

TECHNICAL BULLETIN

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M-Tool Overview and Installation

Introduction

M-Tool provides a suite of tools with an intuitive and efficient work environment that transforms the way you create control strategies. It is an easy-to-use programming tool for application engineers, system representatives, and facility operators.

M-Tool is divided into two major groups of tools: System Tools and Configuration Tools. You can install each of these groups independently to support different types of control products.

This document describes how to:

- install Configuration Tools
- install System Tools
- install additional object libraries
- install M-Pro software as a LONWORKS® Network Services (LNS™) plug-in
- re-register M-Pro software as an LNS plug-in
- uninstall System Tools

Refer to the *Metasys® Installation and Platform Requirements Technical Bulletin (LIT-12012)* for M-Tool hardware and software requirements and the installation order of M-Tool components.

Key Concepts

M-Tool

M-Tool is divided into two major groups of tools:

- Configuration Tools — contains software tools, such as HVAC PRO™ software, used to support N2 based field controllers
- System Tools — contains Project Builder, Comm Pro, M-Pro, Site Book, Site Manager, N30 Upgrade, and Loader

In addition, the Palm OS® compatible Variable Air Volume Modular Assembly (VMA), Balancing Tool (VBT) for both the VMA1200 and VMA1400, and the N2 Checkout Tool are included with M-Tool.

Table 1 lists M-Tool components.

Table 1: M-Tool Components

Component	Description
Configuration Tools	
HVAC PRO Software	Creates control strategies for the Air Handling Unit (AHU) controller, Unitary (UNT) controller, Variable Air Volume (VAV) controller, Variable Air Volume Modular Assembly (VMA), Phoenix Fume Hood (PHX) controller, N2 Dialer Module (NDM), and Terminal Controller (TC) devices. HVAC PRO software also configures Original Equipment Manufacturer (OEM) applications. The HVAC PRO Template Commissioning feature supports all Application Specific Controllers (ASCs), the DX-9x00/912x controller, and the TC-9102 controller.
DX Commissioning	Supports only DX-9x00/912x controllers (Point Template Program). DX Commissioning is a subset of the HVAC PRO Template Commissioning feature.
ZT PRO	Programs the Zone Terminal Unit (ZTU100). Install ZT PRO at the same time as HVAC PRO software. ZT PRO only supports HVAC PRO tool configuration files.
LCP Graphic Configuration Tool	Configures and downloads Lab and Central Plant controllers (LCP100, LCP200).
GX-9100 Software Configuration Tool (GX Tool)	Programs the DX-9100, DX-912x, DX-9200 controllers, and the DT-9100 Liquid Crystal Display (LCD).
NDM Configurator	Supports only N2 Dialer Module (NDM101). NDM Configurator is a subset of the HVAC PRO software.
XTM Configurator	Programs the XTM/XPx Point Expansion Modules.
Auxiliary Access	Dials out to remote sites equipped with a modem and N2 Dialer module or Companion™/Facilitator™ panel.
ModemPRO	Configures modems for various applications. Includes a comprehensive database of predefined modem setup strings that you can customize for your particular needs.
Continued on next page . . .	

Component (Cont.)	Description
System Tools	
Project Builder	Defines the N30 Supervisory Controller database by mapping points from field devices and adding objects. Allows downloads and uploads to any N30 in the network and to N2 controllers attached to N30s. Project Builder defines N30 and N2 Controller objects, imports predefined Controller configuration files, and Point and Room Schedules to map the input and output points to the N30 (physical or simulated). Configuration files are imported from Configuration Tools, Metasys Integrator® systems, and Advanced Information Management (AIM). Project Builder adds and edits objects in the project database.
Comm Pro	Commissions devices such as the VMA1200 controller on a LONWORKS network.
M-Pro	Creates control strategies for VMA1200 Series controllers by using a simple question and answer path, similar to the method used in HVAC PRO software. Downloads applications to controllers.
Site Book	Defines and saves communications setups for uploading and downloading to the controllers configured with M-Tool.
Site Manager	Controls the communication flow with controllers during download and upload.
Loader	Manages uploading and downloading programs and configurations to controllers. Consists of Load Manager, LoaderUI, and controller-specific Load Components.
Palm™ Compatible Tools	
VMA1400 Balancing Tool (VBT1400)	Balances VAV boxes controlled by VMA1400 Series controllers using a Palm compatible* handheld device. Refer to <i>Using the VMA1400 Balancing Tool (VBT) Software Technical Bulletin (LIT-6363092)</i> .
VMA1200 Balancing Tool (VBT1200)	Balances VAV boxes controlled by VMA1200 Series controllers using a Palm compatible* handheld device. Refer to <i>Using the VMA1200 Balancing Tool (VBT) Software Technical Bulletin (LIT-1162400)</i> .
N2 Checkout Tool	Provides a semi-automated method to checkout the wiring and addressing of N2 zone level controllers using a Palm compatible** handheld device. Refer to the <i>N2 Checkout Tool User's Guide</i> .

* Version 2.0 or later operating system

** Version 3.1 or later operating system

Advanced Information Management (AIM) Tools

AIM tools are a series of Johnson Controls proprietary tools used to standardize and accelerate the engineering process. The Project Builder tool imports N2 Controller devices and point object data from AIM point and room schedules.

M-Workstation Settings

The M-Workstation Settings utility (Figure 1) edits global tools and workstation parameters after installation. Use this utility to change the database location, set a default project, or make additional product library files available to Project Builder.

