



# SENTINEL HAND-HELD REMOTE (SHHR)

## Operations and Commands

### SENTINEL HAND-HELD REMOTE

The Sentinel Hand-held Remote (SHHR) is a powerful tool used to remotely activate valves and/or programs on Sentinel satellites. The SHHR is also capable of 2-way voice communication with other SHHR radios. To initiate hand held operation, the satellite is addressed and placed into one of two modes: All Call (A) or Secure (S).

- **Secure Mode (S)** – The Secure mode enables SHHR commands to be sent to specified satellites only. When placed in this mode, an “S” will appear in the top right corner of the satellite display. Satellites may be left in the secure mode, to avoid the need to re-address each time the SHHR is used. Leaving the unit in the Secure mode will not interfere with central to satellite communication or operation. This is the recommended mode of remote operations.
- **All Call Mode (A)** – All satellites placed in the All Call mode will respond to ANY AND ALL commands sent by the SHHR. When placed in this mode, an “A” will appear in the top right corner of the satellite display.
- **Locked (L)** – A Sentinel satellite can also be “locked” to prevent handheld commands from activating any function within the unit (either Secure or All Call Mode commands). The satellite reverts to ‘Locked’ state when the user sends the exit command to exit from either All Call or Secure mode. When placed in this mode, an “L” will appear in the top right corner of the satellite display

### REMOTE COMMANDS

The SHHR commands are written using the following abbreviations:

<b>nn</b> or <b>nnn</b>	nn = Two-digit station number. Enter a 0 for single digit stations numbers 1–9; i.e. 01–09. Range: 01–99 stations. nnn = Three-digit station number for two-wire controllers up to 204 stations. Enter two 0’s for single digit station number (e.g. 001) and one 0 for double-digit station numbers (e.g. 099). Range: 001–204 stations.
<b>h</b>	Hour(s) of station run time. Range: 1–4.
<b>tt</b>	Minutes of run time. Enter a 0 for single digit minutes 1–9; i.e. 01–09. Range: 01–59 minutes.
<b>dd</b>	Rain Days. Enter a 0 for single digit days 1–9; i.e. 01–09. Range: 01–99 days.
<b>CCC</b>	Three-digit satellite unit code. Range: 001–999.
<b>MMM</b>	Three-digit MapTo unit code. Range: 001–999.
<b>C</b>	Cluster number. 1 for Cluster A, 2 for Cluster B, 3 for Cluster C, 4 for Cluster D. Range: 1-4
<b>p</b>	Program number. Range 1 – 4.
<b>#</b>	Pound (lb) or “Hash” sign. Refers to button marked by “#”
<b>*</b>	Star or Asterisk sign. Refers to button marked by “*”

**IMPORTANT: The maximum timed run for a station is 4 hours and 14 minutes. If a station is initiated manually for 4 hours and 15 minutes (that is, over 4:14), it will run continuously until it is manually turned off.**

### Remote Command Categories:

Commands in this instruction are broken into the following categories for Normal and Secure Mode:

- Standard Commands (Station On, Off, etc)
- Semi-Auto Program Commands (Program Operation)
- Sequence Commands (Run Sequence of Stations) – *Use in Secure Mode Only*

**NOTE:** Spaces in listed SHHR commands are inserted in this guide for easy understanding of the components in a particular command. They do not represent an actual keypad entry element.

### REMOTE OPERATIONS – SECURE MODE

The Secure mode enables Hand-held Remote commands to be sent to a specified satellite only. [This is the recommended method of remote operations.](#)

1. To operate a satellite in the **Secure** mode, press **##CCC##** (where **CCC** is the satellite address code).
2. To **send** the command, press the push-to-talk (PTT) button. The satellite will display “S” to indicate Secure mode operation.
3. Repeat this procedure for additional satellites to be operated in the Secure mode.
4. To exit Secure Mode, send **CCC##** (Locks Satellite)

