



TELEX

Radio Dispatch

Radio Dispatch Engineering Group

IP-224 Version 2.400 Engineering Release Notes

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F01U267043 – Revision 10

September 21, 2018

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Revision History

Revision	Date	Author	Description
01	05/07/12	Radio Dispatch Engineering	Firmware Version 1.000 Release
02	08/31/12	Radio Dispatch Engineering	Firmware Version 1.100 Release
03	02/18/13	Radio Dispatch Engineering	Firmware Version 1.200 Release
04	08/20/14	Radio Dispatch Engineering	Firmware Version 1.300 Release
05	01/09/15	Radio Dispatch Engineering	Firmware Version 1.400 Release
06	01/14/15	Radio Dispatch Engineering	Firmware Version 2.000 Release
07	04/08/16	Radio Dispatch Engineering	Firmware Version 2.100 Release
08	06/02/17	Radio Dispatch Engineering	Firmware Version 2.200 Release
09	12/01/17	Radio Dispatch Engineering	Firmware Version 2.300 Release
10	09/21/18	Radio Dispatch Engineering	Firmware Version 2.400 Release

Overview

This document contains the release notes for the IP-224's firmware version 2.400. The release notes include all of the changes and fixes since official release version 2.300. Cross application compatibilities are outlined in this document.

Important

Starting with IP-224 firmware version 2.000, some serial controlled radio types now require an Additional Features | Access Key to be enabled. See the table below.

After upgrading from a previous firmware revision to version 2.000 or newer, the unit will reboot and begin the process of updating system components. During the update process, the unit will display "Firmware Updating". This update process takes approximately 1 minute, after which the unit will self-reboot and operate normally. **Ensure that the unit completes the update cycle and boots normally before removing power from the unit.**

After the IP-224 firmware has been upgraded to version 1.200 or newer, the firmware cannot be reverted to any previous version (1.102 or earlier). Any attempt to downgrade the firmware version via TSM will be refused by the IP-224.

New Features

Version 2.400

Local Mode: Serial Type – Telex Generic

- Added support for Telex Generic serial protocol Radio Call Alert message.
- Added support for Telex Generic serial protocol Radio Call Status Notification message.
- Added support for Telex Generic serial protocol Radio Select Call End message.
- Added support for Sonim XP8 LTE Phone, Hardware Setup | Serial Protocol Setup | Serial Protocol Version 2 for the Telex Generic Serial Type. The Version 2 option is only available if the Advanced Interface Option (North American) or Advanced Interface Option (Export) are enabled. The Serial Protocol Version 2 will support the following features not supported in Version 1:
 - When C-Soft sends a Private PTT or Group PTT message to the IP-224, the IP-224 will send out Key-up/Key-down serial commands to the connected radio.
 - The Version 2 serial protocol messages' Source and Destination IDs support up to 255 ASCII characters.



Miscellaneous

- Added support for Per Line Setup | LAM/COR Setup | Rx w/ PTT. This field is used to enter the amount of time the IP-224 generates RX packets to the network after PTT is activated. It is used to allow radio go-ahead tones to be sent to consoles when COR is enabled or when tone levels are too low to trigger LAM. Note full duplex must be enabled to support this timer.
- Added an option to the front panel display System Utilities | Remote Access | TSM Enable to enable/disable Telex System Manager access to the IP-224.
- Added an option to the front panel display System Utilities | Remote Access | Webpage Enable to enable/disable Webpage access to the IP-224.
- Added/Fixed the following to enhance IP-224 security:
 - Added encryption for Telex System Manager (TSM) and IP-224 communication.
 - Added a new account management webpage, login webpage, and access denied webpage.
 - Added to the Account Management webpage the ability to create User Accounts and Set User Permissions for which webpages the user can access.
 - Added an inactivity logout timeout and Logout button for logging a user out of the IP-224 webpages.
 - Increased password requirements for User Accounts so that the password length is 8-20 characters and must include a capital letter, a number, and a special character.
 - Fixed several webpage vulnerabilities.

Feature improvements and known issues fixed in this release

Version 2.400

Local Mode: Serial Type – All

- Fixed an issue where the serial connections need to be restarted after changing the Hardware | Setup | Serial Protocol Setup | Serial Mode or RS485 Address settings.
- Fixed an issue where the Serial Over IP and Telex Generic Serial Types were forced to RS-232 even if TTL was selected for the Hardware Setup | Serial Protocol Setup | Serial Mode setting.
- Fixed an issue where the IP-224 was not always sending the correct scan list back to C-Soft after a query.

Local Mode: Serial Type – Telex Generic

- Fixed an issue where the Telex Generic serial port could lock up when invalid serial messages were received.

Miscellaneous

- Fixed an issue where the G.726 implementation was not compatible to the standard. Note there is no audible difference.
- Fixed an issue where the Per Line Setup | Signaling Setup | ANI Suffix was not being added to Telex Generic ANIs.
- Fixed an issue where the TSM configuration | Firmware Settings | Checksum was wrong.
- Fixed an issue when changing the IP Address with TSM, the IP-224 was not sending back a successful confirmation message. This would cause TSM to display "Failure: IO Exception".
- Changed Ethernet Setup | Telex System Manager Setup | Mcast Address, Incoming Port, and Outgoing Port fields so that they can be modified. Note when modifying these settings, TSM settings must also be changed to match.
- Changed the front panel display Factory Mode | Reset Password menu to Reset Accounts. This is used to delete/reset the User Accounts back to default.
- Updated Copyright to 2018.

