MX10 & MX16 ANTENNA CBRS ACF UPDATE MOP

1-24-2024

Document Number 17989-01

Revision History

ECO Number	Description	Date
00756	MX10 & MX16 Full CBRS RET ACF File MOP First Relase	01/24/24

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Introduction

- This document provides the steps required to update the CBRS RET device from a fixed electrical tilt value to a full range RET device, in the JMA Macro panel antenna models beginning with either MX10 or MX16
- The steps in this document are only applicable where the user has direct access to the antenna and can connect to the antenna via either the AISG connector input or to the RF Port which supports RET connection
- For situations where antennas are already installed on site and operational, please refer to Verizon MTCE advisory to how CBRS RETS can be updated via the ENM system.

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Applicable Antenna Models

List of MX10 Models

MX10FIT445-xx
MX10FIT465-xx
MX10FIT645-xx
MX10FIT665-xx
MX10FIT845-xx
MX10FIT845-Bxx
MX10FIT865-xx
MX10FIT865-Bxx
MX10FRO440-xx
MX10FRO640-xx
MX10FRO660-xx
MX10FRO840-xx
MX10FRO840-Bxx
MX10FRO860-xx
MX10FRO860-Bxx

-xx can be a value from 02 to 12

List of MX16 Models

MX16FRO445-xx
MX16FRO645-xx
MX16FRO845-Bxx
MX16FIT465-xx
MX16FIT665-xx
MX16FIT865-Bxx

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List of the equipment needed

- RET Controller
  JMA PCU-1000

- Antenna

MX10

MX16

- AISG Cable

- Smart Bias T
  (For RF connection)

- Laptop

RF Jumper for Bias T connection

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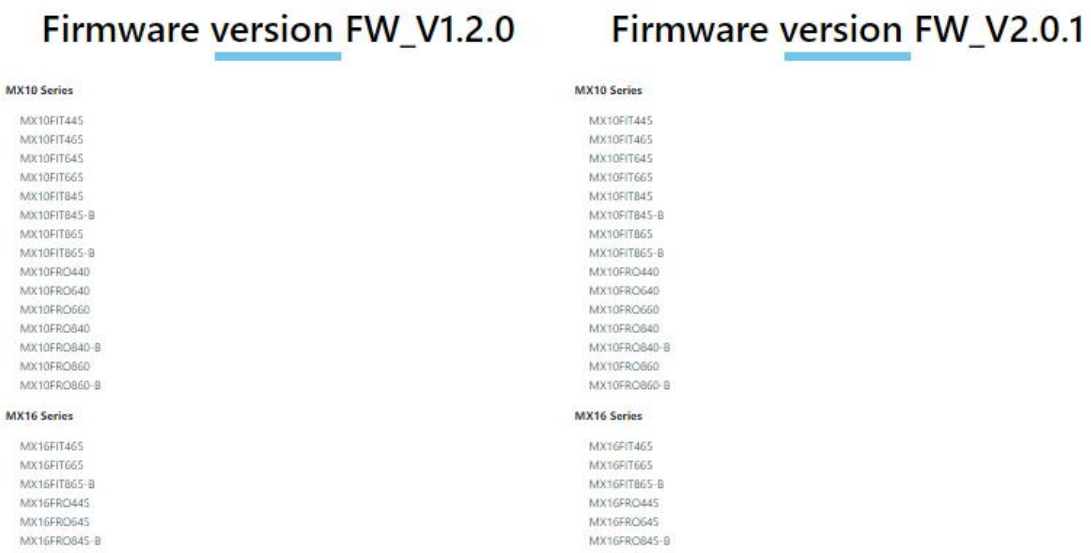
MOP Instructions location details

CBRS Full RET ACF File loading MOP instructions

http://jma%20mx10%20&%20mx16%20cbrs%20full%20ret%20act%20update%20mop.pdf/



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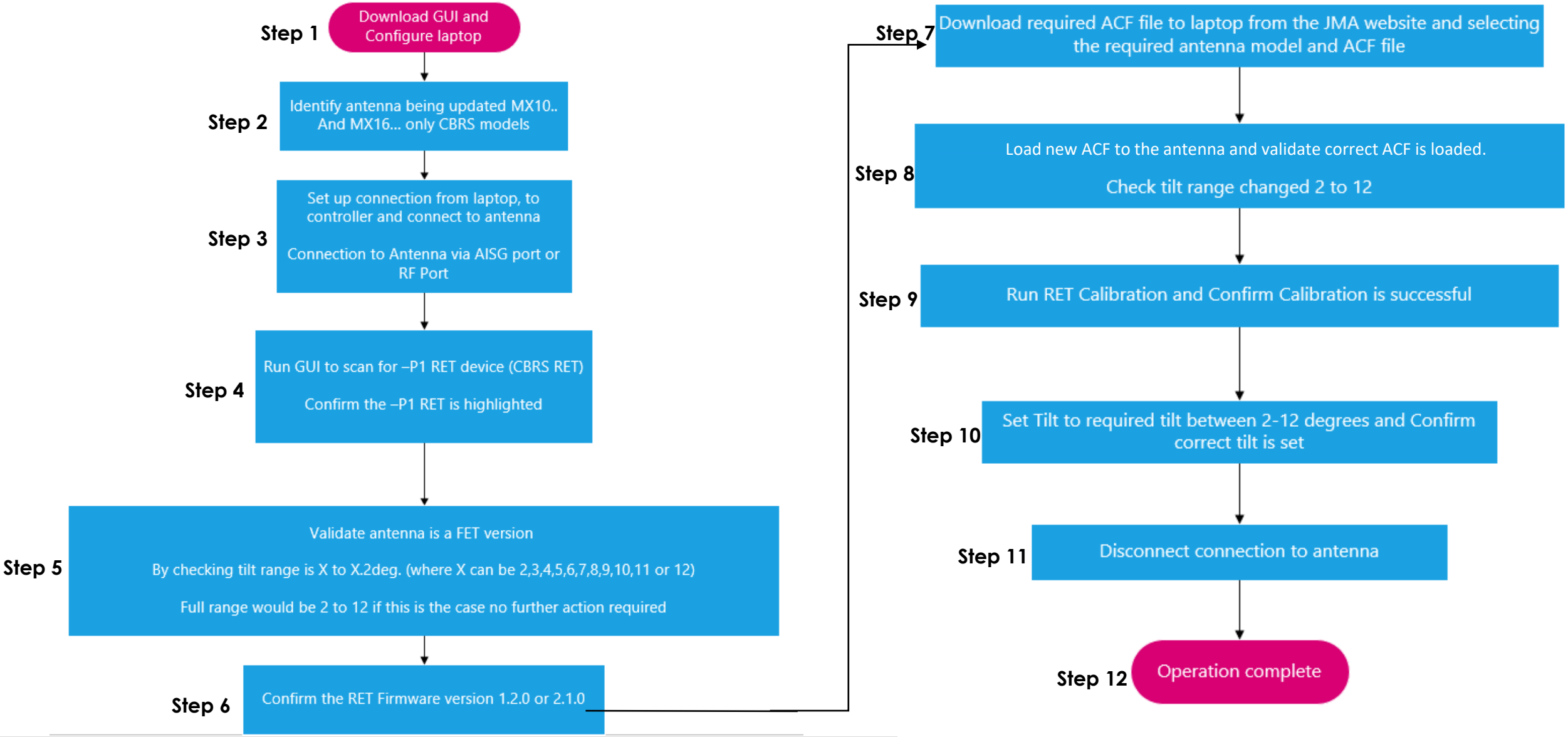
Flow Chart



