



# Genesis VP Directional™



## User's Manual

Canada Variant • Rev 25/Aug/2010



# Genesis VP Directional™

## User's Manual

Canada Variant • Rev 25/Aug/2010

*This manual is the most current version  
and supersedes all other manuals.*



SONCELL NORTH AMERICA  
A PUBLIC SAFETY COMPANY

# Table of Contents

Welcome to Decatur Electronics .....	6	5.2.3 Electromagnetic Interference (EMI) .....	25
Introduction .....	7	5.2.4 Feedback Interference .....	25
About This Manual .....	7	5.2.5 Multi-Path Beam Cancellation .....	25
1 Quick Start .....	8	5.2.6 Radio Frequency Interference (RFI) .....	25
1.1 Initial Set Up .....	8	5.2.7 Scanning .....	25
1.1.1 Insert the Batteries .....	8	6 Testing the Device .....	26
1.1.2 Control Panel Functions .....	9	6.1 Operator-Requested Self Test .....	26
1.2 Trigger Operation .....	9	6.2 Mini-Test .....	26
1.3 Measuring a Target Speed .....	9	7 Care, Cleaning, and Storage .....	26
2 Components .....	9	8 Specifications .....	27
2.1 Batteries .....	9	8.1 Antenna Parameters .....	27
2.1.1 Removing Batteries .....	11	8.2 Voltages .....	27
2.1.2 Battery Charger .....	11	8.3 Speed Range Parameters .....	27
2.2 Controls .....	12	8.4 Power Consumption Parameters .....	28
2.3 Display .....	13	8.5 Accuracy .....	28
2.3.1 Number Segments .....	13	9 Legal Requirements .....	29
2.3.2 Status Indicator Icons .....	13	9.1 FCC Document .....	29
2.4 Trigger .....	14	10 Frequently Asked Questions (FAQ) .....	30
2.5 Mounting Configurations .....	15	11 Service .....	31
3 Operating Modes .....	15	11.1 Warranty .....	31
3.1 Primary Menu .....	16	11.2 Service Return Procedure .....	32
3.2 Secondary Menu .....	17	12 How to Order Additional Products .....	33
3.3 Directional .....	19	User Notes .....	34
3.4 Strongest Signal Mode .....	20		
3.5 Faster Mode .....	20		
3.6 Faster Toggle Mode .....	21		
3.7 Faster Hold Mode .....	21		
4 Serial Output Mode .....	22		
5 Performance Tips .....	23		
5.1 How Radar Works .....	23		
5.2 Interference Sources .....	23		
5.2.1 Angular Interference (Cosine Effect) .....	23		
5.2.2 Fan Interference .....	25		



## Welcome to Decatur Electronics, Inc.

Thank you for choosing the Decatur Electronics Genesis-VP Directional™ — A highly advanced traffic radar unit that will reward your department with years of dependable service. The Genesis-VP Directional design incorporates high performance and long range, with many leading features. We urge you to study this manual before using the Genesis-VP Directional, so you can maximize the benefits of this sophisticated radar device. We believe you will be pleasantly surprised by the features and advantages.

The Genesis-VP Directional is small, dependable, features instant target acquisition, and is designed using a quality management system certified to ISO 9001. If you are as pleased with its performance as we think you will be, ask your Decatur sales representative about other Decatur products including the Genesis™ line of radars, the Onsite™ line of speed trailers, dollies, and pole signs and the Responder™ line of in-car video systems.

Traffic officers told us exactly what they wanted in a radar device - and we built it. Try any one of our products and see if you don't agree that it is the best-in-class!

—The Management and Staff at Decatur Electronics,  
The Nation's Oldest Radar Company

## Introduction

The Genesis-VP Directional (Genesis-VPD)™ gives you the option to easily select and track vehicles approaching, receding, or moving in both directions simultaneously from your position.

Directionality dramatically enhances the target selection process. For example, if the radar is set in toward (t) mode, it will track only vehicles coming toward the radar and ignore all vehicles moving away from it!

## About This Manual

This manual contains valuable information to help you set up, use and maintain your Genesis-VPD, so you can extend its life and keep it at peak performance. Please take a moment to read through it, and keep it handy for future reference.

### Note the following symbols in this manual:



Indicates a warning message about safety precautions. Please read it carefully.



Indicates a helpful tip or precaution to note.

