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ADICON 2500 User's Guide Rev 7

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## 1 INTRODUCTION

Thank you for purchasing the ADICON 2500 Home Automation and Control Series. The ADICON 2500 gives you an easy to install and setup system with the flexibility and expandability of a more expensive home automation system.

### 1.1 Leopard™

The Leopard™ is a controlling device for the ADICON Series. The Leopard™ has a user definable 320 x 240 touch screen interface. The Leopard™ connects to the computer via the RS232 port using the provided DB9M-DB9F cable. A RJ-11 port allows you to connect the Leopard™ to a TW523 for complete two-way X10 control. Two IR (Infrared) ports (transmit and receive) give you complete learning IR. The Leopard™ will hold up to 1024 unique IR commands and 2048 lines of code. Once the Leopard™ has been programmed, you can disconnect it from the computer and the Leopard™ will operation independently.

A 4-wire screw terminal allows you to connect our various control modules to provide relay outputs analog, digital and supervised inputs. Up to 128 modules and 2048 points (each input or relay output is a point) can be connected in a daisy chain.

### 1.2 Ocelot™

The Ocelot™ is the controlling device for the ADICON Series. The Ocelot™ connects to the computer via the RS232 port using the provided DB9M-DB9F cable. A RJ-11 port allows you to connect the Ocelot™ to a TW523 for complete two-way X10 control. Two IR (Infrared) ports (transmit and receive) give you complete learning IR. The Ocelot™ will hold up to 512 unique IR commands and 2000 lines of code. Once the Ocelot™ has been programmed, you can disconnect it from the computer and the Ocelot™ will operation independently.

A 4-wire screw terminal allows you to connect our various control modules to provide relay outputs analog, digital and supervised inputs. Up to 128 modules and 2048 points (each input or relay output is a point) can be connected in a daisy chain. This makes the ADICON® 2500 Series very expandable.

### 1.3 C-Max™ Control Wizard

The C-Max™ Control Wizard is the software provided with the Ocelot™ and Leopard™ that allows you to control the ADICON™ Series. Simple IF, THEN, ELSE, AND, and OR commands allow for easy programming.

### 1.4 ADICON™ 2500 Modules

Various data acquisition modules (listed below) are available to allow you to expand the ADICON® 2500 series. Connection is accomplished via a 4-wire screw terminal on the Ocelot™ and each module. The series connects in a daisy chain and can run up to 4000 ft. Up to 128 modules and 2048 points (each input or relay output is a point) in any combination can be connected in the daisy chain.

#### 1.4.1 SECU-16™

The SECU-16™ has 8 inputs that can be configured as digital inputs, analog inputs (0-5V) or supervised inputs for detecting dry contact closures. The SECU-16™ also has 8 low current (24V @ 1A) relay outputs.

#### 1.4.2 SECU-16I™

The SECU-16I™ has 16 inputs that can be configured at digital inputs, 4-20mA inputs, analog inputs (0-5V) or supervised inputs for detecting dry contact closures.

#### 1.4.3 RLY8-XA™

The RLY8-XA™ has 8 high-current (120V@ 10A) relay outputs to switch higher loads. The RLY8-XA™ can connect to the ADICON™ 2500 daisy chain or be connected to a TW523 and controlled via X10. Jumpers allow you to set the House Code on the RLY8-XA™.

#### 1.4.4 SECU-16IR™

The SECU-16IR™ allows you to expand the IR outputs 16 at a time. You can control multiple IR devices (such as VCRs, TV's etc). Each IR output on the SECU-16IR is identified as a zone.

### 1.4.5 ADNET™ Repeater

The ADNET™ Repeater is a device that connects in the middle of the ADICON® 2500 daisy chain to amplify the communications signal. Typically the ADNET™ Repeater is needed after 25 modules are connected in the daisy chain.

### 1.4.6 ADNET™ Modem

Used to call a pager based on an event to allow the user to call into and control the ADICON™ 2500 from a remote location.

## 1.5 Specifications and Accessories

Specifications		Accessories Supplied
<b>Leopard™:</b>		
Connections	RS232, DB9 to PC	1, User's Guide CD
	RS485, 2 wire to ADICON™ 2500	1, C-Max™ Diskette
	2, 3.5mm Stereo Jack	1, 6' DB9M-DB9F Cable
	Power, 2 Wire screw terminals	1, 25' Modular cable w/RJ11 connection for X10
	X10, 4 conductor RJ11	1, 9-12V @1A PS
	9-12V (DC or AC) @ 1A	1, 3' DB9F to 3 Pin header to connect to Aux RS232
Power:	9-12V (DC or AC) @ 1A	
Size:	Total: 7 1/8" W x 5 5/8" H x 1 5/8" D	
	PCB Size: 6" W x 5" H	
	LCD Screen: 4 1/8" W x 3 1/8" H	
	LCD Resolution: 320 x 240, Black & White	
<b>Ocelot™:</b>		
Connections:	RS232, DB9 to PC	1, User's Guide CD
	RS485, 2 wire to ADICON™ 2500	1, C-Max™ Diskette
	2, 3.5mm Stereo Jack	1, 6' DB9M-DB9F Cable
	Power, 2 Wire screw terminals	1, 25' Modular cable w/RJ11 connection for X10
	X10, 4 conductor RJ11	1, 9-12V @200mA PS
Power:	9-12V (DC or AC) @ 200mA	
Size:	6 9/16 W" x 1 3/8" H x 4 3/4" D	
<b>SECU-16™:</b>		
Connections:	RS485, 2 Wire to Ocelot™	1, Data Sheet
	Power, 2 Wire screw terminals	8, 1Kohm Resistors
	Inputs and outputs: Screw terminals	
Power:	9-12V (DC or AC) @ 200mA	
Inputs:	Digital, Analog (0-5V) or Supervised	
Relay Outputs:	24VDC @ 1A	
Size:	5 1/2 W" x 1 3/8" H x 3 1/4" D	
<b>SECU-16I™</b>		
Connections:	RS485, 2 Wire to Ocelot™	1, Data Sheet
	Power, 2 Wire screw terminals	16, 1Kohm Resistors
	Inputs and outputs: Screw terminals	
Power:	9-12V (DC or AC) @ 200mA	
Inputs:	Digital, Analog (0-5V) or Supervised	
Size:	6 9/16 W" x 13/8" H x 3 1/4" D	
<b>RLY8-XA™</b>		
Connections:	RS485, 2 Wire to Ocelot™	1, Data Sheet
	Power, 2 Wire screw terminals	1, Modular cable to connect RLY8-XA™ to TW523

Specifications (Cont.)	Accessories Supplied (Cont.)	
	Outputs: Screw terminals	
	X10, two wire using provided cable to TW523	
Power:	9V DC or AC @ 500mA	
Relay Outputs:	120V @ 10A; 220V @ 5A	
Size:	6 9/16 W" x 1 3/8" H x 3 1/4" D	
<b>SECU-16IR™</b>		
Connections:	RS485, 2 Wire to Ocelot™	1, Data Sheet
	Power, 2 Wire screw terminals	
	IR, 1 inputs and 16 outputs 3.5mm Stereo Jack	
Power:	9-12V (DC or AC) @ 200mA	
<b>C-Max™ Software</b>		
	MS-Windows® 95/98/NT	
	1.6 Mbytes Available Hard Disk Space	
	1.6 Mbytes RAM	

## 2 INITIAL SETUP

### 2.1 Wiring

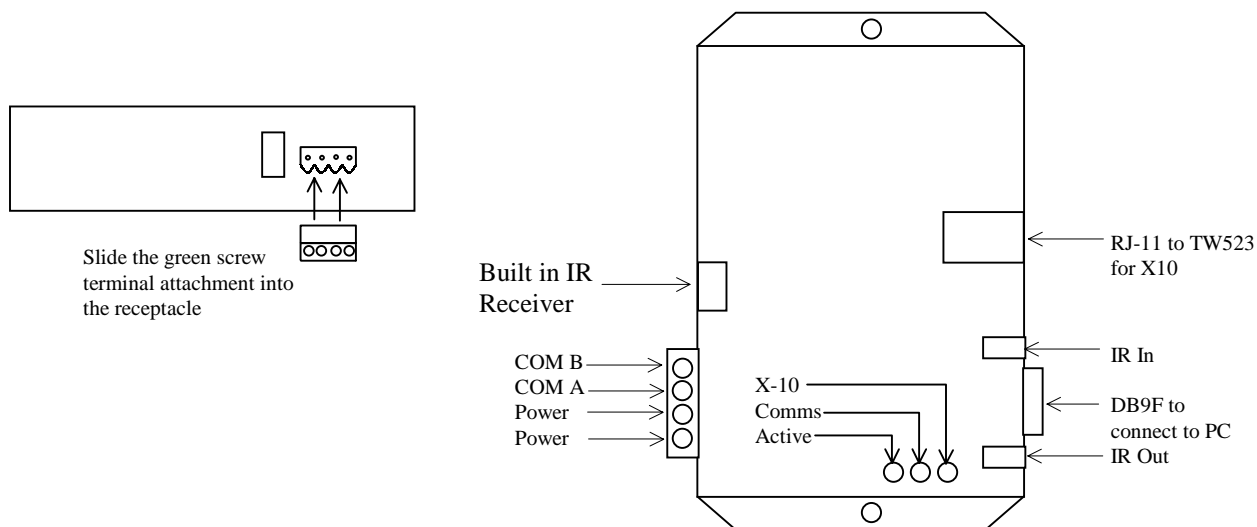
#### 2.1.1 Connecting the Ocelot™ or Leopard™ to a PC

The Ocelot™ and Leopard™ connect to the RS232 port (commonly called a COM or Serial port) on the back of your computer. Connect the provided DB9M-DB9F cable to the DB9F connector on the Ocelot™. Connect the other end of the cable to a DB9M connector on the back of your PC (Refer to Figure 1). If you can't find this port on the back of your computer, contact the computer's manufacturer.

#### 2.1.2 Connecting power to the Ocelot™

Connect the green screw attachment to the input receptacle next to the built in IR receiver on the Ocelot™. Connect the power wires to the power screw terminals labeled "Pwr" on the Ocelot™. It does not matter which wire screws into which terminal.

Figure 1 – Ocelot™



### 2.2 Connecting the ADICON™ 2500 Series

#### 2.2.1 Connecting Power

Each module must be supplied with power. Each module can be connected to a separate power supply, or you can power each unit from a common power supply (See Figure 2).

When connecting many ADICON™ 2500 modules to a power common supply, the power supply used must be able to handle the current draw of the entire network. Below is a list of the ADICON™ 2500 modules and their current draw specifications:

Ocelot™ – 200mA	RLY8-XA™ – 500mA
SECU-16™ – 200mA	SECU-16IR™ – 200mA
SECU-16I™ – 200mA	

When connecting ADICON™ Modules to common power supply, you must add up the current draw of each module. Voltage will be constant. For example if you want to connect 1 Ocelot™, 2 SECU-16™s and 1 RLY8-XA you will need a 9VDC power supply rated at 1.1Amps or higher.

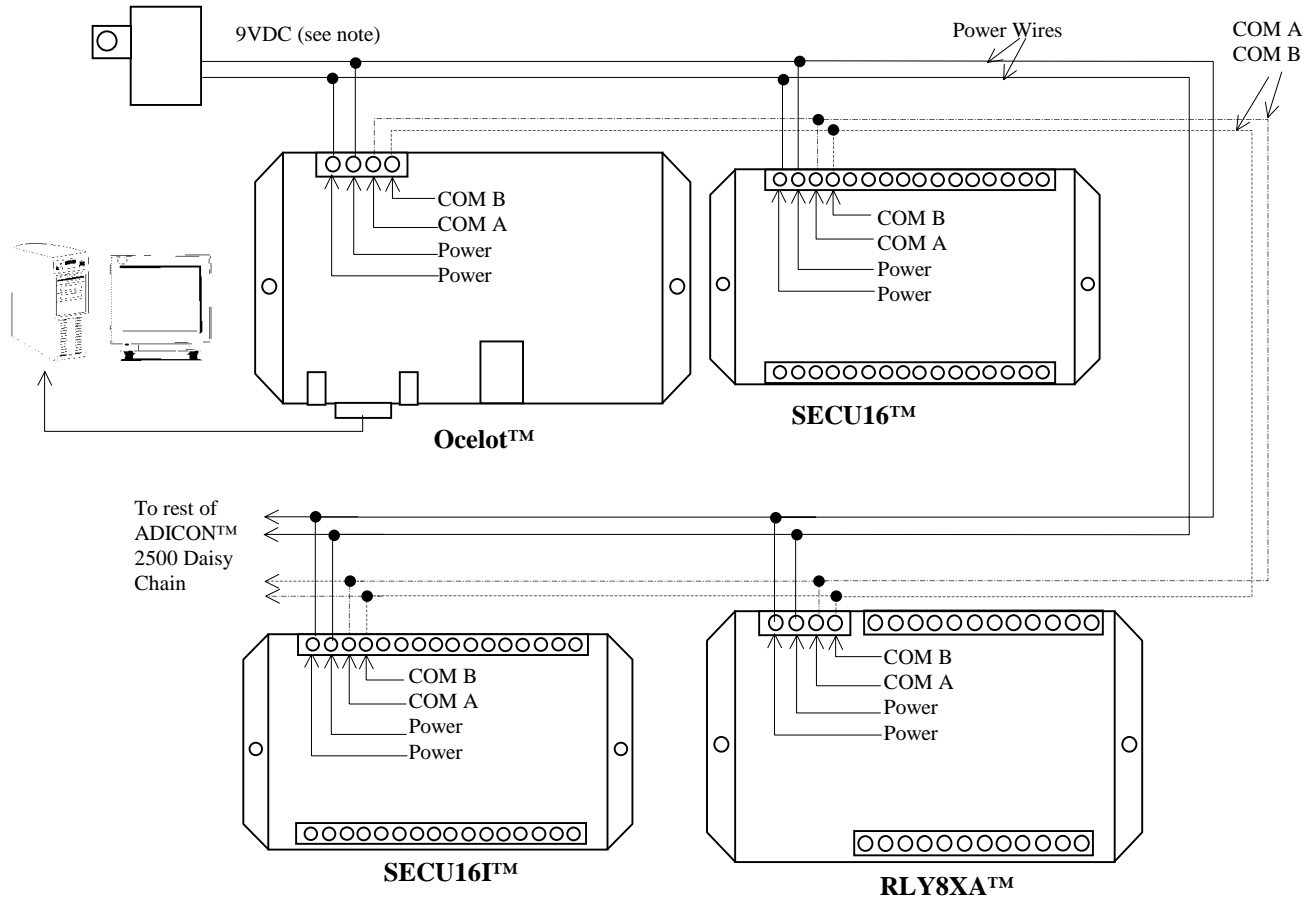
$$\begin{array}{rclclclcl}
 \text{Ocelot}^{\text{TM}} & + & \text{SECU-16}^{\text{TM}} & + & \text{SECU-16}^{\text{TM}} & + & \text{RLY8-XA}^{\text{TM}} \\
 200\text{mA} & + & 200\text{mA} & + & 200\text{mA} & + & 500\text{mA} = 1100\text{mA} = 1.1\text{A}
 \end{array}$$

### 2.2.2 Connecting Communications

The current rating of the power supply can be greater than 1Amp, but the voltage rating must be 9VDC.

Each Module also has two screw terminals labeled COM A and COM B. Connect each COM A on each module together and each COM B module on each module (See Figure 2).

**Figure 2 - Connecting the ADICON™ 2500 and Power in a daisy chain**



The power supply that is provided with the Ocelot™ has only enough power to drive the Ocelot. The above wiring example is a suggested way to wire the power. You can connect a separate power supply to each module or connect the entire series with a common power supply as shown above. To do this you must add up the current draws (see the specifications for each module) for each module then use a power supply to handle that load. For example: in the above drawing to connect 1 Ocelot, 1 SECU16, 1 SECU16I and 1 RLY8XA, you would need a 9V power supply at 1.1 Amps (500mA + 200mA + 200mA + 200mA = 1.1 Amps).

### 2.2.3 Ocelot™ Light Indications

**Active** – Indicates that the Ocelot™ is operational. Three flashes indicate that the Ocelot™ is processing but there is no program loaded. 4 flashes indicate that the Ocelot™ is processing and a program written in the C-Max Code Editor is loaded into the Ocelot. Also acts as an Infrared Transmit/Receive indication. When IR is transmitted and received, the Active Light Illuminated for about 2 seconds.

**Comms** – Indicates communications with ADICON 2500 Series modules. If no modules are connected, this light will not illuminate. If there is communications between the ADICON 2500 modules and the Ocelot, this light will flash rapidly.

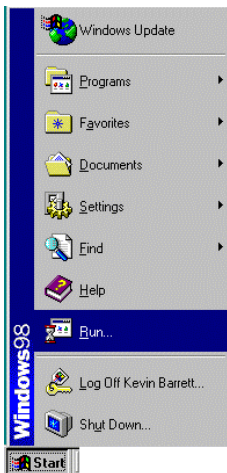
**X10** – Indicates X10 activity. The light is constantly on when connected to a TW523 with no X10 activity. Every time X10 is transmitted and received, the X10 light will flash off momentarily. If the Ocelot™ is not connected to a TW523, the X10 light will be off

## 2.3 C-Max™ Control Wizard

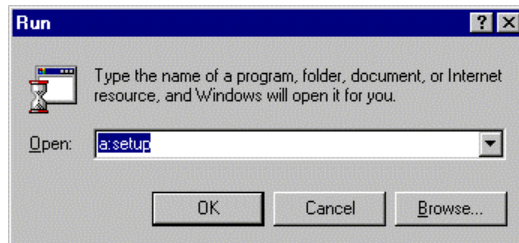
The C-Max™ Control Wizard software allows you to program the Ocelot™ and Leopard™ using IF, THEN, ELSE, AND and OR commands. The C-Max™ Control Wizard is provided with the Ocelot™ and Leopard™.

### 2.3.1 Installing the C-Max™ Software

- 1) Place the C-Max™ 3.5" diskette in your computers A drive.
- 2) Click Start with your left mouse button. A window will appear.



- 3) Click Run with your left mouse button. The Run window will appear.
- 4) Type the following in the window to the right of Open: A:Setup

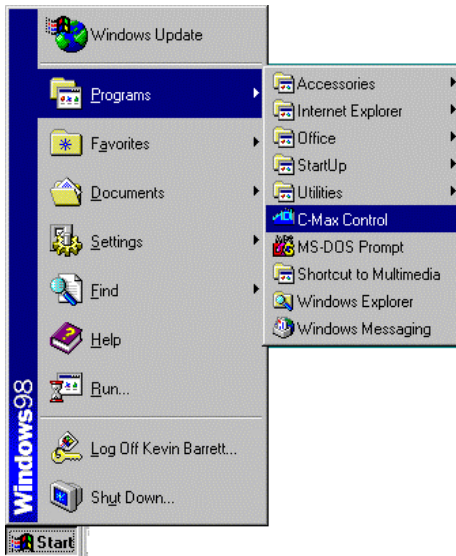


- 5) Click OK and follow the directions on screen.

### 2.3.2 Setting up Communications

- 1) Click Start with your left mouse button. A Window will appear.
- 2) Move the mouse up to Programs. A second window will appear.





3) Move the mouse over to the second window and then move the mouse down until the C-Max™ Control icon is highlighted. Click the C-Max™ Control icon with your left mouse button.

The following screen will appear:



4) Click Comms with your left mouse button. A window will appear.

5) Click Comms Setup with your left mouse button. The following screen will appear:

6) Click the COM port you are connected to the back of your computer to with your left mouse button. A black circle will appear next to the Com port you have selected. If you do not know which Com port you are connected to, contact your computer's manufacturer.

7) Click OK with your left mouse button.

### 2.3.3 Auto Addressing your ADICON™ 2500 Series

Auto Addressing sets the addresses on all the modules connected in the daisy chain.

**Note:** If you are only using the Ocelot™ or Leopard™ to control X10 or IR and are not connecting any ADICON™ 2500 Modules (SECU-16™, SECU-16I™, RLY8-XA™ or SECU-16IR™), do not perform this step.

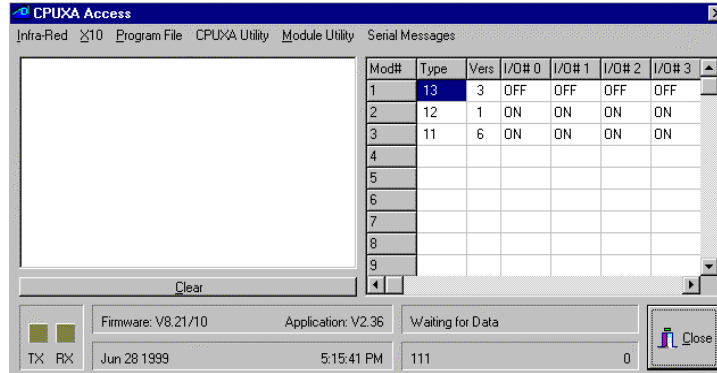
#### **IMPORTANT!**

If you plan to use more than 1 Ocelot™ or Leopard, disconnect (or remove power from) each slave Ocelot™ or Leopard™ before auto addressing. Section 8 will describe how to add additional Ocelots or Leopards to an installation. Slave Ocelots and Leopards cannot be auto addressed.

1) Remove the covers from each ADICON™ module.

It is not necessary to remove the cover from the Ocelot™.

