

## View Manager® 96 Enhanced TOUCH TRACKER®

### Contents

About This Document .....	1
Planning the TOUCH TRACKER Network.....	1
Backbone Network Guidelines .....	2
Star Network Guidelines .....	2
Installing Enhanced TOUCH TRACKERS.....	3
Configuring TOUCH TRACKERS for Use with VM96 .....	4
Connecting TOUCH TRACKERS.....	4
Remote TOUCH TRACKER Overview.....	5
Remote Touch Tracker Installation .....	6

### About This Document

This guide explains how to install and configure the VM96 Enhanced Touch Tracker. Other related documents are:

- **Communications Protocols and Cable Networks** (PN 8000-2573-19)
- **View Manager 96 Version 5.0 System Operator's Manual** (PN 8000-2635-01)
- **View Manager 96 Version 5.0 Quick Reference Guide** (PN 8000-2636-05)
- **View Manager 96 Version 5.0 System Administrator's Manual** (PN 8000-0756-05)

### If you need assistance...

Call your sales representative.

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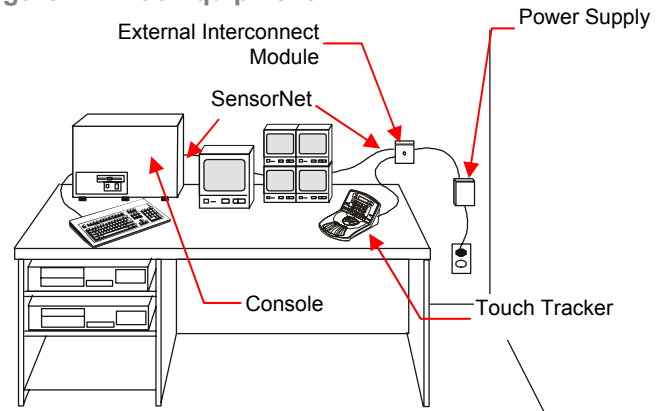
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## Planning the Touch Tracker Network

Figure 1: VM96 Equipment



The VM96 system supports a maximum of eight Touch Tracker controllers (controller). Controllers can attach in a variety of configurations, but must follow all SensorNet configuration and termination rules.

- A network link's maximum length is 1000m (3300 feet).
- Each network link supports up to 32 devices and up to four network branches.
- The VM96 console provides four SensorNet links. SensorNet J-Boxes provide additional links.
- Each Touch Tracker controller attaches to the network via an External Interconnect Module (EIM), which provides the controller with power and network termination.

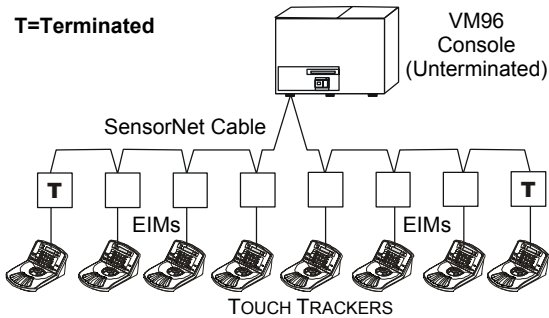
The guidelines included in this document provide brief descriptions about how to implement Enhanced Touch Trackers in a Backbone or Star network. For detailed information about the various network types and communication protocols, refer to **Communications Protocols & Cable Networks** (PN 8000-2573-19).

## Backbone Network Guidelines

The backbone network topology uses a single cable that passes through each external interconnect module (EIM), as shown in Figures 2 and 3.

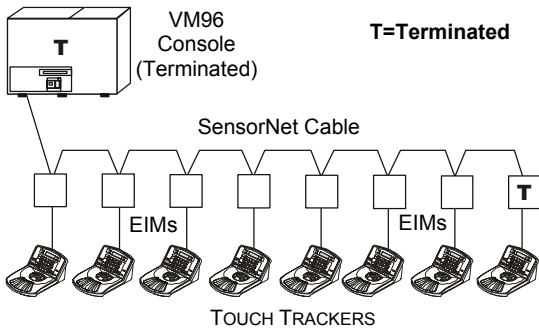
In Figure 2, the EIMs at each end of the backbone must be terminated. All other interconnect points, including the console, are unterminated.

**Figure 2: Backbone Network Example #1.**



In Figure 3, the console and the last EIM are terminated. All other interconnect points are unterminated.

**Figure 3: Backbone Network Example #2**



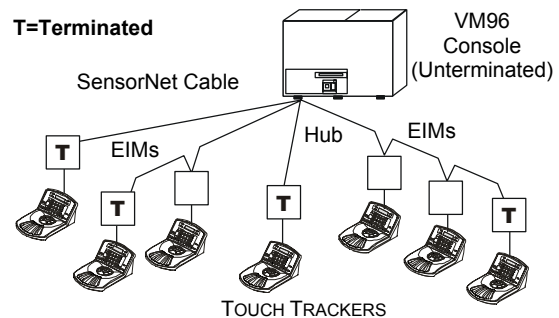
## Star Network Guidelines

The star network topology has legs running from a hub (central connection) to the attached EIMs. The console, a J-Box, or one of the domes or EIMs can serve as the wiring point or "hub" for the star configurations, as shown in Figures 4 and 5.

- Each network link supports one star network, with up to 32 devices. VM96 supports up to eight Touch Tracker controllers.
- Only one hub is allowed for each star network.
- A network hub supports a maximum of four legs.
- The device at the hub is always unterminated.
- A star network leg can attach unterminated connected devices; however, the device at the end of each leg must be terminated.

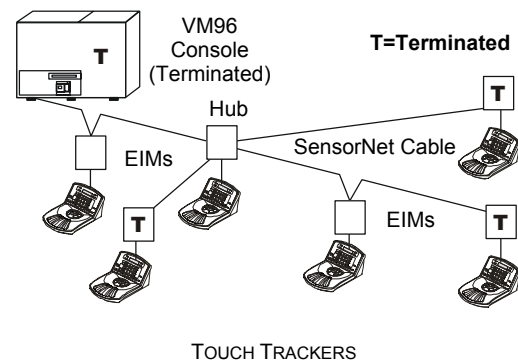
In Figure 4, the EIMs at the end of each leg must be terminated; other EIMs are unterminated. Since the console is the hub in this configuration, it is unterminated.

**Figure 4: Star Network Example #1**



In Figure 5, the second EIM attached to the console is the hub, and it is unterminated. The VM96 console, and the EIMs at the end of each leg must be terminated. Other EIMs are connected together and unterminated.

**Figure 5: Star Network Example #2**



# Installing Enhanced Touch Trackers

## Installation Kit (0351-0474-01):

Description	Quantity	Part Number
CABLE ASSY,MDLR,RJ-45,8 COND,14	1	6003-0047-01
SCR,THD CUT,M2,9X9.5,PHP,ST,Z,	1	5899-0004-102
ANCHOR,PLASTIC,#4-#8,3/4"	2	2880-0083-01
SCR,TYP AB,PHP,CAD,#8X1"	2	2816-7634-44
CONN,PLUG,TUBLR,..200CTR,26-12A	1	2109-0254-04
LUG,SPADE,CRIMP,INSUL,22-16AWG	3	2141-0002
CABLE,3COND,18AWG,PVC	16.50 ft	6002-0024-01
INTERCONNECT BOX,TOUCH TRACK	1	0300-1000-01



### WARNING—RISK OF ELECTRIC SHOCK!

Disconnect AC power to the VM96 System and External Interconnect Module before starting to install this equipment. Failure to do so could shock you and may damage the VM96 system or attached devices.



### CAUTION—ELECTROSTATIC SENSITIVE DEVICE!

Follow proper handling procedures to prevent component failure.

- Review the network design to determine which Touch Tracker controllers (controller) must be terminated. Set jumper E1 on EIMs requiring termination (Figure 6).
- Mount each EIM on a wall or other surface within 3m (10') of its attached controller. Then route a twisted-pair SensorNet cable from the VM96 console, past each EIM, until the last EIM is reached. Do not cut the cable at each EIM.
- Referring to Figures 6 through 8:
  - Wire each EIM's power supply leads to pins 2, 3, and 4 of a 5-pin compression connector (one connector per EIM). Tighten the fastening screws to secure the wires.
  - Strip 25mm (1") of outer insulation from the SensorNet cable at each EIM location. Then strip 12mm (.5") of insulation from each wire.
  - Bend the two wires in the middle of the stripped area. Insert one wire into pin 1, and the other into pin 5 of the EIM's 5-pin compression connector. Tighten both fastening screws to secure the wires.

- After attaching power and SensorNet cables, plug the wired 5-pin connector into each EIM's WAG005 connector. See Figure 6.
- Connect the EIM SensorNet cable to the SensorNet card or preceding SensorNet device. Then connect the cable between the last EIM and the next SensorNet device.
- Plug the modular interconnect cable into the RJ-45 connector on the back of the Touch Tracker controller. Use the strain relief. Plug the other end into the EIM.

Figure 6: EIM Board Layout.

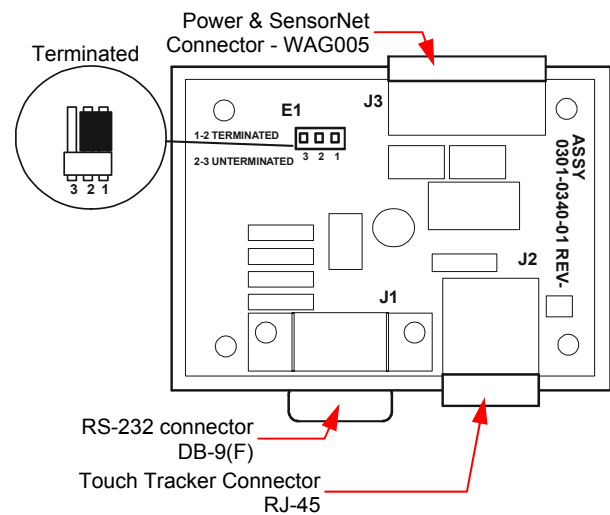


Figure 7: Installing one Touch Tracker.

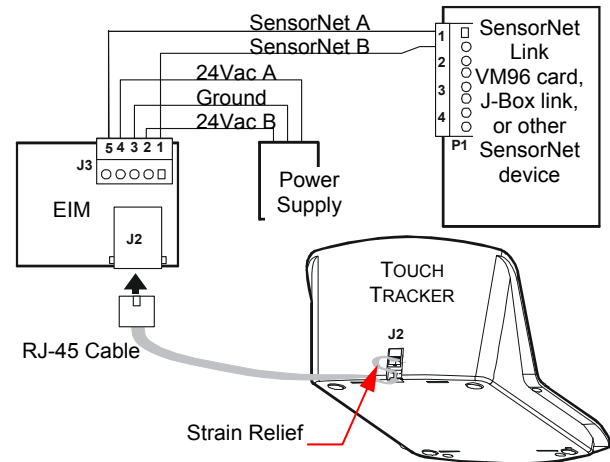
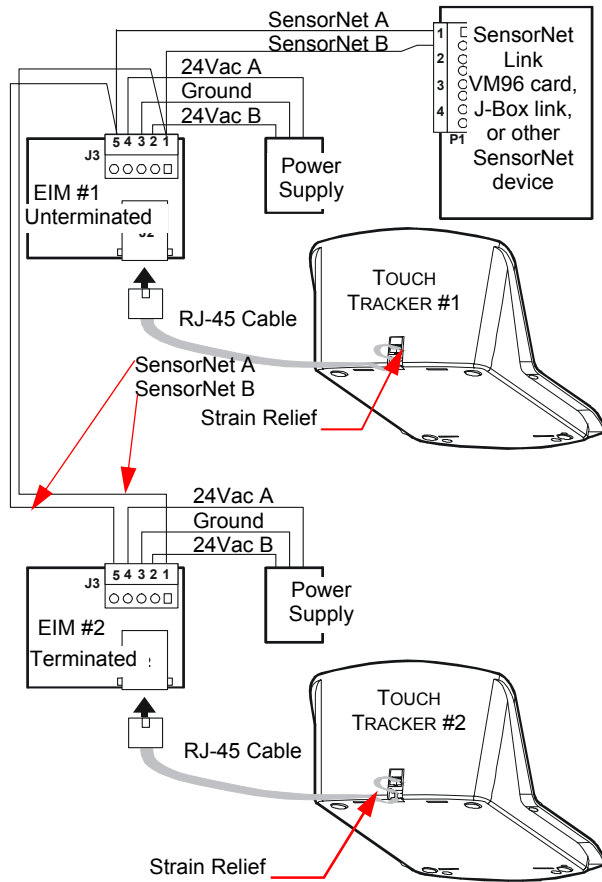


Figure 8: Installing multiple Touch Trackers.



4. Plug the EIM power supply or transformer into a grounded, 3-wire electrical outlet.

**Note:** If the keypad and backlighting do not light when power is applied, repeat steps 3 and 4. Disconnect the controllers from the EIMs after completing this test. They will be connected later, one at a time.

Continue with Configuring **TOUCH TRACKERS** for Use with VM96 to set up the Enhanced Touch Trackers.

## Configuring Touch Trackers for Use with VM96

**Note:** Touch Trackers shipped from the factory are configured to work with VM96 version 4.x and later. If your VM96 software version is 3.x, the Touch Tracker mode will need to be set.

### Connecting Touch Trackers

**IMPORTANT:** Touch Trackers must be connected one at a time

1. Start the VM96 console.
2. Determine the VM96 software version.
  - a. Start the Administrator menu.
  - b. Select "**Setup**" then "**System**".  
The Setup System form appears on the screen.
  - c. Check the version number. The version number appears in the upper right corner of the form.
  - d. Do one of the following:
    - If the VM96 software version is 3.x, the Touch Tracker must be set to version 3 mode. See the note before step 3 for instructions. Press **Alt+X**, then **Enter** to exit the form.
    - If the VM96 software version is 4.x or later, the Touch Tracker is ready to use. Press **Alt+X**, then **Enter** to exit the form.
  - e. Press **Alt+X**, then **Enter** to exit the Administrator Menu. Continue with step 3.

**Note:** If the VM96 software is version 3.x, you must press and hold number **3** while performing the next step

3. Attach the cable to the Touch Tracker.  
After going through its startup sequence, the Touch Tracker displays the following LCD message:

Sensormatic  
Touch Tracker v5

After a few moments, the LCD displays:

Cam	A1
Mon	—

The Touch Tracker may cycle several times with an **r** in the upper right-hand section of the LCD. An **A** indicates the address was accepted.

Press **Clear Entry** if the controller stalls with a **TTR** message at the bottom of the LCD screen or if there is no text visible.

**NOTE:** The Touch Tracker address defaults to A1. If more than one Touch Tracker will be used, you must change the address for all Touch Trackers except the last one connected. See step 3.

5. Set the Touch Tracker link address:
  - a. Press **0**, then **Menu** to start the Utility Menu on the Touch Tracker you just connected.
  - b. Press **2** to set the link address.
  - c. Enter an address (2-8) for the Touch Tracker. The Touch Tracker checks for address availability. If the address is accepted, the message Address Granted, Press Clear appears on the LCD.
  - d. Press **Clear Entry** twice to exit the Utility Menu.
6. Disconnect the Touch Tracker, and repeat steps 3-5 for each Touch Tracker (except the last one). When addresses have been assigned to the Touch Trackers, reconnect all Touch Trackers.

The VM96 system is ready to use.

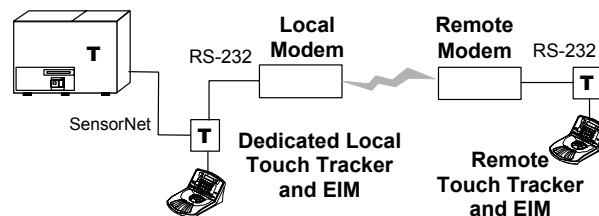
## Remote Touch Tracker Overview

VM96 supports communication with a remotely located Touch Tracker using RS-232 communications. A remote Touch Tracker should be used when the Touch Tracker will be located more than 1000m (3300 feet) from the host. Short haul modems allow the distance to be extended and support communications over voice-grade leased or switched lines.

When installing a remote Touch Tracker, keep the following requirements in mind:

- The short haul modems must support 1200, 2400, 4800 or 9600 baud. Use the instructions included with the modems for installation and configuration. These are the only baud rates supported by the Touch Trackers.
- The Touch Trackers must be configured to the same baud settings as the short haul modems.
- A local Touch Tracker must be dedicated while the remote unit is in use. The two Touch Trackers connect through the RS-232 ports on their respective EIMs.
- The RS-232 cable cannot exceed 15m (50 ft). Use low capacitance, 100% shielded EIA RS-232 cabling.
- Both Touch Trackers must be the same type (Enhanced Touch Trackers) and have the same firmware version.

The following illustrates a remote Touch Tracker installation:



The following chart provides the wiring information between the two EIMs.

Wire	Local and Remote EIM
1	Pin 2-Tx
2	Pin 3-Rx
3	Pin 5 Ground

**Note:** When attaching with a modem, use a conventional modem cable and DB-25 to DB-9 converter, if required.

## Remote Touch Tracker Installation

Follow the instructions included with the modems to set the baud rate to 1200, 2400, 4800, or 9600 baud. You must then configure the remote and local Touch Trackers to use the same baud rate as the modems.

### Setting the Touch Tracker Baud Rate

The baud rate for the Touch Tracker can only be changed when the Touch Tracker is connected via SensorNet. This procedure must be performed before moving the remote Touch Tracker to its final location.

1. Connect **one Touch Tracker only** to the VM96 console.
2. When the Touch Tracker completes start up, the following prompt appears on the LCD.

Cam	A#
Mon	—

3. Press number **0**, then press the **Menu** button on the Touch Tracker. This starts the Utility Menu.
4. Use the **A**, **B**, **C**, or **D** buttons located next to the LCD screen on the Touch Tracker to set the baud rate.
  - Press **A** for 1200 baud.
  - Press **B** for 2400 baud.
  - Press **C** for 4800 baud.
  - Press **D** for 9600 baud.
5. Press the **Clear Entry** button to save the setting.
6. Disconnect the Touch Tracker. Use this Touch Tracker as the remote unit.
7. Repeat steps 1 through 5 with the second Touch Tracker. Leave this Touch Tracker connected as the dedicated local Touch Tracker.

### Setting Up the Remote Touch Tracker

With the remote Touch Tracker in its final location, use this procedure to configure it for use.

1. Apply power to the Touch Tracker. When the start up procedure completes, the following will appear on the LCD screen:

r#
----

2. Press number **0**, then press **Menu**.
3. When the Utility Menu appears, press the **Clear Entry** button. The information from the local Touch Tracker will appear on the remote Touch Tracker's LCD screen.

Cam	r#
Mon	—

The remote Touch Tracker is ready for use.