

# ArcMaxII Help

## *Gas Detection*



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## ArcMaxII Help

### Overview

The ArcMaxII Program has been developed to provide Real-Time statistical analysis of gas detection sensors.

ArcMaxII can be started in two different modes:

- ArcMaxII Monitor - Real-Time data collection and analysis.
- ArcMaxII Reporter - Historical Reports.

#### **ArcMaxII provides the following Real-Time calculations:**

Firstly, ArcMaxII maintains a "Minute Average" for the Sensor. It does this by using the PC clock. At the start of each minute the average is reset. Then for the duration of the minute ArcMaxII is continuously scanning the value of the sensor and including the data in the "Minute Average" for the Sensor.

Then if the Shift is running, ArcMaxII Calculates both an "8 Hour Average" and a "STEL" in the following way:

- 8 Hour Average - This is calculated using the "Minute Average" data. At the start of the Shift the "8 Hour Average" is set to zero. Then at the end of every minute the "Minute Average" value is included in the "8 Hour Average". Therefore over a Shift, the "8 Hour Average" will slowly climb from zero to its final value.
- STEL - This is also calculated using the "Minute Average" data. The "STEL" is a 15 minute moving average. During the Shift, ArcMaxII will continuously update the "STEL" which will be equal to the average of the last 15 "Minute Averages".

#### **ArcMaxII allows excellent data tracking and historical reporting.**

ArcMaxII enables the storing of data in two ways:

- By sending the calculated data to the MicroScan2000 for trending and historical reporting.
- By storing the end of Shift data in its own data base store files for historical reporting.

## ArcMaxII Help

### Getting Started

When setting up the ArcMaxII program for the first time it will be helpful to take the following steps:

1/ First set up all of the MicroScan2000 Scada tags that you will be using. Typically for each Sensor the following tags will be set up. If there is 4 Shifts then 10 InputTags per sensor will be used. Please note that when setting up the InputTags do use the same sensor for each of the respective 10 tags. When the ArcMaxII software runs it will disconnect the last 8 InputTags from the Sensor input and then set the InputTag to the correct "8 Hr Av" or "STEL" value.

- InputTag 1 = "Sensor Name", used for Hi & Lo alarms.
- InputTag 2 = "Sensor Name", used for HiHi & LoLo alarms.
- InputTag 3 = "Shift1 8 Hr Av", used to display the 8 Hour Average for Shift 1.
- InputTag 4 = "Shift1 STEL", used to display the current STEL for Shift 1.
- InputTag 5 = "Shift2 8 Hr Av", used to display the 8 Hour Average for Shift 2.
- InputTag 6 = "Shift2 STEL", used to display the current STEL for Shift 2.
- InputTag 7 = "Shift3 8 Hr Av", used to display the 8 Hour Average for Shift 3.
- InputTag 8 = "Shift3 STEL", used to display the current STEL for Shift 3.
- InputTag 9 = "Shift4 8 Hr Av", used to display the 8 Hour Average for Shift 4.
- InputTag 10 = "Shift4 STEL", used to display the current STEL for Shift 4.

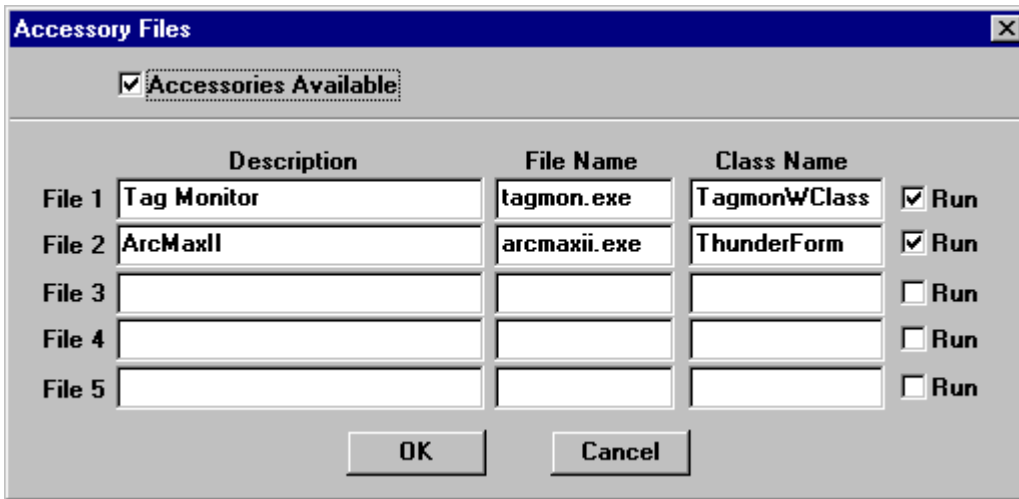
2/ Once the InputTags have been set up then set up the Recorder. Generally keep one Recorder page per Sensor. Set up the Recorder page as follows:

