



Tube Queen AM/FM Radio & Bluetooth Speaker

R801W-3DI

Large collectible table-model Hi-Fi stereo radio /Bluetooth speaker



Tube Queen AM/FM Radio & Bluetooth Speaker

Tube Queen is a large table-model radio /Bluetooth speaker produced by our company. This product uses the Hi-Fi concept and draws experience from Germany's excellent radio design style in the 1950s to 60s. The product uses electronic tube to make power amplifier and signal strength received indicator.

This product is a high-sensitivity radio with FM stereo reception and high-quality Bluetooth speaker, but also a Hi-Fi tube amplifier that may be used separately. In case of connection with external high-quality speaker, it can form a set of high-fidelity stereo system.

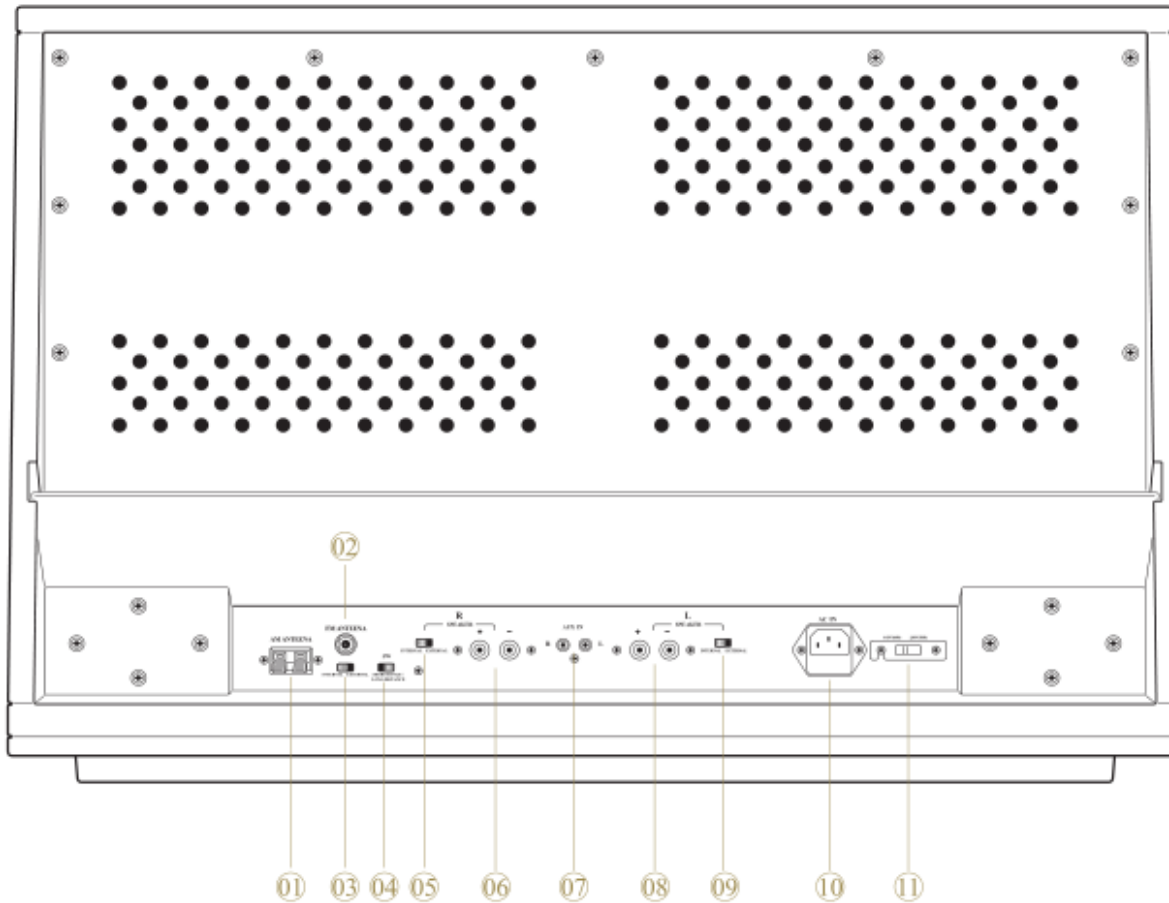
This product is a multi-frequency radio that has four frequencies, namely, FM (FM) stereo, medium wave (MW), shortwave 1 (SW1) and shortwave 2 (SW2), and uses vacuum tube (commonly known as "cat's eye") tuning indicator.

This product is also a high-quality Bluetooth audio speaker. Its Bluetooth program uses the CSR 4.0 Bluetooth module that supports aptx lossless transmission. Hence, it can guarantee excellent audio effect via Bluetooth.

This product uses high-power vacuum tube to make post amplification, so the output power is strong. Coupled with the high-quality loudspeaker, and excellent circuit and electro-acoustic design, this product has acquired sound effect unique to radio set. In connection with stand-alone high-quality audio speaker, the Hi-Fi sound effect can be achieved.

