**FastPass**

# HAND HELD

# READER

Revision: 1.0

Date:

# *Contents*

# 1. General Information

## 1.1. Introduction

The electronic seal's reader is a handheld device that enables to set and activate TDMA electronic seal when the container is loaded and closed.

## 1.2. Reader Description

The Reader is based on Telematics-Wireless's TDMA reader, which is controlled by a PDA. The TDMA reader is in standby mode most of the time and become active to very short duration upon application (PDA) software request. The application software can read a seal status, set and activate the seal. The application software can save the seal status to a file. The file can be downloaded to PC using the PDA synchronization software.

## 1.3. Reference Data

### 1.3.1. Specifications

The Reader specifications are listed in Table 1-1, which covers the electrical, functional, and environmental operating characteristics of the Reader.

Table 1-1: Reader Specification

| Item | Characteristics |
|---|---|
| General: | |
|     1. Charger input voltage | 100 – 240 VAC |
|     2. Operation time | > 12 hours |
|     3. Recharging time | < 4 hours |
| TDMA Reader: | |
|     1. Center frequency | 915 MHz ± 300 kHz |
|     2. Transmit power | 13 dBm |
|     3. Transmit duration | < 1 second per PDA software request |
|     4. Communication zone | ~ 6 feet when seal closed in container |
| Communication interface: | |
|     1. PC interface | Full RS232 for IPAQ files transfer |

### 1.3.2. Accessories Supplied

The accessories supplied are listed in Table 1-2.

Table 1-2: Accessories Supplied

| Item | Quantity |
|---|---|
| Charger | 1 |
| PC synchronization software installation CD | 1 |
| Communication cable | 1 |

## 2. PC SOFTWARE

### 2.1.    Installation

Insert the supplied CD into the PC CD drive and follow the installation instructions.  In the partner setting, select synchronization of files.  The installation procedure will open new directory for the synchronized files and put a shortcut in the PC desktop.  The new directory is  \Documents and Settings\[user name]\My Documents\ Pocket_PC My Documents

### 2.2.    Files Transfer

The file transfer from the IPAQ to the PC and back is done using the Microsoft ActiveSync software.  The file synchronization will be activated whenever the IPAQ is connected to the PC COM port.  The seal data files will be found in Seal Files sub directory.  The seal data file name is [SealID].txt

## 3. CONTROLS and INDICATORS

### 3.1.    TDMA Reader

The TDMA reader has ON/OFF switch and indicator LED located on the HH reader topside.  To turn the TDMA reader on push the On/Off switch in the direction of the LED.  The LED will light yellow for about 1 second and then start blinking green.  When blinking green the TDMA is active and ready for commands.  The TDMA reader shall emit RF signal only when performing commands.
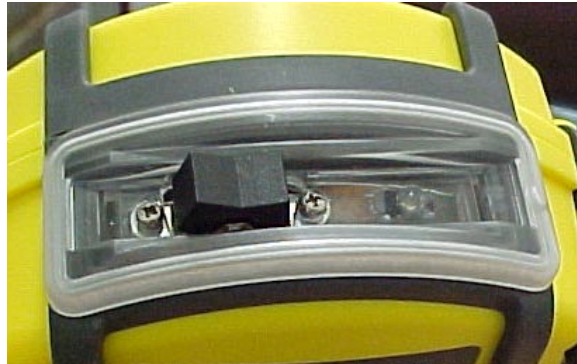


### 3.2.    Charging

The HH reader has a single charger for both the IPAQ and the TDMA reader.  The charger connector is located in the HH reader bottom side.  To connect the charger, push the cable side with the arrow facing the HH reader front side.  To remove the cable, pull the connector gently downward.

# 4. Operation

### 4.1.    Start HH Reader

Make sure that the TDMA reader is on before starting the IPAQ application. The IPAQ application can be start by pushing the leftmost function button or click <start> and <Seal_Reader>.

### 4.2.    Log In

The first thing is log in.  The application will ask for User PIN and password.  The User PIN is 8 digit number and the password is and 8 characters. If less then 8 digits/Char is entered the application will add leading '0'.  Entering the User PIN and/or password is done using the popup keyboard or character recognizer

After entering the User PIN and password[1] click the Enter Seal Control icon.  The application will check the PIN and password. If valid then the application will start the seal search window.

