



# **Rek**<sup>®</sup> Meiruike Instruction Manual

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Audio Frequency  
Sweep Signal Generator

SHENZHEN MEIRUIKE ELECTRONIC TECHNOLOGY CO., LTD

### 7.1 warranty period

If the user purchases the instrument from our company, it will be calculated from the date of shipment from our company, and if it is purchased from the distribution department, it will be calculated from the date of shipment from the distributor. The warranty period of the whole machine is 12 months, and the warranty period of accessories and other consumables is 6 months.

### 7.2 Warranty

The warranty card of the instrument should be presented during warranty. The company implements lifetime maintenance services for all outsourced instruments. During the warranty period, if the instrument is damaged due to improper operation by the user, the maintenance cost shall be borne by the user.

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### 1.0 overview

This instrument uses direct digital synthesis (DDS) technology to generate pure sine wave signals, which can be widely used in acoustics, vibration, telecommunications and other fields as signal excitation sources.

### 2.Features

- ▲ Adopt direct digital synthesis (DDS) technology;
- ▲ The waveform output frequency is 20Hz ~ 20kHz, and the sweep frequency ratio reaches 1000;
- ▲ The frequency resolution is 1Hz;
- ▲ Frequency stability  $\leq 5 \times 10^{-6}$ ;
- ▲ The small signal output amplitude is up to 10mVrms;
- ▲ Scanning start frequency and end frequency can be set arbitrarily;
- ▲ With start-up delay output, short-circuit current limit protection function;

### 3.Technical Parameter :

Model		RK1212 Series	RK1316 Series
Freq. Range		20HZ-20KHz	
Resolution		1Hz	
Sine wave output range		0.1Vrms----- 15Vrms(20W)/18Vrms(40W)/22Vrms(60W)/28.5Vrms(100W)/40Vrms(200W) (8Ωload) dpi: 0.01Vrms	
Output voltage deviation		$\pm 1\%$ +3个字, (f≤20Khz)	
Sine wave distortion		<0.2% (20W,8 Ω load, The rest shall not be greater than 0.8%)	
output power	20W	RK1212BLN	RK1316BL
output	40W	RK1212	RK131

power		DN	6D
output power	60W	RK1212 EN	RK131 6E
output power	100W	RK1212 GN	RK131 6G
output power	200W	RK1212 HN	RK131 6H
pulse width	no		0.4 (±0.2ms)
pulse amplitude	no		10VPP (H igh、W middle、L low)
Sensing microphone	no		Condenser microphone
Test sensitivity	no		High ≥25cm, middle ≤ 25cm speakers
Discrimination speed	no		0.2s
Speakers, headphones	speakers		Speakers, headphones
Sweep mode	logarithm		
Sweep ratio	1:1000		
Sweep time	0.1s ~ 20s		
Output mode	Power output, synchronous output		
Working power supply	220V±10%,50/60Hz		
Overall dimension	375mm×368mm×135mm		
Weight	RK1212BLN/DN:6.2Kg		RK1316BL/D:6.5Kg
	RK1212EN/GN: 7.5Kg		RK1316E/G:8Kg
	RK1212HN:8.5Kg		RK1316H:9Kg

4.1.3 In the sweep working state, adjust the sweep time as needed.

#### 4.2 Manual point frequency output

4.2.1 The instrument can be set to manual single frequency output. At this time, press the "manual" control key and adjust the frequency knob to make the displayed frequency the desired frequency.

4.2.2 Adjust the signal amplitude knob as needed.

#### 5. Announcements

5.1 This machine has a power-off storage function, which can save the state set before shutting down, and automatically restore it after restarting. The saved states are: start frequency, end frequency, sweep time, and signal amplitude.

5.2 When the output amplitude is greater than 3Vrms, if the output load is too large or short-circuited, the amplitude display window will display "Err2" and a warning beeps. If the load is not disconnected in time, the instrument will automatically disconnect the output after a few seconds. At this time, check the load condition and adjust the amplitude knob to output the signal after it returns to normal.