### Standard Commands Under Secure Mode

<i>Action</i>	<i>SHHR Command</i>	<i>Description</i>
Turn on a station for 30 minutes	<b>CCC nn</b> or <b>CCC nnn</b>	Specified station (nn or nnn) in selected satellite (CCC) will start and irrigate for 30 minutes. After 30 minutes, the station will stop irrigating and the satellite waits for the next command.
Turn-on a station for a specified amount of time	<b>CCC nn h tt</b> or <b>CCC nnn h tt</b>	Specified station (nn or nnn) in selected satellite (CCC) will irrigate for length of time specified by hour (h) and minutes (tt). For example, entering 101 12 1 30 will run station 12 in satellite 101 for 1 hour and 30 min. <i>NOTE: Maximum timed run is 4 hours and 14 minutes. Time input longer than this will cause station to run continuously until a command is entered to turn off.</i>
Turn on multiple stations simultaneously	<b>See Description</b>	By repeating (sending separate commands) “CCC nn” or “CCC nn h tt” for stations to run simultaneously, the satellite will start all stations up to its current maximum setting.
Increment to the next higher manually operated station  <i>Leaves automatic stations unaffected</i>	<b>CCC 3</b>	Sending the “CCC 3” command will increment (step-forward) the currently selected manually operating station in selected satellite (CCC). For example, if station 16 is currently in operation and the 3 command is transmitted to the satellite station 16 will stop and station 17 will turn on.

Decrement to the next lower manually operated station  <i>Leaves automatic stations unaffected</i>	<b>CCC 1</b>	Sending the “1” command will decrement (step-back) the currently selected manually operating station in the selected satellite (CCC). For example, if station 16 is currently in operation and the 1 command is transmitted to the satellite, station 16 will stop and station 15 will turn on.
Turn off last manually selected station  <i>Leaves automatic stations unaffected</i>	<b>CCC *</b>	Sending the “*” command will turn-off the last station that was turned on manually in selected satellite (CCC). For example, if station 16 was the last station energized and the “*” command was transmitted, station 16 will stop operation.
Turn off a specific station	<b>CCC nn *</b> or <b>CCC nnn *</b>	Send “nn *” or “nnn *” to turn-off individual stations in selected satellite (CCC). For example, to turn-off station 16 from a series of manually irrigating stations, send a “16 *” command.
Turn off all stations in manual operation	<b>CCC * *</b>	To turn-off <i>all manually</i> operating stations that are in operation within the selected satellite (CCC), send a “CCC **” command. This command does not affect stations operating automatically.
Turn off all Automatic Irrigation	<b>CCC * * * *</b>	To turn-off <i>all automatically</i> operating stations that are in operation within the selected satellite, send a “CCC ****” command. This command does not affect stations operating manually.
Place a station in Rain Off	<b>CCC nn dd *</b> <b>Or</b> <b>CCC nnn dd *</b>	Use this command to place a station (nn or nnn) in the Rain Day mode for a specified number of days (dd). For example, sending 16 05 * will disable station 16 for 5 days.
Clear Alarms	<b>CCC AA</b>	Use this command to clear all alarms in the selected Sentinel satellite.
Check MapTo Communication	<b>** MMM # 96*</b>  <b>NOTE: MMM = MapTo Unit Code</b>	Using this command will allow you to hear the MapTo radio acknowledgement over the handheld speaker.

### Semi-Auto Program Commands Under Secure Mode

<i>Action</i>	<i>SHHR Command</i>	<i>Description</i>
Start Program	<b>CCC # C p #</b>	This command instructs the satellite to start a specified cluster program. The C designates the cluster number, 1 for cluster A, 2 for cluster B, etc. The p designates the program number within the specified cluster. For example, if command # 2 4 # is transmitted, Cluster B, Program 4 will start.

Stop Program	CCC # C p *	Sending this command instructs the satellite to stop a specified cluster program. The C after the # designates the cluster number (1 for cluster A, 2 for cluster B, etc). The p designates the program number within the specified cluster. For example, if command 123 # 2 4 * is transmitted, Cluster B, Program 4 will stop (if running) in unit 123.
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### Sequence (Sequence of Stations) Commands Under Secure Mode

<i>Action</i>	<i>SHHR Command</i>	<i>Description</i>
Set sequence time & Start sequence	CCC 00 h tt	To run a sequence of stations, use this command to set the run time duration <u>before</u> the sequence has been entered. As an example, sending 00 1 30 command instructs the satellite unit to run each station in a sequence for 1 hour and 30 minutes.
Assign stations to a sequence (build a sequence)	CCC nn # or CCC nnn #	<b>Use this command to add a station to the sequence. Repeat command for all stations in sequence.</b> <u>NOTE: Stations run in the order of entry.</u>
Increment sequence	CCC 3 #	Sending the 3 # command will increment (step-up) the current “sequence” station. For example, if station 16 is currently in operation and the 3 # command is transmitted, station 16 will stop and station 17 will begin operation.
Decrement sequence	CCC 1 #	Sending the 1 # command will decrement (step down) the current “sequence” station. For example, if station 16 is currently in operation and the 1 command is transmitted, station 16 will stop and station 15 will initiate operation.
Stop sequence operation	CCC 00 # <b>-and separately-</b> CCC * *	Sending CCC 00 # will stop the station sequence operation (the next station in order will not turn on). You must also send CCC * * to turn off the currently operating station. <u>NOTE: Sending “CCC **” only will not end a sequence. The next station in sequence will come on at the minute change after “CCC **” is sent.</u>

## REMOTE OPERATIONS – ALL CALL MODE

All satellites placed in the All Call mode will respond to **any and all** commands sent by the Hand-held Remote.

