

Uniden BCD396T Firmware Revision Notes 1.20.13

As part of Uniden's commitment to the continued support of the BCD396T, Uniden has, from time to time, issued firmware updates. These updates contain major enhancements to the BCD396T that directly reflect requests from our customers. Please take a few minutes to read all of these instructions before applying the update.

Notes:

- This update is cumulative...it incorporates all improvements made in all previous updates. You need only apply this one update.
- Most update problems are caused by serial port issues. See the troubleshooting hints in the [Update Troubleshooting](#) section if you have problems.
- Two great forums exist for sharing information about this scanner within the user community:
 - The RadioReference forums (<http://www.RadioReference.com/forums>)
 - The BCD396T Yahoo! Group (<http://groups.yahoo.com/group/BCD396T>)
- **You must install this update in order to access and apply future updates to your BCD396T.**

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What is Changed by This Update?

This firmware update makes the following change to your BCD396T scanner.

- Add ESN (electronic serial number) and ESN checksum to the scanner

Previous Update 1.13.17

- Add compatibility for the BC-RH96 Remote Head.
- Add WACN display to P25 systems. Hold on a P25 control channel and press FUNC. The SysID is replaced by the 5-digit hex WACN code.
- Fix "Multi Packet" issue on some P25 systems.
- Fix "Stops on Control Channel" issue for Motorola systems.
- Fix the "Ghost Talkgroups" issue where the incorrect talkgroup can be displayed for P25 systems.
- Improve rejection of close call hits on nearby frequencies when the signal level is weak.
- Change alpha tag advance method to use "<4" and "6>" to move left and right during text entry.
- Improve P25 audio performance in the Auto Threshold mode.
- Improve digital AGC performance when the person transmitting suddenly speaks loudly.
- Make the squelch control more logarithmic to more closely emulate analog control.

Previous Update 1.11.03

- Add P25 band plan setting for Implicit Mode systems.
- Improve Audio AGC.
- Adjust the Volume Table for smaller increments at low volumes.
- Change P25 Individual Call display format (Source and Destination) ([Before] DST – SRC; [After] SRC - DST (as same as analog individual call)
- Fix an issue where EDACS beeps are sometimes not detected and suppressed.
- Fix an issue where, If you are doing an ID Search or Scan with the 396T on an EDACS Wide system (and just that one system), once it acquires the system and shows you the control channel, it will NEVER lose that indicator that it's locked on. The problem occurs only if system hold time is 0 or 1. The problem goes away if hold is set to 2 or higher.
- Fix an issue where Close Call and Wx Priority do not work when in ID SCAN/SEARCH Mode if there is no TGID information on control channel (no traffic on the system).
- Improve scanning when there are adjacent strong signals.
- Adds a Digital End Code option (unofficial)
- Adds AGC Parameter Adjustments (unofficial)

Applying the Update

The following file is required for this update:

- **BCD396T_ESN_Updater_V1_20_13.exe** – this is the firmware updater file.

1. Run the above file to install the updater on your computer.
2. After installation, a “BCD396T ESN Loader v1.20.13” icon will appear on your desktop. Click this icon to start the updater.
3. Follow all of the on-screen instructions to apply the update.

Update Troubleshooting

Follow these tips to troubleshoot any update problem you encounter:

- When prompted, be sure to turn off the scanner, remove the batteries, and hold down both the L/O and 6 buttons while plugging in the AC adapter. The blue backlight should come on and remain on until the end of the update.
- If an error occurs during the update, simply repeat all steps, *including removing power, holding down L/O and 6, and plugging in AC power*. Even if the backlight is already on, you need to repeat this step if you restart the update.
- Almost all update error messages are caused by:
 - Incorrect COM port selection: Be sure you have selected the COM port that the scanner is plugged into.
 - COM port software conflicts: No other software can be running that uses the COM port. Be sure to close UASD and any other scanner control software. Also, if you have ever used a PDA with this PC, there is probably synchronization software running all the time that takes over the COM port. You can usually stop that software by right-clicking on its icon in the lower right side of your PC screen, then selecting “Quit” or “Exit.”

- If your PC does not have a COM port, you can use a USB→RS232 adapter. Uniden sells such an adapter specifically for this scanner (Model [USB-1](#)). Or, you can use many other adapters that are available at computer retailers. Note that some adapters do not work, or require updated drivers. Uniden only supports the [USB-1](#).