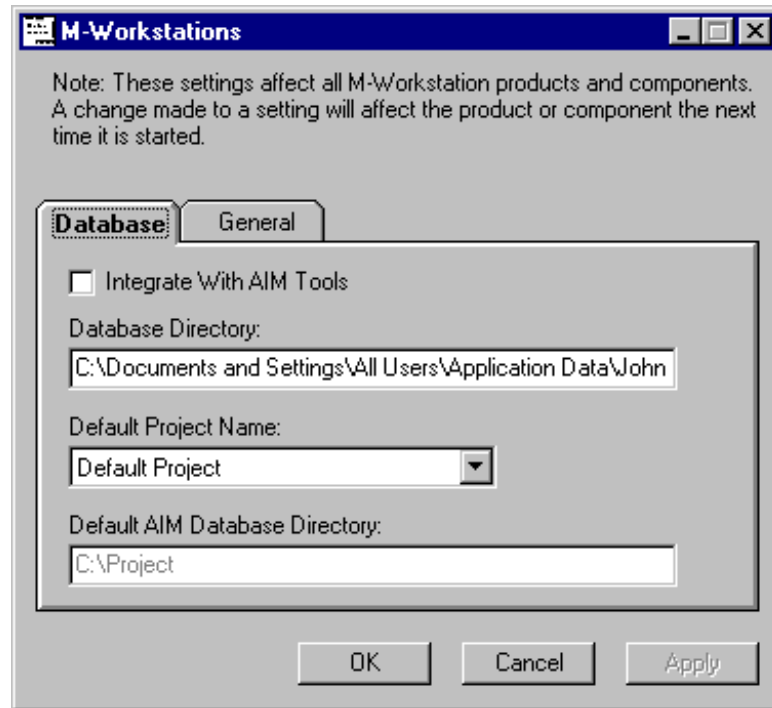


Figure 1: M-Workstations Dialog Box - Database Tab

Database Settings

The M-Workstations dialog box - Database tab (Figure 1) allows you to manually set or change the default Database Directory and Default Project Name. These defaults are used whenever you start a new project in Project Builder.

You have the option to integrate your project database with the AIM tools. If the Integrate With AIM Tools box is selected, the project directory path is based on AIM settings and cannot be changed in Project Builder.

Database Directory and Default AIM Database Directory selections in the M-Workstation settings dialog box are written to the Windows® Registry. As a result, the user must use these locations when creating new projects in order for Project Builder to function correctly. For example, with the settings shown in Figure 1, all projects created in a non-AIM environment reside in the C:\Documents and Settings\...\Database directory, and all projects created when Integrate With AIM Tools box is checked are created in the C:\Project directory.

General Settings

The M-Workstations dialog box - General tab (Figure 2) displays the default and preferred languages for the user interfaces. System Tools components first try to launch using language files associated with the user's preferred language. If files are not found for the user's preferred language, the System Tools look for components in the default language. If neither is found, the default language is English (United States).

A similar process is used for vendors. The user's default vendor ID is used when selecting class strings in the dictionary. This value is the numeric code defined by the BACnet® vendor list. This version of M-Tool supports only one vendor - Johnson Controls.

The Installed Class Libraries field lists libraries of object types available in System Tools applications. The classdata_n30_20.dll, commworxprodlb.dll, and bacnetprodlb.dll are required to work with the N30, while the tcvlib.dll applies to the VMA1200.

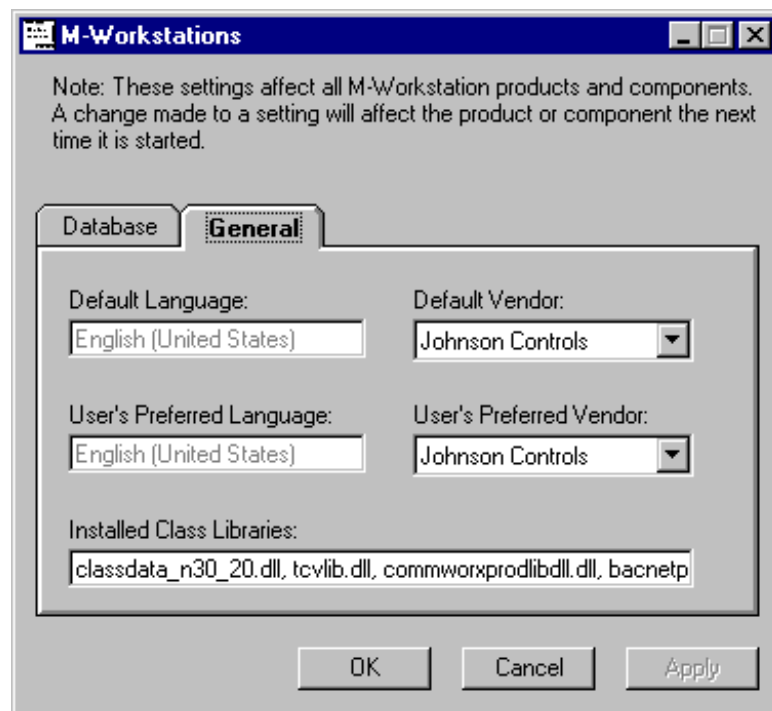


Figure 2: M-Workstations Dialog Box - General Tab

Loader User Interface

The Loader User Interface (LoaderUI) allows DX, UNT, VAV, and AHU configurations and XTM Configurator files passing from the GX Tool and HVAC PRO software to controllers through an N30.

The LoaderUI can download the same file to multiple controllers and can upload multiple controllers at once.

Figure 3 shows the LoaderUI window.

Note: You cannot upload XTM files.

For more information on LoaderUI, see the *GX-9100 Software Configuration Tool User's Guide*.

