Crestron **ST-4T & ST-8T**
Hand-Held Wireless Transmitters

Operations Guide

CRESTRON
REMOTE CONTROL SYSTEMS

Contents

Hand-Held Wireless Transmitter

Description

Functional Description

The ST-4T and ST-8T are hand-held radio-frequency (RF) transmitters. The units are designed to operate with the SmarTouch STS via the ST-CP, control processor. The hand-held transmitter is available with four (ST-4T) or eight (ST-8T) button controls. Depression of any fixed button on the button panel initiates a RF signal transmission to the ST-CP.

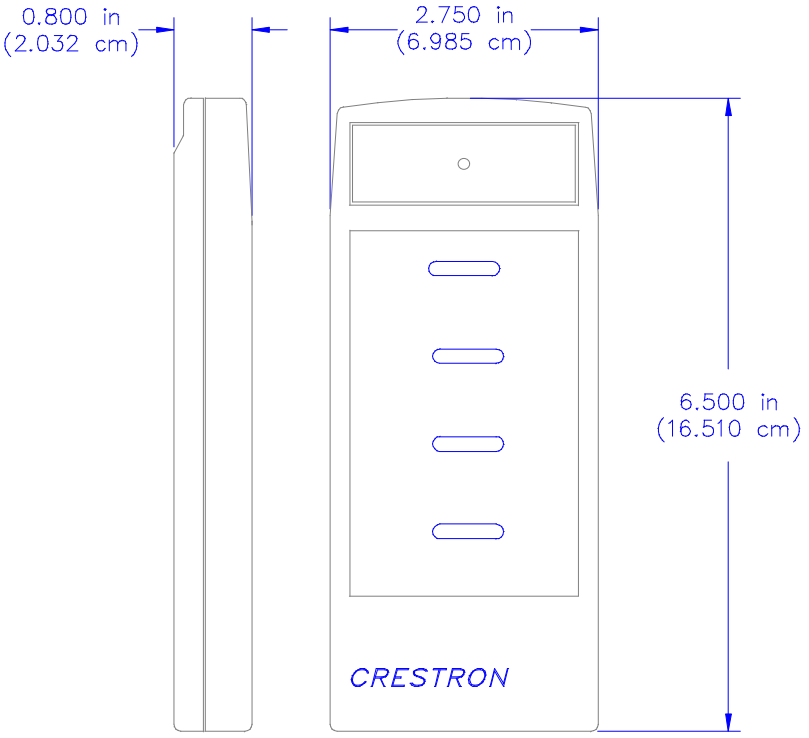
Both hand-held transmitters have a power-saving mode, known as sleep mode, to extend battery life. Units are continually in sleep mode until a button is depressed. The unit activates immediately. It is not necessary to hold down a button.

Physical Description

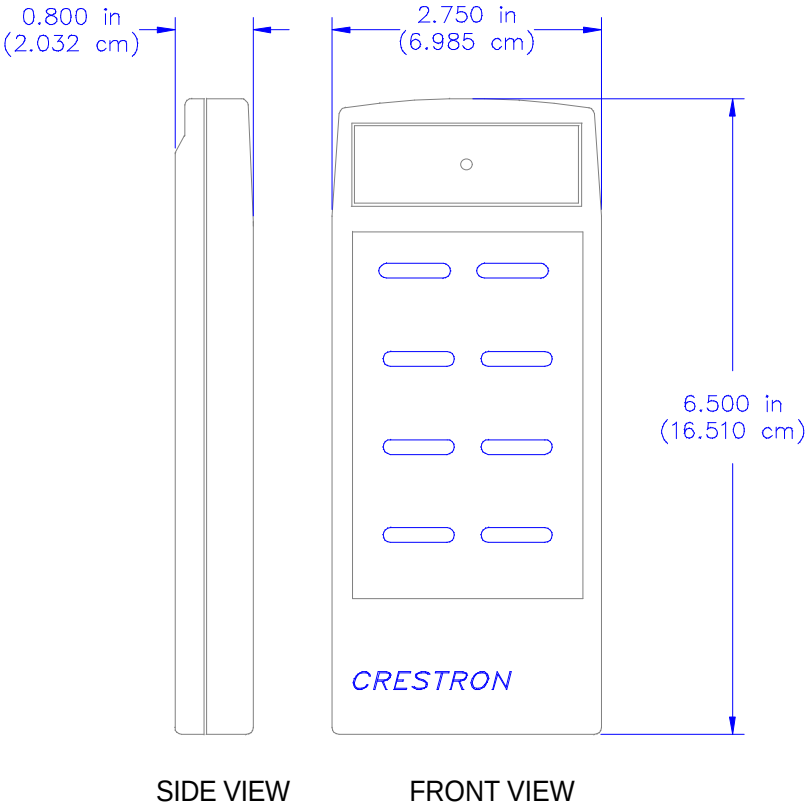
ST-4T and ST-8T electronic hardware is housed in a slim, high-impact molded ABS black plastic enclosure, as shown on the next page. A button array on the printed circuit board is covered by a button panel. All button panels include custom engraving with large light gray button caps and black finish. Refer to the latest version of the CRESNET II Engraving Worksheet for the ST-4T and ST-8T (Doc. 5704 and 5705, respectively) for engraving directions.

