SPECIAL EXPANDED ISSUE

Pages 2-10 explain known radio and system issues and offer solutions for our users.

TELECOM

MANDATORY RADIO SYSTEM BULLETIN

This bulletin addresses several issues that our users are having with their portable and mobile radios. Please read it entirely and distribute to every member of your department that uses a radio.

Issues Covered

1. All mobile radios need tuned at Telecom!
2. APX6000 Manufacturing Issue
3. Your display shows 'Out of Range'
4. Setting up your Scan List
5. Reverb/Echo
6. Do you hear "BONK" on your radio? You might be talking over somebody!
7. Car Antennas
8. Interoperability Channel Package
9. Scanning / Range Limitations

Did you know?
After 12 radio key-ups, we can tell if your radio is out of alignment or not programmed correctly. This is one improvement with the digital system—our remote ability to troubleshoot radios.

MARCS in SCHOOLS SECURITY RADIO UPDATE

MOU Signatures are trickling in as we approach go-live for 53 School Security Radios at Warren County public school facilities. Fully-signed MOUs will be collectively presented to the Board of Warren County Commissioners for resolution/adoption in July. Mobilcomm, a qualified third-party vendor has been contracted by the State of Ohio to facilitate the programming/installation of Warren County school radios. The goal is for all MOUs to be signed and radios installed by July 31st, so that we can activate all radios on August 1st, the first day of schools' testing window.

MOTOROLA
83 SCHOOLS

APX 4500   Model STS 573077-0-1

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APX6000 ISSUE

2.

On May 29th, we distributed a Telecom Safety Alert with Motorola's 3-page Field Service Bulletin regarding a fault in the APX6000 radio.

This is a Motorola issue unrelated to Warren County's digital radio system performance.

PROBLEM: Warren County's APX 6000's fall within a serial number range that need repaired. If you have a defective radio and a shoulder microphone or headset is attached, when keying up, the radio frequency energy may be directed back into the radio through the shoulder microphone or headset confusing the radio and causing an 'ERROR' message to appear on the radio's display. The radio is then incapable of transmitting out. Portables need to be tested to determine if they're defective. The root problem is that 4% of the APX6000 radios made by Motorola got glue on a connector during manufacturing, causing this problem.

PUBLIC SAFETY IMPLICATION:

- Fire departments – do not use APX radios inside a fire until they are tested and verified okay by Mobilcomm. Do not use shoulder microphones or headsets at all.
- Law enforcement/probation officers – cease use of shoulder microphones and headsets immediately. The quick solution is turn off / turn on your radio to remove the error. But if you're involved in a high-risk / compromising incident when the error occurs, it's not safe to turn your attention away from the incident and toward your faulty radio.

TEMPORARY SOLUTION: disconnect all shoulder microphones and headsets. If you see the error, turn off / turn on your radio to remove the error. Notify Glenn & Nick x3251 to get the unit repaired.

PERMANENT SOLUTION: Motorola is offering NO-COST REPAIR – Mobilcomm will perform the test procedure for Warren County agencies to determine if the radios need repaired. Telecom will not have loaner XTS radios for your department while yours are out for repair, so you may only want to send off a few at a time.

Contact the Radio Systems Team at 513.695.3251 with questions.