#### 6. Attachment list

(1) test line	2 pcs
(2) power line	1 pcs
(3) user's manual	1 book
(4) Product certification	1 piece
(5) 1A /220V Fuse (installed in the socket)	2 pcs
(6) microphone	1 pcs
(7) Microphone adapter	1 pcs

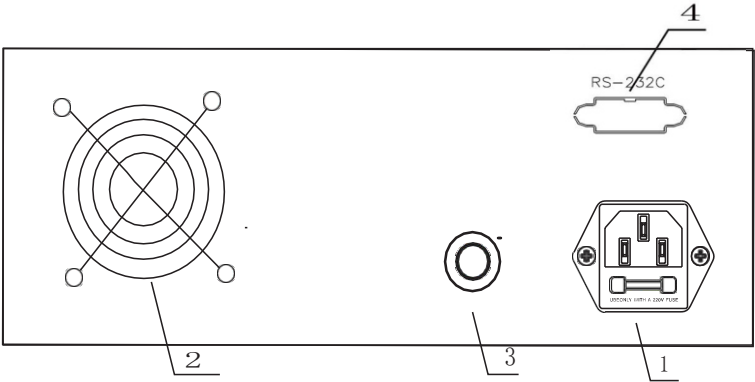
Note : (6) • (7) only for RK 1316 for series models Special

After receiving the instrument, the user should open the box to check the above content, if there is a shortage, please contact our company or the dealer immediately.

#### 7. Warranty

headphones.

4.3 Rear panel description :



- (1) Power socket (including fuse holder)
- (2) fan
- (3) Ground pole
- (4) RS232C Interface (Optional)

5. Operating Instruction

After power on, warm up for 10 minutes before proceeding as follows.

4.1 Sweep frequency output

4.1.1 According to the requirements of the sweep signal, set the start and end frequencies of the sweep respectively. The specific operation process is as follows: Press the "Start" button, adjust the "Sweep Start" knob to make the displayed frequency the required frequency, and then press the "End" button, adjust the "Sweep End" knob to make the displayed frequency the required frequency.

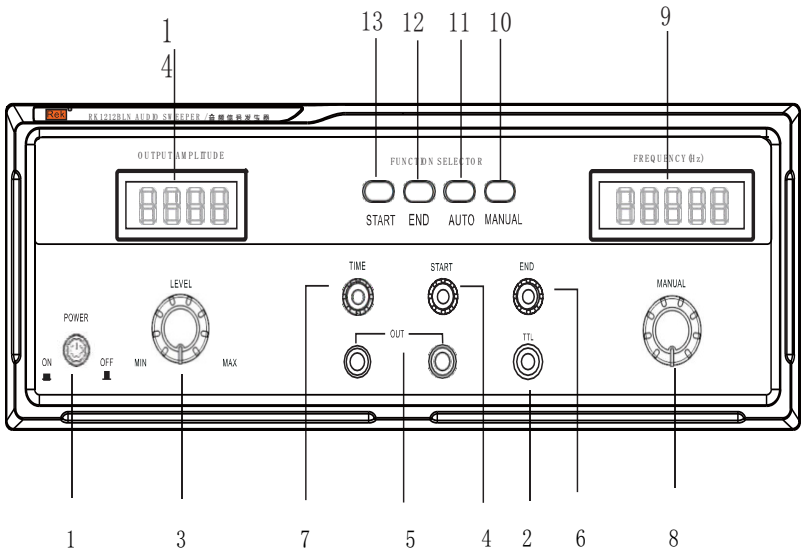
Note: The frequency setting must be that the end frequency is greater than the start frequency, otherwise the sweep will stop.

4.1.2 After setting the frequency, press the "Sweep" button to enter the sweep working state. Connect the speaker under test and adjust the output voltage to an appropriate value according to the requirements of the speaker under test.

Note: When the speaker impedance is 4  $\Omega$ , the output amplitude should not be greater than  $V_{max}/2$  to avoid damage to the instrument.  $V_{max}$  is the maximum effective output of the instrument.

