

# Arcom Communications RCP Programmer

## Version 4.9.3

### Introduction

The RCP Programmer was designed to allow you to easily and quickly program all the operating parameters of the Arcom Communications RC-210 Deluxe Repeater Controller without having to enter each command "by hand". Your settings are saved to disk for future recall and you may save multiple configuration files, such as would be needed for programming multiple controllers. These configuration files (called "databases") are standard text files and may be edited by using any text editor, if so desired. However we think you'll find that RCP is so easy and intuitive to use that this won't be necessary.

The RCP Programmer allows for two methods of programming the RC-210:

- 1) DTMF which is generated by your sound card and may be connected directly to the RC-210. Alternately, you can connect a radio to your computer (via an interface such as Mountain Radio's RigBlaster) and the RCP will automatically key your radio, send the appropriate DTMF and then unkey your radio. Or you can use a simple circuit to handle PTT duties. Using this method of programming allows you to easily remote program your RC-210 without the need for modems and/or phone lines.
- 2) Direct serial connection between your computer and the RC-210. This method is much faster than the DTMF method, however it requires either a direct connection or one established by a phone or packet modem.

### Installing RCP

Simply open the supplied RCP zip file, click on Setup and follow the prompts. If installing on a computer running Windows NT, XP or 2000, you must have Administrator privileges in order to successfully install RCP.

### Running RCP For The First Time

When you open RCP, you will be prompted for a database file name. Until you create your own, you must use the default database (RCP will not run without a database). This database contains the factory default values that are programmed into your RC-210 when you first received it. Don't worry, you'll be able to configure your own settings and save them to your own custom database later. For now, double click on "rc210.dat".

You will now be prompted to register your copy of RCP. When you're presented with the Registration window, enter your information exactly as you specified when you ordered your license. Note: your user name is case sensitive. That is to say that "User" is different than "uSeR". It is suggested that you copy and paste your registration information, including registration code, from the email you received when you registered. Click the Register button and you should now be ready to use RCP!

You should now create your own database with which to work. Click File, then Save As. Type the filename you'd like to save your database as, then click OK. You will now be working with your new database, leaving the default one intact.

### Only If You're Using The DTMF Method Of Communications

It is very important that the unlock codes you have programmed into your RC-210 match the ones in RCP's database. If you have reprogrammed them in the 210, you must change them in RCP before you use it with your controller. Simply open RCP, select the Special Codes tab, enter the lock codes to match the ones programmed in your RC-210, click apply and save your database. You must then either close and start RCP again or simply chose Open from the menu (or the toolbar button) and reload your database. You should now be ready.

**Note: This does not apply if you're using the direct serial connection method of communication, in which case you may disregard this section.**

## Selecting DTMF or Serial Communications

Selection between the two methods of communication with the RC-210 is automatic when you set the parameters for the respective methods. This is to say that if you select DTMF parameters in the Configuration menu, the DTMF method will be selected. If you select a Serial parameter, the Serial method will be selected. When your selection is made, the change is immediate and that method will be remembered by RCP.

## Setting DTMF Parameters

There are 3 parameters you can use to adjust how RCP sends DTMF. This information is stored separately from your database file, so once you've determined the proper settings for your particular setup, you should not have to change them, even if you load a different database file. Note that if you select any of DTMF parameters below, RCP automatically disables serial port operation of RCP. The DTMF parameters are accessed under the Configure menu, below the Use DTMF menu item.

Set Interdigit Delay - set the amount of time, in milliseconds, between DTMF digits as they are sent out the soundcard. By default, this delay is set to 60 milliseconds, which should be adequate for most purposes. Depending on the quality of your radio path however, you may need to adjust the amount of delay to insure reliable DTMF operation. Use the smallest amount possible for reliable operation, as this will speed up the process.

Set TxDelay - set the amount of time, in milliseconds, between keying the transmitter and starting to send DTMF. This allows your transmitter to come up to power before RCP actually starts sending any DTMF.

