

# **Power Tracker VII<sup>TM</sup>**

## **User's Manual**

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### **Multi Mode Reader**

**Manufactured under one or more of the following Patents:**

5,235,326 - 5,266,926 - 5,559,507 – 6,172,609

#### **FCC ID: IOL-134-AV1028**

The 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.
2. This device must accept any interference received, including interference that may cause undesired operation.

**WARNING:** This equipment has been tested and found to comply with the limits for Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference in which case the user will be required to correct the interference at his own expense.

The user is cautioned that changes and modifications made to the equipment without approval of the manufacturer could void the user's authority to operate this equipment.

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### **AVID Power TrackKer Multi Mode Reader**

#### **Power TrackKer VII**

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## 1. Introduction

Congratulations on purchasing your AVID Power Tracker VII Reader. This unit will read both ISO-FDX-B and ISO-HDX radio frequency identification tags:

## 2. Functional Description



Figure 1 Power Tracker

### 2.1. POWER Switch

The *POWER Switch* is located on the top right side of the reader and turns the unit ON and OFF. Press the *POWER Switch* once and the unit will turn ON. The LCD will display "ISO READY" and the reader will produce a beep. Press the *POWER Switch* again to turn the unit OFF. The LCD will go blank.

**WHEN NOT IN USE, TURN THE READER OFF. The reader will sound a "reminder" beep every 3 minutes when powered on and not in use.**

## 2.2. READ Switch

The *READ Switch* is located on the top left side of the reader and is used to scan for an ID tag. Press and hold down the *READ Switch* to seek an ID tag. The LCD will display "LOOKING". When the reader locates and reads an ID tag, it will display the ID tag number and sound two high-pitched beeps. The LED will flash continuously for up to 5 seconds, or until you release the *READ Switch*.

When you release the *READ Switch* the LCD will continue to display the found ID tag number. If the *READ Switch* is released before the Reader has located a tag, it will sound a low-pitched single beep, and the LCD will display "NO ID FOUND".

As soon as an ID tag number is found and displayed on the LCD, the reader stops looking for another ID tag. The *READ Switch* must be released and re-pressed each time a new ID tag is to be read.

## 2.3. LCD Display

The *LCD* is located on the top center of the reader. It displays reader functions and ID tag numbers.

The *LCD* displays the following messages:

"ISO READY"	Displays when reader is first turned ON and battery is OK.
"LOOKING"	Displays when seeking an ID tag.
"NO ID FOUND"	Displays after termination of "LOOKING" when no valid ID tag is read.
"LOW BATTERY"	Displays when low battery is sensed, either when the unit is switched ON or instead of "LOOKING" when the <i>READ Switch</i> is depressed.
097712345678912	Sample display for a valid ISO ID tag.

## 2.4. BATTERY Compartment

The *BATTERY Compartment* is located on the back of the reader. When you do not intend to use the reader for an extended period of time, remove the battery and store the reader and battery in a dry location protected from sunlight, high heat and humidity.



Figure 2 Battery Compartment

To open, rotate the battery cap counterclockwise. To close, rotate the battery cap clockwise.

**WARNING: MAKE SURE THE BATTERY IS INSERTED IN THE PROPER DIRECTION (Figure 2). INCORRECT POSITION CAN DESTROY THE BATTERY AND READER. USE ONLY AVID APPROVED NiMH RECHARGEABLE BATTERY. DISPOSE OF BATTERY WITH EXTREME CARE AND IN ACCORDANCE WITH LOCAL REGULATIONS. BATTERY MAY EXPLODE IF DISPOSED OF IN FIRE OR WATER.**

## 2.5. BATTERY Charger

The Power Tracker comes equipped with an AVID 8.4V NiMH battery and a charger. The charger will charge the AVID NiMH battery in 14 to 16 hours. It is recommended that each new battery be fully charged.

To charge an AVID NiMH battery, inspect the charger to insure that no foreign materials are in the charging area or on the charging contacts. Connect the transformer to the charger and plug in. Place the battery, positive anode end first (Figure 3), into the top of the charger. The LED will light up RED, indicating that the charger is on and working. After approximately 14 to 16 hours, the LED will change from RED to a GREEN pulsing light indicating that the battery is fully charged and ready for use.

**Caution:** Do not use around water. Do not allow the charger to get wet. Keep the charger on a clean, dry area and insure that dirt, dust, and foreign objects are kept out of the hole and off of the charging contacts. Do not try charging any other battery except the AVID supplied NiMH battery.



Figure 3. NiMH Battery Charger

## 2.6. PC Interface / AC Power Adapter Cable

The connector is a standard DB-9 and provides a pigtail for an external power connection as well as a PC connection to the reader. It can only be used with an AVID AC Power Adapter (AVID4004).



