



Compleat Idiot's Guide to Getting Started

*Three "Must" Tips to Catch
the World*

World band radio is your unfiltered connection to what's going on, but it differs from conventional radio. Here are three "must" tips to get started.

"Must" #1: World Time and Day

World band schedules use a single time, *World Time*. After all, world band radio is global, with stations broadcasting around-the-clock from virtually every time zone.

Imagine the chaos if each station used its own local time for scheduling. In England, 9:00 PM is different from nine in the evening in Japan or Canada. How would anybody know when to tune in?

World Time, or Coordinated Universal Time (UTC), is also known as Greenwich Mean Time (GMT) or, in the military, "Zulu." It is announced

in 24-hour format, so 2 PM is 1400 (“fourteen hundred”) hours.

There are four easy ways to know World Time. First, around North America tune to one of the standard time stations, such as WWV in Colorado and WWVH in Hawaii or CHU in Ottawa. WWV and WWVH are on 5000, 10000 and 15000 kHz, with WWV also on 2500 and 20000 kHz; CHU is on 3330, 7335 and 14670 kHz.

Second, tune to a major international broadcaster, such as the BBC World Service or Voice of America. Most announce World Time at the hour.

Third, on the Internet you can access World Time at various sites, including tycho.usno.navy.mil/what.html and www.nrc.ca/inms/time/cesium.shtml.

Fourth, see the sidebar to set your 24-hour clock. For example, if you live on the East Coast of the United States, *add* five hours winter (four hours summer) to your local time to get World Time. So, if it is 8 PM EST (the 20th hour of the day) in New York, it is 0100 hours World Time.

Once you know the correct World Time, adjust your radio's 24-hour clock. No clock? Get one now unless you enjoy doing weird computations in your head (it's 6:00 PM here, so add five hours to make it 11:00 PM, which on a 24-hour clock converts to 23:00 World Time—but, whoops, it's summer so I should have added four hours instead of five . . .). It will be the best money you've ever spent.

Remember that at midnight a new *World Day* arrives. This can trip up even experienced listeners—sometimes radio stations, too. So if it is 9 PM EST Wednesday in New York, it is 0200 hours World Time *Thursday*. Don't forget to “wind your calendar”!

What happens at midnight, World Time? A new *World Day* arrives, as well.

PASSPORT'S THREE-MINUTE START

No time? Try this:

1. Night time is the right time, so wait until evening when signals are strongest. In a concrete-and-steel building put your radio by a window or balcony.
2. Make sure your radio is plugged in or has fresh batteries. Extend the telescopic antenna fully and vertically. Set the DX/local switch (if there is one) to “DX,” but otherwise leave the controls the way they came from the factory.
3. Turn on your radio. Set it to 5900 kHz and begin tuning slowly toward 6200 kHz; you can also try 9400-9900 kHz. You should hear stations from around the world.

Other times? Read “Best Times and Frequencies for 2001.”

"Must" #2: How to Find Stations

PASSPORT provides station schedules three ways: by country, time of day and frequency. By-country is best to hear a given station. "What's On Tonight," the time-of-day section, is like *TV Guide* and includes program descriptions from our listening panel. The by-frequency Blue Pages are ideal for when you're dialing around the bands.

World band frequencies are usually given in kilohertz (kHz), but a few stations use Megahertz (MHz). Forget all the technobabble—the main difference is three decimal places, so 6170 kHz is the same as 6.17 MHz, 6175 kHz identical to 6.175 MHz, and so on. All you need to know is that, either way, it refers to a certain spot on your radio's dial.


You're already used to hearing FM and


SETTING YOUR WORLD TIME CLOCK

PASSPORT's "Addresses PLUS" lets you arrive at the local time in another country by adding or subtracting from World Time. Use that section to determine the time within a country you are listening to.

This box, however, gives it from the other direction—that is, what to add or subtract from your local time to determine World Time at your location. Use this to set your World Time clock.

Wherever in the world you live, you can also use Addresses PLUS, instead of this sidebar, to determine World Time simply by reversing the time difference. For example, Addresses PLUS states that Burundi's local time is "World Time +2." So if you're in Burundi, to set your World Time clock you would take Burundi time *minus* two hours.

WHERE YOU ARE 

TO DETERMINE WORLD TIME 

North America**Newfoundland**

St. John's NF, St. Anthony NF

Add 3½ hours winter, 2½ hours summer

Atlantic

St. John NB, Battle Harbour NF

Add 4 hours winter, 3 hours summer

Eastern

New York, Atlanta, Toronto

Add 5 hours winter, 4 hours summer

Central

Chicago, Nashville, Winnipeg

Add 6 hours winter, 5 hours summer

Mountain

Denver, Salt Lake City, Calgary

Add 7 hours winter, 6 hours summer

Pacific

San Francisco, Vancouver

Add 8 hours winter, 7 hours summer

Alaska

Add 9 hours winter, 8 hours summer

Hawaii

Add 10 hours year round

mediumwave AM stations at the same spot on the dial, day and night, or Webcasts at the same URLs. But things are a lot different when you roam the international airwaves.

