



Power amplifier

XPA125

Operating Manual



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Important reminder:

Before operating the equipment, please read our operating manual carefully and keep the manual, so as not to lose.

Features:

- Both the power amplification, but also with antenna tuning function
- The maximum output power can reach 125W
- Auto tuning function
- The amplified frequency range of 0.5M - 50M
- harmonic suppression 39dB
- The maximum output power can be automatically constant (only for X108G and X5105) [ALC control function]

Security considerations:



Do not use equipment during a lightning storm.



Attention should be paid to prevent moisture.



Don't illegal operations!



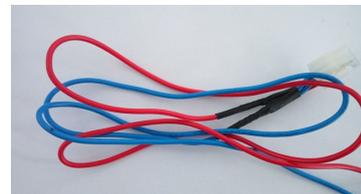
Note RF high-voltage of antenna connector!

Packing list:

	Qty
① XPA125..	1
② Power supply cable..	1
③ Communication line..	1
④ Date line..	1
⑤ Service card..	1



①



②



④



③

1 Parameters of XPA125

1.1 Basic parameters:

Amplified frequency range: 0.5~50MHz

Maximum output power: 125W

Maximum operating ambient temperature: 55°C

Whole gain: 13dB (+ 2dB)

Working voltage: DC 12~14.5V

Current parameter: position in readiness @Max 550mA

Transmit: 30A@Max

1.2 ATU parameters:

Tuning frequency range: 1.8M~30M

Maximum tuning range: 14 ~500

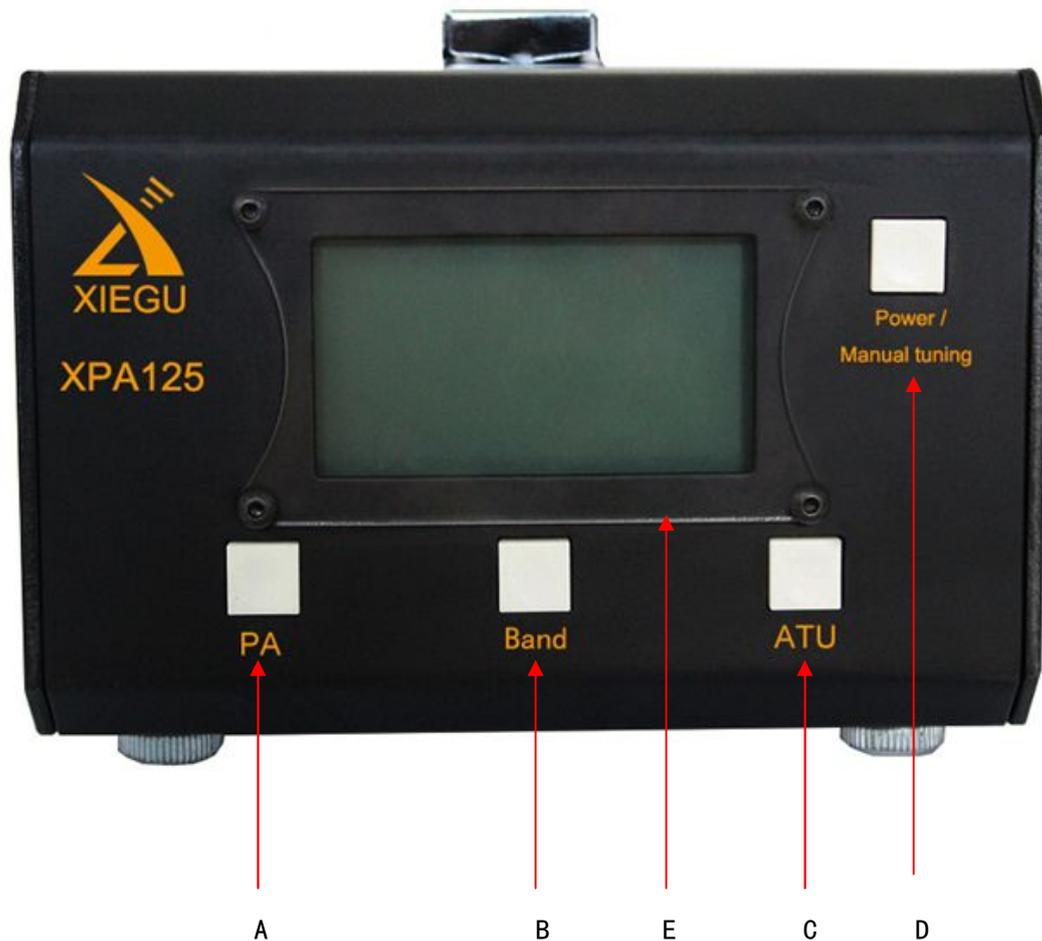
1.3 Product specifications:

Overall size: 260*150*100 (mm) [do not include knob, handle and other prominent]

Weight: 3.3 Kg

2 Equipment description

2.1 Front panel button definition:

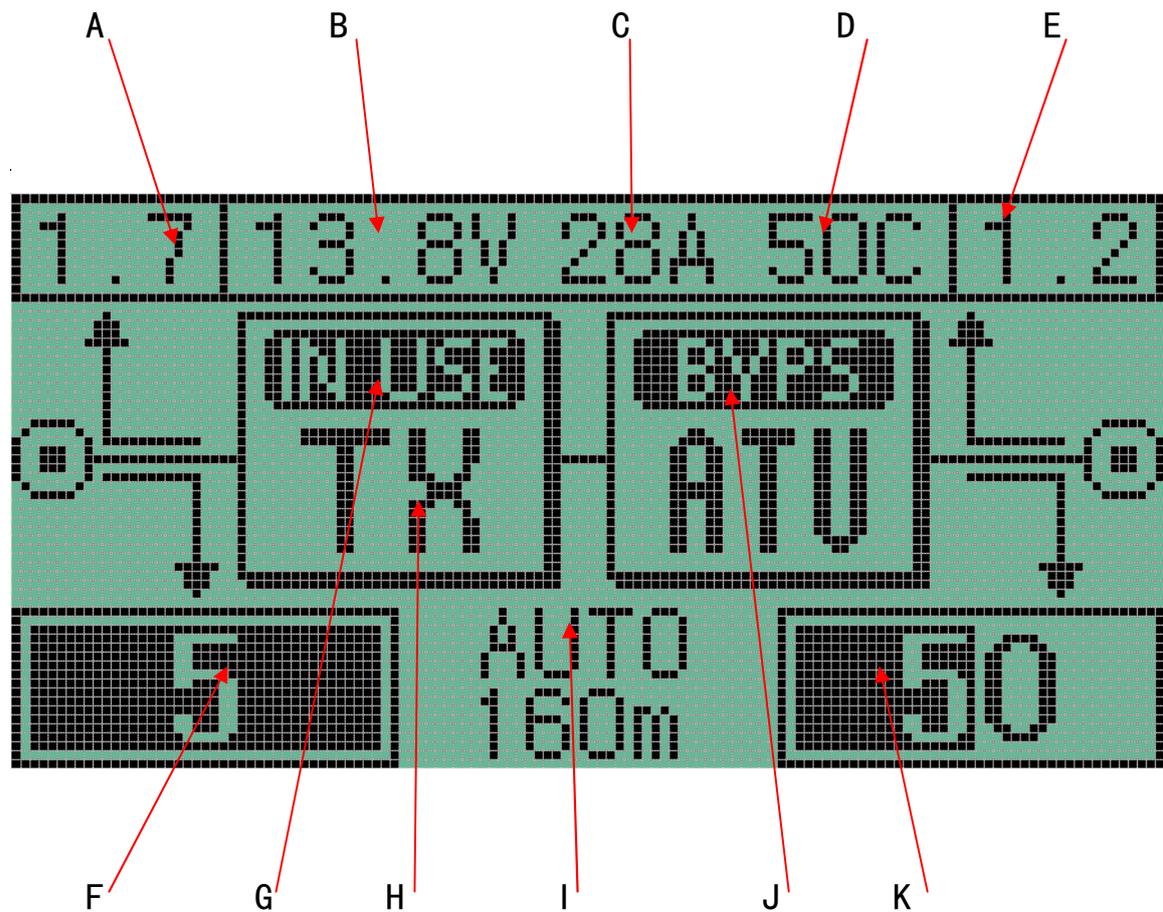


- A. PA function key, in the "BYPSS" state, press the key, enter the "INUSE" state; in the "INUSE" state, press the key to enter the "BYPSS" state
- B. Band set button, press the button can set the LPF band and working mode
- C. ATU function key, when the ATU display "BYPSS" mode, press the button to enter "INUSE" mode, ATU function to open
- D. Switch machine button / remove the protection function key / force tuning key, function description: press the key for a long time, for the

switch function; in TX mode, press the key quickly, you can force the tuning; in protection mode, press the key quickly, you can remove the protection

E. Screen display

2.2 Display information description



A: input SWR display

B: supply voltage display

C: PA operating current

D: PA temperature display

E: output SWR display

F: Input power display, maximum input power is 8W

