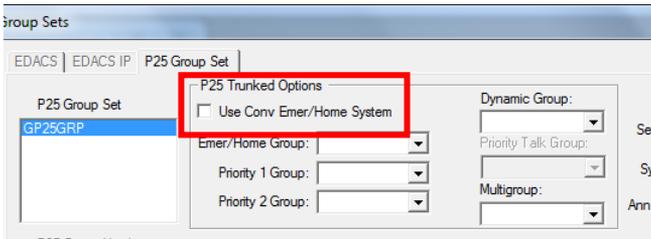


Figure 4-12: Use Conv Emer/Home System

4.7.4 Ignore AB Switch Selection

A new checkbox has been added to the **Power Up Options** screen to allow the user to select whether or not to use the A/B Switch configuration during power-up.

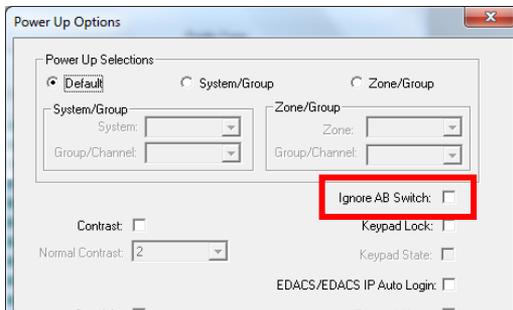


Figure 4-13: Ignore AB Switch

4.7.5 Alert Message Text

When modifying Scan, Private, and/or Keypad Lock settings in power-up options: if the setting is already configured to the A/B Switch and **Ignore AB Switch** is disabled/unchecked, an alert message pops up indicating a potential conflict.

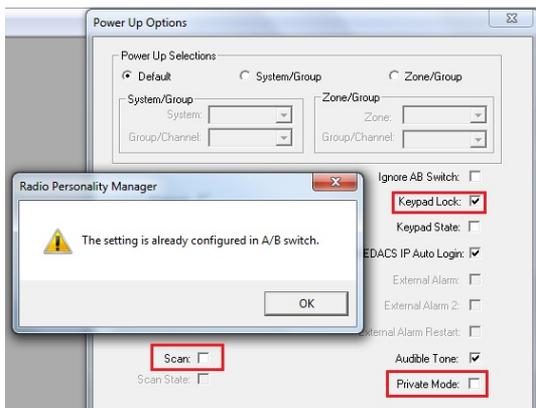
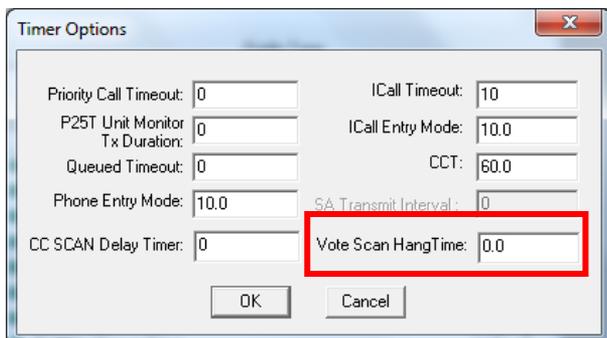


Figure 4-14: Alert Message Text

4.7.6 Vote Scan Hang Time

A new control has been added to the Timer Options screen that allows the user to determine the Vote Scan Hangtime if the Vote Scan option is checked.

This parameter is used when Vote Scan is enabled on a conventional system. The timer is started when an incoming call is voted and the receiver is opened. After the call ends, the radio remains on the voted channel for the programmed duration of the vote scan hang timer.



4.7.7 P5300 900 MHz IQ Radio

Added support for the new P5300 900 MHz IQ radio.

4.7.8 Enhanced Personality Support

Prior to RPM R13A, personality sizes were restricted to 128K for “fl” files and 4K for “ee” files. RPM R13A allows increased personality sizes of 384K for “fl” files and 8K for “ee” files.

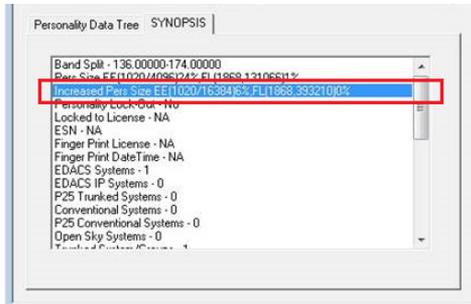


Figure 4-15: Increased Personality Size in Synopsis

4.7.9 Alternate Alert Tone

A new checkbox has been added to the Signaling Options screen to enable an alternate alert tone to be played when transmitting and receiving emergency calls.

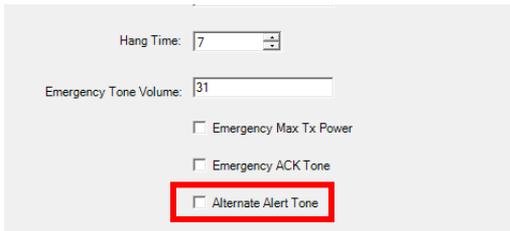


Figure 4-16: Alternate Alert Tone

4.7.10 Disable NC During Emergency Hot Mic

A checkbox has been added to the Supervisory Options screen to allow a user to disable the Noise Cancellation (NC) functionality when a radio is in an Emergency Hot Mic initiated voice call.

