

**WARNING!**

***You must be familiar with both setup and operation of the RFC-1 for the information in this section to make any sense. Unplanned or random changes in the programming mode can cause erratic behavior in the RFC-1. Consult the RFC-1/B manual for instructions on operating the RFC-1/B in programming mode.***

**7.1 Site Identification Phrase**

In the first example we will change the Site Identification Phrase--the phrase that the RFC-1 says when it answers the phone or when it reports an alarm. The factory programming is "This is RFC-1/B". We will change it to say "Hello this is Curly".

- Step 1 Enter the Advanced Programming Mode: 80  
2 Enter the Advanced Programming Security Code: 4150
- 3 Enter the starting address (from the Address Table) for the Site ID Phrase: 0984  
4 Find the word hello in the Word Table and get the values V1 and V2: V1=3, V2=8  
5 Enter V1 for the word hello : 3  
6 Press the # key to enter this value and increment to the next address in memory  
7 Enter V2 for the word hello : 8  
8 Press the # key to write this value and increment to the next address in memory
- 9 Find the words this is in the Word Table and get the values V1 and V2: V1=7, V2=11  
10 Enter V1 for the words this is : 7  
11 Press the # key to enter this value and increment to the next address in memory  
12 Enter V2 for the words this is : 11  
13 Press the # key to write this value and increment to the next address in memory
- 14 Find the word Curly in the Word Table and get the values V1 and V2: V1=2, V2=4  
15 Enter V1 for the word Curly : 2  
16 Press the # key to enter this value and increment to the next address in memory  
17 Enter V2 for the word Curly : 4  
18 Press the # key to write this value and increment to the next address in memory
- 19 Find the 25ms voice pause in the Word Table and get the values V1 and V2: V1=10, V2=5  
20 Enter V1 for the 25ms voice pause : 10  
21 Press the # key to enter this value and increment to the next address in memory  
22 Enter V2 for the 25ms voice pause : 5  
23 Press the # key to write this value and increment to the next address in memory

(continues...)

- 24 Find the 25ms voice pause in the Word Table and get the values V1 and V2: V1=10, V2=5
- 25 Enter V1 for the 25ms voice pause : 10
- 26 Press the # key to enter this value and increment to the next address in memory
- 27 Enter V2 for the 25ms voice pause : 5
- 28 Press the # key to write this value and increment to the next address in memory
  
- 29 Find the 25ms voice pause in the Word Table and get the values V1 and V2: V1=10, V2=5
- 30 Enter V1 for the 25ms voice pause : 10
- 31 Press the # key to enter this value and increment to the next address in memory
- 32 Enter V2 for the 25ms voice pause : 5
- 33 Press the # key to write this value and increment to the next address in memory
  
- 34 Press the \* key to exit the programming mode

The Site ID Phrase can be up to six “words” long. “Hello this is Curly” only uses three of those words (“this is” is considered a single word). The last three words are programmed with the “25 ms voice pause” so that they will be silent. For a little more fun, try replacing one of the voice pauses with “nyuk, nyuk, nyuk” in the Site ID Phrase.

## 7.2 Telemetry Channels--unit word, full scale, decimal point

In this example we will program Channel 00 with the unit word “kilovolts”, a maximum reading with decimal point of “204.0” and set the channel for “logarithmic” tracking.

- Step
- 1 Enter the Advanced Programming Mode: 80
  - 2 Enter the Advanced Programming Security Code: 4150
  
  - 3 Enter the starting address (from the Address Table) for Channel 00 telemetry units: 0000
  - 4 Find the word kilovolts in the Word Table and get the values V1 and V2: V1=4, V2=2
  - 5 Enter V1 for the word kilovolts : 4
  - 6 Press the # key to enter this value and increment to the next address in memory
  - 7 Enter V2 for the word kilovolts : 2
  - 8 Press the # key to write this value and increment to the next address in memory
  
  - 9 From section 6.3.3 (Programming), find the maximum reading of 204.0 and get the value V1: V1=6
  - 10 Enter V1 for the maximum reading of 204.0 : 6
  - 11 Press the # key to write this value and increment to the next address in memory
  
  - 12 From section 6.3.4 (Programming), find the setting for logarithmic tracking and get the value V1: V1=1
  - 13 Enter V1 for logarithmic tracking: 1
  - 14 Press the # key to write this value and increment to the next address in memory
  
  - 15 Press the \* key to exit the programming mode

Every channel can be setup with a unit word; the full scale reading and decimal point location can be changed; and the tracking method--linear, logarithmic or indirect--can be changed. Change the starting address the address appropriate for the channel to be programmed.

### 7.3 Action Sequences

In this example we will program Action Sequence 2 to activate the channel 00 “on” relay, pause 15 seconds, and then activate the channel “01” on relay. A sequence like this might be used to power up transmitter filaments with a short delay then turn on the plate voltage.