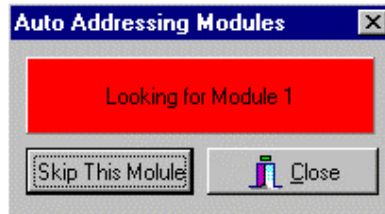
2) Connect the ADICON™ 2500 Series daisy chain and apply power to each module as described in Section 2.1. After performing each step in Section 2.3.2 to set up communications, click COMMS with your left mouse button. A window will appear. Click Attach to CPUXA with your left mouse button. The CPUXA™ Access window will appear.



If the window to the left reads “Comms Retry timeout 101” repeatedly followed by a Lost Connection window, repeat Section 2.3.3 and try another com port setting. You may need to connect the Ocelot™ to another port on the back of your computer. If there is still no communications, contact your computer manufacturer.

3) Click CPUXA Utility with your left mouse button. A window will appear.

4) Click Auto Address Modules with your left mouse button. The following window will appear:



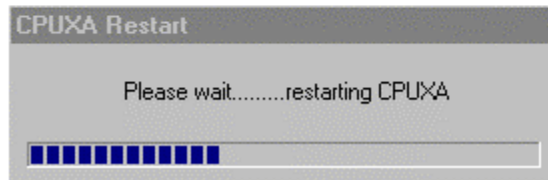
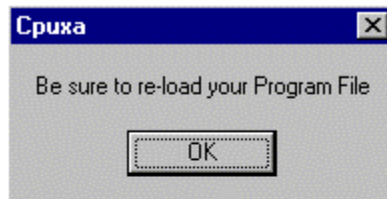
The Active light on each module will flash rapidly.

4) Each module has a push button on the circuit board. Go to each module in sequence and push the pushbutton.

Make certain that only one button is pushed at a time. Each time a pushbutton is pushed, the Active light will stop flashing rapidly and flash slowly. The number beside Looking for Module will increment each time a button is pushed.

**Note:** Be sure to write down which modules are programmed as Module 1, Module 2 etc. This will help you when you start writing your program.

5) Once all buttons are pressed, click Close with the left mouse button. The following windows will appear: Click OK with your left mouse button.



## 2.4 Entering Latitude and Longitude Sunrise and Sunset

If you are going to base events on Sunrise and Sunset, you must enter the latitude and longitude for your location. Click Comms, then Comms Setups from the Code editor. The following screen will appear:



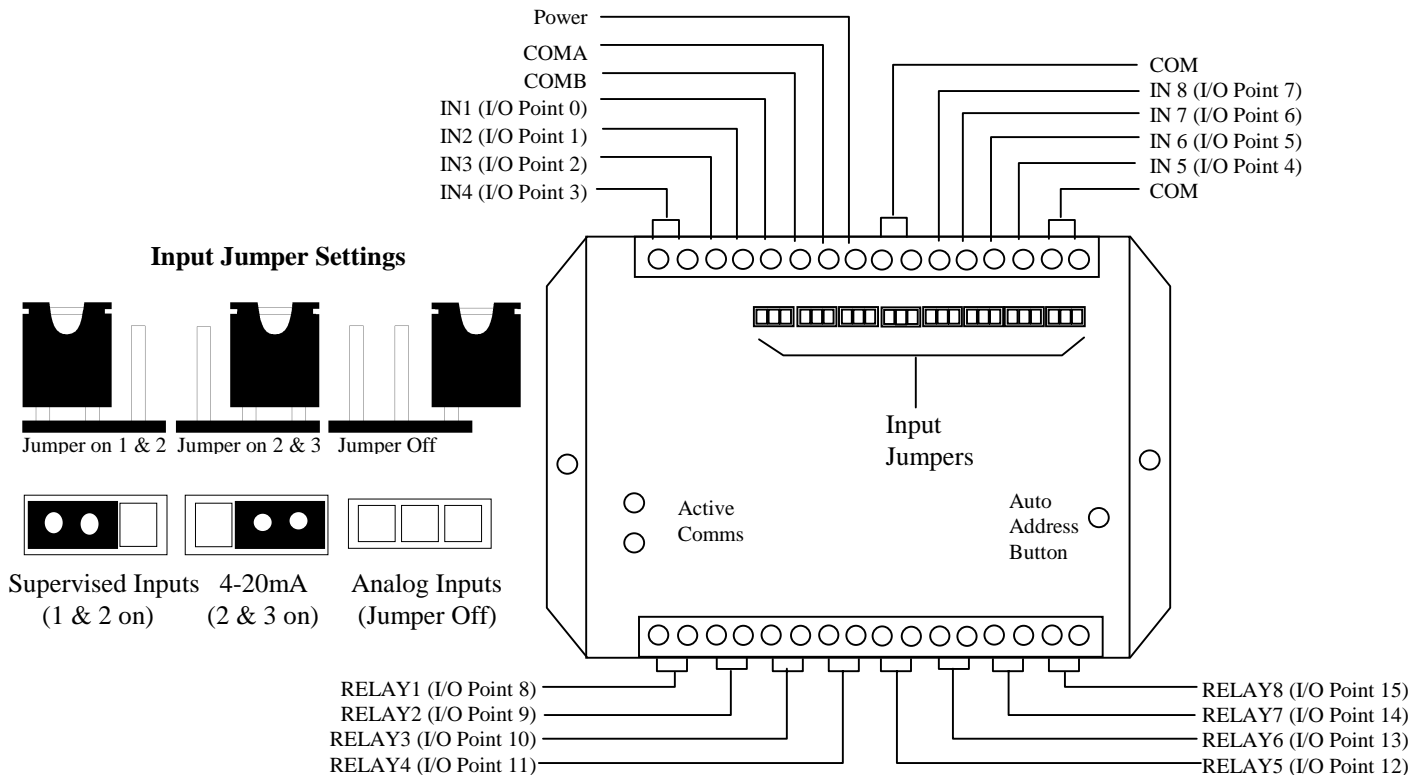
The latitude and longitude must be entered in decimal format. The time zone must be entered. Greenwich England is time zone 0. Time zones west are minus numbers. Eastern Time Zone is -5, Central Time Zone -6, etc. The default value entered when C-Max™ is installed is for Branson, MO.

### 3 ADICON™ 2500 Modules

#### 3.1 SECU-16™

The SECU-16™ has 8 inputs that can be used as digital inputs, 4-20mA current inputs, Supervised inputs (detect relay closure) and Analog inputs (0-5V). The SECU-16™ also has 8 low current relay closures (24V @ 1A).

Figure 3 – SECU-16™

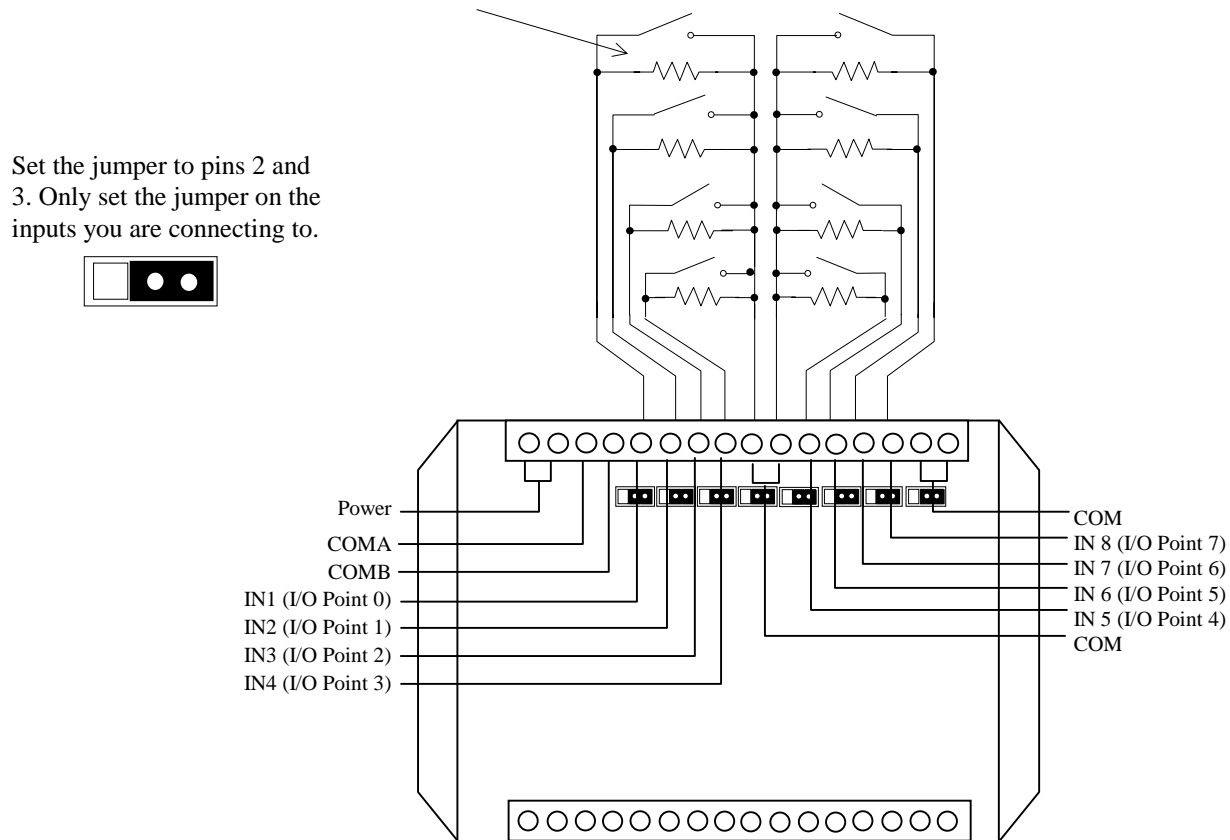


## Connecting Supervised Inputs on the SECU-16™

A supervised input allows you to detect a relay closure. An example of this is a motion sensor. When motion is detected, the motion closes a relay. The first input is I/O Point 0 and the 8<sup>th</sup> input is I/O Point 7.

Each resistor is 1KOhm

**Figure 4 - Connecting Supervised Inputs on a SECU-16™**



- 1) Place a 1Kohm Resistor across the COM and the input that you are connecting the external relay to.
- 2) Place the Jumper on pins 2 and 3 for the appropriate input on the SECU-16™.
- 3) Connect the two wires from the external relay to one of the COM terminals. Connect the other wire to the appropriate input terminal on the SECU-16™ (the same two terminals that the 1Kohm resistor is connected to described in Step 1).

### 3.1.1 Connecting Analog Inputs to a SECU-16™

To connect an analog output device to the SECU-16™, remove the jumper for the appropriate input on the SECU-16™. Connect the ground wire to a common terminal and connect the other wire to the appropriate input terminal on the SECU-16™. The first input is I/O Point 0 and the 8<sup>th</sup> input is I/O Point 7.

### 3.1.2 Connecting to the Relay Outputs

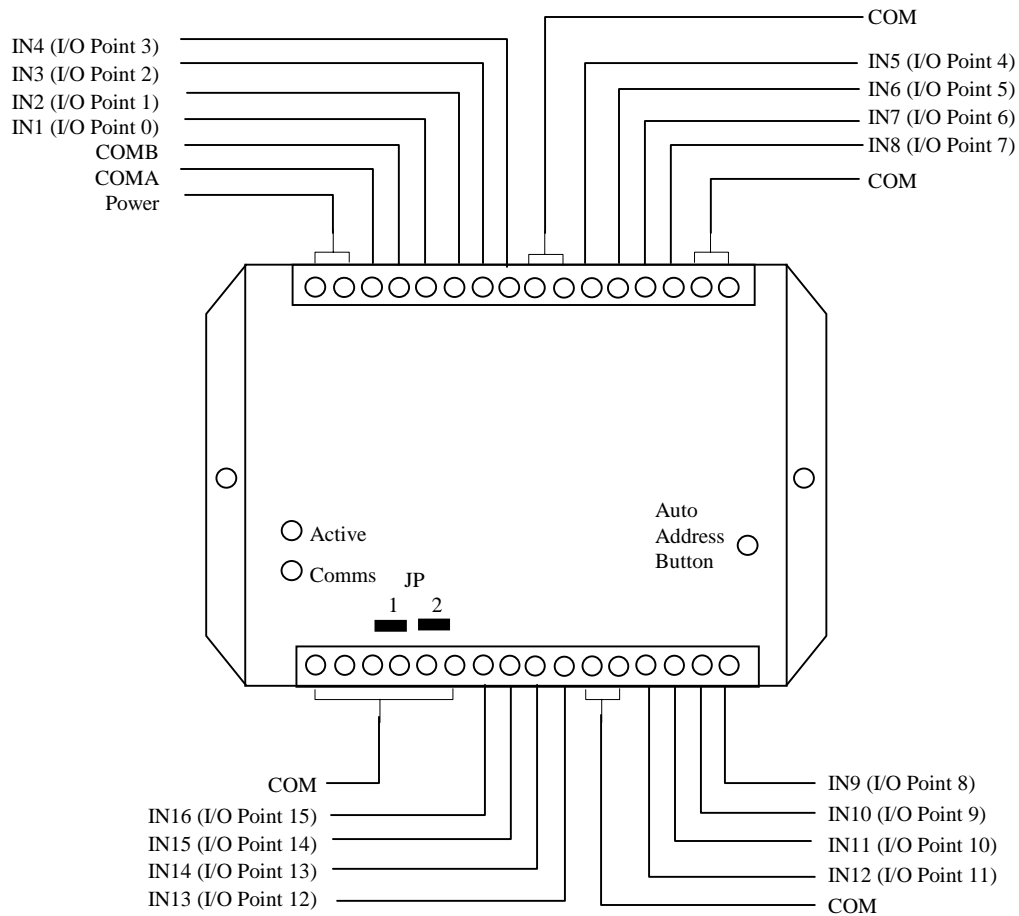
The SECU-16™ has 8 low current (24V @ 1A) relay outputs. The Common and Normally Open terminals are used. When a relay is on, the contacts are closed the wires screwed into the corresponding relay output will be touched together. When a relay is off, the contacts are open and the wires do not touch.

Connect the wires you are using to the corresponding relay output on the SECU-16™. The first relay is I/O point 8 and the last relay is I/O Point 15.

## 3.2 SECU-16I™

The SECU-16I™ has 16 inputs that can be used as Digital Inputs, Supervised Inputs (detect relay closure) and Analog inputs (0-5V).

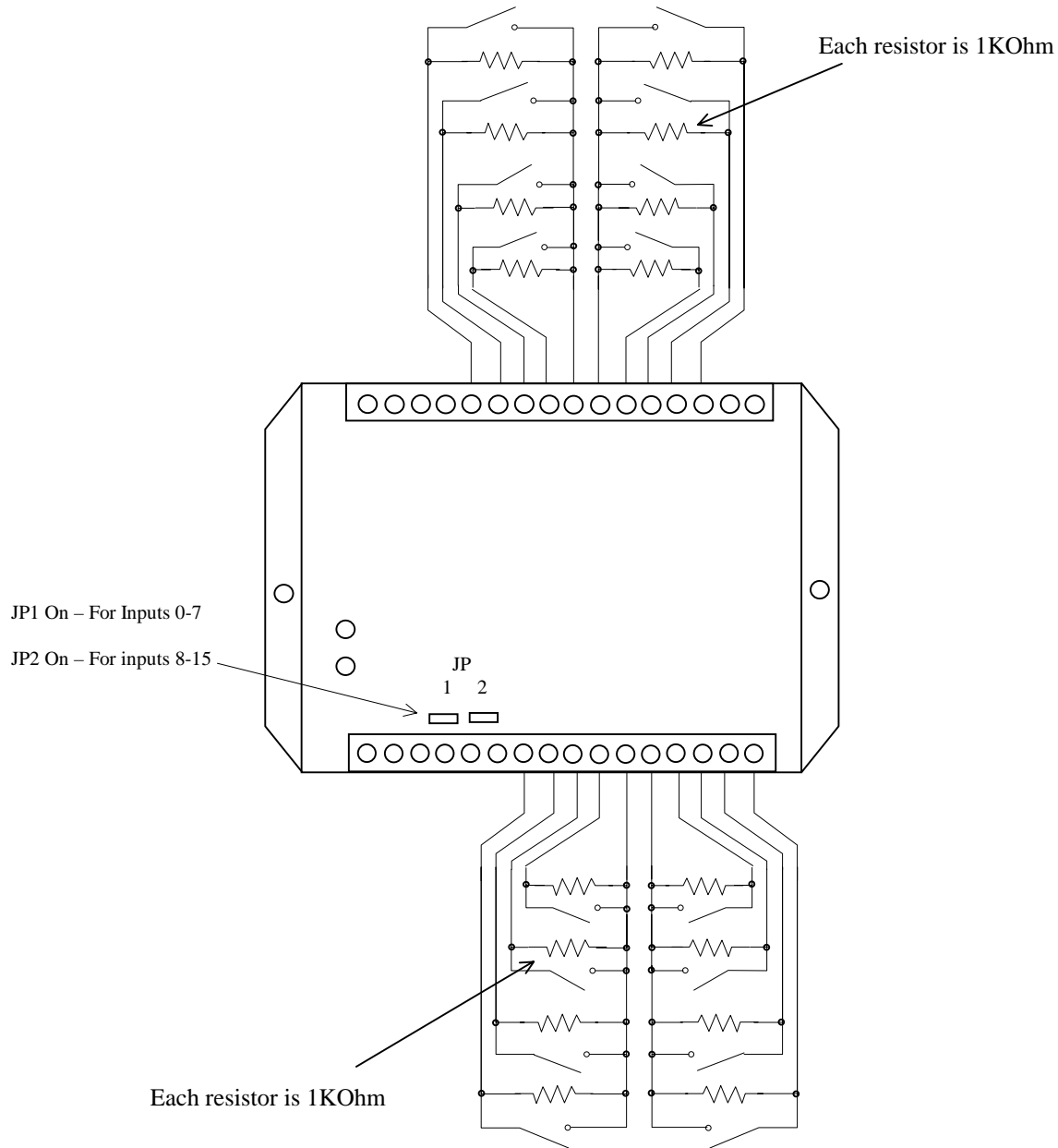
**Figure 5 – SECU-16I™**



### 3.2.1 Connecting Supervised Inputs on the SECU-16I™

A supervised input allows you to detect relay closure. An example of this is a motion sensor. When motion is detected, the motion sensor closes a relay. The first input is I/O Point 0 and the 16<sup>th</sup> input is I/O Point 15.

**Figure 6 - Connecting Supervised Inputs on a SECU-16I™**



- 1) Place a 1Kohm Resistor across the COM and the input that you are connecting the external relay to.
- 2) JP1 jumper must be on if you are using Inputs 0-7 for supervised inputs. JP2 must be on if you are using Inputs 8-15 for supervised inputs.
- 3) Connect the two wires from the external relay to one of the COM terminals. Connect the other wire to the appropriate input terminal on the SECU-16I™ (These are the same two terminals that the 1Kohm resistor was connected to in step 1).

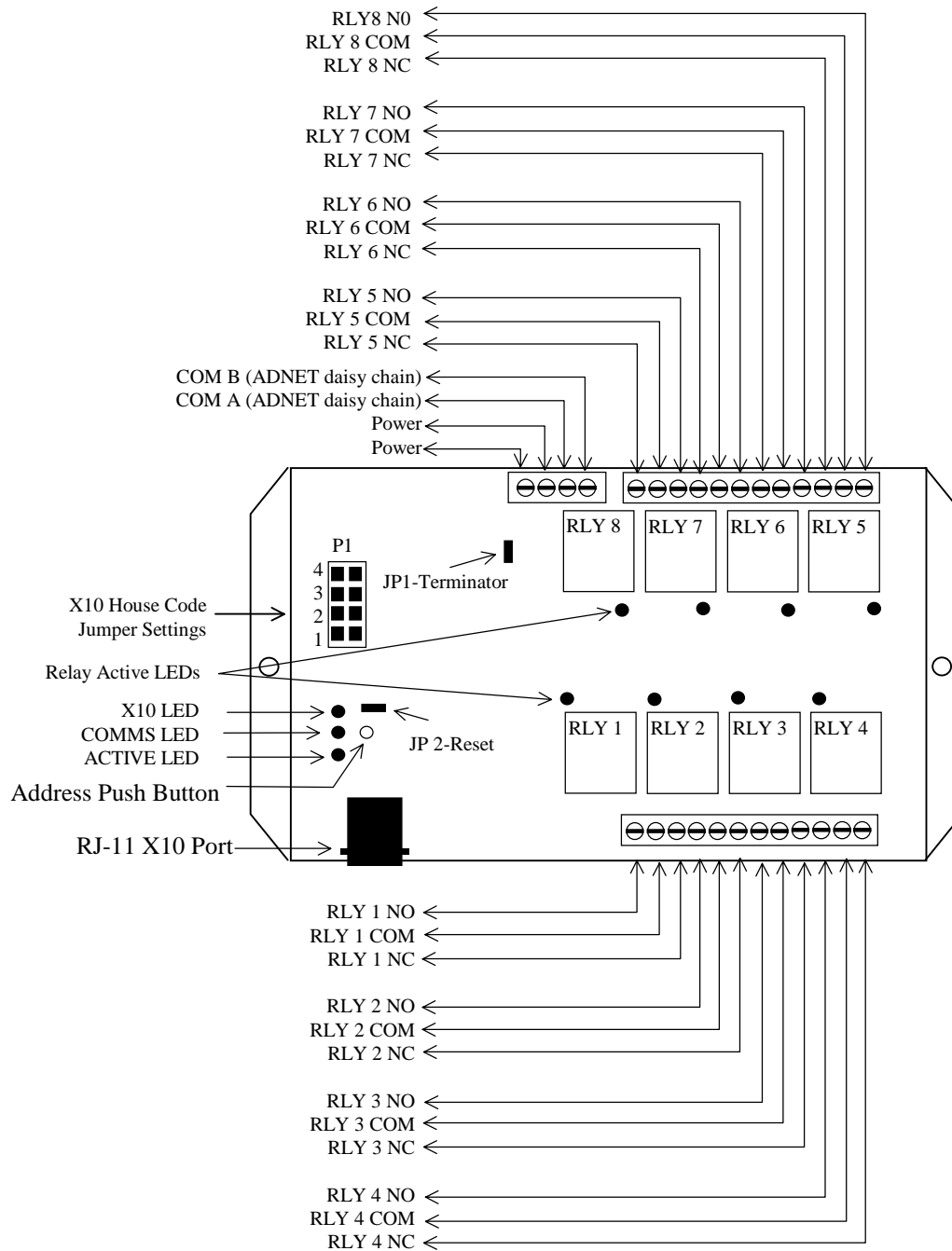
### 3.2.2 Connecting Digital and Analog Inputs to a SECU-16I™

To connect an analog output device or digit output device to the SECU-16I™ simply connect the ground wire to a COM wire and connect the other wire to the appropriate input terminal on the SECU-16I™. The first input is I/O Point 0 and the 16<sup>th</sup> input is I/O Point 15. Remove JP1 if you are using inputs 0-7 as analog or digital inputs. Remove JP2 if you are using 8-16 as analog or digital inputs.

