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## Xiegu G90

# Xiegu G90 HF Transceiver User Manual

Comprehensive instructions for the Xiegu G90 High-End 20W HF Transceiver with SDR Technology.

## PRODUCT OVERVIEW

The Xiegu G90 is a high-performance 20W HF transceiver featuring SDR (Software Defined Radio) technology. It is designed for amateur radio enthusiasts, offering advanced functionalities and a user-friendly interface. Key features include a detachable display unit, a color LCD with spectrum and waterfall display, and a built-in automatic antenna tuner.



Image: The Xiegu G90 HF Transceiver, showing the main unit and the connected microphone. The display unit is integrated.

## KEY FEATURES

- **Detachable Display Unit:** The display module and the main radio unit can be separated, allowing for flexible installation and placement. This compact design enhances portability and setup versatility.

# DETACHABLE DISPLAY UNIT



Image: The Xiegu G90 with its display unit detached from the main body, illustrating the modular design.

- **Wideband Automatic Antenna Tuner:** Unlike many QRP radios, the G90 includes a built-in automatic antenna tuner, enabling efficient operation with various antenna configurations in different field conditions.



Image: A close-up of the Xiegu G90, highlighting the "Built-in Auto Antenna Tuner" feature with a waveform graphic.

- **1.8-inch Color LCD Screen:** Features a high-contrast TFT LCD display that clearly shows all important operating conditions, including a 48kHz bandwidth spectrum and waterfall display for excellent signal condition awareness.

# 1.8 INCH LCD SCREEN

Bandwidth Spectrum + Waterfall Display



Image: A detailed view of the Xiegu G90's 1.8-inch color LCD screen, showing frequency, signal strength, and spectrum display.

- **User-Friendly Interface:** Designed for ease of use, with frequently used functions accessible directly on the central unit. A Quick Access Menu provides shortcuts to common operations.
- **Firmware Updates:** Free firmware updates are provided to enhance radio functions, and updates can be performed easily by the user.

## SETUP AND CONNECTIONS

### Connecting the Microphone

The microphone connects to the dedicated port on the main unit. It features two configurable modes and multiple buttons for specific commands, including Push-To-Talk (PTT) and Tuner functions.





Image: A hand holding the Xiegu G90 microphone, with labels pointing to the PTT (Push-To-Talk) and Tuner buttons. An inset shows the backlit keypad.

### Audio and Data Interfaces

The G90 utilizes a standard 3.5mm stereo jack (3-pin) for headphone connection. There is also a port for microphone software updates and an I/Q output interface for PC connection or XTD1 panadapter.



Image: A close-up view of the side of the Xiegu G90, showing the headphone interface and a self-defining interface port.

## Power Requirements

For optimal performance and to maintain the 20W transmission power, the G90 requires a voltage between 13.8V and 15V. If the voltage drops below 13.8V, the output power may not be guaranteed.



Image: The rear panel of the Xiegu G90, displaying various connection ports including ANT (antenna), KEY, CONN, I/Q, ACC, and DC IN.

## OPERATING INSTRUCTIONS

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### Frequency Range and Modes

The G90 supports a reception frequency range of 0.5-30 MHz and transmits on amateur bands plus the 6m band. It operates in SSB/CW/AM/FM modes.

- **Rx Frequency:** 0.5-30 MHz
- **Tx Frequency:** 160m-10m Amateur Bands + 6m band
- **Modes:** SSB, CW, AM, FM

*Note: FM mode can only be activated when the GSOC controller is used in conjunction with the G90.*

### Bandwidth and Filtering

The advanced technology includes pre-selections for narrow bands. The Rx filters are fully adjustable, allowing for CW filtering down to 50Hz.

## MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your Xiegu G90. Keep the unit clean and free from dust.

### Heat Management

It is normal for the G90 to generate heat if used for extended periods. Ensure adequate ventilation around the unit to prevent overheating.

### Firmware Updates

Periodically check the official Xiegu website for new firmware updates. Updating the firmware can improve performance, add new features, and resolve potential issues. Instructions for updating are typically provided with the firmware download.

### TROUBLESHOOTING

- **Low Output Power:** Ensure the power supply voltage is between 13.8V and 15V. A voltage below 13.8V may result in reduced output power.
- **FM Mode Not Available:** Verify that the GSOC controller is connected and properly configured, as FM mode requires its use.
- **Display Issues:** Check the connection of the detachable display unit to the main body. Ensure all pins are aligned and securely connected.
- **Antenna Tuning Problems:** Confirm that your antenna is properly connected and that the automatic antenna tuner function is activated.