RTS/ CTS for PTT - this selects which serial port pin is used to control PTT. Usually this is determined by the hardware interface you're using between your computer and your radio. If you're making a direct connection from your sound card to a port audio input on your RC-210, you may ignore this setting.

## Setting Serial Port Parameters

RCP allows the use of your computer's Com1 - Com3 serial port to communicate with the RC-210. Note that if you select a Comport, RCP automatically disables DTMF. Which com port to use is selected by the Configure menu, below the *Use Serial Port* menu item.

In addition to selecting which com port on your computer RCP uses, there is also a menu item to set *Delay Time*. This is the amount of time RCP delays sending a new serial command to the RC-210, in response to an "OK" acknowledgment from the controller. While this value is best determined by experimentation, a value of 0 to 5 ms should suffice for a direct connection between your computer and the RC-210. A longer value may be necessary if your RC-210 is remotely located and you're sending/receiving data from it via a packet or phone line modem. If at all possible, try to use the lowest possible setting in order to avoid slowing down the data transfer anymore than necessary. **In all but the most extreme cases, a setting of 0 should work just fine.**

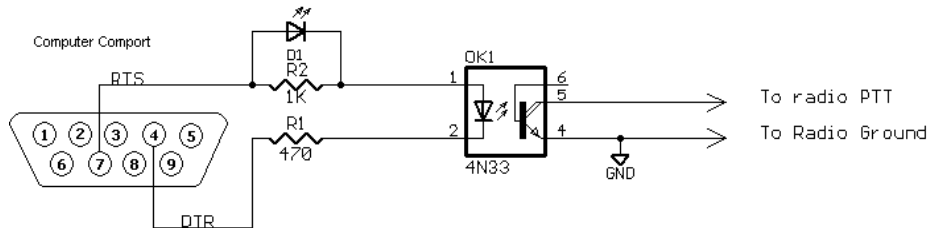
**Note: It should NEVER be necessary to use a delay setting of more than 5. If you do, check your serial connections.**

Should RCP have a problem properly communicating with the RC-210, a pop-up window will inform you of the problem. You may need to lengthen the Delay Time to correct it or your connection may not be good. Should too many serial errors occur, another pop-up will let you know and RCP will exit the current operation. Check your connections and/or radio path (if using a packet modem) and start the operation again.

# Hardware Connections

## A Simple PTT Interface For DTMF PTT

If you don't have a commercially manufactured sound card interface for your radio, you can easily fabricate a PTT interface for your radio. This interface relies on the differential voltage produced between the DTR and RTS signals on your computer's serial port and prevents unwanted PTT action, which may occur when RCP isn't running under Windows ME or XP.

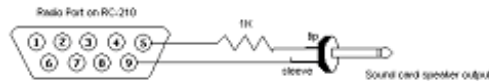


## Selecting Which Signal On Your Computer's Comport To Use For PTT

If you're using the circuit above, use the Configuration menu to select "RTS for PTT". If you're using a commercially manufactured interface, consult their manual as to which signal (RTS or DTR) to use for the PTT signal.

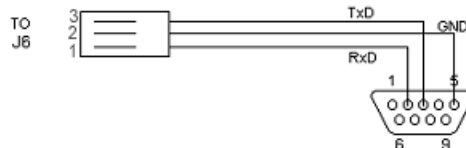
## Making A Direct Audio Connection To The RC-210

It is possible to make a direct audio connection between the computer running RCP and the RC-210 (this is used mostly for recording DVR tracks using wav files on your computer. See the section on this in this manual). Simply fabricate a cable to connect between your computer's sound card SPEAKER output and one of RC-210's radio ports.



## Serial Port Connections

If you choose to use the direct serial connection method of programming, simply connect a standard serial cable to your computer's com port and the other end to the DB9 serial adapter, shown below. This adapter plugs into the RC-210's serial port header (J6).