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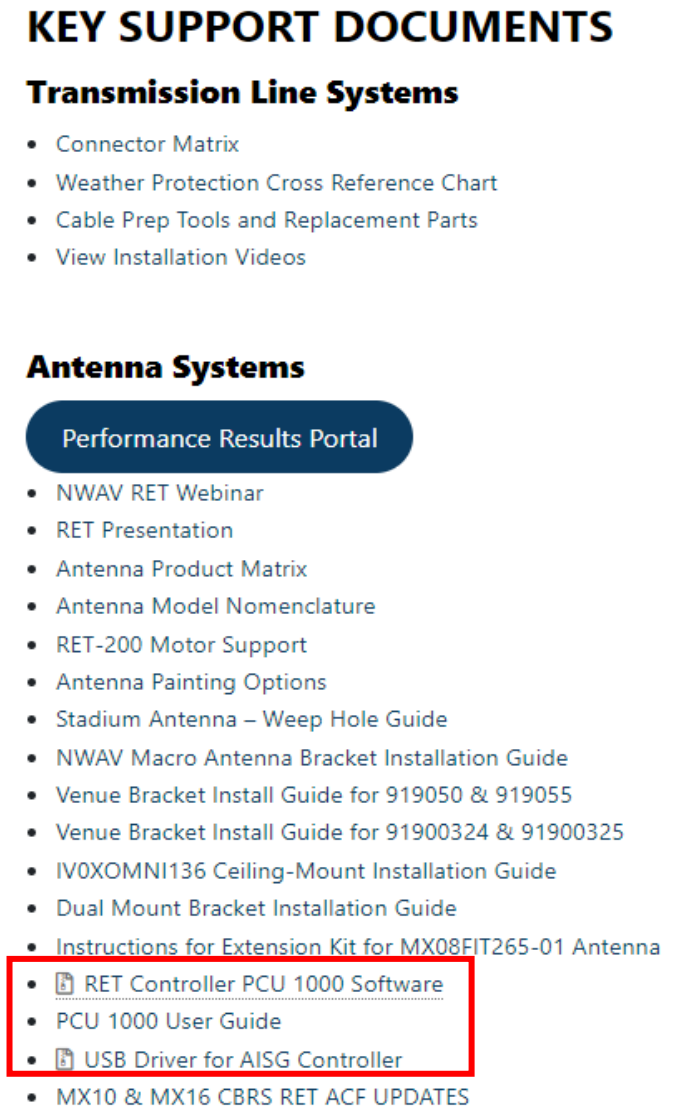
Step 1 - JMA Website location for Software and Guide

Go to:

https://jmawireless.com/support/

Download the 3 red highlighted items as shown.



KEY SUPPORT DOCUMENTS

Transmission Line Systems

- Connector Matrix
- Weather Protection Cross Reference Chart
- Cable Prep Tools and Replacement Parts
- View Installation Videos

Antenna Systems

Performance Results Portal

- NWAV RET Webinar
- RET Presentation
- Antenna Product Matrix
- Antenna Model Nomenclature
- RET-200 Motor Support
- Antenna Painting Options
- Stadium Antenna – Weep Hole Guide
- NWAV Macro Antenna Bracket Installation Guide
- Venue Bracket Install Guide for 919050 & 919055
- Venue Bracket Install Guide for 91900324 & 91900325
- IV0XOMNI136 Ceiling-Mount Installation Guide
- Dual Mount Bracket Installation Guide
- Instructions for Extension Kit for MX08FIT265-01 Antenna
- RET Controller PCU 1000 Software
- PCU 1000 User Guide
- USB Driver for AISG Controller
- MX10 & MX16 CBRS RET ACF UPDATES

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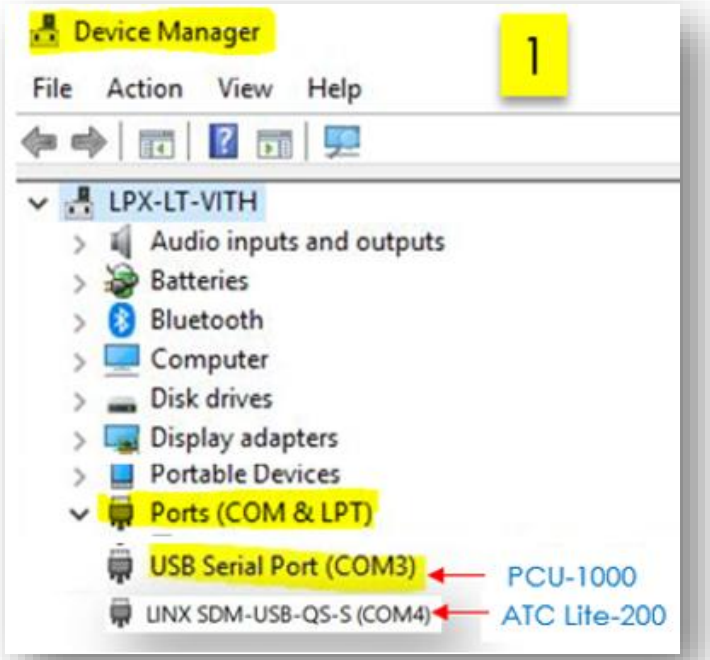
Step 1 cont. - RET GUI & COM SET UP

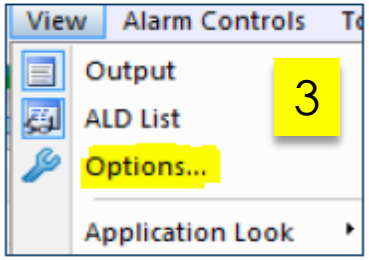
- Download & Install JMA RET GUI 5.16 and USB Driver for AISG Controller
- Ensure RET Controller is powered up and connected to PC
- Launch GUI application
- Perform COM setup for RET controller on PC Steps 1-5