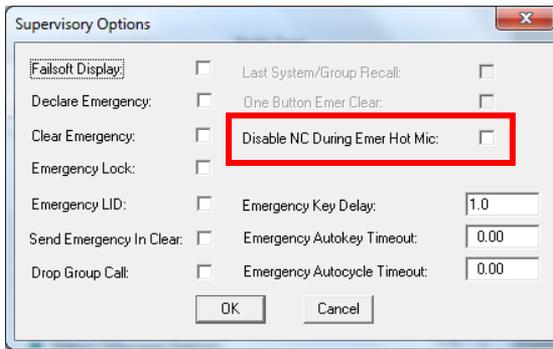


Figure 4-17: Disable NC During Emer Hot Mic

4.7.11 AAC Installer

In RPM R13A, the Advanced Access Control (AAC) Administrator installer was upgraded to R2A. As part of the upgrade, the location of AAC that was installed with previous versions of RPM has been changed. AAC is now installed and treated as an independent product. AAC Administrator is installed into the “{ProgramFiles}\Harris Advanced Access Control” directory. Under the Start menu, it is available in **All Programs → Harris Advanced Access Control → AAC Administrator**.



NOTE

AAC Administrator R2A is compatible with licenses and dongles from older versions of RPM. If the licensing isn't working after upgrading to this version of RPM, please contact Software Services as the license may need to be updated.

If RPM2 or ProFile Manager R9B or later have been installed, this version of AAC may already be installed and will not initiate another installation dialog.



NOTE

AAC R2A is also a prerequisite for RPM2 and ProFile Manager R9B. Uninstalling this version of RPM from the machine will not cause AAC to uninstall, but uninstalling AAC will cause the other applications to no longer work correctly.

4.8 R-STATE R12A



NOTE

A new License is required to use RPM R11A and later software. Advanced Access Control (AAC) is included in this version. This feature supports limiting access to P25 Wide Area Networks and various other access policies. See AAC documentation for more information.

Support was added for the following radios in this release:

- XG-75Pe
- XG-75M
- XG-15P

4.8.1 XGP R5 Features

Support has been added for XGP R5 features. These features are supported on the following radios:

M7300, M5300 800 MHz, P5300 900 MHz only, P5500 UHF LL (335-380 MHz), XG-15P, XG-25 P/M, XG-75-P, XG-75Pe, Unity XG-100P, Unity XG-100M w/CH-100, and Unity XG-100M w/CH-721

- Caller ID
- Zones
- Transmit Clear Emergency on encrypted system
- Mixed Zone Scan
 - Create a Custom Scan list
 - Associate a Custom Scan list to a System (Conventional, P25 Conventional, and Trunked)
- Programmable CC Scan Delay Timer
- Added support for logging radio events in the event log. RPM logs the messages in the Windows application event log for all radio interfacing actions such as read personality, write personality, read audio files, write audio files, code loading, read/write Unity mission plans, and activate mission plan.
- Noise Cancellation types added in General Options screen

4.8.2 New Feature for XG-75Pe only

Channel Bank support for A\B\C Switch

4.9 R-STATE R11A

Advanced Access Control (AAC) is added to this version. This feature supports limiting access to P25 Wide Area Networks and various other access policies. See the AAC/RPM Overview Manual, 14221-2100-3000, for detailed information about AAC.

Support has been added for XGP R4 features, including the following:



NOTE

New features will not be supported for M/P7200 radios

- Low Band PA support for Unity Mobile. This includes limiting the TX frequency range for Low Band to 33.0 – 48.0 MHz. For RX the range is 30.0 – 50.0 MHz.



NOTE

When the XG-100LPA external VHF low-band power amplifier is attached, the Unity XG-100M is able to transmit between 33 and 48 MHz. While previous software versions permitted the radio to be set between 30 and 50 MHz for receive only, the additional transmit capability forces a constraint of the frequency range of VHF low band.

- Enable Radio TextLink settings and options screens for Unity Mobile Radio systems (CH-721 and CH-100).
- Added "Indicator LED" combo box in Display Settings for Unity Portable.
- Added "Top Display Color" combo box in Display Settings for Unity Portable.
- Support for XG-25M UHF (378 – 470) is added.
- A new Accessory Device Options dialog is added (to support Fire Speaker Mic). This dialog is available for all Unity and OMAP radios (except 7200 radios).
- PTT Ready to Talk Tone on the Alert Options dialog is enabled for Unity Portable radios.
- Radio TextLink Host parameters is enabled on EDACS and EDACS IP Systems for Unity Mobile/CH-721 radios.
- On the Power Up Options dialog, "Power up Zones" is enabled for Unity XG-100M (CH-100).
- Voice Annunciation support is added. This feature includes multiple changes/additions. The main menu now includes "Voice Annunciation." Sub-menus include, "Voice Annunciation Configuration" and "Voice

Annunciation Management.” The configuration menu allows the user to select the voice files and create/save voice annunciation configuration (.vac) files. The .vac files need to be associated with the personalities that will use the voice files contained in the .vac files. The Voice Annunciation Management Menu allows for writing/reading voice files to terminals. Note that this is a separate operation from writing personalities.

Additionally, there is a new “Voice Annunciation Settings” dialog in the Options Tree in RPM. There are multiple dialogs that have been modified to add the Voice Annunciation files selection, such as Zones, Systems (General tab), Conventional and P25 Conventional Sets, Group sets, and portable and mobile keypads. See the Voice Annunciation Features manual, 14221-7200-6110, for more information.

- Talk Around indication has been enabled for all OMAP radios (except 7200/5200).
- A new checkbox, “Refresh ProScan Adjacency List” is added to P25T Systems. This control is available for all OMAP and Unity radios (except 7200/5200).
- An “Adaptive Filter” checkbox is added to the P25T Systems. This option indicates if Adaptive Filter needs to be used on a P25T System. It is available for the user to select only if “Linear Simulcast” or “TDMA Capable” checkboxes are enabled. This control is available for all OMAP and Unity radios (except 7200/5200).
- XG-75M is added to the radio types.
- Electronic License Finger Print feature is added. Upon reading a radio, this information can be viewed on the Synopsis tab (Fingerprint License and Fingerprint date/time).

