

MIPRO DVU User Manual

What is the Receiver Control System?

Receiver Control System (RCS) is a windows-based software designed for True Diversity UHF Wireless Receiver ACT-707/ACT-7 series. With RCS you can control receivers from an external PC instead of using LCD control panel on the receiver. Some additional functions like spectrum analyzer or RF monitor can be performed by RCS to help your work.

System requirements for RCS

To run RCS you need a personal computer via RS232 serial port, a RS-485 bus driver, and some 2-line conductive wires.

1. Personal Computer Requirements(IBM PC-Compatible only)

CPU: PENTIUM 166 (or higher)

RAM: The same as the Microsoft Windows operating system

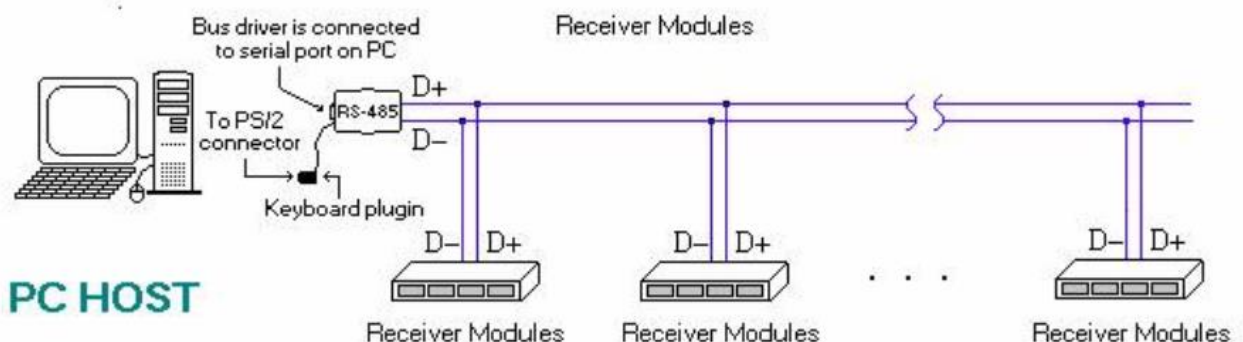
Available disk space: 10MB (for program setup)

Monitor: 15" (800*600) for 32 control panels, 17" (1024*768) for 64 control panels

