



The TX3500 is a universal input RF remote transceiver designed for limited access users that may find using typical classroom response reporting devices cumbersome or inappropriate.

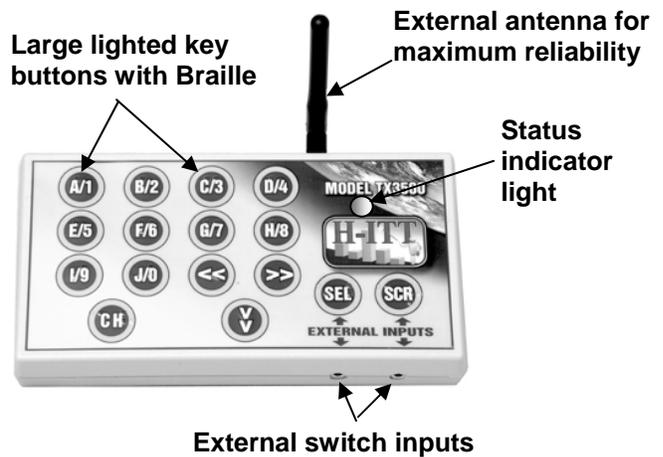


GENERAL:

The TX3500 is designed for users with limitations such as sight, hearing, or physical mobility that may not allow easy use of H-ITT's handheld remote units when engaging in an interactive question/answer session. The TX3500 has large, lighted, easy access keypad buttons with Braille that include vibrating and visual input with acknowledgment features. H-ITT's unique scrolling function allows minimal physical ability in order to utilize all keypad functions. Two keys are provided with external access switch inputs to provide flexibility based on user mobility, however the TX3500 can be used with a single input switch to scroll to, and select, any key on the TX3500. The switch inputs accept most all commercially available access switches. If needed, H-ITT will make special adaptation to switches as required to ensure that the system works based on any individual needs. The TX3500 is battery powered, with several years of typical usage. Mounting options for positioning the unit in a variety of orientations for ease of use are available.

Some features include:

- 10 data entry keys
- Forward, reverse and special set up keys
- Channel select key
- Program function key
- SElect key with external input
- SCRoll key with external input
- Internal vibration motor
- Various mounting options
- Portable battery operation



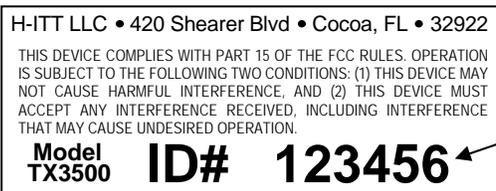
Installing the Batteries

The TX3500 uses six standard AA size batteries (not included). To install the batteries, slide the battery cover back and lift off. Install the batteries observing the polarity indicated, and replace the battery door.

Recommended batteries, AA size, 1.5V Alkaline: Energizer # EN91 LR6 AM3 1.5V or equivalent

Your Unique H-ITT ID number

Each TX3500 has a unique ID number that is on the label located on the back of the unit. Your instructor will need to record this ID number in the classroom software to associate you with responses from your TX3500.



H-ITT ID number

Using the Keys:

The keys A/1 through J/0 function exactly like a standard H-ITT remote with 13 buttons. These keys are used to answer questions posed by the instructor. Press the key and the selection is transmitted to the receiver and processed by H-ITT's programs.

The function of the other keys differ from the standard remote, as outlined here and detailed in the following sections:

1. The CH key is used to change the RF channel.
2. V (down arrow) is used to put the unit into a receive mode the same as the standard remote, but also has a dual function that is used to program the auto scroll timing to suit the users particular needs.
3. The << and >> keys function the same as the standard remotes to allow scrolling through self paced paper based tests. They also have a dual function used in programming the scroll timing in conjunction with the V (down arrow) key.
4. The SEL key can be used to SELECT a key, or rather activate it when the key is scrolled to. This key also has an external input jack for a switch that can activate this key.
5. The SCR key is used to SCROLL to any key, and can also activate that key. This key also has an external jack for a switch that can activate this key.

Activating keys using the Scrolling function

The TX3500 accepts either the key button or a connected input switch for the SCR (SCRoll) and SEL (SElect) function. This instruction describes using the key buttons, but an externally connected switch will function exactly the same.

Either two keys (or input switches) can be used, or a single key (or input switch) can be used to scroll to and activate any data key on the TX3500. In addition, there are two methods you can use to advance to the next key: Auto scroll and Click scroll. Both methods are described below.

The scroll feature has specific time periods when different functions of the SCR key are active:

- ADVANCE time period, pressing the SCR key during this time will advance to the next key.
- SELECT time period, pressing the SCR key during this time will activate the selected key.