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Figure 1

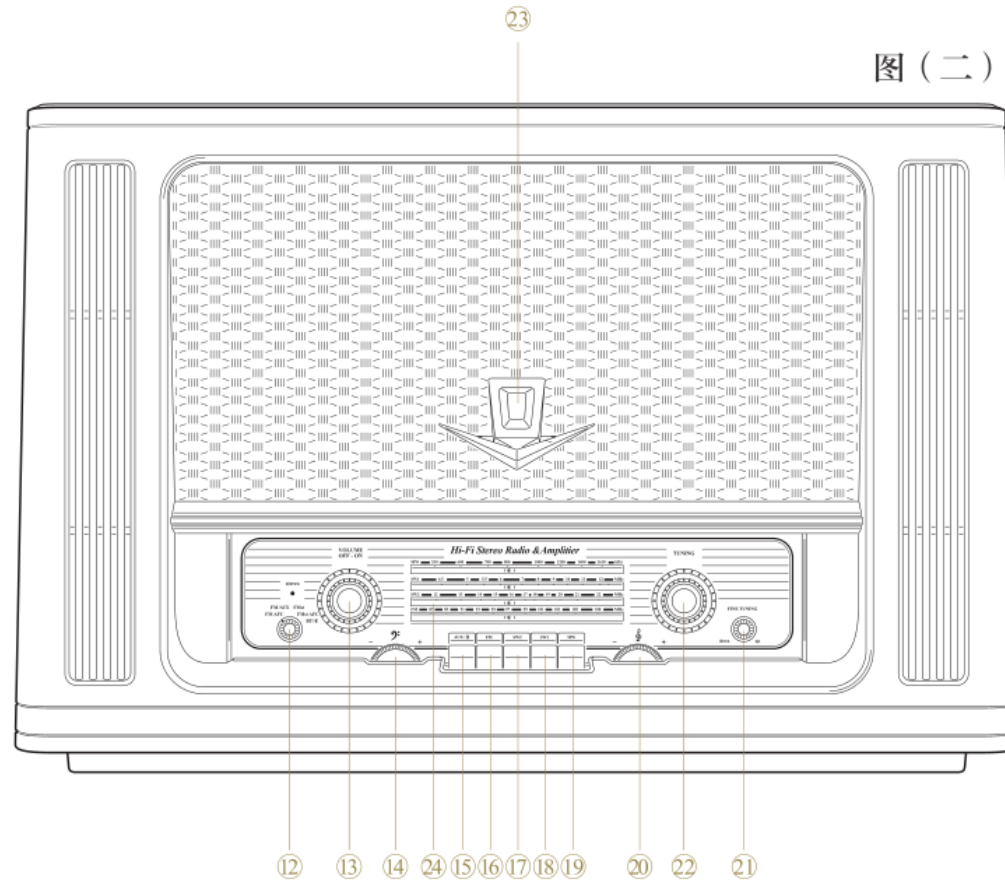


- ① Medium wave external antenna port
- ② FM antenna port
- ③ FM internal/external antenna transfer switch
- ④ Short-wave proximity and remote switch
- ⑤ Right channel inner /outer speaker transfer switch
- ⑥ Right channel speaker port
- ⑦ Auxiliary input
- ⑧ Left channel speaker port
- ⑨ Left channel inner /outer speaker transfer switch
- ⑩ Power port (in)
- ⑪ 230/115V transfer switch (Note: only adjust under professional guidance)

Figure 2

- ⑫ Bluetooth /AUX / FM stereo and mono
FM transfer switch and AFC switch
- ⑬ Power switch / volume adjustment
- ⑭ Bass tuning
- ⑮ Auxiliary input / Bluetooth function
switch
- ⑯ FM transfer switch
- ⑰ Short wave II transfer switch
- ⑱ Short wave I transfer switch
- ⑲ Medium wave transfer switch
- ⑳ High volume tuning
- ㉑ Shortwave frequency fine tuning
- ㉒ Tuning knob
- ㉓ Cat's eye tuning instructions
- ㉔ Radio station indication

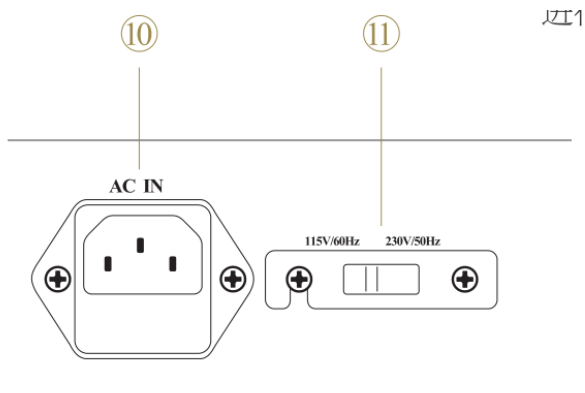
图 (二)



1

Power supply voltage

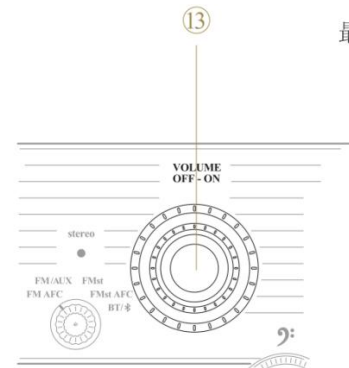
(Figure 1) ⑩ is the powerport (in), which may be connected with 230V or 115V alternating current (AC) by use of standard three-pin plug (random configuration). Before use, please check if the voltage transfer switch (Figure 1) ⑪ is consistent with the alternating current (AC). When the voltage transfer switch is at 115V position, it can adapt to 110 - 120V/60HZ alternating current (AC); when the voltage is at 230V position, it can adapt to 220-240V/50HZ alternating current (AC); the switch's factory setting is 230V (Note: only adjust under professional guidance)