4.10 R-STATE R10B

Support has been added for XGP R3 features, including the following:

- Channel Entry for Unity XG-100P – “Select Channel/Group Number” has been added to the shortcut menu options.
- DTMF – support has been added for XG-100P.
- A/B/C Switch for Unity XG-100P – “Three Position Switch” options have been added under Programmable Knobs settings.
- Talk Around Indication has been added to Conventional and P25 Conventional Systems. The selections are Disabled, Transmit Only, or Transmit & Receive. These controls apply to Unity XG-100P and Unity XG-100M.

4.11 R-STATE R10A

- Support has been added for XGP R2 features, including the following:
 - P25 Conventional Features (OMAP and Unity Mobile)
 - Data:
 - ❖ Data (SCEP)
 - ❖ ProFile (OTAP)
 - ❖ Over-The-Air Re-Keying (OTAR)
 - ❖ GPS
 - ❖ Radio TextLink
 - Voice Registration/De-registration and Group Affiliation
 - Emergency Alarm
 - Vote Scan on a conventional system
 - P25C Vehicular Repeater w/M7300
 - Bluetooth feature on XG-25P and XG-25M (audio only)
 - EDACS/ProVoice™ Support on XG-25P and XG-25M
 - EDACS ProVoice/AES feature on non-Unity platforms
 - M7300 Test Unit
 - Accessory Support: Man Down Switch
 - Type 99 quick call - Unity
 - Assignable control of ext mic PTT / Unity
 - Vehicular Repeater with Unity Mobile
 - Control & Status Services on Unity Mobile
- Support for XG-25P UHF L (378 – 470)
- Support for XG-25M 700/800 MHz
- Support for XG-75P UHF H (450 – 512 MHz)
- Code loading support for CH-25

4.12 R-STATE R9C

This version makes some additional changes to support P25T TDMA Phase 2.

4.13 R-STATE R9B

- EDACS support has been added for Unity XG-100 Mobile/CH-721.
- Support for Link Layer Authentication has been added for Unity XG-100 Mobile and Portable radios as well as P7200, M7200, P5200, P5300, P5400, P7300, M5300, P5400, P7300, M5300, M7200, M7300, XG-25M, XG-25P, and XG-75P radios.
- Enhanced ID has been enabled for Unity XG-100 Mobile and Portable radios.
- Multiple Mixed System/Zones has been added for Unity Mobile (CH-100 and CH-721).
- Additionally, Power up Options includes a new selection for Power Up.
- Zone and new key codes have been added for Zones.
- AES/DES support has been enabled for XG-25 Portable and Mobile radios.
- “Alternate Alert Tone” checkbox has been added to the Enhanced ID Options Dialog. This option is supported by the following radios - Unity XG-100.
- “One Button Emergency Clear” checkbox has been added to Supervisory Options. This option will be available to select when “Clear Emergency” is selected. This option is supported by the following radios: Unity XG-100 Mobile and Portable radios as well as P7200, M7200, P5200, P5300, P5400, P7300, M5300, P5400, P7300, M5300, M7200, M7300, XG-25M, XG-25P, and XG-75P.

4.14 R-STATE R9A

- Support added for XG-25M radios, P5500 UHF 330-380 MHz and 378-470 MHz radios, and M7300 UHF 330-380 MHz radios.
- The following options have been added for **P7200/5200/5300/5400/5500, M7200/7300/5300, XG-25P/75P,** and **XG-25M** radios:
 - **Stealth Options** – A Stealth Mode Options dialog box has been added.
 - On the P25 Conv Frequency Sets dialog, the **TX and RX NAC**, and **RX Default NAC** have been made available.
 - **Multigroup options** have been added. This includes new controls added to the P25 Group Set dialog for the Multigroup selection, the **Announcement Group ID**, and a checkbox for selecting “**Subgroup of MG**” for each group. In addition, a checkbox has been added to the P25 Trunked System dialog to select “**Keyback on MG.**”

- **Control & Status Services** – A CSS checkbox and **UPD Service Port** have been added on the “Data Applications” tab of Data Options.
 - A checkbox called “**Emer User Only Clr**” was added to the P25T system dialog.
 - “**PTT Polarity**” was added to Conv Freq sets. This control is available for **Mobile** radios when the “Data” checkbox is selected.
 - The selection in the Options tree for MDC Options has been renamed “**Signaling Options**” and a new tab has been added for “**Enhanced ID**” options. Additionally, “**Enhanced ID**” was added to P25 Conv Freq Sets, via the “Signaling” button.
- The following features/options have been added for the Unity XG-100 Portable radio:



NOTE

All features added for Unity Portable radios require R4 radio software.

- Custom Scan Options have been added.
- Multiple Mixed System/Zone dialog has been added for Unity Portable. This can be selected from the main tree menu by selecting “Zones.”
- Some new controls have been added to the Display Settings Dialog. These include Front Backlight Timeout, Top Backlight, and Top Backlight Timeout.
- New selections have been added to Programmable Buttons – Talkaround, Keypad Lock, Scan, Monitor/Clear, Front Backlight Toggle, Top Backlight Toggle, and Flashlight Mode. Additionally, a button Delay has been added for the Top, Middle, and Side Buttons.
- A new tab was added to the Programmable Buttons/Knobs dialog for Programmable Shortcut Menu.
- On the Audio Settings dialog, a new checkbox was added for Keypad Tones.
- Data Options - The “Profile UDP port” has been enabled.
- “Linear Simulcast” on the P25T System dialog has been made accessible.

- The following options have been added for the Unity XG-100 Mobile (CH-100 and CH-721) radios:



NOTE

All features added for Unity Mobile radios require R3 radio software.