### 3.3 RLY8-XA™

The RLY8-XA™ has 8 high current (120V @ 10A) to switch higher current loads. The RLY8-XA™ can be connected to the ADICON™ 2500 via the 4 wire Daisy chain or be connected to a TW523 and be controlled via X10.

**Figure 7 – RLY8-XA™**



#### 3.3.1 X10 Installation

1. Remove the four Phillips screws and remove the cover.
2. Attach the power supply to the screw terminal block labeled POWER
3. Attach one end of the RJ cable to the RJ socket in the RLY8-XA™.
4. Attach the other end of the cable to the TW-523.
5. Set the House Code in the RLY8-XA™ by placing jumpers on P1.

### P1 Jumper Settings

1	2	3	4	House Code	
OFF	OFF	OFF	OFF	A	0
ON	OFF	OFF	OFF	B	1
OFF	ON	OFF	OFF	C	2
ON	ON	OFF	OFF	D	3
OFF	OFF	ON	OFF	E	4
ON	OFF	ON	OFF	F	5
OFF	ON	ON	OFF	G	6
ON	ON	ON	OFF	H	7
OFF	OFF	OFF	ON	I	8
ON	OFF	OFF	ON	J	9
OFF	ON	OFF	ON	K	10
ON	ON	OFF	ON	L	11
OFF	OFF	ON	ON	M	12
ON	OFF	ON	ON	N	13
OFF	ON	ON	ON	O	14
ON	ON	ON	ON	P	15

6. Plug in the RLY8-XA™ and the TW-523.
7. The RLY8-XA™ X-10 light should be on steady.  
The ACTIVE light should blink the same # as the House Code. I.e. blink once for house B.  
The X-10 light should blink on any X-10 activity.

The relay that you want to trigger is determined by the key code that you send; 0-7. The next line, sending a 19 turns the relay ON, 20 turns the relay OFF, 23 turns all relays OFF, determines the action of the relay. For example if the House code is A and you want to turn on the 1<sup>st</sup> relay on the RLY8-XA™, then you would first send a Transmit X10 to A0 then send an A19. This will turn the first relay on.

#### 3.3.2 Connecting the RLY8-XA™ to Ocelot™ and Leopard™

1. Remove the four Phillips screws and remove the lid.
2. Attach the power supply to the screw terminal block labeled POWER
3. Connect the COMS A and B ADNET communications line to the screw terminals (See Figure 1)
4. If the RLY8-XA™ is not at the end of the daisy chain, remove J1 jumper.

#### RLY8-XA™ Connections and Descriptions.

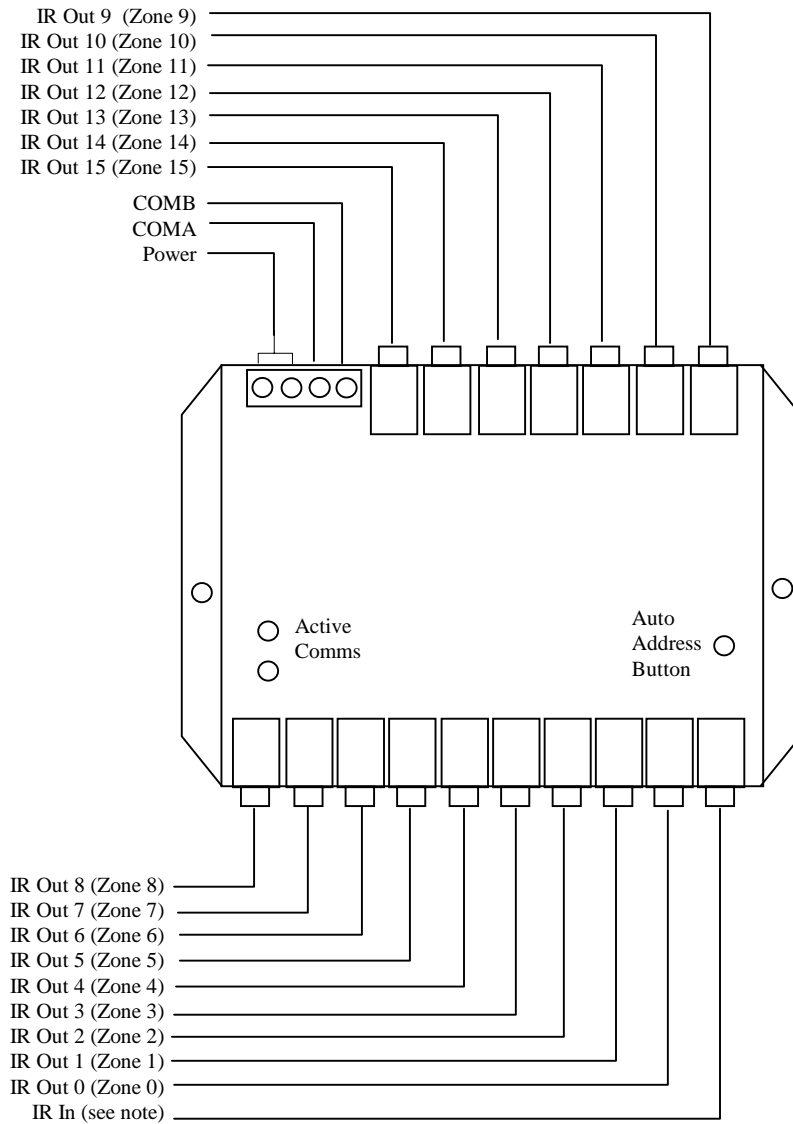
TB2 is for Relay 1  
 TB3 is for Relay 2  
 “”  
 TB9 is for Relay 8

#### 3.4 SECU-16IR™

The SECU-16IR™ allows you to add up 16 IR outputs at a time. It can be connected to the Ocelot™ or Leopard™ via the 4-wire 485 port to send an IR output to any port desired.



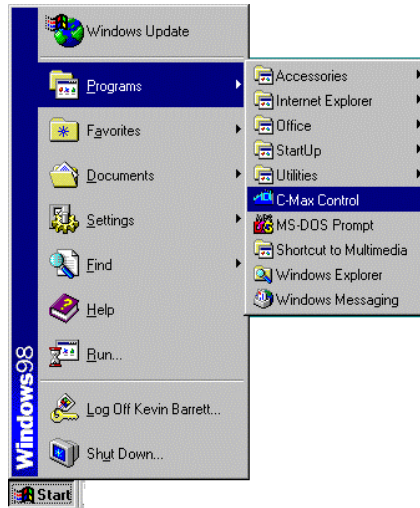
**Figure 8 – SECU-16IR™**



**Note:** The IR In is used to broadcast an Infrared signal out all 16 ports. To do this simply connect the IR output on the Ocelot™ to the IR input on the SECU-16IR™ using a mono 3.5 mm cable. When you send an IR signal out the Ocelot IR out port, that IR signal will be broadcast out all 16 IR ports.

#### **4 Running the C-Max™ Control Wizard Software**

- 1) Click Start with your left mouse button. A Window will appear.
- 2) Move the mouse up to Programs. A second window will appear.



3) Move the mouse over to the second window and then move the mouse down until the C-Max™ Control Icon is highlighted. Click the C-Max™ Control icon with your left mouse button.

#### 4.1 Using the Code Editor and Control Wizard

The Code Editor and Control Wizard are used together to write the program that will tell the Ocelot™ and ADICON™ 2500 modules what to do. The Ocelot™ and Leopard™ can hold up to 2000 lines of code and up to 512 unique IR commands.



**C-Max™ Code Editor and Control Wizard**

##### 4.1.1 The Code Editor

The Code Editor displays the program that will tell the ADICON™ 2500 Series what to do and how to react to events you stipulate. You do not type in the Code Editor. Programming is accomplished using the Control Wizard. Following are descriptions of the Code Editor commands:

**File** - Selection for creating new, saving, opening printing files and exiting the C-Max™ program.

**New** – Create a new program

**Open Program** – Open a program you have previously saved.

**Save Program As** – Save program displayed in the Code Editor

**Print** – Prints program displayed in the Code Editor

**Print Setup...** - Sets up which printer for printing your program

**Exit** – Exits the Code Editor

**Comms** – Sets up and allows you to communicate and manipulate the Ocelot™, Leopard™ and ADICON Series

**Attach to CPUXA™** – Start Communicating with the Ocelot™ or Leopard™ and Enters the CPUXA™ Access Screen.

**Comms Setup** – Sets up communications with the Ocelot™ and Leopard™.

**Touch Screen Setup** – Allows you to set up the Leopard™ Touch screen.

**Clear Line** – Clears the text highlighted in the Code Editor and leaves a blank line.

**Delete Line** – Deletes the line highlighted in the Code Editor

**Insert Line** – Inserts a blank line in the place highlighted in the Code Editor. The highlighted text and everything below that line is moved down one line.

#### 4.1.2 The Control Wizard

The Control Wizard is where the programming is done. The Control Wizard has been designed to require a minimum amount of typing.

Programming is accomplished using IF, THEN, ELSE, AND, OR and END. The first line in any program should be an IF statement. Selections are made using the left button on the mouse.

Type refers to what you are controlling or reading. Following is a description of each category under type.

**Type Selections if IF, AND or OR is selected:**

**Module/Point** – Which module (SECU-16™, SECU-16I™, RLY8-XA™ or SECU-16IR™) is being used.

**I/O Point Entry** will be displayed to the right. **Module #** is the module in the daisy chain that you want to control (the module whose first button you pressed when auto addressing the ADICON™ 2500 Series is Module 1, the second module whose button you pressed is Module 2, etc.). **Point #** is the point on that module you want to manipulate. The first point starts at 0. For example the first input on a SECU-16™ is Point 0, and the last relay output on a SECU-16™ is Point 15. Click Enter after the Module# and Point# is typed in.

**I/O Status** will be displayed to the right of I/O Point Entry. The selections are as follows: Is OFF, Is ON, Turns OFF and Turns ON. This is the condition that you are observing to for that particular module point on the specified module.

**Module / Param** – These are parameters stored in the ADICON™ 2500 Modules. These are used to read analog inputs on the SECU-16™ and SECU-16I™.

Parameter 10 – Input point 0 on a SECU-16™ and SECU-16I™

Parameter 11 – Input point 1 on a SECU-16™ and SECU-16I™

Parameter 12 – Input point 2 on a SECU-16™ and SECU-16I™

Parameter 13 – Input point 3 on a SECU-16™ and SECU-16I™

Parameter 14 – Input point 4 on a SECU-16™ and SECU-16I™

Parameter 15 – Input point 5 on a SECU-16™ and SECU-16I™

Parameter 16 – Input point 6 on a SECU-16™ and SECU-16I™

Parameter 17 – Input point 7 on a SECU-16™ and SECU-16I™

Parameter 18 – Input point 8 on a SECU-16I™

Parameter 19 – Input point 9 on a SECU-16I™

Parameter 20 – Input point 10 on a SECU-16I™

Parameter 21 – Input point 11 on a SECU-16I™

Parameter 22 – Input point 12 on a SECU-16I™

Parameter 23 – Input point 13 on a SECU-16I™

Parameter 24 – Input point 14 on a SECU-16I™

Parameter 25 – Input point 15 on a SECU-16I™

The analog input range on the SECU-16™ and SECU-16I™ are 0-5V. A 0 stored in a parameter equals 0 volts on the designated input. A 255 stored in a parameter equals 5V on the designated input. To determine the voltage an

input, divide the value stored in the parameter by 51. For example, if parameter 10 reads a 120, then the voltage on the first input (I/O Point 0) is 2.35V ( $120/51=2.35V$ ).

**Parameter Entry** is the module number and parameter number you want to observe.

**Module #** is the module in the daisy chain that you want to control (the module whose first button you pressed when auto addressing the ADICON™ 2500 Series is Module 1, the second module whose button you pressed is Module 2, etc.).

**Parameter #** is the parameter corresponding to the input you want to observe. Click Enter after the Module# and Param# is typed in.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the parameter # is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the parameter # is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the parameter # is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the parameter # is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**becomes >** - becomes greater than. At the moment the value stored in the parameter # becomes greater than the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes <** - becomes less than. At the moment the value stored in the parameter # becomes less than the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes NOT =** - becomes not equal to. At the moment the value stored in the parameter # becomes not equal to the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes =** - becomes equal to. At the moment the value stored in the parameter # becomes equal to the value entered in the Constant Entry field; the Then statement will be triggered.

**Constant Entry** is the value you are comparing to. This number is the digital representation of the voltage level you are looking for. The number entered will be the voltage level you are looking for multiplied by 51. For example, if you want to act when the voltage on a given input reaches 4V, then the constant entry entered will be 204 ( $4V \times 51 = 204$ ). Click Enter after the value is typed in.

**Receive X10** allows you to act if an X10 signal is received.

**House Code** is the house code received from an X10 Module.

**Key Code** is the key code received from an X10 module and what the command is.

**Timer (seconds)** allows you to cause an event based on the status of a timer. All values are in seconds.

The Ocelot™ and Leopard™ have 32 timers: T0-T31. All timers are up timers and count in seconds. These are used to have an event happen based on what the timer has counted up to.

A timer is set at 0 until it is initialized by a Then or Else statement. Setting it equal to 1 initializes the timer. When a timer is set to 1 it starts counting up in seconds. Setting a timer to 0 disables it. The timer must be initialized by a THEN or ELSE statement.

**Timer #** is the timer you want to check.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Timer # is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Timer# is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Timer # is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Timer # is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**becomes >** - becomes greater than. At the moment the value stored in the Timer # becomes greater than the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes <** - becomes less than. At the moment the value stored in the Timer # becomes less than the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes NOT =** - becomes not equal to. At the moment the value stored in the Timer # becomes not equal to the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes =** - becomes equal to. At the moment the value stored in the Timer # becomes equal to the value entered in the Constant Entry field; the Then statement will be triggered.

**Constant Entry** is the value that the operator is acting upon. Click Enter after the value is typed in.

**Variable** is a value you can set to act on any outside event. The Ocelot™ and Leopard™ have 64 variables V0-V63. Variable 63 is reserved for the Leopard™ Touch screen.

**Variable #** is the variable you want to observe.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Variable # is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Variable # is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Variable # is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Variable # is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**becomes >** - becomes greater than. At the moment the value stored in the Variable # becomes greater than the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes <** - becomes less than. At the moment the value stored in the Variable # becomes less than the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes NOT =** - becomes not equal to. At the moment the value stored in the Variable # becomes not equal to the value entered in the Constant Entry field; the Then statement will be triggered.

**becomes =** - becomes equal to. At the moment the value stored in the Variable # becomes equal to the value entered in the Constant Entry field; the Then statement will be triggered.

**Constant Entry** is the value that the operator is acting upon. Click Enter after the value is typed in.

**Time of Day (Military)** allows you to trigger an event based on the time of day.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Time of Day is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Time of Day is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Time of Day is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. The moment the value stored in the Time of Day becomes equal to the value entered in the Constant Entry field, the Then statement will be triggered. Acts like a “becomes equals to” (becomes =) statement.

**Time Entry** is the time that the operator is acting upon.

**Sunrise and Sunset** allows you have an event happen based on Sunrise or Sunset. The slide bar to the right allows you to have an event happen any time 30 minutes before or 30 minutes after sunrise or sunset. For example, if you want to have an event happen 30 15 minutes before sunrise, click Sunrise then slide the bar to the -15 min position. Click the Sunrise/Sunset button after the desired time is set.

**Time of Day** allows you to select a specific time of day that you want an event to occur. Click the Time of Day button after the time of day is entered. Enter the time of day in 24-hour format.

**Month** is used to schedule an event based on what month it is. This can be used to schedule annual or biannual events.

1 = January	4 = April	7 = July	10 = October
2 = February	5 = May	8 = August	11 = November
3 = March	6 = June	9 = September	12 = December

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Month is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Month is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Month is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Month is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**Constant Entry** is the month that the operator is acting upon. Click Enter after the value is typed in.

**Day of Month** allows you to schedule an event based on the day of the month. This is used to schedule monthly events.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Day of Month is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Day of Month is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Day of Month is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Day of Month is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**Constant Entry** is the day of the month that the operator is acting upon. Click Enter after the value is typed in.

**Day of Week** allows you to schedule events based on the day of the week. This is used to schedule weekly events.

0 = Sunday      2 = Tuesday      4 = Thursday      6 = Saturday

1 = Monday      3 = Wednesday      5 = Friday

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Day of Week is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Day of Week is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Day of Week is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Day of Week is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**Constant Entry** is the day of the week that the operator is acting upon. Click Enter after the value is typed in.

**Year** allows you to schedule an event on a specific year.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Year is greater than the value entered in the Constant Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Year is less than the value entered in the Constant Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Year is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Year is equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**Constant Entry** is the year that the operator is acting upon. Click Enter after the year is typed in.

**Date (mm/dd/yy)** allows you to schedule an event on a specific date.

**Operator** is the condition that you want to act upon. The choices are as follows:

**is >** - is greater than. As long as the value stored in the Date is greater than the value entered in the Date Entry field, the Then statement will be triggered.

**is <** - is less than. As long as the value stored in the Date is less than the value entered in the Date Entry field, the Then statement will be triggered.

**is NOT =** - is not equal to. As long as the value stored in the Date is not equal to the value entered in the Constant Entry field, the Then statement will be triggered.

**is =** - is equal to. As long as the value stored in the Date is equal to the value entered in the Date Entry field, the Then statement will be triggered.

**Date Entry** allows you to enter the specific date. Click Enter after the date is typed in.

**Receive IR** allows you to act on an event is an IR signal is received. Once an IR signal is learned, this signal can then be acted upon when received. Up to 1024 unique IR commands can be stored in the Ocelot™ and Leopard™.

**Note:** Although you can learn up to 1024 IR commands you can only recognize on IR commands 1-80. When learning your IR commands, make certain that all IR signal that you what to recognize and act on are stored as IR commands 1-80.

**Module #** is the Ocelots™ and Leopards™ that you want to receive IR on.

If you are using multiple Ocelots or Leopards™, always use Module 0 for IR received locally regardless of what the address of the Ocelot™ or Leopard™ is. If you want the Master Ocelot™ or Leopard™ to act on a IR received on a slave Ocelot™ or Leopard™, then make the Module # the address of the slave Ocelot™ or Leopard™ you want to act on. If you want a slave Ocelot™ or Leopard™ to act on a received IR that it receives (for example you want the slave Ocelot™ or Leopard™ to send out an X10 command if it receives an IR), then make the Module Number for the code being stored in the Slave Ocelot™ or Leopard™ 0, regardless of the address of the Slave Ocelot™ or Leopard™ that the program is being loaded into.

**IR #** is the learned IR that you want to act on.

The slave Ocelots™ and Leopards™ can have different Infrared Commands stored in them (The master Ocelot™ or Leopard™ can have IR #1 be power on for a TV while the slave Ocelot™ can have an entirely different IR #1 stored in it).

**X10 Status Change** allows you to act if the status of an X10 signal has changed.

**House Code** is the house code of the module whose status has changed.

**Key Code** is the Key Code of the module whose status has changed.

**I/O Status** is the status of the X10 device that you are checking.

**Is ON** – As long as the X10 Status stored in the X10 buffer on the Ocelot™ or Leopard™ is on the Then statement will be triggered.

