# TECSUN AN-48x

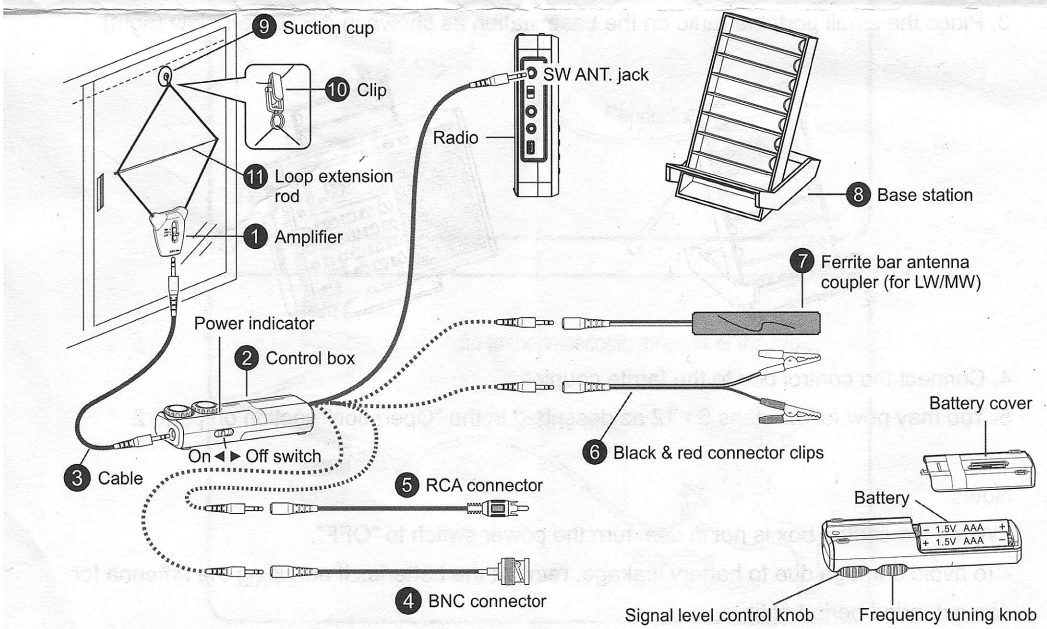
## Active Loop Antenna – LW / MW / SW

AN-48x is a portable indoor active loop antenna for enhancing the reception sensitivity of Longwave (LW), Medium Wave (MW) and Shortwave (SW) signals. The antenna comes with three types of connector cable and a ferrite coupler for connecting to different types of radios.

**Warning!** This antenna is suitable for indoor use. If you use it outdoors, you must pay attention to waterproofing, sun exposure, and lightning protection!

## EFFECTIVE FREQUENCY RANGE

| | |
|---|---|
| Longwave (LW): | 120 ~ 400 kHz |
| Medium Wave (MW): | 520 ~ 1,700 kHz |
| Shortwave (SW): | 3,500 ~ 20,000 kHz |



## INCLUDED PARTS

❶ Antenna wire and amplifier
❷ Control box (power switch, frequency tuning, gain adjustment)
❸ “TRS (male) - TRS (male)” cable (connecting amplifier and control box)
❹ “TRS (female) - BNC (male)” cable (for radio with BNC antenna socket)
❺ “TRS (female) - RCA (male)” cable (for radio with RCA antenna socket)
❻ “TRS (female) - connector clips” cable
(transmits the amplifier output signal to the radio’s telescopic antenna)
❼ Ferrite coupler: Couples the amplifier output signal to the built-in magnetic antenna
(for radios without an LW/MW antenna socket)
❽ Base station (for small portable radios)
❾ Suction cup to suspend the loop antenna
❿ Hanging clip to suspend the loop antenna
⓫ Loop extension rod

## OPERATION

1. Create an antenna loop using the wire antenna ❶ and the extension rod ⓫.
2. Hang the loop antenna with a suction cup ❾ or a hanging clip ❿.
   Tip: Hang the loop antenna away from large metal objects and sources of interference (RFI). The greater the suspension height, the better.
3. Install two 1.5V AAA batteries in the control box ❷.
4. Connect the antenna amplifier ❶ and control box using the "TRS (male) - TRS (male)" cable ❸.
5. Use an appropriate cable to connect the control box to the radio.
6. Push the control box power switch to “ON” and the power indicator will light up.
7. Tune the radio to the desired frequency.
8. Push the switch on the amplifier to the corresponding frequency band (LW, MW, SW).
9. Turn the signal level control knob to a position somewhere in the middle.
   Note: If the signal level control starts at maximum, the received signal might be too strong, in which case no signal can be heard due to front-end overloading.
10. Adjust the frequency tuning knob on the control box until the signal received by the radio is clearest.
11. Adjust the signal level control knob to enhance the received signal.
12. Change the direction of the loop antenna to further enhance the reception.