3. Your display shows 'Out of Range'

OUT OF RANGE

If you are inside Warren County's borders and see "out of range" - your radio needs tuned. See **1.**
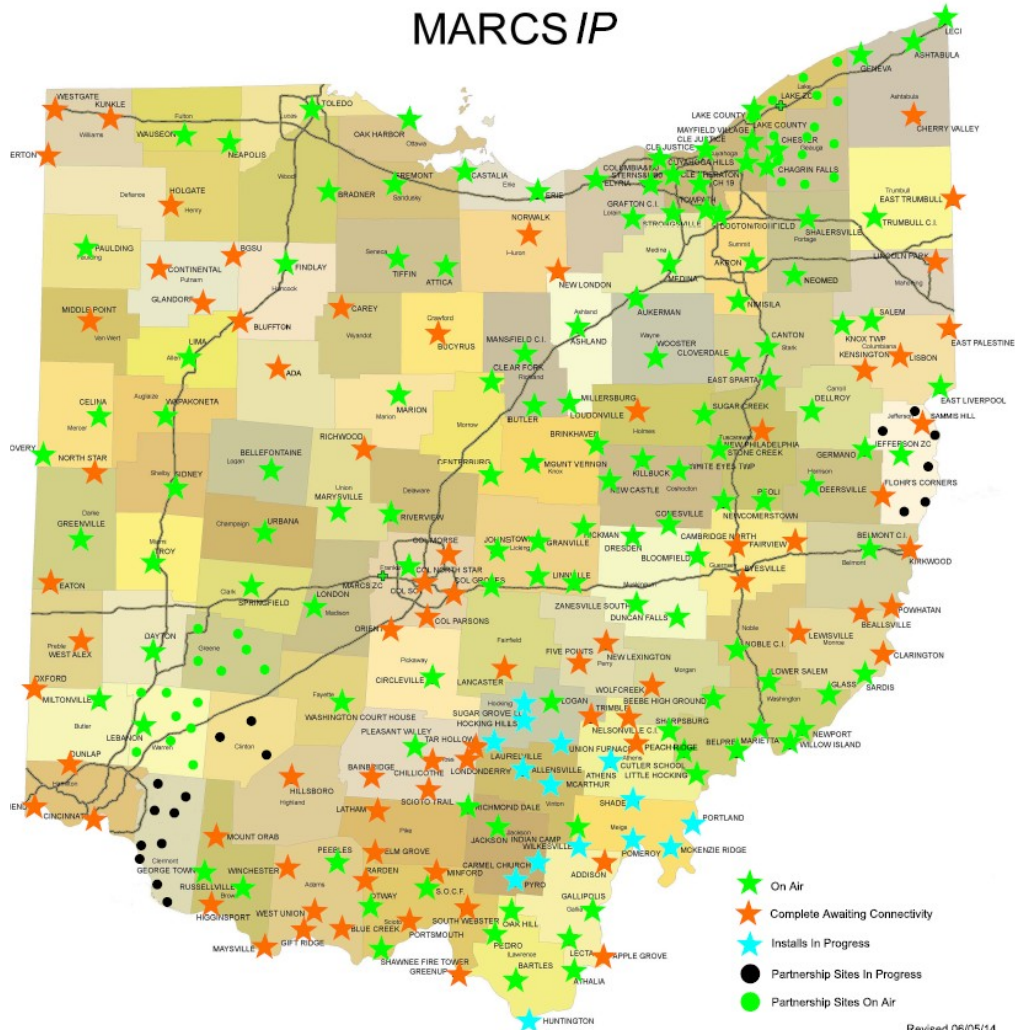
If you are outside of Warren County and see "out of range" - that County most likely doesn't have MARCS IP towers (YET!) The State of Ohio's Radio System has two versions running right now: the old Version 3.5 and the new Internet Protocol (IP) version. Warren County operates on the latter.

Because this is the newest State system and Warren County is an early adopter, they are still adding towers throughout the State and neighboring Counties are following our lead to join it. Until those towers are constructed, we will experience 'out of range' in Counties that don't house IP towers. This problem is out of our control but the benefits will come, as you'll be able to roam statewide on our local talkgroups, compared to the analog system when you lost connectivity at the county border. Certain talkgroups are programmed to roam the entire State, and they will as long as they can latch onto a MARCS IP tower. See the below map for existing and future MARCS IP towers.

PROJECTIONS: Clinton County October 2014. Clermont County April 2015. Butler County September 2014.

You can still travel to Butler County and use BC talkgroups / Hamilton County and use HC talkgroups / Montgomery County and use MC talkgroups. You will affiliate with their system towers.

MARCS IP

★ On Air
★ Complete Awaiting Connectivity
★ Installs In Progress
● Partnership Sites In Progress
● Partnership Sites On Air

Revised 06/05/14

![TELECOM Warren County · Ohio]

4. Scan List Setup

When radios were reprogrammed for the digital switch, their scan lists had to be deleted, but were replaced with a default list of your Primary and Local talkgroup. Each user needs to reset their scan list (up to 10 talkgroups in XTS&XTL2500/ APX6000 and 15 talkgroups in XTS5000). Even if you press the scan button (bottom side button on portable and soft key under 'scan' on mobiles/controls stations), there's nothing to scan until you set it up.

