

Xiegu G90 FAQ from Radioddity

* The hardware of G90 is exactly the same as that of G90S. In the following, G90 is used to represent two models.

Question Type	No.	Question	Answer
Accessories	1	What's the maximum output power I should use if I connect the G90 to an XPA125B amplifier?	5W. It's one of the full band settings of G90.
Accessories	2	Is the data cable included with the G90 also suitable for other XIEGU machines?	Yes, all the XIEGU USB-TTL cables are universal.
Accessories	3	How long can the remote head cable be extended?	When using the remote head, please make sure you are using a high-quality DB9 extension cable. As long as the voltage drop on the cable is small enough, the remote head can work normally. The longest length recommended is about 6 meters (18 feet).
Accessories	4	Can the headphone port of the G90 be used to drive external speakers?	No, the headphone port can only drive headphones, not passive speakers. (Any speakers connected must be active powered speakers.)
Accessories	5	Is the headphone output mono or stereo?	The G90 output is a mono signal, and the left and right channel are combined on the earphone socket. With a 3.5mm stereo earphone, you can hear sounds on both sides. If you use a 4-pin earphone, please make sure that the pin definition meets the requirements, otherwise, there may be no sound, low volume, or other errors.
Accessories	6	Can I connect the G90 to an external amplifier or a computer, without using the CE-19?	Yes. You can make a cable by yourself. A pinout and interface definition is included in the G90 User Manual
Function	7	What is the antenna tuning range of the built-in antenna tuner in the G90?	The tuner can match an antenna with an SWR of up to 5:1
Function	8	Can the G90 antenna tuner connect to and match a long wire antenna directly without a balun?	No, a balun is needed. Otherwise, the tuning range will be reduced.
Function	9	Which bands does the G90 support?	Reception is supported from 500KHz to 30Mhz. Transmission is supported on the 10 amateur bands in this range. (160m, 80m, 60m, 40m, 30m, 20m, 17m, 15m, 12m, 10m)
Function	10	Does the G90 support the new 60 meter band?	Yes, it does.
Function	11	When switching bands, can the non-amateur band display be turned off?	Yes, it can.
Function	12	Can I get the 6-meter band by expanding or upgrading firmware?	No. (The hardware does not support this frequency range.)
Function	13	How do I read the ALC readings?	When the G90 is transmitting, the ALC (Automatic Level Control) meter will be displayed in the upper right corner of the spectrum display area. The normal reading should be greater than 30, and manual intervention is not needed. If the reading is too low when using the line input, please increase the input volume appropriately.
Function	14	Is the filter bandwidth adjustable on the G90?	Yes, both the center frequency and bandwidth of the digital filter can be adjusted.
Function	15	What should the frequency accuracy be?	± 1.5 ppm. You can fine tune the current frequency deviation based on a reference signal. After adjustment, the frequency accuracy could be ± 0.5 ppm.
Function	16	Can the G90 send and receive on different frequencies?	Yes, please turn on SPL (Split Mode).
Function	17	Can the G90 be connected to a PC serial port directly through the remote head cable interface?	No, this interface is not suitable for a serial port and this could cause damage to the interface.
Function	18	What is the "Δ" indicator light used for ?	In CW receiving mode, this indicator light will blink in sync with the incoming CW signal when you have the signal tuned to the correct pitch.
Function	19	Are the buttons on the G90 backlit?	No. The buttons below the screen may be dimly lit by light leaking from the display.
Function	20	Can the MIC and LINE IN be used at the same time?	No. You can use only one input source at a time.
Function	21	Does the MIC interface have a speaker output signal?	No.
Function	22	Does the G90 have protection against damage from high SWR (Standing Wave Ratio)?	Yes, and the standing wave protection threshold is adjustable.
Function	23	What's the level trigger of the G90's PTT pin?	The G90's PTT pin is triggered by connecting the pin to ground. This is sometimes referred to as a "Low Level Trigger"
Function	24	Does the G90 support PTT signal output?	Yes, there is a PTT terminal at the rear ACC port. This control terminal is a bidirectional control port.
Function	25	Can I control the transmit of the G90 by short circuiting the PTT line on the MIC input?	No. To control the transmission of the G90 from outside, you need utilize the provided PTT pin on the rear ACC interface. The CIV command can also control the PTT state of the device.
Function	26	Why doesn't the S meter show up?	The AGC function needs to be turned on for the S meter to be displayed.

