



AT-D878UVII Firmware & CPS Change Log

Important: MCU Reset Required After Firmware Update

After Updating the firmware, make sure you turn the radio back off, Press and hold the PTT and PF1 Button, and while holding them, turn the radio back on. Keep holding them down. You should see "Are you sure you want to Initialize Radio" on the screen. Release when you see this, and press confirm. Radio will reboot and must be time must either be set or just press confirm to get to the main screen so you can reload your codeplug.

*** **USB Drivers** – For Windows 10 and Windows 11 systems, you do not need to install any drivers. Connect the radio with the programming cable, turn on the radio, and once it is fully booted up, Windows will detect and install the correct drivers. If you are still on the Date and Time screen, it will not detect the radio. You must be on the main radio screen.

For Windows 7/8 Systems, please install the USB driver available at: <https://w9jam.com/anytone-firmware-cps-guides/>

Firmware V4.01b | 2026-09-21

Changes

1. **CPS > Optional Setting > Other > EXT PTT Lock:** Added an option to lock the PTT key and inhibit transmission.
2. Fixed an issue where waking the radio at night could cause the display to flash completely white for a split second before the normal frequency display appeared.
3. **CPS > Tool > JSON Data Import/Export:** Added the ability to export a JSON file containing Optional Settings and other radio settings. Importing the JSON file preserves the maximum number of compatible settings across the D878UV, D878UVII, D578UV, D168UV, and D890UV models.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V4.01b	V4.01	V1.23	V2.01.07 BA	10046	V1.06 / V2.00

Firmware V4.00 | 2025-08-15

Changes

1. **Removed Satellite Functionality:** Due to CPU memory limits on the D878UVII architecture causing intermittent system freezes on firmware V3.08N for some users, the Satellite function has been

removed in V4.00 while retaining all other features and improvements since V3.04. (Note: Users who are not experiencing freezes and wish to keep Satellite functionality may remain on firmware V3.08N).

2. Fixed an issue where APRS data could not be downloaded in the CPS.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V4.00	V4.00	V1.23	V2.01.07 BA	10046	V1.06 / V2.00

Firmware V3.08N | 2025-06-14

Changes

1. Fixed an issue in firmware V3.07 where the monitor function failed to open the audio speaker to white noise.
2. Fixed an issue in firmware V3.07 where custom background images caused the radio to freeze.
3. Fixed an issue in firmware V3.07 where setting channel modes to A+D or D+A prevented signal reception and disabled analog monitoring.
4. Fixed an issue where the voice notification for "Repeater Out of Range" failed to play on the D878UV and D878UVII.
5. Fixed an issue where Satellite TX frequencies were incorrect.
6. Fixed an issue where Satellite pass predictions were inaccurate.
7. **Bluetooth Update (Module V10046):** Improved Bluetooth PTT auto-reconnection stability when brought back into close proximity with the radio.
8. Configured the radio to remember paired Bluetooth PTT devices across reboots for seamless reconnects after powering on.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.08N	V3.08	V1.23	V2.01.07 BA	10046	V1.06 / V2.00

Firmware V3.07 | 2025-04-29 – Recalled (Do Not Use)

Changes

1. Resolved issues affecting analog and digital APRS performance.
2. Fixed an issue where the **Edit** button was missing from the GPS Info menu.
3. Fixed an issue where the Satellite AOS elevation limit was not enforced.
4. Fixed an issue where setting squelch to 0 in Satellite mode produced no receiver audio.
5. Fixed an issue where the satellite name failed to display after satellite orbital data was loaded.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.07	V3.07	V1.23	V2.01.07 BA	10033 / 10036 / 10043 / 19043	V1.06 / V2.00

Firmware V3.06 | 2025-01-23

Changes

1. Added Maidenhead grid square locator display on the GPS information screen when a valid GPS lock is established.
2. **Satellite Mode:** Allowed APRS transmissions by pressing **PTT + PF2** (configured under **CPS > Tool > GPS Satellite Data Update > AprsTxFreq(Hz)**).
3. **Satellite Mode:** Allowed Armed CTCSS/DCS tone bursts by pressing **PTT + PF1** (configured under **CPS > Tool > GPS Satellite Data Update**).
4. Separated Color Code settings for TX and RX in channel configuration. When importing older **.rdt** codeplug files, the CPS will prompt to match TX Color Code to RX Color Code.
5. Fixed an issue in firmware V3.05 where APRS transmission was disabled.
6. Fixed an issue where a 250 ms silent transmission occurred even with STE (Squelch Tail Elimination) set to OFF.
7. **CPS > Tool > GPS Satellite Data Update:** Added **.CSV** file import/export capabilities for satellite ephemeris data.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.06	V3.06	V1.22	V2.01.07 BA	10033 / 10036 / 10043 / 19043	V1.06 / V2.00

Firmware V3.05 | 2024-12-12

Changes

1. **Satellite Function:** Allowed independent power level adjustments for Satellite mode. Press the ***** key in Satellite mode to toggle power levels.
2. **Satellite Function:** Fixed an issue where the radio froze during satellite pass calculation.
3. **Satellite Function:** Configured the radio to stay in the Satellite menu continuously, bypassing menu exit timeouts (exit manually using the Return key).
4. **CPS > Tool > Satellite Data Updating:** Added support for custom URL entries for satellite data downloads.
5. **CPS > Digital > Master ID:** Added Master Radio ID configuration. Assigning the Master ID under **Radio Menu > Setting > Channel Set > Radio ID** forces all channels to utilize the designated public Master ID globally.