### 4.3.    Search Window

- Clicking the "Get Reader Version" shall get the TDMA reader software version.
- Clicking the "Seals' Files" will start the history file handler
- Clicking the "Seal Search" will command the TDMA reader to search for seals.  The TDMA reader will search for 1 second and return a list of found seals.
- Clicking a seal in the Seal List will send beep command to the selected seal and start the seal status window.

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[1] Adding or removing users procedure is defined in separate document.

### 4.4.    Seals' Files

The seals' files window enables viewing the content of the saves seal status.

Every time "save" operation is done the current seal's status is appended to the seal's file.  The current status consists of:
- Time and data of the save operation.
- Seal internal time and date
- Seal status (Active, Tempered)
- Current status of door and external sensors
- Number of sealing records and the records
- Number of tampering attempts and the attempts details
- Freight information.

Additionally a seal file can be deleted.
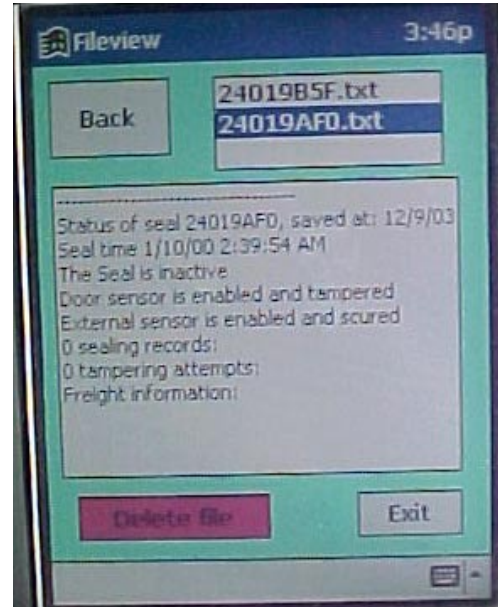
### 4.5.    Seal Status

The seal status consists of:
- Active / Inactive
- Tampered
- Seal internal time/date
- Door and external sensor status
- Number of sealing records
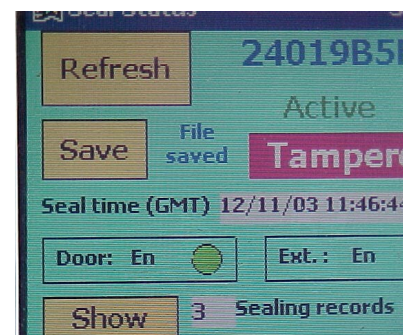- Number of tampering attempts

The seal status is updated when the window is started, refresh is clicking or when seal setting is changed[2].

The detailed sealing records and tampering attempts can be viewed by clicking the "Show Records"

The freight information can be viewed and set by clicking the "Freight Info" icon.

Changing the seal setting is done by clicking the "Setting" icon

The seal current status can be saved by clicking the "Save" icon.

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[2] See setting window

### 4.6.    Sealing Records and Tampering Attempts

The records window consists of two lists, the sealing records list and the tampering attempts list.
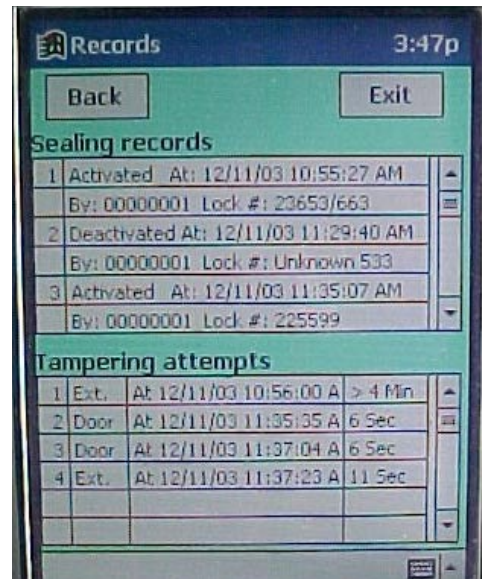
Every sealing record consists of:
- Action (Activate or Deactivate)
- Time of action
- Action performed by
- Mechanical lock number

Every tampering attempt consists of:
- Tampered sensor
- Start time of tampering attempt
- Duration of the tampering attempt

Clicking "Back" will return to the seal status window.
Clicking  "Exit" will terminate the program

### 4.7.    Freight Information

The freight information is up to 64 letter free text. The information is saved in the seal.  To change the information just enter new text and click "Set"

When operation is completed a "Done" indication will be displayed[3].

