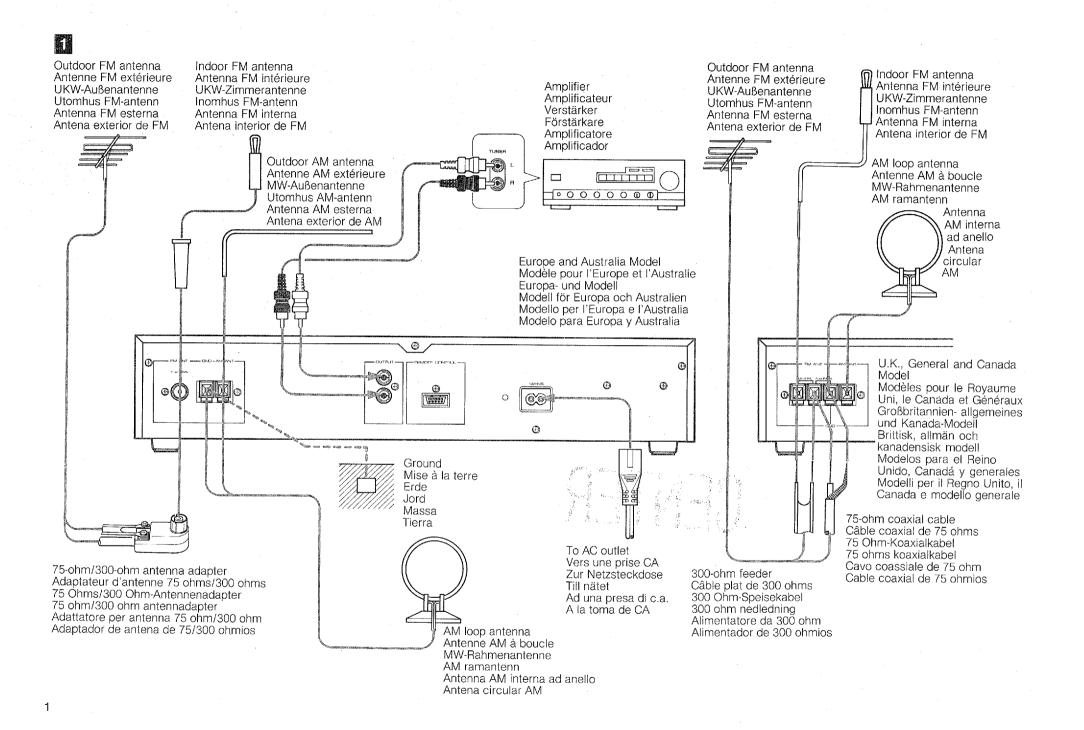
## WANAHAIDX-580.

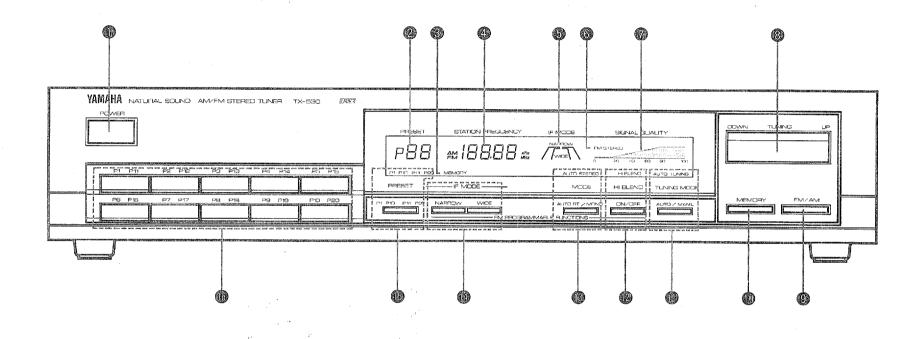
Natural Sound AM/FM Stereo Tuner Syntoniseur FM/AM stéréo de la série "Natural Sound" "Natural Sound" MW/UKW-Stereo-Tuner Natural Sound AM/FM Stereo Tuner Sintonizatore stereo AM/FM a suono naturale Sintonizador estéreo de AM/FM de sonido natural





OWNER'S MANUAL MODE D'EMPLOI BEDIENUNGSANLEITUNG BRUKSANVISNING MANUALE DELL'UTENTE MANUAL DE INSTRUCCIONES





### ENGLISH

 Thank you for purchasing the YAMAHA TX-530 AM/FM stereo tuner.

## CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

**1.** This unit is a sophisticated AM/FM stereo tuner. To ensure proper operation for the best possible performance, please read this manual carefully.

**2.** Choose the installation of your unit carefully. Avoid placing it in direct sunlight or close to source of heat. Also avoid locations subject to vibration and excessive dust, heat, cold or moisture. Keep it away from such sources of hum as transformers or motors.

**3.** Do not open the cabinet as this may result in damage to the unit or electrical shock. If a foreign object should get into the unit, contact your local dealer.

**4.** To prevent lightning damage, pull out the power cord and remove the antenna cable in case of an electrical storm.

**5.** When removing the power plug from the wall outlet, always pull directly on the plug; never pull the cord itself.

**6.** Do not use force when operating switches and knobs.

7. When moving the unit, be sure to first pull out the power plug and remove all cords connecting the unit to other equipment.

**8.** Do not attempt to clean this unit with chemical solvents as this may damage the finish. Use a clean, dry cloth.

**9.** Be sure to read the "Troubleshooting" section of this manual for advice on common operating errors before concluding that your unit is faulty.

10. Keep this manual in a safe place for future reference.

**11.** Voltage Selector (General Model) The voltage selector on the rear panel of this unit must be set for your local mains voltage BEFORE plugging in the AC mains supply. Voltages are 110 - 120/220 - 240V AC, 50/60 Hz.

#### WARNING

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**CAUTION FOR CANADA MODEL:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

#### SPECIAL INSTRUCTIONS FOR BRITISH MODEL

#### IMPORTANT:

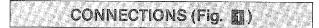
The wires in the mains lead are coloured in accordance with the following code.

Blue: NEUTRAL Brown: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

#### FOR CANADIAN CUSTOMER

THIS DIGITAL APPARATUS DOES NOT EXCEED THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULA-TION OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.



#### OUTPUT jacks

Using the supplied connection cords, connect the L (left) and R (right) OUTPUT terminals of the TX-530 to the L and R tuner input terminals of an amplifier, respectively.

#### GND terminal

For maximum safety and interference, connect the GND terminal to a good earth ground if practicable. A good earth ground is a metal stake driven into moist earth.

#### FREQUENCY STEP switch (General Model only)

As the interstation frequency spacing differs in different areas, set the FREQUENCY STEP switch located at the rear according to the frequency spacing in your area.

#### **REMOTE CONTROL terminal**

Using the REMOTE CONTROL terminal on the rear of the TX-530, system remote control through a compatible amplifier is possible. Connect this terminal to the amplifier with the flat cable supplied to the amplifier. For details of operation, refer to the Owner's Manual of the amplifier.

#### **ANTENNAS**

Both AM and FM indoor antennas are included with the TX-530. Under normal conditions these antennas should be adequate. In general, a properly installed outdoor antenna will give a clearer reception than an indoor one. If you experience poor reception quality, an outdoor antenna may result in improvement.

#### ANTENNA CONNECTIONS

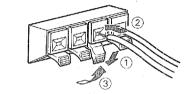
#### AM loop antenna

Connect the AM loop antenna cords to the AM ANT and GND terminals.

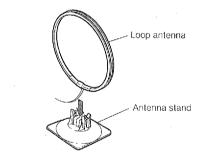
1) Depress the tabs of AM ANT terminals.

② Connect the AM loop antenna leads to the AM ANT terminals.

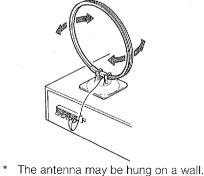
(3) Release the tabs. Lightly pull on the leads to confirm a good connection.



④ Attach the loop antenna to the antenna stand.



(5) Orient the AM loop antenna so that the best reception is obtained.