- Recorder Line 1 = "Sensor Name", used for Hi & Lo alarms.
- Recorder Line 2 = Not Used
- Recorder Line 3 = "Shift1 8 Hr Av", used to display the 8 Hour Average for Shift 1.
- Recorder Line 4 = "Shift1 STEL", used to display the current STEL for Shift 1.
- Recorder Line 5 = "Shift2 8 Hr Av", used to display the 8 Hour Average for Shift 2.
- Recorder Line 6 = "Shift2 STEL", used to display the current STEL for Shift 2.
- Recorder Line 7 = "Shift3 8 Hr Av", used to display the 8 Hour Average for Shift 3.
- Recorder Line 8 = "Shift3 STEL", used to display the current STEL for Shift 3.
- Recorder Line 9 = "Shift4 8 Hr Av", used to display the 8 Hour Average for Shift 4.
- Recorder Line 10 = "Shift4 STEL", used to display the current STEL for Shift 4.

3/ Finish setting up the MicroScan2000 including the following:

The ArcMaxII program is designed to be automatically started and stopped with the MicroScan2000 Scada. To do this start the MicroScan2000 System Configuration (referred to as "Syscon") program and make the following settings.

First click on the "Admin Tools" button, from the "Administration Tools" form click on the button "Accessory Files". Enter the data into the "Accessory Files" form as detailed below:

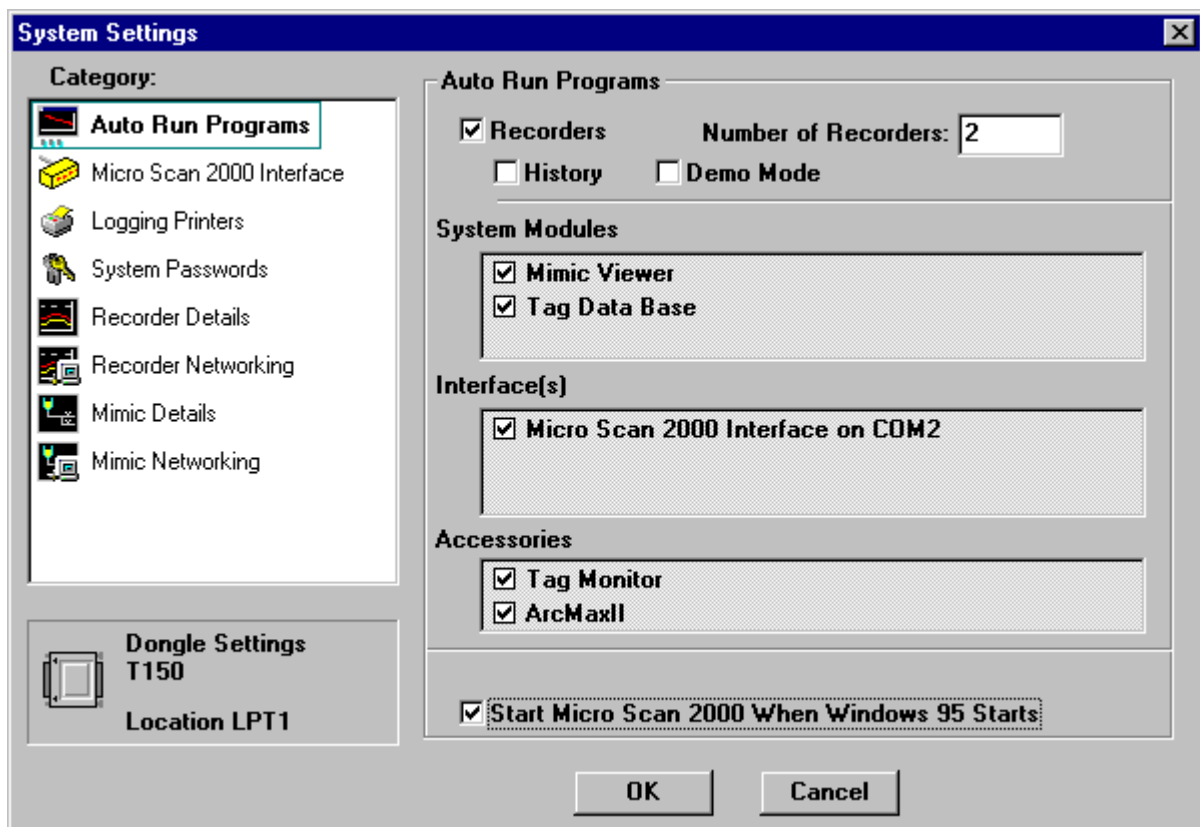


Please note that the "Class Name" is required so that the programs can be closed by the MicroScan2000 Autoloader when it closes. It is assumed that both of the above programs have been installed into the same directory as the MicroScan2000 software. This is usually the c:\in2000 directory.

Also the Tag Monitor program is a hidden file which is required to service communications to the MicroScan2000 tags.

Once all of the entries have been made into the "Accessory File" click on the "OK" button, this will take you back to the "Administration Tools" form. Click on the "Close" button to get back to the Syscon Main Form.

From the Syscon Main Form click on the "System Setup" button. The "System Settings" form will appear similar to the one below:



Under the "Accessories" heading make sure that both the Tag Monitor and the ArcMaxII programs are

ticked.

Click on the "OK" button to confirm.

Now both the Tag Monitor and the ArcMaxII programs will start and stop with the Autoloader.

4/ Now set up the ArcMaxII program. First start the ArcMaxII program and the select the "Setup" option under the "Options" menu. Complete the setup as per this Help file starting with:

- [Support Information Setup](#)
- [General Setup](#)
- [Sensor Setup](#)
- [Shift Setup](#)

## ArcMaxII Help

### Main Form

Item	Value
Current Value	1.01 ppb
Shift Min Value	0.00 ppb @ Mar 18, 1999. 09:01Hrs
Shift Max Value	1.01 ppb @ Mar 18, 1999. 09:23Hrs
Minute Average	1.01 ppb (8 Samples)
8 Hr Average	0.00 ppb @ 42.29% thru Shift 1.
Current STEL	0.07 ppb
STEL Max 1	0.07 ppb @ Mar 18, 1999. 09:23Hrs
STEL Max 2	0.00 ppb @ Dec 30, 1899. 00:00Hrs
STEL Max 3	0.00 ppb @ Dec 30, 1899. 00:00Hrs
STEL Max 4	0.00 ppb @ Dec 30, 1899. 00:00Hrs

The main form of the ArcMaxII (referred to as the ArcMaxII Monitor) allows you to view the current status of a particular Sensor with respect to a Shift.