How to program a scan list has been in our XTS2500 and XTS5000 anatomy training videos since 2011, with an additional video solely covering scan lists - www.YouTube.com/WarrenCountyTelecom or http://warrencountytelecom.com/wp/training/radio-training/

1) Press and hold the scan button - bottom side on portable, soft key under 'SCAN" on mobile.
- A small square flashes in the upper right corner of the display indicating the programming mode
- SEL, DEL, and RCL display above soft keys

2) Left/right arrow between zones + scroll channel selector knob to navigate talkgroups

3) Press the button below SEL or DEL or RCL
- SEL = add the currently displayed talkgroup to the scan list, a Z will appear. Press twice to add a $Z_{\bullet J}$ making it 2nd priority in your scan list. If this talkgroup and another key up at the same time, your radio will pick your second priority.
- DEL = delete the currently displayed talkgroup from the scan list
- RCL = view your current scan list roster

NOTE: Priority-one is automatically the talkgroup you're sitting on. You can't edit this.

XTS instructions

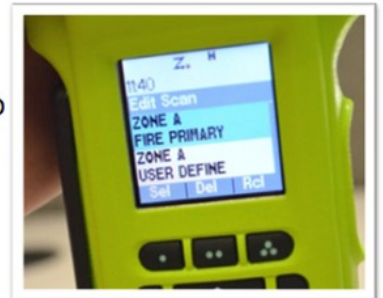**4) Press HOME to switch out of the programming position**

1. Long press the bottom side button with (2) raised squares until your face display changes to say 'Edit Scan' and the top display has a blinking square.

2. Soft Keys now associate with
   - 'SEL'– Select / Add. Hit TWICE to make a talkgroup your 2nd priority in the scan list (a $Z.$ will appear above it)
   - 'DEL'– Delete the highlighted talkgroup from your scan list
   - "RCL'– press to recall what is already in your scan list

3. Left/Right arrows to navigate zones

4. Up/down arrows or scroll channel selector knob to navigate talkgroups

APX instructions

5. Echo / Reverb on Radio Traffic

The "echo" is digital technology's equivalent of the old analog system's "SQUEAL". Like a musical performer standing too close to their speaker on stage, old analog radios would sound a squeal if you got too close to another radio user (speaker). Alerting you to move or turn down a radio. The new digital technology blocks the squeal and continues to send the distinguishable verbal audio just with an echo effect, not as audibly offensive but equally frustrating for users.

This is a permanent caveat to the digital system that users will need to work around.

Ways for End Users to Avoid Echo/Reverb
- If talking on your mobile radio, turn down your portable so that it doesn't broadcast what you're saying right back into your mobile's microphone. Otherwise, you risk having to repeat your traffic because Dispatch/listeners couldn't understand it.
- If talking on your portable while near your mobile, turn down your mobile so that it doesn't broadcast what you're saying right back into your portable's microphone.
- If in a group of people with radios, turn away from them when transmitting.

We now have a way to reduce the background noise in your radio. Come into Telecom for a quick update to your radio.

Delayed audio feeding back into the person's portable microphone

6. Do you hear "BONK" on your radio? You might be talking over somebody!

- There is no "hang-time" / "white noise" / "fuzz" like on the old analog system.
- The new digital system doesn't allow talking over someone like the old system did. On analog, if Officer A was transmitting on Primary 1 with their portable, and Officer B had a stronger signal with a mobile, Officer B could potentially key up on Primary 1 during Officer A's transmission and take over the talkgroup. At the least, Officer B would think they were talking but be hitting dead air. Now on the digital system, Officer B would hear a 'BONK', not allowing them to talk over someone, and their radio would revert to receive-mode to only hear the ongoing Primary 1 traffic.
- The BONK can mean 1 of 3 things:
  1. Your radio isn't reaching the system—see Page 2.
  2. You are keying up over someone's existing traffic on a talkgroup.
  3. You and another person are simultaneously keying up on a talkgroup, fighting for the line. Neither gets the line and you need to try again.

BONK

This item reiterates the rule of listening to a talkgroup for ongoing traffic before you key up. If there is back and forth dialogue between a unit and Dispatch, let them clear that conversation before you transmit. If on an incident, every transmission is important for safety and incident progression so be patient and avoid having to re-transmit.

