

# RAC16

## Programmer User Guide

9M02-9029-A001-EN



Revision History

VERSION	DATE	NOTES
3	5/2/2019	Updated Branding and expanded Configuration programming
4	7/19/2019	Clarified OCU timeout and added PW



## Description

The RAC16A Programmer (Figure 1), incorporates an LCD display and membrane keypad plus an electrical cable to connect to the OCU or MCU that is being programmed, it can be used to read or change the ID Code, (frequency and address) and change the OCU time-out.

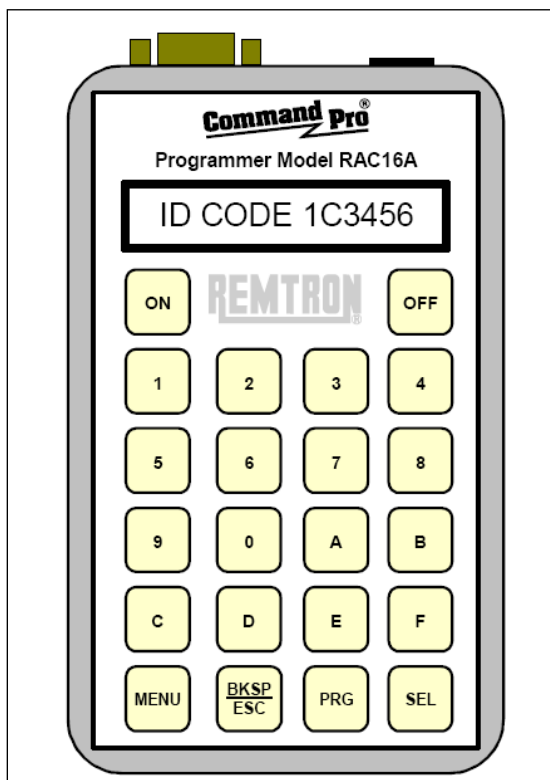


FIGURE 1. RAC16A PROGRAMMER



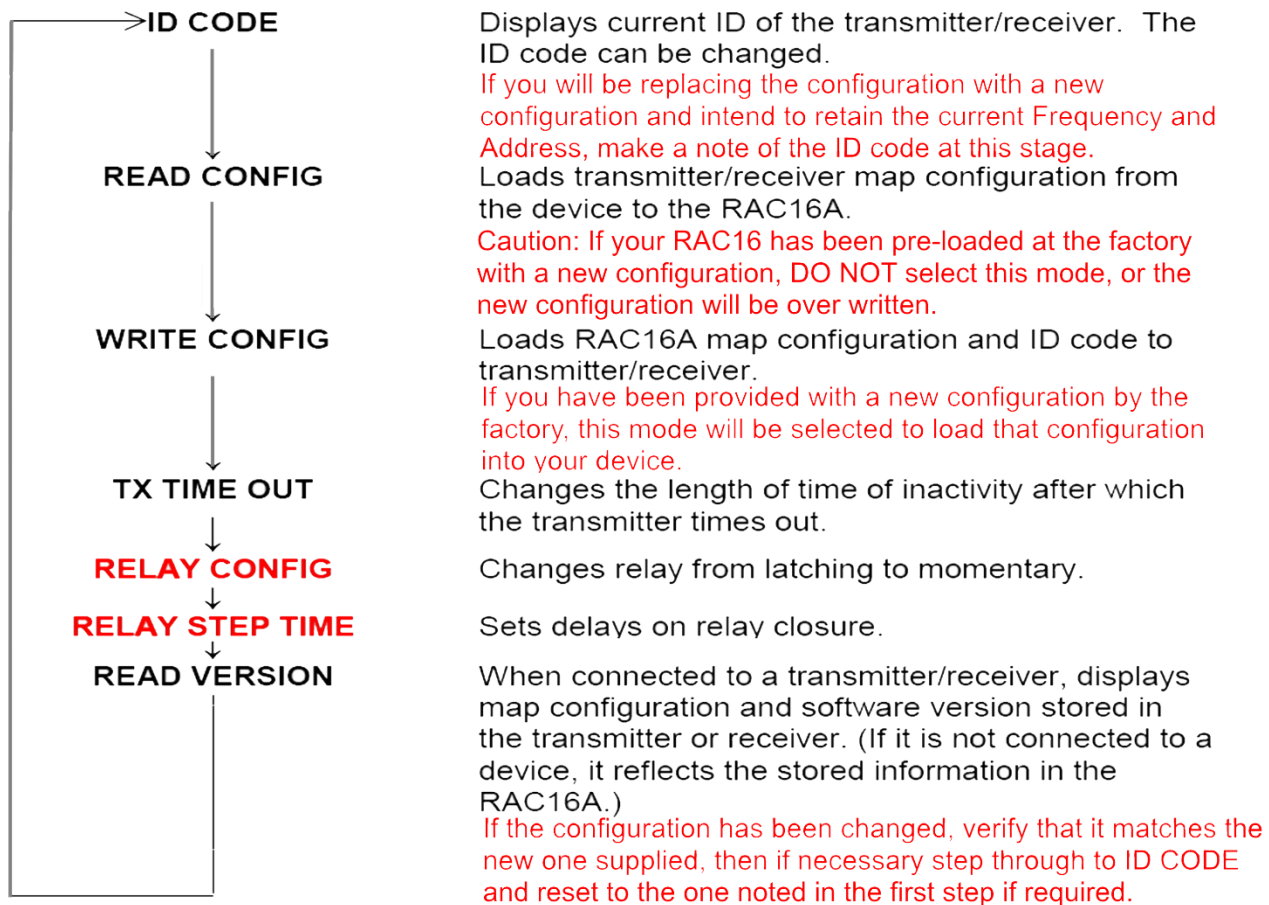


FIGURE 2. RAC16A MENU AND FUNCTIONS

**NOTE:** Only MCU options will be available when the programmer is connected to an MCU. Likewise, only OCU options will be available when the programmer is connected to an OCU.

Sequence items highlighted in Red on the left are not available



## Connecting the Programmer

OCUs have a four position (three plus Key) connector; MCUs have a six-position (five plus Key) connector. The programmer has a six-position (five plus Key) connector. See Figure 3.

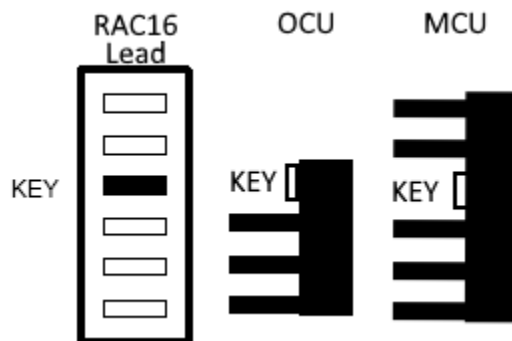


FIGURE 3. THREE AND SIX POSITION CONNECTORS

Locate the programming connector on the OCU or MCU and connect the plug from the programmer, the plug is polarized and must be aligned as shown above.



FIGURE 4. RAC16 CONNECTED TO OCU