Device manager on laptop to validate com port used

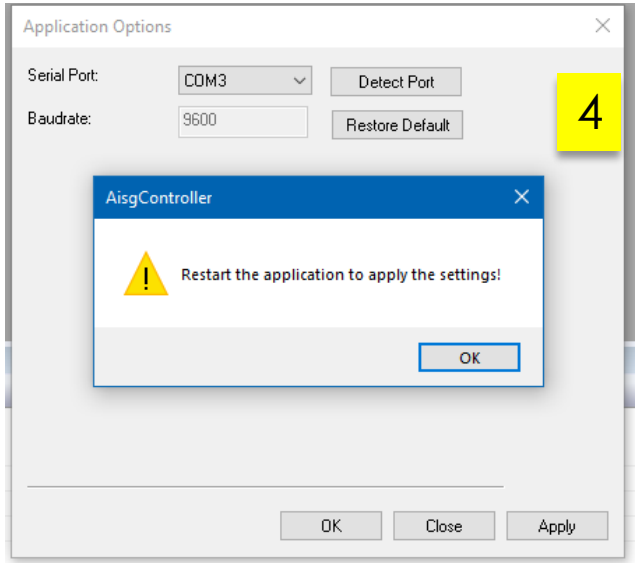


JMA Desktop icon

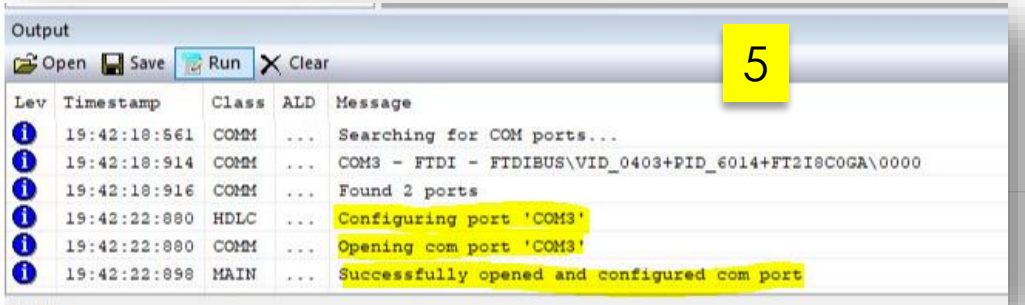
Top left inside JMA GUI



Select serial port and restart the program

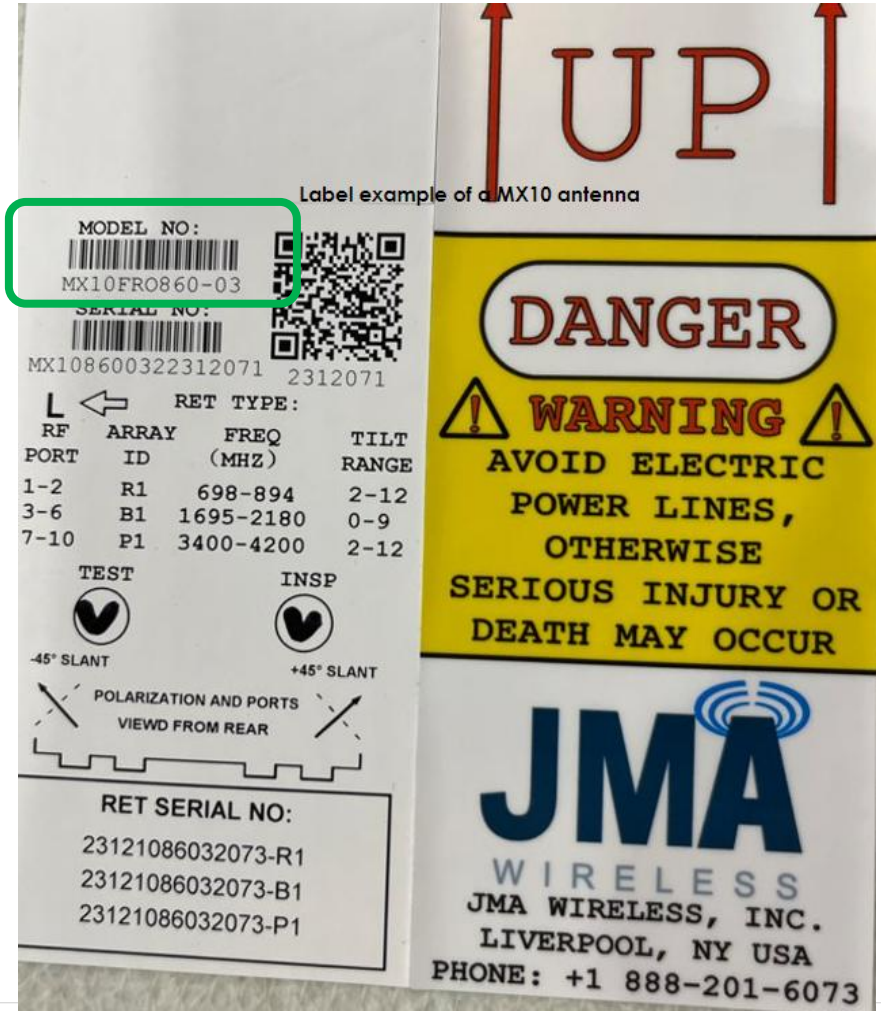


Verify that com port has been opened and configured

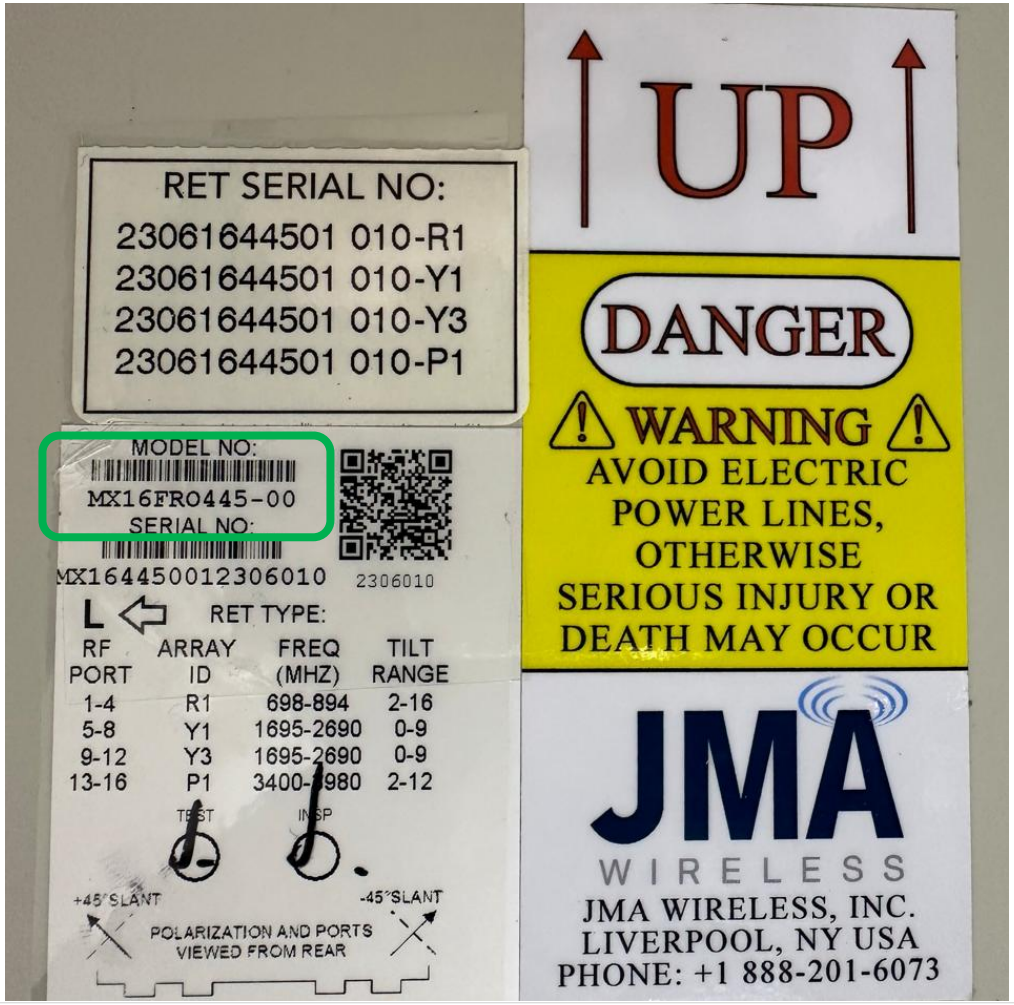


Step 2 - Identify Antenna

Label example of a MX10 antenna



Label example of a MX16 antenna



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Step 3 - RET Controller Test Diagram – AISG Port

Testing RET Through Antenna AISG Port

- Connect RET Controller to AISG IN port on Antenna

USB Cable

AISG Cable

Example of a MX10 antenna model

Example of a MX16 antenna model

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Step 3 cont. - RET Controller Test Diagram – RF Port

Testing RET Through Antenna RF Port

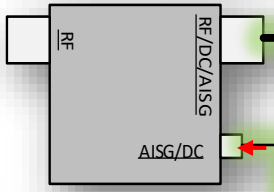
- Via Ant RF **AISG IN** port – internal Bias-T
- Use external Bottom Bias-T to inject DC/AISG

USB Cable

PCU-1000

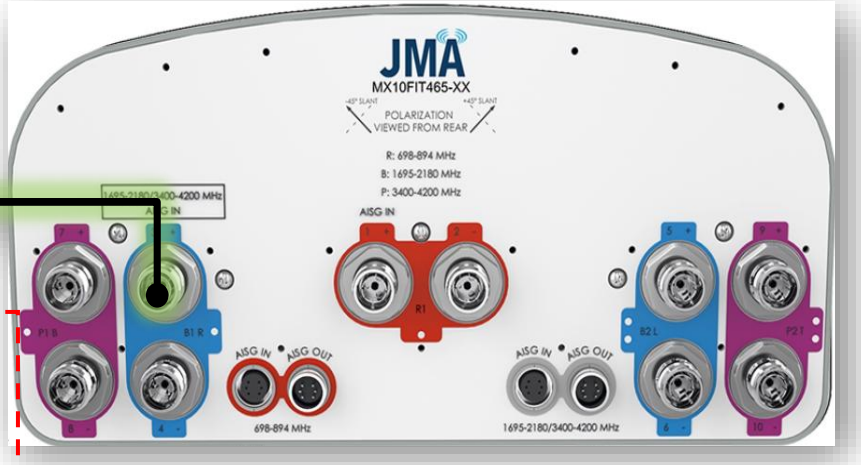
AISG Cable

DC/AISG



RF Cable

Example of a MX10 antenna model



Example of a MX16 antenna model

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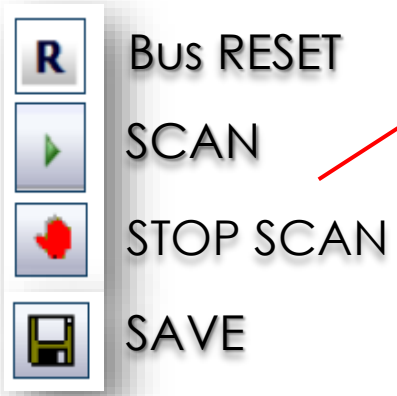
Explanation of the GUI LAYOUT