OS: Microsoft Windows 98/2000 or higher

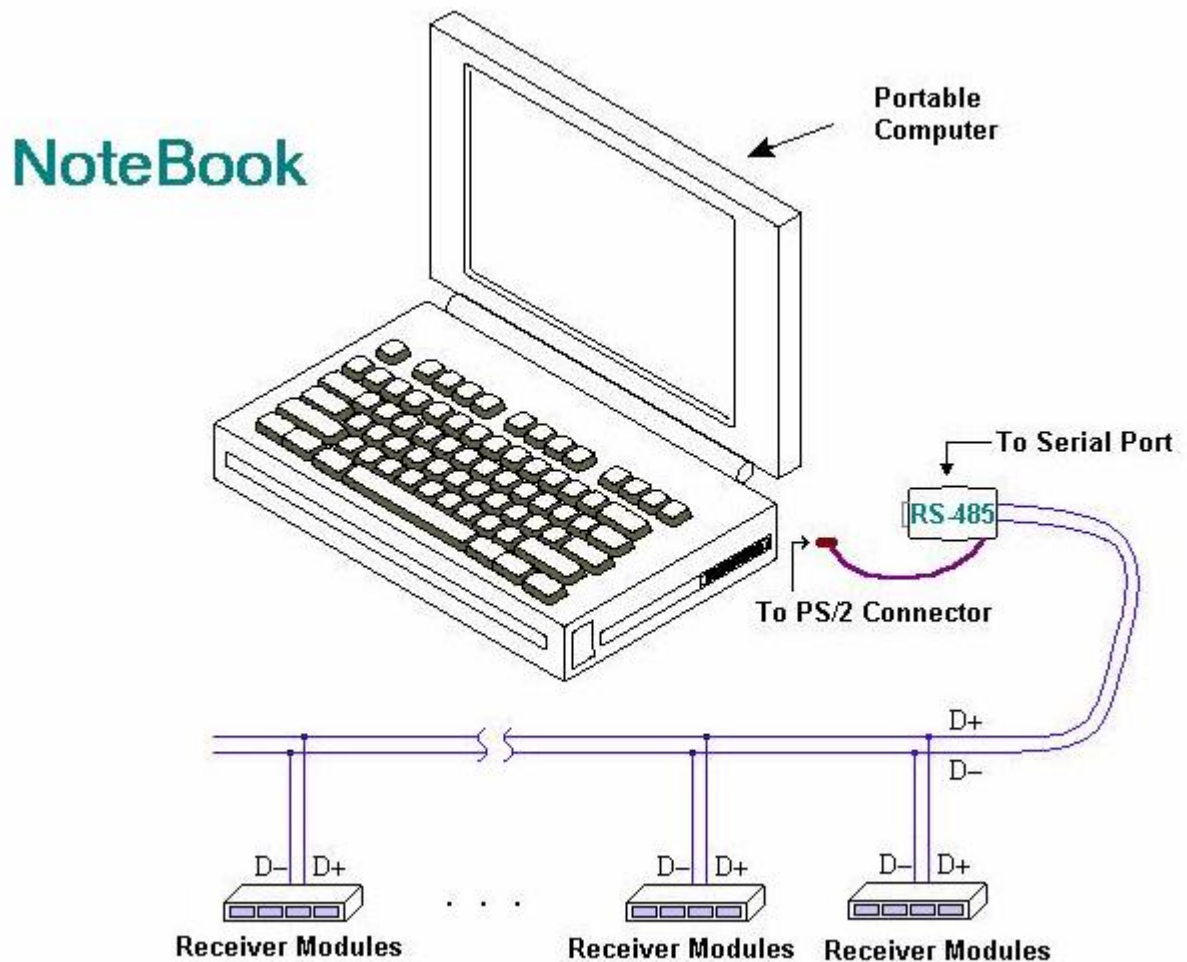
Hardware connections

- I. Connection with desktop PC



1. Connect bus driver to any free serial port on your computer.
2. Connect power cable to PS/2 connector on your computer.
3. Connect RS-485 bus driver to the receiver module.
4. Setup and run software.

II. Connection with Notebook PC



The steps of making connection with notebook PC are the same as desktop PC.

All you have to do is to make sure your notebook has a COM port and PS/2 connector.

Receivers' Control Panel

RCS main windows has 64 control panels. Each panel shows a summary information of a receiver module. If a receiver is normally connected to PC, one of the panels is set to active and begins the communication. The active panels show you how many receivers are under control.

Figure shows the function of an active/inactive panel:



Menu Items

Figure 1.



File -> Load (Ctrl + L) -- Loads settings of receivers from a file. The file must be previously saved and has the extension (*.rcs).

File -> Save (Ctrl + S) -- Save current settings of all receivers to a file. The file can be loaded next time to set all receivers. Default extension is (*.rcs).

File -> Exit (Ctrl + X) -- Close this program and return to windows.

Figure 2.



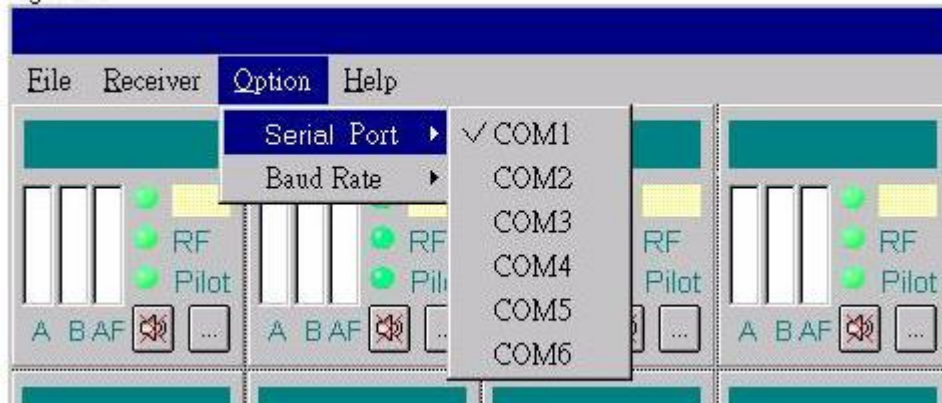
Receiver -> Auto Detect Receivers (Ctrl + D) -- Search connected receivers in all available serial port until found.

