



Technical Bulletin: Aardvark Install Procedure Update

Some versions of Aardvark/Numbat support mounting at any angle. This bulletin is meant to clarify details in the installation procedure that are not clear in the current Aardvark Reference Guide.

The latest Aardvark User's Guide can be found on the web here:

http://www.trimble.com/embeddedsystems/aardvark_dr.aspx?dtID=support

Document	Part Number	Version
Trimble Aardvark DR + GPS Receiver Reference Guide	88788-XX-UG	1.0, rev B
Trimble Aardvark DR + GPS Receiver Reference Guide (for -40 version)	88788-40-UG	1.0, rev A

Affected Models

This bulletin applies to the following models.

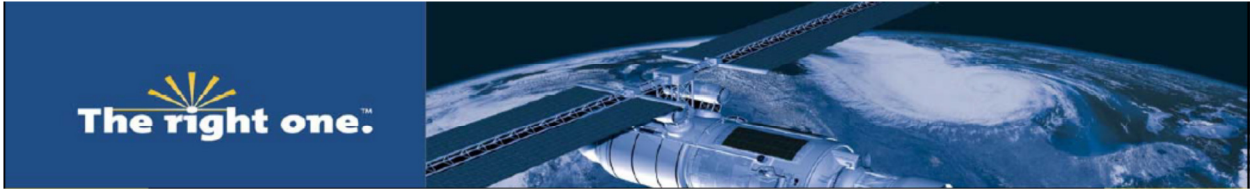
Product	Part Number
Numbat DR + GPS	82828-2x
Aardvark DR + GPS	88788-2x
Aardvark DR+ GPS Tilt Install	88788-4x
Aardvark DR+ GPS Tilt Install	88788-5x
Aardvark DR+ GPS w/ G Sensor	88788-26
A3000 DR+GPS Tilt Install	99899-50
A3000 DR+GPS Tilt Install	99899-60

Install Process

The Aardvark versions that allow the customer to mount at any angle require either input of mounting angles or calibration of the mounting angles. Any time the Aardvark is powered, it will be trying to create a DR position calculation. Part of this calculation involves a continuous estimation of the on-board sensor bias and scale factor. During the install process the definition of the Aardvark orientation can change. This means the sensor calibration data can change as well. The Aardvark should have the old data erased after any procedure that changes the mounting orientation parameters. Please see the Aardvark Reference Guide for complete install procedures.

Add this step to the installation procedure.

1. After any setting of the mounting angle (either by self-calibration, snap-to-profile, or direct entry):



- a. Do not issue a Save Configuration command. Mounting angle is saved automatically when it is set.
- b. Command a cold start reset of the Aardvark.
 - i. NMEA RT Command

```
$PNTLSRT,C,0*20<CR><LF>
```

- ii. HIPPO Command (See Reference Guide for complete description of the HIPPO protocol); System Class Receiver Reset Command

Name	Type	Value	Meaning
Code	U8	0x03	System Class, Reset
Subcode	U8	0x02	Clear RAM, reset

- 2. Continue with DR calibration. After the system is calibrated, if your system does not implement a battery backup for the RAM, the user should command a graceful shutdown. This saves the current information in RAM (which contains all of the Kalman filter parameters such as location and calibration parameters) into non-volatile memory.

- i. NMEA RT Command

```
$PNTLSRT,G,0*24<CR><LF>
```

- ii. HIPPO Command (See Reference Guide for complete description of the HIPPO protocol); System Class Receiver Reset Command

Name	Type	Value	Meaning
Code	U8	0x03	System Class, Reset
Subcode	U8	0x09	Write BBRAM to flash, reset (Graceful reset)

Note: This should also be done for the 88788-26 model after entering accelerometer orientation and lever arm parameters.

Note: If you have changed the mounting angle after a previous calibration, you must complete a factory reset to clear all Kalman filter parameters before doing the installation and calibration procedure. This should be done if you move from one vehicle to another for example.

- i. NMEA RT Command

```
$PNTLSRT,F,0*25<CR><LF>
```



- ii. HIPPO Command (See Reference Guide for complete description of the HIPPO protocol); System Class Receiver Reset Command

Name	Type	Value	Meaning
Code	U8	0x03	System Class, Reset
Subcode	U8	0x07	Clear flash data and RAM, reset