MOTOROLA SOLUTIONS

DOCUMENT NUMBER: MTN-0075B-18-NA
APC: Various
ISSUE DATE: 06-2023
EXPIRATION DATE: 12-31-2028
Bulletin Type: Informational Only

Motorola Solutions Technical Notification (MTN)

TITLE: APX, SRX Radios, radios cannot access a Type II Trunking site, resulting in retries/ NO COMMS/ unable to key up

TECHNOLOGY: ASTRO Subscriber

SYMPTOMS:
In certain locations, radios may be unable to reliably access a Type II Trunking site (exhibited by a red blinking LED, BONK sound when PTT, or a “NO COMMS ” message displayed on the screen. End users may report an intermittent loss of reliable communication at Type II Trunking sites.

MODELS / SYSTEM RELEASES / KITS / DATE CODES AFFECTED:
- Only applies to Type II Trunked systems with 6809 or MTC controllers
- Any Astro Subscriber radio (APX, APX NEXT, SRX)

SEVERITY RECOMMENDATION:
MEDIUM - If the above symptoms are encountered, check the radio configuration parameters and make the adjustments as outlined below.

ROOT CAUSE / DEFINITIVE TEST:
Firmware defect

WORKAROUNDS AND CORRECTIVE ACTIONS:
Compare the radio ISW codeplug settings to values in Table 1 and follow the instructions below.
- Trunking Configuration> Trunking Wide> Advanced> ISW window Adjust

RESOLUTIONS AND REPAIR PROCEDURES:
1. **For radio subscribers units currently on a firmware version prior to R18.xx.xx**
   - Upgrade to radio firmware version R18.xx or greater, (proceed to step 2).
2. **For radio subscribers units currently on a firmware R18.xx.xx or greater**
   - Read the radio codeplug ISW Window Adjust setting in the radio.
   - Make any needed modifications to the ISW Window Adjust setting (to match Table 1 below) in CPS/Radio Management/RadioCentral.
   - Then Save and Write codeplug to the radio.

   Note: All units shipped from the factory after July 16, 2018 with R18.00.00 or higher have the updated ISW Window Adjust value in the default codeplug. As long as the default settings have not been modified, there should be no need to change the ISW Window Adjust value.

   If the ISW Window Adjust setting has been modified from the default codeplug value, or an older codeplug version (prior to R18.00.00) was cloned, then follow step 2 above to correct the setting.

3. Determine your T0 Counter Setting of your Type II Trunking System (which is set for each site)
   - Validate the T0 setting is set to the default value.

4. If the upgraded device continues to exhibit accessibility issues, or if unfamiliar with how to determine the T0 Counter value or if the T0 Counter Setting is not set to Default, please contact Motorola Solutions at 1(800) MSI-HELP and say 'ASTRO' at the voice prompt. Our team will provide the steps to determine the T0 Counter Value and the proper ISW Window setting for the system.

5. For systems with default T0 Counter Settings, reference Appendix A to ensure that the proper default ISW value is set for each device. **Note: All units shipped from the factory after July 16, 2018 with R18.00.00 or higher have the updated ISW Window Adjust value.**

PARTS REQUIRED (HARDWARE/SOFTWARE):
Firmware Version R18.00.00 or higher
APX Device Management Software (CPS/RM/RC) appropriate to the firmware of the radio being programmed.

APX Firmware and Device Management Software can be obtained by downloading from MyView:
You must be a subscribed MyView member to view available software downloads.
The MyView Support team can be reached at 1-800-MSI-HELP; Use voice commands to ask for "MyView"

ADDITIONAL INFORMATION:
NA

REFERENCE THE FOLLOWING DOCUMENTS/PROCESSES FOR INSTALLATION PROCEDURES:
NA

WHEN TO APPLY RESOLUTION:
If the radios exhibit system access issues on a Type II Trunking site