World band radio is like a global bazaar where a variety of merchants come and go at different times. Similarly, stations routinely enter and leave a given spot—frequency—on the dial throughout the day and night. Where you once tuned in, say, a

French station, hours later you might find a Russian or Chinese broadcaster roosting on that same spot.

Or on a nearby perch. If you suddenly hear interference from a station on an adjacent channel, it doesn't mean something is wrong with your radio; it probably means another station has begun broadcasting on a nearby frequency. There are more stations on the air than there is space for

Europe

United Kingdom, Ireland and Portugal

Same time as World Time winter, subtract 1 hour summer

Continental Western Europe; parts of Central and Eastern Continental Europe

Subtract 1 hour winter, 2 hours summer

Estonia, Latvia and Lithuania

Subtract 2 hours year round

Elsewhere in Continental Europe

Subtract 2 hours winter, 3 hours summer

Belarus, Bulgaria, Cyprus, Finland, Greece, Moldova, Romania, Russia (Kaliningradskaya Oblast), Turkey and Ukraine

Mideast & Southern Africa

Egypt, Israel, Lebanon and Syria

Subtract 2 hours winter, 3 hours summer

South Africa, Zambia and Zimbabwe

Subtract 2 hours year round

East Asia & Australasia

China, including Taiwan

Subtract 8 hours year round

Japan

Subtract 9 hours year round

Australia: *Victoria, New South Wales, Tasmania*

Subtract 11 hours local summer, 10 local winter (midyear)

Australia: *South Australia*

Subtract 10½ hours local summer, 9½ hours local winter (midyear)

Australia: *Queensland*

Subtract 10 hours year round

Australia: *Northern Territory*

Subtract 9½ hours year round

Australia: *Western Australia*

Subtract 8 hours year round

New Zealand

Subtract 13 hours local summer, 12 hours local winter (midyear)

WORLD TIME CLOCKS

Because World Time uses 24-hour format, digital clocks are easier to read than analog timepieces with hands. Some radios include a World Time clock that is displayed fulltime—these are best. Many other radios have World Time clocks, but you have to press a button to have time replace frequency in the display.

Basic Models

If your radio has no clock, a separate 24-hour clock is a virtual “must.” Here are three affordable choices, listed in order of cost.

MFJ-107B, \$9.95. Bare-bones, but this battery-powered LCD “Volksclock” is good enough for many. Seconds not displayed numerically.

MFJ-118, \$24.95, is similar to the '107B, but with large (1¼ inches or 32 mm) LCD numerals. Additionally, has an adjustable flip stand and a multilingual 100-year calendar. Seconds not displayed numerically.

Some radios include a World Time clock that is displayed at all times—these are best.

MFJ-114B/114BX, \$54.95; a/k/a **Hamx Business Corp. HX-923D**. If you want your World Time *VISIBLE* and need to see seconds numerically, this wall/desk clock may be for you—but there are caveats. It uses tall (1¾ inches or 44 mm) bright-red LEDs for hours and minutes, half-size LEDs for seconds—better than the usual limited-contrast LCD. Unlike the '107B and '118, the '114B uses a “wall wart” AC adaptor, plus “AA” batteries for backup (the regular '114B model is 120 VAC, the “X” version 220/240 VAC). It also displays the month, day and year for a couple of seconds when you clap twice.

☞ Our sample arrived performing intermittently, the result of two connections not having been soldered and some questionable solder joints. Once ministered to with a soldering iron, it worked properly.

☞ The time display is quite accurate provided you adjust the SCV1 trimmer—an adjust-wait-readjust proposition that can take days before you finally get it “spot on.”

☞ The clock emits broadband hash throughout the shortwave spectrum and beyond, so it should be mounted well away from radio antennas.

**Sophisticated Timepieces**

For those who want only the very best, there are any number of sophisticated 24-hour clocks ranging from under \$100 to over \$2,000. Nearly all display seconds numerically, and some synchronize the displayed time with one or another of the atomic clock standards.

This desktop clock from Arcron Zeit allows hourly time zone changes to be made for all U.S. and World Times.



Chinese cowboys listen to foreign broadcasts on their Tecsun world band radios. E.A. Hozour

them, so sometimes they try to outshout each other.

Technology to the rescue! To cope with this, purchase a radio with superior adjacent-channel rejection, also known as selectivity, and give preference to radios with synchronous selectable sideband. *PASSPORT REPORTS*, a major section of this book, tells you which stand out.

One of the most pleasant things about world band radio is cruising up and down the airwaves. Daytime, you'll find most stations above 11500 kHz; night, below 16000 kHz. Tune slowly, savor the sound of foreign tongues alongside English offerings. Enjoy the music, weigh the opinions of other peoples, hear the events that shape their lives and yours.

If a station can't be found or fades out, there is probably nothing wrong with your radio. The atmosphere's sky-high ionosphere deflects world band signals earthward, whereupon they bounce back up to the ionosphere, and so on like a

dribbled basketball until they get to your radio. This is why world band radio is so unencumbered—its signals don't rely on cables or satellites or the Internet, just layers of ionized gases which have enveloped our planet for millions of years. World band is free from regulation, free from taxes, free from fees—and largely free from ads, as well.