## 1. Quick Start

If you are already familiar with operating and using police radar guns, you probably will want to follow the quick start instructions.

### 1.1 Initial Set Up

#### 1.1.1 Insert the Batteries

Remove the Black & Decker® VersaPak™ batteries from their package and charge them according to the VersaPak™ instruction sheet. See section 2.1.2: Battery Charger for more information about using the battery charger. After charging the batteries, insert them into the handle grip.



**Figure 1.1.1**  
Insert the batteries into the handle grip.

Push the batteries into the receptacles in the bottom of the handle until you hear them snap into place.

#### 1.1.2 Control Panel Functions

The factory default settings for the control panel are:

		Default
dir	Direction	tA
bL	Backlight	On
Aud	Audio volume	3
SEn	Sensitivity	5
SLh	Squelch	On

#### 1.2 Trigger Operation

The Genesis-VPD transmits and receives microwave energy when you pull the trigger. When you want to lock onto a speed, release the trigger, then pull it again within 1/2 second. The speed in the left window will move to the right window and flash alternately between it and a directional indicator (t means the target vehicle is moving toward you, and A means away.) The locked speed clears when you pull the trigger again.

#### 1.3 Measuring a Target Speed

The Genesis-VPD operates in Strongest Signal mode, which is the default. If you have purchased Faster Target software, you can select the Faster mode of operation with the FAST button. In Faster mode, the Genesis-VPD can operate in Faster-Toggle or Faster-Hold setting, which you select in the secondary menu. See section 3: Operating Modes for more information.

## 2. Components

### 2.1 Batteries

The Genesis-VPD comes with a Black & Decker® Interchangeable Battery System: two nickel-metal-hydrate (NiMH), gold label, 3.6-volt VersaPak™ batteries and a two-port AC charger. Please read all the instructions and warnings on the VersaPak™ instruction sheet to ensure proper use and storage of your batteries.

Use the battery caps provided with the batteries to store or carry them, so metal objects (keys, coins, etc.) can not come in contact with the exposed metal end. Remember to remove the caps before placing the batteries in the charger or the Genesis-VPD.

If the device is idle for 30 minutes, it automatically powers down to save the batteries. The batteries have a minimum life of 300 charge cycles. You can purchase additional batteries at hardware stores and from Decatur Electronics.



- When the radar is transmitting, it consumes roughly three times as much power from the batteries than when it is not transmitting. Keep this in mind to maximize battery life.
- The device draws a small amount of power from the batteries even when the power is off. When you are not using the device for extended periods, remove the batteries to save the charge.



#### WARNINGS

- **IMPORTANT:** Do not combine a NiCd (silver label) battery with a NiMH (gold label) battery in the same gun. It can damage the batteries.
- **IMPORTANT:** Using batteries that have mismatched voltages, such as one battery fully charged and another with low voltage can cause the device to incorrectly power up.
- Never attempt to open a battery. If the housing breaks or cracks, immediately discontinue its use, and do not recharge
- Do not incinerate the batteries. They may explode.

If you have problems or questions about your batteries, contact Decatur Electronics at 800.428.4315, Black & Decker® at 800.54.HOWTO, or a local Black & Decker service center (see the Tools Electric section in the Yellow Pages).

#### 2.1.1 Removing Batteries

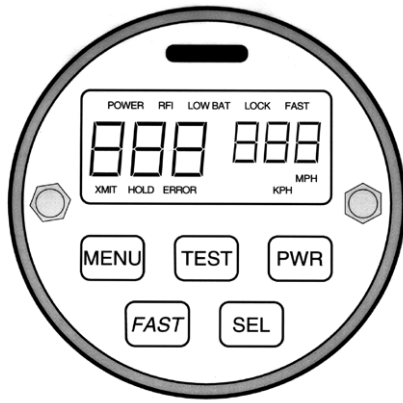
To remove the batteries, press the red button with your thumb while pulling on the battery with your fingers.

#### 2.1.2 Battery Charger

Only charge the batteries with the VersaPak™ battery charger. It is normal for the charger to hum and for the batteries and charger to become warm while charging. If a battery does not charge properly, check the receptacle to see if it is working or move it somewhere with a temperature between +5°C and +40°C.

Unplug the charger when it is not in use.

## 2.2 Controls



**Figure 2.2**  
Faceplate controls.

- When you press the button of a valid function the system beeps to acknowledge the command.