The form has the following features:

- File Menu - Includes the Exit option.
- Options Menu - Includes the Password and the Setup options.
- Help Menu - Includes the; Help, Obtaining Technical Support, Upgrade Information and About options.
- ArcMaxII Gas Detection Animation
- Shift Buttons - The shift buttons will only appear if that shift is enabled. If the shift is running the button will be green, if the shift is stopped the button will be red. To view data for a shift then click on the button for the respective shift so that it is inset. The details table will automatically update with the current information for the Sensor with respect to the Shift that is currently selected.
- Select Sensor List Box - All of the Sensors are listed in this list box. To view data for a Sensor click on the respective sensor. The details table will automatically update with the current information for the Sensor with respect to the Shift that is currently selected.
- Reports Button - Displays the ArcMaxII Report form. When this button is clicked a report will automatically be generated for the currently selected Shift.
- Scan Display Box - Displays the number of seconds left until the next scan is due. That is the number of seconds until the ArcMaxII Monitor takes another sample from the Sensors.
- Shift Start Stop Display Box - Displays the Start and the Stop of the currently selected Shift.
- Date/Time Box - Displays the current Date and Time of the PC.

## ArcMaxII Report Form

The screenshot shows the ArcMaxII Reporter application window for XYZ Corporation. The interface includes a menu bar (File, Options, Help), a logo for ArcMaxII Gas Detection, and four shift selection buttons (Shift 1, Shift 2, Shift 3, Shift 4). Shift 1 is currently selected and highlighted in green. Below the shift buttons are input fields for the date (Thursday, 18 Mar 1999) and the data path (\\SERVER\JEFF\DATA\INTERS~2\CODE\Ar), each with a corresponding 'Set' button. An 'Update Report' button is also present. The main report area displays the following information:

ArcMaxII - Shift Report	
XYZ Corporation	
Shift1: Mar 18, 1999. 06:00Hrs to Mar 18, 1999. 14:00Hrs	
Sensor1: Sensor 1	
Minimum = 0.00ppb at Mar 18, 1999. 09:01Hrs	
Maximum = 1.01ppb at Mar 18, 1999. 09:23Hrs	
8 Hour Average = 0.00ppb	
STEL Max 1 = 0.13ppb at Mar 18, 1999. 09:24Hrs	
STEL Max 2 = 0.07ppb at Mar 18, 1999. 09:23Hrs	

At the bottom of the window are 'Print' and 'Close' buttons.

The Report form of the ArcMaxII (referred to as the ArcMaxII Reporter) allows you to view and print the results of a Shift.

To view a report take the following steps:

- Select the required Shift.
- [Select the required Date.](#)
- [Select the required Path to where the store data is located.](#)
- Click the Update Report button.
- If you wish to print the report then click on the Print button or select the Print option in the File menu.

The form has the following features:

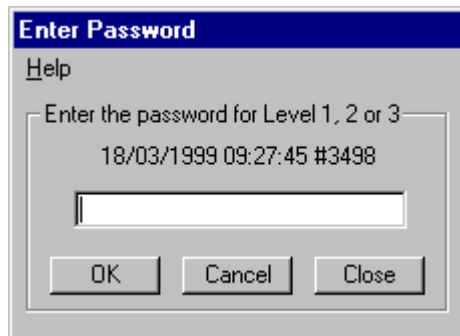
- File Menu - Includes the Print and Exit option.
- Options Menu - Includes the Password and the Setup options.
- Help Menu - Includes the; Help, Obtaining Technical Support, Upgrade Information and About options.
- ArcMaxII Gas Detection Animation
- Shift Buttons - All 4 shift buttons appear even if that shift was not enabled for the selected day. The shift button that is selected will be green, all of the other shift buttons will be red.

- [Set Date Button](#) - Click on this button to change the date of the Report.
- [Set Path Button](#) - Click on this button to change the path to where the store files are located.
- Update Report Button - Click on this button to update the report.
- Report Details - Displays the report details.
- Print Button - Click on this button to print the report.
- Close/Exit Button - Click on this button to close the ArcMaxII Reporter.



## ArcMaxII

### Password Form



The image shows a standard Windows-style dialog box titled "Enter Password". It features a blue title bar with the text "Enter Password" in white. Below the title bar is a "Help" button. The main content area contains the text "Enter the password for Level 1, 2 or 3" and a timestamp "18/03/1999 09:27:45 #3498". A text input field is positioned below the text. At the bottom of the dialog are three buttons: "OK", "Cancel", and "Close".