7. Car Antennas

- Long Antennas—An ongoing issue that existed before the digital cutover, please make sure that your vehicle's radio antennas are properly seated into their bases and aren't corroding. We see antennas pushed too far into their bases, diminishing their reception. Proper seating is to pull it out as far as you can while keeping it securely in the base.

- Public Works departments who purchased new XTL1500 radios received new antennas that shouldn't experience problems. They come ready to affix to the vehicle. However, if you didn't take our recommendation to swap antennas, make sure your existing antenna is seated properly.

- "Pepper shaker antennas" are not appropriate for MDC's. **They only hit the 800MHz band while MDC's need to reach 700-2700MHz.** If you do not use Telecom for your parts, below are DST's recommended parts to order with your supplier of choice:

MP ANTENNA 700-2700 MHz wideband NMO mount black multi-polarized antenna.
Mfg Part #: 08-ANT-0902

Larsen vehicle roof mount antenna installation hardware kit includes 25 feet of RG58/U dual shield cable.
Mfg Part #: NMOKHFUD25

AMPHENOL "RFX" series TNC connector. Nickel plated body with crimp on center pin. Crimp-on connector.
Mfg Part #: 031-2367-RFX

your mobile radio antennas

Agencies are reporting poor mobile radio reception and transmission - with no signs of failure on Telecom's end, we wonder if antennas are being incorrectly attached to your vehicle. There is a right and wrong way to attach your antenna. Bring your vehicle into Telecom's Radio Team during business hours and they can inspect / tune your antennas, getting you back to 100%

Are they swapped?

Is it not seated correctly in the holder?

Is it missing?

Interoperability Package

There has been some confusion on interoperability with the Warren County transition to MARCS iP.

Most importantly, Warren County's Interoperability policy has not changed. Any agency that provides mutual aid to agencies within Warren County are eligible for access to the Warren County Radio System.

Mutual Aid providers in Counties that border Warren County are not subject to the monthly MARCS users fees. Mutual Aid providers will be provided with the Warren County Interoperability Package of talkgroups, but are not eligible for the MARCS Interoperability package of LECOMMS, SCOMMS, etc with the no-fee plan. We negotiated this into our agreement with MARCS to ensure continued communications with our Mutual Aid partners.

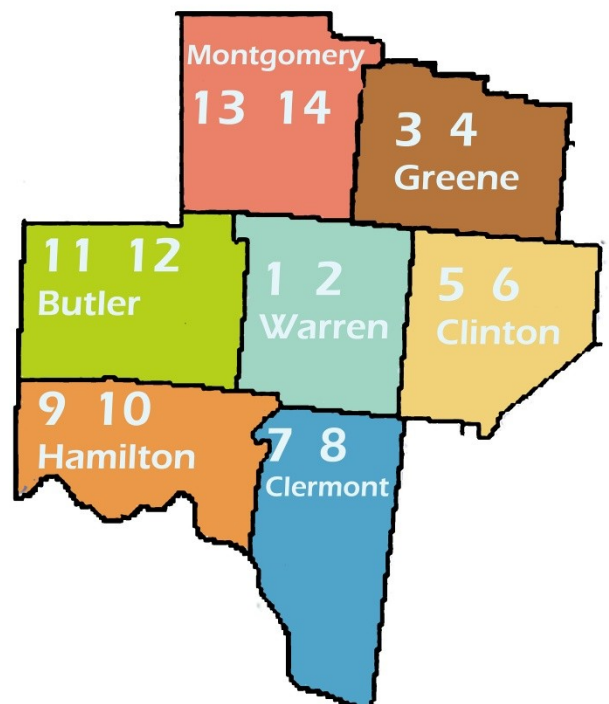|	Warren County Interoperability Package			
	Zone A	Zone B	Zone C	Zone D
1	83XFD PRIM	83XFD PRIM	MA TAC 1 (warren)	MA TAC 15
2	83XFD HAIL	83XNIMS	MA TAC 2 (warren)	MA TAC 16
3	83XTAC 2	83XTAC 12	MA TAC 3 (greene)	MA TAC 17
4	83XTAC 3	83XTAC 13	MA TAC 4 (greene)	MA TAC 18
5	83XTAC 4	83XTAC 14	MA TAC 5 (clinton)	MA TAC 19
6	83XTAC 5	83XTAC 15	MA TAC 6 (clinton)	MA TAC 20
7	83XTAC 6	83XTAC 16	MA TAC 7 (clermont)	MA TAC 21
8	83XTAC 7	83XTAC 17	MA TAC 8 (clermont)	MA TAC 22
9	83XTAC 8	83XTAC 18	MA TAC 9 (hamilton)	MA TAC 23
10	83XTAC 9	83XTAC 19	MA TAC 10 (hamilton)	MA TAC 24
11	83XTAC 10	83XTAC 20	MA TAC 11 (butler)	MA TAC 25
12	83XTAC 11	83XTAC 21	MA TAC 12 (butler)	MA TAC 26
13	83XMYDY 1	83XMYDY 2	MA TAC 13 (mont)	MA TAC 27
14	8 TAC 94D	8 TAC 94D	MA TAC 14 (mont)	MA TAC 28
15	8 TAC 92D	8 TAC 92D	MA MYDY 1	MA MYDY 3
16	83XFD PRIM	83XFD PRIM	MA MYDY 2	MA MYDY 4

