SatCom FAQ

7/18/2018

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1. About Radeus Labs customer support

Q: **How does Radeus Labs support its products?**

A: Supporting our customers is a priority for Radeus Labs. We strive to provide outstanding after-sales support of our products in the field. We do this by providing several options.

- *Website* — we provide online operation manuals and other documentation at RadeusLabs.com, including:
  - [O&M Manual](https://i2fj92msoss2xyrl44dke19v-wpengine.netdna-ssl.com/wp-content/uploads/2018/01/8200-8250-OM-201701025-02.pdf) (https://i2fj92msoss2xyrl44dke19v-wpengine.netdna-ssl.com/wp-content/uploads/2018/01/8200-8250-OM-201701025-02.pdf)

- *Training* — Radeus currently offers free training for our systems at our Poway, CA headquarters. Two training events are planned for

2018, one on August 2-3 and the second in the late fall. Training and meals are provided at no charge; attendees cover their own lodging and travel. [Check here](#) for details.

- *Email* — The [support email](#) address ([support@RadeusLabs.com](#)) will generate a support ticket for documenting the issue. It is distributed through our engineering, sales, and admin teams. Our goal is to respond to all support requests as soon as possible, often within an hour. Our business hours are from 7:00 am to 4:30 pm PST, Monday through Friday. We check support email on weekends and holidays, but there is no dedicated person on call then, so response times may be slower or even on the next business day.

- *FAQ* — Frequently asked questions regarding our products are posted on our website at RadeusLabs.com.

- *Video* — we have online video regarding the setup of the RL8200 ACU and will be adding more instructional videos. All video content requires a username and password, please [contact support](#).

- *Sales* — our knowledgeable sales team can be reached by email to [sales@radeuslabs.com](#) or via our dedicated sales number: 858-602-1255.

2. Remote access and control of the ACS

Q: **What options do I have for remotely controlling the RL8200 ACS?**

A: There are multiple options for remote control of the RL8200 ACS. It currently supports the following:

- M&C via SNMP
- M&C via serial interface (7200 R&C protocol)
- TeamViewer 12 (provides a VPN interface)
- Windows remote desktop access (provides a VPN interface)

There is no web-based interface at this time, however, it is on our product roadmap.

Q: **Where can I get the latest MIBs for the SNMP interface?**

A: If you have a new RL8200 ACU, the latest version of MIBs at the time of manufacture were loaded onto the ACU and may be found on the desktop. You can get to the desktop from the home screen via Setup > About > Desktop. This will keep the application running in the background while allowing access to files and functions on the host operating system.

Q: **Are any M&C systems with drivers already available for the RL8200 M&C?**

A: Yes, the COMPASS M&C system by Kratos has drivers for the RL8200 M&C. Contact COMPASS for revision details:

http://www.kratostts.com/solutions/networks/end-to-end-network-management/compass
or telephone 703-254-2000

If you are replacing a Vertex/GD 7200 system with our RL8200 Legacy ACU, the serial M&C option is also available. While there is not a one-to-one mapping, we implemented most of the critical 7200 commands in the 8200.

We are continuously developing relationships with other M&C providers across the SatCom industry. Contact sales to find out the latest regarding M&C compatibility.

Q: Are there any issues operating the SNMP M&C from behind a firewall?

A: Not if you allow response packets to be returned from all ports. The ACU uses the Windows SNMP Agent to manage the interface. The ACU listens on port 601 but will respond as an ephemeral port, selecting a random device address for the response-source address. Therefore, the firewall may reject the packets if it is expecting the response from port 601, so the M&C system will likely time out, causing a communication failure. There are no issues when a firewall is not involved in the communication path.

Q: Where can I find the details for the serial M&C interface?

A: Contact support. We can provide a list of available commands for you.

Q: Can you upgrade firmware for the RL8200 ACU remotely?

A: Yes, we can upgrade the firmware for an ACU remotely if we can get a TeamViewer connection with the unit. This can be achieved by exposing the port to the web at a predetermined time when we can access the unit. The upgrade typically takes less than 10 minutes, after which the port can be closed to maintain security.

You may also download the latest version of ACU software to a USB drive and manually install it to the ACU. The software download is password protected but may be found at the following location. The latest MIB revision for M&C control is included in the download:

https://www.radeuslabs.com/sdm_downloads/acu-software/

Contact support for password information.

