How to Choose a World Band Radio

Some electronic products are scarcely more than commodities. With a little common sense you can find what you want.

But not world band receivers, which can 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 read the fine print.

Squeezed-in Stations

World band radio offers hundreds of channels, each shoehorned five kilohertz away from the other. That's more crowded than FM and around twice as crammed as mediumwave AM.

It gets worse: Global treks wear down signals, causing fading and reduced strength. To cope with these challenges, a world band radio has to perform electronic gymnastics. Some succeed, others don't.

This is why PASSPORT REPORTS was created. At International Broadcasting Services we've independently tested hundreds of world band radios, antennas and accessories since 1977. These evaluations include rigorous hands-on use by listeners, plus specialized lab tests developed over the years. These form the basis of PASSPORT REPORTS, and for the Full Monty on various popular premium receivers and antennas there are also Radio Database International White Papers®.

Know what you want. Etón's S350DL is popular for music and news, but not for faint rarities.

Four-Point Checklist

✔ **Price.** Want to hear major stations, or do you prefer gentler voices from exotic lands? Powerful evening signals, or weaker stations by day? Decide, then choose a radio that slightly surpasses your needs—this helps ensure against disappointment without spending too much.

Once the novelty of world band wears thin, most people give up on cheap radios—they're clumsy to tune, often receive poorly and can sound terrible. That's why we rarely cover analog-readout radios. Yet, even some models with digital frequency readout can disappoint.

Most find satisfaction with digital-readout portables selling for $65–150 in the United States or £60–130 in the United Kingdom, and having a rating of ✪✪¾ or more. If you're looking for elite performance, shoot for a costlier portable rated ✪✪✪¾ or better. If you want bragging rights, a five-star tabletop or a professional model is *numero uno*.

Radios must overcome the beating taken by global signals.

✔ **Location.** Signals are usually strongest around Europe, North Africa and the Near East; they're almost as good in eastern North America. Elsewhere in the Americas—or in Hawaii, Australasia or the Middle East—spring for a receiver with superior sensitivity to weak signals. Some sort of accessory antenna helps, too.

✔ **Features.** Divide features between those for performance and those that impact operation (see sidebars), but regard them with a cynical eye. Radios with relatively few features sometimes outperform those tricked out with seductive goodies.

PASSPORT'S STANDARDS

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

The 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.

PERFORMANCE FEATURES

A signal should sound pleasant, not just be audible. To help, some radios have features to ward off unwanted sounds or improve audio quality. Of course, just because a feature exists doesn't mean it functions properly, but PASSPORT REPORTS' team checks this out.

Reception "Musts"

Full world band coverage from 2300-26100 kHz is best, but 3200-21850 kHz is plenty good—even 5730-21850 kHz is usually okay. Less coverage? Look over "Best Times and Frequencies for 2007" elsewhere in PASSPORT to see what's missed.

Synchronous selectable sideband helps knock out adjacent-channel interference and reduce fading distortion. This advanced feature is found on a few portables, as well as most tabletop and professional models. PASSPORT REPORTS indicates which work well.

Especially if a receiver doesn't include synchronous selectable sideband, it benefits from having two or more *bandwidths* to reduce adjacent-channel interference. Some premium models have multiple bandwidths and synchronous selectable sideband—a killer combo.

Double (or multiple) conversion helps reject unwanted disturbances—images, unwanted growls, whistles and dih-dah sounds. Few cheaper models have it.

Spit and Polish

Tone controls are a plus, especially if continuous with separate bass and treble. For world band reception, *single-sideband* (SSB) isn't important, but is essential for utility or "ham" signals. SSB's main use for world band is to hear the American Forces Radio and Television Service.

Look for good coverage, selectivity and image rejection.

Tabletop models flush out stubborn signals, but they're for veterans and are overkill for casual listening. Look for a tunable *notch filter* to zap howls; *passband offset* (also called *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, although performance varies greatly.

Digital signal processing (DSP) attempts to enhance reception quality. Until recently it has been much smoke, little fire, but it's improving. Watch for more DSP receivers to appear, but don't worship at their altar.

Digital Radio Mondiale (DRM), a form of digital transmission with good and bad points, is slowly being rolled out for world band. Thus far there have been no DRM-capable receivers offered to the public, just regular receivers that feed a 12 kHz IF to a personal computer to process DRM signals. However, the first genuine DRM portables are scheduled for introduction by early 2007.

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

✔ **Where to buy?** Whether you buy in a store, by phone or on the Internet makes little difference. That's because world band receivers don't test well in stores except in the rare showroom with an outdoor antenna. Even then, long-term satisfaction is hard to gauge from a spot test, so check at different times.

One thing you can nail down in a store is ergonomics—how intuitive is the radio to operate? You can also get a thumbnail idea of world band fidelity by listening to mediumwave AM stations or a muscular world band station.

Internet purchases from foreign countries are usually hassle-free, although don't expect enforceable warranties. Too, AC voltages may be inappropriate, and packets are sometimes refused by customs because of trademark and other legal considerations.

CONVENIENCE FEATURES

To find stations quickly, look for *digital frequency readout*, found on virtually all models tested by PASSPORT REPORTS. Too, a *24-hour World Time clock* to know when to tune in; many receivers include them. The best allow time to be read while the frequency is being displayed.

If your radio doesn't include a World Time clock, there are standalone 24-hour clocks and watches. Seconds displayed numerically are a nice touch so you can be alert for station IDs.

Other handy features: direct-access tuning by *keypad* and station *presets* ("memories"); and any combination of a *tuning knob*, up/down *slewing controls* or *"signal-seek" scanning* to search for stations. A few models have handy *one-touch presets* buttons, like a classic car radio. Quick access to *world band segments* (meter bands) is another time saver.

Presets are important because world band stations don't stay on the same frequency all day. Being able to store a station's multiple frequencies makes the station easier to find. With sophisticated receivers, presets should be able to store not only frequency, but also such parameters as bandwidth, mode and AGC.

Useful but less important is an *on/off timer*. Also, look for an *illuminated display* and a good *signal-strength indicator*, either as an analog meter or a digital display.

Travelers like portables with *power-lock switches* or *recessed power buttons* so the radio won't go on by itself in luggage. ☞ The locks on some Chinese portables don't disable display illumination.

If ergonomics stand out, bad or good, PASSPORT REPORTS says so. But few controls doesn't necessarily mean handier operation. Some receivers with many controls are easier to operate than comparable receivers with few controls—especially if operation involves complex software choices.

Tabletop models can run in the four figures, but not always. Palstar's R30 costs little more than a premium portable.
Universal Radio