

## KAITO KA1103

### A Surprising, All-Purpose, All-Band, Shortwave Portable

**R**adio manufacturer Kaito U.S.A. has been developing a wide range of shortwave radios over the last few years to fit just about any budget. The KA1103 is a perfect example. It's small, easy to use, feature packed, and even charges its own batteries.

#### ❖ Retro Look, Modern Appeal

The first thing that's striking about the KA1103 is the faux analog dial. At first it looks like an old fashioned, multi-band analog radio, complete with slide rule indicator. But, closer inspection reveals that this dial also gives a large, precise, digital frequency readout with room for volume and signal level, too. To complete the fake-out, Kaito has outfitted the dial with cozy yellow LEDs that'll make you swear you're looking at an old-time radio shrunk into a 6" x 4" box.

There are a few things you might not expect to see on a radio of this size and price: on AM it tunes in 1 kHz steps, it has full HF coverage from 100 kHz to 29.999 MHz, it has SSB reception and an amazing 268 memory presets. But wait, there's more! It comes with an external power supply, built-in battery charger (four AA NiMH batteries are included) and it has a 32 foot long plug-in, long-wire antenna.

Among its other attributes is four-way tuning. You can access frequencies by traditional dial tuning, direct entry, auto-scan, or memory tuning. It features two alarms and a sleep timer. And, what's this? A line out jack! Hmm, looks like you can record to your MP3 player. This is getting better and better. But, just how does it perform?

#### ❖ Riding the Bands with the KA1103

Thanks to the mini-plug external antenna jack on the KA1103, I was able to test this radio with a number of antennas besides the built-in 36 inch telescoping whip antenna and the aforementioned 32 foot long wire. If you use an external antenna, you'll need to get a mini-plug adaptor so that the radio can accept input from a 50 ohm coax antenna.

An advantage in using an outdoor antenna with any short-

wave radio, besides the obvious increase in signal, is that you move the antenna away from the many items inside your house which are generating RF noise. That's a particular problem when you use a portable radio near a fairly noisy computer. On the other hand, a frequent disadvantage in using a big outdoor antenna on such a small radio is that you might overload the front end of the radio and reduce its sensitivity. I found that, no matter what antenna I used or what band I listened to, this didn't happen on the KA1103.

Checking out the FM band first, I found that reception was pretty much what you'd expect from a small portable radio. But, that's not the reason anyone would buy the KA1103, though it's nice to have that band. Attached to an external antenna, FM reception was very good, pulling in distant stations as well as any portable I've used.

AM reception, while not great, was at least not a disappointment. Usually radios this small have little to offer in the way of DX on the AM band. There's just not enough bandspread to sort out the thousands of stations on AM. The KA1103 uses a built-in ferrite antenna which was of minimal value. However, using the Radio Shack tunable AM loop antenna, I could do some pretty good AM DXing. In addition to the usual AM broadcasters, I could pick up CMIA



*View of KA1103 back panel shows retractable desk stand, built-in, swiveling 36" telescoping whip antenna and battery compartment. Also seen from this view is the main tuning control, clarifying thumb wheel, line out jack, narrow/wide audio selector and front panel light switch (helps save on batteries when not plugged into the wall). (Courtesy: Kaito USA)*

560 Radio Rebelde in Cuba broadcasting Cuban baseball.

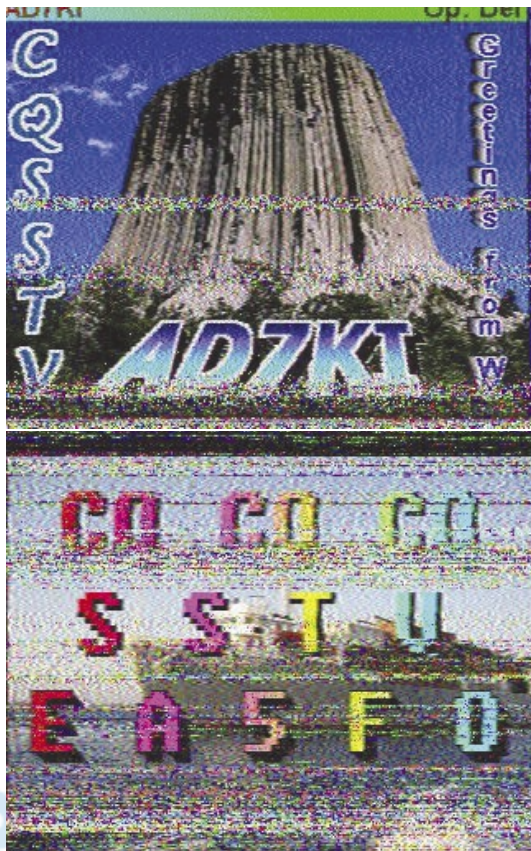
On HF I was surprised at how well the little telescoping antenna worked. Even sitting next to my computer I was able to tune in some decent DX shortwave catches on the 49 meter band, such as Voice of Vietnam at 6.175 MHz, in addition to the usual powerhouse broadcasters.

The 32-ft long wire did a much better job than the telescoping whip, but as might be expected, I found the most improvement attaching the outdoor shortwave antenna. Marginal signals became real arm chair copy. For instance, listening from 2000 to 2200 UTC I heard Vatican Radio's English service to Europe (5.885 MHz) which came in like a local AMer. BBC's African service on 17.830, 15.400, 12.095, 6.190, and 6.005 MHz all came in very well. Even the BBC 5.875 MHz service to Europe was strong.

Cruising the *MT* Shortwave Guide made my global journey a snap. Punch in the frequency on the KA1103 and there's Albania's 7.530 MHz service to Europe. RCI's service to the EU at 9.770 MHz was extremely strong. Radio Australia's service to Asia at 15.515 MHz was filling out the LCD signal strength meter. OK, so I couldn't get Nepal or Syria, but I couldn't do that on my main SW radio at that time, either!