Receiver -> Reconnect (Ctrl + C) -- Connect to receivers again.

Receiver -> Hide Unused Panel (Ctrl + H) -- Hide the panels which are not connected to any receivers.

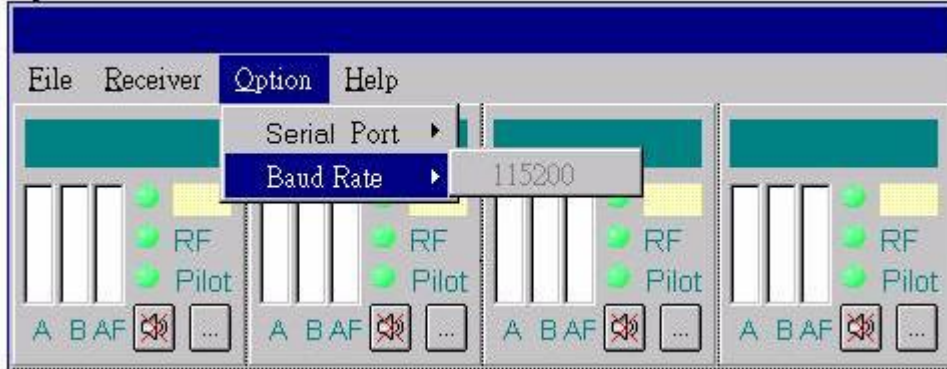
Receiver -> Full View (Ctrl + F) -- Toggle view of all receivers in one page or two page mode. Note that VGA monitor must have 1024 x 768 resolution with small fonts to see all receivers in one page!

Figure 3.



Option -> Serial Port (No Shortcut key) -- Show which serial port is currently used. If any of "COMx" is in grey color, that means it is not exist, error in hardware or occupied by other applications. Change serial port is not needed. You can use "Auto Detect Receivers" function to scan receivers from COM1 to COM6.

Figure 4.



Option -> Baud Rate (No Shortcut key) -- Default baud rate is set to 115200bps. The baud rate cannot be changed.

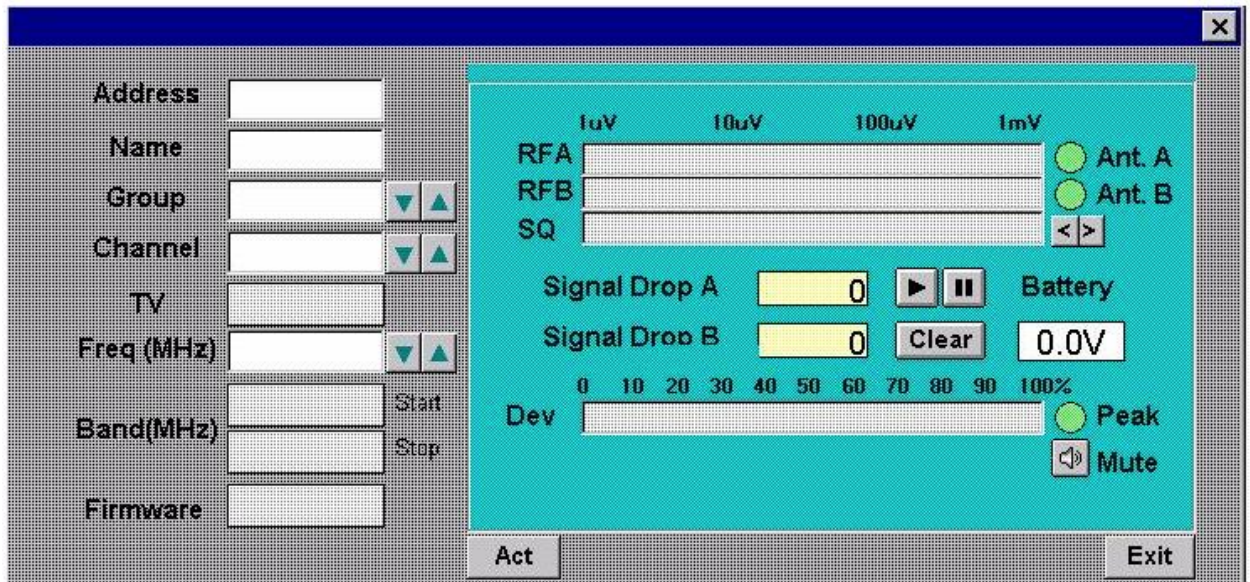
Figure 5.