Mutual Aid providers will be provided with all of the talkgroups they had before our transition (Primary and local TAC Channels) with the addition of the 2 zones of Mutual Aid TACs.

Counties that are in the process of transitioning to MARCS will issue radio ID's out of their ID blocks so that we don't have multiple radio ID's for the same system in the same radio. Clermont, Clinton, Butler, and Montgomery Counties will issue ID's to their agencies now for radios being put on the Warren County System. Once the Counties have approved and assigned the ID, MARCS will activate the ID for them. Mobilcomm has the procedure to request radio IDs for the radios they service.

We are making every effort to expedite radio activation requests on to the system.

If you have questions please email or call Director Paul Kindell (x1318 or paul.kindell@wcoh.net)

9. Scanning / Range Limitations

Users are reporting the inability to scan on vehicle radios. We've discovered that **when you leave Warren County's towers, scan stops working.** You will only hear radio traffic for the channel your radio is "sitting on" as shown on your display. Radios are locking onto towers outside of Warren County, even though they are still physically inside Warren County's borders. The map shows nearby MARCS towers that our radios are "latching onto" in lieu of our own.

Come into Telecom for the quick "1.5 update" that helps lock your radio onto Warren County towers as often as possible, keeping scan enabled.

3 Data System NOTICES

1. MDC REMINDER
Please do not have your ordered MDC's or related equipment shipped to Telecom's office (500 Justice Drive). Mounts, docks, MDCs, etc. should be received by your Agency. We are happy to look over quotes/specs and offer our opinions or pre-purchase consultations before you purchase. If you need Telecom assistance, contact DST at 695-3250 to schedule a drop-off.

2. DROPBOX SPAM ATTACK
Dropbox users are reporting spam e-mails, leading users to believe that Dropbox has again been hacked, like last July year when hundreds of Dropbox-exclusive email addresses received spam emails. A Dropbox spokesperson has stated that it's not the same this time around, and assured users that its service wasn't hacked. Users are receiving phishing e-mails from fake LinkedIn and PayPal e-mail addresses, as well as "offers" from casinos and gambling sites. The PayPal phishing e-mails are more frightening because they appear very similar to real PayPal transaction e-mails, and to the unaware user, could result in their computers being infected by malware. **Dropbox states, "If you've received spam to an email account you only use for Dropbox, please send the message (including full headers) to support-security@dropbox.com to help our ongoing investigation." It is also suggested that you change your e-mail & Dropbox passwords.**

3. HOW TO ENABLE CITRIX ON FIREFOX 30

a

b

Copy   Paste
100%
New Window   New Private Window   Save Page
Print   History   Full Screen
Find   Options   Add-ons
Open Add-ons Manager (Ctrl+Shift+A)

c

Extensions
Appearance
Plugins
Services

d

Citrix ICA Client 14.1.0.0
Citrix Receiver Plugin (Win32)   More

e

Always Activate
Ask to Activate
Always Activate
Never Activate
Always use this add

f

Add-ons Manager