# The RCP Graphical Interface

The RCP graphical interface is very straightforward and intuitive. All programming parameters are selected by clicking on the appropriate tab for the group of parameters you wish to work with. Once a particular tab is selected, you are presented with a screen that allows you to edit as you please. In the case of Port Specific Commands (those that only affect a particular port's programming in the RC-210), you select the port by clicking on its sub-tab.

There are some basic things to remember when editing:

- When you start RCP (or load in an existing database), the values contained in that database are automatically displayed in their appropriate fields.
- Whenever you change a value from that which is stored in the database, the color of the text in that field changes to red. This allows you to quickly and easily identify which parameters you've changed since the database was loaded.
- If you enter a value that is out of range for that particular parameter, you'll receive an error message. You will need to correct the error before continuing.
- When you click the APPLY button, you tell RCP that you've made changes that you want to send as an update to the controller *AND LATER* want to save to your database file. In other words, those changes you've made up to that point will be saved to disk only when you explicitly do so (don't worry, you'll be prompted when you exit the program). These changes only apply to the current session of RCP. **Failure to save to your database will result in your changes being lost.**

## Basic RCP Controls

There are several Menu items available:






**File** Used to create a new database, save or open an existing one. You can also exit the program from here

**Configure RCP** Used to set up DTMF parameters, such as timing, transmitter key delay and which pin to use for PTT

**RC210** Used to upload programming commands to the RC-210

**Help** Used for obtaining Help on using RCP (not currently available)

There are also shortcut buttons you can use

-  **New** Creates new database
-  **Open** Opens existing database
-  **Save** Immediately saves all changed parameters (after the APPLY button is clicked) to the currently used database
-  **RC210** Communications with the RC210 (to upload or download data)
-  **Help (coming soon)**

# Editing Parameters

There are three types of parameters you edit

**Numeric** Timers, Command Macros

**Text** Voice and CW messages

**Alphanumeric** Macro Command codes which may contain a mixture of numbers and letters

While editing, numeric values are checked that they fall within acceptable range limits. For example, if you're programming a Hang Timer and you enter a value outside of the acceptable range of 1 to 255 seconds, you'll receive an error message. To correct this, you simply edit your entered value to fall within this range.

The same holds true for voice and CW messages, except the total number of words (or in the case of CW - characters) is checked. For example, you are allowed a maximum of 22 words per voice ID. If you enter more than this, you'll receive an error message and the last entered word will be deleted.

Alphanumeric values are only checked for the total number, not their content with one exception. For example, any Macro Command code may be up to 8 digits in length. If you exceed this, RCP will give you an error. To correct it, simply shorten the code to be less 8 digits or less.

The exception to the above rule is Macro Command Codes, which are not only checked for length but for duplication as well. In other words, RCP will not allow you to use a Command Code that is currently used in any other macro.

## The Apply Button And Saving To Disk

When you edit a parameter and click the Apply button, you should remember two things:

- Clicking the Apply button tells RCP that you want this parameter to be uploaded to the controller when you do an Update
- Your change is temporarily stored and is ***not*** saved to your database.

What this means is that you should always make sure to click the Apply button before you change to another group of programming. In other words, let's say you're programming Timers and then want to edit your ID's. Be sure to click the Apply button in the Timers tab before you select ID's.

## Updates Versus Complete Uploads

When you actually program the RC-210, you have a choice as to what to send to the RC-210.

- **UPDATE CHANGES ONLY** - Programs those parameters that have been changed during the current session, ***only if you clicked APPLY after you've edited something in that group***. The data that is temporarily (it is not written to the database file unless you specifically do so) stored in RCP's memory is used for this.
- **SEND COMPLETE CONFIG** - Sends complete programming information to the RC-210, based on the information stored in the currently loaded database. Therefore if you want to include changes you've made during the current session before doing a complete upload, you should first save those changes to the database.