**IMPORTANT: It is highly recommended you use “Secure Mode” for all remote satellite operations. Utilizing the “All Call Mode” creates the risk of unintentionally turning on stations in satellites within handheld range, but outside visual.**

1. To select a satellite to operate in the All Call mode remote mode, enter ##CCC#.
2. Press the PTT (push-to-talk) button to **send** the command to the satellite. The satellite will display an “A” indicating **All Call** remote operating mode.
3. Repeat ##CCC# for additional satellites to be operated simultaneously in the Normal mode.
4. Send ## to exit All Call Mode Operation (Locks controller).

NOTE: Commands in the All Call Mode are the same format as commands in the Secure Mode, with the exception that the three-digit unit code **CCC** is not used.

### Standard Commands Under All Call Mode

Action	SHHR Command	Description
Turn on a station for 30 minutes	<b>nn</b> or <b>nnn</b>	Specified station (nn / nnn) will start and irrigate for 30 minutes. After 30 minutes, the station will stop irrigating and the All Call satellites wait for the next command.
Turn-on a station for a specified amount of time	<b>nn h tt</b> or <b>nnn</b>	Specified station (nn / nnn) will irrigate for length of time specified by hour (h) and minutes (tt). For example, entering 12 1 30 will run station 12 for 1 hour and 30 min. <b>NOTE:</b> Maximum timed run is 4 hours and 14 minutes. Time input longer than this will cause station to run continuously until a command is entered to turn off.
Turn on multiple stations simultaneously	<b>See Description</b>	By repeating (sending separate commands) “nn” or “nn h tt” for stations to run simultaneously, the All Call satellites will start all stations up to its current maximum setting.
Increment operation to the next higher station	<b>3</b>	Sending the “3” command will increment (step-forward) the currently selected manually operating station. For example, if station 16 is currently in operation and the 3 command is transmitted, station 16 will stop and station 17 will turn on.
Decrement operation to the next lower station	<b>1</b>	Sending the “1” command will decrement (step-back) the currently selected manually operating station. For example, if station 16 is currently in operation and the 1 command is transmitted, station 16 will stop and station 15 will turn on.

Turn off last energized station	*	Sending the “*” command will turn-off the last station that was turned on manually. For example, if station 16 was the last station energized and the “*” command was transmitted, station 16 will stop operation.
Turn off a specific station	<b>nn *</b> or <b>nnn *</b>	Send “nn *” or “nnn *” to turn-off individual stations. For example, to turn-off station 16 from a series of manually irrigating stations, send a “16 *” command.
Turn off all stations in manual operation	* *	To turn-off <i>all manually</i> operating stations that are in operation within the All Call satellites, send a “**” command. This command does not affect stations operating automatically.
Turn off all Automatic Irrigation	* * * *	To turn-off <i>all automatically</i> operating stations that are in operation within the All Call satellites, send a “****” command. This command does not affect stations operating manually.
Place a station in Rain Off	<b>nn dd *</b> or <b>nnn dd *</b>	Use this command to place a station (nn / nnn) in the Rain Day mode for a specified number of days (dd). For example, sending 16 05 * will disable station 16 for 5 days.
Clear Alarms	<b>AA</b>	Use this command to clear all alarms in the All Call satellites.

### Semi-Auto Program Commands Under All Call Mode

<i>Action</i>	<i>SHHR Command</i>	<i>Description</i>
Start Program	<b># C p #</b>	This command instructs the All Call satellites to start a specified cluster program. The C designates the cluster number, 1 for cluster A, 2 for cluster B, etc. The p designates the program number within the specified cluster. For example, if command # 2 4 # is transmitted, Cluster B, Program 4 will start.
Stop Program	<b># C p *</b>	Sending this command instructs the All Call satellites to stop a specified cluster program. The C after the # designates the cluster number (1 for cluster A, 2 for cluster B, etc). The p designates the program number within the specified cluster. For example, if command # 2 4 * is transmitted, Cluster B, Program 4 will stop.