#### Outdoor AM antenna

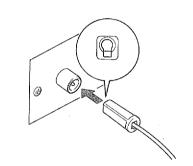
The end of the wire should be stripped of insulation and connected to the AM ANT terminal. At this time, keep the loop antenna connected.

#### Supplied indoor FM antenna

(U.S.A., Canada, U.K. and General models) Connect the supplied indoor antenna to either of the 300  $\Omega$  BAL. FM ANT terminals. Move the antenna for best reception.

#### (Europe and Australia models)

- Connect the supplied indoor antenna to the 75  $\Omega$  UNBAL. FM ANT terminal.
- \* Insert so that the grooved part of the connector hole is facing downward when the connection is made.

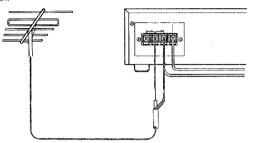




## Optional outdoor FM antenna 4. Insert the cable wire into the slot as shown below and clamp it with pliers. 75-ohm coaxial cable connection (Europe and Australia models) 1. Connect the outdoor FM antenna coaxial cable to the optional outdoor antenna adapter. Clamp it with Clamp it with pliers. The following are connection procedures for the optional outdoor antenna adapter. Insert the wire into the slot. 1. Open the cover of the optional antenna adapter. 5. Snap the cover into its place. 2. Cut the end of the 75-ohm coaxial cable and process it as shown below. 2. Insert the adapter into the 75 $\Omega$ UNBAL FM ANT 11 (7/16) terminal. 8 (5/16) 6 (1/4) Unit: mm (inch.) 3. Cut the red lead and remove it. Red lead 5

(U.K. and General Models)

After stripping the end of your coaxial cable, insert the wires into the 75  $\Omega$  UNBAL FM ANT terminals on the rear panel.

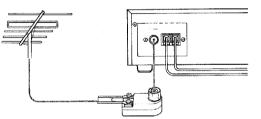


#### 300-ohm feeder connection

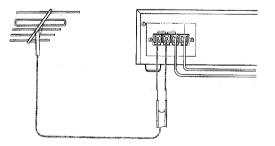
This unit can also accept a 300-ohm indoor antenna or 300-ohm feeder.

#### (Europe and Australia Models)

Connect the 300-ohm feeder to the terminals of the optional 75-ohm/300-ohm antenna adapter, then insert into the 75  $\Omega$  UNBAL FM ANT terminal.



(U.K., General and Canada Models) Insert the 300-ohm feeder into the 300  $\Omega$  BAL FM ANT terminals on the rear panel.





#### **O** POWER switch

Press this switch to turn the power on. Press again to turn the power off.

#### **PRESET** station display

Displays the selected preset station.

#### MEMORY indicator

Flickers for about 5 seconds when the MEMORY button is pressed.

#### **O STATION FREQUENCY display**

Displays the band and frequency of the received frequency.

#### IF MODE display

Displays the selected IF mode (SUPER NARROW, NARROW and WIDE).

#### **@** FM STEREO indicator

Lights when an FM stereo broadcast with a sufficient signal strength is received.

#### SIGNAL QUALITY indicator

Indicates the level of the received frequency. If the multipath interference is detected, the level of the signal quality indication decreases.

#### **O** TUNING button

Press either side of the TUNING button to carry out auto or manual tuning.

#### FM/AM button

Press this button to select the reception band between FM and AM.

#### MEMORY button

When this button is pressed, the MEMORY indicator flickers for about 5 seconds. During this period, press the desired preset station button to store the displayed frequency.

#### **(D)** TUNING MODE button and indicator

Used to select the tuning mode between AUTO and MAN'L.

#### HI BLEND button and indicator

Press this button to eliminate an annoying high frequency noise from FM broadcast.

#### **B** MODE button and indicator

Used to select the FM reception mode. **AUTO ST:** To receive an FM stereo broadcast with a sufficient signal strength in stereo mode. **MONO:** To receive a weak FM broadcast. The received broadcast is heard in monaural mode.

#### **IF MODE buttons and indicators**

Press these buttons to select the mode of the IF band bass width.