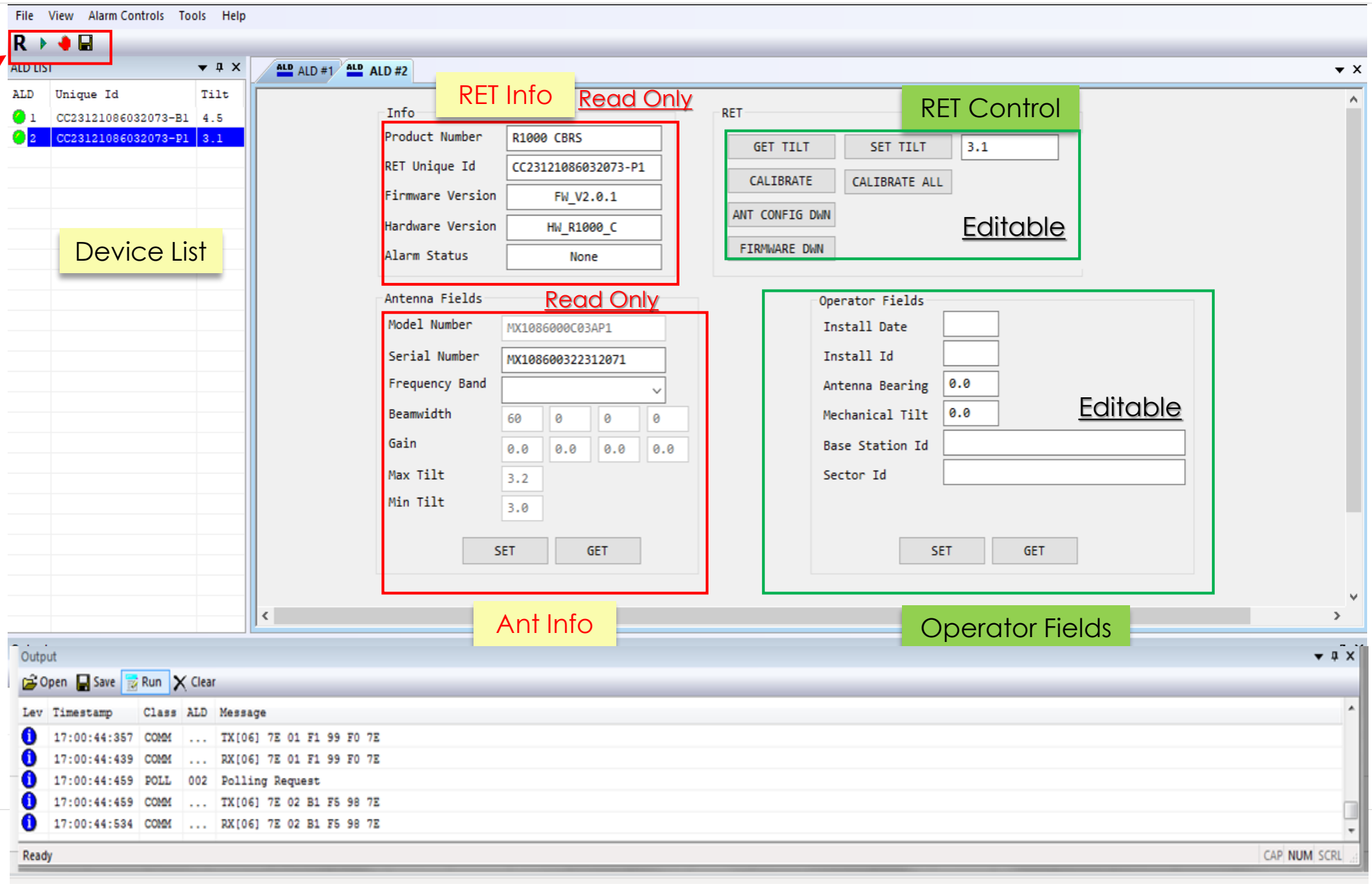


Bus RESET

SCAN

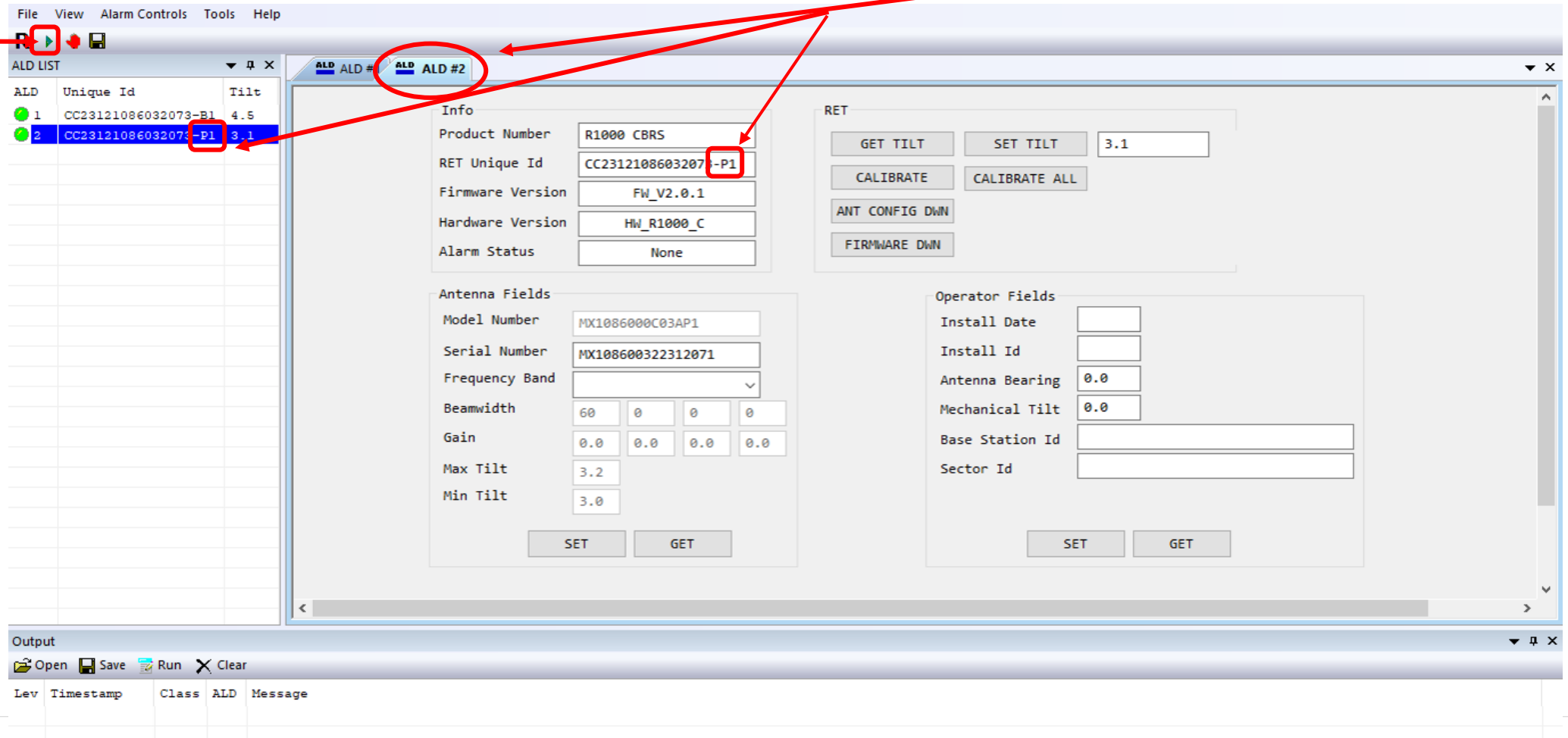
STOP SCAN

SAVE



Step 4 - Scan for RETs and confirm connected to –P1 RET in unique antenna ID

Start scan by clicking the ▶ button then select ALD for the P1 RET