**MENU:** The MENU button lets you view the options that you can change.

**SEL:** The select (SEL) button lets you choose the settings in each of the menu options. To change a menu option, press the SEL button.

**TEST:** When you press the TEST button, the Genesis-VPD runs a self test. For more on tests, see section 6: Testing the Device.

**FAST:** When you press the FAST button, the Genesis-VPD enters Faster target mode.

**PWR:** The PWR button turns the radar on and off. If you press SEL while pressing power, the factory default settings are restored.

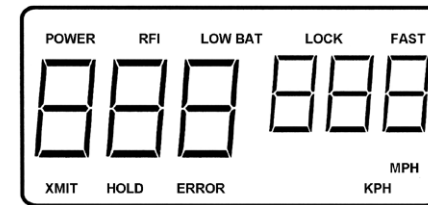
## 2.3 Display

### 2.3.1 Number Segments

The three large digits (888) on the left display the vehicle speed. The three small digits on the right display either the locked speed or Faster Target speeds. (Figure 2.3.2).

### 2.3.2 Status Indicator Icons

The following icons can appear at the top and bottom of the display screen and describe the following conditions:



**Figure 2.3.2**  
Number segments and status indicators

**POWER:** When POWER appears, the power is on.

**RADIO FREQUENCY INTERFERENCE (RFI):** Indicates that excess RFI energy is present. The radar automatically inhibits all speed measurements. No new speeds display in the display window or transmit via the serial port while this icon is active, and if the system is displaying a locked speed, the speed will remain locked. When the RFI condition no longer exists, the system will resume normal operation. Possible causes of this condition are the patrol vehicle's FM communications proximity to radio stations and other broadcast equipment.

**LOW BATTERY (LOW BAT):** Indicates that your batteries are low on power. The system will not transmit or display any new speeds while LOW BAT appears.

**LOCK:** The LOCK icon indicates that the speed, previously

displayed on the left window, is now locked and will appear in the right window.

**FAST:** Indicates the radar is in Faster mode. When the device is not in Faster mode, it is in Strongest Signal mode, which is the default mode.

**XMIT:** Indicates that the Genesis-VPD is transmitting.

**HOLD:** Indicates the system is not transmitting.

**ERROR:** Indicates the radar has detected an internal hardware error which can affect the operation of the radar device. You should turn the gun off and back on. If the problem persists, contact Decatur Electronics at 800.428.4315 for assistance.

**KM/H:** The Genesis-VPD displays speeds in kilometers per hour. KPH appears in the display.

### 2.4 Trigger

The radar transmits and receives microwave energy when you pull the trigger. To measure the speeds of target vehicles, pull and hold the trigger.

When you want to lock a speed, release the trigger then quickly pull it again (within 1/2 second). The radar will take the speed in the left display when the trigger is released, move it to the right display, and lock it in. The right display will then flash alternately between the locked speed and a directional indicator, t or A (t means the target vehicle is moving toward you, and A means it is moving away from you).

As long as you continue to hold the trigger, the radar will continue to track targets and display their speeds in the left display. The locked speed clears when you pull the trigger again.

### 2.5 Mounting Configurations

The Genesis-VPD is designed for hand-held operation. Optionally, you can mount it to a standard camera tripod.

### 3. Operating Modes

The MENU and SEL buttons on the Genesis-VPD control panel lets you review and change programmable settings. The settings are in two menus: primary and secondary. When you finish making your selection(s), release the buttons, and your new settings will be in effect. The radar gun will remember the settings you last set when it is turned off and will power up with them.

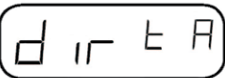
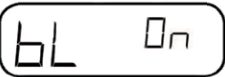
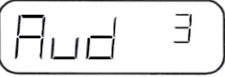

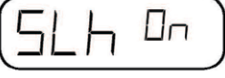


- If you press and hold the SEL button when powering up the unit, the system will restore the factory default settings.
- The Genesis-VPD will exit menu mode if you do not press the MENU or SEL buttons after two seconds. If you press and hold either the MENU or SEL buttons, the Genesis-VPD will remain in menu mode.



