



How to Choose a World Band Radio

Some electronic products are almost commodities. With a little common sense you can get what you want without fuss or bother.

Not so world band receivers, which vary greatly from model to model. As usual, money talks, but even that's a fickle barometer. Fortunately, many perform well, and we rate them accordingly. Yet, even among models with comparable

star ratings it helps to choose a radio that fits you—not some marketing Everyman.

No Elbow Room

World band radio is a jungle: 1,100 channels, with stations scrunched cheek-by-jowl. It's much more crowded than FM or mediumwave AM, and to make matters worse the international voyage can make

signals weak and quavery. To cope, a radio has to perform exceptional electronic gymnastics. Some succeed, others don't.

This is why PASSPORT REPORTS was created. We've tested hundreds of world band products—the good, the bad and the ugly. These evaluations include rigorous hands-on use by listeners, plus specialized lab tests we've developed over the years. These form the basis of PASSPORT REPORTS, and for some premium receivers and antennas there are also soup-to-nuts Radio Database International White Papers®.

Four-Point Checklist

✓ **Price.** Do you want to hear big stations, or soft voices from exotic lands? Powerful evening signals, or weaker signals by day? Decide, then choose a radio that surpasses your needs by a good notch or so—this helps ensure against disappointment without wasting money.

Once the novelty wears thin, most people give up on cheap radios—they're clumsy to tune and can sound terrible. That's why we don't cover analog-tuned models, but even some digitally tuned models can disappoint.

Most find satisfaction with portables selling for \$135-200 in the United States or £90-130 in the United Kingdom with a rating of ★★ $\frac{7}{8}$ or more. If you're looking for elite performance, shoot for a portable or portatop rated ★★ $\frac{3}{4}$ or better—at least \$350 or £300—or consider a five-star tabletop model.

✓ **Location.** Signals tend to be strongest in and around Europe, next-strongest in eastern North America. Elsewhere in the Americas, or in Hawaii or Australasia, you'll need a receiver that's unusually sensitive to weak signals—some sort of accessory antenna helps, too.

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PASSPORT'S STANDARDS

At International Broadcasting Services we have been analyzing shortwave equipment since 1977. Our reviewers, and no one else, write everything in PASSPORT REPORTS. These include our laboratory findings, all of which are done by an independent laboratory recognized as the world's leader. (For more on this, please see the Radio Database International White Paper, *How to Interpret Receiver Lab Tests and Measurements*.)

Our review process is completely separate from equipment advertising, which is not allowed within PASSPORT REPORTS. Our team members may not accept review fees from manufacturers, nor may they "permanently borrow" radios. International Broadcasting Services does not manufacture, sell or distribute world band radios or related hardware.

PASSPORT recognizes superior products regardless of when they first appear on the market. We don't bestow annual awards, but instead designate each exceptional model, regardless of its year of introduction, as *Passport's Choice*.

For apartment dwellers and travelers the Sony AN-LP1 active antenna works well with portables.



World band receivers don't test well in stores.

✓ **Which features?** Divide features between those which affect performance and those that impact operation (see sidebars), but be wary of judging a radio by its features. A radio with few features may outperform one laden with goodies.

✓ **Where to buy?** Whether you buy in a store, by phone or on the Web makes little difference. That's because world band receivers don't test well in stores except in the handful of world band showrooms with proper outdoor antennas. Even then, long-term satisfaction is hard to gauge from a spot test, so visits at different times are advisable.

One thing a store lets you get a feel for is ergonomics—how intuitive a radio is to operate. You can also get a thumbnail idea of world band fidelity by listening to mediumwave AM stations or a superpower world band station.

USEFUL OPERATING FEATURES

Digital frequency readout is a "must" to find stations quickly. A *24-hour World Time clock* helps to know when to tune in; many receivers have them, or you can buy them separately.

Also: direct-access tuning via *keypad* and *presets* ("memories"); and any combination of a *tuning knob*, up/down *slewing* controls or "*signal-seek*" *scanning* to hunt around for stations. Some radios have handy *one-touch presets* buttons, like a car radio.

Depending on your listening habits, you may be interested in an *on/off timer* or built-in cassette recording. Also, look for an *illuminated display* and a good *signal-strength indicator*. Travelers prefer portables with power-lock switches that keep the radio from going on accidentally, but the lock on some Chinese-made portables doesn't disable the display illumination.

EFFECTIVE PERFORMANCE FEATURES

A signal should not just be audible, but actually sound pleasant. Several features help bring this about—some keep out unwanted sounds, others enhance audio quality. Of course, just because a feature exists doesn't mean it works properly, which is why we check these out in PASSPORT REPORTS.

Full world band coverage from 2300-26100 kHz is best, although 3200-21850 kHz or even 4750-21850 kHz is usually adequate. If coverage is less, look at "Best Times and Frequencies for 2001" elsewhere in this book to ensure that important world band segments are completely covered.