**Is OFF** – As long as the X10 Status stored in the X10 buffer on the Ocelot™ or Leopard™ is off the Then statement will be triggered

**Turns ON** – When the X10 Status stored in the X10 buffer on the Ocelot™ or Leopard™ turns on (goes from off to on) the Then statement will be triggered

**Turns Off** - When the X10 Status stored in the X10 buffer on the Ocelot™ or Leopard™ turns off (goes from on to off) the Then statement will be triggered

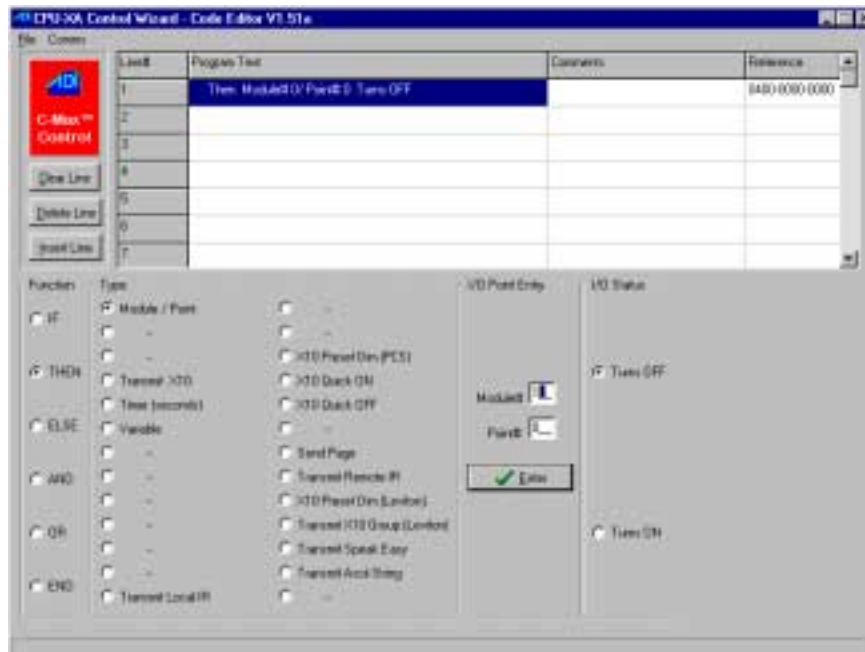
**On Command Pair** – When a pair of X10 commands is received is sequence to turn a X10 device on (for example: if A1 is followed by an A19), the Then statement will be triggered.

**Off Command Pair** – When a pair of X10 commands is received is sequence to turn a X10 device off (for example: if A1 is followed by an A20), the Then statement will be triggered.

**Touch Button Pressed** allows you to act a specific button pressed on the Leopard™ Touch screen.

**Module #** - The address of the Leopard. If you only have 1 Leopard, this number should always be 0. If you have multiple Leopards

**Button #** - The button number pressed. This is the same as the Object number when you set up the touch screen.



**Type Selections if THEN and ELSE:**

**THEN** and **ELSE** allow you to turn relays on, send out X10 and Send IR signals. The options available under THEN and ELSE are as follows:

**Module I/O Point** – Turn on a Relay (or many relays) on a SECU-16™ or RLY8-XA™.

**Transmit X10** – Send out an X10 command to any X10 device.

**Timer** – Sets or disables a timer.

Setting a timer's value to 0 disables the timer. Setting a timer to 1 starts the timer counting in seconds.

**Variable** – Set a variable to a value

**The Operators** for THEN and ELSE are as follows: = (equals), + (plus), - (minus), \* (multiply) and / (divide).

**Transmit IR** – Transmits an IR (or Series of IR) signals.

**X10 Preset DIM (PCS)** – Sends a Preset Dim command to a X10 module. The module being sent the command must support the preset dim command.

**House Code** – House Code of the device your are manipulating.

**Key Code** – Key Code of the device you are manipulating.

**Preset Dim Level** – The level you want the module to dim. There are 32 preset dim levels. 0 is full off, 31 is full on.

**X10 Quick ON** – Turns the X10 device at a given House and Key code on.

**X10 Quick OFF** – Turns the X10 device at a given House or Key Code off.

**Send Page** – Sends a page.

**Pager Message** sends the message saved. Up to 15 messages can be saved: Message# 1 to Message# 15. Each message can be up to 64 characters long.

**Transmit Remote I/R** – Transmits a Learned IR to given output on a SECU-16IR™.

**Module#** - Address of the SECU-16IR™

**Zone#** - I/O Point you want to send the IR out on the SECU16-IR™:Zone 0 is first output, Zone 15 is the 16<sup>th</sup> output on the SECU-16IR™.

**IR Command#** - The learned IR command you want to transmit. Click Enter when finished.

**X10 Preset DIM (Leviton)** – Sends a preset Dim command to a Leviton® X10 control module.

**House Code** – House code of the Leviton® Module

**Key Code** – Key code of the Leviton® Module



**Preset Dim Level (Leviton)** – The level you want to brighten the Leviton® Module to. Simply move the bar (or click the right or left arrows with your left mouse button) until the desired brightness level is displayed.

**Transmit X10 Group (Leviton)** – Sends a group command to all Leviton® modules on a given house code.

**House Code** – House code that all the Leviton® Modules are set to.

**Leviton Group Command** – The level that you want all the Leviton® modules set to.

**Transmit Speak Easy** – Allow you to send an audible pre-recorded message from the Speak Easy™.

**Speak Easy** – Allows you to select which Speak Easy™ and which message to play.

**Transmit Ascii String** – Allows you to transmit an ASCII string out the RS-232 port on the Ocelot™

**Constant Entry** – Allows you to select which ASCII string to send.

**Type Selections End:** Ends program. Every program must have an End statement as the last line in the Code Editor.

#### 4.1.3 Entering Comments

The Comment Section on the C-Max™ Code editor allows you to enter text to help tell you what each line does. To enter text, place the mouse on the comment line to the right of the Program Text that you want to add the comment. Click the window with your left mouse button. A Comment window will appear. Type in your comments, then click OK. The text you type will appear where you clicked your mouse. To change existing comments, click anywhere in the comment line that you want to edit with your left mouse button. The existing text will appear on the Comment window. Make the changes necessary click OK with your left mouse button. The modified text will appear in the comment line in the Code Editor.

#### 4.1.4 Cut, Copy and Pasting Code

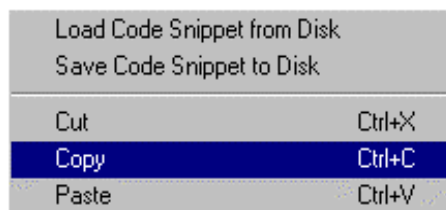
**Cut** – Allows you to delete more than one line of code at a time.

**Copy** – Allows you to place code in memory to place in another part of your program.

**Paste** – Allows you to place code previously copied into your code.

##### 4.1.4.1 Cutting and Coping

- 1) Place your mouse over the first line of code you want to Cut or Copy.
- 2) Press and hold your left mouse button.
- 3) Holding your left mouse button down, drag the mouse up or down until all the code you want to Cut or Copy is highlighted. Release your left mouse button.
- 4) Press and release your right mouse button. The following window will appear:



- 5) Move your mouse over and down until Cut or Copy is highlighted. Press and release your left mouse button.  
If you select cut, the highlighted section will disappear from the code editor. If you select copy, the highlighted section will be placed in memory.

##### 4.1.4.2 Pasting Code

You must first copy a section of code in the editor before you can paste (Refer to Section 4.1.4.1).

- 1) Place your mouse over the line that you want to place the code you copied. Click your left mouse button to highlight that line.
- 2) Press and release your right mouse button. A window will appear to the right.
- 3) Move your mouse over and down until Paste is highlighted. Press and release your left mouse button.

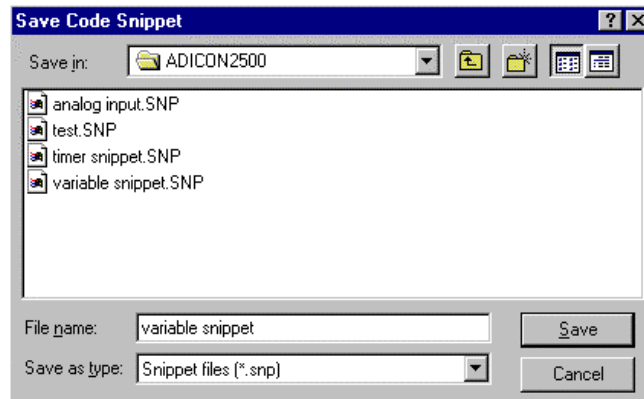
The code you previously copied will be placed in the line you highlighted in step 1. Any code below that line will be pushed down to the end of the pasted code.

## 4.1.5 Code Snippets

A Code Snippet is a section of code that you can save to disk that and use repeatedly.

### 4.1.5.1 Saving a Code Snippet

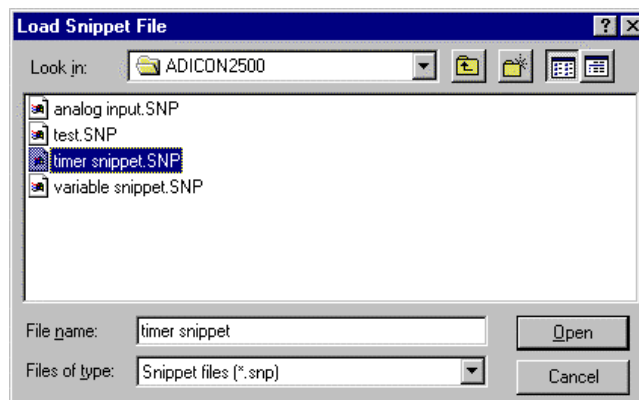
- 1) Place your mouse over the first line of code you want to save.
- 2) Press and hold your left mouse button.
- 3) Holding your left mouse button down, drag the mouse up or down until all the code you want to save is highlighted. Release your left mouse button.
- 4) Press and release your right mouse button. A Window will appear
- 5) Move your mouse over and down until Save Code Snippet to Disk is highlighted. Press and release your left mouse button. The following window will appear:



- 6) Type in the name you want the snippet to be saved as. Click Save with your left mouse button. The code snippet is now saved.

### 4.1.5.2 Loading a Saved Code Snippet

- 1) Place your mouse over the line that you want to place Code Snippet. Click your left mouse button to highlight that line.
- 2) Press and release your right mouse button. A window will appear to the right.
- 3) Move you mouse over and down until Load Code Snippet from Disk is highlighted. Press and release your left mouse button. The following window will appear:



- 4) Double click the Code Snippet file you want to load (or single click the Code Snippet file to highlight it then click OK) with your left mouse button.

The Code Snippet will be placed in the line you highlighted in Step 1. Any code below that line will be pushed down to the end of the pasted code.

## 4.2 Writing Your Program

The program is written using the Control Wizard. The Code Editor will display the written code.

IF, THEN, ELSE AND and OR are used to write the program. The first line in any program should be an IF statement. The IF stated is what generates the condition that the ADICON™ 2500 Series will act on.

#### 4.2.1 Turning on a Relay based on an Input on a SECU-16™

In this example: assume that a SECU-16™ is set at Address 1, and you want to close the first relay when the 1<sup>st</sup> input turns on:

- 1) Click the top line in the Code Editor. This will place the IF statement in the first line
- 2) Click IF with your left mouse button. A black circle will appear to the left of IF and a series of windows will appear to the right.
- 3) Under Type, click Module / Point. A black circle will appear next to Module Point
- 4) Under I/O Point Entry type a 1 in for Module#.

If your SECU-16™ were at address 5, you would enter a 5

- 5) In the Point# window under Module I/O Entry, type a 0.

Remember that all I/O Points on a given module start at 0, so the first input you are monitoring is I/O point 0. The second input would be I/O point 1.

- 6) Click Enter under I/O Point Entry.
- 7) Under I/O Status click Turns ON. A black circle will appear next to turns on.

At this point the following line will appear in the first line in the Code Editor:

If Module# 1/Point# 0 Turns ON

- 8) Click the next line below the first line in the Code Editor. This will allow you to enter the next line of code.
- 9) Click Then with your left mouse button. A black circle will appear to the left of THEN.
- 10) Under Type, click Module / Point. A black circle will appear next to Module I/O point.
- 11) Under I/O Point Entry type a 1 in for Module#.
- 12) In the Point# window under Module I/O Entry, type an 8.

The first relay on a SECU-16™ is I/O Point 8.

- 13) Click Enter under I/O Point Entry.
- 14) Under I/O Status, click Turns ON.

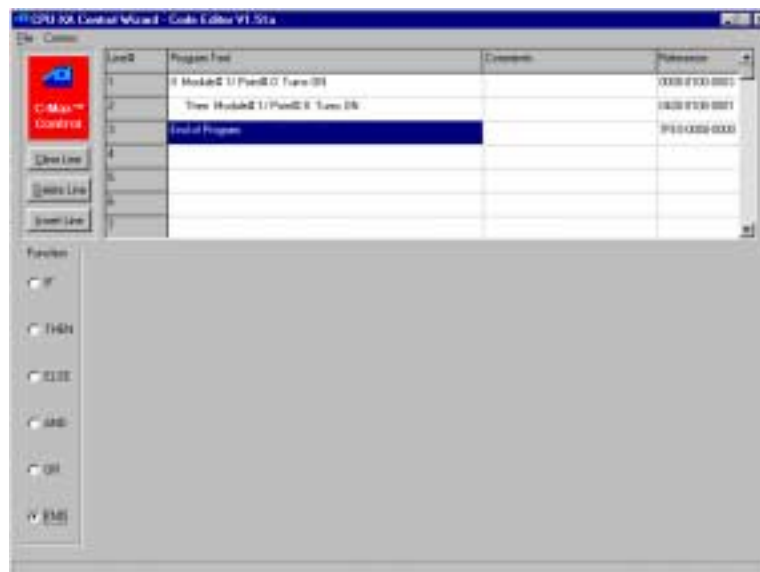
At this point, the 2<sup>nd</sup> line in the Code Editor will read as follows:

Then Module# 1/Point# 8 Turns ON

- 15) Click the line under the Then statement in the Code Editor.
- 16) Click END with your left mouse button.

A Black circle will appear to the left of END. The following line will appear in the third window in the Code Editor: End of Program. Every program must have an End of Program statement as the last line of code. There must only be 1 End of Code statement in any program.

The Code Editor will display the following program when the program is finished:



## 4.2.2 Reading in an Analog Input

Many sensors provide a voltage output base on an external event. A temperature sensor will provide a voltage output based on what the temperature is. As the temperature drops the voltage level out of the sensor will drop. The SECU-16™ or SECU-16I™ can read this voltage level. When the temperature reaches a certain level, the corresponding voltage will reach a certain level. En external even can be triggered, such as turning on a heater or fan.

In this example assume that an SECU-16I™ is set to Address 2 and an RLY8-XA™ is set to Address 4. You want to close the 6th relay on the RLY8-XA™ when the voltage level on the 3<sup>rd</sup> input on the SECU-16I™ reaches 3V:

1) Click the top line in the Code Editor. This will place the IF statement in the first line.  
2) Click IF with your left mouse button. A black circle will appear to the left of IF and a series of windows will appear to the right.

3) Under Type, click Module / Param. A black circle will appear next to Module / Param.

4) Under Parameter Entry type a 2 in for Module#.

5) In the Param# window under Module I/O Entry, type a 13.

Parameter 13 stores the value corresponding to the voltage level for the 3<sup>rd</sup> input (I/O point 2) on a SECU-16™ or SECU-16I™ (refer to Section 4.1.2 under Module / Param).

6) Click Enter under Parameter Entry.

7) Under Operator, click becomes = with your left mouse button. A Black circle will appear next to becomes =.

8) Under Constant Entry, enter a 153.

$3V \times 51 = 153$  (refer to Section 4.1.2 under Module / Param for an explanation of analog input values).

The first line in the Code editor will read as follows:

If Module# 2 / Param 13 becomes = 153

9) Click the next line below the first line in the Code Editor. This will allow you to enter the next line of code.

10) Click Then with your left mouse button. A black circle will appear to the left of THEN.

11) Under Type, click Module / Point. A black circle will appear next to Module I/O point.

12) Under I/O Point Entry type a 4 in for Module#.

13) In the Point# windows under Module I/O Entry, type a 5.

The 6<sup>th</sup> relay on an RLY8-XA™ is I/O Point 5.

14) Click Enter under I/O Point Entry.

15) Under I/O Status, click Turns ON.

At this point, the 2<sup>nd</sup> line in the Code Editor will read as follows:

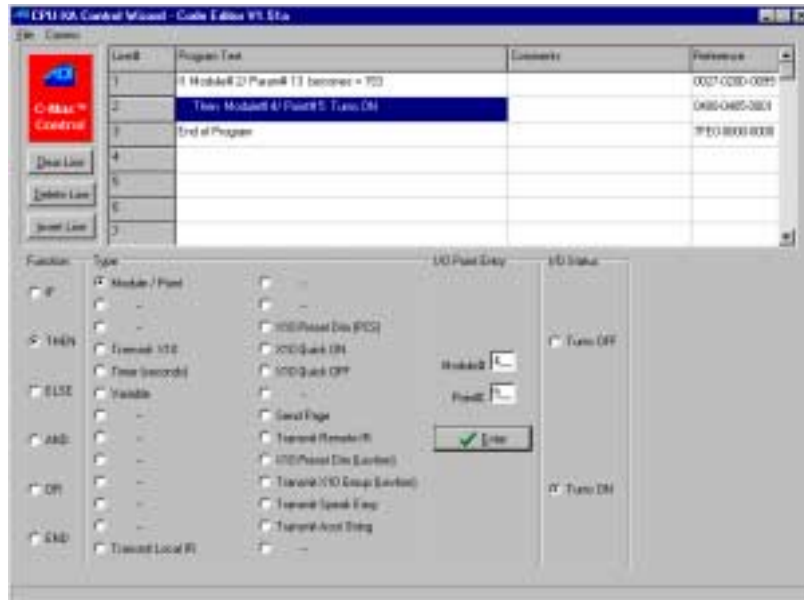
Then Module# 4/Point# 5 Turns ON

16) Click the line under the Then statement in the Code Editor.

17) Click END with your left mouse button.

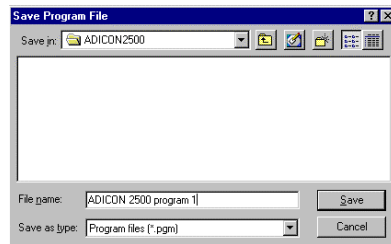
A Black circle will appear to the left of END. The following line will appear in the third window in the Code Editor:  
End of Program. Every program must have an End of Program statement as the last line of code. There must only be 1 End of Code statement in any program.

The Code Editor will display the following program when the previously described program is complete:



### 4.2.3 Saving your file

- 1) Click file with your left mouse button. A window will appear.
- 2) Click Save As with your left mouse button. The following window will appear:



- 3) Type the file name and click Save with your left mouse button.

### 4.2.4 Programming example snippets

#### 4.2.4.1 Sending an X10 Command when an IR is received.

1	If Receive Infra-Red# 1	If I press the Power on my remote
2	Then turn X10 A/1 ON	Then Turn light on.
3	End of Program	(null)

In this example X10 A/1 (X10 Quick On) when Infra Red #1 is received.

#### 4.2.4.2 Send an X10 is a input on a SECU16 turns on

1	If Module# 1/ Point# 0 Turns ON	If Motion Sensor on SECU16 turns on
2	Then turn X10 A/1 ON	Turn Light on
3	End of Program	(null)

In this example assume the SECU-16™ is set to address 1. When the input turns on (as in a motion sensor closing a contact) then X10 A/1 (X10 Quick On) is sent.

#### 4.2.4.3 Executing a Macro when an IR is received

1	If Receive Infra-Red# 5	If power on remote is pressed
2	Then X10 Preset Dim A/4 to Level 6 (19.3%)	Dim Lights
3	Then Transmit Remote Infra-Red# 2 to Module# 2, Zone# 0	Turn on TV
4	Then Transmit Remote Infra-Red# 2 to Module# 2, Zone# 1	Turn on DVD
5	Then Transmit Remote Infra-Red# 3 to Module# 2, Zone# 2	Play Movie
6	End of Program	(null)

In this example, when infrared command 5 is received, An X10 dim command will be sent followed by three infrared commands to turn on the home theater.

#### 4.2.4.4 Sprinkler Application on Sunrise

1	If Time of Day is = Sunrise + 0 minute(s)	When sunrise
2	And Module# 1/ Point# 2 Is OFF	And it is not raining (rain gauge dry)
3	Then Module# 3/ Point# 2 Turns ON	Turn Sprinklers on (RLY8XA)
4	Then Timer 0 is = 1	Start Timer counting
5	If Timer 0 becomes = 900	After 15 minutes
6	Then Module# 3/ Point# 2 Turns OFF	Turn Sprinklers off
7	Then Timer 0 is = 0	Reset timer

In this example assume that an RLY8XA™ is set to address 3 and a SECU-16™ is set to address 1. A rain gauge is connected to input 2 on the SECU-16™. When sunrise occurs, if it is not raining, the relay on the RLY8XA™ will turn on, turning the sprinkler system on. A timer is also started. After 15 minutes, the relay is turned off. The timer is reset after 15 minutes to be ready for the next day.

#### 4.2.4.5 Programming Notes

When programming your Ocelot™ or Leopard™, here are some tips that may help you avoid difficulties:

Avoid using Is =, Is >, Is < unless it is being used in conjunction with another event. The reason for this is that as long as the condition of Is =, Is < or Is > is true, then Then statement will be continually triggered.