### 3.1 Primary Menu

You can use the factory default settings listed on the next page or you can select your own settings. To select a setting, repeatedly press the MENU button until the setting you want to change appears. Then press the select (SEL) button to advance through the selections for that setting. When you have made your selection, release the buttons and your new settings will be in effect. If neither MENU or SEL is pressed after 2 seconds, the radar gun will return to normal operating mode. Table 3.1 show the primary menu setting choices.

Letters Displayed	Description	Setting Selection	How Default Settings are Displayed
Dir	Direction	t = toward A = away tA = toward & away (Default)	
bL	Backlight	On/Off (Default = On)	
Aud	Audio Volume	3 - 6 (Default = 3)* <small>*See Note on page 17</small>	
SEn	Sensitivity	0 - 5 (Default = 5)	
SLh	Squelch	On / Off (Default = On)	

**Figure 3.1**  
Primary menu settings.

**DIRECTION (dir):** Direction lets you select the direction of the motor vehicle you want to display. The dir default value t A indicates that you are monitoring motor vehicles moving both toward and away from the radar gun.

**BACKLIGHT (bL):** This turns on and off the LCD backlight. bL ON is the default setting.

**AUDIO (Aud):** The Audio setting controls the volume level of the Doppler tone. The volume level settings are from 3 to 6 (3 is minimum and 6 is the highest volume level.)

- Previous versions may have a volume range of 0 to 6. For evidentiary reasons, it is recommended that the audio level never be muted during normal operation.

**SENSITIVITY LEVEL (SEn):** The SEn option lets you control the maximum target-acquisition range. SEn levels range from 0 through 5 (0 is off, 1 is the minimum range, and 5 is the maximum range.)

**SQUELCH (SLh):** The squelch determines the type of Doppler audio you want the radar gun to send out. When squelch is on, the sound is only the Doppler tone for the displayed target. When squelch is off, you will hear all Doppler tones, including other vehicles, interference and any noise the antenna receives.

### 3.2 Secondary Menu

You can use the factory default settings listed on the next page or set your own. To select the secondary menu settings, press and hold the select (SEL) button, then press the MENU button. To select a setting, press and release the MENU button until the setting you want to change appears. Then press and release the SEL button to advance through that setting's options. When you have made your selection(s), release the buttons and the new settings will be in effect. If neither MENU or SEL is pressed after 2 seconds, the radar gun will return to normal operating mode.

Letters Displayed	Description	Setting Selections	How Default Settings are Displayed
Prt	Comm.	0 = None (Default) 1 = Sign/Video 2 = OnSite sign/video 3 = ASCII [hundreds] [tens] [ones] [tenths] <CR> 4 = Lock Port 1200 Baud [hundreds] [tens] [ones] 5 = Lock Port 9600 Baud [hundreds] [tens] [ones] 6 = (Contact Decatur) 7 = (Contact Decatur)	
FSt	Faster Target	0 = Fast-hold 1 = Fast-toggle (Default)	
tSt	Test	Default = ON	
dir	Directional	Default = ON	

**Figure 3.2**  
Secondary menu settings.

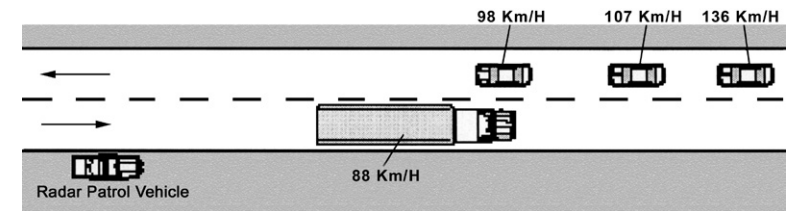
**COMMUNICATIONS PORT (Prt):** The Prt setting indicates which communication port configuration you want the system to use. Zero means no serial communication, and 1 through 7 are various setting options (see the menu settings.)

**FASTER VEHICLE (FSt):** The FSt setting programs the FAST button for either Faster-Hold or Faster-Toggle mode. The default, 1, is Faster-Toggle, and 0 is Faster-Hold.

**MINI-TEST (tSt):** The tSt option sets the system to automatically perform a “mini” self test every 10 minutes.

### 3.3 Directional

The Genesis-VPD™ lets you easily select and focus on vehicles approaching or receding from your stationary patrol position.



**Figure 3.3a**  
While in directional mode t (towards only), the radar gun does not track the truck going 88 km/h. It displays the car going 98 km/h.