- Settings for Data Options have been made accessible.
- On the P25 Trunked System dialog, **Conv Priority System** has been made available.
- **Conv Pri Scan Hang Time** on Scan Options has been made available.
- **DTMF Options** have been made available. Additionally, the **DTMF** checkbox on Conventional Systems and P25 Conventional Systems has been made available.
- **Alternate PTT Channel** has been made available on the Conv Frequency Sets.
- **Minimum Volume ON** General Options have been made available.
- **Status/Message Options** have been made available.
- **Send Emer Alarm** checkbox on P25 Conventional Systems has been made available.
- **FNE LID** on the P25 Conventional System dialog has been made available.
- On the Data Options dialog, on the ProFile Settings Tab, the **UDP Port** in the ProFile Settings has been enabled.
- **Data** checkbox on P25 Conventional Frequency Sets has been made available.
- **Emer Display** checkbox on P25 Conventional Systems has been made available.
- **Emer Disp** and **Emer Audio** checkboxes on P25 Trunked System have been made available.
- **Phone Keypad** on Keypad Options has been made available. (CH-721 only)
- **CG Sel** on P25 Conv Systems has been added.
- **Emer User Only Clr** checkbox was added to P25T systems.
- **External I/O Options** have been added for Unity Mobile CH-100.

- The following options have been added for the Unity XG-100 Mobile CH-721 radio:



NOTE

All features added for Unity Mobile radios require R3 radio software.

- **Multigroup options** have been made available.
 - On the Display Settings dialog, the **Alternate SYS/GRP Font Size** checkbox has been enabled.
 - The **HHC-731 Hand Held Controller** tab on the Control Unit Keypad Options has been enabled.
- The following options have been added for both the Unity XG-100 Portable and Unity XG-100 Mobile (CH-100 and CH-721) radios:



NOTE

All features added for Unity Portable radios require R4 radio software.

All features added for Unity Mobile radios require R3 radio software.

- **MDC Options** – all controls have been made available. These options are available as part of “Signaling Options” selection from the tree view.
- **MDC ID** on Conventional and P25 Conventional Systems has been made available.
- **Phone Call Sets** and **Programmable Phone Calls** have been made available. Additionally, **Phone Call Set** from P25 Trunked System dialog has been made available.
- **Phone Entry Mode** on Timer Options has been made available.
- On the Keypad Options dialog, **Phone Keypad** has been made available (for CH-721 only)
- On the General Options dialog, “**Allow P25T Unsolicited Dynamic Regroup**” checkbox has been enabled.

- The following options have been added for P7200/5200/5300/5400/5500, M7200/7300/5300, XG-25P/75P, and XG-25M radios and the Unity XG-100 Portable:



NOTE

All features added for Unity Portable radios require R4 radio software.

- Pin Entry Options have been added to the PowerUp Options dialog.
- Confirmed Tx” has been added to the P25C and P25T system.
- A checkbox called “Emer User Only Clr” was added to the P25T system dialog.
- P25 Conv ERTT – an “Emer Behavior” control has been added to P25C Systems. Selections are Emer Alarm Only, Emer Call Only, or Emer Alarm + Emer Call.

4.15 R-STATE R8B

There are no new features in this release.

4.16 R-STATE R8A

- Support for XG-25 radios and Unity Mobile radios with CH-100 has been added.
- New features that were added for Unity Portable radio software (R3A) have been added or made available for editing, including:
 - Situational Awareness - This includes a checkbox on the P25 Conv Channel, “SA,” as well as a new control on the Timer Options dialog, “SA Transmit Interval.”
 - Mixed System/Zone Options have been added.
 - Two new controls have been added to P25 Conv Systems. These controls are “FNE LID” and “Mfg ID” (Standard or Legacy).
 - A two position knob setting has been added for Unity XG-100P radios, selections include TX disable on/off and Encryption On/Off.
 - The ability to map a status/message to a Programmable Button has been added.
 - Long Names were added to Phone Set and Programmable Phone Calls.
 - Send Emer Alarm has been added to P25 Conv Systems.
 - In P25 Conv Systems, support was added for CG Select.
 - In Conv Systems, support was added for CG Select.

- In P25 Trunked Systems, support was added for Radio TextLink, Conv. Priority System, and Phone Call Set.
- In P25 Conv. Frequency Set, Rx Default NAC was added.
- Minimum Volume was added in Audio Settings for Unity Portable radios.
- In Data Options, Radio TextLink support was added.
- In Power Up Options, Audible Tone support was added.
- The USB Driver for Unity radios has been updated to support 64 bit Windows 7 operating systems.
- MDC-1200 Options have been added for the following radios – P7200/5200/5300/5400/5500, M7200/7300, XG-25, XG-75, and Unity XG-100P.
- G-STAR Options have been added to P25 Conv channels (when set to analog), for the following radios – P7200/5200/5300/5400/5500, M7200/7300, XG-25, and XG-75.
- P25 Priority Talk Group has been added to the P25 Group Set for the following radios - P7200/5200/5400/5500, M7200/7300, XG-25, and XG-75.
- On the General Options dialog, a checkbox has been added for “Noise Suppression.” This control is available for P7200/5200/5300/5400/5500, XG-75, and M7200/7300/5300.
- On P25 Conv Systems, several checkboxes have been added for Unity XG-100P, Emergency Display, Emergency Audio, and Send Emergency Alarm.
- On the P25 Group Set dialog, a checkbox has been added for “Use Group ID 0.” When this checkbox is enabled, the Group ID control will be disabled. This is available for Unity XG-100P, P7200, P7300, P5200, P5400, M5300, M7200, and M7300 radios.
- The range for the P25 Unit ID has been expanded for all radios, to 16,777,211.
- The Status/Message Dialog has been redesigned in this release.
- In radio maintenance, the ability to edit Calibration Data has been added for the following radios - P7200/5200/5300/5400/5500, XG-25/75, and M7200/7300/5300.