A red Transmit LED is located above the button panel cover. The Transmit LED indicates RF transmission and illuminates when a button is depressed. It also has the auxilliary function of illuminating when a new transmitter RF ID code is programmed into the unit.

ST-4T Physical Views

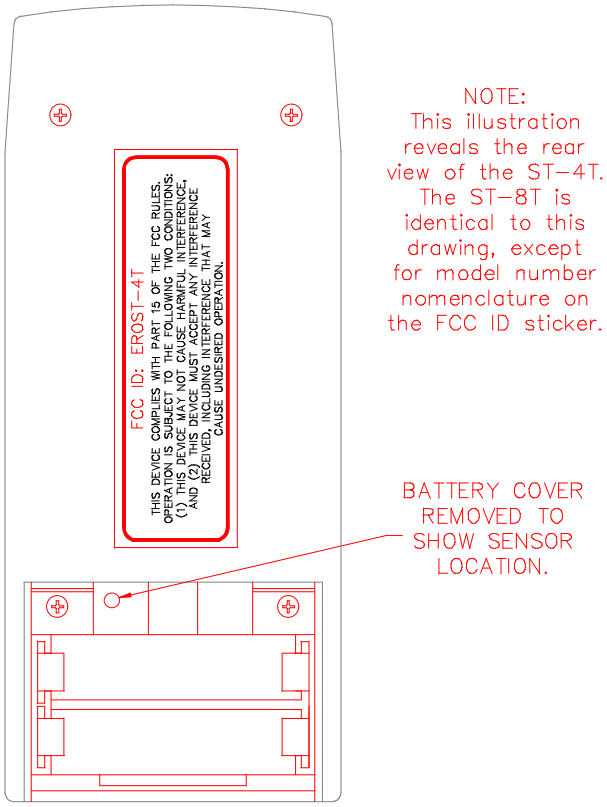


ST-8T Physical Views



A standard nine-volt battery is included with all units. Access to the battery is permitted after the battery cover, located on the underside of the unit, is removed. A sensor (photo transistor) used to program an identity code is also located in the battery compartment, as shown below.

Battery Compartment (Rear View)



Leading Specifications

The table below provides a summary of leading specifications for the hand-held transmitters. Dimensions and weight are approximations rounded to the nearest thousandth unit.

Leading Specifications of the ST-4T and ST-8T

SPECIFICATION	DETAILS
Battery	9V DC
CRESNET II Workshop	Version 5.0 or later
CRESNET II Operating System	SR30222.OPS or later
SmarTouch Operating System	Any
STS VisionTools for Windows	Version 10.4 or later
Compiler	3.09.17 or later
Dimensions & Weight	Height: 6.500 in (16.510 cm) Width: 2.750 in (6.985 cm) Depth: 0.800 in (2.032 cm) Weight: 0.300 lb (0.200 kg)

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

As of the date of manufacture, the unit has been tested and found to comply with specifications for CE marking.