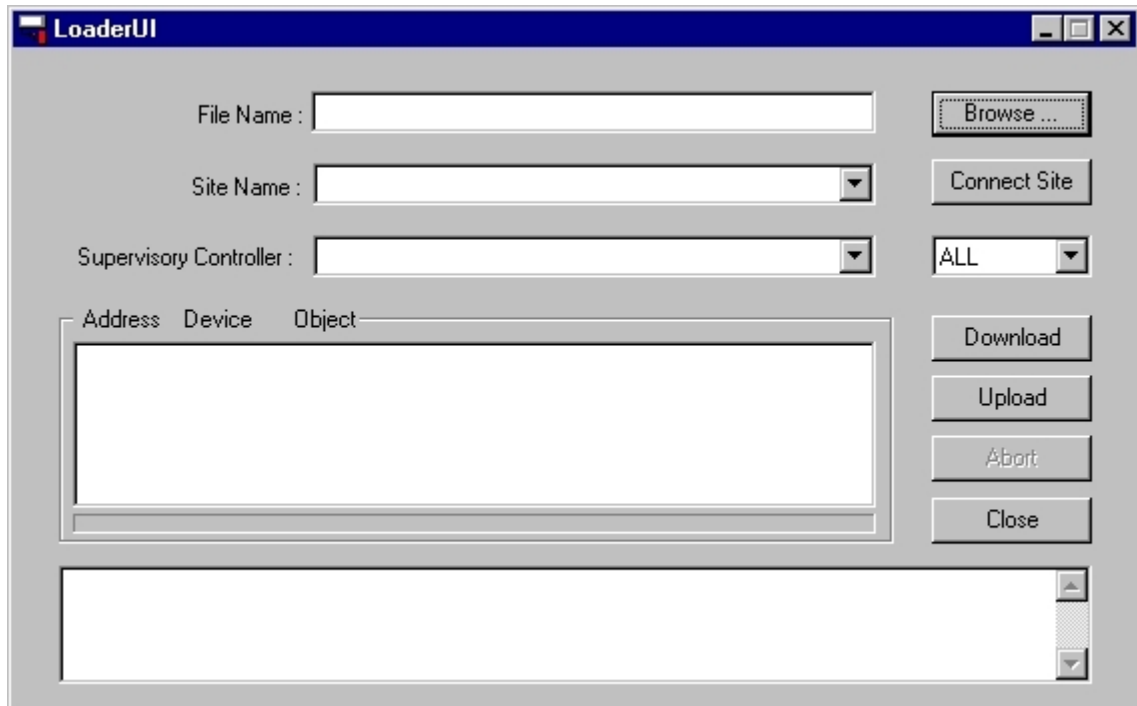


Figure 3: LoaderUI Window

Site Book

Site Book (Figure 4) is used for configuring communications options for an N30 system. When communicating with an N30 Supervisory Controller from M-Tool or an M-Series Workstation, three connection methods are available. These are: direct serial connections, dial-up (modem) connections, and connections over Ethernet networks. When communicating with a simulated N30, only an Ethernet network connection is available. For more information on using the Simulation feature in Project Builder, see the *Using the Simulator* chapter (LIT-693255) in the *Project Builder User's Guide*.

For more information, including an overview of how to set up the different types of communications connections, see the flowcharts in the *Site Book User's Guide* (LIT-6893100).

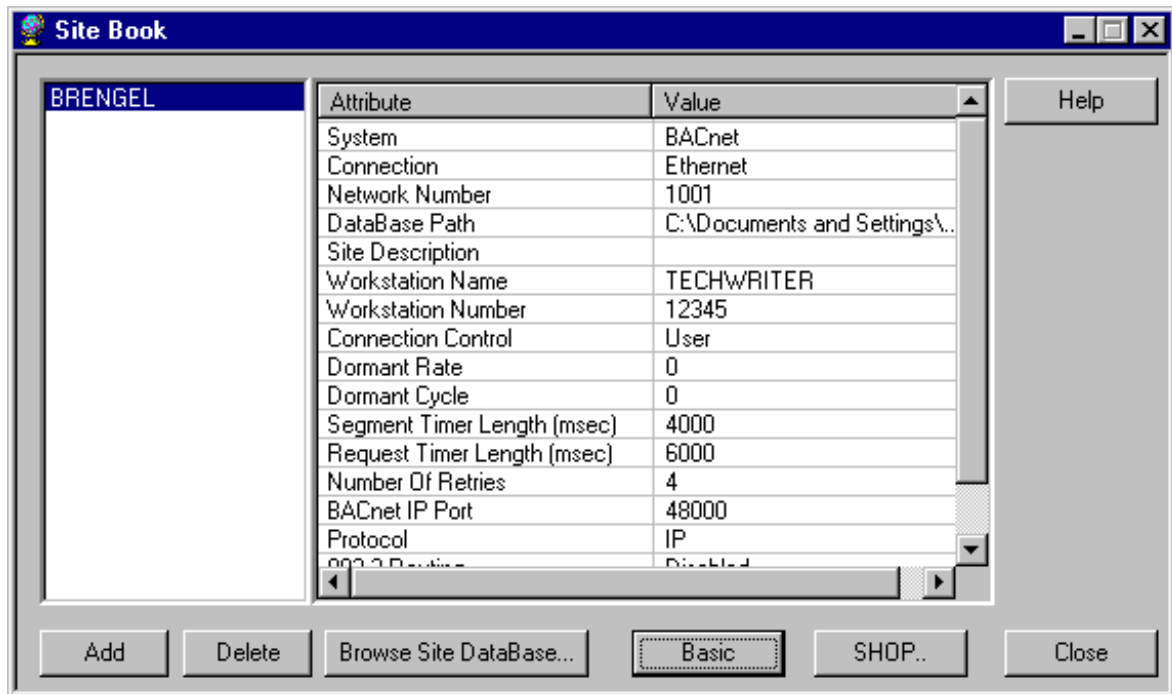


Figure 4: Site Book

Related Literature

Table 2 lists M-Tool related literature.

Table 2: M-Tool Related Literature

For Information On	Refer To
M-Tool Hardware and Software Requirements	<i>Metasys Installation and Platform Requirements Technical Bulletin (LIT-12012)</i>
Project Builder	<i>Project Builder User's Guide</i>
M-Pro	<i>M-Pro User's Guide</i>
Using the Comm Pro Commissioning Tool	<i>Comm Pro User's Guide</i>
HVAC PRO Software	<i>HVAC PRO User's Guide</i>
GX-9100 Software Configuration Tool (GX Tool)	<i>GX-9100 Software Configuration Tool User's Guide</i>
ZT PRO	<i>Zone Terminal Application Note (LIT-6375140)</i>
LCP Graphic Configuration Tool	<i>LCP Commissioning Tool (LIT-636069e)</i>
NDM Configurator	<i>NDM Configurator Application Note (LIT-6364090)</i>
XTM Configurator	<i>XTM Configurator Technical Bulletin (LIT-6364220)</i>
Auxiliary Access	<i>Controller Access Technical Bulletin (LIT-6364013)</i>
ModemPRO	ModemPRO online help
VBT for VMA1200	<i>Using the VMA1200 Balancing Tool (VBT) Software Technical Bulletin (LIT-1162400)</i>
VBT for VMA1400	<i>Using the VMA1400 Balancing Tool (VBT) Software Technical Bulletin (LIT-6363092)</i>
N2 Checkout Tool	<i>N2 Checkout Tool User's Guide</i>
Site Book, Including an Overview of How to Set Up Communications	<i>Site Book User's Guide (6893100)</i>
Ethernet Setup on the PC	<i>Site Book User's Guide (6893100)</i>
Direct Serial and Dial-Up (Modem) Connections to N30 Supervisory Controllers from PCs Running Windows® 98	<i>Direct Connect and Dial-Up on Windows 98 Application Note (LIT-6893350)</i>
Direct Serial and Dial-Up (Modem) Connections to N30 Supervisory Controllers from PCs Running Windows NT®	<i>Direct Connect and Dial-Up on Windows NT Application Note (LIT-6893400)</i>
N30 Supervisory Controller Installation and Networking	<i>N30 Supervisory Controller Installation Technical Bulletin (LIT-6891100), N30 Supervisory Controller Networking Technical Bulletin (LIT-6891300)</i>
N30 Supervisory Controller User's Information	<i>N30 Supervisory Controller User's Manual</i>
LONWORKS Networks	<i>LONWORKS Network Layout Technical Bulletin (LIT-1162150)</i>
Object Attribute Reference Guide	<i>Object Dictionary</i>

M-Tool Controller Access

Tables 3 and 4 identify the ability to access field controllers directly from a standalone Personal Computer (PC) via connection to the N2 Bus, Zone Bus, LONWORKS FTT-10 Bus or RS-232 connection, depending on the controller.