- Step 1 Enter the Advanced Programming Mode: 80  
2 Enter the Advanced Programming Security Code: 4150
- 3 Enter the starting address (from the Address Table) for Action Sequence 2: 0740  
4 From Section 6, find the command for channel 00 on and get V1 and V2: V1=0, V2=0  
5 Enter V1 for the command channel 00 on: 0  
6 Press the # key to enter this value and increment to the next address in memory  
7 Enter V2 for the command channel 00 on: 0  
8 Press the # key to write this value and increment to the next address in memory
- 9 From Section 6, find the command for a 15 second pause and get V1 and V2: V1=8, V2=3  
10 Enter V1 for the 15 second pause command: 8  
11 Press the # key to enter this value and increment to the next address in memory  
12 Enter V2 for the 15 second pause command: 3  
13 Press the # key to write this value and increment to the next address in memory
- 14 From Section 6, find the command for channel 01 on and get V1 and V2: V1=0, V2=1  
15 Enter V1 for the command channel 01 on: 0  
16 Press the # key to enter this value and increment to the next address in memory  
17 Enter V2 for the command channel 01 on: 1  
18 Press the # key to write this value and increment to the next address in memory
- 19 Press the \* key to exit the programming mode

An action sequence is of little use by itself--it is merely a set of instructions to perform a task. It must be told when to perform that task. When combined with a time trigger or an alarm trigger, an action sequence gives the RFC-1 the ability to perform functions automatically.

In the next example we will program a time trigger that could be used to call upon this action sequence to turn the transmitter on.

## 7.4 Time Trigger

In this example we will program Date/Time Trigger 1 to activate the action sequence that we programmed in the previous segment. The action sequence is one that could be used to turn on a transmitter: activate the channel 00 on relay, pause 15 seconds, and then activate the channel 01 on relay. We will program the time trigger to activate the action sequence every day at 6:00am.

- Step 1 Enter the Advanced Programming Mode: 80  
2 Enter the Advanced Programming Security Code: 4150
- 3 Enter the starting address (from the Address Table) for Date/Time Trigger 1: 0632  
4 Enter the number of the action sequence that should be triggered: 2  
6 Press the # key to enter this value and increment to the next address in memory
- 7 Enter up to two digits for the month in which this trigger should function: 15 (every month)  
8 Press the # key to write this value and increment to the next address in memory
- 9 Enter the first digit for the date in which this trigger should function: 15 (every day)  
10 Press the # key to write this value and increment to the next address in memory  
11 Enter the second digit for the date in which this trigger should function: 15 (every day)  
12 Press the # key to write this value and increment to the next address in memory
- 13 Enter the first digit for the hour at which this trigger should function: 0  
14 Press the # key to write this value and increment to the next address in memory  
15 Enter the second digit for the hour at which this trigger should function: 6  
16 Press the # key to write this value and increment to the next address in memory
- 17 Enter the first digit for the minute at which this trigger should function: 0  
18 Press the # key to write this value and increment to the next address in memory  
19 Enter the second digit for the minute at which this trigger should function: 0  
20 Press the # key to write this value and increment to the next address in memory
- 21 Press the \* key to exit the programming mode

The text in Section 6 describes the use of the value 15 for a "global match"--an entry that will match any condition in a time trigger.

The clock must be set before the time trigger can function properly. Setting the clock/calendar is easy. Issue the commands 70 and 71 in the operating mode, not programming mode, and the RFC-1 will prompt you for the time and date.

## 7.5 Alarm Limits

In this example we will program alarm channel A to monitor telemetry channel 03 for an upper limit of 105.0 and a lower limit of 090.0 and place a series of alarm calls if either limit is exceeded. In this example, we assume that the factory programming for action sequence 1 is intact--it is programmed to call all programmed telephone numbers in sequence. When programming alarm limits, ignore the decimal point and enter four significant digits.

- Step 1 Enter the Advanced Programming Mode: 80
- 2 Enter the Advanced Programming Security Code: 4150
  
- 3 Enter the starting address (from the Address Table) for Alarm Channel A: 0852
- 4 Enter the first digit of the telemetry channel to be monitored: 0
- 5 Press the # key to write this value and increment to the next address in memory
- 6 Enter the second digit of the telemetry channel to be monitored: 3
- 7 Press the # key to write this value and increment to the next address in memory
  
- 8 From Section 6, enter the number of the trigger rule: 5 (upper or lower limit crossing)
- 9 Press the # key to enter this value and increment to the next address in memory
  
- 10 Enter the number of the Action Sequence that should be triggered: 1 (place telephone calls)
- 11 Press the # key to enter this value and increment to the next address in memory
  
- 12 Enter the first digit of the upper limit: 1
- 13 Press the # key to write this value and increment to the next address in memory
- 14 Enter the second digit of the upper limit: 0
- 15 Press the # key to write this value and increment to the next address in memory
- 16 Enter the third digit of the upper limit: 5
- 17 Press the # key to write this value and increment to the next address in memory
- 18 Enter the fourth digit of the upper limit: 0
- 19 Press the # key to write this value and increment to the next address in memory
  
- 20 Enter the first digit of the lower limit: 0
- 21 Press the # key to write this value and increment to the next address in memory
- 22 Enter the second digit of the lower limit: 9
- 23 Press the # key to write this value and increment to the next address in memory
- 24 Enter the third digit of the lower limit: 0
- 25 Press the # key to write this value and increment to the next address in memory
- 26 Enter the fourth digit of the lower limit: 0
- 27 Press the # key to write this value and increment to the next address in memory
  
- 28 Press the \* key to exit the programming mode

The first three telephone numbers can be programmed through basic programming commands 86-88. Memory locations are available for three more telephone numbers that are only accessible in programming mode.