If the your first line is If time of day is greater than 1200, and the Next line is Then Transmit X10 A/1 On, as long as the time is greater than 12:00, the Ocelot™ will continually send X10 commands. This will fill the X10 buffer and effectively lock up the system. You should either use Becomes = or use the is greater than condition in conjunction with another condition like an input turning on. Consider the following example:

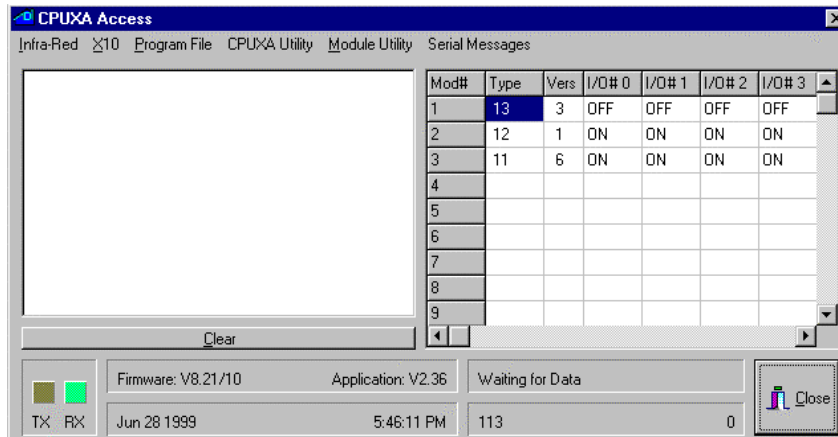
1	If Time of Day is > 18:00	If time is greater than 6:00pm
2	And Module# 1/ Point# 0 Turns ON	And someone drives up
3	Then turn X10 A/1 ON	Turn light on
4	End of Program	

In this example only when the time of day is greater than 6:00 and if a motion sensor turns on will the X10 A/1 command will be sent.

The differences between Becomes= and Is =: Becomes = the Then statement will be triggered at the moment the condition becomes equal to the value indicated. Becomes = is a one time event. Is = means that as long as the condition is equal to a value, the Then statement will be triggered. As a rule, Is = should only be used in conjunction with another event. This same rule should be applied when using Is greater (is >) than, Is Less (Is <) than, Is On, and Is Off.

### 4.3 CPUXA™ Access Screen

The CPUXA™ Access window allows you to control the ADICON™ 2500 Series directly from your computer. You also use the CPUXA™ Access screen to download the program displayed in your Code Editor to the CPUXA™ to execute your program.



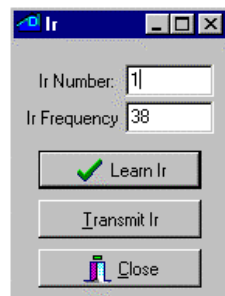
#### 4.3.1 Infra-Red

This section allows you to learn, transmit, receive, upload and download an IR command.

##### 4.3.1.1 Learning a Infra-Red Command

**Note:** If you are using more than one Ocelot™ or Leopard™, each unit must learn the infrared commands that you want that unit to transmit or receive. Each train each unit with different IR commands if you desire. If you have a TV where the master is and a VCR where a slave is, the slave can be programmed for the VCR codes and the Master can be programmed with the TV codes.

1) Click Infra-Red with your left mouse button. A window will appear.



2) Click Learn Infra-Red Command with your left mouse button. The following window will appear:

3) Type in the IR number that you want to save this IR command as.

Make sure that the number you save is a unique number. If you save the IR command as the same number that has been previously saved, the previously save IR command will be lost. It is a good idea to write down what IR number corresponds to what remote signal.

**Note:** You cannot recognize on IR command 0. IR commands 1-80 and be received and acted on and transmitted. IR commands above 80 can only be transmitted. Make certain all IR commands that you want to act on are stored in commands 1-80.

**Note2:** Do not save the same IR in two locations (I.E. store the Power command in IR 3 and 9).

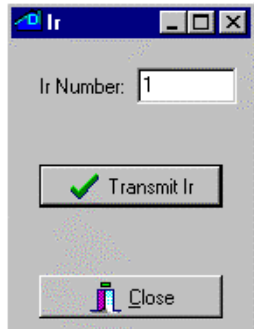
4) Click Learn IR with your left mouse button. The following window will appear:



5) Point your Infra-Red device to the IR receiver and press the button you want to learn. The learning IR window will disappear.

6) To test the IR command, make sure you have an IR emitter connected to the IR Out on the Ocelot™ or Leopard™ and pointed to the IR Receiver on your Device (VCR, TV, etc.) and click Transmit Ir with your left mouse button. The device should respond to the command learned.

Repeat steps 2-6 until all IR commands are learned. Remember you can store up to 512 unique Ir commands in the Ocelot™.



7) Click Close when each IR Command is learned.

A window will appear asking you if you want to save the learned IR to disk. If you do click yes and type the file name that you want the program saved to. If not, click No.

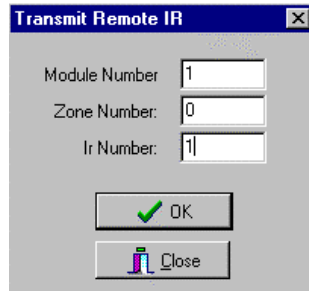
#### 4.3.1.2 Transmit Infra-Red Command

- 1) Click Infra-Red with your left mouse button. A window will appear.
- 2) Click Transmit Infra-Red with your left mouse button. The following screen will appear:
- 3) Enter the Learned IR number you want to transmit.
- 4) Make sure you have an IR emitter connected to the IR Out and pointed to the IR Receiver on your Device (VCR, TV, etc.) on the Ocelot™ or Leopard™ and click Transmit Ir with your left mouse button. The device should respond to the command learned.
- 5) Click Close with your left mouse button to close the Ir window.

#### 4.3.1.3 Transmit Remote Infra-Red Command – Using the SECU-16IR™

The SECU-16IR™ is an ADICON™ 2500 module that connects to the Ocelot™ or Leopard™ in a daisy chain. This allows you to have multiple IR outputs. Make sure that the SECU-16IR™ is connected to the Ocelot™ Leopard™ and that the address is set as described in section 2.1.

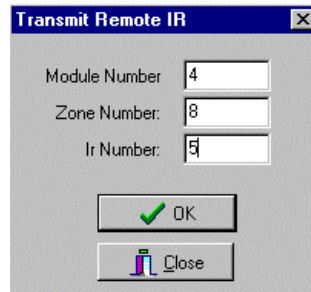
- 1) Click Infra-Red with your left mouse button. A window will appear.
- 2) Click Transmit Remote Infra-Red Command with your left mouse button. The following window will appear:



Module number is the address of the SECU-16IR™ you want to control. If this was the first button you pressed when you auto addressed the series, then this is Module 1, if it is the second button your pressed then this is Module 2 etc. Zone number is the output on the specified module you want to send the IR command out of. If it is the first output, then the Zone Number is 0, if it is the last output, then it is Zone 15. IR number is the IR number learned that you want to transmit.



For example, if you want to send Ir command 5 to module 4 (the SECU-16IR™ that was addressed fourth in the auto addressing procedure) and send the command to the 9<sup>th</sup> Zone on that SECU-16IR™, the numbers will be entered as follows:



Make sure an Ir emitter is connected to the correct output on the SECU-16IR™ and is pointed to the Ir receiving device.

3) Click OK with our left mouse button. The device should respond to the command learned.

Repeat Steps 2 and 3 for each IR command you want to send.

4) Click Close when finished.

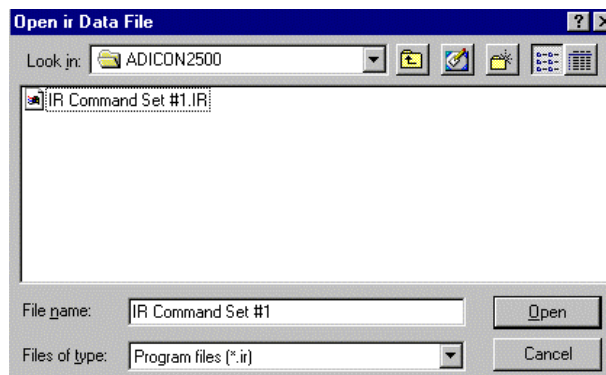
#### 4.3.1.4 Download Infra-Red File to Ocelot™ or Leopard™.

If you have saved a series of IR command to disk, you can load them into the Ocelot™ or Leopard™ from your computer.

**Note:** Down loading a saved Ir file to the CPUXA™ will overwrite all saved Ir commands loaded into the Ocelot™ or Leopard™.

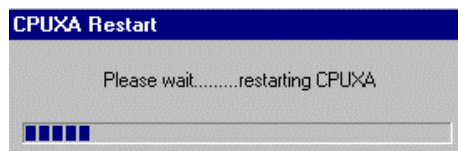
1) Click Infra-Red with your left mouse button. A window will appear.

2) Click Download Infra-Red file to CPUXA™ with your left mouse button. The following window will appear:



3) Highlight the saved Ir file. The file name should appear in the window to the right of File name. Press OK with your left mouse button.

The window to the left will read Sending 256 bytes to various addresses starting at C000. When the file has been sent, the following window will be displayed:



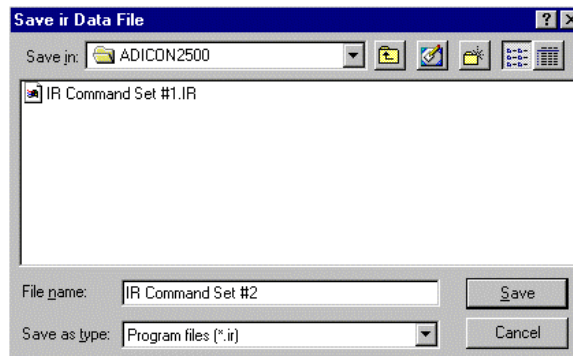
When the Status Bar is done scrolling across the CPUXA™ Restart window, the window will disappear and the Ocelot™ or Leopard™ is ready to transmit Ir.

#### 4.3.1.5 Upload Infra-Red File from the Ocelot™ or Leopard™.

If you have saved a series of IR commands in the Ocelot™ or Leopard™, you can load them from the Ocelot™ or Leopard™ and save them to your computer.

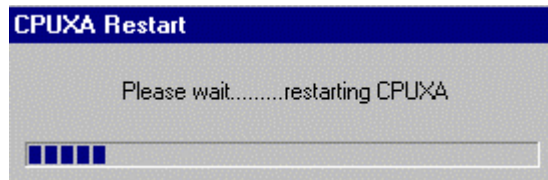
1) Click Infra-Red with your left mouse button. A window will appear.

2) Click Upload Infra-Red file from CPUXA™ with the left mouse button. The following window will appear:



3) Type in the file name you want to save the IR command set to in the window to the right of File name, then click Save with your left mouse button.

Stopping Ocelot™ will appear in the window to the left in the Ocelot™ Access screen. Wait until the following window appears:



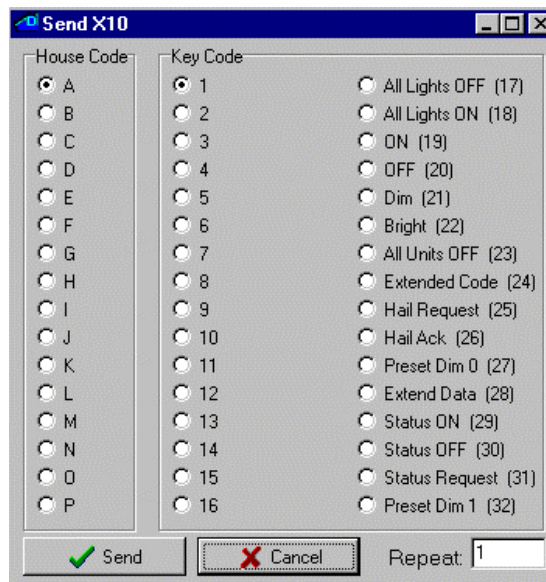
When the Status Bar is done scrolling across the CPUXA™ Restart, the window will disappear and the Ocelot™ or Leopard™ is ready to transmit Ir.

### 4.3.2 X10

This allows you to send and monitor X10 signals.

#### 4.3.2.1 Send X10

- 1) Click X10 with your left mouse button. A window will appear.
- 2) Send X10 with your left mouse button. The following screen will appear:



Each X10 module has a House code and Key Code (also called a Unit Code).

- 3) Click the House Code then the Key Code (1-16) of the device you want to send the X10 Signal to. Click Send with the Left Mouse button.
- 4) Then Click the Key Code designating what you want the unit to do (the list of commands to the right). The device should respond.

For example, if you want to turn on a light whose light module is set to House code C3, you will select House Code C and Key Code 3 with your left mouse button. Click Send with the left mouse button. Then select ON (19) with your left mouse button then click Send again with your left mouse button.

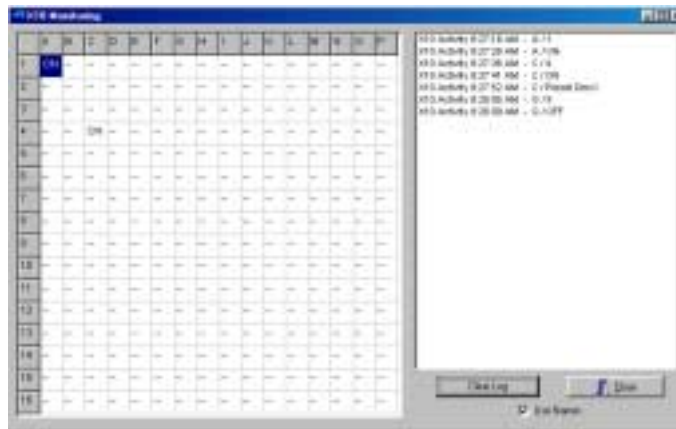
If the device does not respond, type in a number higher than one on the window to the right of Repeat on the lower right corner of the Send X10 window then repeat steps 3 and 4. The command will be repeated that number of times.

5) Click Cancel with the left mouse button when finished.

#### 4.3.2.2 Monitor X10

This option allows you to monitor X10 Activity.

- 1) Click X10 with your left mouse button. A window will appear.
- 2) Click Monitor X10 with your left mouse button. The following window will appear: Any X10 activity will be displayed on this window. Click Close with your left mouse button to close the window.



#### 4.3.2.3 Send Leviton X10

This allows you to set a Leviton® module to a preset level.

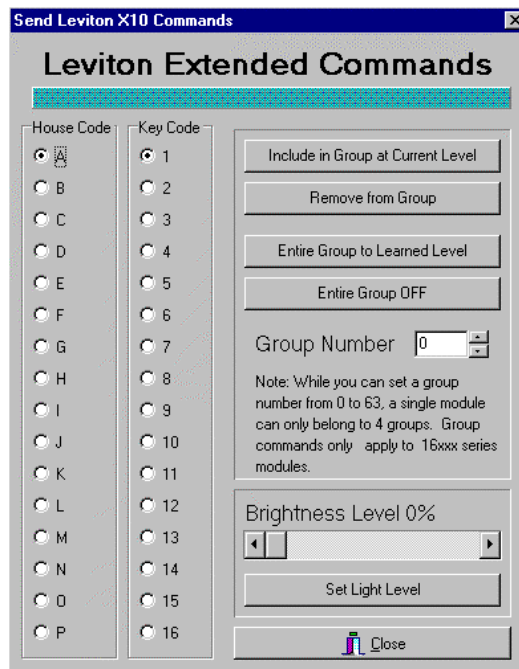
- 1) Click X10 with your left mouse button. A window will appear.
- 2) Click Monitor X10 with your left mouse button. The following window will appear: Any X10 activity will be displayed on this window. Click Close with your left mouse button to close the window.

#### 4.3.2.4 Setting a Leviton® Module to a preset level.

- 1) Click the House Code and the Key Code of the Leviton® module you want to manipulate with your left mouse button.
- 2) Move the Scroll bar on the lower right corner until the desired light level is displayed using your mouse. You can either click the arrows to the Left (Dim) or Right (Bright) with your left mouse button or place your mouse over the square between the arrows, press and hold your left mouse button then slide the bar left (Dim) or right (Bright) until the desired brightness level is displayed. Release the left mouse button once the desired brightness level is displayed.
- 3) Click Set Light Level with your left mouse button.

#### 4.3.2.5 Leviton® Group Commands

Leviton® modules series 16xxx support group commands. These modules can be set to learn a group command, so when that command is issued, every module in that group will brighten or dim to a preset level. Every module in the group must have the same house code. If you want each module in a group to be at different light levels, then each module must have a unique key code.



There are 64 different groups that can be set up. Each module can belong to 4 different groups. For example one light module can be in groups M1, M3, M7, and M9, while another module can be in groups M1, M25, M33, and M60. When group M1 command is issued, both modules will respond. When M3, M7 or M9 group command is issued, only the first module will respond. When group command M25, M33 or M60 is issued, only the second module will respond.

To learn a group command,

- 1) Click the circle to the left of the House Code you want to train with your left mouse button. A black circle will appear in the circle.
- 2) Click the circle to the left of Key Code to select the Leviton® module you want to add to the group. A black circle will appear on the circle.
- 3) Select the Group Number by either typing in the group number to the right of Group Number or click the Up and Down arrows to the right of the white box until the desired group number is displayed.
- 4) Move the scroll bar on the lower right corner until the desired light level you want the Leviton® module preset to is displayed. You can either click the arrows to the Left (Dim) or Right (Bright) with your left mouse button or place you mouse over the square between the arrows, press and hold your left mouse button then slide the bar left (Dim) or right (Bright) until the desired brightness level is displayed. Release the left mouse button once the desired brightness level is displayed.
- 5) Click Set Light Level with your left mouse button. The Leviton® module will respond to that light level.
- 6) Click Include in Group at Current Level with your left mouse button. The Leviton® module is now part of that learned group.

Repeat steps 1-6 until each Leviton® module has learned their groups.

#### 4.3.2.6 Setting a Group to Their Learned Levels

- 1) Click the circle to the left of the House Code you want to train with your left mouse button. A black circle will appear in the circle.
- 2) Select the Group Number by either typing in the group number to the right of Group Number or click the Up and Down arrows to the right of the white box until the desired group number is displayed.
- 3) Click Entire Group to Learned Level with your left mouse button. Every light in that learned group will respond to their learned levels.

#### 4.3.2.7 Turning Off an Entire Group

- 1) Click the circle to the left of the House Code you want to train with your left mouse button. A black circle will appear in the circle.
- 2) Select the Group Number by either typing in the group number to the right of Group Number or click the Up and Down arrows to the right of the white box until the desired group number is displayed.

- 3) Click Entire Group OFF with your left mouse button. Every Leviton® module in the selected groups will turn off.

#### 4.3.2.8 Removing a Leviton® Module From a Group

- 1) Click the circle to the left of the House Code you want to train with your left mouse button. A black circle will appear in the circle.
- 2) Click the circle to the left of Key Code to select the Leviton® module you want to remove from the group. A black circle will appear on the circle.
- 3) Select the Group Number by either typing in the group number to the right of Group Number or click the Up and Down arrows to the right of the white box until the desired group number is displayed.
- 4) Click Remove from group with your left mouse button. That module will no longer respond to that groups command but can be set to another group if desired.

#### 4.3.3 Program File

This allows you to download the program you wrote using your Code Editor and Control Wizard. The program you want to download to the Ocelot™ or Leopard™ must be displayed in the Code Editor.

- 1) Click Program file with your left mouse button. A window will appear.
- 2) Click Download Program in Editor To CPUXA™ with your left mouse button.

The program in the Code Editor will be down loaded into the Ocelot™ or Leopard™. Once this is done, you can turn the computer off and the Ocelot™ or Leopard™ will run the program.

#### 4.3.4 CPUXA™ Utility

##### 4.3.4.1 Setting the Clock on the Ocelot™ or Leopard™

- 1) Double-click the clock on the lower right corner of your monitor and set the PC clock to the correct date and time.
- 2) Click CPUXA™ Utility with your left mouse button. A Window will appear.
- 3) Click Set CPUXA™ Clock to PC Clock with your left mouse button. The window to the left will read Setting CPUXA™ RTC. The clock on the Ocelot™ or Leopard™ is set.

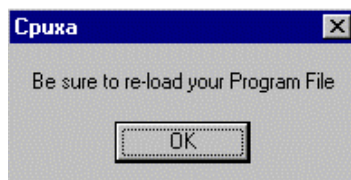
##### 4.3.4.2 Retrieving the time from the Ocelot™ or Leopard™

- 1) Click CPUXA™ Utility with your left mouse button. A Window will appear.
- 2) Click Get CPUXA™ Clock your left mouse button. The window to the left will display the Date and Time stored in the Ocelot™ or Leopard™.

##### 4.3.4.3 Reload CPUXA™ Executive

When you install a new version of C-Max™ Control Wizard software, you will need to load the FLASH512.BIN file into the Ocelot™ or Leopard™. The FLASH512.BIN file is the software inside the Ocelot™ and Leopard™. As features are added to the C-Max® Control Wizard Software, the FLASH512.BIN file loaded in the Ocelot™ and Leopard™ allows them to support the new features.

