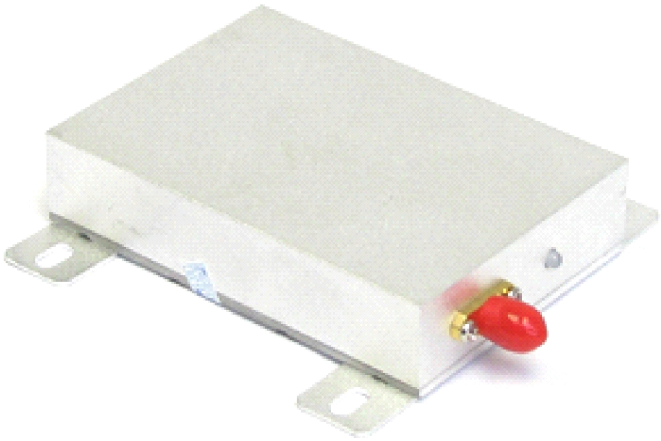
KYL-600H 5W Wireless Audio Modem User Manual



KYL-600H radio module adopts double phase-lock loop, double VCO structure and high stability TXCO. With advanced arithmetic fault-rectify system, it has high stability and reliability. This module is usually used for industry control, water conservancy, electric, oil field management, wireless alarm and so on. Moreover, we can extend its functions and ODM products for you according to your specific application.

I. Features:

1. Specifications:

0 Double phase-lock loop, double VCO structure, high stability

0 Carrier frequency: VHF/UHF selectable

0 Air data rate: 1200/2400bps now

0 Interface: TTL/RS-232/RS-485 selectable

0 Modulation: FSK/MSK

0 Frequency stability: ±2.5ppm

0 Channel spacing: 25KHz

0 Antenna impedance: 50 ohm

0 Temperature: -30~+70C

0 Size: 85x58x16mm (without radiator)

0 Transmission distance can reach 12Km

2. Receiver:

0 Receiving sensibility: ≤-119dBm (more than 12dB SINAD)

0 Adjacent channel selectivity: ≥65dB

0 Intermodulation rejection: ≥65dB

0 Clutter and images rejection: ≥70dB

3. Transmitter:

0 RF power: 5W

0 Frequency deviation: ≥ 5.0kHz

0 Adjacent channel power: ≥70dB

0 Transmitting current: ≤1.5A

II. Application of KYL-600H:

0 APRS, SCADA
0 Wireless alarm and security systems;
0 Wireless voice transmission system, wireless pagers
0 wireless monitoring and process control;
0 Wireless data transmission, automatic data collection system;
0 Wireless conference voting system;
0 Wireless POS, PDA wireless smart terminal;
0 Electronic bus station and intelligent traffic;
0 Wireless electronic display screen, LED display
0 RS232/RS485 to wireless;

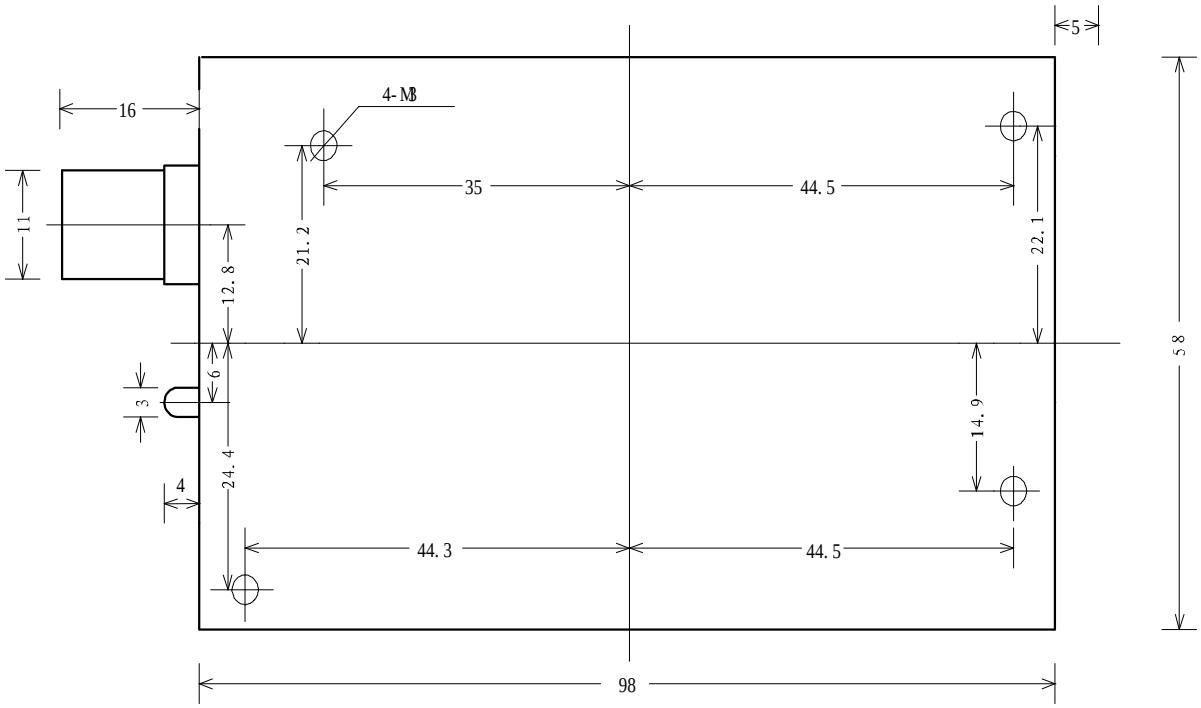
III. How to use the KYL-600H data radio module

KYL-600H provides RS-232, RS-485 and TTL level interface port for direct connection with PC, RS485 devices, monolithic processors and other UART equipments.