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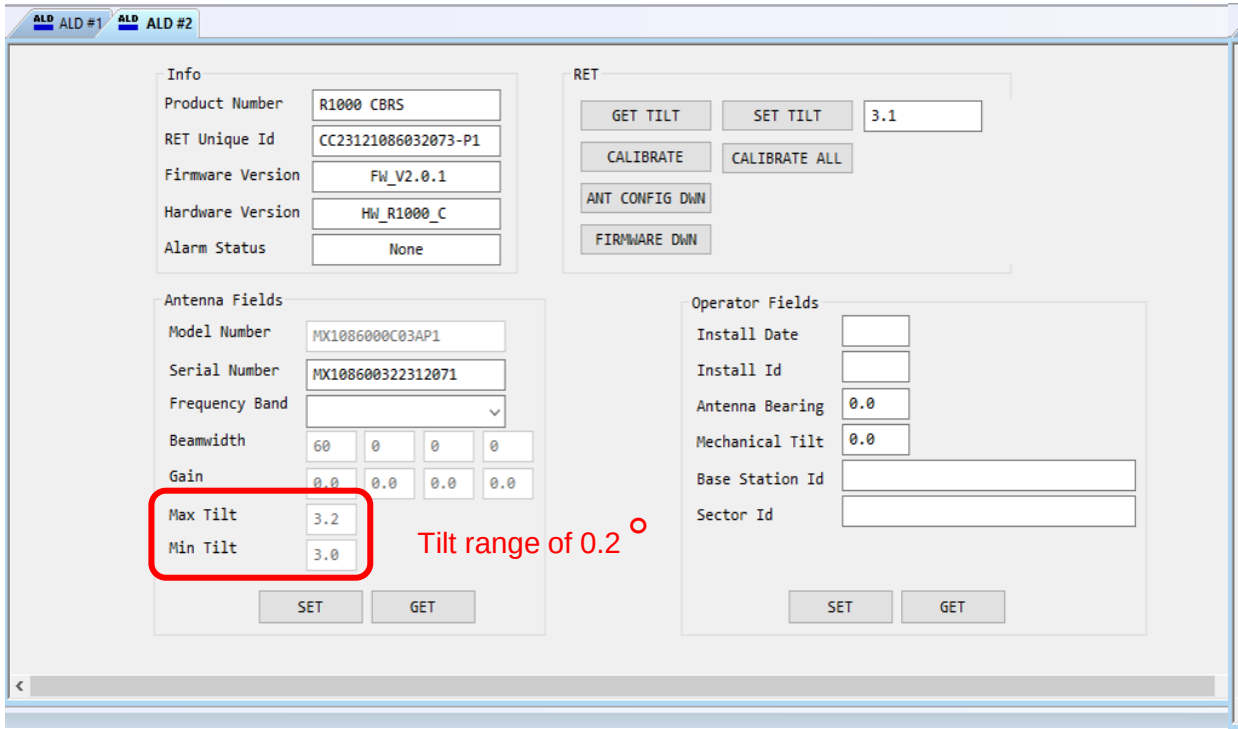
Step 5 - Example of a FET RET vs Full RET

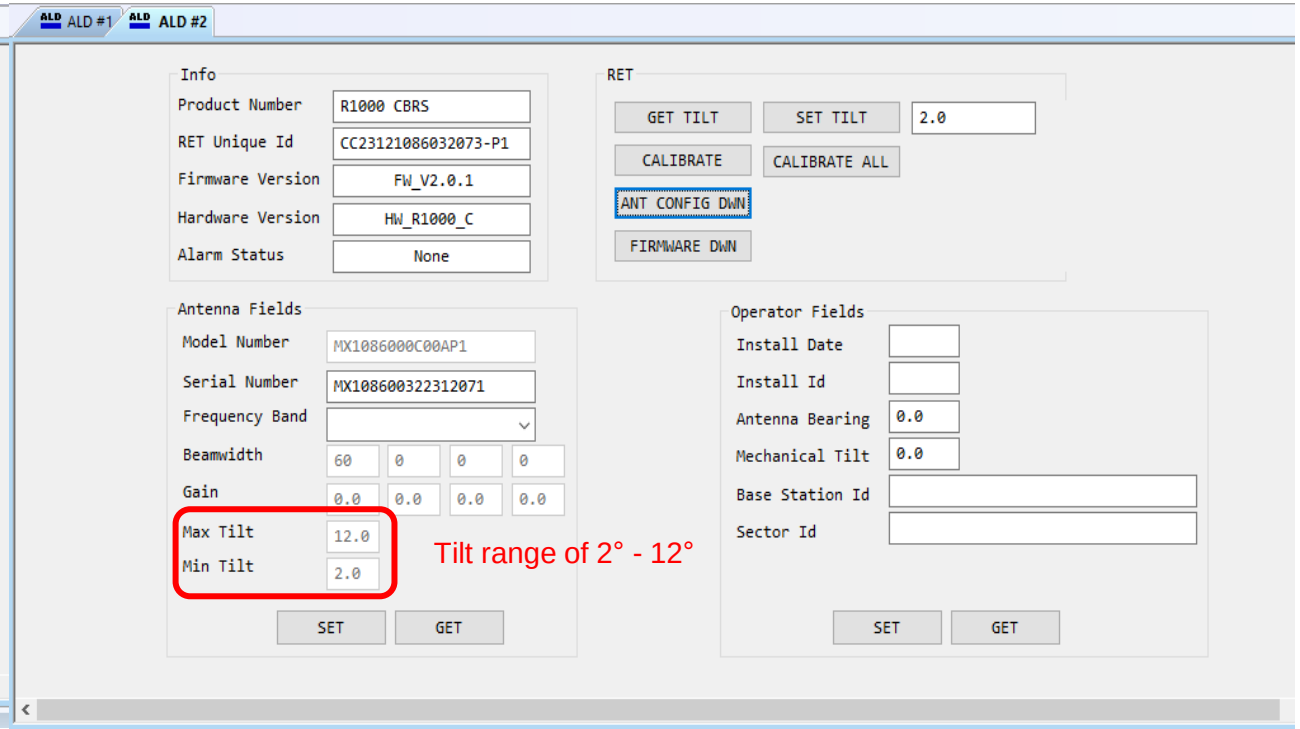
Confirm the antenna is a –P1 FET antenna and not the full ret version by the tilt values

FET Antenna (Fixed Electrical Tilt)