**Figure 3.3b**  
The directional setting displays tA, t or A

You can change the dir option to t to display only the speeds of targets coming toward you or A to display only the speeds of targets moving away from you.

When you are in t A mode, the radar will display a t or an A depending on the direction the target is traveling. If the radar cannot

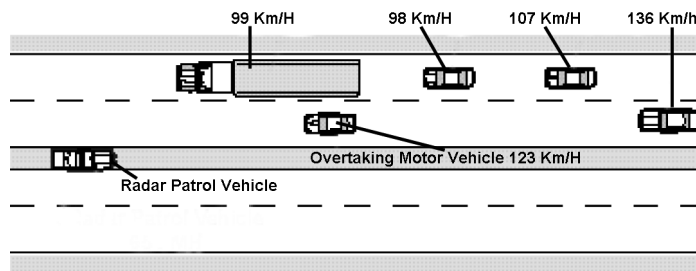
determine the target direction, the direction indicator will not display. Target direction, t or A, will display in the right window to indicate the target's direction.

### 3.4 Strongest Signal Mode

All radars track the strongest signal, an essential function of tracking history. The radar defaults to the strongest signal-tracking mode and will stay in this mode until you press the FAST button. In Strongest Signal tracking mode, the radar displays the speed of the vehicle with the strongest return signal, which is often the closest car. This speed appears in the left window.

### 3.5 Faster Mode

The advanced signal processing algorithms in the Genesis-VPD simultaneously track multiple vehicles. In Faster mode, the Genesis-VPD takes the strongest return signal and uses it as a reference level. It then looks at the return signal levels from all other vehicles going faster than the strongest vehicle and compares them to that reference level. It will display the speed of the vehicle that is moving faster than the strongest signal **and** is the next strongest target. In multiple target situations, the next strongest target going faster than the strongest is often closest to the strongest vehicle. The FAST icon is displayed when in faster mode.



**Figure 3.5**

The vehicle going 123 km/h is the next strongest target going faster than the strongest

There are two different Faster target modes: Faster-Toggle mode and Faster-Hold mode.

### 3.6 Faster-Toggle Mode

In Faster-Toggle mode you can toggle between Faster and Strongest Signal targets by pressing the FAST button (the FAST icon is displayed.)

To switch from Strongest Signal target to Faster target, press and release the FAST button. The speed of the vehicle returning the strongest signal will continue to appear in the left window, and the speed of the next strongest target going faster than the strongest will appear on the right window. The system will remain in Faster mode until you press the FAST button again or until you lock a speed, which automatically switches the gun back to the Strongest Signal target.



- In Faster-Toggle mode, the radar gun locks only the strongest vehicle speed. After the speed is locked, the Genesis-VPD reverts to the Strongest Signal mode.

### 3.7 Faster-Hold Mode

To use to Faster-Hold mode, make sure you have selected Faster-Hold in the menu (FSt 0). Press and continue to hold the FAST button. When active, the faster vehicle speed is displayed in the left window. If there are no faster vehicles, the display will be blank. When you release the FAST button, the gun will automatically switch back to the strongest signal.



**Figure 3.7**

Strongest Signal mode, Faster Toggle mode, Faster Hold mode

If you lock the speed of the fast vehicle, the LOCK and FAST icons will designate that the locked speed is a faster target lock. If these icons do not appear, the lock is on the strongest target.

#### 4. Serial Output Mode

The Genesis-VPD has an RS232 communications port on the side panel. Using a custom RS232 communications cable, you can connect the Genesis-VPD and transmit data to display signs, in-car video and PCs for recording and analyzing speed data. The serial communication has the following characteristics (8:n:1) and is transmit only:

One (1) start bit  
 Eight (8) data bits  
 No parity  
 One (1) stop bit  
 Transmission at 1200 baud

The unit transmits data as ASCII symbols in the following digit sequence:

ASCII [hundreds][tens][ones]  
 Carriage return<CR>  
 (<CR> = ASCII decimal value 13)

The radar unit sends the data in this sequence when the TARGET speed display changes. When you press the LOCK button, the radar transmits the following digital sequence:

[hundreds][tens][ones]<CR>  
 (<CR> = ASCII decimal value 13)

## 5. Performance Tips

Understanding potential radar interference and what to do when it occurs can greatly increase the radar's performance.