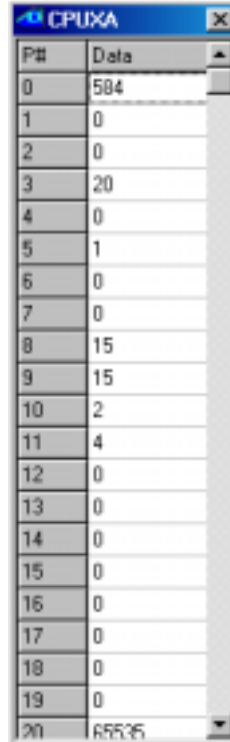
- 1) Click CPUXA Utility with your left mouse button. A Window will appear.
- 2) Click Reload CPUXA Executive with your left mouse button. The new FLASH512.BIN file will be loaded into the Ocelot™ or Leopard™. Once the program is loaded, the following message will appear:



- 3) Click OK with your left mouse button. If you have a program in your Code Editor, you must reload it into the Ocelot™ or Leopard™ (refer to section 4.2.3)

#### 4.3.4.4 CPUXA™ Parameters

Parameters are stored in the Ocelot™ and Leopard™ to set them up in various states. From the CPUXA Utility, click Retrieve CPUXA Parameters with your left mouse button. The following window will appear:



Below are list of the Parameters and their explanations:

**Ocelot™ and Leopard™ Parameter Table**

Parameter #	Data Descriptions	Explanation:
1	not used	
2	Power Mode	1 = low power mode, 0 = normal mode
3	Max Unit	Highest unit number to scan to. This is automatically set after system is auto addressed.
4	Daylight Savings Time Status	1= DST in force, 0 = DST not in force
5	Daylight Savings Time Enable	1 = check for DST, 0 = do not check for DST
6	Auto Touch Response	0 = do not respond. 1 = respond with virtual button match. 2 = respond with grid location (0-59)
7	Rescan Time	Auto rescan in minutes (0 = off)
8	Net Timeout	Time in 1/10ths sec to wait for a module to respond
9	Retry Counter	Give up talking to a module after this many retries.
10	Reserved	
11	Reserved	
12	Reserved	
13	not used	
14	Ocelot™ or Leopard™ #	Ocelot™ or Leopard™ address (Master must be 0, All slaves must have a unique address)
15	Auto X10	Send X10 (0 = off, 1 = on) 0xfe (RX),hc,kc when rx'd 0xfb (TX),hc,kc when tx'd
16	Auto I/O	Send 0xff if remote i/o status has changed (0 = off, 1 = on)
17	Auto ir	Send IR number when compare exists, (0 = off, 1 = on) 0xfd (RX) or 0xfc (TX) , IR number
18	Send ASCII Ir	0 = off, 1 = Send ASCII string on IR recognize +T000xxx. xxx = IR number recognized
19	Leopard	0 = Ocelot, 1 = Leopard

#### 4.3.4.5 CPU Memory Dump

Used for internal use and should not be changed.

#### 4.3.4.6 Auto Address Modules

Refer to Section 2.2.3.

#### 4.3.4.7 Debug Timers and Variables

Allows you to see the status of all the timers and variables stored in the Ocelot™ or Leopard.

### 4.3.5 Module Utility

#### 4.3.5.1 Retrieve Module Parameters

Parameters are values stored in the various modules that store input values and statuses of the various modules. These values should not be changed, but only used to observe.

**Important** – The only parameters that should be needed are parameters 10-25 on SECU-16™s and SECU-16I™s. This is where the analog input values are stored. Changing other parameter numbers may cause the system to operate improperly or not operate at all.

- 1) Click Module Utility with your left mouse button. A window will appear.
- 2) Click Retrieve Module Parameters with the left mouse button. The following window will appear:

Mod#	Param 10	Param 11	Param 12	Param 13	Param 14	Param 15	Param 16
1	32	223	164	223	80	255	19
2	0	0	0	0	0	0	0
3	254	253	254	253	253	253	254
4	0	255	4	227	6	235	2
5							
6							
7							
8							
9							
10							
11							

The numbers displayed represent the input level for that input. For SECU-16™s and SECU-16I™s, this value represents the analog input. To determine the voltage level on that particular input divide the value shown by 51 to determine the voltage level on that input (Refer to Section 4.2.1 under Module / Param).

- 3) Click Close with the left mouse button to exit the Module Parameter Access screen.

#### 4.3.5.2 Set/Clear Relay

This function allows you to turn relays on and off.

- 1) Click Module Utility with your left mouse button. A window will appear.
- 2) Click Set/Clear Relay with the button. The following window will appear:

Set/Clear Relay

Module Number:

I/O Point:

Turn Relay OFF

Turn Relay ON

**Module #** is the module in the daisy chain that you want to control (the module whose first button you pressed when auto addressing the ADICON™ 2500 Series is Module 1, the second module whose button you pressed is Module 2, etc.). **I/O Point #** is the point on that module you want to manipulate. The first point starts at 0. For example the first input on an RLY8-XA™ is Point 0, and the last relay output on a RLY8-XA™ is Point 7. The first relay on a SECU-16™ is I/O point 8, and last relay on a SECU-16™ is I/O point 15.

- 3) Enter the module number you want to control.
- 4) Enter the I/O point corresponding to the relay you want to turn on.
- 5) If you want to turn the relay on, click Turn Relay ON with the left mouse button. A black circle will appear to the left. If you want to turn the relay off, click Turn Relay OFF with your left mouse button.  
The I/O# for that module will reflect that the relay has turned on or off.  
Repeat steps 3-5 for each relay you want to turn on or off.
- 6) When you are done, click Close with your left mouse button.

#### 4.3.5.3 Speak Easy

This allows you to record, play back and save voice recorded messages on the Speak Easy voice module. Once this product is released, this section will be completed.

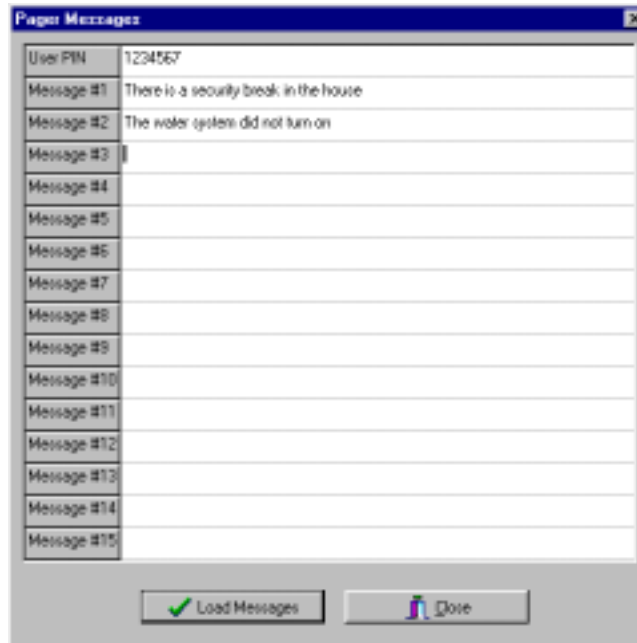
#### 4.3.6 Serial Messages

Serial messages allow you to either use alphanumeric numeric pager to send a page or send an Ascii string to an RS-232 device connected to the DB9 connector on the Ocelot™.

##### 4.3.6.1 Pager Messages

The ADICON™ 2500 can be used to call a pager on an event. An ADNET™ Modem is must be connected to the ADICON® 2500 series.

- 1) Click Pager Messages with your left mouse button. The following screen will appear:



- 2) Type in your User PIN number beside the User PIN window.
- 3) Type in the alphanumeric message you want stored in the Ocelot™ or Leopard™. You can have up to 15 messages. Each message can be up to 64 characters.

Once you have entered all the pager messages you want, click Load Messages with your left mouse button. The Pager Messages window will disappear and the CPUXA Access screen will reappear.

#### Multi-Pager Support

The Ocelot™ and Leopard™ can be set up to dial different pagers. This is ideal for contacting various people if an event occurs.

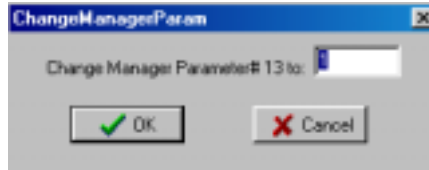
- 1) Set up the ADNET-Modem as described in Section 5.



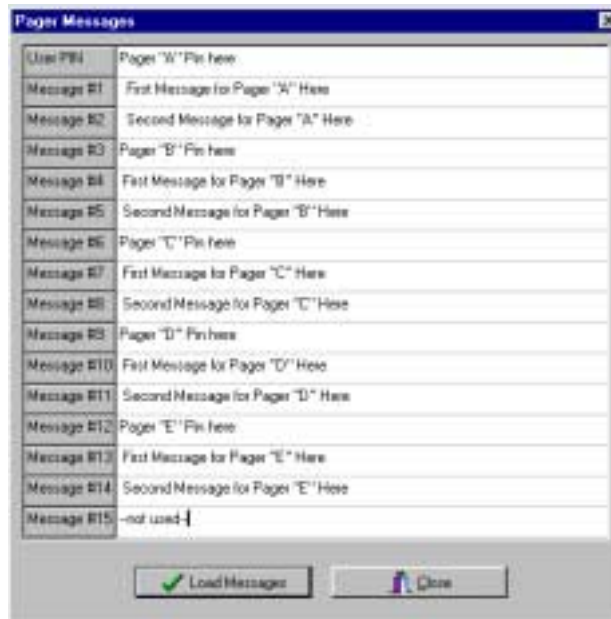
- 2) Connect the Ocelot™ or Leopard™ to the computer.
- 3) In the C-Max software, go to Comms, Attach to CPUXA.
- 4) Click CPUXA Utility then Retrieve CPUXA Parameters with your left mouse button. The following screen will appear:



- 5) Click the window to the right of P# 13 below Data. The following window will appear:



- 6) Type in 1 then click OK with your left mouse button. The CPUXA parameter window will reflect the change.
- 7) Click Serial Messages then Pager Messages with your left mouse button. The Pager Messages Window will appear. The windows labeled PIN#, Message #3, Message #6, Message #9, and Message #12 are used for the PIN numbers for the various pagers you want to page. The windows labeled Message #1, Message #2, Message #4, Message #5, Message #7, Message #8, Message #10, Message #11, Message#13 and Message #14 are used to enter the message being displayed on the various pagers (see window below).



In your code, in you Then statement, the pager message number you indicate to send will automatically determine which PIN number the Ocelot or Leopard will send. If you tell the Ocelot or Leopard to send pager message number 4, then the PIN number in Message #3 will be sent.

Line#	Program Text	Comments
1	If Module# 2/ Point# 0 Turns ON	If 1st input on SECU16 turns on
2	Then Send Page# 1	Page Mike
3	Then Send Page# 2	
4	Then Timer 0 is = 1	Start Timer
5	If Timer 0 becomes = 600	If Mike does not answer in 600 Sec.
6	Then Send Page# 4	Page Dan

In the above example, assume a SECU16 is set to address 2. If the first input on the SECU16 turns on, the first pin number will be paged. If the person does not respond with in 600 seconds, the 2<sup>nd</sup> person will be paged.

#### 4.3.6.2 ASCII Messages

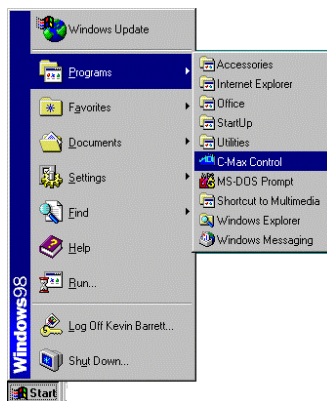
The Ocelot™ and Leopard™ can send an ASCII message based on an event. You can record up to 128 ASCII messages, each message can be up to 32 characters long. At the end of each message when the string is sent, a carriage return will be at the end of the data string marking the end of the string.

- 1) Click Serial messages with your left mouse button. A window will appear.
- 2) Click ASCII Message with your left mouse button.

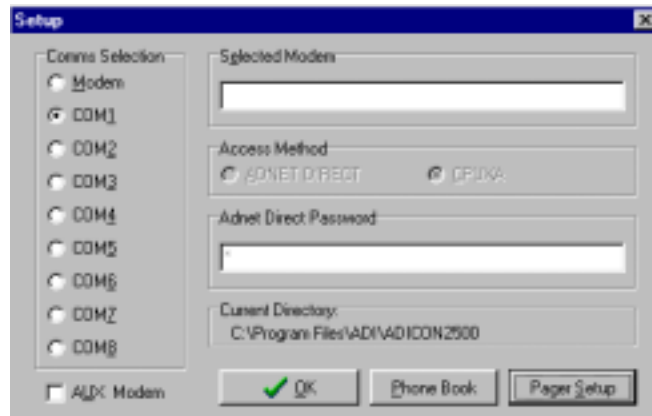
### 5 Setting up the ADNET™ Modem

**Important:** Do not perform this procedure without an ADNET™ Modem connected to your computer. If you perform this procedure with your PC's modem selected as your modem, you will change your modems initialization string and your modem will no longer work properly.

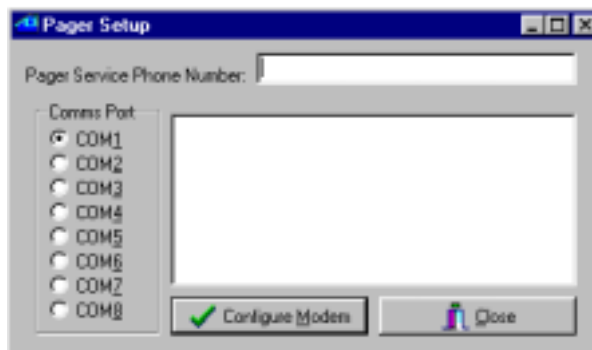
- 1) Attach the ADNET™ Modem to the PC Serial port using the **Straight Through** cable that was provided with the Ocelot™ and Leopard™.
- 2) Apply power to the PC and ADNET™ Modem.
- 3) Click Start with your left mouse button. A Window will appear.
- 4) Move the mouse up to programs. A second window will appear.



- 5) Move the mouse over and down until the C-Max Control icon is highlighted.
- 6) Click C-Max Control with your left mouse button. The C-Max Control editor will appear.
- 7) Click Comms with your left mouse button. A Window will appear.
- 8) Click Comms Setup with your left mouse button. The following window will appear:



9) Click Pager Setup with your left mouse button. The following screen will appear:



10) Click the Com port your **ADNET™ Modem** is connected to on the back of your computer.

11) If you are using a Alphanumeric Pager features:

- A) Select the Edit Box Labeled “Pager Service Phone Number” with your left mouse button.
- B) Enter the Services modem number Exactly as you would dial it (including 1 and area code if necessary). Do not type in dashes, just the numbers (i.e.15556667777)

12) Click Configure Modem with your left mouse button.

A scroll box will appear showing communications activity with the ADNET™ Modem.

13) Look for the phone number you entered, a 0 should follow it. If it is click the Close button with your left mouse button.

If not, check the communication cable for good connection and make sure the ADNET™ Modem has power. You may need to click a different Com Port number.

14) Exit the C-Max Software.

15) Connect the ADNET™ Modem to the Ocelot™ or Leopard™ using a **Null Modem** cable.

16) Connect the Phone line to the RJ-11 phone connector on the ADNET™ Modem.

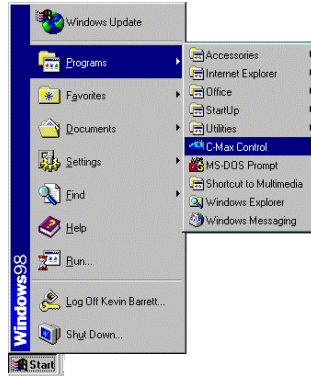
The system hardware is now ready for remote access and or paging.

## 6 Controlling the ADICON™ 2500 from a remote PC

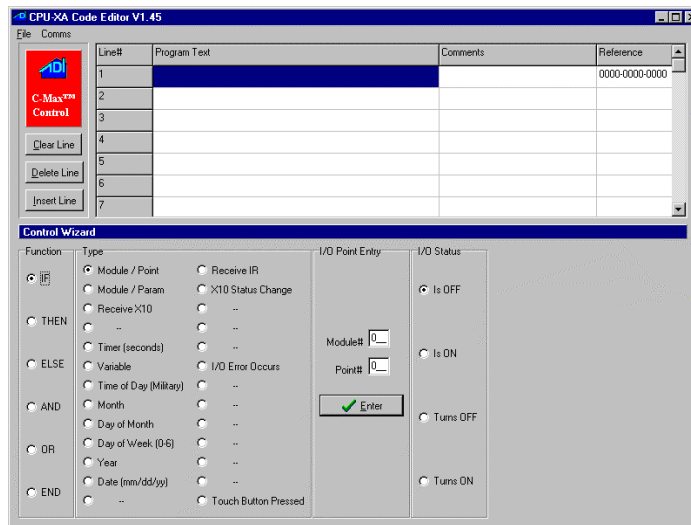
The ADICON™ 2500 Series can be controlled from a remote location. Using a computer’s modem, you can dial into the ADNET™ Modem, which is connected to the Ocelot™ or Leopard™ using a Null Modem cable, and you can control the system as if the Ocelot™ was connected directly to your PC.

- 1) Set up and connect the ADNET™ Modem as described in Section 4.4.1.
- 2) Make sure you have a modem connected to your PC that you are using. Make sure it is properly configured and working (Consult your modem user’s guide).
- 3) Install the C-Max Control Software on your remote computer as described in Section 2.3.
- 4) Click Start with your left mouse button. A Window will appear.
- 5) Move the mouse up to Programs. A second window will appear.

- 6) Move the mouse over to the second window and then move the mouse down until the C-Max™ Control icon is highlighted. Click the C-Max™ Control icon with your left mouse button.

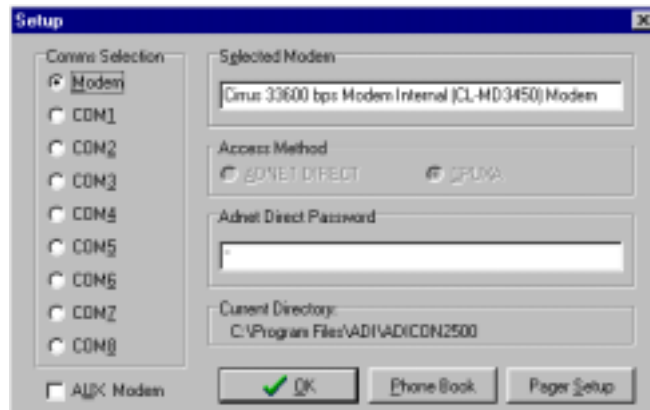


The following screen will appear:



- 7) Click Comms with your left mouse button. A window will appear.

- 8) Click Comms Setup with your left mouse button. The following screen will appear:



- 9) Click Modem with your left mouse button. A black circle will appear to the left of Modem.

- 10) Click in the window below Select Modem. A Device Selection window will appear.

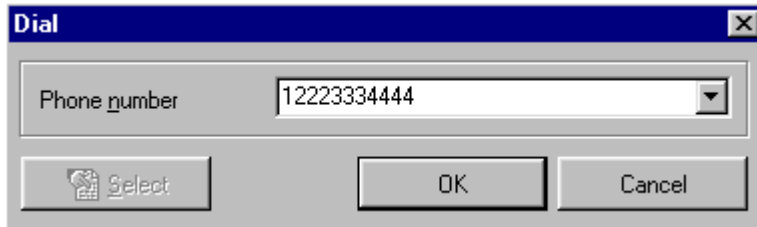
- 11) Click the down arrow and select the installed modem you have on your computer.

- 12) Click OK with your left mouse button.

- 13) Click OK with your left mouse button. Your C-Max™ Control Window will reappear.

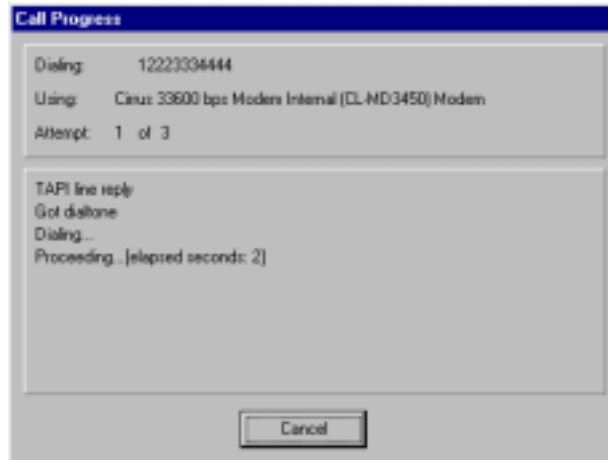
- 14) Click Comms with your left mouse button. A window will appear.

- 15) Click Attach to CPUXA with your left mouse button. The following window will appear:

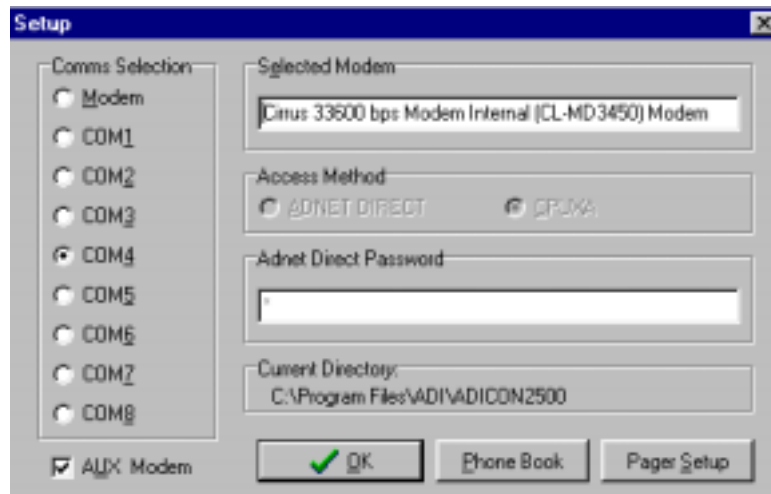


16) Type in the phone number that your ADNET™ modem is connected to. Type in the number exactly as you would dial it (do not type in dashes, just the numbers including 1 and area code if necessary). The following window will appear:

If you have entered a number in the Phone Book and want to dial that number, click the Select button with your left mouse button and select the number you want to dial, then click OK. The number will appear in the phone number window (Refer to Section 6.2 for setting up the Phone Book).