Note: When installing the new firmware, there is a known issue with a false-flag, "X firmware update failure" fault. The fault is simply *shown* incorrectly — due to exceeding the timeout during the flashing process; it does not actually fail to flash. If you receive that message, simply clear it and/or restart the system.

Q: What diagnostics can we access remotely to troubleshoot the system if we have problems?

A: The RL8200 provides powerful diagnostic tools to support troubleshooting. Every second, information is logged into a retrievable text file showing actual look angles, TLE-based (calculated) look angles, receiver information, fault conditions that exist at that moment, operational mode, and much more.

The log files are useful for diagnosing problems, given their resolution and breadth of coverage. They are remotely accessible via the TeamViewer interface and/or may be accessed directly from the ACU for local access and diagnostics. To access the log files, simply go to the ACU hard drive's logs at:

C:\Radeus Labs\logs

3. RL8250 Antenna Drive Unit

Q: **What are the V1000 inverter factory set values for track and slew speed?**

A: In the RL8200 ACS O&M manual, please refer to Appendix 9: Setup: V1000 Motor Drives. The parameters that control the inverter speed are D1-01 and D1-02. They are accessed from the Par menu. The default factory settings are 6 and 60, respectively.

Q: **How do I change the V1000 inverter settings for track and slew speed?**

A: See the preceding answer.

Q: **Can the inverter settings be changed remotely?**

A: No, we are unable to remotely view or change inverter settings because they are not connected to the network.

Q: **Can I autotune the drives with the load connected?**

A: Please review the *Yaskawa V1000 Quick Start Guide*, page 116. You can run Auto-Tuning while the load is connected but, when doing so, the highlighted (blue and red boxes) caveats will apply:
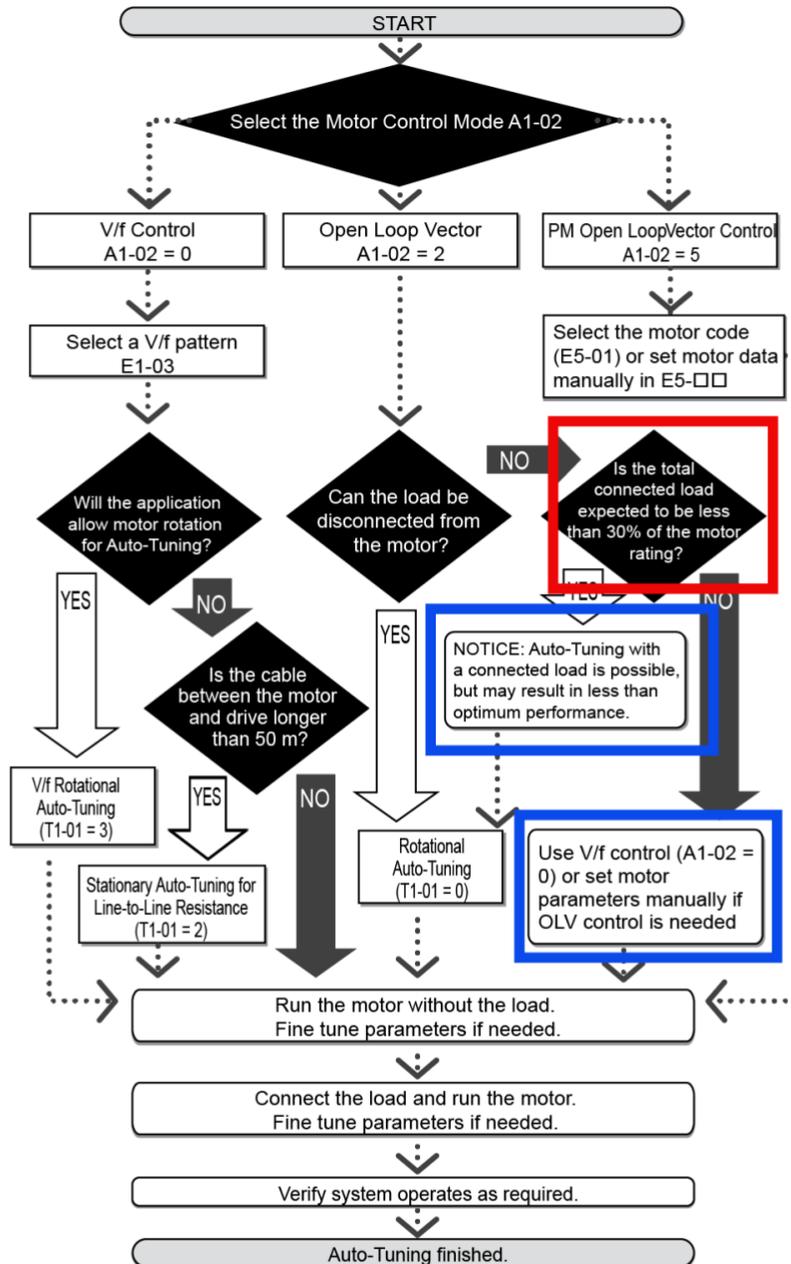
[continued on next page]