1. Power supply

KYL-600H works in supply voltage+12V DC. By using better ripple factor, KYL-600H transceivers can also share power supply with other equipments. If possible, a voltage-stabilizing chip with 12V voltage is more recommended as the only power supply than switch power supply. But if only switch power supply available, the jam by switch pulse to the transceiver should be avoided. In addition, the reliable grounding must be used if there is other devices in this system. In case of failing to connect with the ground, it can form its own grounding but must be absolutely separated from the municipal electric supply.

2. Installing Diagram

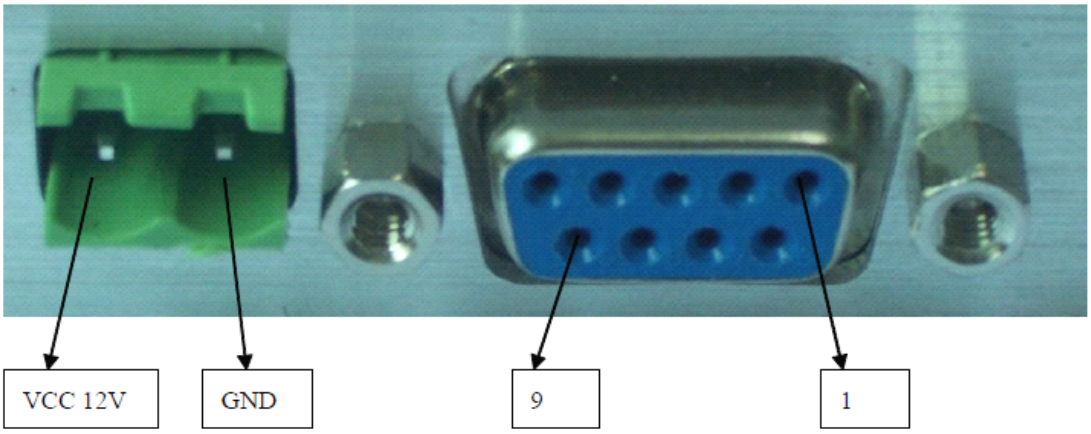


3. Pin Definition

The definitions and connection methods with terminals are shown in the following

Pin No.		Signal Name	Definition	Description	Remarks
Power	1	VCC	DC12V±10%	Maximum transmission current: 1.5A	
	2	GND	Grounding of power supply		
Signal base	1	GND	Grounding of power signal		
	2	A(TXD)	Data receiving	TTL TX / RS232 TX / RS485－A	Choose one
	3	B(RXD)	Data transmitting	TTL RX / RS232 RX / RS485－B	
	4	NC			
	5	DGND	Grounding of Signal		
	6	PTT	Audio transmitting control		
	7	MIC IN	Microphone input control		
	8	SPEAKER OUT	Speaker output control		
	9	Test	Internal test		

4. The connection schematic diagram of KYL-600H transceivers with terminal



5. Setting of frequency, interface, and data format

Before using KYL-600H, users can use our software to setting frequency, interface baud rate and data format.

A. Users can program any frequency value in the frequency range. Before place the order, clients need to confirm the frequency range.

B. Users can choose the interface rate according to requirement.

C. Users can change the data format individually.

6. **Supported protocol and transmit capability**

KYL-600H transceivers offer transparent protocol to support various applications and protocols of users. If the user needs to decrease its cost or ease the workload of terminal CPU, we can add other specific functions based on the transparent protocol, such as addressing, data acquisition, command interpretation and so on.

7. Description of Indicator light

a. The red and green lights will keep on about 50Ms when power suppy.

b. The red light is normally on when transmitting data, while the red light will crush out after ending the data transmission.

c. The green light is normally on when receiving the air signal, while the green light will crush out after receiving the air signal.

8. **Standard configuration and Antenna configuration**

A. Standard configuration

One KYL-600H radio modem
one Power supply connector line
one data connector line (flat cable)
Helical TNC antennas（about 10cm）

B. Antenna configuration:

Many appropriative antennas for RF modules are selected to meet different user's requirement.The main options are exterior flagelliform, rubber antenna with helical SMA joint, small osculum antenna, small rod antenna and elbow antenna. For this 5W module, you'd better choose a high gain antenna to reach good communication effect. Please ask our sales office for more information if you have special demands. We may design and produce for you individually.