

# M-Trend ActiveX Control

## *Introduction*

The M-Trend ActiveX control allows you to create M-Trend graphs in ActiveX -compliant programs. Although there is a separate procedure for inserting the ActiveX control, the control object is connected to a database, defined, and edited in the same manner described in the rest of this manual. This chapter describes how to:

- insert the M-Trend ActiveX control in an M-Graphics display
- navigate to the M-Trend menus in an M-Trend ActiveX control in an M-Graphics display
- save M-Trend parameters in an M-Graphics document

## Key Concepts

### ActiveX

A loosely defined set of technologies developed by Microsoft. ActiveX is an outgrowth of two other Microsoft technologies called OLE (Object Linking and Embedding) and COM (Component Object Model). ActiveX applies to a whole set of COM-based technologies. ActiveX is not a programming language, but rather a set of rules for how applications should share information.

### ActiveX Controls

ActiveX controls represent a specific way of implementing ActiveX technologies. They can be used to provide limited functionality of an application, such as M-Trend, without having to have the entire program downloaded to a machine.

### M-Trend ActiveX Control

An ActiveX control that allows the display of M-Trend graphs in M-Graphics displays, or in other ActiveX-compliant applications such as Internet Explorer 4. Using the M-Trend ActiveX control, a user can put multiple M-Trend graphs into an M-Graphics display.

Note: The M-Trend ActiveX Control does **not** allow you to view M-Trend documents (.htv files) in other applications.

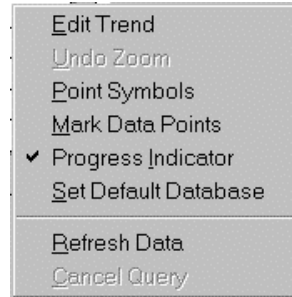
When an M-Trend ActiveX control is created in an M-Graphics display, the information for the M-Trend graph is saved in the M-Graphics document. Therefore, instead of having a separate .htv file for the M-Trend information, the M-Trend information is accessed when the M-graphics document (.gdf file) is opened.

### M-Graphics

An OPC (OLE for Process Controls) graphics package from Johnson Controls. Allows the user to create dynamic, animated graphics to represent the controls processes in a facility.

## Expanded Right-click Menu in an M-Trend ActiveX Control

When an M-Trend ActiveX control is inserted in an ActiveX compliant application, some of the menu options that are present in the M-Trend program menu bar are accessed through an expanded right-click menu (Figure 6-1). See Table 6-1 for a description of the options.



**Figure 6-1: M-Trend ActiveX Control:  
Expanded Right-click Options**

Table 6-1 describes the expanded right-click menu options used in the M-Trend ActiveX Control.

**Table 6-1: M-Trend ActiveX Control: Expanded Right-click Options**

<b>Menu Selection</b>	<b>Description</b>
<b><u>E</u>dit Trend</b>	Opens the M-Trend Definition dialog box.
<b><u>U</u>ndo Zoom</b>	If the current view has any zoom factor, this command returns it to normal view.
<b><u>P</u>oint Symbols</b>	When View Graph is checked, this command adds unique symbols to each trended data point on the graph. Not available in Text View.
<b><u>M</u>ark Data Points</b>	When View Graph is checked, this command marks each data point on the graph with a small point. Not available in Text View.
<b><u>P</u>rogress <u>I</u>ndicator</b>	When checked, provides a visual indication of percentage completed when querying data.
<b><u>S</u>et Default Database</b>	Determines or changes the Historian database connection.
<b><u>R</u>efresh Data</b>	Starts or restarts the current query.
<b><u>C</u>ancel Query</b>	Cancels any query in progress.