Tilt range of 0.2 °

Full Range Tilt RET



Tilt range of 2° - 12°

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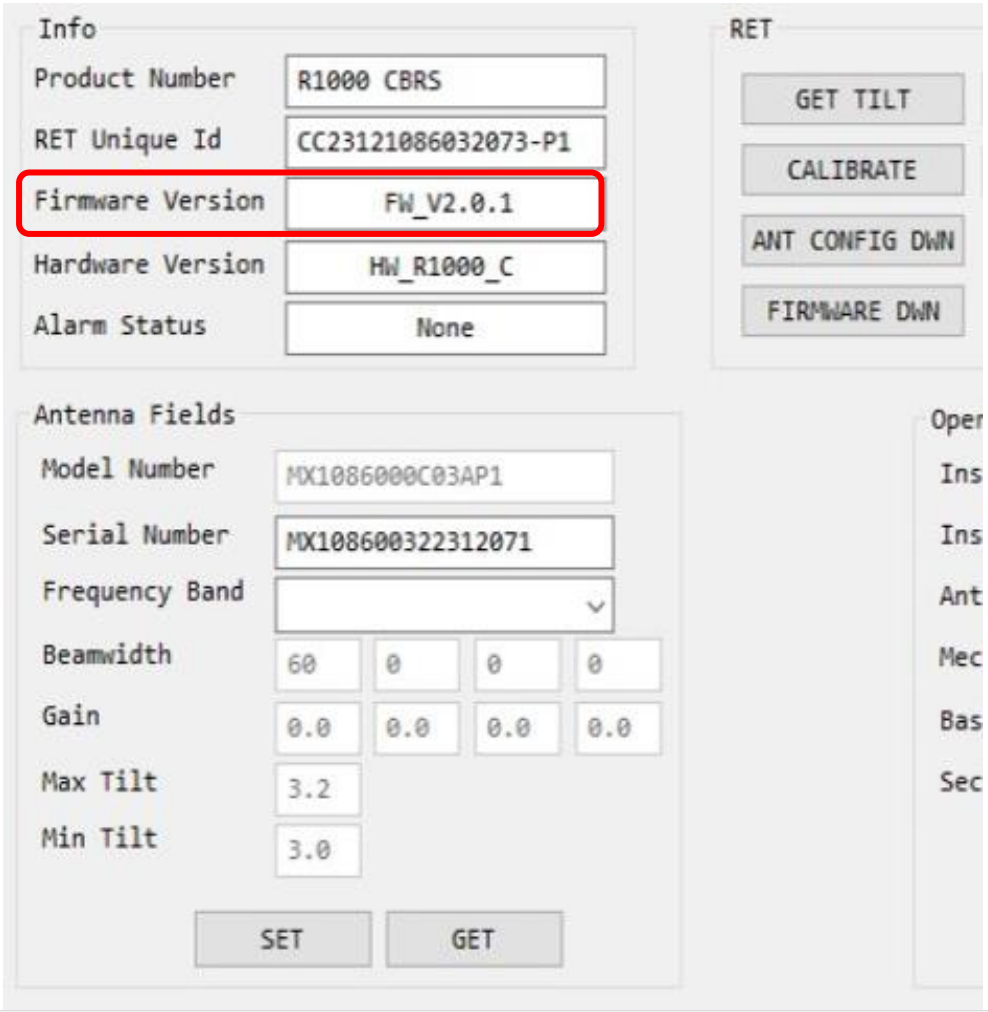
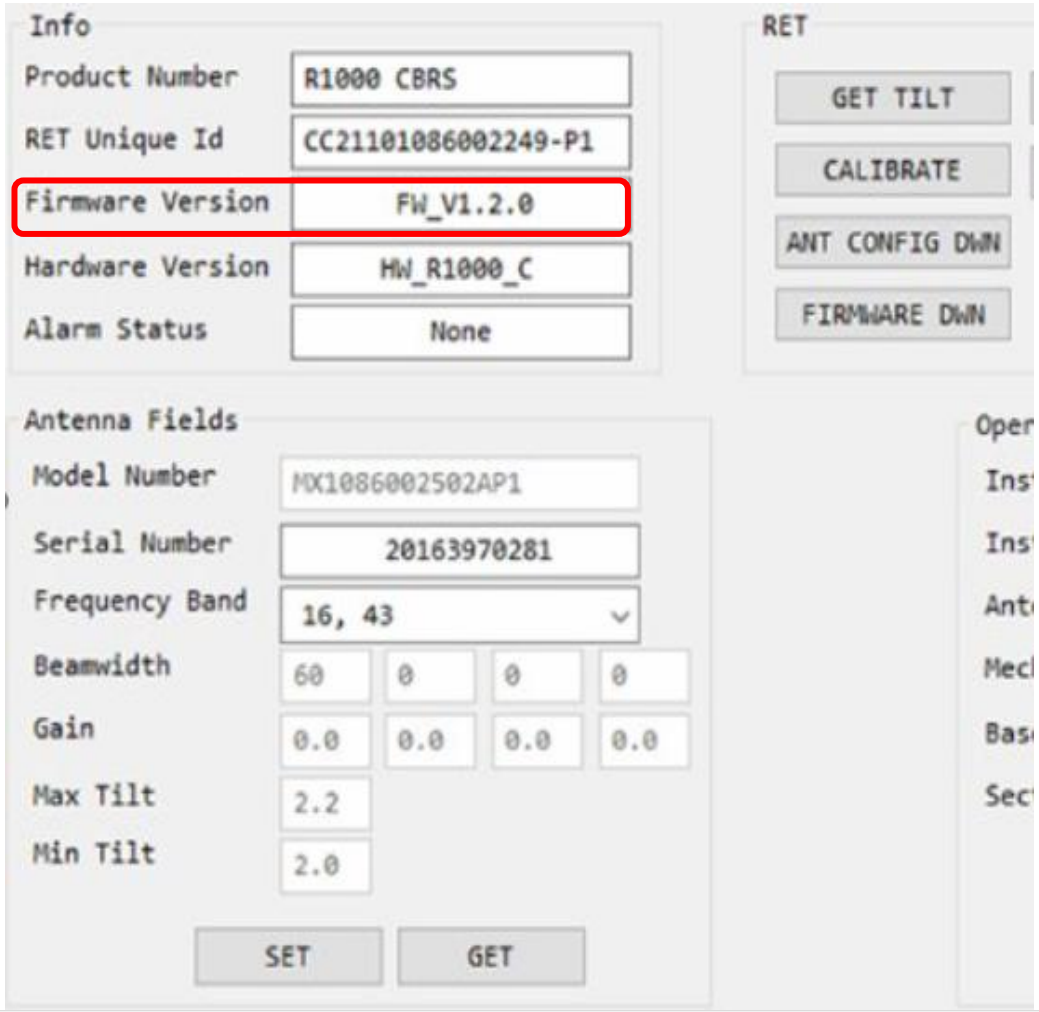
Step 6 - Confirm Firmware Version





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Step 7 - ACF File location details

ACF file link –

https://jmawireless.com/mx10-mx16-cbrs-ret-acf-updates/

Download the JMA MX10 & MX16 CBRS FULL RET UPDATE MOP here.

Firmware version FW_V1.2.0

MX10 Series

MX10FIT445
MX10FIT465
MX10FIT645
MX10FIT665
MX10FIT845
MX10FIT845-B
MX10FIT865
MX10FIT865-B
MX10FRO440
MX10FRO640
MX10FRO660
MX10FRO840
MX10FRO840-B
MX10FRO860
MX10FRO860-B

MX16 Series

MX16FIT465
MX16FIT665
MX16FIT865-B
MX16FRO445
MX16FRO645
MX16FRO845-B

Firmware version FW_V2.0.1

MX10 Series

MX10FIT445
MX10FIT465
MX10FIT645
MX10FIT665
MX10FIT845
MX10FIT845-B
MX10FIT865
MX10FIT865-B
MX10FRO440
MX10FRO640
MX10FRO660
MX10FRO840
MX10FRO840-B
MX10FRO860
MX10FRO860-B

MX16 Series

MX16FIT465
MX16FIT665
MX16FIT865-B
MX16FRO445
MX16FRO645
MX16FRO845-B

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Step 7 cont. - Select file based on firmware version of antenna

Firmware version FW_V1.2.0

MX10 Series

- MX10FIT445
- MX10FIT465
- MX10FIT645
- MX10FIT665
- MX10FIT845
- MX10FIT845-B
- MX10FIT865
- MX10FIT865-B
- MX10FRO440
- MX10FRO640
- MX10FRO660
- MX10FRO840
- MX10FRO840-B
- MX10FRO860
- MX10FRO860-B

MX16 Series

- MX16FIT465
- MX16FIT665
- MX16FIT865-B
- MX16FRO445
- MX16FRO645
- MX16FRO845-B

Firmware version FW_V2.0.1

MX10 Series

- MX10FIT445
- MX10FIT465
- MX10FIT645
- MX10FIT665
- MX10FIT845
- MX10FIT845-B
- MX10FIT865
- MX10FIT865-B
- MX10FRO440
- MX10FRO640
- MX10FRO660
- MX10FRO840
- MX10FRO840-B
- MX10FRO860
- MX10FRO860-B