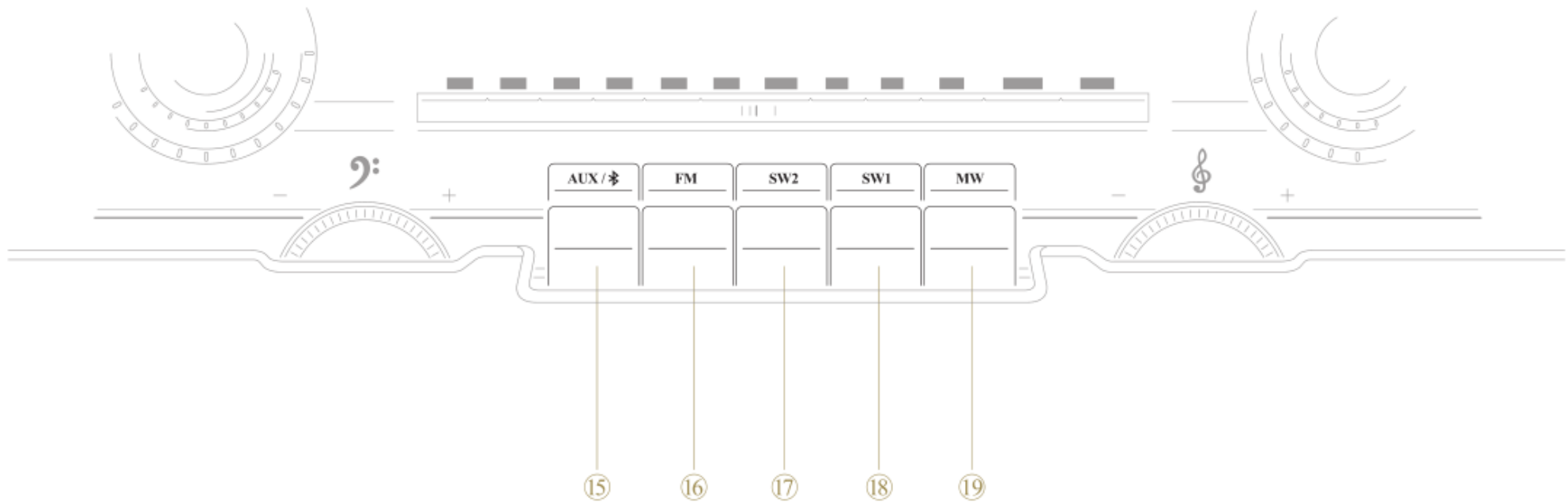


2

Power switch and sound adjustment

Panel (Figure 2) ⑬ is the power switch and volume knob. By clockwise rotation, turn the power on, and by counterclockwise rotation, turn the power off. After power on, continue to rotate to the right to increase the volume to an appropriate location (the volume knob is normally adjusted to around ten o'clock direction). Due to the use of vacuum tube amplifier, vacuum tube needs about 30 seconds for warming up before normal operation. Therefore, the radio speaker will make a sound 30 seconds later. Note that the volume can't be turned to the maximum during these moments.





3

Wave selection

Front panel (Figure 2) ⑮- ⑲ five key switches are function and wave selection keys. When a key is pressed, the radio will start working under the corresponding function or wave.

4

Search for radio broadcasting

(Figure 2) ⑮⑲ when a certain wave switch is pressed, adjust the tuning button, (Figure 2) ⑳ to search for your favorite radio station. When the "cat's eye" (Figure 2) ㉓ shows the maximum, it means the tuning has reached the optimal state.

5

Bluetooth play/ CD play and auxiliary input

See page 14: use of Bluetooth function, CD and auxiliary input.

When the machine is used as a radio, it is of paramount importance to place the machine and the external antenna correctly. Otherwise, you may not receive any radio programs, or only receive bad one! It is recommended to use the machine close to window as much as possible. If it is impossible to use the machine near the window, a group of external antennas will be of great importance. The more professional the antenna and antenna installation, the better the machine performance. In addition, in case of connection with external antenna or not, it should also be noted that the switch position for “internal/external” antenna on the back of the machine must be correct!

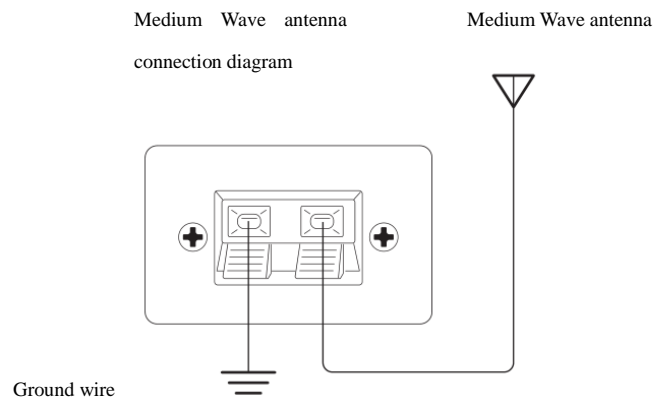
1

Listen to FM broadcasting

This machine has equipped with built-in FM line. If the radio is placed close to the window in the general urban area (not far from the radio transmitting station), there is no need to use external antenna generally. When external antenna (random accessory) is used, turn the rear③(Figure 1) to the external (EXTERNAL) position. The external antenna of this machine can also be connected with dedicated external antenna or dedicated cable antenna. Press the (Figure 2) ⑩key switch on the front of the machine to be in FM wave, and adjust the tuning knob to the range of 87--108MHZ for its radio programs. Turn the transfer switch (Figure 2) ⑫to FM position to be in ordinary FM state. Turn to FM St position to be in stereo FM state. If the FM St effect is not good enough, the switch can get a higher Signal to Noise Ratio (SNR) at FM