Radio code R15A or later is required to support reading and writing Calibration Data.

- PPP/Slip Options have been turned on for most radios.
- Noise Suppression has been added for P5200, P5300, P5400, P5500, P7200, P7300, M5300, M7200, M7300, and XG-75.
- Key Selections for PRESET 1 – 3 have been added for M7200, M7300, and M5300 radios.
- Some options on Conv Sets and P25 Conv Sets have been moved to a separate dialog, accessed through the “Signaling” Button. These include Tone Encode, G-Star, MDC, T99 Decode, and DES-CFB options.
- P25 Vehicular Repeater now supports 800 MHz frequencies.
- Wideband Filter control was added to the P25T System dialog and is available for M7100 radios.

4.17 R-STATE R7A

- Support for XG-75 radios with a Noise Cancellation option.
- Support for P5500 radios.
- Support for Unity XG-100 mobile radios. This radio has two different control head options. The Unity XG-100 with the CH-721 control head is supported in this release of software. Support for the CH-100 control head is scheduled for a future release.
- Allow programming of all of the types of code available to the 7200/7300/5300/5400 radios.
- Added a checkbox to allow the Handheld Controller to unlock the keypad and zeroize encryption keys (for M7200 only).

4.18 R-STATE R6B

There are no new features in this release.

4.19 R-STATE R6A

- Unity XG-100 Portable and Unity XG-100 Mobile radios have been added. These two radios support multiple bands. Unity radios support Conventional, P25 Conventional, and P25 Trunked Systems. The new dialogs added for the Unity XG-100 Portable include: Audio Settings, Display Settings, GPS Settings, Bluetooth Settings, Clock Settings, Battery Settings, Unity XG-100 Portable Programmable Buttons, and Unity XG-100 Portable Options. New controls for Long Names were added to many of the dialogs where alpha names are entered. Vote scan settings were added to the Conventional and P25 Conv Frequency sets. DES-CFB was added to P25 Conventional sets.

- Dual Control Head support for M7200/M7300/M5300 radios has been added.
- The number of preferred systems available for a P25T system has been expanded from 8 to 32.
- The options available for the A/B Switch on P7300/P5300/P5400 radios are updated to reflect the options that are applicable.
- The top level “Radio” menu has changed slightly to add the USB connection for Unity portable radios. A new button on the toolbar will also access the Unity Radio Management dialog.

4.20 R-STATE R5D

- The Data Options Dialog is redesigned. The new dialog contains three tabs labeled Data Applications, Data Transport, and Data Interfaces. SNDCP support is added to the Data Transport tab and is available for P7200, P7300, P5400, M7200, M7300, and M5300 radios.
- P25 and ProVoice are enabled for M5300 radios.

4.21 R-STATE R5C

- Support for the following radios has been added to this release - P7300 VHF, P7300 Dual Band, M7300 UHF Low, and UHF High.
- The license server has been updated to the Harris license server.
- A new dialog box has been added to support P25 Vehicular Repeater Options (available for M7300 only). The existing Vehicular Repeater options were renamed Analog Vehicular Repeater. A VR activation checkbox has been added to P25T Systems (available for P5200, P5400, P7200, P7300, M7200, and M7300 radios). A selection for “P25 VR” has also been added to the programmable trunked menu options and the control unity keypad selections.
- Selections for Emergency Alarms were added to the External I/O Options dialog. While implementing these options, this screen was redesigned to better reflect the actual operation of the radio.
- Two new controls have been added to the Tracking Data dialog box to address coarse and fine Channel Selectivity Optimization. These controls are available for some M7100 radios.
- Support for 700 MHz 25 kHz Channel Center Frequencies has been added.
- Code loading to the CH-721 and HHC-731 Hand Held Controller has been added.
- Conventional Priority System (ECP1 scan) was added to P25 Conv Systems.

- The ability to extract data to csv files from the command line was added (currently available under the Tools menu).
- A new dialog for defining HHC-731 Hand Held Controller keys has been added.
- An option to allow an alternate System/Group Font was added to the Display Settings Dialog. This option allows the 2nd line of the display to be the same size as the first (for M5300/7300 radios only).
- GPS MIC Power Save option was added to the Portable Radio Options dialog.
- A new selection was added to the Site Preference Level for P25 Trunked Systems. Additionally, the wording of the selections has changed slightly. Previous versions had a selection called “Always Desired” which is now called “Preferred.” The selection is called “Always Preferred.”

4.22 R-STATE R5B

The R5B version contains the following change:

Fixes a problem with the “Override Default NPSPAC Channel Assignment” in General Options.

4.23 R-STATE R5A

The R5A version contains the following changes/additions:

- Harris rebranding.
- The P25 Trunked System Dialog has been reorganized.
- The HHC-731 has been added.
- Hand Held Controller has been added.
- M7300 VHF has been added.
- Radio TextLink MID List import has been changed to a new format.
- Four new controls for Digital Audio Scaling have been added, accessed by a button on the General Options Dialog for M/P7200, M/P7300, P5200, P5300, and P5400 radios.
- For ISSI support, a new control for System ID has been added to the P25 Group Set for M/P7200, M/P7300, P5200, P5300, and P5400 radios.
- DCS+ has been turned on for all band splits supported (800, UHF, and VHF).
- An “External TX Indicator” control has been added in the External I/O dialog for M5300/M7300.