G: PA display ("BYP" represents the current state in the through state, without PA access, "INUSE" represents the current state in the amplification, PA access)

H: When the status of the work shows RX, said the host into the receiving mode, when the state of work shows TX, said the host into the transmit mode

I: LPF band display, "XXm AUTO" representation band automatic recognition mode (when the band output voltage of host is consistent with form "Band voltage parameter" described in paragraphs voltage, you can use this mode of operation)

"XXm MANUAL" means that the LPF working state is in manual operation.

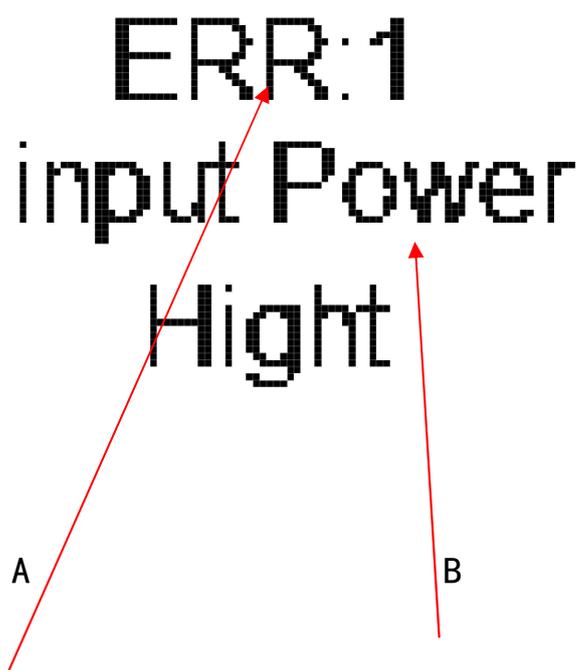
"XXm" means that the current band.(when the band output voltage of host is NOT consistent with form "Band voltage parameter" described in paragraphs voltage, you can use this mode of operation, you can manually set the working band of the machine)

● The form "Band voltage parameter", please refer to page 8.

J: ATU working status display, "BYP" means no access to ATU, "INUSE" means that the access to ATU(when the SWR is too large, it will automatically be tuned.)