Function	27	What is the error level of the built-in S meter?	The level reading error of the S meter is ± 2 dB, which is significantly more accurate than a standard pointer meter.
Function	28	Does the S meter of the G90 need to be calibrated?	No.
Function	29	What is the bandwidth of the displayed spectrum on the G90?	± 24 k bandwidth centered on the current signal.
Function	30	Why is my G90 spectrum displayed so high that I can't see the top?	The SCAL reference level value needs to be adjusted.
Function	31	How about the stray radiation suppression of the G90?	≥ 50 dB.
Function	32	Is the SWR scanner accurate?	The accuracy of the built-in SWR scanner is sufficient for antenna debugging, and can accurately reflect the SWR of the current antenna feeder system. The scanning power is generally around 5W, which is more accurate than most cheap meters. More precise measurement requires professional instruments.
Function	33	Can the boot-up tone and system tone be turned off?	Yes, it can be turned off in the radio settings menu.
Function	34	Does the G90 have voice compression function?	Yes, press the CMP button to enable voice compression.
Function	35	Does the G90 have voice control VOX function?	Yes, FUNC + press the volume knob to set accordingly.
Function	36	Why does the sound become louder when AGC is turned off?	When AGC is turned off, the G90 is in the highest gain state, and the noise will be significantly increased. It sounds loud, but it may reduce the signal-to-noise ratio and dynamics. It is recommended to turn on AGC.
Mode	37	Does the G90 support CW auto key?	Yes, and the auto key rate can be adjusted.
Mode	38	Why is my CW signal not decoded?	To decode a CW signal requires: 1. The frequency is tuned to the correct pitch. 2. The received signal-to-noise ratio(SNR) is strong enough. 3. The code sent by the other party should be standard. If the code is sent manually, the decoding accuracy is lower. If the code is sent from a computer or by a machine automatically, the decoding accuracy is higher. Generally, automatic decoding is only a supplement to manual copying.
Mode	39	Can the CW key be used to switch modes?	Yes, it can be used for IAMBIC A/B Mode switching.
Mode	40	Can the CW key be used to adjust the length and proportion of dots and dashes?	Yes, it can.
Mode	41	Can the G90 store CW calling information?	No, it can't. (This one can't be added due to the hardware limitation.)
Mode	42	Can I adjust the CW tone of the G90?	Yes.
Mode	43	Can CW be used in SSB mode?	No, you need to turn the mode to CW or CWR.
Mode	44	Does the G90 support data communication modes like FT8?	Yes, it does.
Mode	45	What is the CWR mode?	Compared to CW, it a sideband report mode. In some cases, CWR mode can be used to eliminate some specific interference nearby.
Mode	46	Does the G90 have an FM mode?	No, it doesn't. (This one can't be added due to the hardware limitation.)
Mode	47	Is there a NB function?	Yes, please see the user manual for full details of the included noise blanker.
Mode	48	What operating modes does the G90 support?	SSB/CW/AM.
Other Troubles	49	Can I turn on the G90 through CAT?	No.
Other Troubles	50	Can the G90 be set to show the call sign on the boot-up screen?	Yes, it can.
PC	51	Does the G90 support computer input signals for data communication?	Yes, there is an audio input/output terminal at the rear ACC port, which is specially used for external input /output.
PC	52	Can I use a PC to control the G90?	Yes, you can control it with software like HRD, HDSDR, etc.
PC	53	What protocol does the G90 use for computer control instruction?	Standard CIV protocol, compatible with ICOM.
Specification	54	How many channels can be stored in the G90?	100
Specification	55	Which port is used for a PC control connection?	On the left side of the radio head unit (below the headphone port).
Specification	56	Does the G90 have a CMIIT ID?	Yes, its CMIIT ID is 2019FP3960.
Specification	57	What type of circuit does the G90 use?	The G90 uses a Mixer SDR with a 24 bit @ 48khz DAC

