

# Power Tracker VI™

## Manual

°AVID

### Multi Mode Reader

Manufactured under one or more of the following Patents:  
**United States:** 5,266,926 - 5,559,507 - 5,235,326 - 5,214,409  
5,257,011 - 5,499,017 - 4,333,072 - 5,484,403 - 5,465,556  
4,262,632 - Des 318,658 - Des 321,069  
**Australia:** 672752 - 673350 - 699484 - 665797 - 703914  
**Germany:** G9218817.6 **United Kingdom:** 2286948  
Other Patents Pending, U.S. and International

FCC ID: IOL-125-AV1026

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 A 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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# TABLE OF CONTENTS

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AVID Power Tracker VI Multi Mode Reader  
OPERATING MANUAL  
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SECTION 1.	Introduction .....	Pg 1
SECTION 2.	Functional Description.....	Pg 1
2.1	POWER Switch .....	Pg 1
2.2	READ Switch.....	Pg 2
2.3	LCD Display .....	Pg 2
2.4	BATTERY Compartment.....	Pg 2
2.5	BATTERY Charger.....	Pg 3
2.6	PC Interface / AC Power Adapter Cable.....	Pg 4
2.7	READ Antenna .....	Pg 5
SECTION 3.	Normal Operation.....	Pg 5
3.1	How To Read An ID Tag.....	Pg 5
3.2	Interference From RF Sources and Metal Objects .	Pg 5
SECTION 4.	Use With Computers.....	Pg 5
SECTION 5.	Specifications.....	Pg 6
SECTION 6.	Warranty and Service.....	Pg 6

## 1. Introduction

The AVID Power Tracker VI Multi Mode Reader is a hand-held identity tag reader. It can be used with AVID, FECAVA, TROVAN and ISO FDXB coded radio frequency identification tags.

## 2. Functional Description

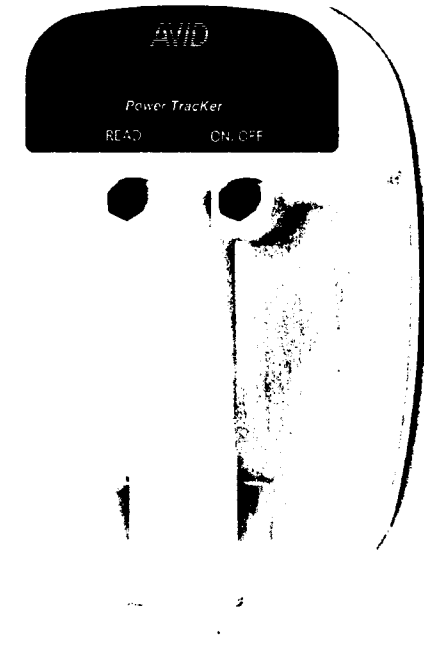


Figure 1. Power Tracker VI

### 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 "AVID ID READY" and the reader will produce a beep. Press the POWER Switch again to turn the unit OFF. The LCD will go blank.

**Note:** 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 reader has not located an ID 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 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:

"AVID ID 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 READ Switch is depressed.
"AVID*123*456*789"	Sample display for a valid AVID 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.

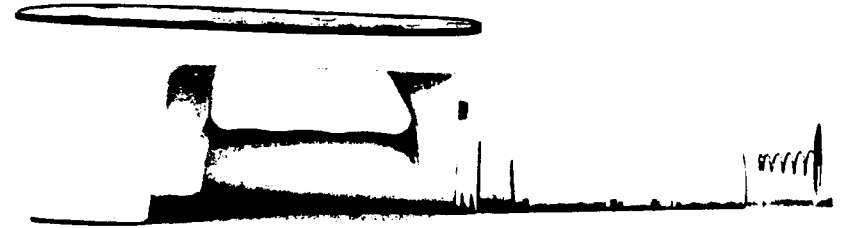


Figure 2. Battery Compartment

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 NICAD 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 Nicad battery charger. The charger will charge the AVID Nicad battery in 14 to 16 hours. It is recommended that each new battery be fully charged.

To charge an AVID Nicad 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. The red light on the charger will begin to pulse. Place the battery, positive anode end first (Figure 3), into the top of the charger. The light will change to a solid red. After approximately 2 hours, the red light will begin to pulse again. This indicates that the charger is operating normally, it does not mean the battery is fully charged. The battery will need to be charged an additional 12 to 14 hours.

**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 NICAD BATTERY.

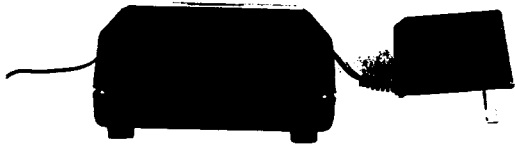


Figure 3. Nicad Battery Charger

## 2.6 PC Interface / AC Power Adapter Cable

The connector is a standard DB-9 and provides 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). To use a DB-25 connector, use a commercially available DB-9 to DB-25 adapter.

The AVID Interface/Power cable is 4 feet in length. You may add additional cable to the PC side by using the following connection chart:

TABLE 1.	
RS-232 Serial Cable Pin Assignment	
Signal	DB-9 Pin #
AC ADAPT	1
TXD1	2
RXD1	3
GND	5
DSR	6
GND (PW)	9



Figure 4. AVID Interface/Power Cable (AVID4011)

**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.

## 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 Scan Pattern 1 and 2. Scan slowly, keep the reader touching the subject during the entire procedure. Move the reader in small circular motions (approximately 2-inch circles) as you follow the scan patterns. When the reader locates an ID tag, it will display the number on the LCD, sound the beeper and flash the green LED.

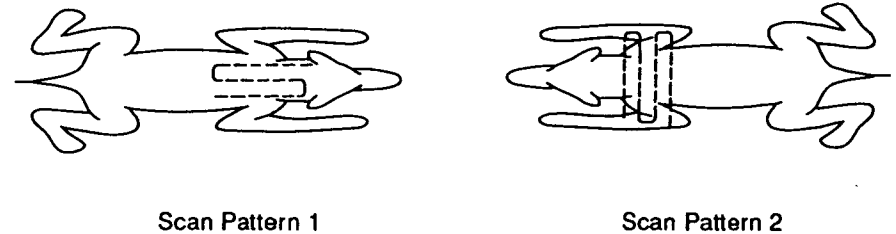


Figure 5. Scanning Technique

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

Attach the reader to your PC using the AVID PC Interface / AC Power Adapter Cable (AVID4011, Figure 4), or the supplied DB-9 to DB-9 Cable.

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

Baud rate	9600
Parity	None
Data bits	8
Stop bits	1
Handshake	None

All characters displayed on the LCD are also sent out of 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.

## 5. Specifications

Operating Frequency:	125 kHz / 128 kHz / 134.2 kHz
Battery:	AVID Nicad rechargeable batteries only
Battery Life:	Approximately 3,000 read operations per recharge, assuming 2 seconds per read operation
FCC Information:	FCC ID: IOL-125-AV1026
AC Power Adapter:	Input: 110 volts, 60Hz@500ma or 220 volts, 50Hz 500ma Output: 8.4VDC; regulated output
Display:	16 character LCD
Operating Temperature:	0° to 50°C (32° to 122° F)
Storage Temperature:	-20° to 70°C (4° to 158° F)

## 6. Warranty and Service

The AVID Power Tracker Multi Mode 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 AVID for a **RMA** number or other service questions. (909) 371-7505.

