# ACTIVE ANTENNA

## for the shortwave bands

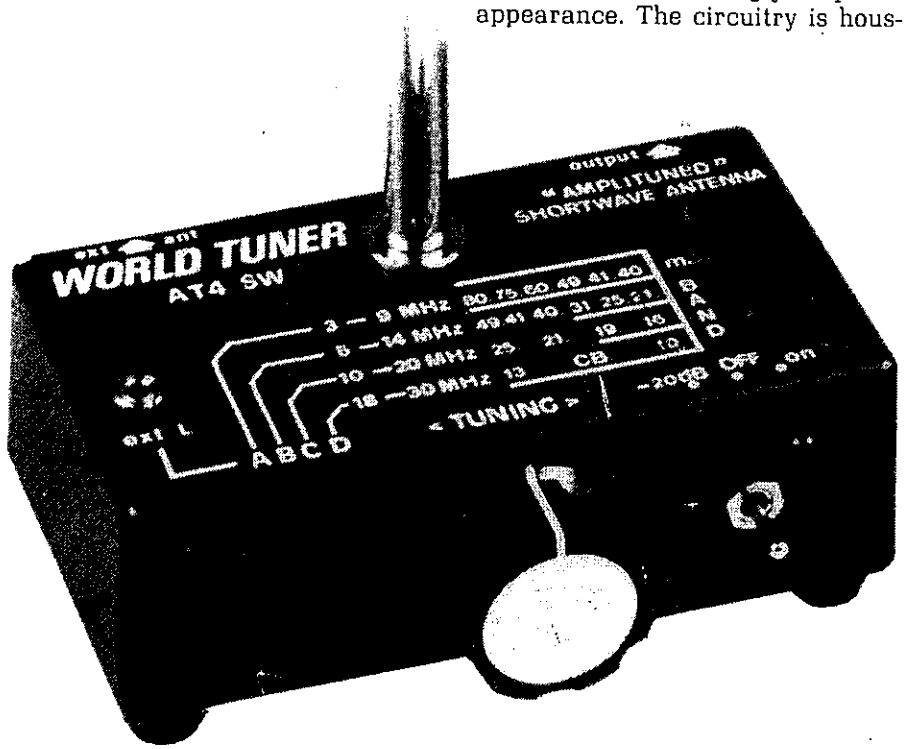
**Interested in shortwave listening? This active antenna can really help pull in those overseas stations. It comes as a kit and can be put together in a few hours.**

By GREG SWAIN

Shortwave listening is a popular pastime for many people and the new receivers now available make tuning into the world easier than ever before. Unfortunately, making the most of those weak signals from across the world generally requires a longwire antenna but that's not always convenient.

There is another way and that is to use an active antenna. The "World Tuner AT4 SW" active antenna described here uses a 1-metre telescopic antenna, a tuned circuit, and two transistors to prevent loading of the antenna and to boost signal output. It covers the shortwave bands from 3-30MHz but by plugging in an external inductor, you can cover other bands as well.

The unit is disarmingly simple in appearance. The circuitry is housed in a small plastic case and this is fitted with a mounting base which accepts the telescopic antenna. When not in use, the antenna can be telescoped down and stored out of the way by fitting it to two plastic P-clips on the back of the case.




The three user controls are arranged along one side of the unit. They include a 4-position band switch, a tuning control and a power switch with LED indicator. Also fitted to the unit are three 3.5mm jack sockets for external antenna (EXT ANT), signal output and external inductor (EXT L).

To use the unit, you simply connect the output to the antenna input of the receiver, select the required band and adjust the tuning knob for best signal. What could be easier?

Because it can tune out interfering signals and noise, the "World Tuner" can outperform many longwire antennas. Often, it can turn a station that is virtually unreadable into a clear signal. Alternatively, for even better performance, the unit can be used to boost the performance of an existing longwire antenna via the external antenna input.

In short, the active antenna can really help lift those weak stations "up out of the mud". We tried it with a Sony ICF-2001 shortwave receiver with great success but the unit will work well with any receiver, particularly those that lack sensitivity.

### The circuit

Fig.1 shows the circuit details of the active antenna. Normally, the telescopic antenna is in circuit but this is switched out if an external antenna is plugged into the EXT ANT