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QUARK-ELEC C201 Built in GPS Receiver



Specifications

• Model: C201

 Features: Fixed Marine VHF/DSC Radio with GPS, Independent DSC Dedicated Receiver, Speaker Vibration Draining Function, IPX7 Waterproof Construction, Built-in GPS Receiver

 Power Supply: 12V DC (24V to 12V DC step-down converter required for 24V power systems)

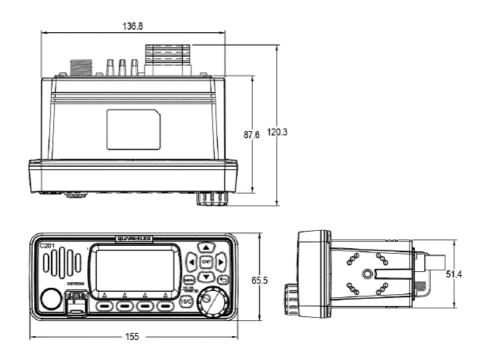
• Input Voltage: Maximum 13.8V

Power Cable Fuse: DC 15A / 32V

Mounting Options: Flush Mounting, Dash Mounting

• Manufacturer: Quark-elec

Dimension



OVERVIEW

This is an overview only. Familiarize yourself with the manual and the manuals of any connecting devices before installation. It is always recommended that electronic equipment be installed by an experienced installer.

Installation key points

 The C201 VHF radio is supplied with all necessary installation accessories. Inside the box, you will find the C201 radio unit, a power cable with fuse for connection to your vessel's 12V DC power supply, and an external GPS antenna to receive satellite signals and provide accurate position data. A universal mounting bracket and screws are also included, enabling secure installation on either a dashboard or an overhead location.

- Before beginning the installation of your VHF radio, please follow these guidelines to select an appropriate installation location:
- The C201 is IPX7-rated for water resistance; however, it should be installed in a dry, well-ventilated and easily accessible location.
- Position the unit within the operator's reach and line of sight, ensuring the LCD display remains clearly visible for monitoring the unit's operating status.
- Mount the radio away from sources of vibration, excessive heat, or direct sunlight. The ambient temperature should remain between -25°C and +55°C.
- Avoid installing the radio in flammable or hazardous areas, such as engine rooms or near fuel tanks.
- Keep the C201 at least 0.25 meters away from compasses or magnetically sensitive devices (e.g., Quark-elec AS08 heading sensor).
- Maintain a minimum distance of 0.5 meters from high-power transmitting equipment, such as AIS transponders.
- Ensure there is sufficient clearance at the rear of the unit for cable connections, ventilation, and heat dissipation.
- Avoid routing power and antenna cables alongside high-current or ignition wiring to reduce the risk of interference.
- Never transmit without a VHF antenna connected to the C201 VHF radio, as this will cause permanent damage to your device!

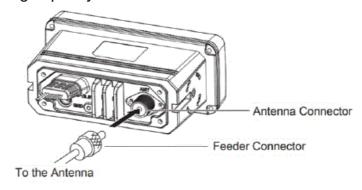
DIAGRAM

The following diagram illustrates a typical C201 connection setup. Review the system components and their connections before starting the installation.



Connections

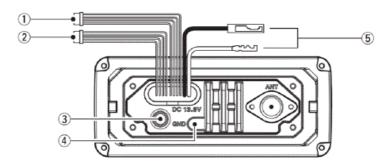
 Antenna connection: Always connect the antenna before powering on or transmitting. Use a marine-grade VHF antenna (e.g., a Quark-elec AS02 or AS12 VHF antenna) with a 50-ohm impedance and connect it securely to the ANT connector on the VHF radio using high-quality coaxial cable and connector.



• If a dedicated antenna is not available, you can share a single antenna between your VHF radio and an AIS device by using a VHF antenna splitter—such as the Quarkelec A015-Rx for AIS receivers or the A015-Tx for AIS transponders. Do not attempt to connect both devices to the same antenna without a splitter, as this may cause permanent damage to the equipment.