Table 3: GX Tool, XTM, and M-Pro Tool Capability – Direct Access to Field Controllers

Function	GX Tool				XTM Tool ¹	M-Pro Tool
	DX-9100	XT/XP XTM905	DX-912X	DX-9200	XTM 105	VMA1200 ²
Create an Application	✓	✓	✓	✓	✓	✓
Download	✓	✓	✓	✓	✓	✓
Upload	✓	✓	✓	✓	✓	
Code Download						✓ ³
Upgrade Single						
Upgrade Multiple						
Commission						✓ ³
Template Commission	✓		✓	✓		
Loop Tune PRAC						
Data Graphing						
Controller Information						✓
VAV Box Flow Test						
Collect VAV Diagnostics						
VMA Balancer Tool						

Notes:

1. Refers to the XTM Configurator.
2. Use the VMA1200 Balancing Tool (VBT1200) included with M-Tool to balance VAV boxes controlled by VMA1200 Series controllers.
3. Comm Pro commissioning tool.

Table 4: HVAC PRO Tool Capability – Direct Access to Field Controllers

Function	HVAC PRO Tool							
	TC-9102	VAV ¹	AHU PHX UNT ¹	NDM	VMA1400 ¹	DX-9xxx	XT/XP	XTM
Create an Application	✓	✓	✓	✓	✓			
Download	✓	✓	✓	✓	✓			
Upload	✓	✓	✓	✓	✓			
Code Download					✓			✓ ³
Upgrade Single		✓	✓	✓	✓			
Upgrade Multiple		✓	✓	✓	✓			
Commission	✓	✓	✓	✓	✓			
Template Commission	✓		✓		✓	✓		
Loop Tune PRAC		✓	✓		²			
Data Graphing	✓	✓	✓		✓	✓		
Controller Information	✓	✓	✓	✓	✓	✓	✓ ³	✓ ³
VAV Box Flow Test		✓			✓			
Collect VAV Diagnostics		✓			✓			
VMA Balancer Tool					✓			

Notes:

1. Controller supports Zone Bus.
2. Internal
3. Displays minimal information such as device type, N2 identification, and N2 address.

Tables 5 and 6 identify the ability to access field controllers through a Network Control Module (NCM) from an Operator Workstation (OWS) or M5 Workstation.

Table 5: GX Tool, XTM, and M-Pro Tool Capability – Access Through NCMs

Function	GX Tool				XTM Tool ¹	M-Pro Tool
	DX-9100	XT/XP XTM905	DX-912X	DX-9200	XTM 105	VMA1200 ²
Download Single Controller from an OWS File	✓	✓	✓		✓	
Create an Application	✓	✓	✓	✓	✓	✓
Download						
Upload						
Code Download						
Upgrade Single						
Upgrade Multiple						
Commission						
Loop Tune PRAC						
Data Graphing						
Template Commission						
Controller Information						
VAV Box Flow Test						
Collect VAV Diagnostics						
VMA Balancer Tool						

Notes:

1. Refers to the XTM Configurator.
2. Using the LONWORKS network, the VMA1200 can be downloaded directly from M-Pro or through an LNS-based network management tool. The connection must be made directly to the LONWORKS network (not through an NCM).

Table 6: OWS HVAC PRO Tool Capability – Access Through NCMs

Function	OWS HVAC PRO Tool							
	TC-9102	VAV	AHU PHX UNT	NDM	VMA1400	DX-91xx	XT/XP	XTM
Download Single Controller from an OWS File		✓	✓					
Create an Application	✓	✓	✓	✓	✓			
Download	✓	✓	✓	✓	✓			
Upload	✓	✓	✓	✓	✓			
Code Download								
Upgrade Single		✓	✓	✓	✓			
Upgrade Multiple		✓	✓	✓	✓			
Commission	✓	✓	✓	✓	✓			
Loop Tune PRAC		✓	✓		1			
Data Graphing	✓	✓	✓	✓	✓	✓		
Template Commission	✓	✓	✓	✓		✓		
Controller Information	✓	✓	✓	✓	✓	✓	✓ ²	✓ ²
VAV Box Flow Test		✓			✓			
Collect VAV Diagnostics		✓			✓			
VMA Balancer Tool								

Notes:

1. Internal
2. Displays minimal information such as device type, N2 identification, and N2 address.

Tables 7 and 8 identify the ability to access field controllers through an N30 Supervisory Controller from a PC with System Tools, via the N2 Bus. Use Project Builder to configure N30s. Use the Site Book to define N30 sites before downloading field controller information. M-Tool only operates on controllers that are defined in the N30 database.

Table 7: GX Tool and XTM Tool Capability – Access Through N30s

Function	GX Tool				XTM Tool ¹	M-Pro Tool
	DX-9100	XT/XP XTM905	DX-912X ³	DX-9200 ³	XTM 105	VMA1200 ³
Download Controllers from a Project Builder File	✓ ²					
Create an Application	✓	✓			✓	
Download	✓	✓ ⁴			✓	
Upload	✓	✓ ⁴				
Code Download						
Upgrade Single						
Upgrade Multiple						
Commission						
Loop Tune PRAC						
Data Graphing						
Template Commission						
Controller Information						
VAV Box Flow Test						
Collect VAV Diagnostics						
VMA Balancer Tool						

Notes:

1. Refers to the XTM Configurator.
2. This feature is turned off by default in the Tools - Options dialog box in Project Builder.
3. LONWORKS devices are not supported on N30s.
4. Can only be downloaded/uploaded along with their master DX-9100. XT only download/upload is not available. Installation of those devices directly on the N2 Bus is not supported, and download/upload through N30 does not work in that case.