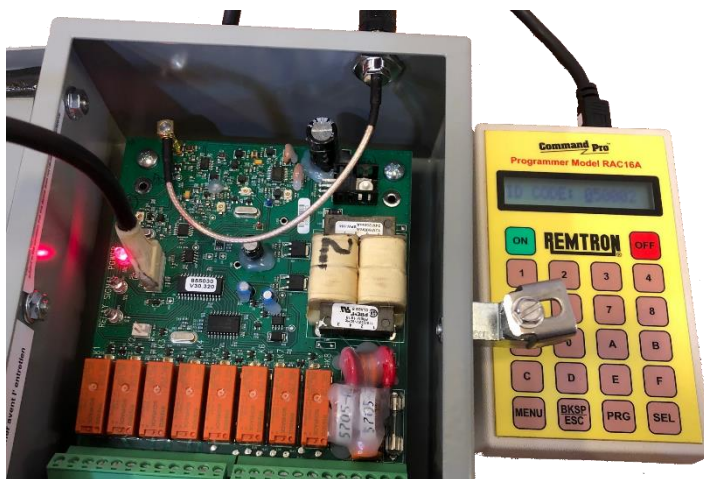


FIGURE 5. RAC16 CONNECTED TO MCU



## Programming Procedure

If programming an OCU, ensure that the batteries are installed.

If programming an MCU, ensure that power is on (power LED is ON) and note that power can be supplied from the programming box so separate power is not needed.

### Identity Codes

The Identity (ID) Code is a six-digit alphanumeric code (e.g., 2E005B) that contains the operating frequency and address of the unit. These are hexadecimal numbers that range from 0 to 9 and A through F.

The first two characters in the six-digit code designate one of the 81 operating frequencies.

- *Each system in a facility should be assigned a different frequency. Figure 6 lists the frequency for each code.*

The last four characters in the six-digit code are the address code.

- *Each system in a plant must have a separate ID Code.*

## Rules for Assigning ID Codes

- It is important to control the assignment of the unit ID Codes, Cattron accepts no responsibility for any consequences that result of failure to do so.
  - If frequencies are duplicated it can result in systems shutting down or operating erratically.
  - If an address is duplicated it could result in an adjacent system being unintentionally controlled and result in any possible safety consequence, including damage to machinery, injury and death.