Figure 1 further describes these timing periods, and you can program these time periods to meet your specific needs.

Using Scroll with 2 keys

Auto scroll: Press and hold the SCR key and each key will light up in sequence, starting with the A/1 key, then B/2 key, etc through the J/0 key, then the <<, >>, CH, and V. To select the desired key, scroll to it and when it is lighted press the SEL key. This will activate that key. Note that the SEL key can be used any time during the total time period so you do not need to wait the scroll time period. If the SCR key is held down through all keys, the sequence will repeat. If the SCR key is released, and no other input is made the TX3500 will timeout after the TOTAL timing period with no key activated.

Click scroll: Alternately you can press and release "click" the SCR key to advance to the next key. Note, when using the click scroll method, you must click during the ADVANCE timing period.

Using Scroll with the SCR key only

The SCR key alone can be used to activate any key using specific timing. Both the auto scroll and Click scroll methods described above can be used, however using the click scroll method requires you click during the ADVANCE timing period to move to the next key.

Press and hold the SCR key (or click) and each key will light up in sequence as described above. To select the key, release the SCR key, wait for the SELECT timing period, then press the SCR key

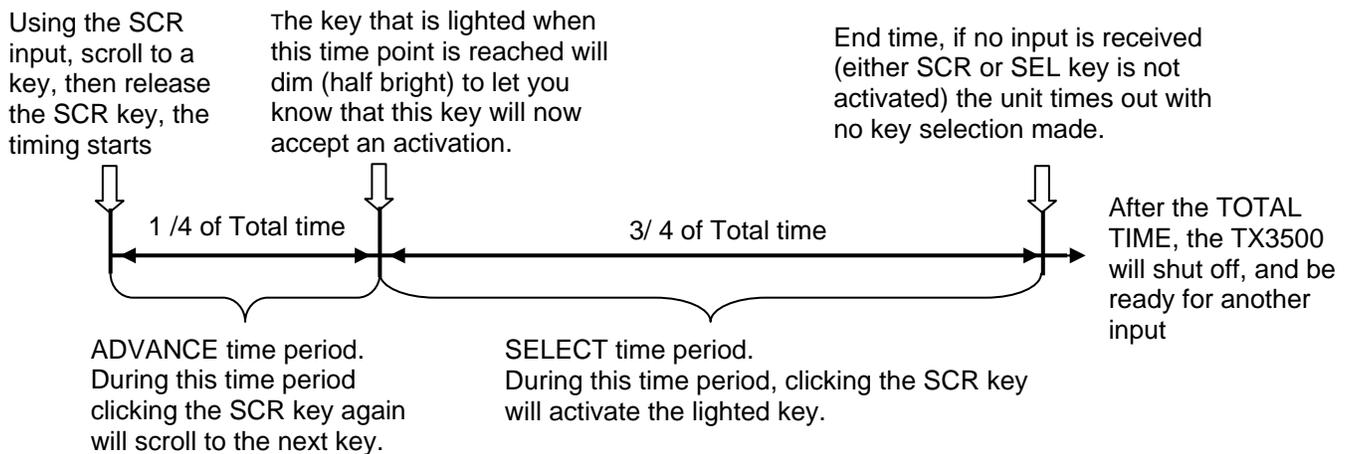
again. The SELECT timing period is indicated by the lighted keypad dimming when it can be activated.

Scroll timing

The scroll function is used with the SCR key, or switch connected to the SCR input. The “timing” is the time allowed for advancing to the next key (ADVANCE time period) and the time after a key is advanced to activate it (SELECT time period). This timing is described in figure 1.

The factory default timing is a total time of 8 seconds. This gives 2 seconds for the ADVANCE time period and 6 seconds for the SELECT time period. The total time can be changed or programmed as described below.

Figure 1, scroll timing diagram



Note that at any time between start time and end time the SEL key will activate the lighted key

Changing the scroll speed time

The V (down arrow) is used to enter the programming mode, and the << and >> keys are used to change the TOTAL time.

- When the “v” key is pressed, the << and >> keys will alternately light up.
- Pressing the SCR key when the << key is lighted will reduce this time (make it faster)
Or pressing the << key when lighted will do the same.
- Pressing the SCR key when the >> key is lighted will increase this time (make it slower)
Or pressing the >> key when lighted will do the same.

After selecting the timing, do not input any key and allow the timeout of the programming to occur (about 8 seconds) and the new timing will be set.

Test the new timing to make sure it is easy to accurately select any key. You can reprogram this timing as many times as you want to achieve both speed and accuracy in responding to interactive questions.