Synchronous selectable sideband greatly enhances adjacent-channel rejection while reducing fading distortion. It is found on some models selling for over \$150 or £110.

Especially if a receiver doesn't have synchronous selectable sideband, it helps to have two or more *bandwidths* for superior adjacent-channel rejection. Some premium models incorporate this *and* synchronous selectable sideband—a killer combo. Multiple bandwidths are found on a number of models over \$190 or £120.

Multiple conversion or *double conversion* helps reject spurious "image" signals—unwanted growls, whistles, dih-dah sounds and the like. Few models under \$100 or £70 have it; nearly all over \$150 or £100 do. This borders on a "must" except for casual listening.

High-quality speakers are an aural plus, as are *tone controls*—preferably continuously tunable with separate bass and treble adjustments. For world band reception, *single-sideband* (SSB) reception capability is only marginally relevant, but it is essential for utility or "ham" signals. On costlier models you'll get it whether you want it or not.

Heavy-hitting tabletop models are designed to flush out virtually the most stubborn signal, but they usually require experience to operate and are overkill for casual listening. Among these look for a tunable *notch filter* to zap howls; *passband offset* (a/k/a *passband tuning* and *IF shift*) for superior adjacent-channel rejection and audio contouring, especially in conjunction with synchronous selectable sideband; and multiple *AGC* decay rates. At electrically noisy locations a *noise blanker* is essential; some work much better than others.

Digital signal processing (DSP) is the latest attempt to enhance mediocre signal quality. Until recently it has been much smoke, little fire, but the technology is improving. Watch for more DSP receivers in the years to come, but don't worship at their altar.

With portables and portatops an *AC adaptor* reduces operating costs and may improve weak-signal performance. Some of these are poorly made and cause hum, but most are quite good. With tabletop models an *inboard AC power supply* is preferable but not essential.

Looking a number of years ahead, *digital shortwave transmission* is a question of how and when, not if. Thankfully, digital transmissions are likely to be compatible with existing analog receivers—in-band, on-channel—so legacy world band receivers will continue to function properly.

Be wary of judging a radio by its features. A radio with few features may outperform one laden with goodies.

WHEN ANTENNAS HELP

Portables come with built-in telescopic antennas that are fine for evening use in Europe and the east coast of North America.

But during the day or in weak-signal locations, your portable will benefit from more oomph. Among the best in the United States is Radio Shack's ten-buck "SW Antenna Kit" with wire, insulators and other goodies, plus \$2 for a claw/alligator clip or other connector.

This antenna may be too long for your radio, but you can always shorten it. Experiment, but as a rough rule of thumb the less costly the portable, the shorter the antenna should be. If you live in an apartment, run the antenna along your balcony or roof and away from the building, then cut off any excess wire. Barring this, try taping a length of wire along a large window.

If the antenna makes a station sound worse, detach it and use the radio's telescopic antenna. Protect the radio's innards by disconnecting any outboard wire antenna when you're not listening—especially when thunder, snow or sand storms are nearby.

Sony Antenna Works Nicely

Sony's active (amplified) AN-LP1 loop antenna helps bring weaker stations out of the mud. It is especially useful if you live in an apartment or townhouse where an outdoor wire antenna isn't feasible.

☞ Don't confuse this with the Sony AN-1 antenna, which is inferior.

☞ The Sony ICF-SW07 portable comes with the AN-LP2 antenna. The 'LP2 isn't sold separately and doesn't replace the AN-LP1, but rather works only with the 'SW07. Except for automated preselector adjustment, it is identical to the AN-LP1.

Antennas Boost Tabletop Performance

Tabletop receivers require an external antenna, either passive or active. Although portatop models don't require an outboard antenna, they usually work better with one.

Active antennas use short rods or wires to snare signals, then amplify those signals electronically. For apartment dwellers they can be a godsend—provided they work right. Our findings on these are given elsewhere in this PASSPORT.

If you have space outdoors, a passive outdoor wire antenna is better, especially when it is designed for world band. Besides not using problematic electronic circuits, a good passive antenna's greater capture length tends to reduce relative disruption by local electrical noise.

Among the best under \$100 or £60 are those made by Antenna Supermarket ("Eavesdropper") and Alpha Delta Communications, direct or from world band vendors. Detailed test results and installation instructions for these and other models are in the Radio Database International White Paper®, *Evaluation of Popular Outdoor Antennas*. Eavesdropper antennas come assembled and are usually equipped with built-in static protectors; unprotected antennas need a separate protector, such as from Alpha Delta. Even then, with any outdoor antenna it is best to disconnect the lead-in if there is lightning nearby. A surge protector for the radio's AC power is good insurance, too. These range from low-cost MOV units to innovative Zero Surge devices.