

Kaito KA1102 vs Eton S350DL Comparing Two Under \$100 Portables

I must admit up front that I have never been much of a fan of head-to-head comparisons of radio equipment. To me they are more than a bit unfair to the manufacturer of the radio that “loses” in the comparison. It may be a fine radio; it just doesn’t measure up to the radio it is being compared with in the eyes of the reviewer.

So, when I was asked to do a series of shortwave portable comparisons for the Grove Tech staff, I was, well, a bit apprehensive. Therefore, before I step into the first installment in an *MT* battle of the shortwave radios, let me present a few caveats so that you will understand the limitations of this type of review.

- 1) Low end portable specifications can vary from batch to batch, making a subjective call on the entire manufacturing run difficult.
- 2) Quality control for lower end radios can vary from unit to unit, and may not represent the entire production run.
- 3) Some specs (i.e. such as audio quality, ergonomics, color selection, usefulness of synchronous detection) are purely a personal preference. What I like, you may not. What I hear, you may not.
- 4) While portable radios are nice, they are not DX machines. Anything below about \$500 in price is aimed more toward the casual or program shortwave listener, not the DXer or hard core utility listener. Yes, you going to hear your share of neat stuff, but unless you have a high end receiver, you aren’t going to know what you are missing by using a low end portable shortwave radio.

So, with this preliminary understanding of field in which we are working, this installment of *MT First Look* will compare the Kaito KA1102 (Grove RCV02 \$79.95) and the Eton S350DL (Grove RCV04 \$99.95).

KAITO KA1102

Inside the Box

The first thing I noticed when I took the radio out of the box was its size. Dimensions are 5.62 inches (143mm) x 3.46 inches (88 mm) x 1.12 inches (28.5 mm) and it weighs 9.8 oz. (280 grams), excluding the three batteries. This radio can be thrown into a briefcase or purse for travel.

Accessories included in the box include a carrying pouch, operating manual (plus a simple operating guide), AC adapter, three Ni-MH rechargeable

batteries, stereo earphones, external antenna (SW/FM only), and a wrist strap with stand support.

The manual was ok. I have seen better. There was no explanation to the beginner as to what shortwave is, etc. The typeset is a bit small due to the small size of the manual itself, but it is logically laid out.

On-the-Air Testing

During our testing, we used the venerable Sony 2010 as our bench mark receiver. The first notable advantage by the Kaito was in FM broadcast band reception. It beat the 2010 hands down when using only the whip antennas. But we did notice some images on the lower frequencies from the high end of the band. AM and shortwave sensitivity was much better on the 2010.

The receiver has good audio – not great, but given the size of the speaker (2.6 inches) it was interesting to hear some reasonable audio from such a small package. There was a noticeable audio improvement when I moved to headphones. However, they do not use a line out jack as the instruction manual indicates. The audio levels change using the volume control. I did notice that at times, depending on signal strength, the narrow AM filter had a detrimental effect on the received audio.

Receiver selectivity was surprising good for this price range. I was particularly pleased with the FM selectivity which is usually an afterthought. But what really surprised me about the 1102 was the inclusion of SSB reception capability. However, there is a negative here, also (see negatives below).

This is a dual conversion receiver. While that is good, we noticed more images, etc. when we

MT First Look Rating (0-10 scale)	
Kaito KA1102 Receiver	
Audio Quality.....	6
Audio Levels.....	6
Back light/Display	6
Battery Life.....	7
Dynamic Range	5
Ease of use	6
Feature Set	7
Keyboard/Button/Control Layout	7
Sensitivity.....AM-5, FM-6, SW-5	
Selectivity.....AM-6, FM-6, SW-6	
Overall Construction	8
Overall Reception.....	7
Overall Manual.....	5

connected it to an external antenna as compared to the same setup for the Sony 2010. AM reception was very good (see below), but FM reception was better on this radio than on the Eton and Sony. Shortwave reception was about equal to the other two radios, but the Eton and Sony were slightly better on the higher shortwave bands.

And for those who like tuning around, there was no chugging when tuning the 1102 like you have with the older Sony.