The TX3500 will reset to the factory timing if the batteries are removed.

Changing the RF channel.

There are 31 RF channels that the TX3500 can operate on. The default channel setting is 07, and should only be changed if your classroom base receiver has been changed to a different channel. If the classroom does operate on a different channel, your instructor will inform you of the channel number used in that classroom, and you will need to log into that class RF channel before the TX3500 will operate. Once you change the RF channel, the TX3500 will remember this new

channel, so if you attend multiple classrooms that have different RF channels you will need to log into each classrooms RF channel. The RF channel is a 2 digit number between 01 and 31.

To change the RF channel:

1. Press the CH key.
2. Enter the 2 digit channel number (Valid channel numbers are 01 through 31)
3. Press the CH key again. If a valid number is entered, after the down arrow is pressed, the Indicator LED will slow blink RED until it either acquires the RF receiver (in which case it will fast blink GREEN) OR time out after about 5 seconds then fast blink RED if a base unit is not detected.

When you see the fast green blinks, you are logged in, and can use the TX3500 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 TX3500 will revert to the default channel 07.

If you have trouble logging in to the RF channel of the classroom, check the following and retry steps 1-3 above:

- The 2 digit RF channel you are entering is correct for the RF receiver in that classroom.
- The RF receiver in that classroom is powered up.
- You are within range (less than 200 feet away from the receiver) and have a clear line-of-sight path (un-obstructed) to the RF receiver.

HELP NOTES ABOUT CHANGING THE RF CHANNEL:

- If an invalid number was entered (I.e. 00 or greater than 31) the LED will immediately fast blink red when the down arrow is pressed.
- You must be within range of a receiver unit with the same channel number you are logging into.
- If all your classrooms use the same channel number then there is no need to reprogram for each room.
- If the battery is removed, the RF channel defaults to Channel 07 when the battery is replaced.

Enabling/Disabling the buzzer:

If the buzzer function is enabled, it will vibrate as follows:

Short activate each time a key is scrolled to
Long Activate upon successful transmission

To enable the buzzer, press the CH key, then press the H/8 key, then H/8 again then the CH key again, the buzzer will activate and be enabled to function as described.

Note this is the same procedure used to select an RF channel.

Use the same procedure to disable the buzzer, that is key sequence CH, H/8, H/8, CH.

Set-up and test

Once the batteries are installed, test each key by pressing it and the response below should result. For the 10 data keys and the << and >> keys:

- If a H-ITT base receiver is on and within range the Key light flash for about 1 second, and the indicator light will turn green.
- If a H-ITT base is not present, the key light will briefly turn on, and the indicator light remains red.

The other function keys will operate as described above simply press and make sure a response is given to ensure the button is functioning.

If using external switches, connect to the external inputs and activate the switch, the switch should perform the function as described above.

Mounting the TX3500

The TX3500 can simply set on a desktop or mounted using various methods suited to the users needs. There is a standard ¼-20 threaded nut on the back of the TX3500 that is used will some standard mounting arms. In Addition, Velcro strips are included that provide a removable mount to any flat surface. Most commercially available adjustable mounting arms such as goose necks and ball joint types provide a plate that the TX3500 can be secured to with these Velcro strips.

External switch applications

The two inputs, SEL and SCR use a standard 1/8" MONO audio type plug, typical of most enabling switches. If needed, H-ITT can provide various adapters upon request that can convert the plug on your switch to the required 1/8" mono type.

There are many vendors and manufacturers of numerous switch types and configurations, so the scope of this section is to describe the requirements of the switch so it will operate correctly with the TX3500:

1. The switch must be the "normally open" type where the switch contacts close when activated.
2. The switch should be "momentary", so when the switch is pressed it is on, and when released it is off.
3. The plug should be an 1/8" mono type, however adapters are available.

Some generic types of switches that can be used with the TX3500 include hand, finger and body activated switches; sip, puff and breath switches; sound activated, and wireless switches may also be used.

Specifications

LxWxH	7.6" x 4" x 1.3"
Weight	1lb (without batteries)
Battery type	Standard AA type (4 required)
Battery life	2 years (typical)
RF carrier	2.4Ghz (ISM band)
RF Channels	31
Range	300 feet max (open field)

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 UNDESIRE 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.

The TX3500 has a 1 year warranty against manufacturer defects. Return the unit with your receipt to a qualified H-ITT retailer. Remember your TX3500 is an electronic device and should be treated delicately, kept dry, and kept free from static charge.

Contact Information:

H-ITT LLC

420 Shearer Blvd
Cocoa, Florida 32922

support@h-itt.com

1-888-322-0089