But nature's ionosphere, like the weather, changes constantly, so world band stations have to adjust as best they can. The result is that broadcasters operate in different parts of the world band spectrum, depending upon the time of day and season of the year.

That same changeability can also work in your favor, especially if you like to eavesdrop on signals not intended for your part of the world. Sometimes stations from exotic locales—places you would not ordinarily hear—become surprise arrivals at your radio, thanks to the shifting characteristics of the ionosphere.

BEST TIMES AND FREQUENCIES FOR 2001

With world band, if you dial randomly you're just as likely to get dead air as a program. That's because some world band segments are alive and kicking only by day, while others spring to life at night. Others fare better at certain times of the year.

This guide is most accurate if you're listening from north of Africa or South America. Even then, what you'll actually hear will vary—depending upon your location, where the station transmits from, the time of year and your radio (see Propagation in the glossary). Although world band is active around the clock, signals are usually best from an hour or two before sunset until sometime after midnight. Too, try a couple of hours on either side of dawn. **Nighttime** refers to your local hours of darkness, plus dawn and dusk.

Possible Reception Nighttime

2 MHz (120 meters) **2300-2495 kHz**—overwhelmingly domestic stations, with 2496-2504 kHz for time stations only.

Limited Reception Nighttime

3 MHz (90 meters) **3200-3400 kHz**—overwhelmingly domestic stations.

Good-to-Fair in Europe and Asia except Summer Nights; Elsewhere, Limited Reception Nighttime

4 MHz (75 meters) **3900-4050 kHz**—international and domestic stations, primarily not in or beamed to the Americas; 3900-3950 kHz mainly Asian and Pacific transmitters; 3950-4000 kHz also includes European and African transmitters; 4001-4050 kHz currently out-of-band.

Some Reception Nighttime; Regional Reception Daytime

5 MHz (60 meters) **4750-4995 kHz** and **5005-5100 kHz**—mostly domestic stations, with 4996-5004 kHz for time stations only and 5061-5100 kHz currently out-of-band.

Excellent Nighttime; Regional Reception Daytime

6 MHz (49 meters) **5730-6300 kHz**—5730-5899 kHz and 6201-6300 kHz currently out-of-band.

Good Nighttime; Regional Reception Daytime

7 MHz (41 meters) **6890-6990 kHz** and **7100-7600 kHz**—6890-6990 kHz and 7351-7600 kHz currently out-of-band; no American-based transmitters and few transmissions targeted to the Americas.

9 MHz (31 meters) **9250-9995 kHz**—9250-9399 kHz and 9901-9995 kHz currently out-of-band; 9996-10004 kHz for time stations only.

Good Nighttime except Mid-Winter; Some Reception Daytime and Winter Nights; Good Asian and Pacific Reception Mornings in America

11 MHz (25 meters) **11500-12200 kHz**—11500-11599 kHz and 12101-12200 kHz currently out-of-band.

"Must" #3: The Right Radio

Choose carefully, but you shouldn't need a costly set. Avoid cheap radios—they suffer from one or more major defects. With one of the better-rated portables you'll be able to hear much more of what world band has to offer.

Two basics: First, purchase a radio with digital frequency display. Its accuracy and related digital features will make tuning far easier than with outmoded slide-rule tuning. Second, ensure the radio covers at least 4750-21850 kHz with no significant tuning gaps. Otherwise, you may not be able to tune in some stations you'd otherwise be able to hear.

You won't need an exotic outside antenna unless you're using a tabletop model. All portables, and to some extent portatops, are designed to work well off the built-in telescopic antenna—or, if you want it to reach a bit further, with several yards or meters of insulated wire clipped on.

If you just want to hear the major stations, you'll do fine with a moderately priced portable. Beyond that, portatop models have a better chance of bringing in faint and difficult signals, and they usually



Shoppers in Xinjiang, China, examine radios. E.A. Hozour

sound better, too. But most tabletops are costly and complex to operate.

Radio in hand, read or at least glance over your owner's manual—yes, it's worth it. You'll find that, despite a few unfamiliar controls, your new world band receiver isn't all that much different from radios you have used all your life.

Prepared by Jock Elliott, Tony Jones and Lawrence Magne, with David Zantow.

Good Daytime; Good Summer Nighttime

13 MHz (22 meters) **13570-13870 kHz**

15 MHz (19 meters) **15005-15800 kHz**—14996-15004 kHz for time stations only; 15005-15099 kHz currently out-of-band.

Good Daytime; Variable, Limited Reception Summer Nighttime

17 MHz (16 meters) **17480-17900 kHz**

19 MHz (15 meters) **18900-19020 kHz**

21 MHz (13 meters) **21450-21850 kHz**

Some Reception Daytime

25 MHz (11 meters) **25670-26100 kHz**

There are more stations than there is space, so they try to shout each other.