### 5.1 How Radar Works

Determining a vehicle's speed begins with the radar gun transmitting a beam of microwave energy (radio waves) at an approaching or departing target vehicle. When energy from this beam strikes a vehicle, a small amount of the beam is reflected back to the antenna. The reflected signal frequency shifts by an amount proportional to the speed of the target vehicle. This is known as the Doppler effect. The radar device then determines the target vehicle speed from the difference in frequency between the reflected and transmitted signal.

### 5.2 Interference Sources

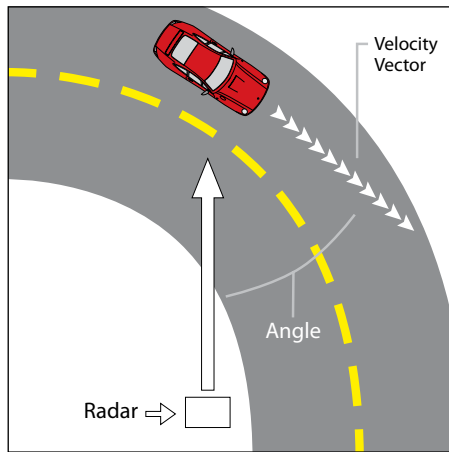
When properly installed and operated, Doppler radar technology is accurate and reliable. However, variations in the environment can cause situations and circumstances which can cause spurious responses which are readily identified by a qualified operator. Signs that a speed is spurious can include the following characteristics:

- A valid target motor vehicle speed in the operational range will always override the source of interference and will be confirmed by the audio component. (See Sections 5.2.2 through 5.2.7.)
- The Doppler tone will lack the pitch and clarity component..
- Speeds are irregular.
- Speeds appear to track with the engine speeds.

#### 5.2.1 Angular Interference (Cosine Effect)

The Cosine Effect causes the system to display a speed which is lower than the actual vehicle speed. This condition occurs when the targeted motor vehicle's path is not parallel to the antenna, including conditions such as the motor vehicle traveling on a curve or a hill.

As the angle between the beam of the antenna and the targeted motor vehicle increases, the displayed speed decreases. Ideally, an angle of zero degrees ( $0^\circ$ ) is preferable, because the displayed speed is the actual targeted motor vehicle speed. However, in all uses of police radar, the radar device is always at a slight angle to the targeted motor vehicle to avoid collisions.



**Figure 5.2.1a**

An angle between the antenna and the target vehicle causes the cosine effect.

The following table shows the effect that an increasing angle has on a displayed speed.

Actual Speed	Horizontal Angle Degrees										
	0°	1°	3°	5°	10°	15°	20°	30°	45°	60°	90°
	Displayed speed:										
50 km/h	50	49	49	49	49	48	46	43	35	25	0
65 km/h	65	64	64	64	64	62	61	56	45	32	0
80 km/h	80	79	79	79	79	77	74	69	56	40	0
90 km/h	90	89	89	89	88	86	84	77	63	45	0
100 km/h	100	99	99	99	98	96	93	86	70	50	0
110 km/h	110	109	109	109	108	106	103	95	77	55	0

**Table 5.2.1b**

Actual and displayed speeds at different antenna-to-target angles.

Small angles (less than  $10^\circ$ ) have little effect on accuracy. As the angle increases, the displayed speed decreases. At  $90^\circ$ , the target speed is 0—grossly incorrect. Cosine Effect will always result in a target speed being displayed that is less than the actual speed of the moving motor vehicle, which will always be advantageous to the motorist.

### 5.2.2 Fan Interference

Fan interference is the most common form of interference that you are likely to experience. It is caused when the radar measures the speed of the vehicle blower fan. Changing the fan speed causes a proportional change in the display speed.

### 5.2.3 Electromagnetic Interference (EMI)

Operating electric motors can produce EMI. With the DSP algorithms the Genesis-VPD has eliminated this.

### 5.2.4 Feedback Interference

When the radar beam is directed at computer screens, streetlights, and other electronic devices, it can display spurious speeds. To correct the interference, relocate the radar gun antenna.

### 5.2.5 Multi-Path Beam Cancellation

The Genesis-VPD is immune from multi-path cancellation.

### 5.2.6 Radio Frequency Interference (RFI)

The Genesis-VPD contains an RFI detection circuit that detects excess radio frequency energy. When stray radio frequency energy reaches an excessive level, the system displays an RFI message and stops processing and displaying speeds. The system resumes normal operation when the RFI condition no longer exists. At that time, any locked speeds will display again.