## The Update Box

When you click on the RC210 Menu or its associated button on the Toolbar, the Update Window pops up. You may now select whether to do an Update or Complete upload to the RC-210. At any time during an upload, you can click the Interrupt Upload button to stop the current operation. RCP will notify you if it needs to complete its current operation first. It will then gracefully exit the operation.

During a Complete Upload, an indicator bar will let you know the progress of the upload. Updates are generally quite fast, so no Progress Indicator is presented. In either case, when the upload is complete, RCP will notify you.

Note that when the Upload Window is shown, you must close it before you will be allowed to perform any operation other than an upload.

## Description of Programming Selections

### Unlock Codes

**Note:** These Unlock Code restrictions only apply if using the DTMF method of communicating with the RC210. If you use the serial method, you may disregard this section

When edited, Unlock Codes are not changed until you reload the database. This is because the RC-210 only knows the unlock code that is currently stored in its memory and obviously we must use *that* one in order to be able to program the RC-210.

The Current Unlock Code for each port is shown in blue. This is the code that will be used when programming the RC-210. If your RC-210 and RCP are not "in sync" (that is to say the unlock codes in the RC-210 do not match those in your RCP database), you can either manually edit your database file *before* you open RCP. Alternately, you can simply enter the unlock codes into the RCP "Current" text boxes, overwriting the existing codes in blue. Once entered, click APPLY, and the new code(s) will be saved to your database and the new code will be immediately be uploaded to the RC-210.

To create a *new* unlock code for a port, enter the new code into the *New Unlock Code* field. Then click APPLY. The new code(s) will be immediately uploaded to the RC-210 and you may now continue editing other parameters.

### Lock Code

The Current Lock Code is shown in red. While there is usually no need to change it from its default value, there may be times when it is necessary (perhaps there is a conflict in another code, where you want to use #). If you need to change it, simply enter the code (which may be anywhere from one to a maximum of 4 digits) into the New Code field. Then click APPLY. The new code will immediately be uploaded to the RC-210.

### DTMF Terminator

If you need to change the Force Evaluation character used by the RC-210, you may change it here. You may only use 1 digit and you must take great care not to use this same character in any other command. For example, the default value for the Terminator is "D" and you may not use D in any other custom command. If you do decide to change it, simply enter the new digit in the field and click APPLY. The new code will immediately be uploaded to the RC-210. Just remember that whatever your Terminator Digit is, that digit cannot be used in any other command (if it was, how would the RC-210 know that it shouldn't act immediately on those DTMF digits preceding the Terminator?).

**Note: You cannot enter the same digit as is currently stored in your database. This is a fail safe, for the reason stated above**

## Autopatch Programming

If you have the optional AP1 Autopatch board installed, you are able to program every parameter of its operation using the window found under the Special Codes/Autopatch tab. Please note that if you don't have the AP1 installed, you may skip this section.

### Autopatch Prefix

All Autopatch commands must be preceded by this code. This prefix may be up to 4 digits but must be at least 1 digit.

### Answer Code

This is the code used by someone calling from the phone that allows them access to your system. As such, it may be up to 15 digits long and should obviously only use those DTMF digits available from a standard telephone.

### Number Of Rings To Answer

This sets how many times the phone must ring before the AP1 will answer

### Timeout

This is the number of seconds that a phone connection will be allowed to remain active.

### Autodial Memories

To add Autodial memories, enter the number to be stored in the text field above the ADD and DELETE buttons. Click ADD to add this number and it is added to the list. To remove a number from the list, highlight the number (click on it) then click DELETE to remove it from the list. Click APPLY when finished.

### Toll Restrictions

This list works identically to the Autodial memories list.

## Editing Voice Messages (ID's and Message Macros)

You may edit any voice message by either manually typing the word(s) into the appropriate field or by finding the word on the vocabulary list and double clicking your choice. RCP automatically keeps track of the number of words allowed for the parameter you're currently programming. That count is displayed in the Counter Box. If you exceed the maximum allowable length, RCP will warn you, then erase the last word that caused the error. You may then go back and edit your message as needed.

