

CG Antenna

RTC-200 Rotator Control Interface

Operating manual

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1 <http://www.cgantenna.com>

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INTRODUCTION

Usually antenna rotators come with only an indoor controller. User must manually control the rotator by turning or pressing a knob. More and more, the radio software has capability to automatic control the rotator. User could easily input a coordinator of the target or simply click the target on the map, software sends instruction to the rotator to turn.

CG Antenna presents the **RTC-200** Rotator Control Interface that provides the interfacing between antenna rotator system and the computer. The **RTC-200** supports Yaesu GS-232B protocol. So it could be used for most of Yaesu rotators.

The **RTC-200** is connected to computer with USB connection. It is compatible with any rotator control software that supports GS-232B protocol.

FEATURES

- **Compatible with Yaesu GS-232B protocol.**

The **RTC-200** supports most commands of Yaesu GS-232B protocol. You could connect both Azimuth and Elevator rotator.

- **USB connection to computer.**

The interface comes with a USB-A to USB-B cable for connecting to the PC computer.

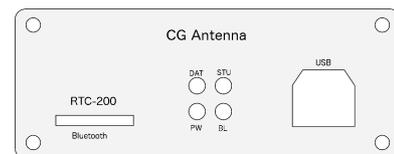
- **Bluetooth extension (optional).**

Support **Bluetooth** connection to computer, tablet or smartphone. With optional Bluetooth module, the **RTC-200** could connect with control devices wirelessly.

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FRONT PANEL

Diagram 1.

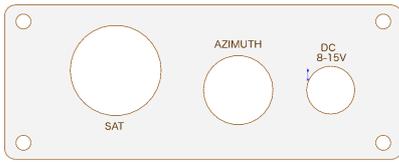


1. **DAT** indicator
The "DAT" indicator lights on when there is data communication between the **RTC-200** and control software.
2. **PW** indicator
Power indicator.
3. **STU** indicator
The "STU" indicator lights on when the **RTC-200** detects setting error.
4. **BL** indicator
The "BL" indicator lights on when the Bluetooth connection is established.
5. **USB** port
This USB-B port provides USB connection to computer.
6. **Bluetooth** socket (optional)
For install the optional Bluetooth module.

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REAR PANEL

Diagram 2.



1. **SAT port**
This DIN-8 port provides connection to the elevation data port of rotator.
2. **AZIMUTH port**
This Mini DIN-6 port provides connection to the azimuth data port of rotator.
3. **DC power port**
Connect to DC power supply. Voltage: 8-15V.

CABLE CONNECTION

1. Connect the cable from the **RTC-200** to the antenna rotator.
For a normal azimuth Yaesu rotator, just connect the Mini DIN-6 to Min Din-6 cable from the AZIMUTH port to the indoor controller of the rotator.

For a both azimuth and elevation Yaesu rotator (normally for satellite communication), you have to connect another DIN-8 to DIN-8 cable from the SAT port to the rotator controller.
2. Insert USB cable to the USB port of the **RTC-200** and computer.
3. Connect DC power supply to the **RTC-200**.

Note:
The **RTC-200** supports 8-15V DC power.

SOFTWARE INSTALLATION

The **RTC-200** comes with the USB driver software and configuration client software for Microsoft Windows XP, Win 7/8/10.

Computer hardware requirement (Minimal):

CPU: Intel P3 500 MHz
RAM: 512 MB
Hard disk: 100 MB
One USB port

Procedure

1. Install the USB driver
2. Connect the cable and check COM port configuration.
3. Install configuration client software
4. Initialize the rotator with configuration client.

USB driver installation

The **RTC-200** uses FT232 USB-to-serial convert chip. This is a very robust and reliable industrial standard microchip.
Before plug-in the USB cable to the computer, please proceed the driver installation.

- Locate the driver file on the CD.



- Click to execute this file.