To change the current password level select from the menu on the Main Form 'Options' and then 'Passwords' and then 'Password'. The Password form will appear.

Enter the correct password for the level you wish to enable into the text box and press the 'Enter' button.

The 'Cancel' button will cancel all password levels.

The 'Close' button will close the Password Form without making any changes.

## ArcMaxII

### Password Setup Form

The screenshot shows a 'Password Setup' dialog box with a blue title bar. It is divided into two main sections. The first section, 'Enter Passwords', has three text input fields: 'Level 1 Password = level1', 'Level 2 Password = level2', and 'Level 3 Password = level3'. Below these is an unchecked checkbox for 'Enable Password Protection'. The second section, 'Password Time Out', has an unchecked checkbox for 'Enable Password Time Out' and a dropdown menu for 'Timeout Period (mins):' set to '1'. At the bottom are 'Save' and 'Close' buttons.

To set up the password facility the passwords must be disabled or password level 3 must be enabled. Only if one of these conditions is true does the passwords Setup menu appear.

Once one of the above conditions is true open the Password Setup Form by selecting from the menu on the Main Form 'Options' and then 'Passwords' and then 'Setup'. The Password Setup form will appear.

The Passwords Setup Form is divided into 2 sections:

#### Section 1:'Enter Passwords'

- 'Level 1 Password =' - Type the password of your choice into the text box which will enable level 1.
- 'Level 2 Password =' - Type the password of your choice into the text box which will enable level 2.
- 'Level 3 Password =' - Type the password of your choice into the text box which will enable level 3.
- 'Enable Password Protection' - Cross the check box to enable password protection.

#### Section 2:'Password Time Out'

- 'Enable Password Time Out' - Cross the check box to enable password time out. This will automatically cancel all password levels once the Timeout Period has passed.
- 'Timeout Period (mins)' - Set the time out period as required.

'Save' button - Click the Save Button to save all changes, changes will be effective immediately.

'Close' Button - Closes the Password Setup Form.

Warning - Do not forget your passwords. They are difficult to find and will cause much inconvenience.

Note: If a higher level password is enabled then all lower levels are automatically enabled.

Once the Passwords have been enabled and a higher level password is required the program will prompt accordingly and advise which level is required.

## ArcMaxII

### Information Setup Form

The screenshot shows the ArcMaxII Setup dialog box with the 'Support Info' tab selected. The dialog has a menu bar with 'File' and 'Help'. The 'Support Info' tab is active, and the following fields are visible:

Company	Interscan Corporation
Contact	Mike Shaw
Address 1	P.O. Box 2496
Address 2	Chatsworth
Address 3	CA 91313-2496
Address 4	USA
Phone	1 800 458 6153 USA and Canada
Fax	(818) 341 0642
Email	mds1@gasdetection.com
User Name	XYZ Corporation

Buttons for 'Save' and 'Close' are located at the bottom right of the dialog.

The Support Information Setup form allows for the editing of details for both the End User and their Support Company.

The User Name will appear on the Reports and the Support Company information is available to the users from the Help menu.

## ArcMaxII

### General Setup Form

The screenshot shows the ArcMaxII Setup window with the General tab selected. The window has a menu bar with 'File' and 'Help'. The main area contains several settings:

Setting	Value
Scan Rate (Seconds)	5
Close When MicroScan2000 Closes	Yes
Confirm To Close	Yes
Units	ppb
Decimal Places	2
Auto Print Reports at End of Shift	No

Buttons for 'Save' and 'Close' are located at the bottom right of the window.

The General Setup Form has the following settings:

- Scan Rate - This is the rate at which the ArcMaxII Monitor will update the Sensor values and adjust the minute averages.
- Close When MicroScan2000 Closes - This option is normally set to "Yes" which will cause the ArcMaxII Monitor to automatically close when the MicroScan2000 is stopped.
- Confirm To Close - This option is normally set to "Yes" and is designed to prevent the ArcMaxII Monitor from being accidentally closed.
- Freeze Animation - Allows the animations to be frozen.
- Units - Set the text for the units for the Sensors.
- Decimal Places - Set the number of decimal places you wish to appear on the Monitor and Reporter forms and on the Print Outs.
- Auto Print Reports at End of Shift - Usually set to "Yes" and causes the ArcMaxII Monitor to print the Shift Report when the Shift finishes.
- Save Button - Remember to save changes before moving on.
- Close Button - Closes the ArcMaxII Setup form.