6. **Radio Menu > GPS > GPS Info:** Added feature to save current GPS coordinates directly to a fixed beacon location.
7. **CPS > Optional Setting > Key Function:** Added **ANA SQL** side-key shortcut for quick analog squelch level adjustments.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.05	V3.05	V1.22	V2.01.07 BA	10033 / 10036 / 10043 / 19043	V1.06 / V2.00

Firmware V3.04 | 2024-09-15

Changes

1. Added Satellite Tracking and pass prediction feature.
2. Updated the active GPS lock icon to a green satellite indicator (designed by IK8JHL).
3. Added support for exporting and importing ARC4 and AES256 encryption configurations via [.CSV](#) templates in the CPS.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.04	V3.04	V1.22	V2.01.07 BA	10033 / 10036 / 10043 / 19043	V1.06 / V2.00

Firmware V3.03 | 2023-12-18

Changes

1. Improved scan speed and added filtering to ignore brief signal bursts.
2. Updated SMS functionality to support Text Capture on BrandMeister networks.
3. Updated the CPS to restrict reading AES / ARC4 encryption keys directly from the radio or codeplug files. *(Note: Export encryption keys using older CPS versions and save them to your PC prior to updating).*
4. **CPS > Optional Setting > Key Function:** Added **Dim Shut** key assignment to completely disable display backlighting and LED indicators.
5. Updated AES encryption functionality to utilize a variable initialization vector (IV) rather than a fixed string ([12345678](#)).

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.03	V3.03	V1.22	V2.01.07 BA	10033 / 10036 / 10043 / 19043	V1.06 / V2.00

Firmware V3.02 | 2023-04-21

Changes

1. **CPS > Digital > ARC4 Encryption:** Added Motorola-compatible ARC4 encryption support. (*Note: Turn off sub-band dual watch when using encryption to increase decoding reliability*).
2. **CPS > Optional Setting > Digital > Voice Header Repetitions:** Added configurable voice-header repetitions to improve synchronization and audio decoding reliability on receiving radios.
3. **CPS > Optional Setting > Digital > TX Preamble:** Added preamble duration settings for data transfers to improve packet synchronization.
4. Improved SMS confirmation mode compatibility with third-party radio hardware.
5. Updated **Call Alert** behavior for full ETSI recommendation compliance.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.02	V3.02	V1.22	V2.01.07 BA	10033 / 10036 / 10043 / 19043	V1.06 / V2.00

Firmware V3.01 | 2022-11-04

Changes

1. **Channel > Analog > 5Tone ID:** Aligned 5-Tone decoding standards on the current channel with 5-Tone encoding settings.
2. Restricted reading of AES256 encryption keys from the radio (write-only for security).

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.01	V3.01	V1.22	V2.01.07 BA	10033 / 10036	V1.04

Firmware V3.00 | 2022-10-14

Changes

1. Added a **None** selection option under **Settings > Chan Set > Rx Group List**.
2. **Talk Group Alerts:** Added an Online Alert feature per Talk Group to sound an alert beep whenever a contact transmits on that specific TG.
3. **CPS > Global Parameters:** Added configurable alert tone triggers when digital channels transition to idle:

- **0:** Beep Off
- **1:** Beep on slot completion (LED blue to off)
- **2:** Beep on carrier drop (LED green to off)
- **3:** Beep on either slot or carrier drop

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V3.00	V3.00	V1.22	V2.01.07 BA	10033	V1.04

Firmware V2.05 | 2022-04-11

Changes

1. Automatically disables the sub-band when GPS Roaming is active to prevent the sub-band VFO from jumping channels randomly.
2. **CPS > APRS > Analog > PASS ALL:** Added **PASS ALL** mode. Enabling PASS ALL displays all received APRS packets regardless of CRC validation (may display corrupted packets). When OFF, only packets passing CRC error checks are displayed.
3. Improved analog APRS reception (requires APRS board firmware update to V1.04).
4. Fixed an issue where exporting **.dcf** files failed when using Contact Manager V270.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V2.05	V2.05	V1.22	V2.01.07 BA	10033	V1.03