After communication has been established, the CPUXA™ Access screen will appear and you can program and control the ADICON™ 2500 series as if you were connected to a PC right at the location.

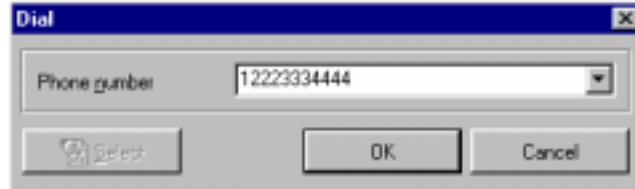


### 6.1 Using the Aux. Modem Option

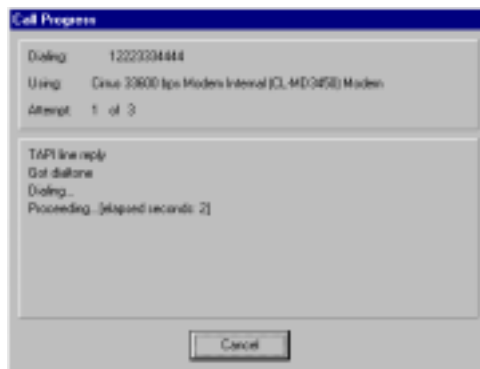
If you have problems where you have trouble connecting to the ADNET™ Modem or get disconnected intermittently, try using the Aux. Modem option in the Comms Setup Window.

- 1) Click Comms then Comm Setup in the Code Editor Window.
- 2) Click the Aux. Modem selection with your left mouse button. A check mark will appear to the box to the left of AUX Modem.

- 3) Click the COM port number that the modem in your computer is set up to (refer the your Windows 95/98/NT user's Guides or Windows Help).
- 4) Click in the window below Selected Modem. A Device Selection window will appear.
- 5) Click the down arrow and select the installed modem you have on your computer.
- 6) Click OK with your left mouse button.
- 7) Click Comms with your left mouse button. A window will appear.
- 8) Click Attach to CPUXA with your left mouse button. The following window will appear:



- 9) Type in the phone number that your ADNET™ Modem is connected to. Type in the number exactly as you would dial it (do not type in dashes, just the numbers including 1 and area code if necessary). The following window will appear:  
If you have entered a number in the Phone Book and want to dial that number, click the Select button with your left



mouse button and select the number you want to dial, then click OK. The number will appear in the phone number window (Refer to Section 6.2 for setting up the Phone Book).

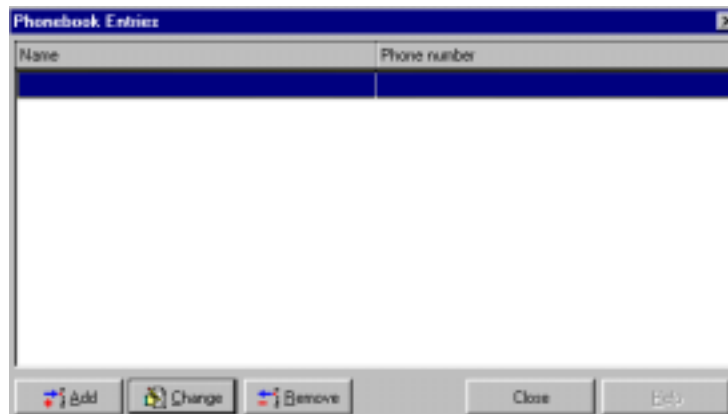
After communication has been established, the CPUXA™ Access screen will appear and you can program and control the ADICON™ 2500 series as if you were connected to a PC right at the location.

## 6.2 Setting up the Phone Book.

The Phone Book can be set up to store many phone numbers to dial into.

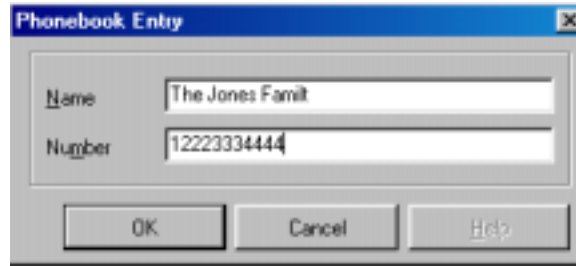
- 1) Click Comms then Comm Setup in the Code Editor Window.

Click Phone book with your left mouse button. The following screen will appear:



### 6.2.1 Adding a New Entry

- 1) Click Add with your left mouse button. The following window will appear:



2) Type in the name and phone number that the ADNET™ Modem is connected to. Type in the number exactly as you would dial it, using 1 and area code if necessary. Do not type in dashes.

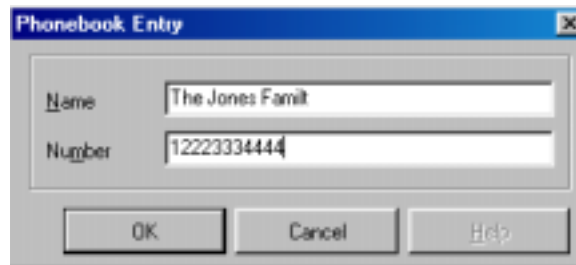
3) Click OK with your left mouse button.

The name and phone number will appear on the next line.

### 6.2.2 Changing an Entry

1) Highlight the Entry to be changed by clicking it with your left mouse button.

2) Click Change with your left mouse button. The following window will appear:

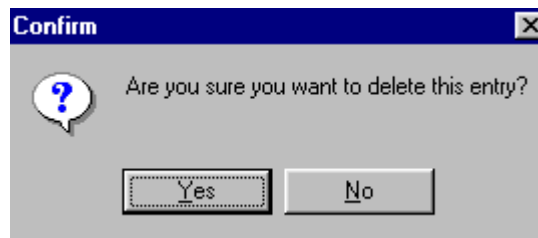


3) Make the necessary changes, then Click OK with your left mouse button. The changed information will appear in the Phone book Entries window.

### 6.2.3 Deleting an Entry

1) Highlight the Entry to be deleted by clicking it with your left mouse button.

2) Click Remove with your left mouse button. The following window will appear:



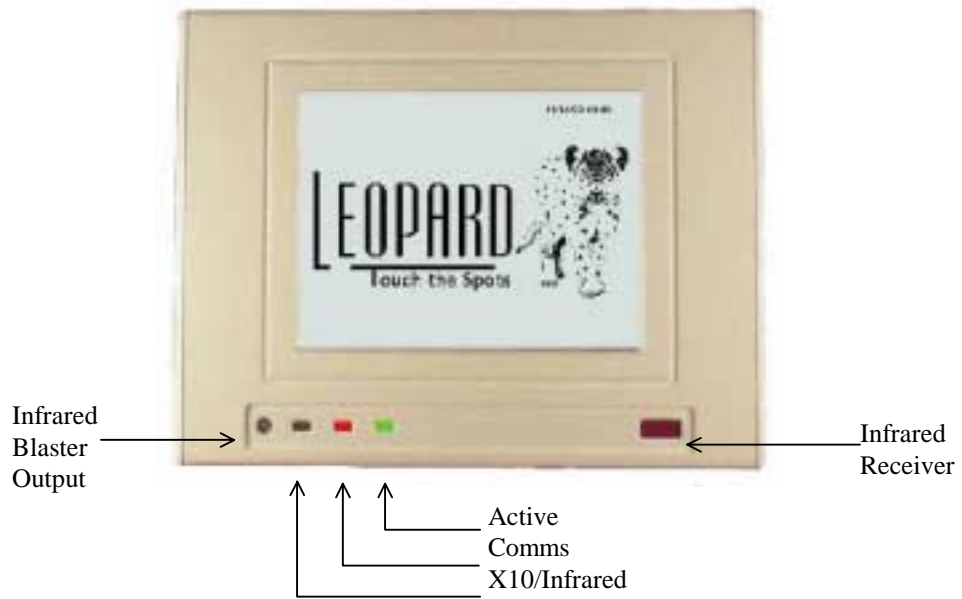
3) Click Yes if you are sure you want to delete the selected Entry. Click No if you do not want to delete the selected Entry.

**Important:** Once an Entry has been deleted, it cannot be recovered. You must re-enter the Entry as described in Section 6.2.1.

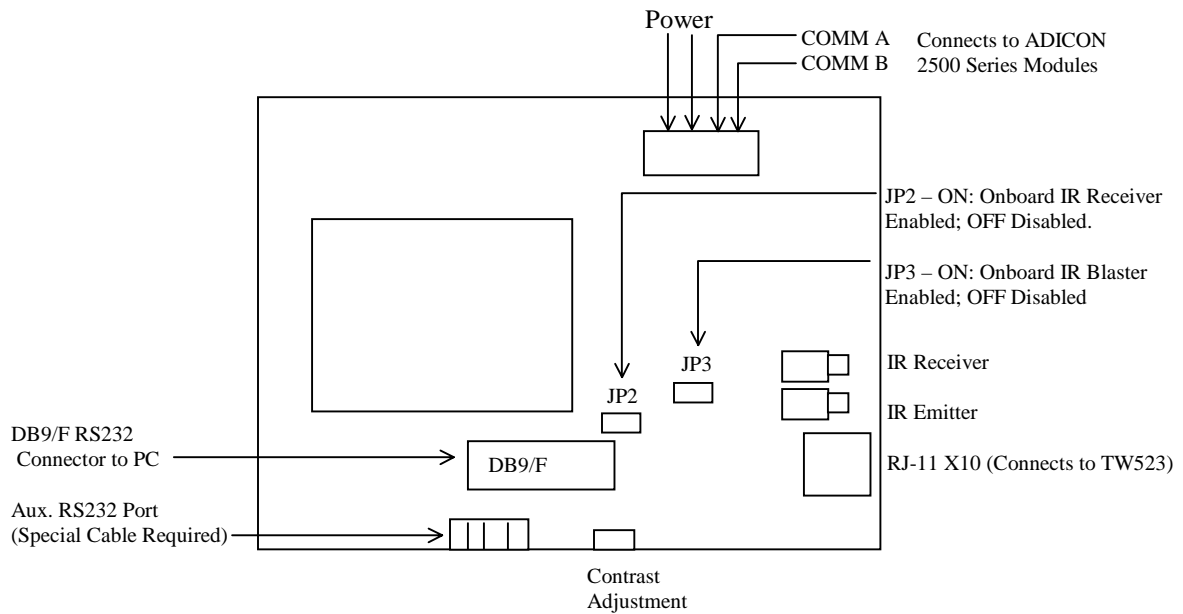
Once you have made all the necessary changes to the Phone Book, click Close.

## 7 The Leopard™ Touch Screen Controller

The Leopard™ has all the features of the Ocelot™ controller, plus a built in IR blaster and has a User definable touch screen controller. All programming using the C-Max software is the same for the Leopard™ as it is for the Ocelot. This section describes how to set up the touch screen and any settings that are unique to the Leopard.

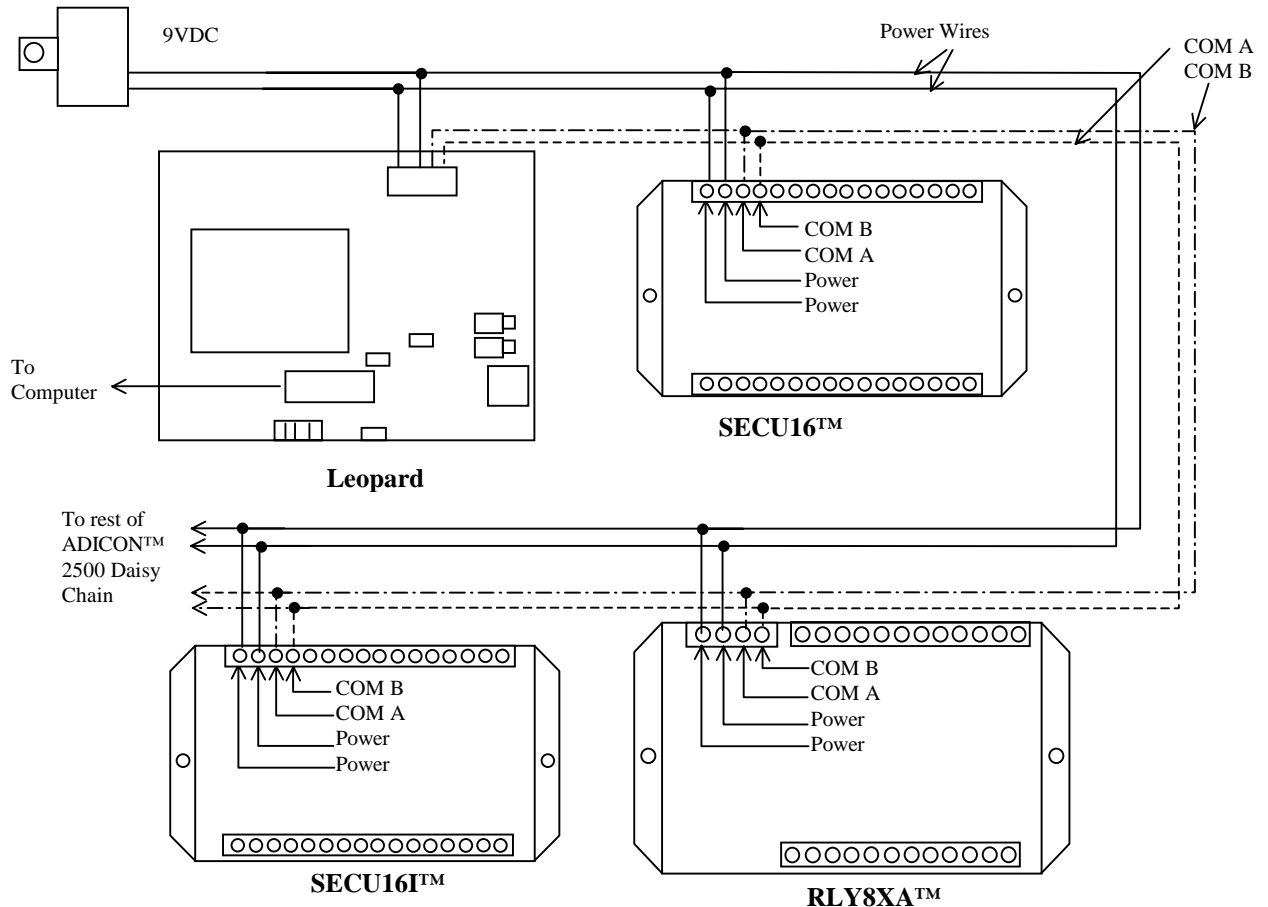


**Leopard™ Rear View**





## Connecting the Leopard™ to the ADICON 2500 Series



### 7.1 Auxiliary IR Input and Outputs

The Leopard™ comes with a built in Infrared Receiver input and Blaster output. However, you can connect an IR emitter and receiver cable to the Infrared ports on the back of the Leopard.

To use the Auxiliary Infrared output, remove the jumper from JP3. You can then connect a standard IR output cable to the infrared output connector on the back of the Leopard. To use the onboard blaster, place the jumper back on JP3.

To use the Auxiliary Infrared input, remove the jumper from JP2. You can then connect an Applied Digital, Inc. IR receiver cable to the infrared output connector on the back of the Leopard. To use the onboard receiver, place the jumper back on JP2.

**Note:** You must use Applied Digital, Inc. IR receiver cable to receive infrared on the Auxiliary Infrared Receiver.

### 7.2 Auxiliary RS232 Connector

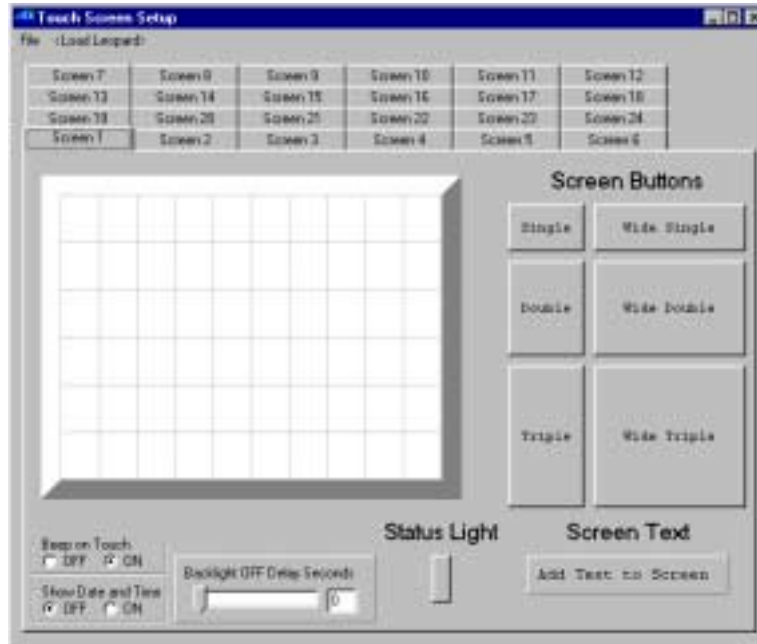
Once the Leopard™ is placed in the wall, you can connect a cable to a small three-pin connector at the bottom the Leopard™ (Cable available from Applied Digital, Inc.). The other end connects to a standard RS232 cable. This way, you will not have to take the Leopard™ out of the wall if you want to connect it to a computer.

### 7.3 Contrast Adjustment.

If when you apply power to the Leopard™ the display looks completely dark or the image is too light, use a small screwdriver and turn the contrast adjustment at the bottom of the Leopard™ until the display is correct. You may need to adjust it again after the display has been on for some time.

## 7.4 Setting up the Leopard™ Touch Screens.

From the C-Max Code editor, click Comms with your left mouse button. A window will appear. Click Touch Screen Setup with your left mouse button. The following screen will appear:



## 7.5 Description of the Touch Screen Setup Window

The upper left of the screen provides 2 options: File and <Load Leopard>.

**File** – The following options are available:

**New** – Clears all objects on every screen.

**Open Touch Screen File** – Opens a saved touch screen file.

**Save Touch Screen File As** – Saves the current touch screen to disk.

**Open Bitmap File** – Opens a bit map file and displays it on screen.

**Load Bitmap to Leopard™** – Loads the bitmap file into the Leopard.

**<Load Leopard>** - Loads the screens you have set up into the Leopard™ touch screen controller.

**Screens** – There are 25 screens available: 0-24. Screen 0 is reserved to load a bitmap file on power up. On power up, the bitmap stored in screen 0 will be displayed. To load this, Variable 63 must be set to 0.

**Objects** – Every button, text or status light is an object. Every object has a number associated with it (Object 1, 2 3 etc.). When you move your mouse over the object, the tag will appear revealing the number of that object.

**Buttons** – There are six sizes of buttons: Single, Double, Triple, Wide Single, Wide Double, and Wide Triple. These can be labeled and placed anywhere on the touch screen.

**Screen Text** – Allows you to add text to a screen.

**Status Light** – Can be attached to an X10 device or ADICON Module I/O point to reflect the status of a device.

**Backlight Off delay Seconds** – Allows you select the delay time between touch screen activity and when the backlight will turn off. If this value is set to 60, if the screen is not touched within 60 seconds, the backlight will automatically turn off. Touching the screen turns the backlight back on. Setting this value to 0 will keep the backlight on continually. Either slide the bar to the right or type the time in seconds on the window to the right.

**Beep on Touch** – If On, the Leopard™ will beep each time the screen is touched. If OFF, the Leopard™ will not beep each time the screen is touched.

**Show Date and Time** – If ON, will show the date and time on each screen. If OFF, the Leopard™ will not display the date and time.

## 7.6 Configuring the Screens

### 7.6.1 Selecting the Screen

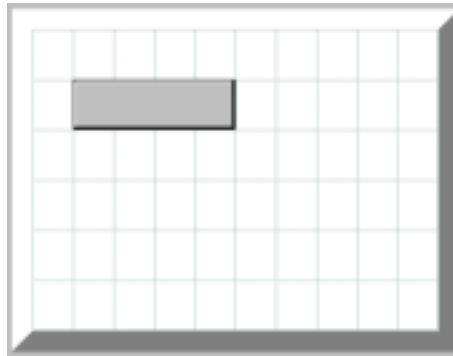
Place your mouse over the Screen Number Tab and click it with your left mouse button. That screen will appear to the forefront.

### 7.6.2 Placing and Editing Buttons

#### 7.6.2.1 Placing Buttons

- 1) Select the button you want to add by clicking it with your left mouse button. The button will appear on the upper left corner of the touch screen.
- 2) Using your left mouse button, move the button to the desired location.