## ArcMaxII

### Sensor Setup Form

The screenshot shows the ArcMaxII Setup window with the Sensor Setup tab active. The interface includes a menu bar, tabs for different setup sections, a list of sensors, input fields for sensor details, and a table for configuring output shifts. Each output shift configuration includes a text box for the tag name and a Find button to search for it.

The Sensor Setup Form has the following items:

- Select Sensor List - Click on the Sensor you wish to edit.
- Add New Button - Adds a new Sensor to the Sensor List.
- Delete Last Button - Deletes the last Sensor from the Sensor List.
- Sensor Name - Type in a descriptive name for the Sensor. This name will appear in the ArcMaxII Reports.
- Sensor Enabled - Check this box to enable the Sensor.
- Select Tag for Sensor Value - Click on the [Find Button](#) to select the MicroScan2000 Input Tag for this Sensor.
- Send Shift (1) Av to - Click on the [Find Button](#) to select the MicroScan2000 Input Tag to which you wish to send the Shift (1) Average value.
- Send Shift (1) STEL to - Click on the [Find Button](#) to select the MicroScan2000 Input Tag to which you wish to send the Shift (1) STEL value.
- Save Button - Remember to save changes before moving on.
- Close Button - Closes the ArcMaxII Setup form.

## ArcMaxII

### Shift Setup Form

The screenshot shows the 'ArcMaxII Setup' application window. The 'Shift Setup' tab is selected, displaying the following configuration:

Shift	Start Time	Stop Time
Shift 1	06:00	14:00
Shift 2	12:00	17:00
Shift 3	18:00	00:00
Shift 4	00:00	00:00

Each time field is accompanied by a 'Find' button. A 'Save' button is located at the bottom right of the form area, and a 'Close' button is at the bottom of the window.

The Shift Setup Form has the following items:

- Shift (1) Start Time - Click on the [Find Button](#) to set the Shift (1) Start Time.
- Shift (1) Stop Time - Click on the [Find Button](#) to set the Shift (1) Stop Time.
- Save Button - Remember to save changes before moving on.
- Close Button - Closes the ArcMaxII Setup form.

## ArcMaxII Help

### Set Date Form



The screenshot shows a 'Select a Date' dialog box. At the top, it displays 'March 1999'. Below this, there are two dropdown menus: one for the month, currently set to 'March', and one for the year, currently set to '1999'. The main part of the dialog is a calendar grid with columns for the days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and rows for the days of the month. The date '18' is highlighted in the grid. At the bottom of the dialog, there is a text box containing the text 'Thursday, 18 Mar 1999' and an 'OK' button.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Use the Month and Year combo boxes to select the required Month and Year. Then click on the required day in the calendar.

When the date required is displayed in the Date box then click the OK button. This will return the date you selected.

## ArcMaxII Help

### Get Tag Form

Tag Number	Tag Name	PLC:Image Interface	Value	Data Type
1	S1 Value	PLC:Image Interface	0	DM Word 1
2	S1 Value	PLC:Image Interface	0	DM Word 1
3	S1 Shift1 Av	PLC:Image Interface	0	DM Word 1
4	S1 Shift1 STEL	PLC:Image Interface	0	DM Word 1
5	S1 Shift2 Av	PLC:Image Interface	0	DM Word 1
6	S1 Shift2 STEL	PLC:Image Interface	0	DM Word 1
7	S1 Shift3 Av	PLC:Image Interface	0	DM Word 1
8	S1 Shift3 STEL	PLC:Image Interface	0	DM Word 1
9	S1 Shift4 Av	PLC:Image Interface	0	DM Word 1
10	S1 Shift4 STEL	PLC:Image Interface	0	DM Word 1
11	S2 Value	PLC:Image Interface	0	DM Word 2

When this form first appears the lower section listing all of the tags is not displayed. To show/hide the lower section click on the toggle button "More>>"/"<<Less".