When the reception signal is strong, press the WIDE IF MODE button to obtain the distortion-free sound. When the reception signal is weak or when the desired station is interfered with adjacent stations, press the NARROW IF MODE button to increase the selectivity.

#### PRESET station range selector

Press this button to select the range of the preset station buttons. When this selector is pressed, the indicator of the selected range flickers for about 5 seconds, then lights.

#### (B) Preset station buttons

Up to 20 station frequencies and reception modes can be stored using the preset station button.





#### **B**AUTO TUNING

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If signals are strong and there is no interference, quick automatic search tuning is possible.

- 1. Select the reception band with FM/AM buttons.
- 2. Press the TUNING MODE button so that the indicator above the button lights up.
- 3. For FM reception, set the IF MODE, HI BLEND and MODE buttons as desired.
- Use the TUNING button to tune. The tuning will start automatically and stops at broadcast station frequency with a sufficient signal strength.
- 5. If the station where tuning stops is not the one you want, press the TUNING button once again.

#### MANUAL TUNING

Auto tuning may not stop if the station signal is weak. If so, use manual tuning.

- 1. Select the reception band with FM/AM button.
- 2. Press the TUNING MODE button so that the indicator above the button goes off.
- 3. For FM reception, set the IF MODE, HI BLEND and MODE buttons as desired.
- 4. Use the TUNING button to tune.
- The frequency will change rapidly if the TUNING button is kept pressed. Release it slightly before reaching the desired frequency, and then press it intermittently until the desired frequency is reached.

**NOTE:** If FM stereo signal reception is weak, switching to MONO mode may improve the reception (by combining left and right signals into one stronger signal) often.

#### PRESET TUNING

The preset station button can be used to select, at a single touch, any desired station which has been preset.

- 1. Tune to the desired station using auto or manual tuning mode.
- 2. Select the range of the preset station button with the PRESET button.
- 3. Press the MEMORY button and then while the MEMORY indicator is flickering, press the desired preset station button.
- 4. To receive the preset station, select the range of the preset station button with the PRESET button and press the desired preset station button.
- Follow the same procedure for other preset station buttons. The new setting will be programmed in place of the former one.
- For FM reception, the setting of the IF MODE, HI BLEND and MODE buttons are stored together with the station frequency.
- The TX-530 automatically remembers the last tuned-in station when the power is turned OFF. When the power is turned ON again, the same station will be received.

#### Memory back-up

The memory back-up circuit will prevent the programmed information from being lost even though the power is switched OFF for timer use of other temporary power failure. If, however, the unit is not used for about one week after power is supplied for about one hour, the memory may be erased. If so, it can be re-programmed by simply following the original procedure.

### SPECIFICATIONS

#### **FM SECTION**

Tuning Range	87.5 to 107.9 MHz		
(U.S.A., Canada and general models)			
	87.5 to 108 MHz		
(Australia, U.K., de	eneral and Europe models)		
50 dB Quieting Sensitivity (IHF), 75 ohms			
Mono	• *		
Stereo			
Usable Sensitivity			
P			
(30 dB Quieting, NARROW)			
75 ohms			
(DIN) 75 ohms Mono (S/N 2			
•	<b>46 dB)</b> 30 <i>µ</i> ∨		
Image Response Ratio			
	(Except Europe model)		
	75 dB (Europe model)		
IF Response Ratio	90 dB		
	(Except Europe model)		
	75 dB (Europe model)		
Spurious Response Ratio	70 dB		
AM Suppression Ratio			
Capture Ratio			
Alternate Channel Selectivity			
	(NARROW)		
	(Except Europe model)		
Selectivity			
	kHz Dev.) (Europe model)		
(40			