CE

Setup

Identity Code

Every hand-held wireless transmitter communicating with either the ST-CP requires a unique RF identity code (ID CODE). There are 254 possible two-digit hexadecimal alphanumeric codes ranging from 01 to FE. To maintain code diversity within SmarTouch STS, use codes between 10 and FE for the transmitters.

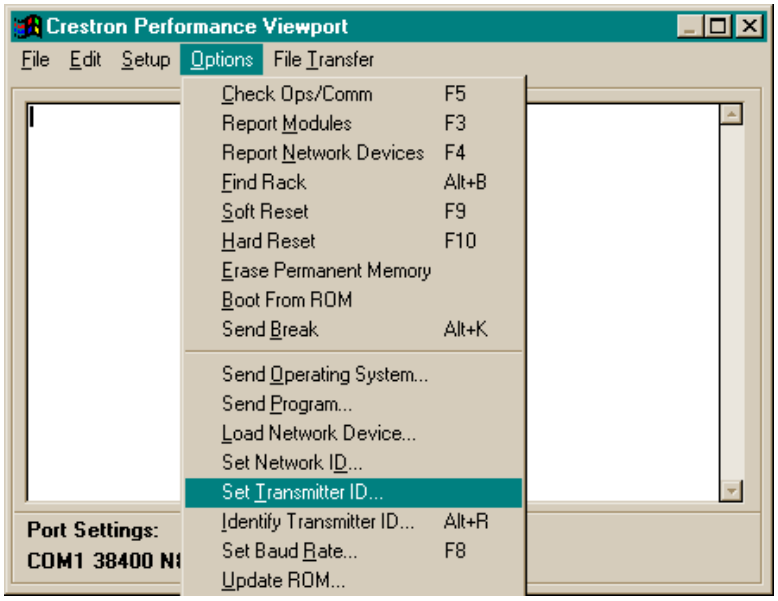
NOTES: The RF ID CODE on the hand-held transmitters is factory set to 11.

Do not use 00 or FF as an RF ID.

Do not confuse RF ID with network (NET) ID.

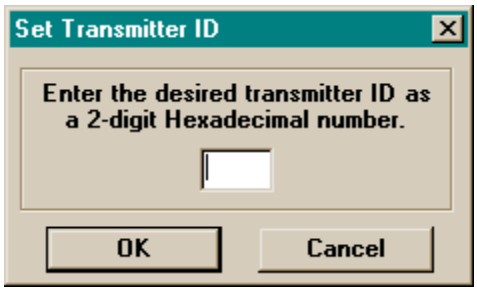
Use STS VisionTools for Windows to set an RF ID CODE. Select ViewPort from the Tools menu; the “Crestron Performance Viewport” dialog box appears.

Crestron Performance Viewport Dialog Box



From the Options menu in the dialog box, select Set Transmitter ID to open the "Set Transmitter ID" dialog box. Enter a two-digit hexadecimal number ranging from 03 to FE. Click OK to confirm.