**Note:** The touch screen is divided into 60 sections or points. For best results, place the button so that it covers an entire section as shown below:

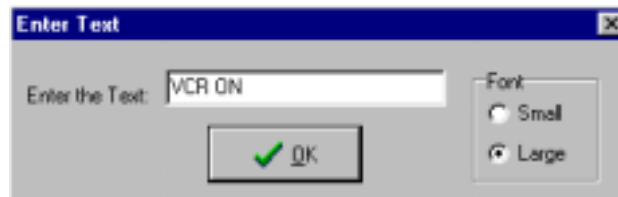


#### 7.6.2.2 Naming Buttons

- 1) Place your mouse over the desired button and click your right mouse button. A window will appear as follows:

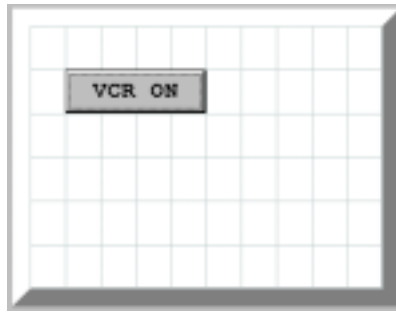


- 2) Move the mouse down until 'Enter Caption' is highlighted and press your left mouse button. The following window will appear:



- 3) Type in the title of the button.
- 4) Select font size of the text by clicking the circle to the left of Small or Large on the right side of the Enter Text window.
- 5) Click OK with your left mouse button.

The button will reflect the text you typed in as shown.



### 7.6.2.3 Deleting Buttons

Click the button you want to delete with your right mouse button. A window will appear. Click Delete Button with your left mouse button. The button will be deleted.

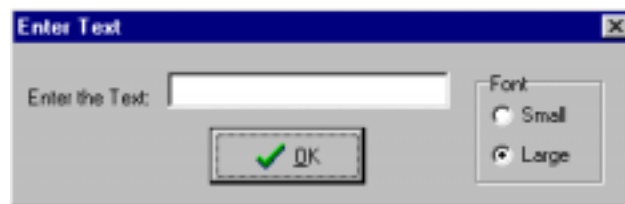
**Note:** If you delete an object whose number is between two existing objects, the next object added will take the deleted objects number designation. For example: if you currently have objects 1,2 and 3 and you delete object 2, the next button you add will be designated object 2.

### 7.6.3 Adding Text to Screen

Click the Add Text to Screen button with your left mouse button. The word Text will appear on the upper left corner of the touch screen. Using your mouse to click and drag the text to where you want it positioned on the touch screen.

#### 7.6.3.1 Editing Text

1) Place your mouse over the text and click your right mouse button. A window will appear. Move your mouse down until Enter Text is highlighted and click it with your left mouse button. The following window will appear:



2) Type in the text you want to add to the screen.

3) Select font size of the text by clicking the circle to the left of Small or Large on the right side of the Enter Text window.

4) Click OK with your left mouse button. The text you typed in will be displayed on the touch screen.

#### 7.6.3.2 Deleting Text

Place your mouse over the text you want to delete and press your right mouse button. A window will appear. Move the mouse down until Delete Text is highlighted and click your left mouse button. The selected text will be deleted.

**Note:** Text on the touch screen is an object. If you delete an object whose number is between two existing objects, the next object added will take the deleted objects number designation. For example: you currently have objects 1,2 and 3 and you delete object 2, the next button you add will be designated object 2.

### 7.6.4 Adding a Status Light

The status light will show the status of either an X10 device or I/O point of a given ADICON™ 2500 module.

1) Click Status Light with your left mouse button. A Status light will appear on the upper left corner of the display.

2) Place your mouse over the status light and click and drag it to where you want it located.

3) Release the mouse button when it is placed.

#### 7.6.4.1 Deleting a Status Light

Place your mouse over the Status light you want to delete and press and release your right mouse button. A window will appear. Move the mouse down until Delete Light is highlighted. Press and release Delete light with your left mouse button. The Status light will be deleted.

**Note:** A Status light on the touch screen is an object. If you delete an object whose number is between two existing objects, the next object added will take the deleted objects number designation. For example: you currently have objects 1,2 and 3 and you delete object 2, the next button you add will be designated object 2.

#### 7.6.4.2 Assigning an X10 device to a Status Light

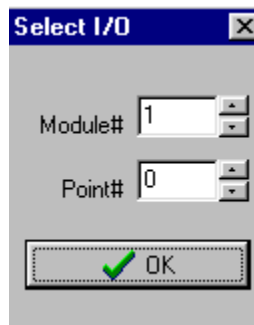
Place your mouse over the Status light you want to delete and press and release your right mouse button. A window will appear. Move the mouse down until Attach X10 Status is highlighted. Press and release Attach X10 Status with your left mouse button. The following window will appear:



Select the House group and Key group you want the Status light to reflect. Click OK with your left mouse button.

#### 7.6.4.3 Assigning an I/O Status to a Status Light

Place your mouse over the Status light you want to delete and press and release your right mouse button. A window will appear. Move the mouse down until Attach I/O Status is highlighted. Press and release Attach I/O Status with your left mouse button. The following window will appear:



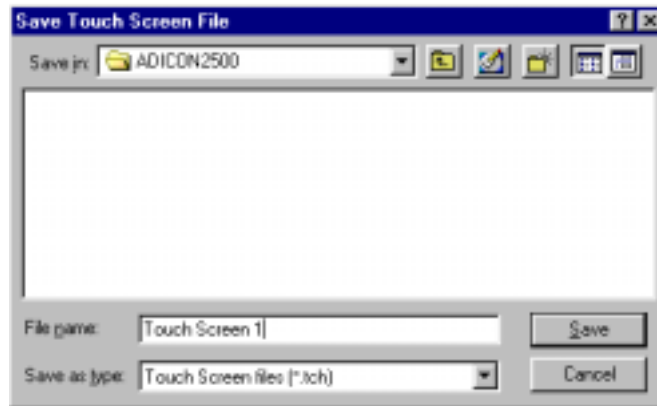
Enter the Module Number (the address of the Module) and the I/O point to want the Status light o reflect. Click OK with your left mouse button.

### 7.7 Loading the Screens into the Leopard

Once your screens are setup, you must load them into the Leopard™ Touch Screen Controller. Click <Load Leopard> with your left mouse button. This will load the screens into the Leopard.

### 7.8 Saving your Screens to Disk

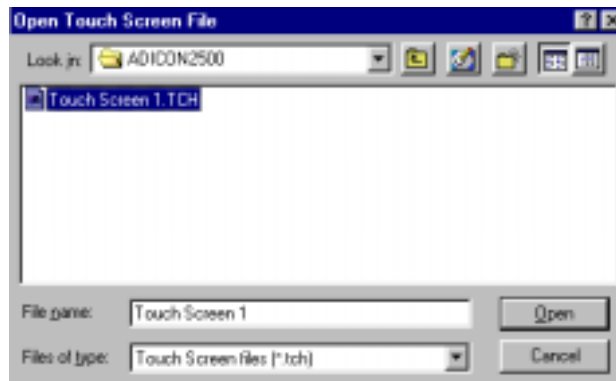
Click file with your left mouse button. A window will appear. Move your mouse down until Save Touch Screen File As is highlighted and click your left mouse button. The following window will appear:



Type in the name of your touch screen file and click Save with your left mouse button.

### 7.9 Opening a Saved Touch Screen File

Click file with your left mouse button. A window will appear. Move your mouse down until Open Touch Screen File is highlighted and click with your left mouse button. The following screen will appear:



Double click the file you want to open with your left mouse button (or highlight the file you want to open then click Open with your left mouse button). The saved touch screen will be displayed on your screen.

### 7.10 Loading a Bit Map file into the Leopard

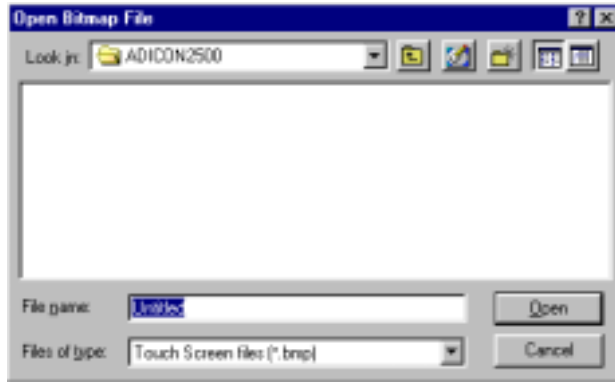
A black and white bitmap file can be loaded into the touch screen. Once loading the bitmap file, upon applying power to the Leopard, the touch screen will first show the Leopard™ logo then your bit map file. You can use Windows Paint to any third party graphics program to create your bitmap program. The Bit Map image must be black and white (NOT gray scale) and be 320x240 in resolution. The top 17 lines must be left blank, as they are reserved for displaying the time and date on the display.

To load the bitmap file into the Leopard, three steps must be accomplished:

- 1) Open the bitmap file
- 2) Load the bitmap file into the Leopard
- 3) Set parameter 63 to 0 to make the bitmap appear on the display once power is applied to the Leopard.

#### 7.10.1 Opening the Bitmap File

1) Click file with your left mouse button. A window will appear. Move your mouse down until Open Bitmap File is highlighted on the display. The following window will appear:



2) Click the down arrow to the right of Look in and find your bit map file (for convenience purposes, when you create your bitmap file, save the file in the Program Files\ADI\ADIC2500 directory on your computer. The Open Bitmap window will then point directly to your bitmap file).

3) Once you find your bitmap file, double click it with your left mouse button (or highlight the filename with your left mouse button then click Open).

The bitmap file will appear on Screen 1 along with whatever objects you have set up on Screen 1 on your computer's display.

**Note:** Even though the bitmap file appears on Screen 1, when you load the bitmap file into the Leopard, it will not be displayed on screen 1 on the Leopard™ on your screen.

### 7.10.2 Loading the Bitmap File

Click File with your left mouse button. A window will appear. Move your mouse down until Load Bitmap to Leopard™ is highlighted and click your left mouse button. The bitmap file will then be loaded into the Leopard.

### 7.10.3 Setting Parameter 63 to 0 in the Leopard

Parameter 63 determines what screen the Leopard™ will display. To display your bitmap upon applying power to the Leopard, the first thing that should be done in your code is to set parameter 63 to 0 as shown in the window below:

Line#	Program Text	Comments
1	If Timer 0 is = 0	Show bitmap on power
2	Then Variable 63 = 0	

There will be other line below this that continues your program. On power up all timers are set to 0. Therefore upon power up, the bitmap file that you loaded into the Leopard™ will be displayed. Pressing the screen anywhere on the display will cause the Leopard™ to display screen 1.

## 7.11 Programming Hints Using the Leopard

- 1) Variable 63 determine what screen is displayed.
- 2) When writing your code, "If Touch Button Module #0 Button #1 is pressed" means if object 1 is pressed (regardless of whether object 1 is a button or text), the Then statement below that If statement will be executed.

### 7.11.1 Example 1: Going to a Screen if a button is pressed

If Touch Button on Module 0, Button 1 is pressed	If TV Control Button is pressed
Then Variable 63 = 2	Go to TV control Screen

In this example, Object 1 has been labeled "TV Control". Screen 2 on the Leopard™ has been set up as the TV control screen. When the TC Control button is pressed, the Leopard™ will then go to the TV Control screen. In this manner you can go from screen to screen.

### 7.11.2 Example 2: If Touch Screen Button is Pressed, Control Theater

If Touch Button on Module 0, Button 5 is pressed	If Start Movie Button is pressed
Then Transmit Infra-Red# 1	Turn on TV
Then Transmit Infra-Red# 2	Turn on DVD
Then Transmit Infra-Red# 3	Play Movie
Then X10 Preset Dim A/1 to Level 2 ( 6.4%)	Dim lights

In this example, assume that learned IR 1 is TV power; Learned IR 2 is DVD power; Learned IR 3 is DVD Play; and Object 5 is labeled Start Movie. When the Start Movie button is pressed on the Leopard, IRs 1, 2, and # will be transmitted and the lights controlled by X10 at house code A/1 will be dimmed to 6.4%.

## 8 Using Multiple Ocelots™ and Leopards™

You can have up to 128 modules in a single ADICON 2500 installation. 1 Leopard™ or Ocelot™ must be a master (parameter 14 on the Ocelot™ or Leopard™ Set to 0). Each additional Ocelot™ or Leopard™ is a slave unit. A slave Ocelot™ or Leopard™ is another module on the ADICON 2500 daisy chain. Each additional Ocelot™ or Leopard™ must have a unique address. There can only be 1 Master in a single installation.

If you have any ADICON 2500 modules other than slave Ocelots or Leopards (SECU16, SECU16I, SECU16IR, RLY8XA), auto address them first as described in Section 2.2.3.

**Note:** Only the Master Ocelot™ or Leopard™ can read and manipulate modules on the ADICON 2500 daisy chain. Slave units can receive and Send IR and send and receive X10.

### 8.1 Connecting Additional Ocelots and Leopards

Wire the slave Ocelots and Leopards in the daisy chain as you would any other ADICON™ 2500 Series module. Provide power to the unit.

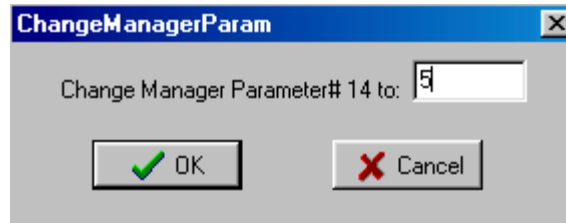
### 8.2 Setting the address on a Leopard™ or Ocelot.

- 1) Connect the Ocelot™ or Leopard™ you want to set the address on to your computer and apply power to the unit.
- 2) In the C-Max software, Click Comms Setup, Attach to CPUXA with your left mouse button. The CPUXA Access screen will appear.
- 3) Click CPUXA Utility then Retrieve CPUXA Parameters with your left mouse button. The following window will appear:



P#	Data
0	584
1	0
2	0
3	20
4	0
5	1
6	0
7	0
8	15
9	15
10	2
11	4
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	65535

4) Click the Window to the right of 14 below Data with your left mouse button. The Change Manager Param window will appear:



5) Type in the address that you want the Ocelot™ or Leopard™ to be. Make sure it is a unique address. If your various ADICON 2500 Modules are addressed 1-4, the address on the slave Ocelot™ or Leopard™ must be at least 5.

6) Click OK with your left mouse button. The data beside parameter 14 will change to reflect the address you typed in. Repeat Steps 1-5 for each slave Ocelot™ or Leopard™ you want to connect in your installation. Remember, each Ocelot™ or Leopard™ must have a unique address.

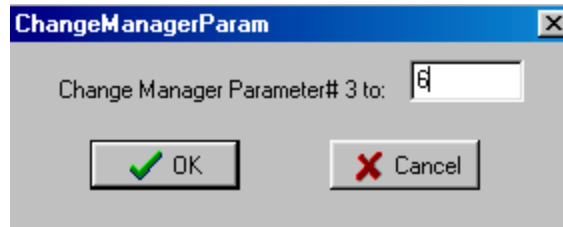
### 8.3 Setting the Maximum Unit number on the Master Ocelot™ or Leopard.

When Auto addressing is completed (Section 2.2.3), the maximum unit number is automatically set to 1 number higher than the number of modules you have (if you auto addressed 4 SECU16s, the maximum unit setting on the Master Ocelot™ or Leopard™ will be set to 5). After you address each additional Ocelot™ and Leopard™ you are going to have, you must set the maximum unit number of the Master Ocelot™ or Leopard™ to be equal to or higher than the highest address you set.

- 1) Connect the Ocelot™ or Leopard™ you want to set the address on to your computer and apply power to the unit.
- 2) In the C-Max software, Click Comms Setup, Attach to CPUXA with your left mouse button. The CPUXA Access screen will appear.
- 3) Click CPUXA Utility then Retrieve CPUXA Parameters with your left mouse button. The following window will appear:

P#	Data
0	584
1	0
2	0
3	20
4	0
5	1
6	0
7	0
8	15
9	15
10	2
11	4
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	65535

4) Click the Window to the right of 3 below Data with your left mouse button. The Change Manager Param window will appear:



5) Type in the maximum unit number. Make sure that the number you type in is equal to or higher than the highest address you have set. If your addresses are 1,2,3,4,5,9 then Maximum Unit Value must be set to at least 9.

Click OK with your left mouse button. The data beside parameter 3 will change to reflect the address you typed in.

#### 8.4 Programming Slave Ocelots and Leopards using variables.

Programming slave units is very similar to programming the master unit. If-Then-Else programming is used to manipulate IR and X10. Slave units cannot read other slave units. The master unit can read IR directly from the slave units and can also read the variables of the slave units. So if you want the master unit to act on an event such as if the slave unit received an X10, in your slave code simply, set as variable on the event as the example shows below:

Line#	Program Text
1	If X10 A/1 On Command
2	Then Variable 1 = 1

In this example, if the slave receives a on command pair A1/A19, it will set Variable 1 to 1.

The master unit uses parameter numbers to read the slave units variables. This can then be acted upon to cause an event. Below is an example of code for a Master unit to read and act on the condition stated in the above example:

Line#	Program Text	Comments
1	If Module# 6/ Param# 1 becomes = 1	If V1 in Ocelot #6 Turns on
2	Then Module# 2/ Point# 9 Turns ON	Turn on 2nd relay on SECU16

In this example assume that the Address of the slave unit is set to 6 and a SECU16 is set to address 2. When variable 1 on the slave unit becomes equal to 1, the relay on the SECU16 will turn on. In this way, a Master Ocelot™ or Leopard™ can trigger on a module based on what happens on a slave Ocelot™ or Leopard.

#### 8.4.1 Reading an IR on a Slave Ocelot™ or Leopard™

A Master Ocelot™ or Leopard™ can directly read when an Infrared has been received on a slave unit. Variables do not need to be manipulated. Below is an example of reading an infrared signal received on a slave Ocelot™ or Leopard.

Line#	Program Text	Comments
1	If Receive Remote Infra-Red# 8 from Module# 6	If IR 8 is received on Leopard#6
2	Then Module# 1/ Point# 2 Turns ON	Turn on 2nd relay on RLY8XA

In this example, assume the slave Ocelot™ or Leopard™ is set to address 6 and a RLY8XA is set to address 1. The slave unit receives IR number 8, the master Ocelot™ or Leopard™ can then turn on a relay on the RLY8XA.

Remember, the IR in the slave units do not have to be the same as the IR in the slave units. In the above example, the Ocelot™ or Leopard™ must learn the IR that it is going to receive and be stored in that IR.

#### 8.4.2 Sending out a IR on a slave from a master Ocelot™ or Leopard™

A master Ocelot™ or Leopard™ can command a slave unit to transmit a learned IR. In this situation, the learned command in the slave unit will be transmitted.

Line#	Program Text	Comments
1	If Module# 2/ Point# 0 Turns ON	If SECU16 input 1 turns on
2	Then Transmit Remote Infra-Red# 5 to Module# 6, Zone# 0	Ocelot #6 transmit IR #5

In this example, assume a slave Ocelot™ is set to address 6 and a SECU16 is set to address 2. If the first input on the SECU16 turns on, IR #5 learned in the slave Ocelot™ will be transmitted.

#### 8.4.3 Reading a Button pressed on a remote Leopard™

A master Leopard™ can read when a button was pressed on a Slave Leopard™ and act on it. In this situation, you can control an event anywhere on the ADICON 2500.

Line#	Program Text	Comments
1	If Touch Button on Module 8, Button 2 is pressed	If Leopard#8 VCR On is pressed
2	Then Transmit Infra-Red# 8	Transmit IR to turn on VCR

In this example assume that the slave Leopard™ is set to address 8. When the VCR button on the salve Leopard™ is pressed, the Master Leopard™ will then transmit IR 8. The infrared #8 being sent is the one stored in the Master Leopard.

## 9 Setting up Daylight Savings Time

The Ocelot™ and Leopard™ can be set up to automatically account for daylight savings time. Daylight Savings time begins on the first Sunday in April (the clock is set 1 hour ahead) and ends on the last Sunday in October (the clock is moved back 1 hour).

## 9.1 Setting up for Daylight Savings Time.

From the C-Max Code editor screen, Click Comms with your left mouse button.

Click Comms Setup with your left mouse button.

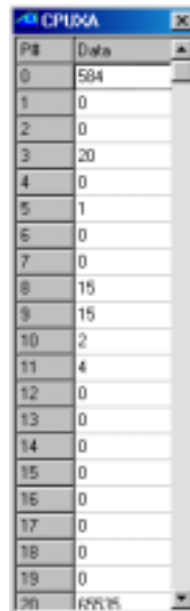
Click the box to the left of User Daylight Savings Time with your left mouse button. A black check mark will appear in the box.

If your state or country does not use daylight savings time, do not click this box.

## 9.2 Forcing Daylight Savings Time

If you receive the Ocelot™ or Leopard™ during daylight savings time and want to make sure that daylight savings time is turned on, do the following:

- 1) Connect the Ocelot™ or Leopard™ you want to set the address on to your computer and apply power to the unit.
- 2) In the C-Max software, Click Comms Setup, Attach to CPUXA with your left mouse button. The CPUXA Access screen will appear.
- 3) Click CPUXA Utility then Retrieve CPUXA Parameters with your left mouse button. The following window will appear:



The screenshot shows a window titled 'CPUXA' with a table of parameters. The table has two columns: 'PB' and 'Data'. The data values are as follows:

PB	Data
0	504
1	0
2	0
3	20
4	0
5	1
6	0
7	0
8	15
9	15
10	2
11	4
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	APR 15

- 3) Click the Window to the right of 4 below Data with your left mouse button. The Change Manager Param window will appear.
- 4) Enter a 1 and click OK with your left mouse button.
- 5) Click the Window to the right of 5 below Data with your left mouse button. The Change Manager Param window will appear.
- 6) Enter a 1 and click OK with your left mouse button.