If you choose to manually type in your messages, the following applies:

- There ***must*** be one, ***and only one***, space between each entry. There should be no space at the end.
- Entries ***must*** be spelled correctly and exactly as show in the vocabulary list.
- Case doesn't matter. You may enter lower case, upper case or any combination of the above. RCP will automatically convert your entry to upper case when it writes to the database file.

Failure to heed the above warnings may result in unpredictable speech in your message. For this reason, while it is possible to manually type your message in, it is suggested you use the vocabulary list whenever possible.

## Editing CW ID Messages

As is the case with voice messages, RCP automatically keeps track of the number of cw characters allowed for the ID you're currently programming (the maximum is 15). If you exceed this number of characters, RCP will warn you, then erase the last character that caused the error. You may then go back and edit your message as needed.

Again, while it is possible to manually type in the message, it is suggested you use the CW Character List to make your entry. When you have finished programming your message, don't forget to click APPLY before moving on to the next tab.

## Courtesy Tone Programming

Programming Courtesy Tones is fast and easy with RCP! Simply enter your parameters and click APPLY. RCP will check your entries to ensure they are not out of range for the particular parameter you've entered.

## Command Macros

Each Macro is displayed with its actual contents and its associated Command Code. Any macro that does not currently have any functions stored in it will display "NONE STORED". Those that do have functions stored will display the function numbers contained within. When you click on a Macro field and that field shows that nothing is stored within that Macro, "NONE STORED" will automatically be erased and you may started editing.

The Function Counter will keep track of how many functions have been entered for a particular Macro and, if you exceed the limit (15 for Macros 1 - 40 and 4 for Macros 41 - 90), you'll receive an error and RCP will erase the last entry. You may then correct as needed.

As is the case with Voice and CW message, it is possible to manually type in the Function Numbers but we recommend double clicking on Function List items to make your entries. Click APPLY when you're finished.



## Port Restrictions

The last tab of the Macro display allows you to set which Port (1, 2, 3 or any combination) is allowed to run any Macro. By default, Macros can be run from any Port. If you want to change that, simply choose with Macro you want to change with the drop down list, click the Macro number and then select the Port(s) from the Ports Allowed drop down list. Click APPLY when you're finished.

## Scheduler/Set Clock

Using the Scheduler setup is fast and easy. Simply select the setpoint you want to change and click. You may then change the other parameters as needed. Click APPLY when you're finished.

You may set the real time clock and calendar in the RC-210 to your computer's system clock at any time by clicking Set Clock button. The settings will immediately be sent to the controller, so be sure your computer is connected to the RC-210 (or radio if using DTMF) beforehand. There is no need to click the APPLY button as this value does not need to be saved.

## Analog

This tab allows you to set all the required parameters for using the Analog Meter functions of the RC-210. Each channel (1 through 8) has it's own sub-tab, where you can choose which Meter Face to use for that channel and it's associated parameters. There is also a sub-tab for setting the A/D Reference Voltage value. Click APPLY when you're finished editing.

## IDs

While IDs may be manually typed in, it is suggested you use the Vocabulary/CW Character list. This helps to avoid errors. When your cursor is placed in the Voice ID field, the Vocabulary List will be display. When it is placed in a CW ID field, the CW Character List will be displayed. In both cases, the Character Counter will help you keep track of how many words (cw characters) you have entered up to that point.

### CW IDs

Upon selecting this tab for the first time, you will notice that the call sign used in the registration of RCP is already filled in for the CW IDs, in the format "DE <callsign>". RCP expects the registered owner's call sign to be the same as the repeater that the RC-210 controls. You may edit the CW IDs any way you like (up to the maximum of 15 characters) and, as long as the registered call sign appears somewhere within that ID, RCP will not change it. For example,

Registered Call Sign: AH6LE

CW ID #1 is edited to say "H I A H 6 L E / R"

RCP will not change the ID. If you exceed 15 characters, RCP will present an error window and erase the last word entered. You may then edit as necessary.