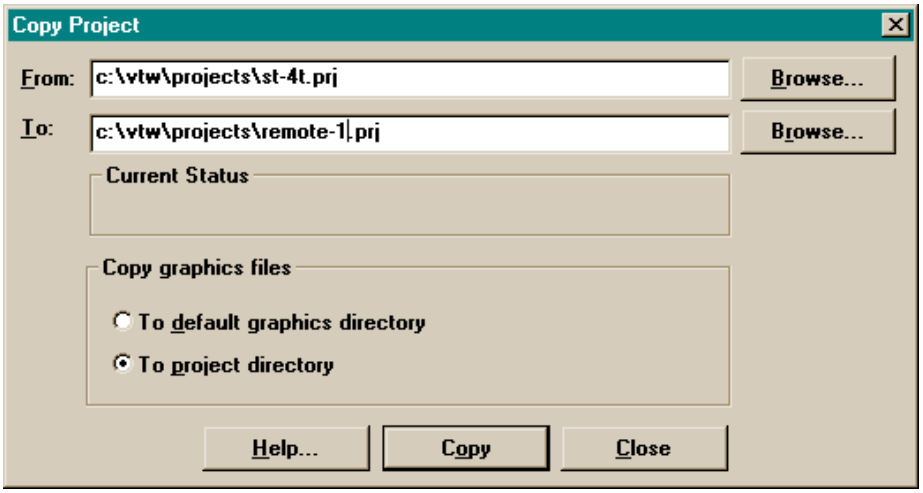
Set Transmitter ID Dialog Box



Programming

STS VisionTools for Windows contains sample projects, ST4T.prj and ST8T.prj, that can be used when programming the hand-held wireless transmitters. Simply copy the respective sample project by selecting Copy Project from the File menu of an open project. The "Copy Project" dialog box is displayed.

Copy Project Dialog Box

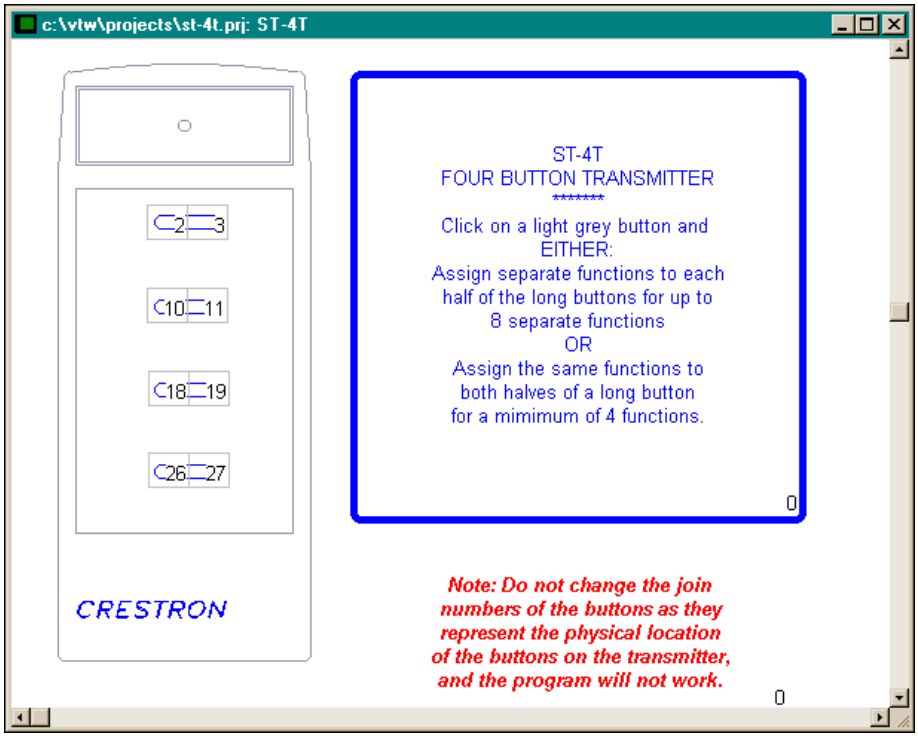


NOTE: The illustration above shows what the "Copy Project" dialog box would look like if the programmer were to copy the ST-4T sample project with the new project name, *remote-1*.

As illustrated, a "From" and "To" field is provided. If the desired project is not present in the field, directly key in the path name (at the From: box) or select Browse to display the "Open" dialog box and scroll through directories to establish the correct path of a desired source for the copy. The destination path is entered in the same manner. Once source and destination paths have been chosen, select Copy to initiate project copying. By default, all copied graphic files are copied to the same directory as the project or touchpanel.