Table 8: HVAC PRO Pass Through N30 Mode Tool Capability – Access Through N30s

Function	HVAC PRO Pass Through N30 Mode Tool						
	TC-9102	VAV	AHU PHX UNT	VMA1400	DX-9100	XT/XP	XTM
Download Controllers from a Project Builder File		✓ ¹	✓ ¹				
Create an Application	✓	✓	✓	✓			
Download	✓	✓	✓	✓			
Upload	✓	✓	✓	✓			
Code Download							
Upgrade Single		✓	✓	✓			
Upgrade Multiple		✓	✓	✓			
Commission	✓	✓	✓	✓			
Loop Tune PRAC		✓ ²	✓ ²	³			
Data Graphing	✓	✓	✓	✓	✓		
Template Commission	✓	✓	✓		✓		
Controller Information	✓	✓	✓	✓	✓	✓ ⁴	✓ ⁴
VAV Box Flow Test		✓		✓			
Collect VAV Diagnostics		✓		✓			
VMA Balancer Tool							

Notes:

1. For the VAV, UNT, and AHU controllers, this feature is turned off by default in the Tools - Options dialog box in Project Builder.
2. Not recommended.
3. Internal
4. Displays minimal information such as device type, N2 identification, and N2 address.

Detailed Procedures

Installing Configuration Tools

Note: To include a Configuration Tools menu under M-Tool, install Configuration Tools before you install System Tools.

To install Configuration Tools:

1. Insert the M-Tool CD into the CD-ROM drive. If AutoPlay is enabled, the M-Tool Installation screen appears. See Table 9 for a description of the options presented by the installation screen.

Note: If AutoPlay is not enabled, use Windows Explorer to navigate to your CD-ROM drive and double-click Setup.exe.

2. Select Install Products. The M-Tool product installation screen appears allowing you to choose Configuration Tools, System Tools, or Additional Libraries.
3. Select Configuration Tools. The Installation Options dialog box appears (Figure 5).

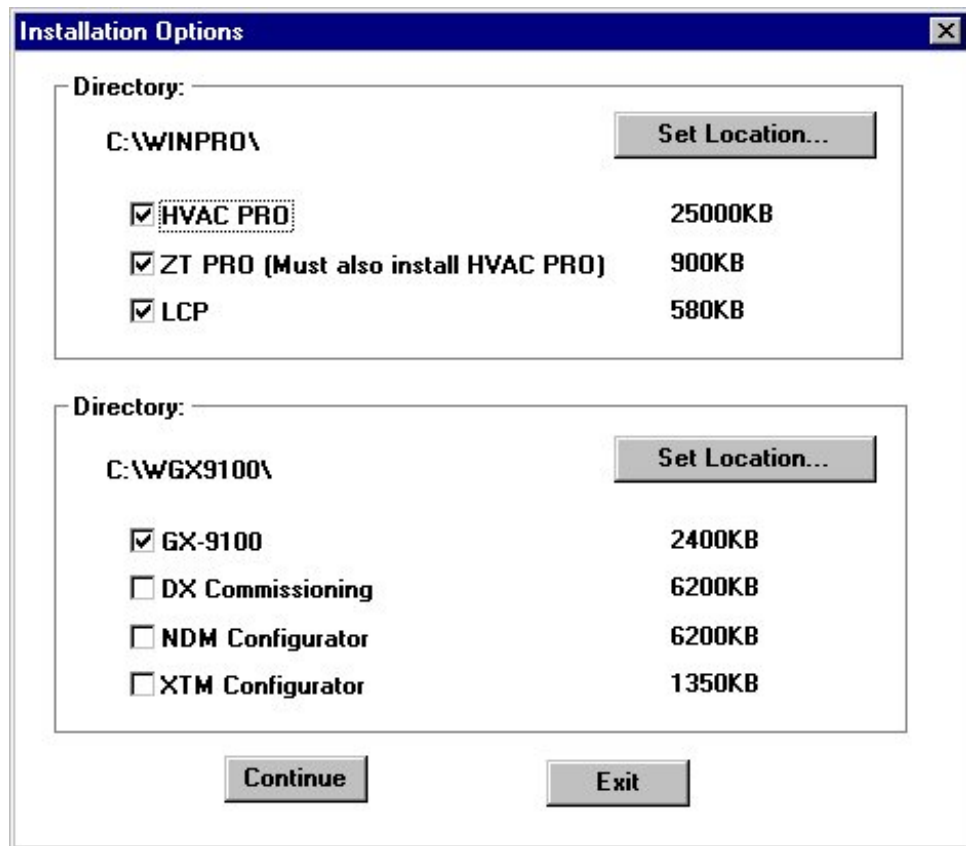


Figure 5: Installation Options Dialog Box

4. Select the tools you want to install. To change the default installation directory, click Set Location.

Notes: The HVAC PRO box must be selected to install ZT PRO.

DX Commissioning is a subset of HVAC PRO software. If HVAC PRO software is installed, DX Commissioning is installed as well.

5. Click Continue. When the installation is complete, an Information dialog box appears.

Note: If you are installing the GX Tool, a dialog box appears requesting the GX Tool language and units options. Select language and units and click OK.

6. Click OK.

Installing System Tools

Notes: To include a Configuration Tools menu under M-Tool, install Configuration Tools before you install System Tools.

If you want to install M-Pro as an LNS plug-in, see *Installing M-Pro Software as a LONWORKS (LNS) Plug-In* in this document before proceeding.

To install System Tools:

1. Insert the M-Tool CD into the CD-ROM drive. If AutoPlay is enabled, the M-Tool Installation screen appears. See Table 9 for a description of the options presented by the installation screen.

Note: If AutoPlay is not enabled, use Windows Explorer to navigate to your CD-ROM drive and double-click Setup.exe.

Table 9: M-Tool Installation Screen Options

Button	Function
Install Products	Opens the product installation screen where you have the option of installing Configuration Tools, System Tools, or Additional Object Libraries.
View Readme File	Opens the readme.txt file, which contains supplemental installation information and lists any known issues with the software.
Browse Disk Contents	Opens Windows Explorer to show the contents of the CD-ROM.
View Our Website	Opens your Web browser software to the Johnson Controls Web site.
Contact Us	Displays contact information such as our address and phone number, and provides a link to our Web site.
Exit	Closes the installation window.

2. Select Install Products. The M-Tool product installation screen appears allowing you to choose to install System Tools, Configuration Tools, or Additional Libraries.
3. Select System Tools. The Welcome dialog box appears.

4. Click Next. The Software License Agreement dialog box appears.
5. Read the Software Licensing Agreement and click Yes to signify that you agree with its content. The User Information dialog box appears.
6. Complete the User Name and Company fields. Click Next. The Installation Options dialog box appears (Figure 6).