Clicking "Back" will return to the seal status window.
Clicking  "Exit" will terminate the program

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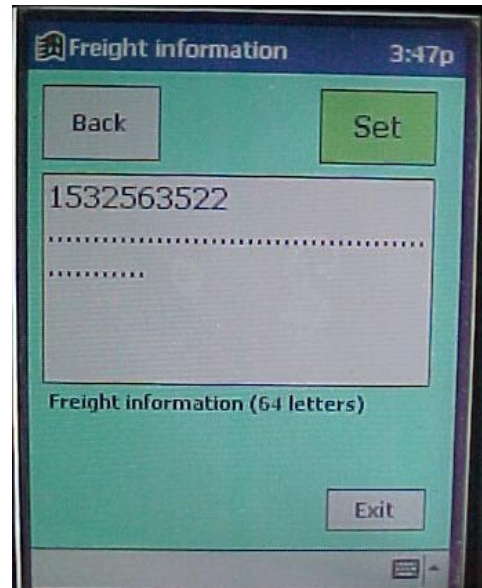
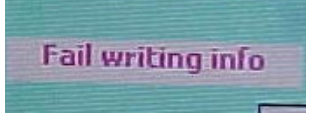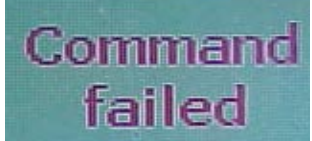[3] For error conditions, see Errors section below.

### 4.8. Seal Setting

▪ "Reset Seal" will delete the sealing records, tampering attempts and freight information from the seal. If selected the application will go back to the seal status window and refresh the status.

▪ "Set RTC" will set the seal real time clock to the IPAQ time[4].

▪ "Sensors" set the sensor action in the Seal where √ means enables and O means normally opened

▪ "Deactivate" (or "Activate"[5]) will deactivate the seal with option to enter the mechanical lock (seal) number. If selected the application will go back to the seal status window and refresh the status.



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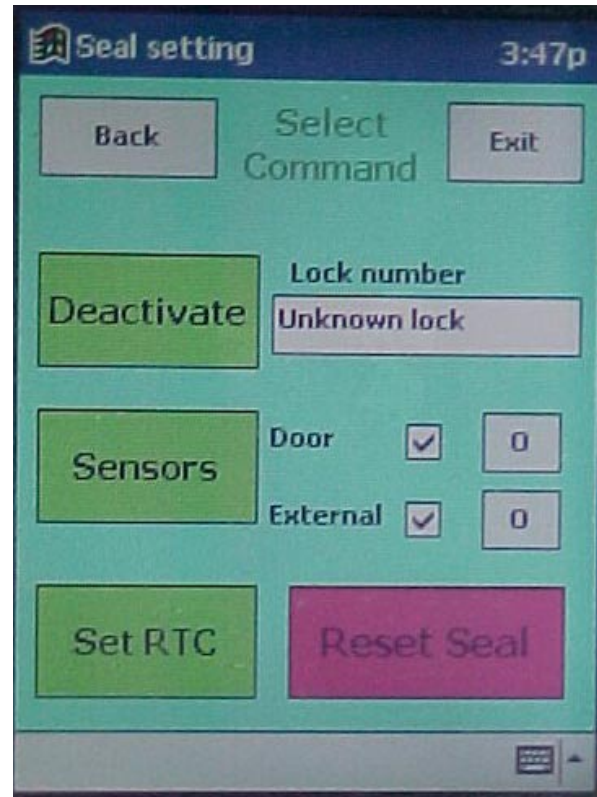
[4] To have GMT time in the seal, set the IPAQ time or regien to GMT
[5] The icon caption will set according to seal status, i.e. if seal is active the caption will be "Deactivate"

**4.9.    Errors Conditions**

| Error message | Reason | To do |
|---|---|---|
| Reader Not Respoding | • TDMA reader is off<br>• Coomunication with TDMA reader lost | 1. Exit application<br>2. Turn TDMA reader on<br>3. Restart application |
| Fail reading seal | • RF interference<br>• Reader not pointing seal<br>• Seal out of range | 1. Make sure within range<br>2. Hold reader toward seal<br>3. Redo last operation |
| Fail writing info | | |
| Command failed | | |

**The user and the installer should be aware that changes and modifications not expressly approved by Telematics-Wireless could void the user`s authority to operate the equipment.**

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.