Content -> Help file.

About -> About MIPRO Electronics Co.,Ltd.

Receiver's Detail Control Panel



The Receiver Detail Control Screen contains all functions of the receiver module and some add-ons.

1. General Fields:

Address -- While connecting to multiple receivers, each receiver must have a unique address to identify itself. Different receivers with same address may cause communication error. The factory default for address is 64. All receivers must be manually set to different addresses before using RCS. Valid range of address is 1 to 64.

Name -- You can give the receiver any name to make it easy to remember. The name field contains maximum 6 characters including 0-9, A-Z, +, -, *, / and space.

Group -- A receiver module has 11 groups and each group has 16 channels. Up to 16 non-interference channels can be put together to a group. The internal memory of the receiver module stores a maximum of 100 channels.

Channel -- A channel means a certain frequency that works on current receiver module.

TV -- Show the TV channel of current frequency.

Freq (MHz) -- Show current frequency in MHz.

Band (MHz) -- Bandwidth of current receiver module.

Version -- Firmware version. (For internal use)

2. RF and Audio Level Bar:

RF A/B Level Bar -- Show the RF level.

Signal Drops - Counts dropouts on RF A/B. Use the picture buttons to run, pause or clear dropouts. Adjust squelch bar to set dropout level. This function is designed for walking test to antenna A/B.

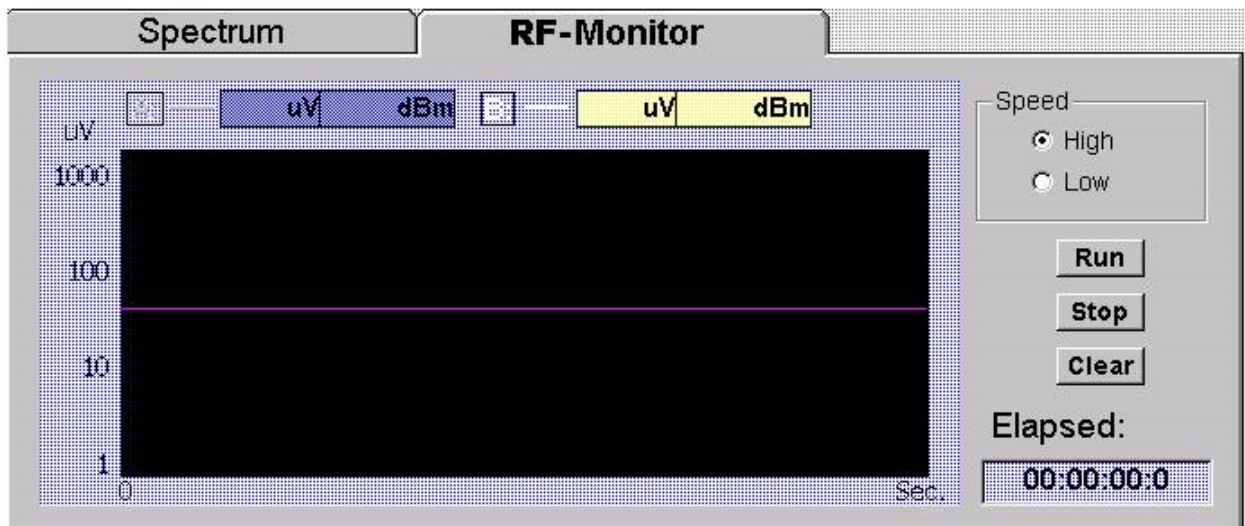
Battery -- show transmitter battery status.