### SPECIFICATIONS

Feature	Specification
Brand	Xiegu
Model Number	G90
Rx Frequency Range	0.5 MHz - 30 MHz
Tx Frequency Range	160m-10m Amateur Bands
Operating Modes	A1A (CW), A3E (AM), J3E (USB/LSB)
HF Output Power	20 W (SSB/CW/FM), 5 W (AM) at 13.8V
Modulation Method	Digital (SDR)
Tuning Step Size	10 Hz
Antenna Impedance	50 Ω
Operating Temperature	0 °C - +50 °C
Dimensions (W x H x L)	120 x 45 x 210 mm (without handle)
Weight	1 Kilogram
Display	1.8 inch TFT LCD with high contrast, 24kHz bandwidth spectrum, waterfall effect
Special Features	Detachable display unit, Built-in automatic wideband antenna tuner, I/Q output interface

### WARRANTY AND SUPPORT











Information regarding warranty and support for Xiegu products can typically be found on the official Xiegu website or through your authorized dealer. For specific inquiries, please refer to the contact information provided with your purchase.

The manufacturer, Xiegu, provides free firmware updates to enhance the radio's functions, which can be performed by the user.

For further assistance, you may contact Radioddity United Kingdom, the seller, through their Amazon store page: [Radioddity United Kingdom Seller Page](#).

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Related Documents - G90

  	<p><a href="#">XIEGU G90/S HF Transceiver Operation Manual</a></p> <p>Comprehensive operation manual for the XIEGU G90/S portable 20W HF SDR transceiver, detailing its advanced features, specifications, operational procedures, and support resources. Learn about its SDR technology, detachable design, and built-in ATU.</p>
  	<p><a href="#">XIEGU G90 HF Transceiver Operation Manual - SDR Portable Radio</a></p> <p>Official operation manual for the XIEGU G90/S HF transceiver. Details features, specifications, setup, and operation of this 20W portable SDR amateur radio. Includes support links from Radioddity.</p>
 	<p><a href="#">Xiegu G90 Portable HF SDR Transceiver Operation Manual</a></p> <p>Comprehensive operation manual for the Xiegu G90 portable 20W HF SDR amateur radio transceiver. Covers features, panel descriptions, LCD display functions, specifications, and connectivity.</p>
  	<p><a href="#">XIEGU G90 HF Transceiver Operation Manual</a></p> <p>Explore the XIEGU G90/S HF Transceiver with this comprehensive operation manual. Learn about its advanced SDR technology, portable design, key features like the built-in ATU and CW decoder, and detailed operational instructions for amateur radio enthusiasts. Visit Radioddity for support.</p>



HF Transceiver  
**G90**

**Operation manual**  
31 – June 2023 (for G60 units with firmware of 8a)

Xiegu G90 HF Transceiver Operation Manual

Comprehensive operation manual for the Xiegu G90 HF Transceiver, detailing features, specifications, setup, and usage of this 20W portable SDR radio. Includes information on accessories and firmware updates.

The GRS is an invariant value that varies transverse with a peptide *STW* in the SDF architecture. It is a new member of the *Stag* protein family and the first peptide SDF model in the G series.

Based on 344,000DC sampling, the 600S brings superior business performance and a highly configurable feature experience, the unique lead design allows you to flexibly position your lead, with built-in high-performance ATU, you can read your results at any time. From there on, the software enables you to adjust and control your data, because it's worth it.

- » High-performance RF front end
- » 32-Bit/32MHz baseband module
- » 1.8-inch high-resolution TFT LCD
- » 42-bit bandwidth operation display refresh rate display
- » Software-defined narrow band filter (VCO module can connect to SDR), built-in CW filter
- » Separable head design
- » Built-in charging screen camera
- » Built-in efficient automatic antenna tuner

Please read this manual carefully for a better experience and full-value reading opportunities of the GORE.

\* GRC is a resident in the People's Republic of China, and GRC is a resident in other countries or regions. This operation manual is applicable to the both models. The contents of this manual are explained with the GRC model.

## Xiegu G90S SDR Transceiver Operation Manual

Comprehensive operation manual for the Xiegu G90S portable 20W SDR amateur radio short-wave transceiver, covering specifications, features, interface definitions, panel controls, operation methods, and system settings.