- The ProScan Options dialog has been changed to allow entries in the following controls to be entered in dBm:
 - Priority System Minimum Level
 - System Transition Level
 - Non-Priority System Minimum Level
 - Non-Priority System Transition Level
- Switch Delta has been changed to be entered in dB.

4.24 R-STATE R4B

The R4B version replaces the TX CG control that was missing in R4A on the P25 Conventional Channel.

4.25 R-STATE R4A

The following features were added with the R4A release of RPM:

- Added support for UHF P7300 radios.
- Added support for 800 MHz M5300 radios.
- When writing JAGUAR/7100 radio code versions 16 or later to the portable radio for the first time, it is necessary to put the radio into Programming Mode via the three side buttons (press and hold the PTT, Clear/Monitor, and Option buttons simultaneously, then power on the radio). Once this is done, it will reduce the time it takes to write code to the radio.
- Added ability to load Encryption Modules to M7200, P7200, M7300, P7300, and P5400 radios.
- Updated the version of the .NET Framework to 3.5 SP 1.

4.26 R-STATE R3A

The following features were added with the R3A release of RPM:

- The 700 MHz Band Split has been changed to allow both the old and new ranges.
- Added changes to support VDOC – there is a new check box on P25 Systems (for P7100 radios).
- Added support for CH-721 Control Head.
- Added support for A/B Switch for P5300 and P5400 portables.
- Added support for the M7300 Mobile (700/800 MHz only).
- Added two check boxes to the P25 Trunked System dialog: Send Emergency Alarm and Avoid Failsoft.

- Removed the Default Channel Data button on P25T Systems. In place of this button, there is now a selection for a Default Channel IDEN Set. Each set can contain up to 16 Default Channels. It is possible for each IDEN set to be attached to multiple systems.



NOTE

This has been implemented in R17 7100 Series Radio code. Only the first channel will be used by radio code that does not support this feature yet.

- Updated the Bootloader for 7100 series radios.
- A check was added to ensure the correct programming mode (3-button) is used (to ensure loading the correct bootloader), when upgrading to R16 code from earlier versions.
- Removed Ext Speaker Dialog box for 7200/5200/5300/5400 series radios.
- Configuration file was moved to C:\Documents and Settings\All Users\Application Data\MA-COM\RadPersMgr.
- Added Mode to the Menu for the OMAP radios. This allows switching to OTP and Burn App.
- Installation will now add a desktop shortcut.
- Added SG6 – SG16 to the menu for mobile radios.

4.27 R-STATE R2A

The following features were added with the R2A release of RPM:

- The radio products P5200, P5300, M5300, and P5400 have been added to this release.
- ProVoice AES has been added to this release. While adding this feature, the options for Private Voice on some of the Systems Dialog boxes have been redesigned and rearranged. The wording on some of these options may have been changed from the previous version. A new control for AES Key Numbers has been added to the EDACS Group Set dialog.
- Volume levels for M/P7200 radios have been changed from 0 – 31 to 0 – 40.
- EEPROM size has changed from 2K to 4K for all P7200, P5200, P5300, P5400, M5300, and M7200 radios.
- Help files have been updated to HTML format.
- The ability to load OpenSky® code to dual mode radios has been added.
- Changed default for AGC Level on General Options to 0.
- Changed LCD to default to Channel on P25 Conventional System.

4.28 R-STATE R1B

RPM is largely the same as the old ProGrammer software. RPM supports only the newer radio products. Most of the dialog boxes have the same name as they do in ProGrammer. Controls that are not used in radios that RPM supports have been removed and some dialog boxes have been rearranged.

JAGUAR, 5100, and 7100 Series radios require a minimum of R14 radio code. If an earlier version of code is in the radio, the user must “upgrade” the radio to be compatible with RPM. “Upgrading” the radio consists of selecting a new Radio Code/DSP file before programming the radio. RPM will automatically make all of the changes necessary. When performing the “Upgrade,” it is important to put the portable radio into programming mode by pressing the 3 side buttons at the same time on the radio. If the radio is not in the correct programming mode, RPM will indicate an error and will not continue.



NOTE

Prior to upgrading to R14 radio code/RPM, feature and tracking data files should be saved (for recovery).



NOTE

RPM cannot be used to read a radio that was programmed with ProGrammer. The user can read the radio with ProGrammer and save the file. The file can then be read in RPM.

RPM and all versions of Radio Code supported by it are capable of supporting very large personalities.

One of the differences between ProGrammer and RPM is on the main personality dialog. Programmer had 4 tabs: Options, Sets, Systems, and Synopsis. In RPM, these are 2 tabs: Personality Data Tree and Synopsis. Options, Sets, and Systems are contained in a tree structure under the Personality Data Tree tab.

Default directories for RPM will now be under C:\Documents and Settings\All Users\Documents\RadPersMgr\...

RPM uses a file extension to differentiate the personality files from ProGrammer personality files. ProGrammer personality files can be read and converted to RPM personality files. When opening a file, change the file type to Programmer Personality. Once the file is saved, it will be in the new file format/extension (prs).

Global Set extensions have also changed. Once your personalities have been converted to RPM Personalities, if they contain global sets, the files will not be found unless they are converted to the new file extensions. Harris provides a

menu option to facilitate the conversion. This option is under Tools/Sets Converter. Be aware that your global sets must be in the global sets directory listed in RPM and the new sets will also be put in the sets directory.

A new option has been added in the Tools menu: Tool/Data Extractor. This option gives you the ability to extract the data into comma separated files, compatible with Microsoft Excel. It will also display a small summary of the data on the screen when you extract the data. The extraction can be done on personalities (both old and new), and all global sets. Multiple sets can be selected.