2

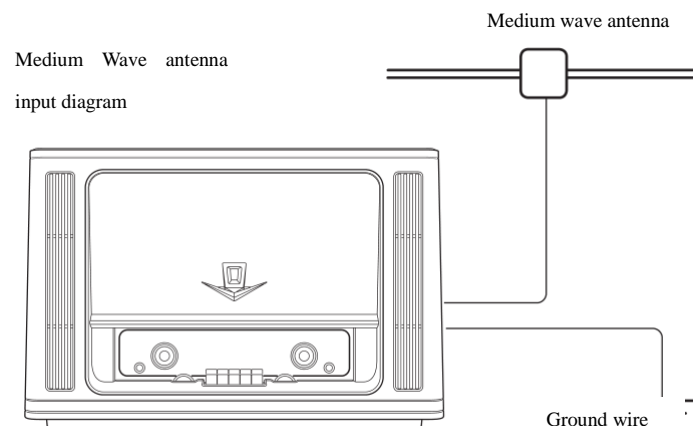
Listen to medium wave broadcasting



Press (Figure 2) ⑰ switch to be in medium wave band, and turn the knob (Figure 2) ⑳ to listen to the radio programs within the range of 530-1610KHZ. This series of machine has high magnetic antenna. The AM external antenna can also be used. Connect the two lines of the antenna to the antenna clip, as shown in the figure below. Adjust the antenna to the best direction, and then adjust the knob on the antenna (with external antenna for tuning) to get the best signal. When the outdoor antenna is used, make connection from (Figure 1) ①, and adjust the direction of external antenna to get the clearest radio broadcasting.

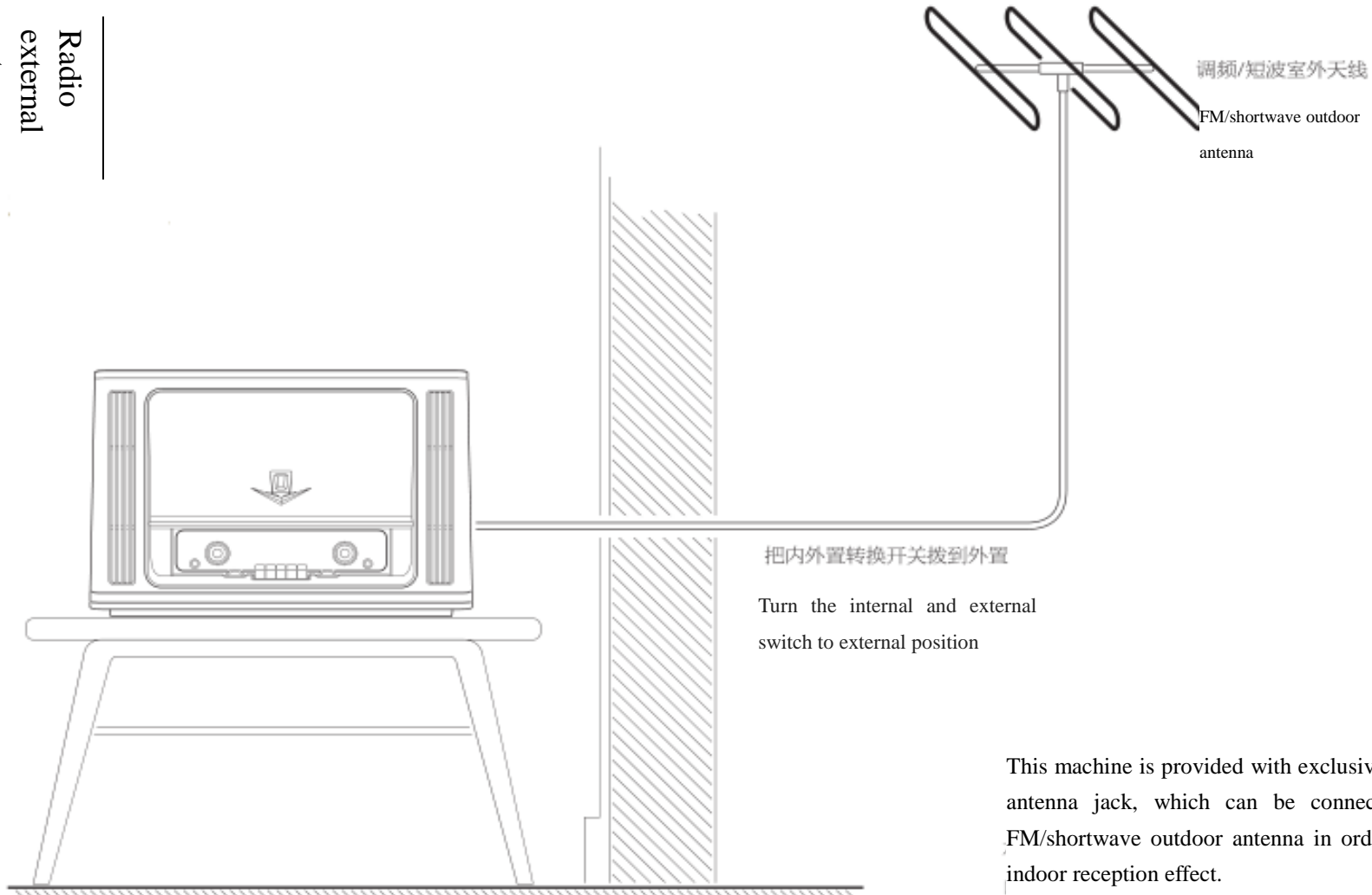
3

Listen to AM shortwave broadcasting



The shortwave shared FM antenna (using external telescopic antenna for best effect) is used as same as FM. This machine has shortwave 1 and shortwave 2. Press the front keyboard switch ⑱ to be in shortwave 1 , press the front keyboard switch ⑲ to be in shortwave 2, and adjust the tuning knob ㉑ to find the desired radio broadcasting. In shortwave 1, the radio programs within the range of 4.5-12MHZ can be received (Figure 2). In shortwave 2, the radio programs within the range of 12-24MHZ can be received. When the radio broadcasting is received, please turn the short or long distance switch ④ on back of the machine to LONG-DISTANCE position. When the machine is close to the station with strong signal, please turn the short or long distance switch to the SHORT-RANGE position. Otherwise, it may cause overload . The (Figure 2) "fine-tuning knob" may also be adjusted for fine-tuning in order to receive program in the best state. The factory status is "remote".

