

H-ITT RX4100 instruction manual

H-ITT • 420 Shearer Blvd • Cocoa, Florida • 32922

Rev 1.0

GENERAL:

The RX4100 communicates with all H-ITT RF clickers. There is no limit to the number of RF clickers that can be used with the RX4100. The RX4100 has 31 RF channels that can be selected and are provided so that a classroom may have a unique RF channel to avoid interference between another device in or about the classroom. The RX4100 is initially set to channel 07 to operate with H-ITT RF clickers that are also initially set to channel 07. The RX4100 has selectable baud rates for communication to your PC. The default setting is 19.2K baud. Higher Baud rates are available, but typically not needed. If higher baud rates are selected, the length of the USB cable should not exceed 15 feet.

Connecting the RX4100

1. Attach the antenna to the SMA connector on the back of the RX4100.
2. Connect the RX4100 to your classroom computer with the supplied USB cable.

Upon connecting the USB the YELLOW power indicator light will turn on and both the GREEN PC com and RED RF com indicators will blink 4 times each.

That's it for hardware connection!

Install the software

Depending on your operating system (Windows, Mac or Linux) you may need to install USB drivers for the hardware to properly communicate with your computer. The USB drivers vary depending on your computers operating system; Windows and Mac require driver installation where Linux drivers are built in. Windows and Mac USB drivers are included on the CD supplied with the RX4100. Insert the H-ITT CD into your drive, the menu should pop-up in a few seconds (depending on your OS and settings), if not, browse to your CD drive and double click the file name "index.htm". Under the "drivers" section, click the link and download (save to your computer) the appropriate USB driver for your operating system. USB drivers are also provided at H-ITT.COM from the download links where you will find instructions based on your operating system.

Windows users note: When the RX4100 is first connected a "found new hardware" wizard will pop-up. If you are connected to the Internet, this wizard can locate and install the proper drivers; accept the wizard defaults and the required USB drivers will be installed in a minute or so. If you are not connected to the Internet click on and download the link "2000/XP/Vista auto installer" to your computer, either from the CD or from H-ITT.COM. Install the drivers by double clicking the download (i.e. CDM 2.02.xx.exe). After a few seconds a prompt will verify successful driver installation.

TEST

With the RX4100 connected, using a H-ITT RF remote press a button (A/1 through J/0) on the RF remote and verify:

- On the RX4100, the YELLOW power indicator is on and the GREEN PC Com light and RED RF com lights blink.
- On the RF remote, the indicator light turns green (confirmation from the base to the remote that valid data is received).

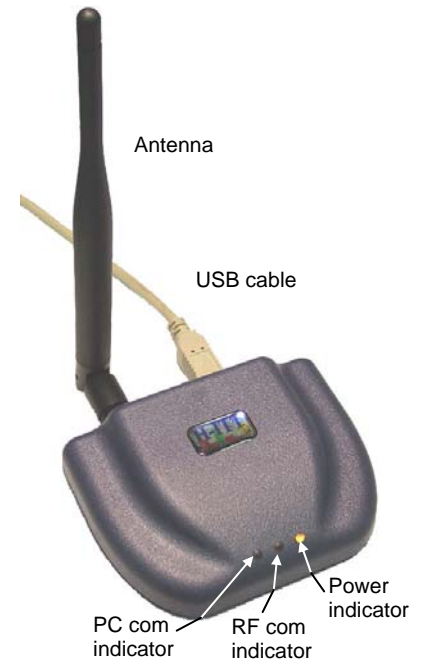
This verifies that the hardware is set correctly. If test fails, check the yellow power light is on (power supplied from the USB cable) and that the RF channel on both the RX4100 and the remote you are testing with are the same (check set-up switches, and remote).

Test with H-ITT software to make sure the RX4100 is communicating with your computer using the H-ITT-CRS Acquisition program. When the RX4100 is connected, the initial screen of the Acquisition program will show under "Port and Base Unit Type" a COM port labeled "USB Serial Com Port x". When a remote is activated, the remotes serial number will appear under the "Detected Responses" column which shows both the remotes serial number and the key pressed.

If the "USB Serial Com Port x" does not show up, it is most likely the USB drivers are not installed, see above to install USB drivers or contact H-ITT support for assistance. If the com port shows up, but remote serial numbers do not show up it is most likely a baud rate mismatch. Verify the set-up switch is set for 19.2K baud (switches 7&8 in the ON position), and Acquisition baud setting under the blue "change" text shows 19.2K baud.

Test the RX4100 installation: To ensure reliable communication between the RX4100 and remotes for your application, go to the far corners of the expected coverage area (or from worst case seat positions) and verify the remotes green light turns on with a key press, this is the remotes acknowledgement that the key press was received by the RX4100 and communicated to the computer.

Your H-ITT hardware is now ready to collect and process responses from remotes with H-ITT's applications software. H-ITT offers several programs that allow you to teach your class your way. Click the link on the CD "Learn More About H-ITT's Software" or visit H-ITT.com software links for more information.



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Contact info:

Additional information regarding installation, applications and software can be found at <http://www.h-itt.com>. You can e-mail support@h-itt.com or call toll free 1-888-322-0089 for technical assistance with any problems installing or using your H-ITT product.