K: Output power display, maximum output power 150W

2.3 Protection interface description:



A. Warning message number

B. Warning information

ERR:1 input power High

ERR:2 output power High

ERR:3 current High

ERR:4 temperature High

ERR:5 voltage High

ERR:6 Fan Stop working

ERR:7 Swr High

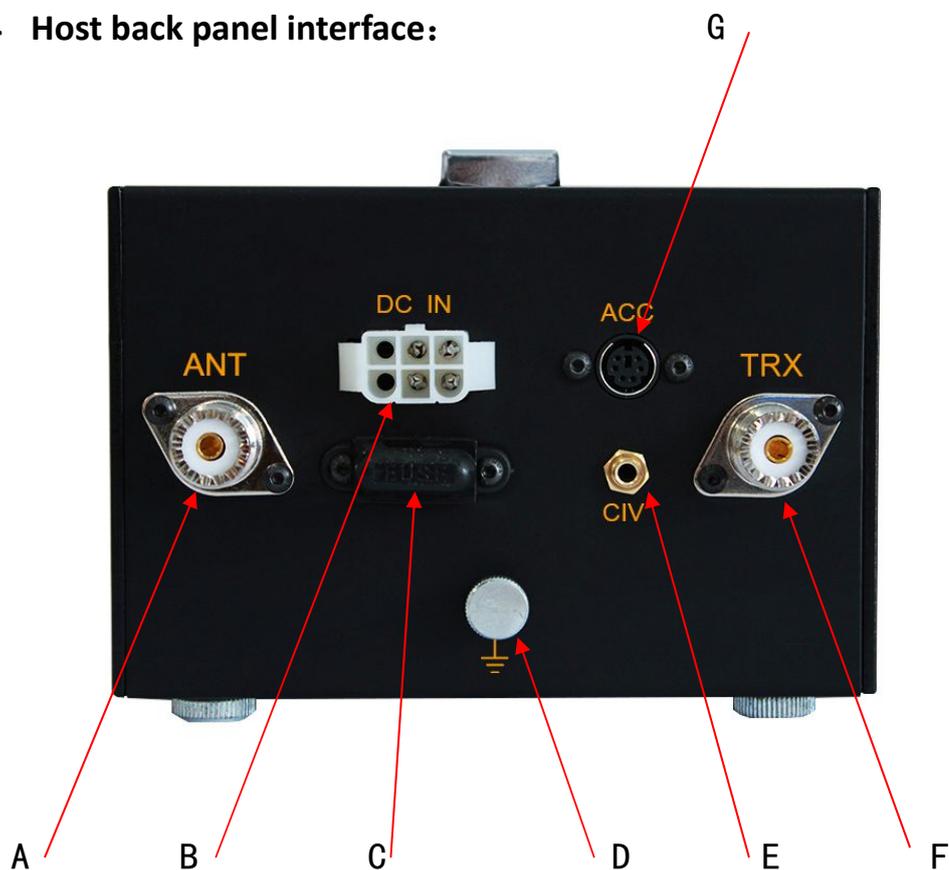
ERR:9 Atu Tun Fail

ERR:10 Gain ERR(The set band of XPA125 does not apply to the current transmit frequency)

Error handling method:

To stop the transmit, press the power key quickly to release the error, rule out the error according to the relevant information.

2.4 Host back panel interface:



A. Output interface

B. Power interface

C. XPA125 safety socket (maximum current 30A)

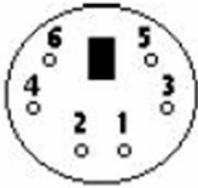
D. Ground

E. Serial port communication interface (can be used for the firmware upgrade, etc.)

F. TX signal input interface

G. ACC communication interface (see figure below)

【ACC】 ACC port



Pin Definitions

- 1: No function
- 2: PTT Signal Output
- 3: Wave Bands voltage output
- 4: ALC voltage output
- 5: No function
- 6: Ground

Band voltage parameter

BAND	LEVEL	BAND	LEVEL	BAND	LEVEL
1.8MHz	0.33V	10MHz	1.33V	21MHz	2.33V
3.5MHz	0.67V	14MHz	1.67V	24MHz	2.67V
7MHz	1.00V	18MHz	2.00V	28MHz	3.00V

3 Equipment operation instructions

Connect the power line, the communication line and the input signal line, after the confirmation, turn on the XPA125.

