

Reference Tuner-1.0

AERIAL REQUIREMENTS

The tuner aerial should be mounted on the roof, clear of obstructions and also as high as possible. Horizontally polarised aerials will respond to almost all commercial broadcasts whilst partially rejecting police and taxi transmissions, and are therefore recommended. Use of an aerial preamplifier will disturb the muting operation of the tuner and may cause cross modulation problems. Such preamplifiers should only be used as a last resort.

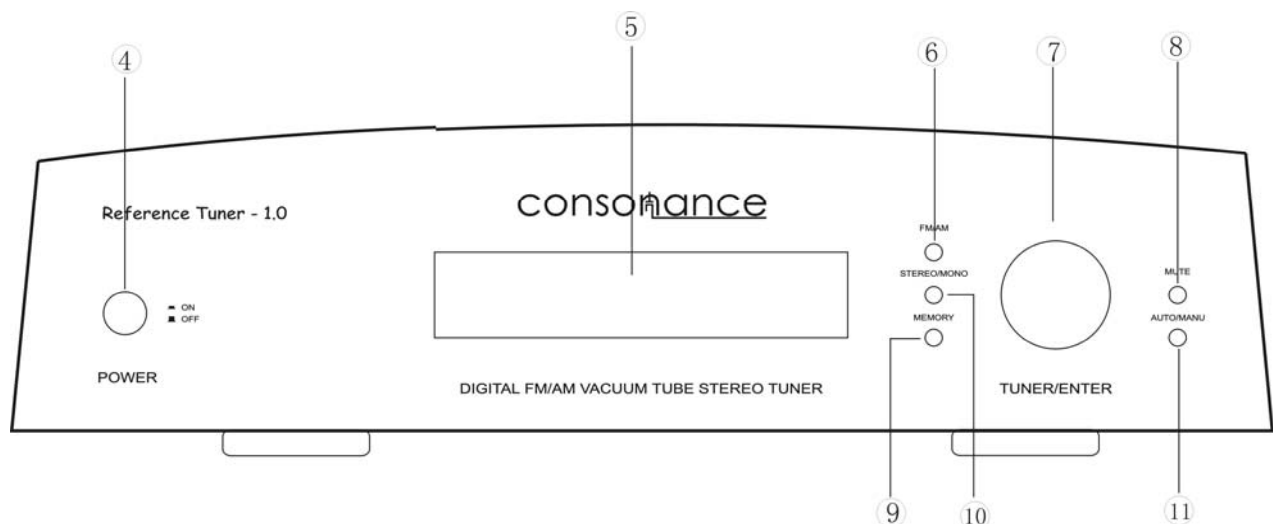
In most commercial radio broadcasts are usually radiated from different sites even though the target areas of the services may be similar. This means that unless the transmitters are in almost the same direction looking from your house, an aerial aligned on one transmitter will give less than optimum performance on the other. In these circumstances you should fit an aerial rotator, or a less directional aerial if appropriate. The more sensitive and directional the aerial you use, the less good will be the reception in directions other than the one towards which the aerial is pointing. If you are particularly interested in receiving a wide range of VHF transmissions an aerial rotator is a necessity. Your dealer will be familiar with local conditions and will be able to advise you on which stations are capable of being received satisfactorily.

CONNECTIONS

The FM aerial input socket could be connected via 75ohm low-loss coaxial cable to a suitable roof-mounted directional aerial. The tuner's audio output is set to 700mV at 100% modulation and should match almost any preamplifier without difficulty.

GENERAL USE

FRONT PANEL OF TUNER



The Tuner has only seven buttons. The buttons on the front panel have 7 functions.

POWER ON OFF

The Tuner is switched on by pushing the power button ④ on the left hand side of the front panel. A flashing " TUNER TU-902" blue light in the display indicates that power has been switched on. And then goes to factory set "FM 87.5MHz" and stand-by for modulation.

By pushing the same button one more time the power is switched off and stay at the final choose station till the next turn on. To cancel all the memory ⑨ and get back the factory set, push the memory clear key on the remote 5 seconds.

FM / AM

Pushing the FM/AM button ⑥ on the front panel or on the remote will switch the tuner sequentially through "FM" and "AM " modulation modes.