There are some differences in the way radio code is loaded with the current products and the 7200 radio products. Loading radio code to the 7200 products is a separate operation from writing the personality to the radio. A new menu option has been added to support writing code to the 7200 radio products. From the main menu, select “Radio,” then select “Load Compressed Code.”

JAGUAR and 7100 radios containing radio code prior to R14 will need to be upgraded. This is done automatically when writing R14 or later radio code. RPM will save the old version of tracking and feature data when an upgrade is done. These files are stored in the backup directory. The files will be named as <esn>-upgrd.trk and <esn>-upgrd.enc. The new converted files are automatically stored in the backup directory if you have “Enable File Backup” selected in the “Options and Directory Settings” dialog.

A new option, “Program,” has been added to keypads and programmable menus for 7200 radios.

Under “Options and Directory Settings,” a new control was added to enable the user to track directories during the session. If this option is enabled, the last directory that the user browsed will be used as long as the application is running.

The default for CCT on Conventional and P25 Conventional channels has been changed to enabled.

4.29 OTHER EXISTING FEATURES

The following features are existing features:

- P25 Conventional Unit Enable/Disable Messaging – New controls for this feature have been added to the P25 Conventional System dialog box. Three new key selections (Rad Chk, Rad Dis, and Rad En) have been added to the Keypad Options for Mobile and Portable radios. These selections have also been added to Programmable menus.
- GPS Settings (available on the Data Options dialog) have been enabled for the 5100 Series, 7100 Series, and 7200 Series radios. A Sample Interval has been added to the GPS settings. GPS has also been added as a Keypad selection as well as a Programmable Menu selection.

- P25 Trunked Band Scan – “Enhanced CC” has been added to the ProScan Option on the P25 Trunked System Dialog. When “Enhanced CC” is selected, two buttons on the dialog box become active and the System Scan list becomes inactive. These buttons are called “Band Hunt Data” and “Preferred Sys Table.” Selecting either of these buttons activates a dialog box that allows these features to be defined. The “Band Hunt Data” dialog allows selection of the Band Hunt Start and End Frequencies as well as the Band Hunt Spacing. The “Preferred Sys Table” dialog allows the user to assign priority levels for up to eight combinations of P25 Trunked System ID, RFSS ID, and Site ID. Additionally, a Band Hunt Interval control has been added to the Scan Options Dialog. This control determines the period of time the radio will go into Band Scan.
- P25 Trunked Priority 1 Scan Follows Selected Group – On the P25 Group Set Dialog, “Selected” will appear as one of the selections for Priority 1 Group.
- EDACS IP Periodic Registration Timer – A “Reg Timer” control has been added to the EDACS IP System dialog. This control determines the time in minutes that the radio will resend a registration to the system.
- The main personality dialog view has Options, Sets, and Systems contained in a tree control instead of tabs as in ProGrammer.
- Default directories for RPM will now be under C:\Users\Public\Documents\RadPersMgr\...
- RPM uses a file extension to differentiate the personality files from ProGrammer personality files. ProGrammer personality files can be read and converted to RPM personality files. The old .per file must be opened in RPM. RPM will perform all of the necessary conversions and this file should be saved in the new format. Once the file is saved, it will be in the new file format/extension (prs).
- Global Set extensions have also changed. Once your personalities have been converted to RPM Personalities, if they contain global sets, the files will not be found unless they are converted to the new file extensions. Harris provides a menu option to facilitate the conversion. This option is under Tools/Sets Converter. Be aware that your global sets must be in the global sets directory listed in RPM and the new sets will also be put in the sets directory.
- An option has been added in the Tools menu: Tools/Data Extractor. This option gives you the ability to extract the data (personality data or set data) into comma separated files, compatible with Microsoft Excel. It will also display a small summary of the data on the screen when you extract the data. The extraction can be done on personalities (both old and new), and all global sets. Multiple sets can be selected.
- There are some differences in the way radio code is loaded with the 7100 products and the 7200 radio products. Loading radio code to the 7200

products is a separate operation from writing the personality to the radio. A new menu option has been added to support writing code to the 7200 radio products. From the main menu, select “Radio,” then select “Load Compressed Code.” For information on putting the radio into Program Mode, see RPM on-line Help.

- An option, “Program,” has been added to keypads and programmable menus for 5300, 5400, and 7200 radios.
- Under “Options and Directory Settings,” a control was added to enable the user to track directories during the session.
- The default for CCT on Conventional and P25 Conventional channels has been changed to Enabled.
- SC4 files have been replaced by SC5 files in all RPM products.

5. INSTALLATION PROCEDURE

To install and run this version of RPM, SK-104768-001, on a PC installed with a supported version of the Windows Operating System, follow the steps below:



Prior to upgrading to this version of RPM, you should copy all personalities into a folder named with the previous version of RPM.

For example, if upgrading from R13E, create a folder called “R13E,” copy all personalities, and paste them in the “R13E” folder. This way, you have a copy of the old personality to revert to if necessary.

5.1 INSTALL/UPGRADE

To install or upgrade the RPM application, perform the following steps:

1. Ensure that your account belongs to a group that can install software; preferably the local **Administrators** group.
2. Ensure that an older version of RPM is not currently running.
3. Either mount the ISO file or insert the CD/DVD into the appropriate optical drive.
4. Execute **setup.exe** by navigating to the correct drive in Windows Explorer.
5. As **setup.exe** executes, it will:
 - a. Install one or more of the following prerequisites:
 - o Microsoft .NET Framework 4.0 Full (*See NOTE below*)
 - o Harris Radio USB Driver (x86) (32-bit OS only)
 - o Harris Radio USB Driver (x64) (64-bit OS only)
 - o Harris Advanced Access Control (*See NOTE below*)
 - b. Each prerequisite may have its own installation dialog as well as licensing terms that will need to be accepted.
 - c. If a prerequisite needs to be upgraded, a dialog may pop-up stating that the program is upgrading and will request the user to confirm proceeding.
 - d. After all prerequisites are installed, the main RPM installer will open.
 - e. Click through the RPM installation dialog screens, Accept the License, read and confirm any pop-up boxes and close once the installation is complete.