Audio Level Bar -- Show the AF level

3. Control Buttons

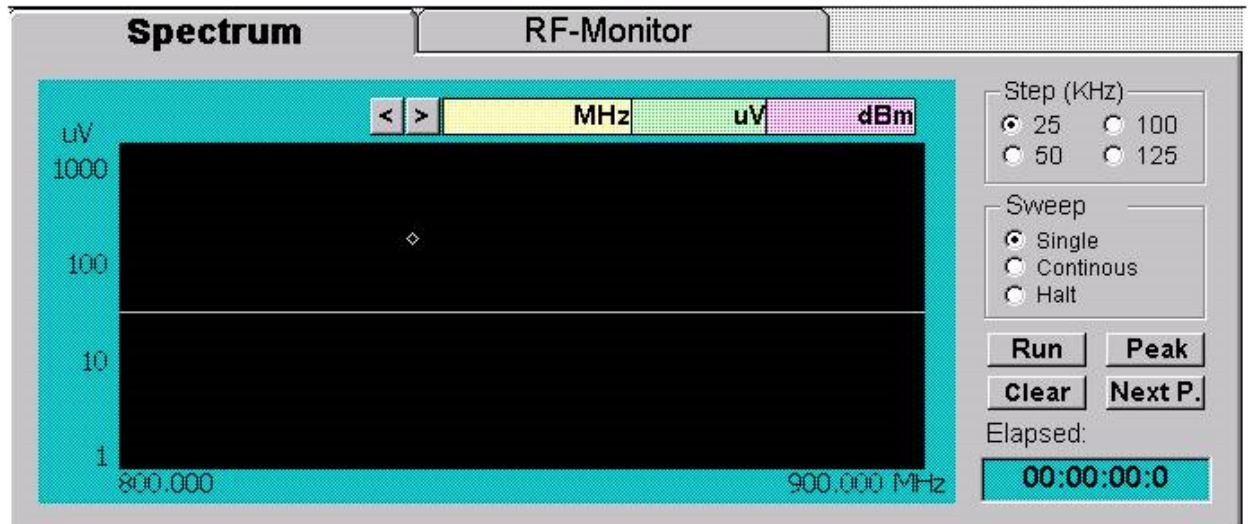
ACT -- Automatically synchronize frequency of the microphone.

RF Monitor



RF-Monitor shows the tracks of RF signals. RF A is painted with blue color and RF B is yellow. The horizontal pink line is the squelch level.

Spectrum Analyzer



How to run Spectrum Analyzer:

1. Decide the squelch level
2. **Select a step size** -- 25, 50, 100 or 125 KHz.
3. **Select sweep mode** -- single, continuous or halt. (The "Halt" mode will find first signal greater than squelch level)
4. Press "Run" button

Diamond-shaped indicator -- Locate on the peak RF value of current frequency. The indicator's readouts are displayed on the labels above (MHz, uV, dBm).

Squelch level -- The horizontal line shows the squelch level.

Single - Run Spectrum Analyzer once.

Continuous - Run Spectrum Analyzer continuously until the "Stop" button is pressed.

Halt - This function enable Spectrum Analyzer to stop automatically if any RF level is larger than squelch is found.

Run - Start/Stop the spectrum analyzer.

Clear - Clears the spectrum display windows.

Peak - Locate the peak signal.