STEREO / MONO

Pushing the STEREO/MONO button ⑩ on the front panel or st. /mono key on the remote will switch the tuner sequentially through "stereo" and "mono " modes.

FM programmes which are broadcast in stereo recommended stereo mode except those which are extremely weak or in circumstances of very weak reception, when mono operation will be enforced because stereo reproduction would be too noisy. Mono mode combines the left and right channels to produce a mono output signal. Switching to mono can reduce background noise with weak stereo signals.

AUTO / MAN

Pushing the AUTO/MANU button (11) on the front panel or auto/man key on the remote will switch the tuner sequentially through "auto-scan" and "manual " modulation modes.

In manual modulation mode, the tuning knob on the front panel or up and down navigator keys on the remote could adjust the tuning frequency step by step. In auto-scan modulation mode, the tuning knob on the front panel or the up and down navigator keys will cause the tuner to search for stations automatically.

TUNING

In manual modulation mode, adjusts the tuning knob clockwise or counter-clockwise or push the up or down navigator keys on the remote continually searching for signals and stations. Rock the tuning knob ⑦ slightly backwards and forwards to check that the tuning is set to the center of the range over which the station can be heard, or the station may slip off tune.

In auto-scan mode, causes the tuner to "scan" down the FM/AM band searching for signals above a preset level. The tuner will stop searching at each tuned station and, using the remote, the option to store the station as a preset will be available. During tuning automatically, the tuned frequency display on the screen ⑤ until a station is received and tuned with sufficient accuracy.

MEMORY

The stations memory key enables specific FM station frequencies to be assigned to preset memory. To assign a station to a preset first tune manually by inputting the station frequency directly from the numeric keypad or by using the up or down navigator keys (or auto-scan). Press the stations memory key on the remote, the tuner is now in station memory mode-the "MEM" indicator will flash and the display will show "- -" or numbers of station. Press the desired preset number (00-39) from the numeric keypad or choose the desired preset number (00-39) by using the tuning knob on the front panel or the up or down navigator keys on the remote, then press one more time the stations memory key simply.

MUTE

Push the MUTE button, a flashing " MUTE" blue light in the display indicates ⑧ reducing the tuner output volume to zero. A second press restores the volume.

ADDITIONAL FUNCTION AVAILABLE ON THE REMOTE CONTROL

CLOCK / TUNER

Switch the tuner sequentially through "clock display or time reset " and "tuner " modes.

NUMERIC KEYPAD

In tuner mode the numeric keys will select tuner presets or can be used directly to input station frequencies.

AUTO SCAN-SAVE

Press the scan-save key on the remote, the tuner is now in auto scan-save stations mode. Turn slightly the tuning knob a bit clockwise/counter-clockwise or push once the up or down navigator keys on the remote, the tuner to "scan" down the whole FM band searching for signals/stations and store them automatically.

FREQUENCY INPUT AND PRESET

Press the freq.input key once on the remote, the tuner is now in frequency input preset mode-the display will show "- - -". Then input the station frequency directly from the numeric keypad to tune manually.

TIME SET

Toggles the tuner through three time set modes – turn on time, clock time and turn off time.