Radio
external
antenna

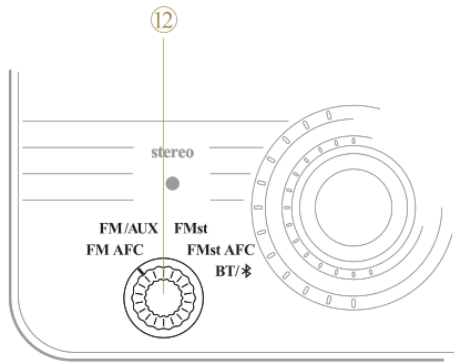


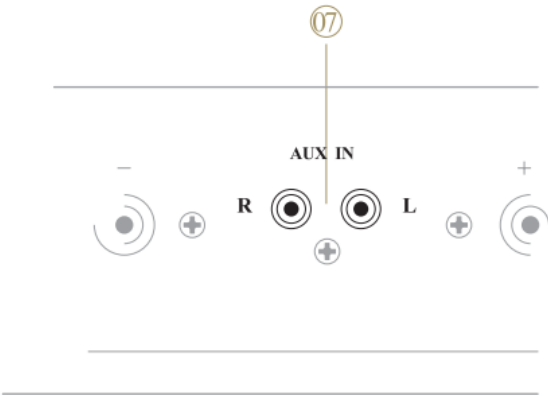
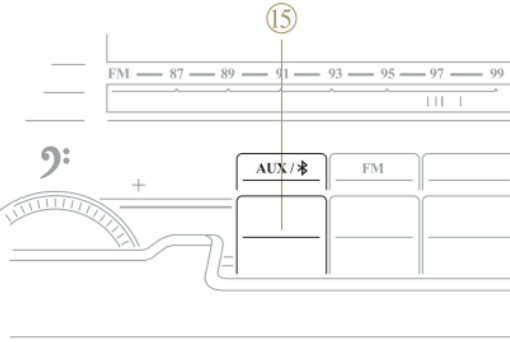
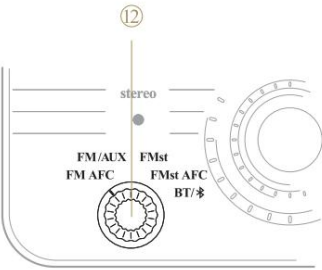
This machine is provided with exclusive FM / shortwave antenna jack, which can be connected to exclusive FM/shortwave outdoor antenna in order to enhance the indoor reception effect.

调频/短波天线连接示意图

AFC
Function
description

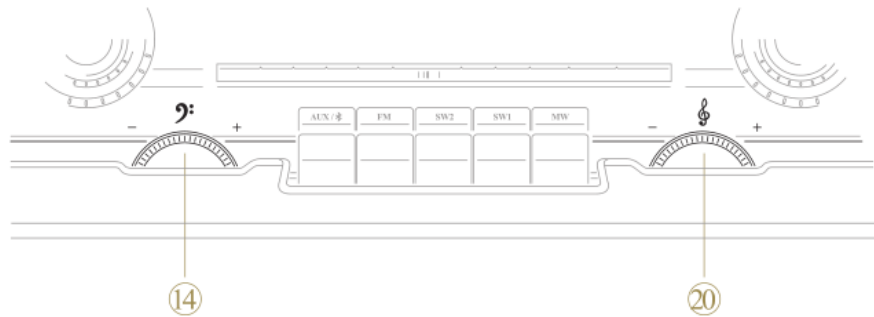
(Figure 2) ⑫ is FM stereo switch, which is provided with AFC (automatic frequency control) switch. When the radio is affected by environment and temperature, frequency shift phenomenon might occur in the received radio program. In this case, AFC function can improve the quality of reception. When using this function, please note that the switch is turned to FM or FM ST position to accurately receive the radio station, and then switch is turned to FM AFC or FM ST AFC position. It is generally recommended to use the machine under FM or FM AFC state.



<p>External CD Player or Other Signal Resource</p>		
	<p>Please connect audio signal output of CD or other auxiliary signal resource with AUX IN port of the rear part of radio on the left (figure 1) ⑰ through RCA wire. When using, please press the key switch at the front panel of the radio (figure 2)⑮, and then turn the function switch to FM/AUX position (figure 2)⑫. After turning on the power switch and adjust to an appropriate position, a beautiful sound effect unique to CD+ Tube Amplifier is available in a moment. If using external loudspeaker, the sound effect would be different from the radio one.</p> <p>When choosing AUX, please remember to turn the AUX/AFC/BT on the bottom left to a correct position. The knob should be in FM/AUX under AUX or reception state.</p>	<p>Bluetooth Function Instructions</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Attention: When using Bluetooth function, it is necessary to pull out the signal wire connecting AUX IN.</p> </div>
	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>When connecting the signal source, please notice the correspondence of the L and R track between the audio source and radio AUX.</p> </div>	 <p>This radio is available for Bluetooth player of telephone, Pad, and PC. When using Bluetooth function, please remember to turn the key switch to “AUX” position and turn the knob on the bottom left to BT position. When not using Bluetooth, please turn back to “FM/AUX” position.</p>

Tone control

This machine inherits the design of the traditional radio in the 1960s, and is provided with "bass" and "treble" toning knob. The user may adjust the two knobs according to their own sound quality preferences, in order to achieve the desirable sound quality.