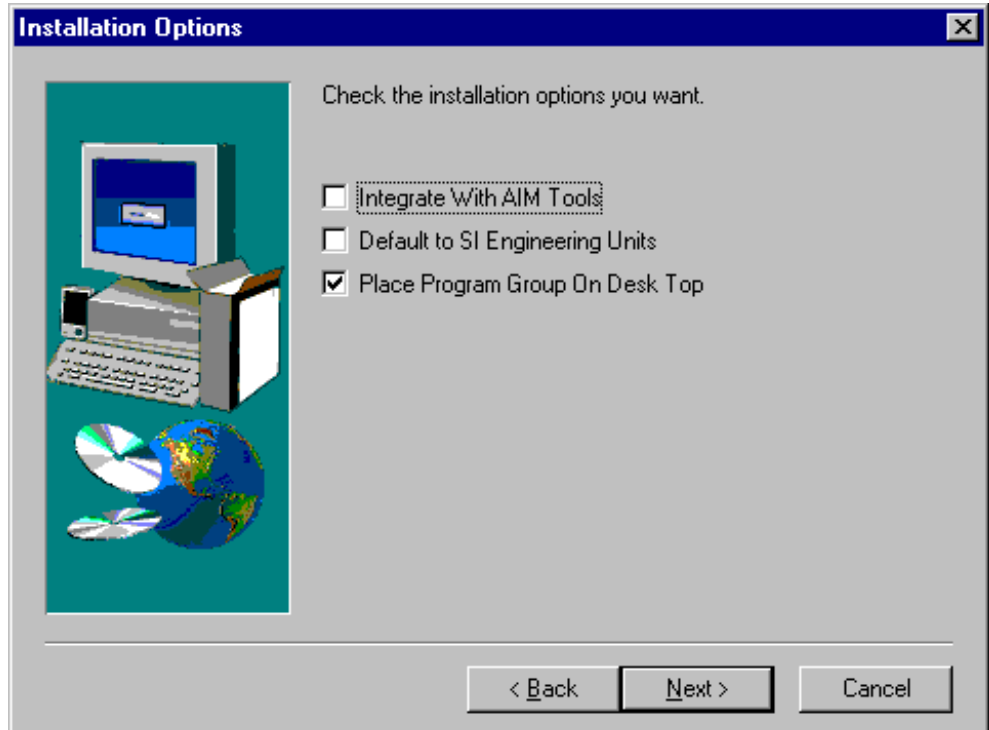


Figure 6: Installation Options Dialog Box

7. Select the installation options using Table 10.

Table 10: System Tools Installation Options

Option	Function
Integrate With AIM Tools	Sets your Project Directory path to the path specified in the AIM settings. Select this box only if AIM tools are installed on your PC.
Default to SI Engineering Units	Automatically sets the units used in the M-Pro software to International Standard units (SI). If this box is not checked, units are set to Imperial. Note: When M-Pro software is installed as a plug-in, the units setting must match that of the LNS network management tool.
Place Program Group On Desk Top	Adds a System Tools icon to the desktop for easier access to System Tools software.

8. Select Place Program Group On Desktop to automatically add a System Tools shortcut to your desktop.
9. If this is the first M-Series software product on this machine, go to Step 10. If you have previously installed an M-Series software product (including an earlier version of M-Tool), skip to Step 12.
10. Click Next. The Choose Destination Location dialog box appears.
Note: Click Browse to choose a different directory and click OK.
11. Click Next. The Choose Data Base Destination Location dialog box appears.
Note: Click Browse to choose a different directory and click OK.
12. Click Next. The Setup Type dialog box appears (Figure 7).

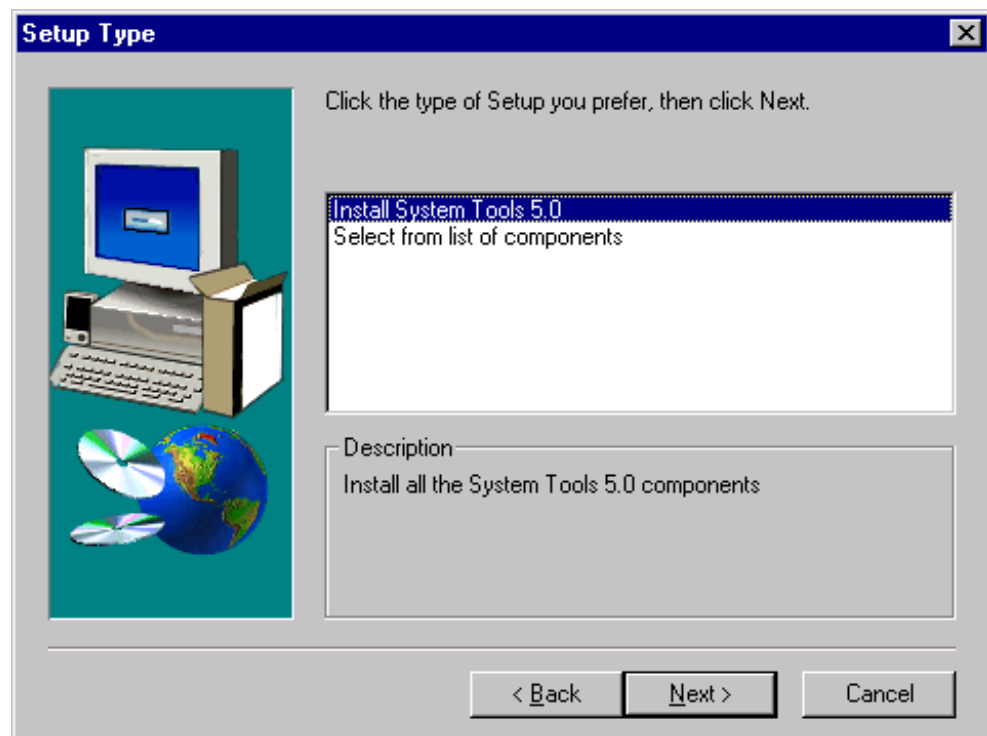


Figure 7: Setup Type Dialog Box

13. Select Install System Tools 5.0 to start the default installation of System Tools. Choose Select from list of components to choose which pieces of the System Tools you are going to install. See Table 11 for a description of the components that you can select.
Note: Select Install System Tools 5.0 to install all System Tool components described in Table 11.

14. If you chose Install System Tools 5.0, click Next and go to Step 19 or, if you chose Select from list of components, click Next and go to Step 15. The Select Components dialog box appears (Figure 8).