### Voice IDs

Voice IDs may be a maximum of 22 words each. If you exceed this limit, RCP will error and erase the last word entered. You may then edit as necessary.

## ID Extras

Also displayed in the ID tab are check boxes for selecting ID Extras associated with the ID's for that Port. If selected, a drop down menu will also be displayed, allowing you to select which ID Extra to use for that ID. If unselected, the associated drop down menu will be hidden.

## Messages

Here you can enter the messages used in Message Macros. If nothing is currently stored in a particular Message Macro, "NONE STORED" will be displayed otherwise its contents will be shown. As is the case with all other entries of this type, it is possible to manually type in your changes but we recommend double clicking on items in the Vocabulary List to edit. The Word Counter will help you keep track of how many words you've entered, so you can avoid an error message.

## Uploading DVR Tracks

Starting with Version 4.5.0, RCP allows the direct upload of wav files to DVR Tracks in the RC210. In order to do this, you will need the direct audio cable as shown in this manual. This cable is used to connect the output of your computer's soundcard to PORT 3 of the RC210 (note: you must use Port 3 on the RC210 to do this). In addition, you will also need the direct serial connection to be made

Wav files may be any sampling rate you wish but must be in 16 bit, mono format. We recommend a sampling rate of 22Khz as this provides very good results.

- 1) Place the wav files you wish to upload to the RC210 in the same directory where RCP.exe resides.
- 2) Select the Messages Tab, then select the DVR Track you wish to record.
- 3) Click on the Load Wav button and select the appropriate wav file.
- 4) Press the Send To RC210 button to start the upload.

You may need to adjust the volume in Windows Sound Manager to obtain the proper level. Don't forget that you can check your recording by using a DTMF equipped radio to unlock the controller , then using the command "123x" (where x is DVR track 1 - 20) to listen to the recording. You may need to repeat the recording as needed to get it "just right".

## DTMF Memory Programming

This tab allows you to program DTMF Memories in the RC-210.

**Note: This tab does not affect the DTMF operation of RCP itself in any way**

If nothing is currently stored in a particular DTMF Memory, "NONE STORED" will be displayed otherwise its contents will be shown. Entries are directly typed in, representing the DTMF digits to be stored. For example, "A" for DTMF A, 1 for DTMF 1 and so on. Be sure to place ONE space between digits, up to the maximum allowed digits of 9.

If you choose to edit the memories with your keyboard, RCP will check each entered digit for validity. In other words, if you enter a digit not normally associated as a DTMF one (0 through 8, A, B, C and D), RCP will notify you, erase the last digit entered and place the cursor back one position so you may enter an acceptable digit.

RCP also compares every digit entered against the stored DTMF Terminator Digit, whether you type it in manually or select it by double clicking the DTMF List. If there is a match, RCP will notify you and automatically erase that digit. You may then continue editing.

The Digit Counter helps you keep track of how many digits have been entered for the particular memory you're editing. Click APPLY when you're finished.

## Alarm Programming/Remote Base/Auxiliary Audio

This tab combines several different features of the RC-210 into one window.

You program an Alarm by first selecting the Alarm Number you want to edit. Then you can select either to have that Alarm run a Command Macro or route an Auxiliary Audio Input by clicking on the respective radio button. The appropriate selector will then appear.

If you choose to run a Macro, simply select which one by clicking its number from the drop down menu. Likewise if you choose to an Auxiliary Audio Input, select which Input by selecting it from the drop down menu. Click APPLY when you're finished.

### Auxiliary Audio Routing

You can select which Port (or combination of Ports) each Auxiliary Audio Input will be routed to when it is activated. Select which Input you wish to program and then the Port(s) it should be routed. Click APPLY when you're finished.

### Remote Base

Here you can select which format (and possibly which radio) the RC-210 should use to communicate with a radio being used as a remote base. If you select Yaesu as your radio type, a new drop down selector will be presented and you must then select which model Yaesu you wish to use. Click APPLY when you're finished.