Bass tuning

Figure 2 ⑭ is bass tuning knob. By clockwise rotation, the bass may be increased, and by counterclockwise rotation, the bass may be reduced.

Treble tuning

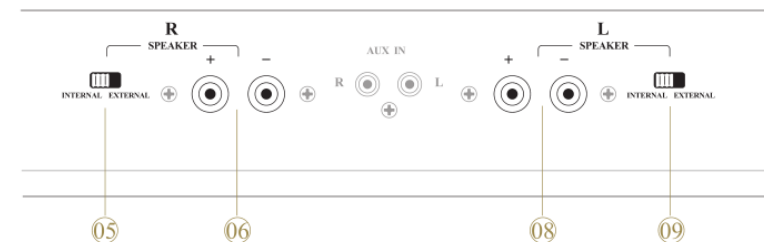
Figure 2 ⑳ is the tuning knob. By clockwise rotation, the treble may be increased, and by counterclockwise rotation, the treble may be reduced.

Speaker system descriptio

Attention: in the power-on state, do not use external loudspeaker, and be sure to turn the loudspeaker switch (Figure 1) ⑤ and ⑨ back to INTERNAL state. Otherwise, the amplifier circuit and output transformer may be damaged!

This product is equipped with a specially designed high-quality speaker system that can be used for broadcasting or external sources. The machine can also be connected with Hi-Fi speaker at rated power of about 20-50W, so that the machine can have the unique sound quality.

When the external speaker is used, please turn the internal/external speaker switch (Figure 1) ⑤, ⑨ on the back of machine to the external position. When the speaker (Figure 1) is at ⑥ and ⑧ position, pay attention to the speaker "+" terminal red binding post and "-" terminal black binding post.



Product maintenance and safety

The vacuum tube is a glass product and easy to be broken. When using, it is careful not to greatly collide with vacuum tube.

When not in use, please turn off the radio.

Please do not use the product for a long time beyond 10% of the Alternating Current (AC).

Do not spill liquid on the vacuum tube during the machine's work and ensure that it is used in a ventilated place.

If not used for a long time, please turn off the radio power.

The vacuum tube of the machine is a heating element, so it is normal for the machine exterior and interior to have a high temperature.

Shell maintenance

This product uses the shell made of solid wood. We give you the following maintenance recommendations:

1. Place this product away from window, door, air vent and other position with strong air flow to avoid sunlight.
2. Avoid excessive indoor dryness, and do not put it in the vicinity of heating in the winter. In autumn and winter, it is recommended to use humidifier for humidification.
3. When the humid weather comes, open the air conditioning for moisture removal, reduce the moisture absorption of wood, and avoid the expansion from humidity on the tenon part in case deformation and cracking.
4. To keep the logs clean and tidy, remove the dust with clean gauze. Do not use chemical brightener to avoid film sticking and damage. Use soft brush or clean flannelette or silk cloth. Do not use wet cloth or water for cleaning.
5. Log shell can be properly protected and cleaned with paraffin water, walnut oil and other protective plant oil on a regular basis.
6. There are many specific maintenance measures accessible in the Internet. In short, please protect the shell of this product against damaged, just like what you do to your skin!

Frequency Range

FM: 87- 108MHz
 MW: 530- 1610kHz
 SW1 : 4.5 - 12MHz
 SW2: 12-22MHz

Degree of distortion

FM: 0.5%
 MW: 1%

Amplifier frequency response

30Hz - 20KHz (-3dB)

Noise-limited

sensitivity

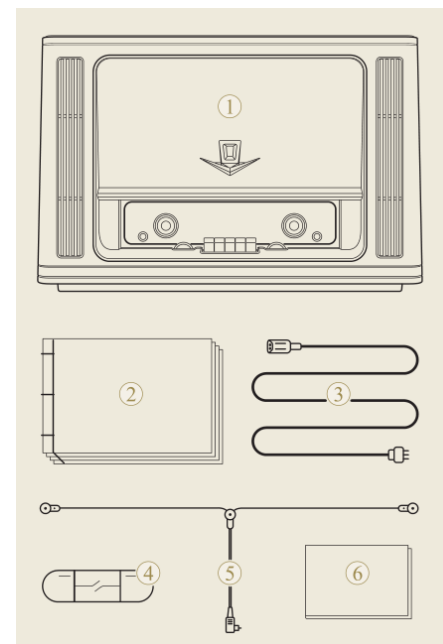
FM: 10uv (actual measurement 8uv)
 AM medium wave: 1.5mv (actual measurement 1mv)
 shortwave : 100uv (actual measurement 80uv)

Signal to Noise Ratio

FM: >50dB
 AM: >40dB

FM Stereo Separation

>35dB



- ① Radio (1)
- ② User Guide (1)
- ③ Power line (1)
- ④ Backup fuse (1)
- ⑤ T antenna (1)
- ⑥ Warranty card (1)
- ⑦ Auxiliary box (optional) (2)



