

TRIMBLE AgGPS 162 RECEIVER QUICK REFERENCE CARD

The Trimble® AgGPS® 162 receiver is a high-performance GPS / SBAS (WAAS, EGNOS, and MSAS) receiver and antenna in a single, rugged housing that is used for agriculture applications.

The AgGPS 162 receiver features the Trimble OnPath® advance filter technology for improved pass-to-pass accuracies, even in the absence of SBAS signals.



SPECIFICATIONS

| Item | Description |
|--------------------------|--|
| Size (W x D x H) | 182 mm x 196 mm x 86 mm (7.16 in x 7.71 in x 3.38 in) |
| Weight | 0.8 kg (1.76 lbs) |
| Operating temperature | -30 °C through +70 °C (-22 °F through +158 °F) |
| Storage temperature | -40 °C through +85 °C (-40 °F through +185 °F) |
| Seal | Unit seals to 5 PSID |
| Humidity | Fully functional when 100% condensing humidity |
| Casing | Low-profile UV-resistant plastic. Dust-proof, waterproof, shock resistance, with one connector. |
| Mounting | 1 ⁵ / ₈ inch threaded mounting hole, three integrated magnets for mounting directly to steel surface |
| Power consumption | <4 Watts (10 to 16 V DC) |
| DGPS accuracy | Sub meter, ±8–12 inch pass-to-pass |
| Position fix update rate | 1, 5 Hz |

Cross track error accuracy over 15 minutes, 95% of the time, in the United States Midwest with at least five satellites, PDOP ≤6, SNR ≥40, Elevation Mask = 8, using WAAS differential corrections. WAAS is a free service that is available in the USA. Specifications are subject to change without notice.

RECEIVER CONNECTIONS

This figure shows the Deutsch 12-pin receiver connection.

There are three ports: two RS-232 serial ports and one ISO 11783/J1939 (CAN 2.0B) port. The connector can perform the following functions:

- accept power
- accept TSIP, RTCM, and ASCII inputs
- output RTCM, TSIP, and NMEA messages
- output 1 PPS signals
- output radar speed



CONNECTING TO AN EXTERNAL DEVICE

After installing the receiver and connecting the appropriate cabling, you can connect the receiver to various external devices.

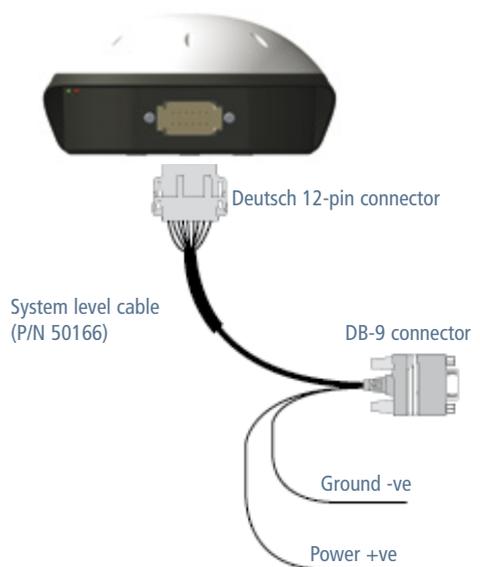
Note: Do not bend the cable at the Deutsch connector.

| To connect the AgGPS 162 receiver to ... | use cable P/N ... |
|--|----------------------------|
| an AgGPS Autopilot™ system ¹ | 50165 |
| a field computer | 50166 / 68463 ³ |
| a yield monitor ² | 50166 / 68463 ³ |
| AgGPS 162 breakout cable (radar) | 68463 ³ |

¹ You must enable the AgGPS 162 receiver for use with the Autopilot system. An upgrade passcode is required.

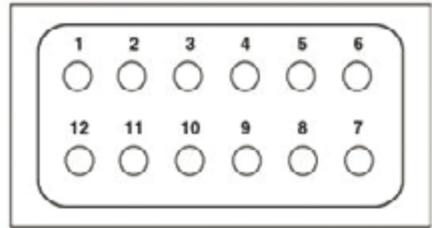
² To connect directly to the yield monitor, you may need an additional model-specific cable. See your yield monitor's user guide.

³ This cable has not yet been released.



PIN OUT DIAGRAMS

| Pin | Function |
|-----|----------------------|
| 1 | CAN A High I/O |
| 2 | Port 1 RS-232 Tx OUT |
| 3 | Port 1 RS-232 Rx IN |
| 4 | PPS OUT |
| 5 | Signal GND |
| 6 | Port 1 RTS OUT |
| 7 | Radar OUT/ Event OUT |
| 8 | Port 1 CTS IN |
| 9 | Event IN |
| 10 | V+ IN / OUT |
| 11 | V- IN / OUT |
| 12 | CAN A Low I/O |



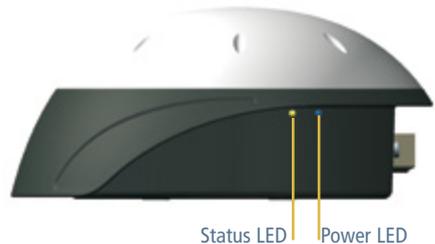
LED INDICATORS

Power LED

| LED color | LED flash | State |
|-----------|-----------|-------|
| Off | Off | Off |
| Blue | Solid | On |