- Follow the instruction of the software and finish the driver installation



- Now you could plugin the USB cable to your PC. System will detects new hardware.



- Next 2 steps, Windows will start to update the driver for the new hardware.
**For different Windows version, the screen appearance maybe not be the same.*

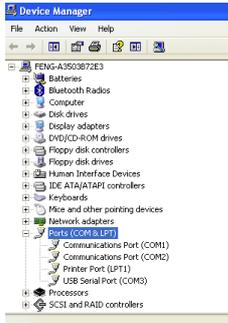
Choose "Yes, this time only".



- Choose "Install the software automatically". After it finishes, the system might ask to do this step for the second time.



- After windows updated its driver list. The **RTC-200** is ready to use. Go to "Control Panel" -> "System" -> "Hardware" -> "Device Manager", you could find a new serial port under "Ports" option. Its name is "USB Serial Port". Write down the COM port number, you will use it later in the **RTC-200** configuration client software.



OPERATION

For using the **RTC-200** rotator control interface, you must run the **RTC-200** configuration client software to initialize the interface. After setting, the **RTC-200** will memorize the rotation parameter of the rotator. Then the **RTC-200** could work with the compatible rotator control software.

Initialize the RTC-200

- Copy the folder of "RTC200client" on the CD to your hard disk. Or you could choose to run the client software directly from your CD.
- Locate the **RTC-200** client program and run it.



- Click '**CHECK**' to get serial port list. Select the correct COM port and click '**OPEN**'.



- After the connection is established, the '**OPEN**' button will be changed to '**CLOSE**'.

'CONTROL' tab

There are 5 buttons:

- CW** – this button activates azimuth rotator to rotate in clockwise direction.
- CCW** – this button activates azimuth rotator to rotate in counter clockwise direction.
- UP** – this button activates elevation rotator to go up.

- DOWN** – this button activates elevation rotator to go down.
- STOP** – The rotator will keep rotating after you click one of buttons above. Click this button to stop rotating

'CALIBRATE' tab

In this tab, you could set the 0 and 360 degrees positions for azimuth rotator. Also you could set 0 and 90 degrees position for elevation rotator.

- For azimuth rotator only:
 - Turn the rotator to the direction 0 degree that you could observe from the rotator controller. Click **0 button** of the 'AZ Rotator'. The parameter will be written into the RTC-200.
 - Turn the rotator clockwise to 360 degree. It means turn the rotator one round. Then click **360 button** of the 'AZ Rotator'.
- For azimuth rotator & elevation rotator:
 - Follow the calibrate procedure of azimuth rotator to complete azimuth setting.
 - Turn the elevation rotator to 0 degree, click **0 button** of the 'EL Rotator'.
 - Turn the elevation rotator to 90 degree, click **90 button** of the 'EL Rotator'.

Reset

Click this button to reset the memory of the **RTC-200**.

Now you can use the RTC-200 rotator control interface with suitable rotator control software.

Software control

In the rotator control software

- Choosing the driver of Yaesu GS232B protocol.
- Select the correct serial port of the RTC-200.
- Now enjoy the software control.

WARRANTY

CG antenna warrants **RTC-200** against defects in material for a period of ONE (1) year unless otherwise indicated.

The warranty does not cover damage, improper use, abuse, or conditions beyond our control (i.e. lightning).

CG Antenna assumes no liability or responsibility for damage to other devices or injuries to persons as a consequence of using our products.

If you don't accept the terms of the above warranty, please return the products in the original package to your reseller for refund (doesn't include the shipping or possible restocking charge).

SERVICE

If you have any problem of your CG product, please contact your local sales directly. Then we can arrange the repair service.

If return for repair is needed, please wrap and pack your unit well to protect damage during transportation or handling. Include a note with your name, address, phone number, email and brief description of the problem.

Technical support: support@cgantenna.com

**CG antenna and our distributors cannot be responsible for unit lost or damage in shipping.*