*A modern, digitally tuned, all-band radio, the Kaito KA1103 features retro styling with faux analog, back-lit dial. It's available in two colors: black and silver. (Courtesy: Kaito USA)*



SSTV images from the KA1103 on 20 meters. Once the tuning and audio are adjusted, simply turn the clarifier thumb wheel until the image starts to appear. (Courtesy: Author)

One big knock on radios of this size is their audio. It's awful. All highs and no lows. There's an audio wide/narrow switch which is basically a treble/bass switch intended to be used when listening to talk or music programming. I switched the audio to narrow and plugged the line out into the MP3 player jack on a high quality table radio. The audio was noticeably improved. You can use an amplified speaker with the same results, especially if you can adjust the treble/bass on the table radio or speaker.

### ❖ Tuning into other Modes

Now, it's one thing to use a shortwave portable to tune in world music and news, but this radio features Single Side Band (SSB) reception, which lets you tune in to the world of amateur radio. Using the built-in antenna, I was able to listen to everything from 160 meter insomniacs to 10 meter beacons. Again, the best reception was with an outdoor antenna.

As a ham I've enjoyed operating the digital modes and thought this might be a good test for a little radio like this. For transmitting, I use a Tigertronics Signalink sound card/radio interface ([www.tigertronics.com](http://www.tigertronics.com)) which utilizes the auxiliary jack on my transceiver, allowing the computer to operate the transmit/receive and VOX functions. But, for SW listening I only needed to connect the output of the radio at the headphone jack to the "mic" input on my computer via a miniplug-to-miniplug patch cord. Now, utilizing HamScope ([www.qsl.net/](http://www.qsl.net/)

[hamscope/HamScope.html](http://hamscope/HamScope.html)) and other digital software, I was set to copy various digital modes such as RTTY, PSK31, MFSK, CW, and SSTV.

The KA1103 worked very well on the digital modes. Even with the telescoping antenna, I was able to tune RTTY and PSK31 ham transmissions on 20, 40 and 80 meters; setting up on the 20 meter SSTV window (14.230 MHz) netted some nice images (as shown). Tuning RTTY and PSK signals is very easy once you press the SSB button on the front panel and the audio level is adjusted. Tuning SSTV is a little trickier. Again, put the radio in SSB mode and, once you find a signal, adjust the volume and then the "clarifier" thumb wheel on the KA1103 until the signal bar on the software screen goes green. The image will start to appear.

### ❖ The Bottom Line

The Kaito KA1102 and the KA1103 are similar (though the KA1103 is the larger of the two): Both feature dual conversion, PLL synthesized tuning; both have SSB reception; and both have battery charging circuits. So, why would you want the 1103 instead of the 1102 when it's about \$20 more expensive? There are a couple of critical points where the 1103 wins out: the 1103 has continuous coverage from 100 kHz to 29,999 kHz (the 1102 has no long wave coverage and a small gap between 1,710 and 3,000 kHz); the 1103 has 268 presets (the 1102 has 190), the 1103 has a real tuning knob (the 1102 tunes via inconvenient + or - front panel buttons), and the 1103 has a line-out and a headphone jack (the 1102 combines both in one).

I happened to have access to both the 1103 and the 1102 at the same time. I used the same antenna for both radios and found the 1103 more sensitive. For instance, the 1103 was able to decode weaker SSTV signals on 20 meters that the 1102 could not. Ham SSB contacts were much more readable on the 1103. Similarly, international broadcasters came in noticeably better on the 1103.

The KA1103 is a great first radio for anyone interested in getting started in shortwave and amateur radio monitoring. It's also a very competent portable unit for seasoned SWLers to take on trips where bringing their main radio is not feasible. I think it might also be a very capable receiver for QRP (low power) enthusiasts who want to build their own tiny CW transmitters and take their hobby on the road. Add a transmit/receive switch and you'd have a nice compact station.

The MSRP for the KA1103 is \$109.99. I found this radio at a number of retailers including Grove Enterprises and Universal Radio (\$89.95), C.Crane (\$109.95), RadioLabs.com (\$94.95) and Durham Radio (\$109). Check each for current pricing and shipping information (some offer free shipping). The KA1103 is made in China and has a one year limited warranty.

## MANUFACTURER SPECIFICATIONS

### Tuning range

FM: 76.00-108.00 MHz  
AM: 100-29,999 kHz

### Power Supply

Battery: 4 AA NiMH Batteries (included)  
External power: DC input 8v 300mA  
Recharging time: 1-23 hours

### Dimensions (approx.):

Size: 6.5" wide 4.25" high 1.25" deep  
Weight: 13.25 oz. (without batteries)

### Ports:

External antenna jack (3.5 mm)  
Headphone jack (3.5 mm)  
Line-out jack (3.5 mm)  
Knobs and Switches:  
DX/Local slide switch  
Narrow/Wide audio slide switch  
Dial light slide switch  
SSB fine tuning thumb wheel  
Main tuning/main volume side mount knob

## Longwave Resources

✓ **Sounds of Longwave** CD or Audio Cassette (please specify) featuring WWVB, Omega, Whistlers, Beacons, European Broadcasters, and more!  
**\$13.95** postpaid

✓ **The BeaconFinder** A 65-page guide listing Frequency, ID and Location for hundreds of LF beacons and utility stations. Covers 0-530 kHz.  
**\$13.95** postpaid

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## Books by Ernest H. Robl:

*THE BASIC RAILFAN BOOK*

*UNDERSTANDING INTERMODAL*

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