## Programming

If the programmer is not already switched on, apply power on by pressing the **ON** button. The display will show what device the programmer is connected to (OCU or MCU) for 5-seconds and then will read and display the ID Code of the unit.

**TX CONNECTED**

**ID CODE 28008C**

### Note Relative to Configuration Changes

*If you will be changing the configuration but retaining the existing ID Code (Frequency and Address) you need to record the current value so it can be re-programmed after the configuration has been changed.*

### Changing the ID Code

Enter the new 6-digit ID Code for the unit to be programmed. Verify the number on the LCD display. If a mistake is made when entering the code, the **BKSP/ESC** key will reposition the cursor to allow corrections.

ACTION	RAC16A DISPLAY
Enter the new 6-digit ID Code for the device being programmed.	<b>ID CODE 28008C</b>
After the new ID Code is entered, press <b>PRG</b> . (If an error message is displayed, press <b>MENU</b> or <b>BKSP/ESC</b> to return to the <b>TX CONNECTED</b> menu.)	<b>SUCCESS!</b>

Verify the new ID Code by connecting the RAC16A as explained above. The ID Code will appear in the display.



## Changing the Configuration

### **New Factory Supplied Configuration within a RAC16**

If a new configuration has been supplied by the factory, *make sure you have recorded the original ID code at step one*, then the new configuration can be programmed into your device at this stage, the RAC16 display will confirm a successful download.

Step through to the READ VERSION step and confirm the loaded configuration matches the new one supplied.

Be sure to then step through to step one and reprogram the ID code, then verify the new ID Code by re-connecting the RAC16A as explained above. The ID Code will appear in the display.

### **Copying the Configuration from one Unit to Another**

Connect a RAC16 to the unit containing the desired configuration and step through to READ CONFIG, enter password when prompted '916'.

Disconnect from that unit and connect the RAC16 to the unit that will be re-programmed (WARNING THIS IS NOT REVERSABLE), record the current ID code, then step through to WRITE CONFIG and enter, the RAC should report SUCCESS. If necessary, step through to the ID CODE section and re-enter the correct ID code.





## OCU Time-Out

The OCU ‘time-out’ is a battery-saving feature that turns off the OCU after a predetermined time of inactivity. This time is adjustable from 0 to 60 minutes, with 0 being no time-out.

*NB: The selection of maintained transmission or momentary transmission operation is defined within the Configuration parameters above.*

ACTION	RAC16A DISPLAY
Press the <b>MENU</b> button on the RAC16A until the display shows: <b>TX TIME-OUT: XX</b>	<b>TX TIME-OUT: XX</b> (XX represents the current time-out value (in minutes) of the connected OCU.)
Enter the new value from <b>01</b> to <b>60</b> . (00 will not time-out the OCU and require it to be shut off manually.)	<b>PROGRAM TX CONFIG?</b> <b>PROGRAM RX CONFIG?</b>
Press <b>PRG</b> button on the RAC16A. (If an error message is displayed, press <b>MENU</b> or <b>BKSP/ESC</b> to return to the <b>TX CONNECTED</b> menu.)	<b>SUCCESS!</b>



FREQ	CODE	FREQ	CODE	FREQ	CODE	FREQ	CODE
903.0	03	909.3	18	915.6	2D	921.9	42
903.3	04	909.6	19	915.9	2E	922.2	43
903.6	05	909.9	1A	916.2	2F	922.5	44
903.9	06	910.2	1B	916.5	30	922.8	45
904.2	07	910.5	1C	916.8	31	923.1	46
904.5	08	910.8	1D	917.1	32	923.4	47
904.8	09	911.1	1E	917.4	33	923.7	48
905.1	0A	911.4	1F	917.7	34	924.0	49
905.4	0B	911.7	20	918.0	35	924.3	4A
905.7	0C	912.0	21	918.3	36	924.6	4B
906.0	0D	912.3	22	918.6	37	924.9	4C
906.3	0E	912.6	23	918.9	38	925.2	4D
906.6	0F	912.9	24	919.2	39	925.5	4E
906.9	10	913.2	25	919.5	3A	925.8	4F
907.2	11	913.5	26	919.8	3B	926.1	50
907.5	12	913.8	27	920.1	3C	926.4	51
907.8	13	914.1	28	920.4	3D	926.7	52
908.1	14	914.4	29	920.7	3E	927.0	53
908.4	15	914.7	2A	921.0	3F		
908.7	16	915.0	2B	921.3	40		
909.0	17	915.3	2C	921.6	41		

FIGURE 6. TABLE OF FREQUENCY CODES



Due to continuous product improvement, the information provided in this document is subject to change without notice.

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