## OPERATION: RADIOS WITHOUT ANTENNA SOCKET

Shortwave Antenna

1. Connect the "TRS (female) - connector clips" cable ❻ to the control box.
2. Connect the red alligator clip to the telescopic antenna of the radio. Connect the black alligator clip to one end of a homemade "ground".
3. You may now follow steps 6 - 12 as described in the "Operation" section on page 2.

TIP - making a (simple) homemade ground wire

Take a conductive wire of approximately 2 meters (the length is not strictly defined) and connect the black alligator clip onto one end of the wire (Figure 1). For the best effect, connect the other end of the wire to a grounded metal (cold) water pipe (Figure 2).

**Warning:** Do not connect the ground wire to a gas pipeline!

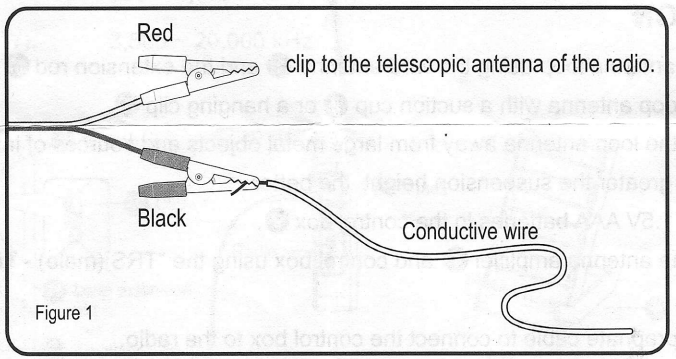


Figure 1

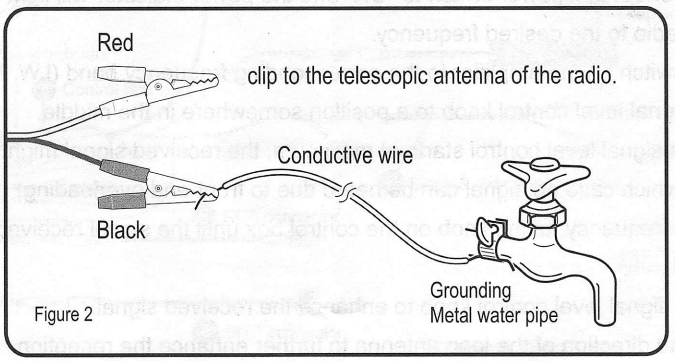
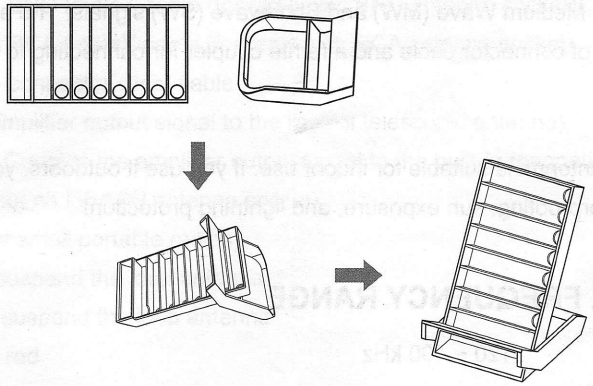


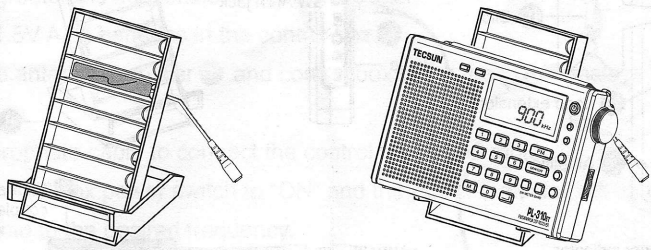
Figure 2

Longwave / Medium Wave Antenna

1. Install the base station ❽ as shown below.



2. Place the ferrite coupler in the appropriate slot of the base station as shown in the figure below (left); the coupler should be in close proximity to the built-in magnetic rod of the radio.
3. Place the small portable radio on the base station as shown in the figure below (right).




4. Connect the control box to the ferrite coupler.
5. You may now follow steps 6 - 12 as described in the “Operation” section on page 2.

Notes:

- When the control box is not in use, turn the power switch to “OFF”.
- To avoid damage due to battery leakage, remove the batteries if not using the antenna for an extended period of time.