Note: If you want to install M-Pro as an LNS plug-in, see *Installing M-Pro Software as a LONWORKS (LNS) Plug-In* in this document before proceeding.

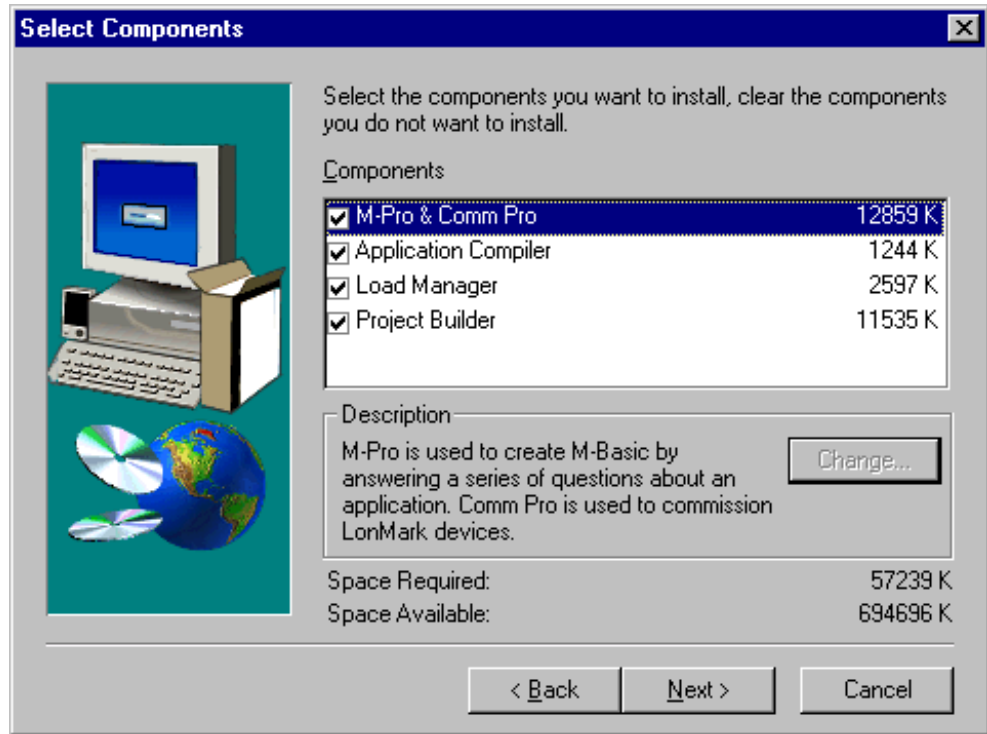


Figure 8: Select Components Dialog Box

15. Select from the components described in Table 11.

Table 11: System Tools Components

Component	Description
M-Pro and Comm Pro	M-Pro creates control strategies for VMA1200 Series controllers using a Q and A path similar to HVAC PRO software. M-Pro also downloads applications to these controllers. The Comm Pro tool commissions devices such as the VMA1200 on a LONWORKS network.
Application Compiler	Compiles BASIC source code to produce template data.
Load Manager	Manages the upload and download of programs and configurations to controllers.
Project Builder	Creates and maintains an archive database of objects used in a system's devices.

16. To change the Load Manager subcomponents, select the Load Manager component and click the Change button. The Select Sub-components dialog box appears. Figure 9 shows the subcomponents of the Load Manager. See Table 12 for a list of the available subcomponents.

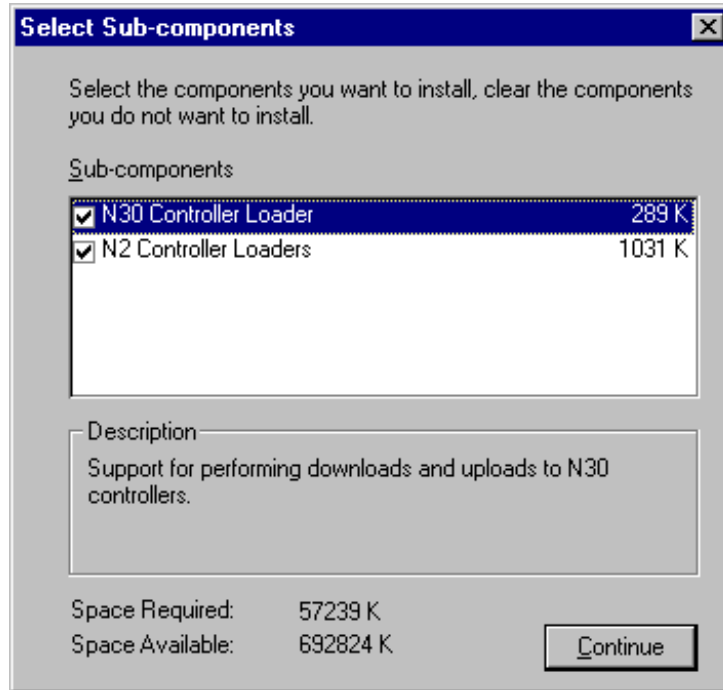


Figure 9: Select Sub-components Dialog Box

Table 12: Load Manager Subcomponents

Subcomponent	Purpose
N30 Controller Loader	Supports downloads and uploads to N30s.
N2 Controller Loaders	Supports downloads and uploads to N2 Controllers on an N30.