Common faults
and removal

Fault phenomenon	Causes	Solution
No sound	<ol style="list-style-type: none">1. Not power on2. Not press the function switch3. Volume knob in off position4. Loudspeaker not in place	<ol style="list-style-type: none">1. Pay attention to power connection2. Press the corresponding function switch (keyboard switch) to adjust the volume knob.3. Turn the loudspeaker switch to current use position
No sound from one side of built-in loudspeaker	Rear loudspeaker switch not in correct position	Turn the switch to correct position
No sound from one side of external loudspeaker box	<ol style="list-style-type: none">1. Loudspeaker wire not connected well2. Loudspeaker switch not in EXTSP position	<ol style="list-style-type: none">1. Check the connection of loudspeaker wire2. Turn the loudspeaker switch to EXT SP position
Discrete sound and lack of low frequency of external loudspeaker box	Reverse connection of loudspeaker wire “+-”	Correctly connect loudspeaker wire
Volume distortion	<ol style="list-style-type: none">1. Inaccurate tuning2. excessive sound volume3. Great increase in low or high pitch sound	<ol style="list-style-type: none">1. Readjust radio station2. Adjust the sound to the distortion free position3. Turn the low pitch knob to proper position
Loud noise	<ol style="list-style-type: none">1. Bad connection of antenna2. Interference from external environment	<ol style="list-style-type: none">1. Check antenna connection or turn the antenna switch to corresponding position2. Turn off the interference electric device or change environment

① What is shortwave radio?

Many countries in the world use short frequency to perform worldwide broadcast transmission. Shortwave frequency range is usually between 1.6MHz and 30MHz. The radio that can receive the frequency with the range is called shortwave radio.

② What is “shortwave meter wave band”?

In general, we also divide the shortwave frequency into many "meter bands". Each meter band contains a frequency range. For example, the 19M band contains a frequency range from 15.100 to 15.600MHz. The International Radio Consultation Committee (CCIR) stipulates that the civil broadcaster uses the frequency within meter band range, and the frequency beyond meter band is mostly used for military and other civilian communications. Therefore, the civil broadcasting programs can only be received within the range of meter band frequency. (Please refer to the table below)

Band (M)	MHz(MHz)	KHz (GHz)		Note: 1MHz (MHz) = 1000kHz (kHz)
11	25.67-26.10	25670-26100	International wave band	Radio distribution and listening effect Very few broadcasting stations
13	21.45-21.85	21450--21850	International wave band	Very few broadcasting stations, only specific station available
15	18.90-19.02	18900-19020	International wave band	Many broadcasting stations, good effect from noon to 9:00 pm;
16	17.55-17.90	17550-17900	International wave band	common effect in the morning, and very few stations from late at night
19	15.10-15.60	15100-15600	International wave band	to early morning
22	13.60-13.80	13600-13800	International wave band	Good effect at dusk, but not many radio stations
25	11.65-12.05	11650-12050	International wave band	Maximum broadcasting stations, good effect all day long, and best
31	9.50-9.90	9500--9900	International wave band	effect in the morning, at dusk and to 12 o'clock.
41	7.10-7.35	7100-7350	International wave band	
49	5.95-6.20	5950-6200	International wave band	Many broadcasting stations in the morning, evening and late at night,
60	4.75-5.06	4750-5060	Regional wave band	but susceptible to interference, and loud noise
75	3.90-4.00	3900-4000	International wave band	
90	3.20-3.40	3200-3400	Regional wave band	Good effect at night, but no many broadcasting stations, bad effect and
120	2.30-2.495	2300--2495	Regional wave band	loud noise during daytime

③

Effect of listening to shortwave programs at different times of the day

Shortwave signal propagation is subject to the influence of many factors, such as sunspot activity, atmosphere and earth-ionosphere change. The shortwave propagation effect varies with band, sometime good in the daytime or at night. It is not good to listen to shortwave program during daytime, especially from 10 am to 3 pm. It is mainly because that shortwave is greatly affected by the change of ionosphere in such period, leading to short transmission distance. If you want to listen to shortwave programs during the daytime, please refer to the table above. The effect may be good in certain meter bands, but inferior to that at night.

⑤

What kind of radio broadcasting can be received by shortwave radio?

Most countries in the world have shortwave radio broadcasting. However, the shortwave radio station in a certain small country can only cover the territory of such country, owing to small transmitting power, which cannot be received well by our country. Even a station with strong power, the receiving effect depends on geographical location within or beyond coverage range. For example: some frequencies of China's Central People's Broadcasting Station shortwave radio broadcasting can be received well in our northeastern region, but badly in China's southwest region.

⑥

What content in the shortwave program?

Thanks to the national cultural and political background of different countries, the shortwave radio content varies with country. In general, the international shortwave radio program contains world news, national news and local news, news reviews, national culture, music appreciation, language teaching, etc. Some countries even set up police information announcement, weather forecast, marine information forecast and other program. It must be stressed that the official radio station of each national government represents its political positions and economic interests. Therefore, when listening to international broadcasting, you should have ability to make judgment.

④

What language programs can be received by shortwave radios?

If in China, in shortwave radio programs, the Mandarin, English, French, German, Russian, Japanese, Hindi, Spanish, Portuguese, and other languages may be heard, as well as our Cantonese, Teochew dialect, Shanghai dialect, Minnan dialect and other dialects. China's Central People's Broadcasting Station also uses Mongolian, Uygur, Tibetan, Kazakh, Korean and other minority languages for short-wave radio broadcasting.

⑦

Is there the need to use outdoor external antenna to listen to shortwave radio broadcasting?

This depends on your listening environment. The reinforced structures will shield the broadcast signal. In some remote areas, mountains and mining areas, the shortwave signal will be slightly weak, so it is necessary to install the outdoor antenna.

⑧

Is the shortwave signal clear?

The effect of listening to shortwave broadcasting depends on the strength of radio transmitting power, the performance of radio and the receiving location and other environmental factors. With the improvement of radio technology, the listening effect will get better and better.

