

# Chapter 1

## OVERVIEW

This booklet provides instructions for installing a uM260 Micro Monitor™ for use with either PressureMAP™ or the CopperWATCH™ telephone cable theft monitoring application. Installation procedures pertain to both the modem version of the monitor (Part No. 9800-6260M) and to the LAN version (Part No. 9800-6260L).

The book also describes the general capabilities of the monitor, offers equipment mounting suggestions, illustrates power hook-up requirements, and specifies device and monitoring pair wiring methods. Also, due to specific network communications requirements for a Local Area Network (LAN), a separate chapter is dedicated to uM260 LAN setup. The procedures in that section include logging onto the uM260, via a direct serial cable connection from a laptop or other computer, and configuring the network.

## Operational Modes

The uM260 Micro Monitor has been designed to operate either in stand-alone mode or in conjunction with System Studies' monitoring software. Because the uM260 is now used with PressureMAP or CopperWATCH in virtually all installations, the stand-alone programming instruction that was once included in the *uM260 Installation & Operation Manual* has been removed and placed on the System Studies website. Please refer to the PDF library section ([www.airtalk.com/reference14.html](http://www.airtalk.com/reference14.html)), and click on *PDF Library* and *Software Documents*. You will notice that there are three uM260 data entry documents listed:

- 1) *Stand-alone uM260 Data Entry—Modem Version, Text Interface*
- 2) *Stand-alone uM260 Data Entry—LAN Version, Text Interface*
- 3) *Stand-alone uM260 Data Entry—LAN Version, Web Browser Interface*

**Note:** The uM260 monitor is not intended to be used in stand-alone mode for copper cable theft detection.

Since PressureMAP or CopperWATCH are the two software applications that are used to monitor a uM260, programming the monitor is performed within the software application. User manuals provided with the software, and available on [www.airtalk.com](http://www.airtalk.com), explain how to use the appropriate data entry editor to build the required uM260 database. The manuals also describe how to set up Alarm Centers, define calling times for alarm distribution, and specify calling schedules for weekdays, weekends and holidays. Once this data has been entered into the database, the software will upload the information to the monitor when it first connects and establishes communications.

If you have any questions regarding the information or procedures described in this booklet or the software documentation, please contact System Studies Incorporated at (800) 247-8255, (831) 475-5777, or via email at [support@airtalk.com](mailto:support@airtalk.com). Our Technical Support personnel are available to offer

assistance to customers with a valid Technical Support contract Monday through Friday, excluding national holidays, from 6:00 a.m. to 4:00 p.m., Pacific Time.

### ***uM260 Capabilities***

The uM260 is a -48V DC-powered monitoring unit that can be installed in a central office or other suitable location, such as a Controlled Environmental Vault (CEV) on the field side of a fiber optic feeder cable. The monitor is accessed via dial-up modem or over a Local Area Network (LAN). Its controller/relay board is equipped with dedicated relays to provide scanning and alarming capabilities for up to 16 resistive or current loop monitoring devices, four binary contactors, and one control relay output.

When used with CopperWATCH, the uM260 has the capability of monitoring a maximum of 16 dedicated monitoring pairs, which are wired to the uM260 via a System Studies Termination Adapter or a larger 100-pair connector block and connector cable. The four binary contactors and one control relay output are not used with the CopperWATCH application. It is also important to understand that a uM260 Micro Monitor cannot be used to monitor both air pressure/flow devices and copper cable theft monitoring pairs. These two monitoring applications are quite different and require the use of either PressureMAP or CopperWATCH, not both.

### ***SCANNING***

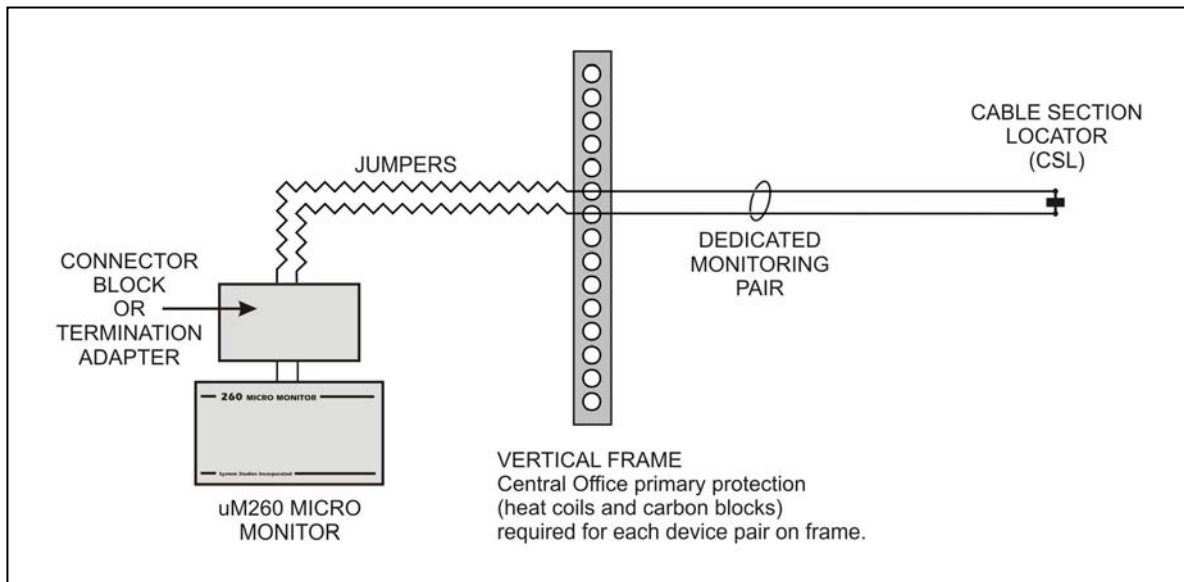
The uM260 continually scans each device or monitoring pair approximately three times a minute. After the pairs have been read, the monitor alerts PressureMAP or CopperWATCH if a potential alarm condition exists. The software then calls the uM260 and takes another reading on the alerting device or cable theft monitoring pair to confirm the alert information. Once PressureMAP or CopperWATCH processes an alarm, it calls the designated alarm center(s) for the specific calling time, and sends an alarm summary. The uM260 then begins the next scan cycle, and repeats the process described above.

### ***DEVICE WIRING***

Monitoring pairs in the field are connected to the uM260 via a dedicated connector block (Part No. 9800-6055) or a Termination Adapter (Part No. 9010-0062). In the case of a dedicated connector block, the monitoring pairs are punched down on wire-wrap pins located on the face of the block. A 25-pair cable with a 50-pin Amphenol connector on each end completes the electrical connection between the block and the uM260. The cable ends plug directly into the bottom of the block and into the back of the monitor.

The Termination Adapter recommended for use with the uM260 Micro Monitor does not require a connecting cable. Once the pairs have been terminated on the adapter card, it can be directly plugged into the back of the uM260.

FIGURE 1-1 represents a CopperWATCH-monitored conductor pair that is connected to a uM260 monitor in a typical small central office or CEV hut. A resistive or 4-20 milliampere pressure or flow transducer, installed in the field and monitored by PressureMAP, would be connected to the uM260 in the same way.



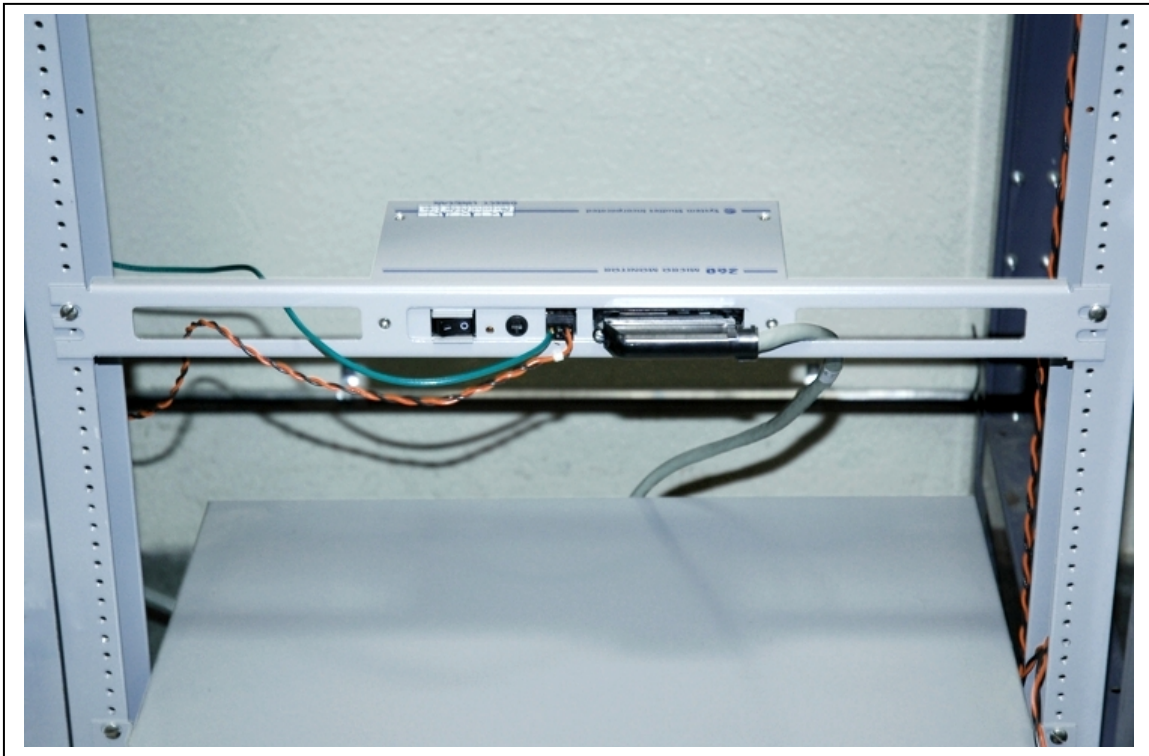
**FIGURE 1-1: DEDICATED INSTALLATION IN CENTRAL OFFICE OR CEV**

### ***MONITOR COMPONENTS, PHYSICAL DESCRIPTION***

The uM260 is a compact chassis (9.25 x 5.14 x 1.25 inches) which can be placed on a horizontal surface, mounted vertically on a wall (PHOTO 1-1), or installed horizontally in an equipment rack using a space-saving rack mount panel (PHOTO 1-2). Angled side mounting brackets, bolts and screws are provided for the wall installation. Equipment rack installations require the purchase of a Rack Mount Panel Kit (Part Number 9900-0260).

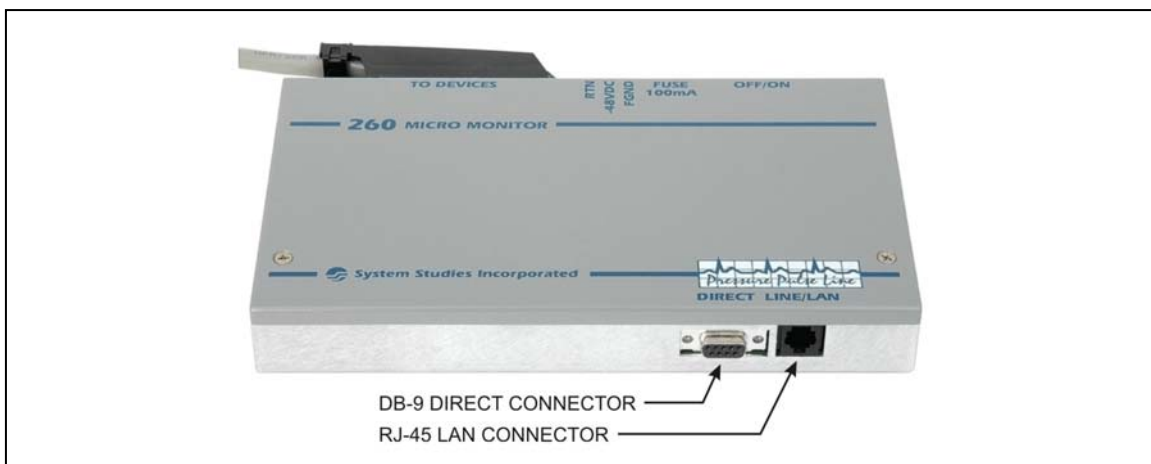


**PHOTO 1-1: UM260 ON VERTICAL SURFACE**



**PHOTO 1-2: uM260 ON 1.75-INCH RACK MOUNT PANEL**

Located on the front of the uM260 are a DB-9 serial cable connector (female) and either a RJ-45 network cable connector or a RJ-11 phone line jack, depending upon the type of model (LAN or modem). The monitor's cable connector occupies a position on the back of the chassis, along with the removable -48V DC power module, 100mA fuse, power-on LED, and On/Off switch. PHOTOS 1-3 and 1-4 show the position of the important uM260 connectors, ports and switches.



**PHOTO 1-3: uM260 FRONT VIEW-LAN VERSION**

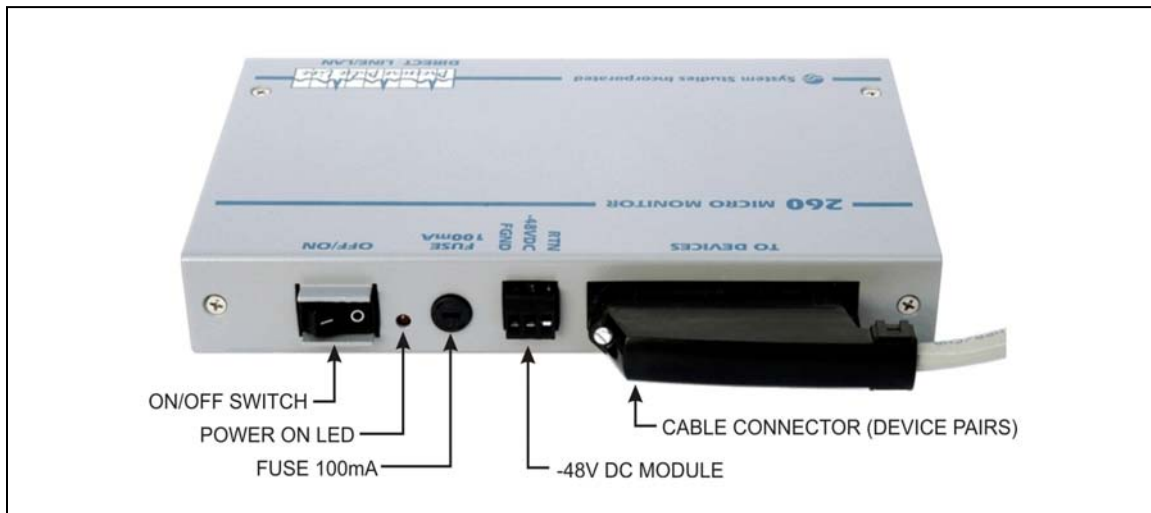


PHOTO 1-4: UM260 BACK