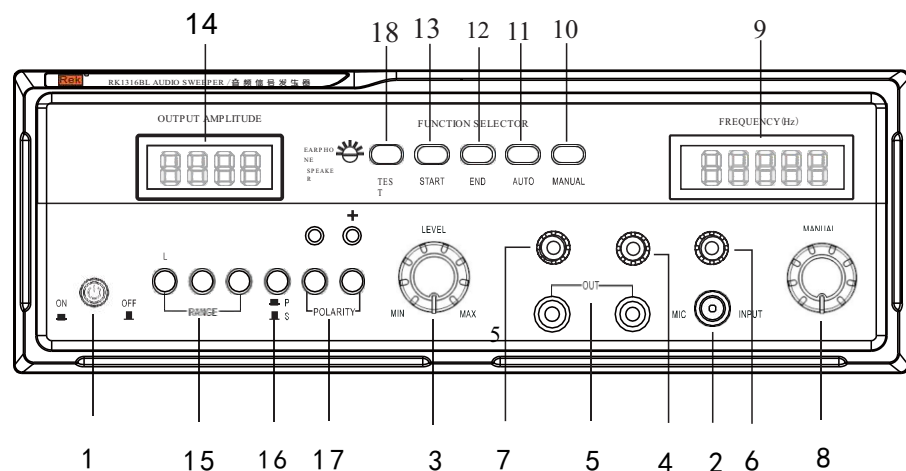
4. Panel description

4.1 RK 1212 Series front panel description :



- (1) switch
- (2) Sync output port
- (3) Amplitude adjustment knob
- (4) Sweep start frequency adjustment knob. When setting the start frequency, press the start frequency button first, and then adjust the starting point frequency adjustment knob.
- (5) Power output port
- (6) Sweep end frequency adjustment knob. When the instrument is set to end frequency, first press the end frequency button, and then adjust the end frequency adjustment knob.
- (7) Sweep frequency adjustment knob. When the instrument is set to auto sweep, the sweep time adjustment knob is used to adjust the speed of auto sweep.
- (8) Output frequency manual adjustment knob. When setting manual frequency sweep, first press the manual frequency sweep button, and then adjust the manual frequency sweep adjustment knob.
- (9) Output frequency display window. Real and real-time display of the current output frequency value.
- (10) Manually adjust the frequency control button. When setting the manual frequency sweep, press this button first.
- (11) Sweep auto setting control button. When setting auto sweep, press this button first.
- (12) Sweep end frequency adjustment control button. When setting the end frequency, press this button first.
- (13) Sweep starting frequency adjustment control button. When setting the starting frequency, press this button first.
- (14) The output signal amplitude display window displays the current voltage value of the power output port in real and real-time.

#### 4.2 RK1316 Series front panel description :



- (1) power switch
  - (2) MIC Microphone input
  - (3) Amplitude adjustment knob
  - (4) Sweep start frequency adjustment knob. When setting the start frequency, press the start frequency button first, and then adjust the start frequency adjustment knob.
  - (5) Power output port
  - (6) Sweep end frequency adjustment knob. When the instrument is set to end frequency, first press the end frequency button, and then adjust the end frequency adjustment knob.
  - (7) Sweep frequency adjustment knob. When the instrument is set to auto sweep, the sweep time adjustment knob is used to adjust the speed of auto sweep
  - (8) Output frequency manual adjustment knob. When setting manual frequency sweep, first press the manual frequency sweep button, and then adjust the manual frequency sweep adjustment knob.
  - (9) Output frequency display window. Real and real-time display of the current output frequency value.
  - (10) Manually adjust the frequency control button. When setting the manual frequency sweep, press this button first.
  - (11) Sweep auto setting control button. When setting auto sweep, press this button first.
  - (12) Sweep end frequency adjustment control button. When setting the end frequency, press this button first.
  - (13) Sweep starting frequency adjustment control button. When setting the starting frequency, press this button first.
  - (14) The output signal amplitude display window displays the current voltage value of the power output port in real and real-time.
  - (15) LMH Output amplitude selection, L: low, W: middle, H: high.
  - (16) Press down to set polarity test (P), Sweep (S) Working with the scanner at the output.
  - (17) (POLA ETTY) “-” “+” Buzzer with polarity indication alarm switch “-” Polarity indicator red light, “+” Polarity indicator green light.
  - (18) Headphone and speaker switch button, the light is on for speaker output, and the light is off for headphone.
- When you need to perform small signal tests such as headphones, you can press this button to attenuate the output voltage to about 1/4 of the original, and output a pure low-power signal from the power output socket, which is more suitable for pure sound testing of