To select the required tag either type the tag number directly into the "Tag Number" box or select the tag from the lower section.

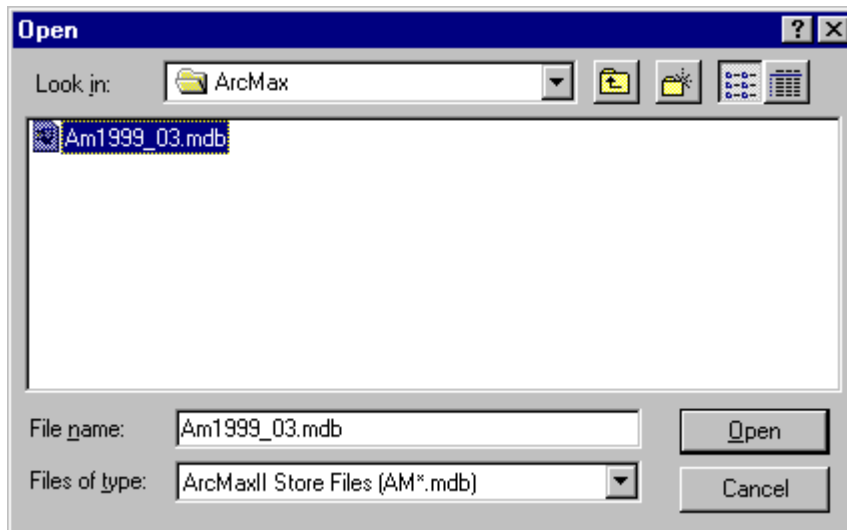
Once the correct tag is selected then click the "OK" button. This will return the tag selected.

If the "Cancel" button is selected then the tag selection "0/ None" will be returned.



## ArcMaxII

### Path Form



Set the Path to where the store files are located by using the standard windows File Open dialog box.

Select a store file and then click on the Open button.

The Path to the store files will be returned.

## ArcMaxII Help

### Set Time Form

The screenshot shows a dialog box titled "Select Shift 1 Start Time". It contains two tables for selecting time components. The "Select Hours" table has a grid with values 0 through 23, and the number 6 is highlighted. The "Select Minutes" table has a grid with values 0 through 59, and the number 0 is highlighted. Below these tables, there is a text field labeled "Time Selected:" which displays "06:00". To the right of this field is an "OK" button.

The Set Time Form is used to set a 24:00 time.

Click on the required Hour in the "Select Hours" table, and then click on the required Minute in the "Select Minutes" table.

The "Time Selected" text will update itself to suit.

When the "OK" button is clicked then the form will close and the selected Time will be returned.

## ArcMaxII Help

### Miscellaneous

#### Typical Directories

- C : \IN2000 - This is the main installation directory.
- C : \IN2000 \ ArcMax - This is the directory where the store files are kept.

#### Associated Files

- ArcMaxII.exe - ArcMaxII executable file.
- ArcMaxII.avi - ArcMaxII animation file. This file can be replaced with another animation file if required.
- ArcMaxII.ver - ArcMaxII text file detailing the version information.
- ArcMaxII.mdb - ArcMaxII setup file.
- ArcMaxII.chm - ArcMaxII help file.
- AMyyyy\_mm.mdb - Typical name for ArcMaxII store file where yyyy = year and mm = month.

#### ArcMaxII Modes

- ArcMaxII Monitor Mode - Start ArcMaxII using "C : \IN2000 \ ArcMaxII.exe".
- ArcMaxII Reporter Mode - Start ArcMaxII using "C : \IN2000 \ ArcMaxII.exe /r". This mode is to be used if starting ArcMacII on another PC for the sole purpose of viewing and reporting on historical ArcMaxII data.