

## THE CS-4000 STACK COMMAND

The **STACK** command allows you to write a small program designed to execute a list of commands to perform a designated task. There are numerous possibilities for programs ie: delete a sensor, bypass a sensor, change a phone number, regroup a sensor, or any command you desire may be used in a Stack program. This program is stored in the receiver's **STACK** memory area.

This **STACK** program can consist of one command or as many as twenty commands. For example you may want to delete a sensor from an account that calls in at 3 a.m. but no one will be there to perform this duty. The **STACK** program allows you to do this "automatically" without being near the receiver. In our example below we will write a program to delete sensor #56 from account IT-100.

1. Begin by gaining access to the **STACK** command by entering the **MASTER PASSWORD**.

**NOTE:** CS-4000 software versions before 8/24/87 have the **STACK** and **PROGRAM** commands readily accessible. CS-4000 Software versions from 8/24/87 to the present will have the **STACK** command hidden. The command **STACK** and **PROGRAM** are now prefixed with the "&" sign. The **HELP** messages for **STACK** and **PROGRAM** are also hidden but can be accessed by typing **&STACK<F10>** or **&PROGRAM<F10>**

2. Open the **STACK** memory table by entering the Stack insert command. This commands allows you to enter commands into the **STACK** memory table. Once the **STACK** table is open, anything you type will be entered into the **STACK** memory table. The command **STACK INSERT** will open the **STACK** table  
Type: **&STACK INSERT <return>** to open the Stack table.

**NOTE:**

**YOU ARE NOW IN THE STACK INSERT MODE**

3. Name your **STACK** program (In our example we will name it +DEL56) You must precede your program name with a "+" sign. (7 characters max.) Type: + name <return> (with "name" being any name up to 7 characters).
4. Begin entering the commands you wish to be used in the **STACK** program enter each command followed by <return>.  
Type: command<return> (With "command" being the next command in your **STACK** program)

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Up to this point you have only entered the commands for your program. Now to set up the Receiver to activate the Stack program you must use the TRAP command. This is accomplished by using the TRAP command followed by your program name.

TYPE: TRAP aa-aaa +name <return> (with "aa-aaa" being the Account Number and "+name" being your program name.

When account aa-aaa calls in, it will be trapped and the program "+name" will be executed. Once the program has been executed it will drop off the TRAP table. You must use the TRAP command to initiate your STACK program. Wildcard TRAP's can be used, remember a Wildcard TRAP does not drop off the TRAP table when a call has been received You must do it manually by entering TRAP OFF return.

<b>WARNING !!!!!!!!!</b> Be aware of the dangers involved with using TRAP ALL (or any Wildcard TRAP) with the STACK program.
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## DEFINITIONS AND FORMAT OF STACK COMMANDS

### &STACK

Display all lines in the Stack.

### &STACK n m

Display all/range/one lines of the Stack Area where n is the optional starting line number and m is the optional ending line number.

### &STACK PRINT n m

Print all/range/one lines of the Stack Area where n is the optional starting line number and m is the optional ending line number.

### &STACK INSERT n

Begin "Stack Insert Mode" inserting new lines at line number n (or at the end of Stack Area if n is not specified) The Previous Line is displayed for reference unless inserting at the beginning of the Stack Area (n = Line 1) All Keyboard Input is directed into the Stack Area until an Empty line is entered (press RETURN with no data)

&STACK DELETE n m Delete one/range of lines of the Stack Area where n is the starting line number and m is the optional ending line number

**&PROGRAM +name**

Entering the **PROGRAM** command will initiate the execution of the program specified. This would be used to execute a program that has been already entered into the **STACK** memory table.

**NOTES:**

1. A program starts with a "+" sign with the program name and ends at the next program name or the end of the Stack Area
2. A program can contain any Central Station Receiver Command.
3. On execution, all of a program's commands executed as if they had just been entered through the keyboard, they are subject to the privilege levels and interactive status current at the time for execution, just as if they were being typed in at the time, this means they will work or fail the same as if they were being typed in at that time.
4. As the Stack performs each command the CS-4000 will display **Executing stack, No Input**. This message means the CS-4000 will not perform any commands that are keyed in during this displayed message until the Stack program is completed.
5. Failure of a command in a program does **-not-** affect the execution of the other commands, they continue sequentially.
6. You may have as many programs as the Stack Area can hold. There are a maximum of 100 lines to a Stack Table.

**NOTE:** If a command requires a Password, you must enter your Password before entering that command in the STACK table.

*Example:* PASSWORD 2 %ABCDE <return>

5. Repeat step 4 for each command in your STACK program.

6. Release the line.

*Example:* RELEASE <return>

7. Turn off the Password

*Example:* PASSWORD OFF <return>

8. End the STACK INSERT MODE by hitting the <return> key with no data entered on that line.

*Type:* <return> to end the stack insert mode.

9. Check your work. *Type:* &STACK STATUS<return>.

### EXAMPLE

TYPE : PASSWORD 1 %xxxxx <return> . (this is a Master Password command)

TYPE : &STACK INSERT <return> (to open the Stack Table)

TYPE : +DELS6 <return> (to name your program)

TYPE : PASSWORD 2 %ABCDE <return> (to get privileged)

TYPE : DELETE 56 <return> (enter the command)

TYPE : RELEASE <return> (to release CPU)

TYPE : PASSWORD OFF <return> (to turn Password privilege off)

TYPE : <return> (to end program)

Check your work.

TYPE : &STACK STATUS <return>

HOW TO USE THE STACK PROGRAM WITH A CPU

## How to write a STACK Command

&STACK INSERT  
+(Stack Name)  
Commands  
(Double Enter after last command to end the stack)

## Other STACK information

Description	STACK Command
Starting the STACK Command	TRAP **_*** (STACK Name)
Deleting the Trap	TRAP OFF or TRAP **_*** OFF
Check STACK Status	&STACK STATUS
Insert STACK line (X = line number)	&STACK INSERT X
Delete STACK Command (X = line number)	&STACK DELETE X
Delete multiple STACK lines	&STACK DELETE X XX

## Examples:

&STACK INSERT  
+INIT93  
INIT 93  
UPD  
ERA  
REL

TRAP +INIT93

&STACK INSERT  
+AREA  
PHO 18887772624  
UPD  
ERA  
REL

TRAP +AREA

## Establishing Users

Description	Command
Log In	PASSWORD 1 %*****
Establish Master	OPERATOR 1 HI %*****
Establish other users (x = user number 2-20, Y = HI or LOW, ***** = new code)	OPERATOR x y %*****
Log In to make programming changes (X = password number)	PASSWORD x %*****
Delete a password (X = password number)	PASSWORD X OFF