⑨

How to test the effect of an external antenna?

In a general listening environment, turn the radio to a relatively weak shortwave radio station, and go outside of the room while listening. If the shortwave radio signal is enhanced, outdoor antenna should be installed to improve the receiving effect. However, if there is a strong TV station, FM radio, BP machine and other radio communication antenna near the receiving location, the strong interference signal will cause poor receiving effect of shortwave external antenna.

Special warning: do not install outdoor antenna in the multi-lightning area!

⑩

Must the external antenna be very high and long?

In short, shortwave external antenna will get better effect if it is high and long. But, higher and longer antenna doesn't imply better effect. Sometimes, sensitive antenna will introduce strong radio interference wave. Therefore, the height and length of the external antenna should be adjusted according to the actual needs.

⑪

FM broadcasting

FM (FM) is a close-range high-fidelity radio system, which is the broadcast system with most rapid development, the largest number, and best sound quality.

In some developed countries, a city even has 30 FM radio stations. Since the 1980s, China has built a large number of FM radio stations, and almost all of them can play stereo programs. China FM radio frequency: 87 ~ 108 MHz, the frequency interval 0.1 MHz, radio frequency from several hundred watts to twenty kilowatts.

⑫

What signal will affect FM reception?

Powerful VHF TV radio broadcasting and personal computer switching power supply radio wave will interfere with the FM reception. In addition, the FM radio stations with adjacent frequency and strong transmitting power will interfere with each other, leading to poor reception effect.

⑬

How far is the receiving distance of the FM radio?

FM radio frequency is very high, and the radio is transmitted in a linear way. The higher the transmitting antenna, the greater the power, the larger the coverage, and the farther the transmission distance. FM radio transmission distance is usually 30 to 100 km.

⑭

How to reduce the interference of FM?

Shorten the lever, change the direction of the antenna, change the listening position, and keep away from personal computer equipment, to reduce the degree of interference.

⑮

How to achieve long distance listening of FM radio?

Use VHF outdoor TV antenna and antenna amplifier. Install the antenna as high as possible, align the antenna at the direction of the FM radio, and connect to the radiotelescopic antenna with 75 ohm coaxial cable, so that the receiving capacity can be greatly improved. Some cities have used cable television networks to transmit cable FM programs. Attempt may be made to pull the antenna from a cable jack.

⑯

Shortwave radio

Shortwave is transmitted mainly relying on the reflection and refraction between ionosphere and the ground, regardless of day and night. Shortwave can be transmitted very far, so the radio can listen to the long-range radio sound in shortwave band.

Shortwave frequency is between 2 and 30 MHz, and is divided into civilian broadcasting meter band and communication dedicated band. Civil broadcast use amplitude modulation system and shortwave communication typically uses single sideband (SSB) system.

⑰

Why does the shortwave radio sound suddenly rise or decline?

The ionosphere that propagates the shortwave is unstable, because its thickness, height and ionospheric density change at any time, especially during daytime. The shortwave signal arriving at the radio is sometimes strong or weak. Therefore, when listening to shortwave broadcasting, the sound may suddenly rise or decline. This phenomenon may be mitigated for the radio with good automatic gain control <AGC> performance.

⑱

Medium wave broadcasting

Medium wave is the world's first and most widely used folk broadcasting band, which is mainly applied in domestic, provincial and municipal, regional and other medium-distance radio, and has rich programs.

Wave broadcast characteristics: short range during daytime, and long distance during night, easy to suffer from the interference from lightning and household appliances.

China medium wave broadcast frequency: 525~1610kHz, step length 9kHz.

⑱

Why more radio stations received at night than that of the daytime?

Medium wave propagation mainly relies on the ground wave. Only a small amount of medium wave is transmitted by relying on sky wave.

When a radio wave encounters conductor, conductor will generate induced current, consuming a portion of energy. The phenomenon that weakens the radio wave energy is called the absorption of radio wave.

The ground is a conductor, which has high absorption of medium wave. So, the medium wave cannot be transmitted for a long distance in the form of ground wave (about two or three hundred kilometers).

Due to sunlight and ionization density increase during the daytime, the ionosphere becomes a good conductor, such that a small part of the medium waves propagated in the form of sky wave will be strongly absorbed, and difficult to return to the ground. Moreover, the medium waves propagated in the form of ground wave are absorbed by the earth and can't be transmitted for a long distance. So it is difficult to receive the medium wave radio stations during the daytime.

At night, the atmosphere is not subject to sunlight, and the mutual recombination of ionospheric electrons and ions is significantly increased. Hence, the ionosphere becomes thinner, the density becomes smaller, the conductivity becomes poorer, and the radio wave absorption is also greatly weakened. At this time, the medium wave can be transmitted to a remote place through sky wave, so the more medium wave radio stations could be received at night.

⑳

What factor will affect broadcasting reception effect?

The reception environment is the main factor that affects the broadcast reception!

In the receiving environment in modern city, there are many waves that may interfere with the radio, such as FM radio, wireless phone, personal computer switching power supply and powerful shortwave SSB communication station. It is very difficult to listen to shortwave programs near such places; furthermore, various motors, cars, televisions, microwave ovens, SCR equipment, and the fluorescent lamps and poor quality energy-saving lamps that use electronic rectifier will seriously affect the medium wave broadcasting.

The mutual interference of a large number of FM radio stations and VHF TV will also make the FM radio receiver worse. The second problem may be the radio itself.

FCC Warning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

ISED Warning:

-English Warning Statement:

"This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).

-French Warning Statement:

"Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR). Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée conforme sans évaluation du débit d'absorption spécifique (DAS).

The device complies with RF specifications.