Status LED

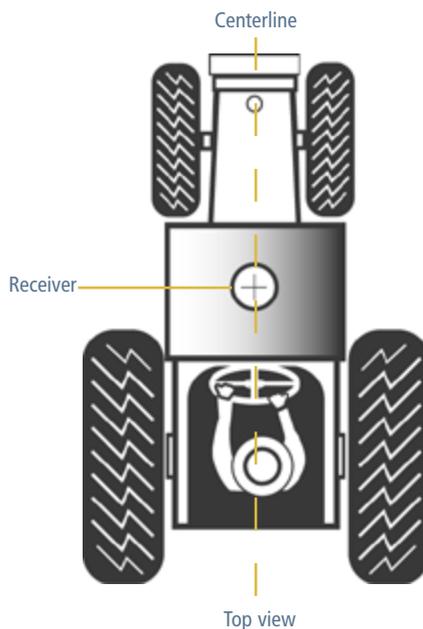
| LED color | LED flash | State |
|-----------|-----------|--|
| Off | Off | Off |
| Yellow | Fast | Not locked on or tracking enough satellites for fix. |
| Yellow | Slow | Computing autonomous but no DGPS fix. |
| Yellow | Solid | Computing autonomous GPS positions (2 or 3D). |
| Blue | Fast | Computing DGPS positions, but no DGPS signal and approaching DGPS age limit. |
| Blue | Slow | Computing DGPS position, but no DGPS signal (using on old corrections). |
| Blue | Solid | Normal operation, computing DGPS solution. |



MOUNTING THE RECEIVER

Use the following guidelines when choosing a location for mounting the receiver:

- Choose a flat surface on the vehicle's centerline.
- Mount the receiver on the highest part of the vehicle, in an area with a clear view of the sky.
- Allow clearance for machine storage entrances.
- Mount the receiver above metal surfaces. If you are mounting the receiver on a non-metal cab, use the metal mounting plate.
- Do not mount the receiver close to electrical cables, metal masts, air conditioning units (machine cab blower fans), or machine accessory lights.
- Mount the receiver at least one meter (about three feet) from transmitting antennas (for example, cell phone or FM two-way radio antennas), radar arrays, or satellite communication equipment.
- Avoid areas with high vibration, excessive heat, electrical interference, and strong magnetic fields such as those generated by alternators.



DEFAULT SETTINGS

| Setting | Value | Setting | Value |
|-----------------|---|----------------------|-------|
| Elevation mask | 8° | PDOP mask | 30 |
| SNR mask | 35 db/Hz | Position rate | 5 Hz |
| Position filter | BF Enable (This sets the OnPath filter to ON) | NMEA output messages | 9600 |

CONFIGURING THE RECEIVER

Use the Trimble AgRemote software to configure GPS, SBAS, or port settings in the AgGPS 162 receiver.

To connect to the receiver using AgRemote:

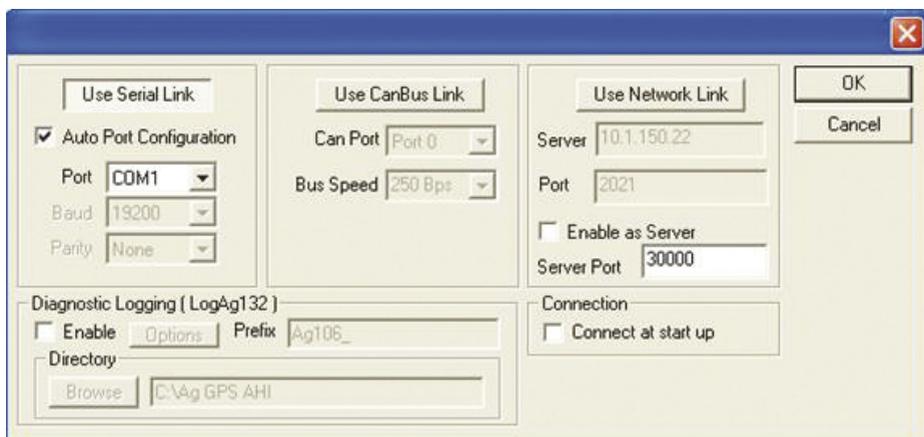
1. Install AgRemote on a computer that is running the Windows® 95, 98, Me, NT, 2000, or Windows XP operating system.
2. Use the optional data/power cable (requires RS-232) to connect the receiver to a serial port on the computer.

Note - If the computer has only USB ports, use a USB-to-serial converter cable to connect the data/power cable to a USB port.

3. Connect the receiver to a power source.
4. Click *Start / Programs / AgRemote* to run the AgRemote software.



5. From the *File* menu, select *Connect*. The *Port Settings* dialog appears.
6. Specify connection settings. By default, AgRemote uses the settings shown below.

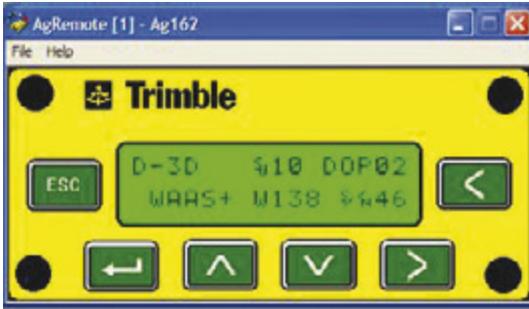


AgGPS 162 RECEIVER

- Click **OK**. AgRemote connects to the receiver. The main AgRemote display shows status information for the receiver:



The following screen shows GPS tracking and WAAS satellite information:



Resetting the receiver to factory defaults

You can use the AgRemote software to reset the AgGPS 162 receiver to its factory default settings.

- Use the AgRemote software to connect to the receiver.
- From the *File* menu, select *Clear BB Ram*.
A message appears, asking you to confirm that you want to reset the receiver.
- Click **Yes**.
Factory defaults are now applied to the receiver.

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