3.1 PA functional instructions

1 Press the PA function button (press once again to close the PA function)



2 Screen display PA access

3 Press the transmit button of the host (such as X108G, X5105).

4 Output power can be observed (antenna to keep matching)

3.2 ATU function instructions (applicable to the case which antenna and the band does not match)

1 Press the ATU enable button (press the button again to close the ATU function)



2 Set your host (such as X108G) to CW mode, power set to 5W

3 Press the CW key, keep tuning until the tuning end

3.3 Band selection

1 Press the Band key (AUTO: automatic mode, according to the band voltage automatic identification band, MANUA: manually set the band,

this menu using cycle mode).



3.4 Warning release

1 Release the host's send button

2 Observe the warning content (according to the actual situation to deal with related issues)

3 Press the warning release button (the power button) to remove the warning. For example:

```
ERR:1  
input Power  
Hight
```

4 General troubleshooting

The following points out the troubleshooting for the general problem, if you still can not solve the problem, please do repair, please do not disassemble the machine, or you will lose the warranty.

Fault description	Possible reasons	Resolvent
Unable to turn on your X108G	No connection power cord	Connecting power cable
	Power is not turned on	Turn on the power
	Power cable connection is bad	Replace or repair power cord
	Power supply reverse connection	Properly connected power supply
Not receive	Antenna is not connected	Properly connected antenna
	Antenna failure	Replace or repair antenna
	No communication	Please confirm the propagation characteristics of the current wave
	Other circumstances	need repair
Not transmit	Antenna is not connected	Properly connected antenna
	Low power supply voltage	Please replace the power supply
	Lack of power	Please replace the power supply
	Antenna SWR value is too large	Please check the antenna
	Work mode is not correct	Please choose the right mode of work
	Other circumstances	need repair
Screen no display	No connection power cord	Connecting power cable
	Power is not turned on	Turn on the power
	Other circumstances	need repair
Equipment goes up in smoke, smell		need repair
microphone operation exception	PTT interface connection exception	Re-connect microphone
	Please confirm that the current frequency is not in the forbidden band	Reset frequency
	Button no reaction	Re-connect microphone
	Other circumstances	need repair

After sales service policy

1. Warranty clause:

When buyer from the point of sale who has obtained the authorization of XIEGU to buy our products, within two weeks after purchase, if host, multifunctional microphone, shell structure of the host, the USB data lines, power lines appear the performance fault of non-human damage, the buyer can be in the original place of purchase to enjoy a free replacement service. The transport costs borne by the seller.

When buyer from the point of sale who has obtained the authorization of XIEGU to buy our products, in more than two weeks and within a year, if host, multifunctional microphone, shell structure of the host, the USB data lines, power lines appear the performance fault of non-human damage, the buyer have the right to enjoy free repair service. The transportation cost of the product from the buyer to the original place of purchase is to be borne by the buyer.

When buyer from the point of sale who has obtained the authorization of XIEGU to buy our products, beyond one year later, if host, multifunctional microphone, shell structure of the host, the USB data lines, power lines appear the performance fault of non-human damage, the buyer can apply for maintenance services in the original place of purchase. The maintenance cost and the transportation cost will be borne by the buyer.

The warranty period is calculated from the date of the purchase of the product.

2. Warranty limitation clause:

The following restrictions on the warranty services, applicable to the host and all accessories, meet one of the following circumstances, we will cancel the warranty:

- A. Without permission and authorization, modification, removal, maintenance of the host's chip;
- B. Change product's embedded software;
- C. Immersed in liquid, broken, or man-made external damage;
- D. Over the warranty period (including additional warranty period);
- E. Product's serial number, after sales service card serial number does not correspond, missing, is torn or blurred;
- F. Products belong to seller who did not obtain the authorization of XIEGU.

Meet one of the following conditions, it does not belong to the scope of the warranty:

- A. Damage caused by improper use of the user;
- B. The damage caused by an accident;
- C. Damage due to incorrect testing, maintenance, debugging, or other

changes;

- D. The damage is not caused by the material or the quality of production;
- E. Due to improper use, causing damage to the shell or other external components;
- F. Use incorrect connection or match Kit.

Contact us: service@cqxiegu.com



www.cqxiegu.com