### Remote Base Prefix

You must prepend the Remote Base Prefix to any remote base command. By default, this prefix is programmed as "A7". While it may first seem tempting to not use any prefix at all, this will result in single digit commands and code conflicts with other commands in the RC-210. In short, don't do it and ALWAYS use at least one digit as your prefix. You may of course, leave it set to the factory default if you so choose. Click APPLY when you're finished editing.

### Remote Base Serial Communications

Use this to select which connector serial communications with your Kenwood mobile remote base radio will be used. For a complete explanation of this, see the RC210 Operations and Programming Manual. Click APPLY if you've changed the selection.

### Port Switches

This tab allows the easy selection of such things as CTCSS/Carrier squelch access, DTMF muting and other functions that generally "ON or OFF" ones. Selecting one has the same effect as entering the respective ON/OFF command by radio and, as such, these setting can be overridden by the use of a macro.

The use is simple - click (select) on a box to turn that function ON or click (unselect) to turn it OFF. When you first start RCP, your current values will be shown as a checkmark for ON and empty for OFF. Click APPLY when you're finished.

## Downloading The RC-210's Complete Memory Configuration

**Note: It is recommended that you NOT download from the RC210 until you have uploaded, at least once, from your edited database file. This will insure that all memory contains valid data.**

RCP gives you the capability of downloading the complete memory from the RC-210, but only if you're using a serial connection. If you try to download while you are using the DTMF method, RCP will notify you that you can't do that.

One important thing to keep in mind is that while you're downloading from the RC-210, all other operations of the controller will be paused. This means that you should wait until ALL activity of the controller has ceased. In other words, don't do a download while a repeater is currently active! Depending on the quality of your serial connection, a complete download can take from a minute to several minutes so plan accordingly. With some experience, you'll get the hang of the time required.

To start the download, select RC210 from the Main Menu and click "Download from RC210". You'll be presented one more opportunity to abort the download. If you want to continue, click YES. You must now select a file in which to store the download data. By default, the extension on RC210 memory files is .mem. We recommend you keep this extension and select a filename that will be descriptive for you. Click OK and download will start.

As the data is being downloaded, a Progress Window will pop up to indicate how far along it is. Unlike uploads however, once a download is started it cannot be interrupted short of closing the program. We highly recommend against doing this however. You won't harm the RC-210 or your database, but you could leave the RC-210 in the unstable state by doing so.

Once the data has completely download (and been saved to the memory file), RCP will ask you for another filename in which to store the formatted memory data (this is a text file that you can view with any text editor program), with an extension of .era. We recommend you keep this extension and select a filename that will be descriptive for you. Then click OK and the data that was downloaded from the RC-210 will now be presented in their respective fields in RCP.

## In Case Of Errors

When you first load in your database file, RCP checks that it contains all the necessary fields, as well as checking most of those fields for valid data. If RCP finds an error on loading, it will notify you, load in a default value and write that default value to the loaded database file. After your database file loads, you should check the value and change it as necessary.

In case of a communications error, RCP will report it, along with the last command that the RC-210 saw. If you receive such an error, checking the error.log will let you know where the problem lies. Generally, serial errors are caused by the serial connection itself and on the rare occasion, if it persists, it may be an indication that you need to use more delay time for your serial port connection. This is best determined by experimentation, but you should never need to use more than 5 ms of delay.

If you continue to have problems, contact Arcom Communications with the error number you receive.

# ARCOM COMMUNICATIONS NO-NONSENSE LICENSE AGREEMENT

## RCP Programming Software

### IMPORTANT - READ CAREFULLY

This license statement and limited warranty constitutes a legal agreement ("License Agreement") between you (either as an individual or a single entity) and Arcom Communications for the software product ("Software") identified above, including any software, media, and accompanying on-line or printed documentation. This License covers both the Software itself and Registration of same.

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