### 5.2.7 Scanning

The Genesis-VPD is designed to be used while attached to a solid mount or hand-held in a steady position. Moving or “scanning” the antenna past stationary objects can cause the system to detect

motion. Obtaining a speed reading from scanning will not happen when you properly use the radar.

## 6. Testing the Device

### 6.1 Operator Requested Self Test

Pressing the TEST button initiates a comprehensive system self test, which checks the numeric displays and runs a target speed simulation. The self test checks:

**DISPLAY TEST:** Allows the operator to verify that the digit segments and status LED lights are working correctly and that none of the pixels in the number segments are burned out.

**CIRCUITRY TEST:** The system checks the internal circuitry. If the unit passes all internal checks, the messages PASS will be displayed. If an error should occur then FAIL will appear in the display window.

**SPEED SIMULATION TEST:** The radar verifies speed accuracy using synthesized Doppler frequencies corresponding to a series of four simulated speeds: 25, 50, 75, and 100 km/h.

- Section 6.1 must be completed by the officer prior to enforcement and at the conclusion of the officer's tour of duty (if any enforcement action was taken).

### 6.2 Mini-Test

The tSt option sets the system to automatically perform a "mini" self test every 10 minutes.

## 7. Care, Cleaning, and Storage

- Avoid spilling food, beverages and other liquids on the radar device.

- When you are not using or transporting the device, store it in its original packaging.
- To clean the radar device, dust it with a soft clean cloth, which is free of cleaning solutions.

## 8. Specifications

### 8.1 Antenna Parameters

#### K-Band

IACP	Type III
Nominal transmission frequency	24.150 GHz
Nominal horizontal beamwidth	12°
Polarization	Linear (Vertical)
Nominal microwave power output	7 mW
Maximum aperture power density	<1 mW/cm <sup>2</sup>

#### Environment

Ambient operating temperatures	-30 C to +70 C
Maximum humidity	90% relative humidity (non-condensing) at 37°C

Water resistance meets International Robustness Standard IEC 529:1989 and European Community Standard EN 60529 Classification IP55. These set international standards for immunity from damage by solid protrusions and water.

### 8.2 Voltages

Supply voltage	6.2VDC - 8.0VDC
Low voltage threshold	6.2VDC

### 8.3 Speed Range Parameters

Speed Display Ranges	Minimum	Maximum
km/h	8	320

**8.4 Power Consumption Parameters**

Supply voltage range 6.2VDC – 8.0VDC

Nominal current draw in various modes:  
(K-Band)

Standby (antenna off) 0.23 amperes  
Antenna ON 0.35 amperes  
(no targets displayed)

Antenna ON 0.39 amperes  
("55" target displayed)

Antenna OFF 0.24 amperes  
(segment check "888 888")

Antenna ON 0.34 amperes  
(segment check "888 888")

**8.5 Accuracy**

The speed calculations of any radar Decatur Electronics produces are 100% accurate. The display precision is as follows:

± 1 unit of measure in stationary mode of operation

**9. Legal Requirements****9.1 FCC Document**

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

GRANT OF EQUIPMENT AUTHORIZATION  
Certification

Decatur Electronics Inc  
715 Bright Street  
Decatur,IL 62522

Date of Grant: 02/28/2000

Application Dated: 12/21/1999

Attention: Randall Sanner

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER HTRCR-1KD  
Name of Grantee Decatur Electronics Inc

Equipment Class: Part 15 Field Disturbance Sensor  
Notes: Traffic Safety Radar

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance %	Emission Designator
	15	24075 - 24175			

Mail To:

EA96328



## 10. Frequently Asked Questions (FAQ)

### Q. *My radar gun will not power up. What should I do?*

- A. Check the batteries to make sure they are charged and working properly. Over time battery performance will diminish and the batteries will need to be replaced. Once you have verified that the batteries are good and your radar still does not power up, call Decatur Electronics at 800.428.4315.

### Q. *My radar gun has poor range. How can I remedy this?*

- A. Verify that the antenna has no obstructions in front of it. If the gun still has poor range, increase the sensitivity level (SEN). If you still have this problem, contact Decatur Electronics.