Serial Type Information

Serial Type	Device	Tested Device Firmware	IP-224 Additional Features Access Key
EFJ 5300/VMx00	EFJohnson RS-5300 EFJohnson 53SL ES EFJohnson VMx00 <i>Multi-System radio</i>	4.14.5 6.16.18 8.16.21	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Hytera MD782	Hytera MD782G <i>DMR radio</i>	8.00.06.007	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Hytera MT680	Hytera MT680 <i>TETRA radio</i>	V2.06.15.009	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Icom	ICOM IDAS IC-Fx061 Option Board UT-126H <i>NXDN radio</i>	Rev.5.4 - Checksum: \$BC4F Rev.3.2 – Checksum: \$F961	Advanced Interface Option (North American) or Advanced Interface Option (Export)
iDEN	Motorola i355 Motorola i365 <i>iDEN radio</i>	NA NA	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Not Tested this Release	Not Tested this Release	Not Tested this Release	Not Tested this Release
Kenwood 5x10	Kenwood TK-5x10 Ver. 2.0 Kenwood TK-5x10 Ver. 2.0 - DOS Kenwood TK-5x10 Ver. 3.0 Kenwood TK-5x10 Ver. 3.0 - DOS <i>P25 radio</i>	F4.41 – Checksum FBF1 F4.41 – Checksum E346 G6.10 – Checksum 0ADA G6.01 – Checksum 9780	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Kenwood NEXEDGE	Kenwood NX-x00 <i>NXDN radio</i>	5.11 – Checksum 1A3E	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Kenwood NX-5x00	Kenwood NX-5x00 DMR radio <i>NXDN radio</i> <i>P25 radio</i>	2.31.00 – Checksum 74AE	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Kenwood x150	Kenwood TK-x150 <i>Conventional Analog radio</i>	1.07 – Checksum E282	No Access Key Required
Kenwood x180	Kenwood TK-x180 <i>Conventional Analog radio</i>	1.22 – Checksum 035C	No Access Key Required
Kenwood x80	Kenwood TK-x80 Ver. 2.0 <i>Conventional Analog radio</i>	.028 – Checksum 0ADE	No Access Key Required
Kenwood x90	Kenwood TK-x90 <i>Conventional Analog radio</i>	2.30 – Checksum 77F4	No Access Key Required



Radio Dispatch

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Serial Type	Device	Tested Device Firmware	IP-224 Additional Features Access Key
MOTOTRBO Interface	Motorola XPR4550 Option Board Version (XPR4550) Motorola XPR5350 Motorola XPR5550 Option Board Version (XPR5550) <i>DMR radio</i>	01.12.17 01.07.44 02.06.05 02.06.05 02.06.03	Advanced Interface Option (North American) ONLY Serial Type MOTOTRBO Interface Available on 1 Line Only per unit
MTRBi	MTRBi Motorola XPR4550 Option Board Version (XPR4550) Motorola XPR5350 Motorola XPR5550 Option Board Version (XPR5550) <i>DMR radio</i>	MTRBi version 1.200 01.12.17 01.07.44 02.06.05 02.06.05 02.06.03	No Access Key Required
PowerTrunk	PowerTrunk MDT-400 <i>TETRA radio</i>	27.00.01	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Sepura	Sepura SRM2000 Sepura SRG3500 <i>TETRA radio</i>	V8.3-002 V9.0-006	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Serial Over IP	NA	NA	No Access Key Required
Sprint Direct Connect	AdvanceTec AdvanceBridge Qualcomm <i>Remote Cellular Modem</i>	V0004 V1.306	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Not Tested this Release	Not Tested this Release	Not Tested this Release	Not Tested this Release
Tait TM91xx/TM94xx	Tait TM9100 Tait TM9400 <i>P25 radio</i>	8.03.03 2.07.00	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Tait TM93xx	Tait TM9300 <i>DMR radio</i> (Only Tier II is supported)	2.12.03	Advanced Interface Option (North American) or Advanced Interface Option (Export)
Telex Generic Version 1 RELM KNG Series	BK Technologies KNG Series <i>P25 radio</i>	5.5.13	No Access Key Required
Telex Generic Version 2 Sonim	Sonim for Motorola WAVE 7000 <i>Cellular PTT</i>	8A.0.0-03-7.1.1-26.01.65	Advanced Interface Option (North American) or Advanced Interface Option (Export)

Compatibility

C-Soft Application

- Version 7.400+ - Necessary for Sonim Interface for Motorola WAVE 7000.
- Version 7.200+ - Necessary for Radio Check.
- Version 6.501+ - Necessary for MDC Call Alert Acknowledgement feature.
- Version 6.500+ - Necessary for all other features.

Telex System Manager

- Version 2.400+ - Necessary for programming parameters.
- Version 2.400+ - Necessary for firmware upgrades.

Installation and Upgrade

Please use Telex System Manager 2.400 or newer to upgrade the firmware. Please refer to the IP-224 manual for information on how to upgrade the new firmware.