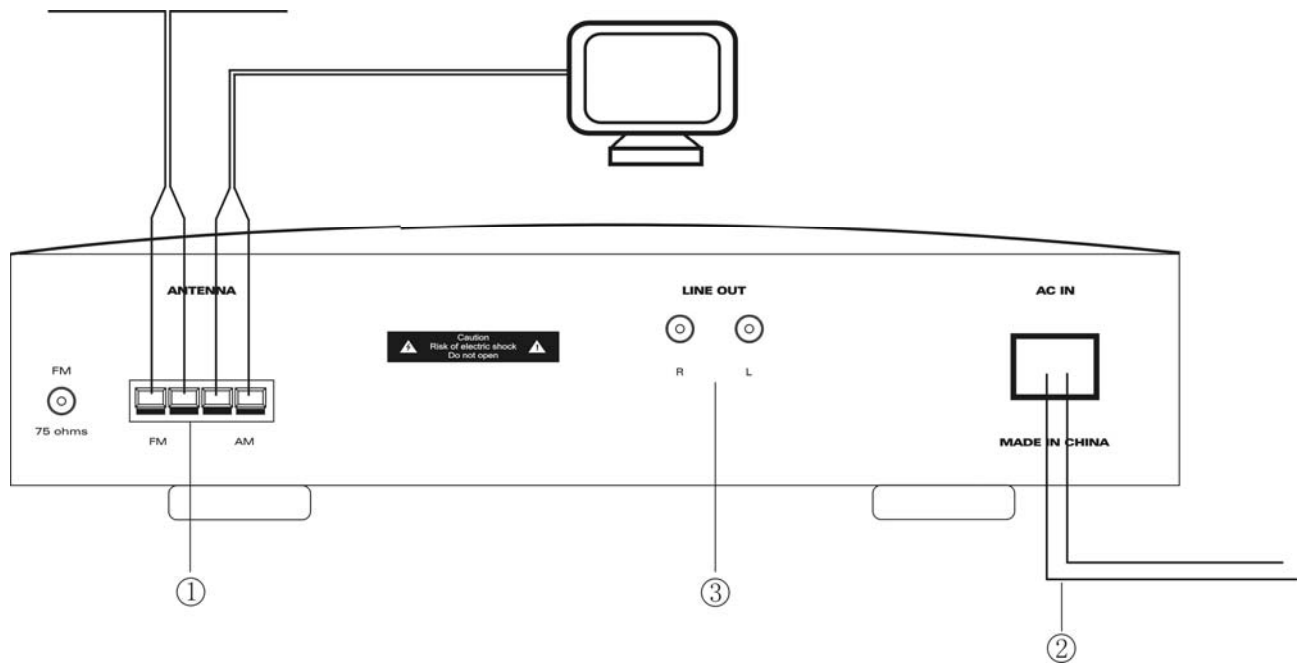
BRIGHTNESS OF DIGITAL INDICATOR

Toggles the tuner display through three brightness modes – bright, light and dim.

MEMORY CLEAR

To clear the memory of preset stations press the memory clear key, the Indicator shows "clear" and with flash of the preset stations number you want to clear, then followed by the enter key on the remote.

REAR PANEL OF TUNER



From left to right the connectors are :