4.7 Auto-Tuning

Figure 4.15   Auto-Tuning Selection

4. RL8200 Antenna Control Unit

Q: **Is the Radeus Labs 8200 compatible with the Vertex 7200?**

A: Yes, it is. If you are replacing *just* a 7200 ACU, order the RL8200 Legacy ACU — it drops in as a replacement for a Vertex 7200 ACU. If you need both the ACU *and* ADU, just order the RL8200 ACS — it will replace both the ACU and ADU in your existing antenna system. It is also the model used for new antennas.

Q: **What is the difference between an RL8200 and an RL8200 Legacy ACU?**

A: The RL8200 Legacy unit is designed as a direct, drop-in replacement for the 7200 ACU. The back panel matches the IFL connections for the 7200 identically, so replacement is fast.

The RL8200 (non-legacy) ACU is for installations where the ACU/ADU combination is being replaced with the RL8200/8250 ACS. In such cases, the IFL is simply a single Ethernet or fiber optic cable between the RL8200 ACU and the RL8250 ADU.

Q: **Does the ACU come with an integrated receiver option?**

A: The RL8200 ACU may have a internal beacon receiver built into the ACU, if that option is selected. We have receivers for L, C, Ku, and Ka bands at this time, with other frequency bands available upon request.

Q: **Why is my RL8200 not displaying antenna position data from the resolvers?**

A: There are several reasons your resolver information may not be showing up on the ACU. The following steps should help troubleshoot:

1. Check the resolver cabling and connection points to make sure everything is connected as expected. Our experience is that 90% of communication issues are cabling related.
2. Check the ACU configuration to verify it is set up to control the axis in question. To check, from the home screen, go to Setup > Site > Axes Under Control and see that the number of axes the ACU is configured to control is correct.
3. Check that the encoder type is set to "Resolver" in the Setup > Encoder tab.
4. If all configurations appear to be correct, try replacing the resolver cable.
5. If prior steps have not cleared the issue, the resolver may need to be replaced.

5. Pointing and tracking

Q: What tracking modes are available with the RL8200 ACU?

A: The RL8200 is equipped with a variety of pointing and tracking modes, to match a broad set of scenarios for our customers. In addition, we are continuously adding to our tracking capabilities. If we add something you believe is compatible with your system's capabilities, ask us whether it's feasible to upgrade your firmware.

Pointing modes:

- Manual jog control
- NORAD Two Line Element (TLE)
- Intelsat 11 (IESS-412)
- Move to look angles
- Move to longitude

Tracking modes:

- Predictive track
- Steptrack
- TLE plus Steptrack (hybrid)
- IESS-412 plus Steptrack (hybrid)

Let us know if we can provide additional modes of operation to make your job easier!

Q: **How can I get the TLE or IESS-412 target names to show up in the ACU menu list?**

A: See the O&M manual sections 2.6.2, 2.6.3, 2.6.3.1. Note that the Default and Immediate target profiles cannot be used with TLE, IESS-412, TLE/Steptrack, and IESS-412/Steptrack modes. Simple create a new target profile to use either of these modes.

Prerequisites for viewing IESS-412 and NORAD TLE targets:

- The ACU must have an internet connection to its E1 NETWORK port *or* the models must be downloaded to a USB drive and transferred to the ACU (see the O&M manual).
- The site's coordinates must be entered so the ACU knows where it is located.
- Soft limits must be entered. The ACU has to know its viewable window so it can list only targets that are within its range of motion.

After these three steps are completed, the viewable satellites should appear in the respective drop-down lists for IESS-412 and TLE modes of operation.