The 1102 Negatives

As I have said many times, no radio is perfect, and we are talking about a \$79.95 portable, so the Kaito has a few skeletons in its closet.

Tuning SSB signals is a chore. Yes, there is a SSB button on the side of the receiver, but it only receives SSB as long as the button is pushed. In order to put it into the SSB mode, you have to go through a convoluted procedure to keep it in that mode. There is no USB/LSB: instead, the radio uses a SSB fine tuning control to home in on SSB signals.

The learning curve for this radio is much steeper than the 2010 or even the Eton radio reviewed in this article. What makes this more difficult is its much smaller screen. If you are nearsighted, you will not have a pleasurable experience using the Kaito KA1102.

AM reception compared to the Sony and Eton was not as good – probably the result of a smaller ferrite loop coil inside the radio compared to the other two radios. The external antenna on the Kaito only works on the shortwave/FM bands, so AM broadcast band reception is not as good as on the other two radios.

I did note a bit of synthesizer noise



MT Rating: 2 1/4 Stars ★★☆☆☆

while tuning around; the Eton reviewed below had none. This is probably a direct result of the tuning methods used by the two portables.

There are few other quirks we noted, but this didn't affect overall reception.

Table 1 is a listing of manufacturer specs and key features.

**Table 1: Kaito KA1102
Manufacturer Specs/Key Features**

Frequency Coverage:	520-1710 kHz with 1/9/10 kHz steps – selectable
Medium Wave	520-1710 kHz with 1/9/10 kHz steps – selectable
Shortwave	3.00-29.99 MHz with 1/5 kHz steps – selectable
FM Band	70.0-108.0 MHz with 10/50/100 kHz steps – selectable
Conversion	MW & SW dual conversion
Bandwidths	Wide-Narrow AM/SW, Mono/stereo selectivity for FM
Freq/Meter Conversion	SW meter band indicator/conversion
Attenuator	Local-DX switch
Tuning Options	Digital frequency readout with manual tuning/speed change tuning/auto scan/memory scan/direct tuning and SSB fine tuning control
Memory Locations	190 random presets pages 1-6; band preset pages 7-9; ATS preset page 0, has Auto tune/Auto memory
Indicators	LED light signal strength (AM/SW four levels/FM three levels), includes a stereo reception indicator, battery level indicator
Clock function	12/24 hour selectable, Sleeping time direct entry 1-99 minutes
Audio Control	Push button
Tone select	News/music switch, FM stereo bass (earphones only)
Backlighting	Display/keyboard light
Antennas	Telescopic antenna for FM and shortwave and built in ferrite bar antenna for AM, plus external jack.
External Jacks	Earphone jack (stereo on FM), antenna jack, both are 3.5 mm diameter jacks
Speaker	2.6 inches (66 mm) in diameter
Power Source	Battery: 3 AA rechargeable Ni-MH batteries (recharging time 1-9 hours); external power: DC 6V 300mA; includes an AC-DC adapter

ETON S350DL

Inside the Box

The first thing that becomes obvious is the Eton S350DL is much bigger than the Kaito. The S350DL is 12.4 inches wide (315 mm) x 7 inches high (6.88 mm) x 3-1/2 inches (89 mm) deep. And it weighs a bunch more than the Kaito – 3 lb. 4 oz. (1.48 Kg).

Accessories included in the box included an operating manual, AC adapter, whip antenna (SW/FM only), and a very nice carrying strap attached to the radio.

The manual was good, well laid out and easy to read, and the radio is very easy to operate. The thing that grabbed me when I first turned it on was the receiver audio. It is among best I have heard for a radio in this price category. There are even separate treble and bass controls (which the Kaito doesn't have).

As mentioned above, no synthesizer noise was noted (the older Grundig Satellite 800 was plagued with this).

The LCD display is very nice, sharp,

and has good contrast when viewed from a various angles. Backlit illumination can be turned on or off, and, when changing frequencies, the LCD backlight automatically comes on while tuning.

AM, FM and SW reception is good, with the AM and low band SW reception is a little better than the Kaito.