Firmware V2.04 | 2021-12-10

Changes

1. Fixed an issue in firmware V2.03 where radios failed to establish contact with repeaters.
2. Fixed an issue where Talker Alias settings were omitted from exported **.CSV** files.
3. **CPS > Tool > Channel Talker Alias Operation:** Added bulk select/deselect options for Talker Alias across all channels.
4. Fixed an issue where **Analog APRS Report Freq** in the CPS failed to save assigned frequency values.
5. Fixed an issue where GPS Roaming configuration data was not saved in the CPS.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V2.04	V2.04	V1.22	V2.01.07 BA	10033	-

Firmware V2.03 | 2021-11-30

Changes

1. Allowed users to select Talk Groups and RX Group Lists when creating new channels directly from the radio menu.
2. Improved stability during Single Frequency Repeater (SFR) operation.
3. **Radio Menu > APRS > APRS SMS:** Added APRS text messaging functionality to send and receive text messages between compatible radios.
4. **Radio Menu > Settings > Device Info:** Added display for the internal APRS board firmware version.
5. **CPS > APRS > Analog:** Added 8 analog TX frequency groups. Channels can select specific transmission frequencies under **Analog APRS Report Freq.**
6. **CPS > Common Setting > Channel > DMR Mode:** Added **DCDM TS Split** mode, allowing transmission on the secondary time slot while receiving on the primary slot (for use with D578UV repeater mode).
7. **CPS > Common Setting > GPS Roaming:** Added GPS coordinate location lists to automatically switch radio zones when within a set radius.
8. **CPS > Common Setting > Zone > Zone Hide:** Added option to hide unused zones from the display menu.
9. **CPS > Common Setting > Optional Setting > Key Function:** Added **Ana APRS Info** shortcut for fast access to received APRS packets.
10. **CPS > Common Setting > Channel > Send Talker Alias:** Changed Talker Alias to a channel-specific setting rather than a global parameter.
11. **CPS > Tool > APRS Information Manager:** Added ability to read and export log histories of received APRS messages.
12. **Messages:** Added a **Drafts** folder to save unsent SMS messages for re-transmission.
13. Added support for time zones: GMT+5:30, GMT+5:45, GMT+4:30, GMT+3:30, GMT-3:30, and GMT+8:30.
14. Lowered incoming APRS message display priority so received packets do not interrupt active radio menu navigation.
15. Corrected inaccurate altitude reporting in analog APRS packets.
16. Resolved echo/reverb audio artifacts when transmitting analog on A+D channels.
17. **Radio Menu > APRS > Ana APRS Info > APRS Verify:** Added error-verification toggle; disabling error-code verification can improve reception on weak analog APRS signals.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V2.03	V2.03	V1.22	V2.01.07 BA	10033	-

Firmware V2.02N | 2021-05-31

Changes

1. Fixed an issue where FM Radio could not be turned off from the radio menu.
2. Corrected an issue where the auto-transmission interval setting under **CPS > APRS** did not match the radio menu setting.

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Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V2.02N	V2.01N	V1.22	V2.01.07 BA	10033	-

Firmware V2.02 | 2021-05-26

Changes

1. **CPS > Optional Setting > Display:** Added customizable **Date Display Format** options.
2. **CPS > Optional Setting > Display:** Added options to hide **Channel Type**, **Time Slot**, and **Color Code** indicators on the main screen.
3. **CPS > Optional Setting > Alert Tone:** Added separate idle-channel alert tone options for digital and analog channels.
4. **CPS > Channel > Auto Scan:** Added auto-scan toggle to start scanning automatically upon channel selection.
5. **CPS > Optional Setting > Volume/Audio:** Added independent microphone gain settings for digital and analog channels.
6. **CPS > APRS > Ana AprsTX:** Added Wideband and Narrowband selection for analog APRS transmissions.
7. Added menu options to configure alert tones directly from the radio keypad.
8. **CPS > Analog > 2Tone / 5Tone / DTMF Settings:** Extended **Auto Reset Time** limits up to 250 seconds for paging system compatibility.
9. **CPS > Channel > Ana APRS Mute:** Added option to mute analog APRS receive audio.
10. Added coarse speed and heading details to digital APRS beacons.
11. **CPS > Optional Setting > Other:** Configured Priority Zone A and Priority Zone B displays to show zone names instead of zone numbers.

Firmware	CPS	Icon	SCT 3258	Bluetooth	APRS Version
V2.02	V2.02	V1.22	V2.01.07 BA	10033	-

Firmware V2.01b | 2021-04-10

Changes

1. **CPS > Digital > Contact List:** Expanded digital contact list capacity to support up to **500,000 contacts**.
2. **Analog APRS Receive (AT-D878UVII PLUS):** Added real-time analog APRS decoding. Receives and displays incoming callsigns, GPS coordinates, heading, distance, and digipeater paths directly on screen.
3. **Radio Menu > APRS > Ana APRS Info:** Added received analog APRS log history view.

4. **CPS > Public > APRS > Analog APRS:** Added callsign filtering options (**Receive Allow**) to restrict displayed APRS popups to specific target callsigns and SSIDs.

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V2.01b	V2.00	V1.22	V2.01.07 BA	10033	-