Figure 4. AVID 4011 Interface Cable

The AVID Interface/Power cable is 6 feet in length. You may add additional cable to the PC side by using the following connection chart:

<b>Signal</b>	<b>DB-9 Pin #</b>
AC ADAPT	1
TXD1	2
RXD1	3
GND	5
DSR	6
GND (PW)	9

**Table 1. RS-232 Serial Cable Pin Assignment**

## 2.7. READ Antenna

The *READ Antenna* is located on the bottom of the reader and is the interface between the reader and the ID tag. The *READ Antenna* emits a low frequency electromagnetic signal to activate the ID tag.

## 3. Normal Operations

### 3.1. How To Read an ID Tag

To read an ID tag with the AVID Power TrackER Reader, position the reader directly on the subject with the READ Switch depressed and search for the ID tag with slow circular motions shown in the Scanning Pattern below. Scan slowly, moving the reader in a circular pattern toward the head, starting from the middle of the back. When the reader locates an ID tag, it will display the number on the LCD, sound the beeper and flash the green LED.

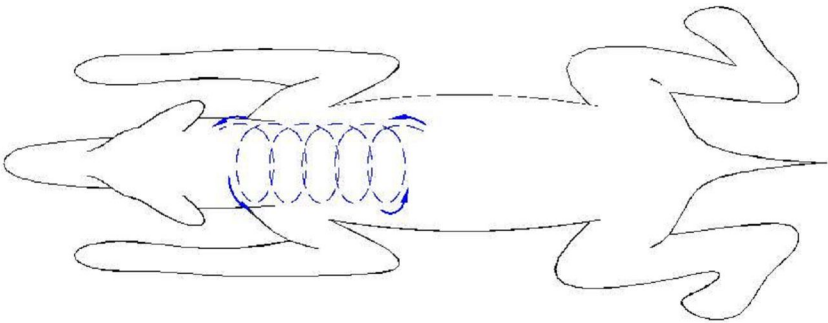


Figure 5. Scanning Pattern

The orientation of the reader antenna to the ID tag affects the range and ability to read. For the best reading performance a circular motion is recommended.

### 3.2. Interference from RF Sources And Metal Objects

The AVID Power TrackER Reader senses variations in electromagnetic fields in order to read ID signals from the ID tags. Computer terminals, video screens and metal can reduce the read range of the reader.

If you are experiencing a decrease in reading distance, the reader is probably being affected by electromagnetic interference. Try moving locations.

## 4. Use With Computers

### 4.1. Serial Connection

Attach the reader to your PC using the AVID PC Interface / AC Power Adapter Cable (AVID4011, Figure 4 above).

Open the PC's serial port using the following PC interface parameters:

**9600 baud, 8 data bits, 1 stop bit, 1 start bit, no parity, no handshaking**

All characters displayed on the LCD are also sent to the reader's serial port, through the RS-232 cable to a PC or printer. All text strings are sent out by the reader as ASCII text followed by CR/LF.

**WARNING: USE ONLY THE AVID INTERFACE CABLE WITH THE POWER TRACKER. USE ONLY THE AVID AC POWER ADAPTER (AVID4004).**

**THE USE OF ANY OTHER CABLE OR AC POWER ADAPTER COULD CAUSE PERMANENT DAMAGE TO THE READER.**

## 4.2. Software

AVID Reader Wedge. This application supports reading tags with the Power Tracker. Tag data is entered directly to Windows base applications without copying or typing in the tag number. This application requires a serial connection to a PC computer.

## 5. Specifications

<b>Operating Frequency:</b>	134.2KHz
<b>Battery:</b>	AVID 8.4V NiMH rechargeable battery only
<b>Battery Life:</b>	Approximately 3,000 read operations per recharge, assuming 2 seconds per read operation
<b>FCC Information:</b>	<b>FCC ID: IOL-134-AV1028</b> <b>CE Certified</b>
<b>AC Power Adapter:</b>	<b>Input: 90-240VAC 50/60Hz</b> <b>Output: 8.4VDC @ 500ma.</b> AVID Interface cable P/N AV4011 required
<b>Display</b>	<b>1 line x 16 character LCD</b>
<b>Operating Temperature:</b>	0° to 50°C (32° to 122°F)
<b>Storage Temperature:</b>	-20° to 65°C (-4° to 149°F)

## 6. Warranty and Service

The AVID Power Tracker VII Reader is warranted against defects in material and workmanship, under normal use and service, for a period of 1 year from the date of shipment from AVID. This warranty will not apply if repairs, parts or adjustments are required due to accident, neglect, damage during transportation, or causes other than ordinary use. AVID's sole responsibility under this warranty shall be, at AVID's option, to either repair or replace any product, which fails during the warranty period. In no event shall AVID be liable for any indirect or consequential damages or loss of profits.

A **Return Material Authorization (RMA)** number must be issued before a unit is returned to AVID for service. Contact Sales at AVID for a **RMA** number or other service questions. (951) 371-7505.