Updating your Registration Information

After you apply this update, your scanner will have an ESN (electronic serial number) and ESN checksum. To get future updates, you must register this information at [My Uniden](#). You can find this information in your scanner by selecting MENU → Settings → See Scanner Info → Firmware Version.

Using the P25 Band Plan Setting

The BCD396T includes two operation modes for P25 systems: explicit mode and implicit mode channel assignment. Explicit mode systems include all information needed to determine voice frequencies on the control channel. You must supply the system's band plan for implicit systems for the scanner to correctly determine voice frequencies.

To set the band plan for a P25 system:

[MENU] ⤴ Program System → E

⤴ Edit Site → E

⤴ Edit Band Plan → E

Then, follow these steps:

1. ⤴ the Band Plan table entry you want to edit and press E.
2. Enter the base frequency for the table entry and press E.
3. Enter the spacing for the table entry (in kHz) and press E.

Repeat 1-3 for additional table entries.

Notes:

- For Explicit mode systems, leave all entries blank.
- There is no way to determine the correct entries using the scanner (other than trial and error). You must get this information from another source. Uniden America Corporation does not have this information.

Using the Digital End Code Option (Unofficial)

This setting is neither fully tested nor supported by Uniden America Corp.

ATTENTION!

This change still needs some review and further testing before officially releasing it, but you can access it for now with a hidden command. Be sure to back up the information in your scanner. While limited testing did not show up any problems (and seemed to have positive results for the issue addressed), using unreleased features always carries some risk.

This change adds a Digital End Code Option for P16 Systems Motorola 3600 bps digital systems. It might be a solution to the issue that systems with stuck repeaters hang the scan cycle.

To add the menu item, press [HOLD] while powering the scanner. Now, there is a "Digital End Code" option in the Motorola systems. The next time you cycle power, the menu item will disappear, but the last setting will persist. There is no provision in UASD to change this setting, but if you read from the scanner, then write to the scanner again the setting will persist.

Adjusting AGC Parameters (Unofficial)

This setting is neither fully tested nor supported by Uniden America Corp.

ATTENTION!

This change allows access to some AGC parameters that might result in poor audio. The default settings of 0 have been arrived at through testing in multiple environments. The use of other settings is at your own risk. Uniden America Corp. is releasing access to these features without support.

General Notes:

- All settings are saved, even when you cycle power and the option is no longer available.
- These settings are not accessible through UASD.

P25 AGC Settings

To access these settings:

1. Press [HOLD] while turning on the scanner.
2. Turn on the Digital AGC option.
3. Tune to a digital channel.
4. While receiving a P25 signal, hold F then tap the scroll knob. The scanner displays the current P25 RES TIME parameter setting (see below for option details).
5. Rotate the scroll control to change the setting.
6. F+rotate the scroll to select another setting.

Parameters:

P25 RES TIME

Range: -8 to +8

This parameter determines how frequently the AGC factor updates. Decreasing this value makes AGC respond faster, but could result in “pumping.” A higher value decreases the response time.

P25 REF GAIN

Range: -5 to +5

This parameter determines the reference level that AGC attempts to adjust the volume to. If digital/analog volume is not matched, adjust this parameter.

Analog AGC Settings

To access these settings:

1. Press [HOLD] while turning on the scanner.
2. Turn off the Digital AGC option and turn on the Analog AGC option.
3. Tune to an analog channel.
4. While receiving a signal, hold F then tap the scroll knob. The scanner displays the current ANA RES TIME parameter setting (see below for option details).
5. Rotate the scroll control to change the setting.
6. F+rotate the scroll to select another setting.

Parameters:**ANA RES TIME**

Range: -8 to +8 (0 is default)

This parameter determines how frequently the AGC factor updates. Decreasing this value makes AGC respond faster, but could result in “pumping.” A higher value decreases the response time.

ANA REF GAIN

Range: -5 to +5 (0 is default)

This parameter determines the reference level that AGC attempts to adjust the volume to. If digital/analog volume is not matched, adjust this parameter.

ANA GN RANGE

Range: 0 to 15 (6 is default)

This parameter controls the total dynamic range of the AGC adjustments. A larger value allows a wider variation in volume.