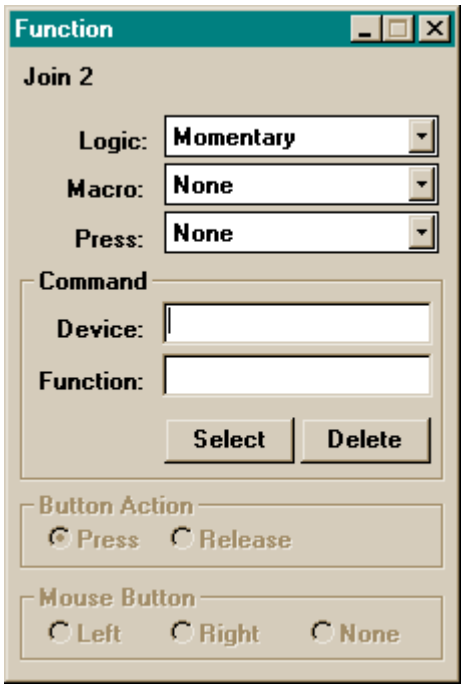
The sample projects for the hand-held transmitters have one page each. The ST-4T page and ST-8T page have four and eight momentary-type buttons, respectively. Each large button has two join numbers associated with it, one for each half of the button. Commands such as VOLUME UP and VOLUME DOWN are usually assigned to the separate button halves; operation of each half is achieved by pressing down on that side of the button. Refer to the following illustration of the sample ST-4T page. Notice the join number assignments for each button.

Open Page of ST4T.PRJ



DO NOT reassign join numbers in the new project, since they represent the physical location of actual buttons on the transmitter. Use STS/VTW to assign device commands when customizing the SmarTouch system. To access the functional properties of the button, simply right-click on the object and select Function from the pop-up menu. The "Function" dialog box appears.

Function Dialog Box Shown for Button with Join Number 2



One possible programming technique is to assign the same command to both join numbers on the large button so that the entire button has a single command. Otherwise, assign a unique command to each join number so that the button has dual functionality. For example, commands such as VOLUME UP and VOLUME DOWN are usually assigned to the separate button halves; operation of each half is achieved by pressing down on that side of the button. Use caution when assigning two commands to a single large button. Due to the sensitivity of the unit, depressing the large button in the center may result in an undesired activity or no activity at all.

If you draw your own project, remember to change the target type to ST-4T or ST-8T in the dialog box after selecting New and Project from the File menu.

Problem Solving

Troubleshooting

The table below provides corrective action for possible trouble situations. If further assistance is required, please contact a CRESTRON technical support representative.

ST-4T/-8T Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
LED on unit does not illuminate.	No battery in unit or battery is dead.	Install new battery.
	Unit is in sleep mode.	Depress and hold any button until unit transmits.
Intermittent response during transmission.	Refer to causes when LED does not	Refer to corrective action when LED does not illuminate.
	Receiver is blocked or moved.	Verify that heavy metal is not in vicinity of transmission.
	ST-CP is in vicinity of metal.	Verify that large amount of metal is not blocking transmission.
No response from SmarTouch system.	Refer to causes when LED does not illuminate and intermittent response during transmission	Refer to corrective action when LED does not illuminate and intermittent response during transmission occurs.
	NET ID of receiver is incorrectly set.	Enter Performance Viewport from the STS/VTW software. Depress the F4 key to poll the network. Verify that the NET ID for the receiver is properly set to match the SIMPL program. **NOTE:** After changing the ST-CP identity code, disconnect and reconnect the network connector.
	RF ID or IR ID is incorrectly set.	Verify that the RF ID is properly set to match the SIMPL program. **NOTE:** NET ID and RF ID are separate parameters.
	Program does not match hardware.	Verify correct program is loaded in system via Performance Viewport.
	Receiver is unplugged (no power).	Verify power to the receiver.
	Two or more receivers are too close together.	Verify that multiple receivers are properly spaced (≥50 feet) from each other.
	Wrong transmitter in use.	If multiple transmitters are accessible, verify proper unit is used.

Further Inquiries

If after reviewing this Operations Guide for the hand-held transmitter, you can not locate specific information, please take advantage of CRESTRON's award winning technical support team in your area. Dial one of the following numbers.

- In the US, call (888) CRESTRON [(888) 273-7876] - the call is toll free or (201) 767-3400.
- In Europe, call +32.15.730.974.
- In Asia, call +852.2341.2016.
- In Latin America, call +525.574.15.90.

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Doc. 5703
09.97