For Sales, phone: 877-244-4488, or email sales@H-ITT.com

Changing the RF channel and/or the Baud rate

The RX4100 has a set-up switch block located on the back. Switch positions 1 through 5 set the RF channel, (ref Table1). Switch position 6 is for factory use and should remain in the ON position for normal operation. Switch positions 7 and 8 select the baud rate.

Some notes:

- Always remove the USB cable when changing any switch setting.
- The default RF channel is 07 to match the remotes default. Changing the RF channel requires that the remote transmitters used with the RX4100 "log on" to the selected channel.
- The default baud rate is 19.2K to match the software programs settings.

Changing the RF Channel

Table 1 shows the numeric value of the 31 selectable channels and the switch setting. The switch setting of all **on** should not be used. In order for the students' clickers to operate on the same RF channel as the RX4100, the selected RF channel must be published, or otherwise be made known to the students in the classroom where the RX4100 is being used. A description of Student "log-in" for the classroom RF channel is provided in the remotes instruction manual, and also provided here:

To change the RF channel of the remotes:

1. Press and hold the down arrow key until the LED turns from GREEN to RED (about 3 seconds).
2. Enter the 2 digit channel number (Valid channel numbers are 01 through 31), the LED blinks GREEN with each key press
3. Press the down arrow again. If a valid channel number is entered, after the down arrow is pressed, the RED LED will slow blink until it either acquires the RF receiver (in which case it will fast blink green) OR time out after about 7 seconds then fast blink RED.

When you see the fast green blinks, you are logged in, and can use the remote in that classroom. The remote will remember the last RF channel logged in until you change it, or if the batteries are removed and replaced the remote will revert to the default channel 07.

Changing the BAUD RATE

Table 2 shows the switch settings and resultant baud rate. The initial factory setting is 19.2K baud which matches H-ITT's software, and is the recommended setting.

RX4100 Technical specifications

Length	3" (76mm) (excluding Antenna)
Width	4" (102mm) (excluding Antenna)
Height	1.4" (36mm) (excluding Antenna)
Weight	3.3 oz. (94 grams)
USB Port	USB-B connection
Baud rate	19.2K, 39.4K, 57.6K, 115.2K
DC power	USB, 100mA max.
RF carrier	2.4Ghz ISM band
RF channels	31
RF data	2Mbit, NRZ format
RF Range	300 feet open field**
FCC ID	UH9RX4100

** Indoor range may be significantly less, range is specified under controlled open field testing with TX3100..

FIGURE 1

Switch settings shown are the factory default: 1,2,3 are off, and 4 through 8 are on

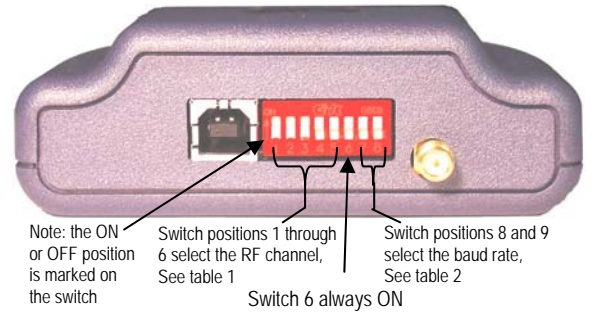


TABLE 1

Channel	DIP SWITCH #				
	# 1	# 2	# 3	# 4	# 5
1	OFF	ON	ON	ON	ON
2	ON	OFF	ON	ON	ON
3	OFF	OFF	ON	ON	ON
4	ON	ON	OFF	ON	ON
5	OFF	ON	OFF	ON	ON
6	ON	OFF	OFF	ON	ON
7	OFF	OFF	OFF	ON	ON
8	ON	ON	ON	OFF	ON
9	OFF	ON	ON	OFF	ON
10	ON	OFF	ON	OFF	ON
11	OFF	OFF	ON	OFF	ON
12	ON	ON	OFF	OFF	ON
13	OFF	ON	OFF	OFF	ON
14	ON	OFF	OFF	OFF	ON
15	OFF	OFF	OFF	OFF	ON
16	ON	ON	ON	ON	OFF
17	OFF	ON	ON	ON	OFF
18	ON	OFF	ON	ON	OFF
19	OFF	OFF	ON	ON	OFF
20	ON	ON	OFF	ON	OFF
21	OFF	ON	OFF	ON	OFF
22	ON	OFF	OFF	ON	OFF
23	OFF	OFF	OFF	ON	OFF
24	ON	ON	ON	OFF	OFF
25	OFF	ON	ON	OFF	OFF
26	ON	OFF	ON	OFF	OFF
27	OFF	OFF	ON	OFF	OFF
28	ON	ON	OFF	OFF	OFF
29	OFF	ON	OFF	OFF	OFF
30	ON	OFF	OFF	OFF	OFF
31	OFF	OFF	OFF	OFF	OFF

TABLE 2

BAUD RATE	DIP SWITCH #	
	# 7	# 8
19.2K	ON	ON
38.4K	OFF	ON
57.6K	ON	OFF
115.2K	OFF	OFF

FCC ID: UH9RX4000

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.