75ohm FM coaxial aerial input

FM&AM aerial inputs right/left ①

Stereo signal outputs (RCA) right/left ③

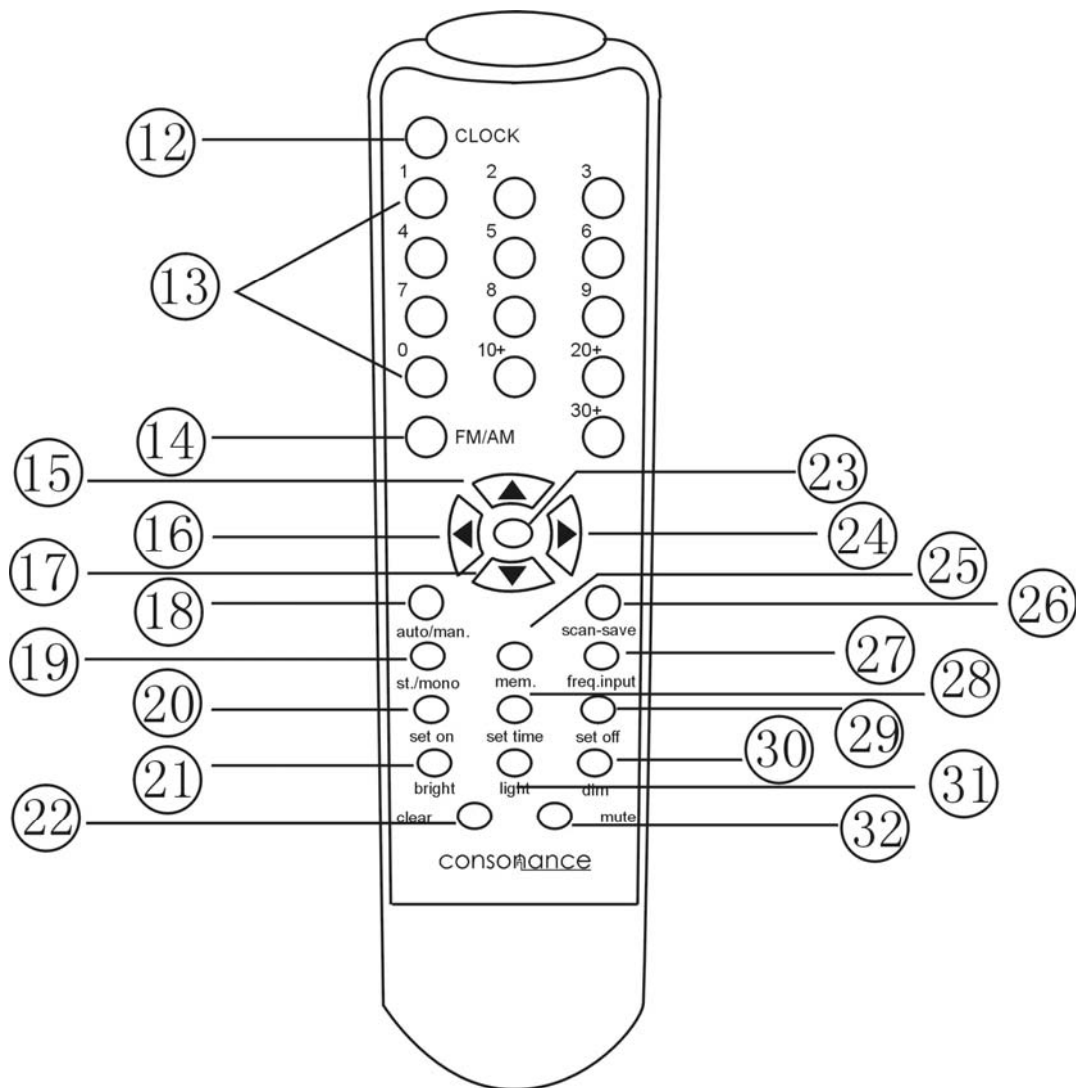
AC Power connection 230V / 115V / 100V AC dependent on country. ②

REMOTE CONTROL

The Tuner-1.0 can be controlled by remote control. The remote control uses two 1.5-volt LR03 AAA batteries.

- 12.CLOCK / TUNER MODE SWITCH KEY
- 13.NUMERIC KEYPAD
- 14.FM/AM MODE SWITCH KEY
- 15.UPWARDS NAVIGATOR KEY
- 16.BACKWARDS NAVIGATOR KEY
- 17.DOWNWARDS NAVIGATOR KEY
- 18.AUTO/MANUAL MODE SWITCH KEY
- 19.STEREO/MONO MODE SWITCH KEY
- 20.TURN ON TIME SET KEY
- 21.BRIGHT MODE KEY OF DIGITAL INDICATOR
- 22.MEMORY CLEAR KEY
- 23.ENTER OR CONFIRM KEY
- 24.FORWARDS NAVIGATOR KEY
- 25.STATIONS MEMORY KEY
- 26.AUTO SCAN AND SAVE STATIONS KEY
- 27.FREQUENCY INPUT PRESET KEY
- 28.CLOCK TIME RESET KEY
- 29.TURN OFF TIME SET KEY
- 30.DIM MODE KEY OF DIGITAL INDICATOR
- 31.LIGHT MODE KEY OF DIGITAL INDICATOR

32.MUTE MODE KEY



USE, PLACEMENT & CLEANING

Note: It takes about 1 minute for the 6H30 vacuum tube to reach its normal operating point, and only slight sonic improvement will be noticed after 5 minutes. The Ref.Tuner-1.0 performs best after being switched on for about 30-60 minutes for heating. The top cover are made of cherry wood, while the front panel and side panels are made of brushed / blasted and anodized aluminum. Fingerprints or stains on the front panel, knobs or top cover can be removed with a cloth moistened with warm water. We wish you good luck in setting up and connecting your new Tuner and hope that it will give you many years of joyful natural sounding music experiences !