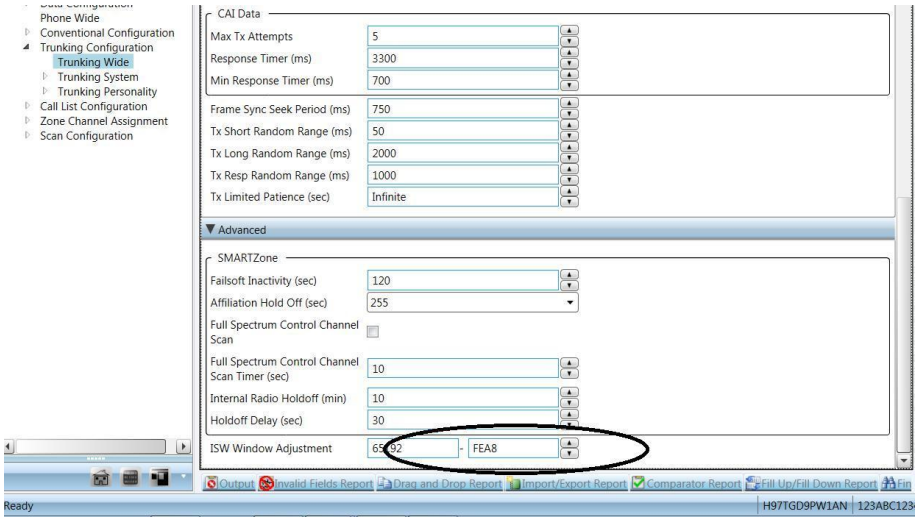
LABOR ALLOWANCE:
This is an informational bulletin. No labor warranty is implied, intended or authorized.

For assistance with this bulletin please contact your MSI Technical support center
https://www.motorolasolutions.com/en_us/support.html

Appendix A

1. Attach USB programming cable to the subscriber unit, open CPS and perform a codeplug read by selecting "Read a Radio."

2. In the opened codeplug, navigate to Trunking Configuration->Trunking Wide. The last field at the bottom of the Trunking Wide Page is the ISW Window Adjustment Setting.



3. **Modify the ISW Window Adjustment hex value**, the second field on the right to the correct value listed below in the table. It is possible that some radio models may have the default recommended values already programmed into them.

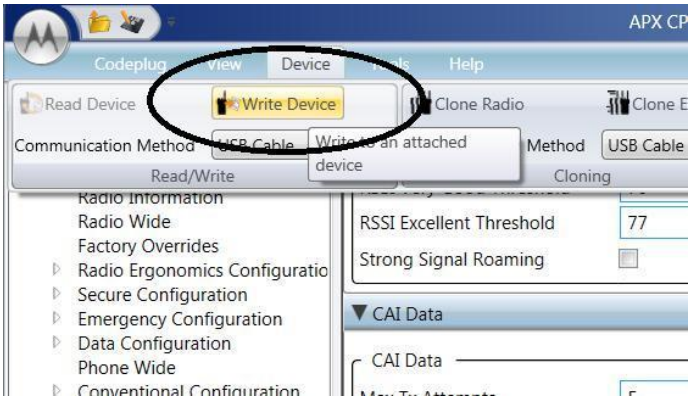
Table 1

4. Please Note: All Models refer to radio models 1, 1.5, 2, 2. 5, 3, and 3.4

Radio Models	Recommended ISW Value
APX900	FE99
APX1000	FE35
APX1000i	FE99
APX3000	FE35
APX2000	FE35
APX2000Li	FE35
APX4000	FE35
APX4000Li	FE35
APX2500	FE35
APX4500 (AN)	FE35
APX4500- Radio Model number ending with “BN” OR “CN”	FEA1
APX4500LI- All Control Heads	FE35
APX5000 (AN)	FE35
APX6000 AN- All Models	FE35
APX6000 AN Rugged - All Models	FE35
APX6000Li (AN)	FE35
APX6000XE (AN)	FE35
SRX2200 (AN)	FE35
APX5000 (BN)	FEA0
APX6000 BN- All Models	FEA0
APX6000 BN Rugged - All Models	FEA0

APX6000Li (BN)	FEA0
APX6000XE (BN)	FEA0
SRX2200 (BN)	FEA0
APX5500	FE35
APX6500 (AN)	FE35
APX6500- Radio Model number ending with “BN” OR “CN”	FEA1
APX-6500Li	FE35
APX-7500- All Control Heads	FE35
APX-7000- All Models	FE35
APX-7000XE-All Models	FE35
APX-8000- All Models	FEA8
APX-8000H- All Models	FEA8
APX-8000HXE- All Models	FEA8
APX-8500	FEA8
APX NEXT	FEA8
APX N30	FEA0
APX N50	FEA0
APX N70	FEA8

5. Write codeplug back in radio by selecting and clicking Device->Write Device, with the default Communication Method: USB Cable (see below);



6. To verify the codeplug has been written properly and contains the correct value, repeat steps 1-2, and verify the ISW Window Adjustment value is matches the value in Step 3: