

# WARREN COUNTY, NJ MOBILE DATA TERMINAL (MDT) SUPPORT POLICY AND PRIMER

(Effective January 4, 2007)

## Recent MDT System Changes

Warren County's MDT Network has been upgraded to communicate via "air cards" that are inserted into laptop computers and Datalux Tracer computers. This essentially eliminates the need for trunk mounted MDT radios, data modems and MDT antennas. These radios and modems had been in service for over ten years and many were experiencing reliability and speed issues.

The upgraded MDT network relies solely on "air cards" and special dialup and communications software. This provides greatly improved speeds, improved coverage range, and better reliability.

### *The three major components to the MDT system for end users are:*

- The computer hardware (including screen, keyboard, mount and power feed)
- The "Biokey MobileCop" software (formerly called Cerulean Packetcluster Patrol)
- The "air card" and dial-up software

At the other end, the Communications Center installed a new MDT server computer to handle an increased workload and installed the latest copy of the MDT server software (last upgraded in 1999). Hardware and software was also installed to support "air card" connections used by "clients" (end users).

Using a Homeland Security Grant, Warren County was able purchase a Datalux Tracer computer for each police department in 2004. In the year 2006, a second Homeland Security Grant was used to purchase two additional Datalux Tracers and two or three internet air cards per police agency, plus a two year subscription for dial-up access through Verizon into our MDT network. Police agencies have the option of purchasing and subscribing to additional air cards at their own cost, and purchasing additional MDT MobileCop software licenses for any MDT's they may choose to add.

The slow, radio-based MDT network will be phased out, possibly by the end of 2006. This is because the microwave system connecting the Communications Center's remote tower sites is being replaced. It would have cost over \$40,000 for the new microwave to support the slower radio modem technology. Vendors have not manufactured or supported these older 4,800 baud radio modems for years – we had been living off the used modem market and biding our time.

## MDT Support Policy

**It is the responsibility of each Police Department's "MDT Coordinator" to serve as the single point of contact when ongoing MDT problems exist. Individual officers must forward any ongoing MDT issues to their MDT Coordinator and should not contact the Communications Center technical staff directly.**

**Biokey MobileCop Software:** Will be installed and supported by Warren County's technical staff onto new and existing computers. However, the software itself must be licensed by the agency using it for each computer it is installed and used on.

**Verizon NationalAccess/Broadband Access Software:** Will be installed and supported by Warren County's technical staff onto new and existing computers. A monthly cellular subscription will be paid by the county for a period of two years starting June, 2006 until June, 2008. After this period user agencies must assume the subscription costs of these air card subscriptions if they choose to continue using the MDT network.

**Datalux Tracer Computers and Installation:** Warren County has purchased and paid for installation of several Datalux Tracer computers to assist user agencies in upgrading from their older laptop units. These computers warranted for a period of three years from the manufacture date found on the back of the unit. These tracers are now property of the user agencies. Once installed, Warren County is not responsible for repairs or problems with the hardware, vehicle mounts, and power cables. Thus, the user agency needs some guidance on how to diagnose hardware problems and contact a vendor for support. This is the intent of the remainder of this document.

## Hardware Problems Most Commonly Experienced with Datalux Tracer MDT Computers

- **Touch Screen no longer functional (even after Calibration):** Datalux will replace the touch screen layer during the warrantee period if you ship the unit back (See "Hardware Repairs" below). Often, running the touch screen calibration software installed on the unit does not correct the problem.
- **Unit has no power:** Some Tracers were installed with a "charge guard", designed to power off the MDT completely after the ignition is turned off for a period of time. The intent is to stop the vehicle's battery from dying. Most units are set for 4 hours once the car is turned off. If you have no green lights on the MDT at all, turn your vehicle off for 5 seconds and then restart – this usually wakes the charge guard back up to supply power to the MDT. If this does not work, check the fuse to make sure it is not blown. Also check the power connector at the bottom right corner of the laptop to see if it has loosened or fallen out. If all else fails, someone with a meter could check to see if the MDT is getting any power at all before removing the unit from the vehicle and sending it out for repair.
- **Unit has power, but will not boot:** There is a single green light near the power button when the MDT is getting power. Once the power button is pressed, two additional green lights appear and

the unit starts to boot up. When there is a problem booting, the green lights will typically blink a couple of times, turn off, or the screen itself will begin flashing. This usually indicates a hardware problem in the units power supply or start-up procedure, meaning the unit must be sent for repair.

- **Unit has “boot sector” problem:** A message may appear that there is a “boot sector” problem, or that the unit cannot properly boot. The messages usually appear as white alphabetic characters on a blue background. This typically means the unit experienced a hard drive crash, and must be sent for repair.
- **Unit boots, but Air Card will not connect:** This is most likely a range problem and not a hardware problem. Your air card will blink green when a cellular signal is received. A red steady or flashing light on the air card indicates the unit is out of range. Try moving your vehicle to an area you know receives a strong cellular Verizon signal. If this does not help, try a different air card. If you experience frequent range or disconnect problems, consider buying an external cellular antenna for the air card (see attachment).

**The Warren County Communications Center is only responsible for installing and maintaining the MobileCop software, Street Locator program, and VZAccessManager (air card dialer) program. Any MDT hardware issues or power problems must be forwarded to the agency’s MDT Coordinator for research and resolution. This can be done by contracting with an MDT vendor.**

**In situations where a Datalux Tracer MDT must be sent out for repair, the following procedure should be followed:**

### **Remove the MDT from the Vehicle**

1. On the back of the MDT there *may* be up to 4 Phillips head screws holding the MDT in. Take these screws out (most units are only held in using two screws). Put these screws in an envelope and store in a secure location. Do not remove the two center hex nuts as they are used to hold on circular studs that the MDT clips onto on the inside of the bracket.
2. Turn the handle on the clip on the rear of the mounting bracket to release the clip that holds the top of the MDT.
3. Lift the MDT unit up and then away from the mounting bracket. You will see two circular studs on the bracket that were seated into holes on the back of the MDT. Leave them on the bracket.
4. Pull down on the ring on the silver colored power connector at the lower right corner of the MDT to release it.
5. Remove the air card and clear plastic air card cover (held on by four screws, if present). They are found on the top right corner of the unit. Save the four cover screws (if present) or screw them back into the unit without the clear plastic cover. Do not send the air card with the unit for repair.

### **Package and Ship Unit Directly to Datalux**

6. Visit the following web site: [http://www.datalux.com/rma\\_form.asp](http://www.datalux.com/rma_form.asp) to fill out an RMA form (Return Merchandise Authorization). Complete it and submit it via the internet.
7. Datalux will assign an RMA number and will e-mail an RMA confirmation with a Datalux RMA shipping label.

8. Attach the completed Datalux RMA shipping label to each package. Make duplicates if necessary.
9. When returning products, pack in original shipping containers (extra shipping boxes can be picked up at the Communications Center). Damage or loss of goods during shipment is the sole responsibility of the customer. Insufficient packaging may result in loss of warranty. Please back-up any other non-MDT programs you added to your hard drive. Datalux is not responsible for software loss.
10. Ship RMA products freight prepaid. After repair, Datalux will return the product UPS ground freight -- prepaid for warranty items. For other shipment methods, customer must pay the difference in freight. Out of warranty items will be invoiced for any parts, labor and shipping charges. Products shipped to Datalux without RMA numbers or freight prepaid will be refused.

### **When the Unit is Returned...**

1. Insert the air card.
2. Screw the clear plastic Air Card cover back on (if you had one) using the four small Phillips head screws you saved in step 5 above. Look at the bottom ledge of the cover (one side is slightly inset) to make sure it is turned and aligned properly.
3. Plug the silver power connector back into the bottom of the unit. This is a bit tricky, because it must be aligned properly and must clip into place. Be careful not to scratch the MDT screen as you are doing this.
4. Lift the MDT unit up and onto the mounting bracket, aligning the two holes in the back of the unit with the two circular studs on the inside of the MDT bracket. Once the studs are in the holes, push the MDT down about an eighth of an inch so they seat properly.
5. Place the metal clip back over the top of the MDT and turn the handle to clip and tighten it into place.
6. If you saved them, screw the small Phillips head screws into the back of the bracket and MDT to better secure it to the bracket and guard against theft.
7. Turn the MDT unit on and check that your Packetcluster software is still installed and functioning. If the hard drive was replaced on the unit, you may have to contact Warren County to have the Packetcluster Mobile Cop software reinstalled.

## **Purchasing Additional MDTs**

The Datalux Tracer is preferred over standard laptop computers. Traditional laptops only have a one or two year life span before experiencing problems – usually in the form of weakened or broken screen hinges or keyboard problems. More rugged laptops, such as the Panasonic Toughbook, are available. However, the two piece Datalux Tracer is very rugged, is designed for in-vehicle use, having a separate lighted keyboard and has a longer lifespan than most laptops,

When purchasing a new MDT the following components must be considered:

- Computer itself
- Mounting hardware
- Power
- Bio-Key MobileCop “client” license
- Hardware Installation
- Air Card

**Price quotes** for Datalux Tracers can be obtained by calling their New Jersey authorized vendor Quality Communications of Lakewood NJ at 1-800-245-8186. Our current contact is Michael Haas at extension 111.

**Air cards** must be purchased and subscribed for separately. There is a separate document explaining pricing and vendor information.

**MDT Software** will be installed on the new computer by Warren County once the unit is received. It is more efficient to bring and leave the new *uninstalled* computer at the Communications Center for programming prior to scheduling hardware installation with the vendor. Software installation takes 3 to 4 hours “on the bench”, but will take longer if affixed in a vehicle. In addition, in-vehicle software installations are only performed at the Communications Center, require the vehicle to be out of service for several hours, and may tie up manpower.

Warren County will install a copy of the Bio-Key MobileCop “client” software, the air card driver software, and some additional applications. These additional applications consist of Emergency Response Guidebook, Locator, radio scanner and active/recent incidents programs. In addition, operating system patches and upgrades are downloaded via the internet, and Anti-virus software is installed and updated and usersids are configured. Software installation for the new computers must be arranged for by the agency’s “MDT Coordinator” by calling Pat Rivoli at 908-835-2040.