NOTE

As stated in the content of the final pop-up box, clicking “Yes” will automatically start the computer restart process.



NOTE

The Microsoft .NET Framework 4.0 requires a reboot after installation. Declining to reboot after it is installed will cause the Harris Advanced Access Control installation to fail. If the installation does not continue after a reboot, rerun the **setup.exe** and the installation will continue from where it left off.

5.2 UNINSTALL

To uninstall the RPM application, perform the following steps:

1. Save any open personalities and close the RPM application.
2. Open the Control Panel.
3. Go to “Programs -> Programs and Features”.
4. Select “Radio Personality Manager”.
5. Click on *Uninstall* and follow the wizard.

Even though the application is uninstalled, any of the user data (i.e. configuration settings, folders, files, etc) that was created after running and configuring RPM, will remain on the machine. This data will have to be removed separately.



NOTE

Following the uninstall steps will uninstall **only** the RPM application. It **will not** uninstall any of the prerequisite applications that may have been installed when the application was installed. The same steps would apply to uninstall any of the prerequisite applications.

5.3 LICENSING

RPM requires a valid license for usage. Licenses are viewed and controlled through the Advanced Access Control (AAC) Administrator application that is installed as a prerequisite. See the AAC/RPM Overview Manual, 14221-2100-3000 for more information.

6. PROBLEM RESOLUTION

REFERENCE NUMBER	DESCRIPTION
PROD00145355	RPM R14B02 - P25 Trunked LID Override does not maintain the incremental step properly.
PROD00145269	Customers can program a radio with RPM R14A/R14B and read the personality using R13E (or earlier) and write the personality back to the same radio.
PROD00144275	RPM R14B does not support control of Enable Mic CClick Suppression for XG-100M/CH-100.
PROD00135239	RPM R13C01 (or earlier) will allow setting ProFile UDP Port, GPS/CSS UDP Service Port, and TextLink UDP Port to all the same value
PROD00143040	RPM R13/R14 - When updating 800 MHz trunked frequency set TX frequency, grayed out RX frequency does not update to new RX freq (+45 MHz offset).
PROD00143882	RPM R14 fails loading HHC-731 R03C firmware through Unity Mobile DB-9 connection - HHC's now show "SER DWNL PLEASE WAIT."
PROD00144055	RPM R14B02 will not allow setting a RX-only Conventional Channel on any radio or bandsplit except Unity. R14A15 works fine.
PROD00146952	RPM's TX/RX "Invalid Frequency" error dialog screen during WRITE needs to include new 700mhz Bandplan frequency ranges.
PROD00146442	XG-25M RPM R13C-R14B Backlight/LED "General" System Tab parameter is grayed-out and disabled - causes very dark XG-25M display (barely readable).
PROD00143832	RPM may fail to flash / update control unit software on a Unity XG-100M radio.

7. TECHNICAL SUPPORT

Harris' Technical Assistance Center (TAC) resources are available to help you with overall system operation, maintenance, upgrades, and product support. TAC is your point of contact when you need technical questions answered.

Product specialists, with detailed knowledge of product operation, maintenance, and repair, provide technical support via a toll-free telephone number (in North America). Support is also available through mail, fax, and e-mail. For more information about technical assistance services, contact your sales representative, or call the Technical Assistance Center directly at:

North America: 1-800-528-7711
International: 1-434-385-2400
Fax: 1-434-455-6712
E-mail: PSPC-tac@harris.com

APPENDIX A AGC INFORMATION

The Automatic Gain Control (AGC) feature normalizes different speaking levels by automatically amplifying or attenuating speech in the audio stream of a transmitting radio. It provides a maximum of 20 dB amplification and 10 dB attenuation.

The recommendation is to have this feature **ENABLED** on all radios to compensate for the varying speaking levels of users. Users are highly recommended to hold the radio or speaker/mics as per the User manuals.

AGC Target level: This field is used to increase the target audio level of the AGC algorithm in steps of 6 dB. It is highly recommended to leave the target level at 0 dB to avoid any potential distortion or clipping at the dispatch consoles.

Radios with Noise cancellation capability:

- XL-200P (supported in RPM2)
- XG-100P
- XG-75P
- XG-100M/CH-100

It is recommended to disable the Noise cancellation in the radio personality. Users can enable Noise cancellation through radio's user interface when entering high noisy environments. It is highly recommended to disable noise cancellation when not needed to avoid the potential risk of degrading audio quality due to improper user operation of radio or speaker/microphone. Refer to radio's operator manual for proper Noise cancellation operation.



NOTE

Noise cancellation enable/disable can be assigned to the A/B switch in the radio personality for XG-75P portables.

Accessories: External microphone gain settings may have to be adjusted for accessories connected to control heads and portables. Example: If a particular user sounds consistently low on the consoles and the receiving radios when using a specific type of accessory, then the external gain can be increased in the radio personality until the audio levels reach a satisfactory level.



NOTE

Symphony™ consoles have the provision to measure the Active Speech Level for each call it receives from radios. A technician setting up the radios and system can make few test calls and measure the Active speech level of the test calls at the console.

For accessories with active noise cancellation, refer to respective product manuals for configuration and operation.

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About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers in more than 100 countries and has approximately \$6 billion in annual revenue. The company is organized into three business segments: Communication Systems, Space and Intelligence Systems and Electronic Systems. Learn more at harris.com.

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