MX16 Series

- MX16FIT465
- MX16FIT665
- MX16FIT865-B
- MX16FRO445
- MX16FRO645
- MX16FRO845-B

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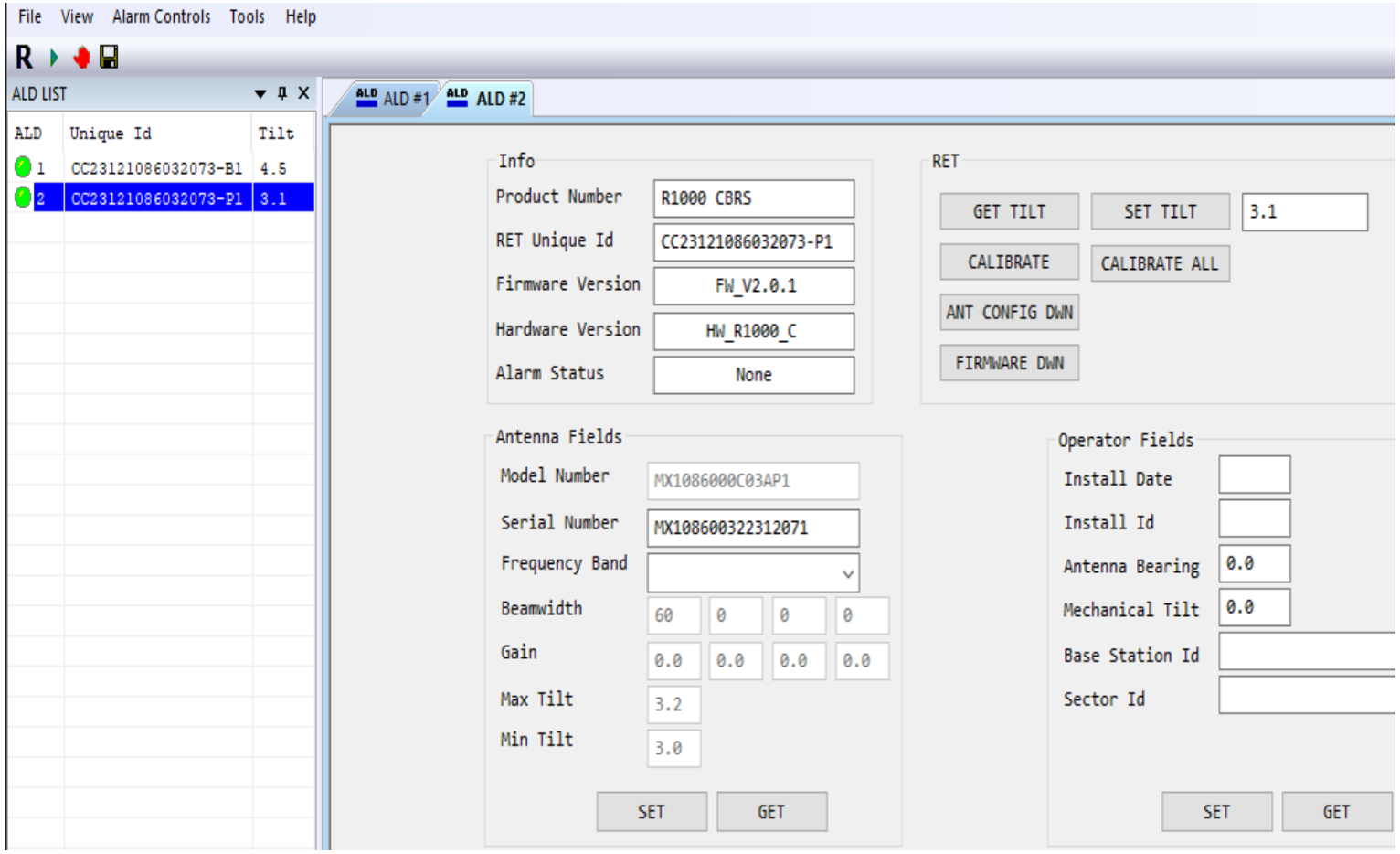
Step 8 - RET ACF LOAD

1. Go to https://jmawireless.com/mx10-mx16-cbrs-ret-acf-updates/ for the ACF files
2. Connect to only one RET at a time
3. Click CONFIG DWN
4. A Browsing window will open to look for the ant file (ACF)
5. Select the ant file per the band
   a. -P1 is CBRS/C-Band
6. Double click on the file and it will load to the RET
7. RET will go into a Not Calibrated status
8. Calibrate the RET – click CALIBRATE
9. Repeat step 2-8 for the remaining RETs