The S350DL Negatives

One of my biggest complaints with the 350 is the tuning arrangement. This radio uses an analog tuning set-up of string-pulley-gears. To be honest, tuning was sloppy at best. Getting on and staying on frequency can be a chore. It was especially noticeable when smaller tuning steps were selected. There was a little too much play and backlash in this tuning setup for my taste and no way to change the tuning to improve these characteristics.

When you changed between AM-FM-SW bands on the Kaito, the frequency was where you left it when you returned to a band. Not so with the 350. If you did some tuning on one band and switched back to the previous band, your frequency will have changed. Also, the band selector switch (AM-SW1-SW2-SW3) can be touchy and is in a bad location.

MT First Look Rating (0-10 scale) Eton S350 DL Receiver	
Audio Quality.....	7
Audio Levels.....	7
Back light/Display	7
Battery Life.....	8
Dynamic Range.....	3
Ease of use	8
Feature Set	5
Keyboard/Button/Control Layout	4
Sensitivity.....AM-6, FM-5, SW-6	
Selectivity.....AM-6, FM-6, SW-6	
Overall Construction	6
Overall Reception.....	6
Overall Manual.....	6

The on/off switch also activates the sleep timer and requires the user to hold down the power switch three seconds in order to keep the radio powered on. The onboard clock appears to lose time over long periods.

Another real negative with the 350 is the lack of SSB reception capability. You definitely have the frequency coverage, but have no ability to receive any SSB signals with this radio. That means that well over 75% of the shortwave spectrum cannot be monitored on the Eton S350DL.

However, my biggest complaint with this radio is the fact that it is single conversion. This



MT Rating: 2 Stars ★★☆☆☆

does not bode well for connecting external antennas to improve reception – as our on-air test bore out. We found a lot more images with this radio than made us happy, even just using the external whip antenna.

Table 2 is a listing of manufacturer specs and key features.

**Table 2: Eton S350DL
Manufacturer Spec/Key Features**

Frequency Coverage:	530-1710 kHz
Medium Wave	530-1710 kHz
Shortwave	3.00 to 28.00 MHz
FM band	88-108 MHz
Conversion	Single
Attenuation	Variable RF gain control
Bandwidths	Wide-Narrow AM/SW, Mono/stereo selectivity for FM
Tuning Options	Analog tuner (string-pully-gear hardware) with digital frequency readout. Main tuning knob and independent fine-tuning control knob. AM/SW frequency lock.
Memory Locations	None
Indicators	Four level (eight bar) signal strength indicator, battery level indicator
Clock function	Digital clock with selectable 12/24 hour format, wake-up timer (use as radio-play alarm clock) and sleep timer.
Audio Control	Rotary volume control
Tone Select	Variable, independent bass and treble control
Antennas	Telescopic antenna for FM and shortwave and built in ferrite bar antenna for AM, plus external jack for supplementary AM, FM and shortwave antennas
External Jacks	Supplementary jacks for AM, FM and shortwave antennas, line outputs stereo, earphone socket in stereo.
Speaker	4 inches (101.6 mm) in diameter
Misc Features	Low-pass filter for shortwave and AM reception, and strap type carrying handle.
Power Source	4 D or 4 AA batteries (not included) or AC Adapter (included)

Note: Published specs subject to change

❖ Bottom Line – Head-to-Head

When we tested both these radios it was quite evident that manufacturers have come a long way in the last decade in improving the under-\$100 portable radio category. I can see some distinct markets for both radios.

The Kaito will have a wide appeal to the traveler. You get a lot of bang for the buck using this radio, including SSB reception. I was particularly pleased with the FM reception on the 1102.

The Eton is a listener's delight. It has some of the best audio in its class. I call this a retro radio because of its tuning mechanism and overall feature set. It reminds me of some of the old Panasonic portables back in the late '70s and early '80s, and based on some testing we did with the few we have in house, it compared favorably with those vintage models (except in dynamic range). So, if you want to monitor some overseas programming and are not interested in SSB monitoring, the Eton S350DL is worthy of placement in your receiver complement.

But who won, you ask?

The Kaito KA1102 was the victor in this head-to-head competition, and priced at \$79.95, well worth the bucks. There is a lot of performance in that small, barely 10-ounce package.