Specification	58	What type of power connector does the G90 use?	EL-2P
Specification	59	What input voltage range does the G90 accept?	10.5~16.5V
Specification	60	What is the rating of the fuse in the power cord?	10A fuse
Specification	61	Can the G90 be powered with 4 Lithium batteries which are 16.8V in total?	Yes, but there is a risk of overvoltage. 16.8V input voltage is not recommended.
Specification	62	How do I connect the G90 to a ground wire?	There is a ground terminal connection at the rear panel, which is for the ground wire connection. Good grounding can help improve the performance of the equipment and enhance its anti-interference ability.
Specification	63	What is the maximum emission current of G90? What kind of power supply would be suitable?	The maximum emission current could be up to 5.5A, when under 13.8V DC power, and the emission current in full power transmitting can't be higher than 5.3A. A power supply with 6A or above output power would be recommended.
Specification	64	What is the minimum input voltage that allows the G90 to transmit at full power?	The G90 can transmit at full power with input voltages at or above 11.5V. Input voltages above 13.8V will not improve the output power, as the APC unit in the radio will regulate the power automatically.
Specification	65	How do I confirm that the output power of the device is normal?	Select CW mode, press the key to start transmission, and observe the output power reading displayed on the screen. You can also use an external power meter to help. Do not use SSB mode to check as it will be affected by the input volume, which may cause a large change in output power.
Specification	66	Does the G90 have reverse polarity protection?	The reverse polarity protection consists of a fuse in the power cord and an internal circuit. When the radio is accidentally miswired, the fuse will blow, and the internal protection circuit will take action to prevent further damage. To repair it, you just need to just replace the fuse and repair the protection unit inside the radio. Generally, it will not cause more serious damage.
Specification	67	What is the receive sensitivity of the G90?	0.25uV @ 10dB S/N
Specification	68	Can the G90 connect to a PC and show a spectrum?	Yes, you can connect the I/Q signal to your PC's sound card, and use appropriate SDR software to see a spectrum. (Depends on your sound card's capability.)
Specification	69	Does the G90 have a spectrum display?	Yes, it provides both a spectrum and waterfall display.
Specification	70	Can the G90 show the SWR (Standing Wave Ratio) of my antenna setup?	Yes. There's a standing wave meter on the right side of the screen, and the current standing wave ratio will be displayed when transmitting.
Specification	71	Is the transmit power adjustable on the G90?	Yes, continuously adjustable from 1 ~ 20W in steps of 1W.
Version	72	How do I factory reset the G90?	Turn off the G90, hold the FUNC button, and turn on the machine, then your radio will be reset. (this reset function was added in firmware version V1.73)
Version	73	How do I update the G90 firmware?	When updating the firmware, the head and body need to be updated at the same time, and the firmware version number must be the same for both. For detailed operation, please refer to the Firmware Upgrade Instructions: https://xiegu.s3.amazonaws.com/G90%20FW%20Update%20Instructions_20200313.pdf
Version	74	What happens if the firmware update process fails or is cut off prematurely?	Repeat the update procedure. The device will not be bricked.
Version	75	How do I check the current firmware version number?	Item #7 in the radio menu shows the firmware version
Version	76	What are the differences between the G90 and G90S?	The hardware in the G90 and G90S is identical. The G90S is the original model for the Chinese market, with the G90 being the model for sales overseas. The G90 is provided with a different set of operating frequencies based on the sales region.