### Q. *Will my radar work while my vehicle is moving?*

- A. No, the Genesis-VPD radar gun is a stationary only models, so your motor vehicle should be parked. You need to hold the radar steady while operating it.

### Q. *What if I drop my gun?*

- A. The unit is extremely durable. Simply power up and perform device test. If the gun doesn't appear to work properly, contact Decatur Electronics.

### Q. *Does Decatur Electronics carry other law enforcement products?*

- A. Yes, the Genesis™ series of radars - GHD™, Scout™, and the Genesis II Select™ and Genesis II Directional™ dash-mount moving radar products, and Responder™ series of in-car video solutions and the OnSite™ line of radar speed trailers.

## 11. Service

### 11.1 Warranty

#### TWO-YEAR RADAR WARRANTY

Decatur Electronics, Inc. guarantees the Genesis-VPD to be free from defects in workmanship and material and to operate within specifications for a period of two years. During this period, Decatur Electronics will repair or replace, at its option, any component found to be defective, without cost to the owner, providing you return the unit to the factory or to a Decatur authorized warranty service center.

The full warranty on parts and workmanship does not include normal wear and tear, crushing, dropping, fire, impact, immersion, over-tightening of screws or damage from attempted repair or modifications by unauthorized service agents.

For repairs, simply return the unit (transportation prepaid) directly to the factory or to a Decatur authorized warranty service center. Refer to Section 11.2: Service Return Procedure.

#### TWO-YEAR WARRANTY EXCEPTION

If you purchased the unit under a special buying program, such as a province purchase contract, etc., the above warranty may not apply. Please refer to the buying program contract for the appropriate warranty terms or contact Decatur Electronics.

|



## 11.2 Service Return Procedure

If you have questions, want a quick problem diagnosis, or need to return your Genesis-VPD to the factory:

- Call Decatur Electronics Customer Service (or the approved Canadian repair depot) and ask to speak with a Customer Service Representative. Have the serial number of the radar unit ready.

Phone: 800.428.4315

If you need to return your radar unit to Decatur Electronics:

- Ask to arrange for a Return Authorization Number. You will need to give the serial number of the radar that is to be serviced. The serial number is located on the back of the main computer unit.
- Return ALL of the Genesis-VPD parts in the original packaging (transportation prepaid).
- If so directed, include a note describing the problem and/or the incident that resulted in the problem. Failure to do so can delay the return of your radar device.
- Based on the information that you have given, the Customer Service Representative will issue you a return authorization (RA) number. Write the RA number on your note and shipping label.

The customer is responsible for the shipping charges to send the system to Decatur Electronics, Inc.

If we receive a system from a customer COD that is still under warranty, we will charge the customer for the amount of COD freight charges plus an additional 10% for handling after we repair the system. Also, we will add COD and a 10% handling fee to the repair bill for out-of-warranty repairs.

The customer is responsible for all shipping charges to the Decatur service location. Decatur does not accept incoming COD shipments. Decatur Electronics will pay the freight (up to \$10.00 US) for shipping the system from the repair facility to the customer, provided the system is still under warranty. We will charge the customer for any shipping charges above the initial \$10.00. If you want to ship your package express or next day air, we will invoice you for these freight charges.

If your radar is out of warranty and you would like to know the cost of repair prior to the actual repair work being performed, Decatur would be happy to give you a repair estimate. To obtain an estimate, request it either on the paperwork you submit with the radar device when you send it in for service or when you obtain a Return Authorization (RA) number. Decatur provides estimates only upon request.

There is an initial charge for an estimate if your radar gun is not under warranty, plus the return shipping and handling fees. If, after reviewing the estimate cost, you decide not to have your radar repaired, you will be invoiced the minimum service charge plus return shipping costs.

## 12. How to Order Additional Products

You can order upgrades to the Genesis-VPD (when available) as well as cases, tripods, etc. To see product descriptions or order products, visit our web site at [www.DecaturElectronics.com](http://www.DecaturElectronics.com) or call the sales office at 800.428.4315.

## User Notes:



**[www.DecaturElectronics.com](http://www.DecaturElectronics.com)**

3433 East Wood Street, Phoenix, Arizona 85040, USA  
800.428.4315 | 217.428.4315 | Fax 217.428.5302



**SONCELL NORTH AMERICA**  
A PUBLIC SAFETY COMPANY