TECHNICAL SPECIFICATIONS

Vacuum tube: Sovtek 6H30 x 1

Mains Supply: 100V/115V/230V 50 or 60 Hz.

Preset Memory: 40 stations

Dimensions / Weight: 21cm x 43cm x 33cm (HxWxD) / 18kg (wood top panel)

FM: 22.5KV dev, 1KHz
 MW: 30% mod 1KHz
 FM: I/P imped: 50ohm
 MW: single loop antenna

1. FM:

Item	Content	Condition	Standard	Terminal	Unit	
1	IF freq.		10.7	+/-0.3	MHz	
2	freq. range	Low extrenity	87.5		MHz	
		High extrenity	108.5		MHz	
3	(26dB S/N)	90MHz	10	20	uV	
		98MHz	10	20	uV	
		106MHz	10	20	uV	
4	image rejection	106MHz	25	20	dB	
5	IF rejection	90MHz	50	40	dB	
6	overall distortion	75KHz dev, 1mV i/p	1	2	%	
7	large signal handing	Distortion<10%	1260	711	mV/M	
8	FM limiting sense	(-3dB) KHz dev	10	14	uV	
9	selective S300	+/-300K, 2signal method	20	15	dB	
10	strong i/p S/N	A-weighted 1mV i/p 67.5KHz dev	60	55	dB	
11	AF(overall) frequency response	50us	low	60	100	Hz
			high	10K	8K	Hz
12	mod.hum	22.5KHz dev 1mV i/p	55	50	dB	
13	stereo on/off point	67.5KHz dev	15	20	uV	
14	channal separation		45	40	dB	
15	AMsuppression	100uV- 5mV i/p, 22.5KHz dev	30	25	dB	
16	Max output	67.5KHz dev 1mV i/p	700		mV	
17	Scan Auto Stop Sensitivity		26	32	dB	

2. MW

Item	Content	Condition	Standard	Terminal	Unit	
1	IF freq.		450	+/-3	KHz	
2	freq. range	Low extrenity	522		KHz	
		High extrenity	1620		KHz	
3	(26dB S/N)	600KHz/603KHz	85	90	dbuV/m	
		1000KHz/999KHz	85	90	dbuV/m	
		1400KHz/1404KHz	85	90	dbuV/m	
4	image rejection	1400KHz	40	30	dB	
5	IF rejection	600KHz	40	30	dB	
6	overall distortion	50mV/m i/p, 80%mod	1	2	%	
7	large signal handing	Distortion<10%	1000	500	mV/M	
8	AGC merit	100mV/m i/p, 30%mod	30	25	dB	
9	selectivity S9	+/-9KHz	20	16	dB	
10	strong i/p S/N	50mV/m i/p, 30%mod	45	40	dB	
11	AF(overall) frequency response	1 KHz ref.	low	60	100	Hz
			high	2.2K	2K	Hz
12	mod.hum	5mV/m i/p, 30%mod	40	35	dB	
13	Max output	50mV/m i/p, 30%mod	700		mV	
14	Scan Auto Stop Sensitivity		98	104	dB	

FM :
 Tuning range: VHF/FM 87.5 - 108.5 MHz

Sensitivity: (INF)10dB uV/m
Signal/Noise Ratio: 55dB
Output level: 700mV per channel at 100% modulation

AM :
Tuning range: VHF/AM 522 - 1620 kHz
Sensitivity: (INF) 60dB uV/m
Signal/Noise Ratio: 45 dB
Output level: 700mV per channel at 100% modulation

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE & WARNING

Consonance products should only be opened and/or serviced by certified Consonance technicians. The device contains electronic components that can cause severe electric shock. Work performed on Consonance products by unqualified personnel can cause serious damage and personal injury.

Opening of the product by non-authorized personnel will void the guarantee.

The products must not be exposed to rain or moisture.

GUARANTEE

All Consonance products come with a 1-year guarantee against defective materials and workmanship. In case you should need assistance with your Consonance product please find your nearest dealer or distributor by looking at our webpage : <http://www.operaudio.com>

In case you have problems locating your dealer or distributor please e-mail to klep@public.bta.net.cn

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