

Job Name:

Schedule Reference:

Date:

**OVERVIEW OF M-NET MAINTENANCE TOOL**

- The M-NET Maintenance Tool Software and the CMS-MNG Maintenance Tool converter are CITY MULTI® system operations monitoring tools created to aid technicians in system maintenance tasks by monitoring and controlling various CITY MULTI system operational functions, status and settings
- Monitoring can be accomplished by connecting a PC (with the M-NET maintenance tool software installed) at any point in the CITY MULTI M-NET system bus using the CMS-MNG Maintenance Tool converter
- M-NET data monitored by the Maintenance Tool Software can be recorded and saved for the purposes of trending and system analysis off site
- Easy to use
- Displays all connected system components and the respective addresses
- Allows remote control of all connected indoor units
- Displays the status of and allows control of all outdoor unit, BC Controller, and indoor unit LEVs
- Display the temperature readings as detected by all thermistors
- Display malfunction logs for each connected system component
- Display system pressures as detected by all system pressure sensors



**GENERAL MAINTENANCE TOOL CONVERTER (CMS-MNG) SPECIFICATIONS**

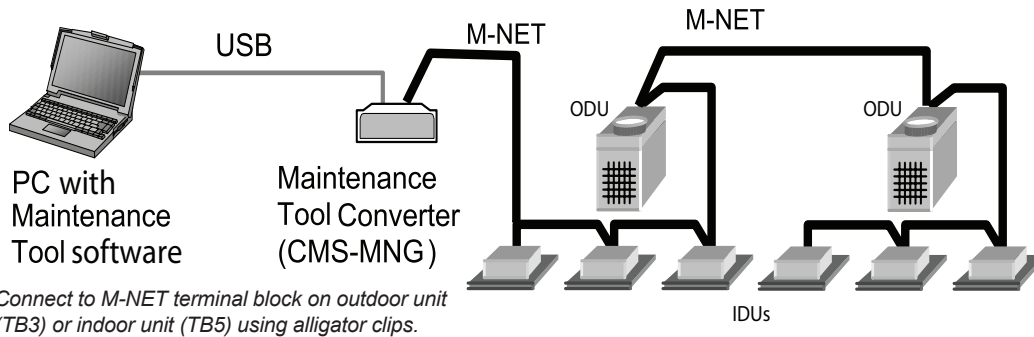
- Maintenance Tool Software must be installed on a PC in order for CMS-MNG converter to monitor system
- Connects PC with Maintenance Tool Software to the M-NET communication bus for equipment monitoring

**RECOMMENDED AND MINIMUM OPERATING ENVIRONMENTS FOR CMS-MNG AND MAINTENANCE TOOL SOFTWARE**

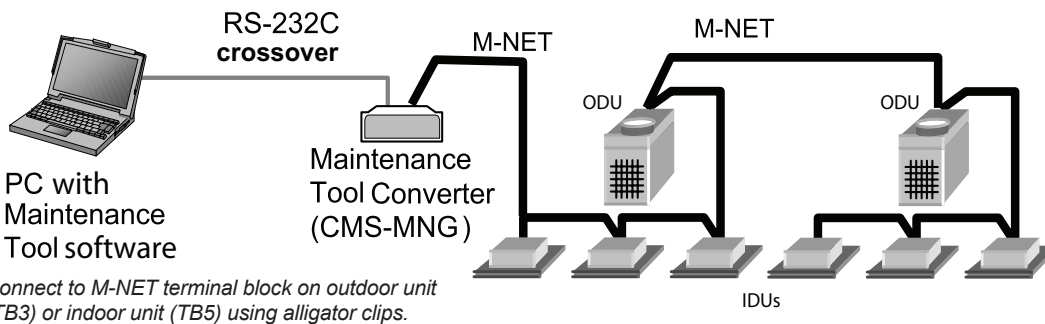
System Requirements	Windows® 2000/XP Pro		Windows Vista® Business / Win7	
	Recommended Operating Environment	Minimum Operating Environment	Recommended Operating Environment	Minimum Operating Environment
<b>Operating System</b>	Windows 2000 (Service Pack 4) or XP Pro (Service Pack 2) English version recommended		Windows Vista Business English version recommended	
<b>CPU</b>	2GHz Pentium® 4 desktop or 1.6GHz Pentium® M notebook	1GHz Celeron® desktop or 1GHz Celeron® M notebook	1.86GHz Core™ 2 Duo desktop or notebook	2GHz Pentium 4 desktop or 1.6GHz Pentium M notebook
<b>RAM</b>	1GB or more	Minimum 512MB	2GB or more	Minimum 1GB
<b>Hard Drive Disk Space</b>	Available 120GB (SATA compatible 7,200 rpm)	Available 40GB (Ultra ATA compatible 5,400 rpm)	Available 120GB (SATA compatible 7,200 rpm)	Available 40GB (Ultra ATA compatible 5,400 rpm)
<b>LCD</b>	1,024 x 768 XGA resolution			
<b>Serial Port</b>	One RS-232C Port (Use when connecting via Maintenance Tool converter CMS-MNG)			
<b>USB Port</b>	One USB Port (Use when connecting via Maintenance Tool converter CMS-MNG)			
<b>LAN Port</b>	One LAN port (10BASE-T or faster)	One LAN port (10BASE-T)	One LAN port (10BASE-T or faster)	One LAN port (10BASE-T)
<b>Optical Drive</b>	One CD-ROM/CD-RW or DVD drive (Use when installing the Maintenance Tool software to a PC)	One CD-ROM drive (Use when installing the Maintenance Tool software to a PC)	One CD-ROM/CD-RW or DVD drive (Use when installing the Maintenance Tool software to a PC)	One CD-ROM drive (Use when installing the Maintenance Tool software to a PC)
<b>Pointing Device</b>	Mouse, track ball, or any other pointing device			

## CONNECTION OPTIONS:

**USB Connection**—Connecting a PC installed with the Maintenance Tool software to M-NET transmission line via Maintenance Tool Converter allows for conducting various monitoring and settings from the Maintenance Tool. Includes a USB connector for connection to a PC. Standard USB cable and associated driver is supplied.



**RS-232C Connection**—Connecting a PC installed with the Maintenance Tool software to M-NET transmission line via Maintenance Tool Converter allows for conducting various monitoring and settings from the Maintenance Tool software. Includes a 9-pin, serial, RS-232C connector for connection to a PC. RS-232C crossover cable is field supplied.



Maintenance Tool Converter LED Display STATUS LED (yellow) displays the converter status.