ACF_FRO10860_CBRS_00 v5.cfg ← CBRS File

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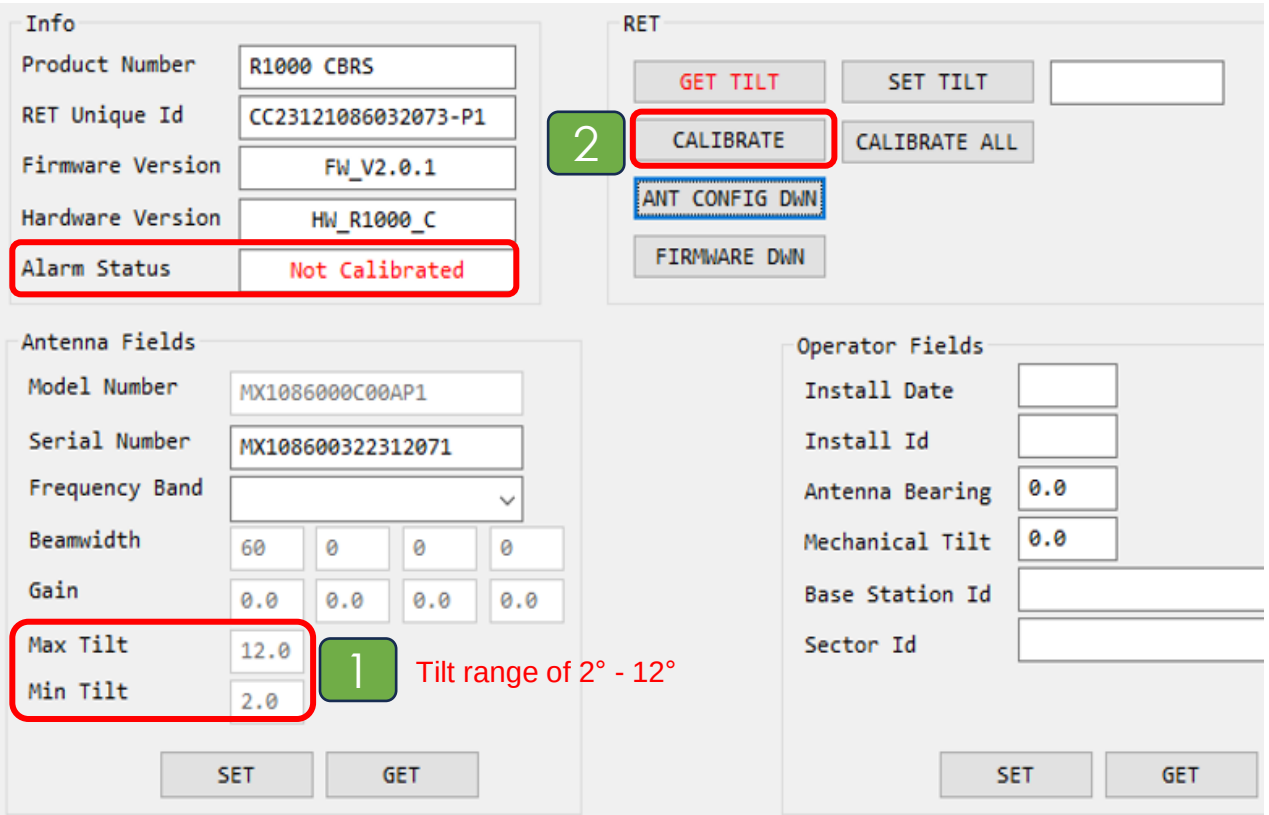
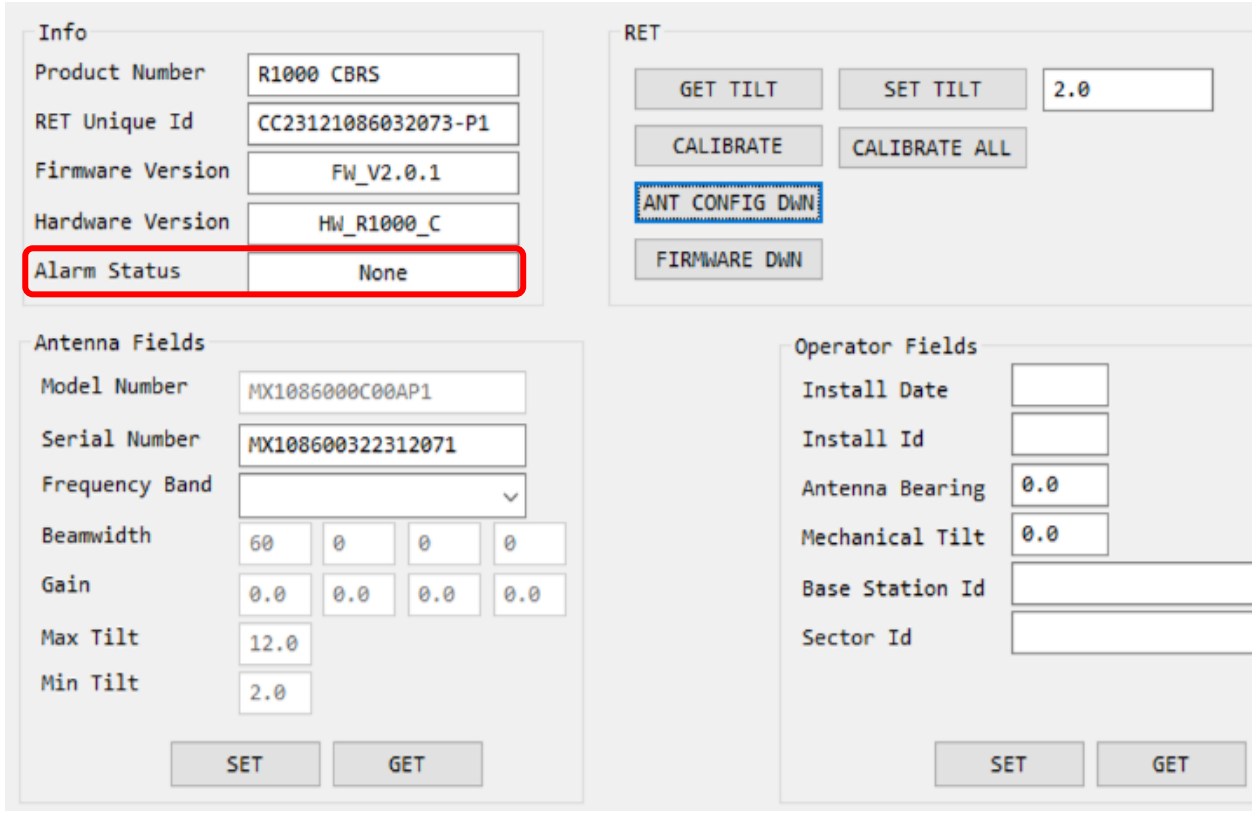
Step 9 - Validate new ACF has loaded

Check that Tilt range has changed 1

Run calibration 2



Validate Calibration is complete



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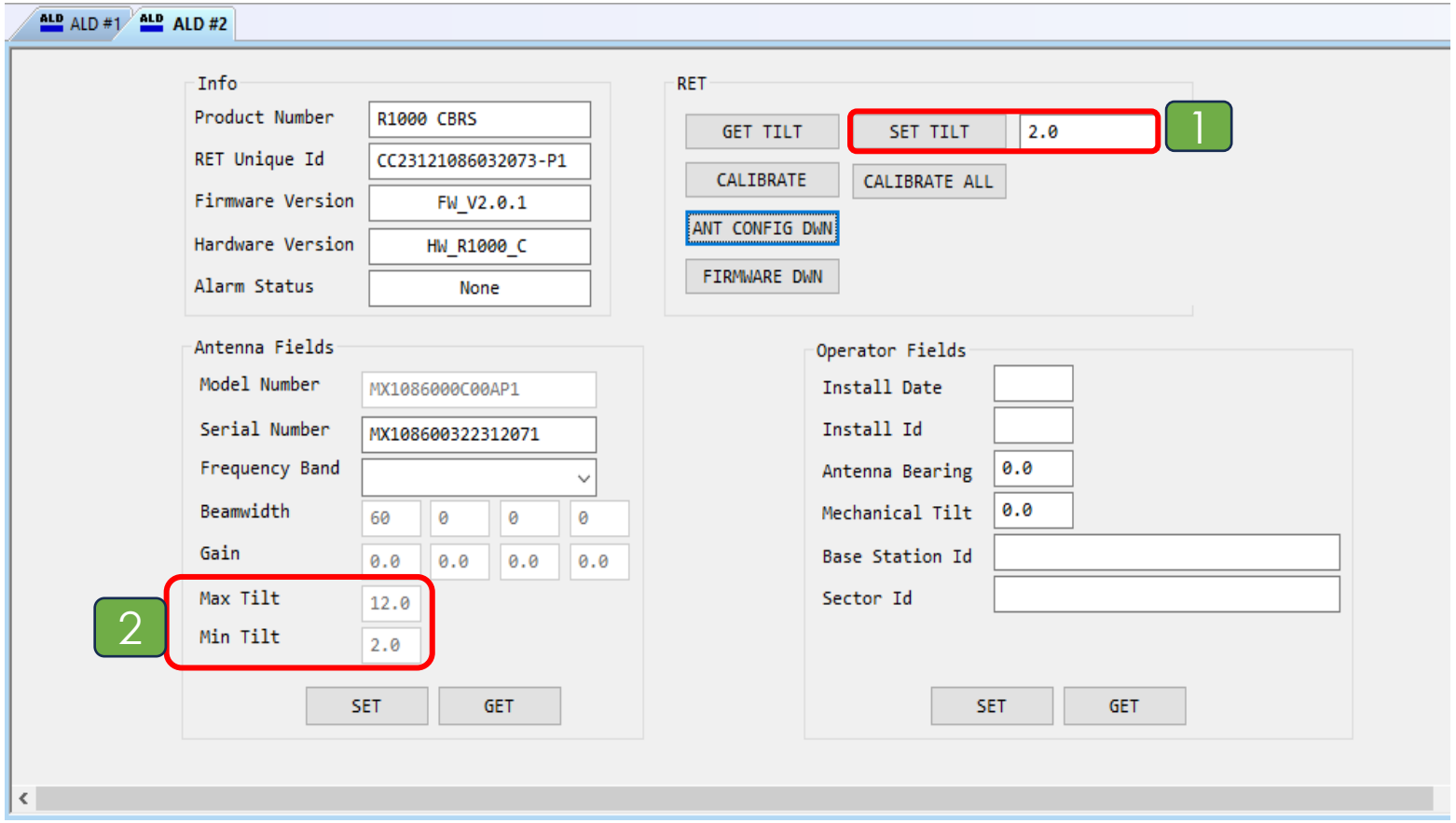
Step 10 - set / confirm tilt

Set tilt 1

Confirm tilt 2



Step – 11 Disconnect from antenna. ACF change complete

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JMA SUPPORT

For any questions please contact technical support on the contact details below

Support Hours	▪ Weekday Hours: 8AM to 5PM EST ▪ After Hours, Weekend & Holiday Hours: • Via Customer Service Representative (CSR) - 24X7
Phone Support	▪ 1-888-201-6073
Email Support & Web Site	▪ techsupport@jmawireless.com ▪ customerservice@jmawireless.com ▪ http://www.jmawireless.com

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Thank you