#### Signal-to-Noise ratio (IHF) (Except Europe model) Mono ...... 82 dB **Stereo** ...... 76 dB (DIN-Weighted) (Europe model) Mono (40 kHz Dev.) ..... 75 dB Stereo (40 kHz Dev.) ..... 70 dB **Distortion:** Mono: 1 kHz ..... 0.05% (WIDE) Stereo: 1 kHz ...... 0.07% (WIDE) Stereo Separation: (Except Europe model) 45 dB (Europe model) Frequency response: **20 Hz to 15 kHz** ..... $0 \pm 1.5$ dB AM SECTION Tuning Range: U.S.A., Canada and general models ...... 530 — 1,610 kHz Australia, U.K., general and Europe models ...... 531 — 1,611 kHz Usable Sensitivity ..... 100 µV/m Selectivity ...... 32 dB Signal-to-Noise Ratio ..... 50 dB Image Response Ratio ..... 40 dB

 Spurious Response Ratio
 50 dB

 Distortion
 0.3%

#### AUDIO SECTION

Output Level/Impedance:	
FM (100% mod., 1 kHz)	. 500 mV/3.3 k-ohm
(E	Except Europe model)
400 mV/3.3 k-ohm (Europe	e model, 40 kHz Dev.)
AM (30% mod., 400 Hz)	. 150 mV/3.3 k-ohm

#### GENERAL

Power Supply:	
Europe model	. 220V, 50 Hz
U.K. and Australia model	. 240V, 50 Hz
General model 110 - 120	$0/220 - 240V_{1}$
	50/60 Hz
U.S.A. and Canada model	. 120V, 60 Hz
Power Consumption	10W
Dimensions (W x H x D) 435 × 92	2.5 x 282.5 mm
(17-1/8" × 3-11/	'16" x 11-1/8")
Weight 3.1	kg (6 lb 3.1 oz)

Specifications subject to change without notice.

# L'ISH(S)NE

## TROUBLESHOOTING

When your unit fails to function properly, before assuming it is faulty, check it according to the following troubleshooting list. It details the corrective action you can take yourself without having to call a service engineer. If you have any doubts or questions, get in touch with your nearest YAMAHA dealer.

ENGLISH

	SYMPTOM	CAUSE	REMEDY
FM	Crackling sounds from time to time (especially in weak signal areas).	Ignition noise from passing vehicles.	The FM antenna should be put up as high as possible, away from the road, and a coaxial cable used.
		<ul> <li>Noise from thermostats or other electrical equipment.</li> </ul>	Attach a noise suppressor to the equipment causing the noise
	FM stereo reception is noisy.	<ul> <li>Because of the characteristics of FM stereo broadcasts, this is limited to cases where the transmitter is far away or the antenna input is poor.</li> </ul>	<ul> <li>Check the antenna connections.</li> <li>Try using a multiple element FM antenna.</li> <li>Set the TUNING MODE button to MAN'L mode.</li> </ul>
	The FM STEREO indicator flickers and reception is noisy.	Insufficient antenna input.	Use an antenna appropriate for the reception condition in your area.
		Not tuned correctly.	Tune again.
	There is distortion and clear reception cannot be obtained even with a good FM antenna.	There is multipath interference.	Adjust antenna placement to eliminate multipath interference.
	No stereo effect even with a stereo broadcast.	The TUNING MODE button is set to MAN'L.	<ul> <li>Set the button properly.</li> </ul>
	A desired station cannot be tuned in with Auto tuning.	The station is too weak.	<ul> <li>Use Manual tuning mode.</li> <li>Set the IF MODE correctly.</li> <li>Use high quality directional FM antenna.</li> </ul>
	Previously preset stations can no longer be tuned in.	The tuner has been unplugged for a long period.	Repeat the presetting procedure.
AM	Insufficient sensitivity.	Weak signal or loose antenna connections.	Tighten the AM loop antenna connections and rotate it for best reception.
	A desired station cannot be tuned in with Auto tuning.		Use Manual tuning mode.
	There are continuous crackling and hissing noises.	These noises result from lightning, fluorescent lamps, motors, thermostats and other electrical equipment.	Use an outdoor antenna and a ground wire. This will help some what but it is difficult to eliminate all noise.
	There are buzzing and whining noises (especially in the evening).	Another station is interfering with the received station.	This is impossible to remedy.
		A television set is being used nearby.	Move the television away.

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HAMAMATSU, JAPAN

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