17. Click Continue.
18. Click Next. The Select Program Folder dialog box appears (Figure 10).

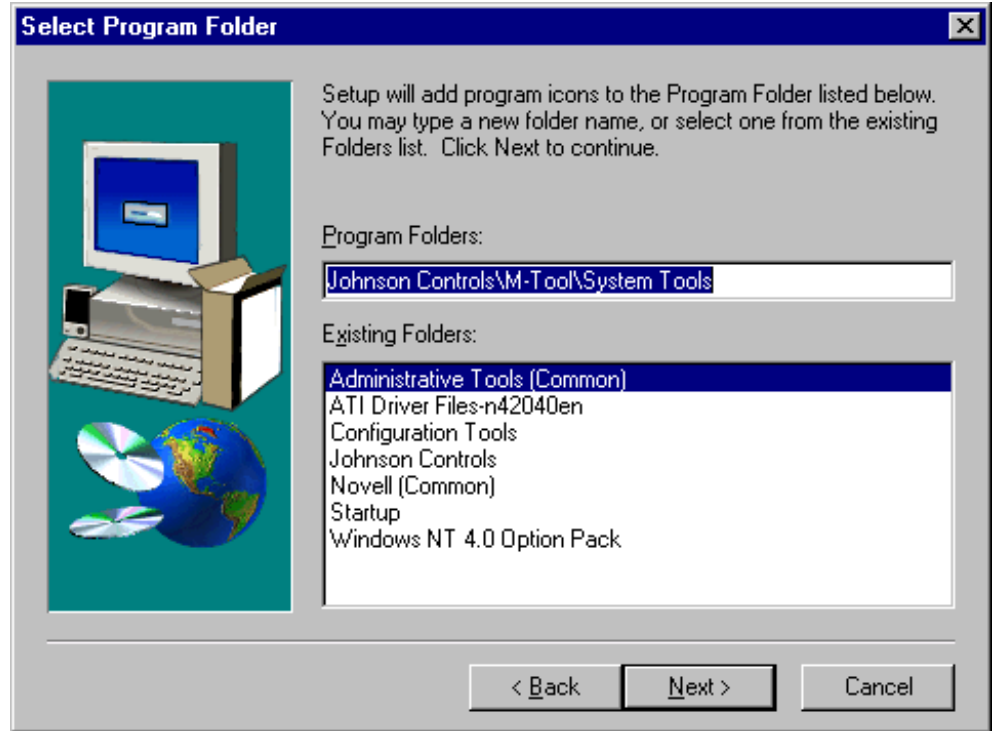


Figure 10: Select Program Folder Dialog Box

19. Enter a name for the System Tools program folder; it is System Tools by default. Click Next. When the installation is complete, the Setup Complete dialog box appears.
20. Click Finish. If prompted to do so, restart the PC.

IMPORTANT: To upload or download files from the System Tools software to and from N30s, you must set up communications in your PC for the type of connection you are using. Project Builder supports direct serial connections, dial-up (modem) connections, and connections over Ethernet networks. For an overview of the steps required for the different types of communications, see the flowcharts in the *Site Book User's Guide*. These communication overviews also apply to M3 Workstations.

Installing Additional Object Libraries

Additional object libraries are available for use with the M-Tool software suite. These additional object libraries allow M-Tool to support other compatible products. Please see the vendor's product documentation for installation and operation details of library items.

Note: You must install System Tools prior to installing additional product libraries.

To install additional object libraries:

1. Insert the M-Tool CD into the CD-ROM drive. If AutoPlay is enabled, the M-Tool Installation screen appears. Table 9 lists descriptions of the installation options.

Note: If AutoPlay is not enabled, use Windows Explorer to navigate to your CD-ROM drive and double-click Setup.exe.

2. Select Install Products. The M-Tool product installation screen appears allowing you to choose Configuration Tools, System Tools, or Install Additional Libraries.
3. Select Install Additional Libraries.
4. Select the desired library. See Table 13.

Table 13: Additional Object Libraries

Available Object Library	Installs the Object Library For
YORK® OptiLogic™ Controller	YORK OptiLogic Controller, part of the YORK OptiLogic Controller Control Center Product Line
MicroTech® II	McQuay® MicroTech II Controller
Cardkey® Panel and PEGASYS® Host	Cardkey PEGASYS 2000 Host and the Cardkey Panel Products

5. When the library is installed, select Back to return to the Install Products screen or Main Menu to return to the Main Menu.

Installing M-Pro Software as an LONWORKS Network Services (LNS) Plug-in

Notes: Refer to the *LONWORKS Network Layout Technical Bulletin (LIT-1162150)* for more information on LONWORKS networks.

LonMaker™ software is used as an example of an LNS tool. Other LNS tools can be used as well. The term plug-in tool (or mode) is applicable only to M-Pro software when that software is installed in an LNS network.

To install M-Pro software as an LNS plug-in:

1. Install the LNS compatible Network Management tool and configure the network. Follow the instructions provided by the network tool. Also see *Appendix A to the M-Pro User's Guide, Example of Network Management Tool Using M-Pro as a Plug-In: Echelon® LonMaker Software (LIT-693300)*.
2. Install M-Pro either as part of System Tools or by itself. See *Installing System Tools* in this bulletin.
3. If you need to re-register the M-Pro plug-in, see the *Re-registering M-Pro Software as an LNS Plug-In* section in this bulletin.

Re-registering M-Pro Software as an LNS Plug-In

Note: If you installed the LNS network management tool after you installed M-Pro software (and do not wish to install M-Pro software again), you must re-register M-Pro software as an LNS plug-in. The term plug-in tool (or mode) is applicable only to M-Pro software when that software is installed in an LNS network.

To re-register M-Pro software as an LNS plug-in:

1. In Windows Explorer, on the drive where the M-Pro files are stored, select Program Files > Johnson Controls > System Tools.
2. Double-click on `appbuilderlnsplugin.exe` in the System Tools folder.
3. Select Register Plug-in.

Note: See the Readme file for more information if you have trouble with the installation routine.

4. In LonMaker software, select Create a New Network.

Notes: If using a network management tool other than LonMaker software, the menu option to create a new network may be different.

See the LonMaker documentation and *Appendix A* to the *M-Pro User's Guide, Example of Network Management Tool Using M-Pro as a Plug-In: Echelon LonMaker Software (LIT-693300)*, for information on placing a device and registering plug-ins.

5. Select Johnson Controls M-Pro LNS Plug-In (Release 2.00) as the plug-in to register. During LNS installation, the following LNS Device Templates and Plug-In Commands are installed:
 - device templates for the VMA1210 and VMA1220
 - M-Pro (VMA1200) Plug-In Command for the VMA1210 and VMA1220 device templates
 - VMA1200 Downloader Plug-In Command for the VMA1210 and VMA1220 device templates

Uninstalling System Tools

IMPORTANT: Do not use this procedure if you are upgrading M-Tool. The M-Tool upgrade installation will perform the necessary uninstalls.

To uninstall System Tools software:

1. On the Windows Start menu, click Settings > Control Panel.
2. Double-click Add/Remove Programs.
3. Select System Tools.

IMPORTANT: Uninstalling System Tools results in the loss of M-Pro, Project Builder, and all other program files installed in the System Tools software package.

4. Select Add/Remove. The Uninstall utility begins.
5. The Confirm File Delete dialog box appears. Click Yes to confirm the deletion of the files.
6. The Remove Shared File dialog box appears. Click Yes to All to remove the shared files.
7. An additional Removed Shared File dialog box appears. Click Yes to confirm the removal of shared files.
8. Once the uninstall is complete, click OK to clear the Uninstall utility from the screen. You may be prompted to restart the PC to complete the uninstall.



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