- When connecting the external speaker, GPS, DC power supply, computer and
 navigation device by the rear panel cable end, cover the connectors and cables with
 rubber vulcanizing tape as below, to prevent water seeping into the transceiver.
- External Speaker Connection (1): The C201 VHF radio supports connection to an external speaker. To do this, connect the speaker to the blue (+) and black (–) wires located on the back panel. Refer to the diagram above for more details.



NMEA In/Out Connection (2): If needed, an external GPS receiver with NMEA 0183 output can be connected to the C201 via the yellow (NMEA In+) and green (NMEA In-) wires to provide position data to the radio. The GPS receiver must be compatible

- with NMEA 0183 version 2.0 or higher. The C201 supports the following input sentences: RMC, GGA, GNS, and GLL.
- The C201 VHF radio can receive and output distress and position data from other vessels using the NMEA 0183 format via its NMEA output port (white wire NMEA Out+ and brown wire NMEA Out-). The output is compatible with devices using NMEA 0183 version 2.0 or higher and supports DSC and DSE-compatible equipment. The supported output sentences are RMC, GSA, and GSV.

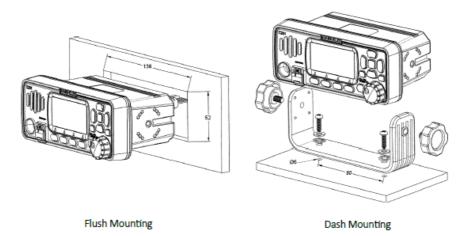
Wire colour	Connection
Yellow	NMEA 0183 In+
Green	NMEA 0183 In-
White	NMEA 0183 Out+
Brown	NMEA 0183 Out-

- GPS Antenna Connection (3): The C201 VHF radio includes a GPS antenna, which
 connects to the SMA connector on the back panel of the radio. The antenna enables
 the C201 to receive GPS signals from satellites. For optimal reception, install the GPS
 antenna in a location with a clear, unobstructed view of the sky.
- Ground Terminal (4): This terminal should be connected to the vessel's grounding system to protect against voltage spikes and reduce electrical interference from nearby electronics.
- **DC Power Connection (5):** The C201 VHF radio must be powered from a 12V DC power supply, via the red (+) and black (-) wires, with a maximum input voltage of 13.8V.

MOUNTING

- For vessels equipped with a 24V power system, a suitable 24V to 12V DC step-down converter must be used.
- The supplied power cable includes an in-line fuse (DC 15A / 32V) for protection. If the
 fuse blows and the radio stops functioning, identify and resolve the cause of the fault
 before replacing the fuse. Always use a fuse with the same specifications (DC 15A /

- 32V) to ensure proper protection and avoid damage to the radio. Always power off the radio before replacing the fuse.
- One fuse is installed in the supplied DC power cable. If a fuse blows or the transceiver stops functioning, track down the source of the problem first, then replace the damaged fuse with a new, rated one.



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Email: info@quark-elec.com

Frequently Asked Questions

Can I use the C201 VHF radio without connecting a VHF antenna?

No, never transmit without a VHF antenna connected to avoid permanent damage to the device.

What should I do if the radio stops functioning?

If the radio stops functioning or a fuse blows, track down the source of the problem first before replacing the damaged fuse with a new one of the same rating.

Is professional installation recommended for the C201 VHF radio?

Yes, it is always recommended to have electronic equipment installed by an experienced installer. Familiarize yourself with the manual and connecting devices before installation.

Documents / Resources



QUARK-ELEC C201 Built in GPS Receiver [pdf] User Guide C201, C201 Built in GPS Receiver, C201, Built in GPS Receiver, GPS Receiver, Receiver

References

- User Manual
 - ▶ Built in GPS Receiver, C201, C201 Built in GPS Receiver, GPS Receiver, QUARK-ELEC,
- QUARK-ELEC Receiver

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