## Procedure Overview

**Table 6-2: M-Trend ActiveX Control**

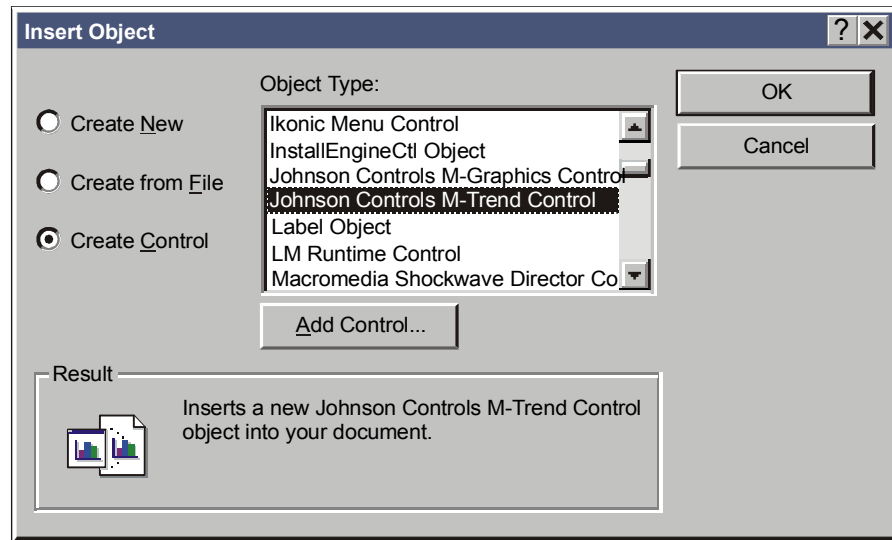
<b>To Do This</b>	<b>Follow These Steps:</b>
<b>Insert an M-Trend ActiveX Control in an M-Graphics Display</b>	On the M-Graphics Edit menu, select Insert New Object. The Insert Object dialog box appears. Choose Create Control. Scroll to and select Johnson Controls M-Trend Control. Select OK.
<b>Navigate to the M-Trend Menus in an M-Trend ActiveX Control in an M-Graphics Display</b>	<p><b>Accessing the M-Trend Definition Dialog box:</b> With M-Graphics in Configure mode, right-click the M-Trend ActiveX control. From the Johnson Controls M-Trend Control Object menu, select Properties.</p> <p><b>Accessing the expanded right-click menu for M-Trend ActiveX controls:</b> With M-Graphics in Configure mode, right-click the M-Trend ActiveX control. From the Johnson Controls M-Trend Control Object menu, select Edit. A black line appears around the M-Trend ActiveX control. Right-click the M-Trend ActiveX control again to see the expanded right-click menu.</p> <p>With M-Graphics in Runtime mode, right-click the M-Trend ActiveX control.</p>
<b>Save M-Trend Parameters in an M-Graphics Document</b>	After inserting the M-Trend ActiveX control, setting a database connection, and defining the M-Trend graph in an M-Graphics document, choose Save or Save As from the File menu. M-Graphics must be in Configure mode to access these menu selections.

## Detailed Procedures

### Inserting an M-Trend ActiveX Control in an M-Graphics Display

To insert an M-Trend ActiveX control into M-Graphics display:

1. On the Edit menu, select Insert New Object. The Insert Object dialog box appears (Figure 6-2).
2. Choose Create Control on the Insert Object dialog box.
3. Scroll to and select Johnson Controls M-Trend Control.



add\_ctrl

**Figure 6-2: Insert Object Dialog Box**

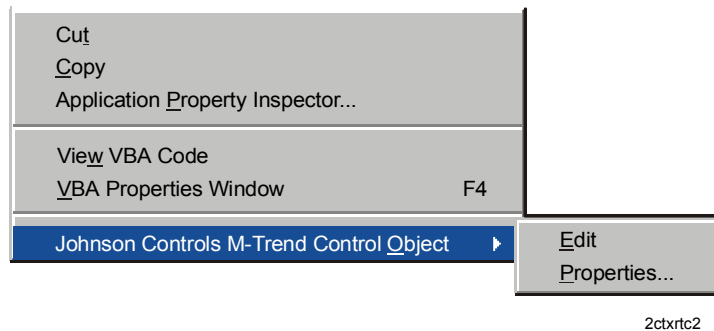
4. Click OK.

## Navigating to M-Trend Menus in an M-Trend ActiveX Control in an M-Graphics Display

An M-Trend ActiveX Control in an M-Graphics display is connected to a database, defined, and edited in the same manner as described in the rest of this document. However, there are some differences in how you get to the menus and screens. Since there is no edit menu for M-Trend within M-Graphics, the default database connection is set through an expanded right-click menu.

### Accessing the M-Trend Definition Dialog Box

1. With M-Graphics in Configure mode, right-click the M-Trend ActiveX control. A list of options appears (Figure 6-3).



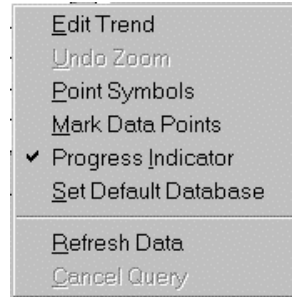
**Figure 6-3: Right-click Menu for an Unselected M-Trend ActiveX Control in an M-Graphics Display**

2. Select Properties (Figure 6-3) from the Johnson Controls M-Trend Control Object menu. The M-Trend Definition screen appears allowing you to define the M-Trend graph as described in *Defining M-Trend Documents* in this manual.

### Accessing the Expanded Right-click Menu for M-Trend ActiveX Controls

1. With M-Graphics in Configure mode, right-click the M-Trend ActiveX control. A list of options appears (Figure 6-3).
2. Select Edit (Figure 6-3) from the Johnson Controls M-Trend Control Object menu. A black line appears around the M-Trend ActiveX Control object.
3. Right-click with the cursor over the M-Trend ActiveX control. The M-Trend ActiveX control's right-click menu appears (Figure 6-4).

- Note: The right-click menu in the M-Trend ActiveX control is an expanded set of the right-click menu when running the full M-Trend application. This is to allow the setting of necessary parameters that would be accessed through the main menu bar in the full M-Trend application.
- See Chapters 3 through 5 in this manual for details on setting M-Trend options.



**Figure 6-4: M-Trend ActiveX Control:  
Expanded Right-click Options**

## **Saving M-Trend Parameters in an M-Graphics Document**

To save M-Trend parameters in an M-Graphics document:

1. Insert, set the database connection, and define the M-Trend graph as described in this manual.
2. With M-Graphics in Configure mode, select save or save as from the file menu.
3. Name your M-Graphics document and select OK. The parameters of your M-Trend graph are saved within the M-Graphics document.

