MT REVIEW

KAITO KA009 Dynamo & Solar Powered Radio

By Ken Reitz

As radio fans, our expectations soar when we come near a radio designed to tune the AM & FM bands, four shortwave bands, the NOAA weather band, the Aircraft band and VHF-TV band. If that same radio can be powered by rechargeable NiMH batteries, a hand-cranked dynamo *and* solar panels, we might be excused for drooling.

The KA009 from Kaito USA sets out to do all of the above in a case weighing in at just over a pound and selling at just over $40!

The Versatile KA009

The first thing you'll encounter when you open the box on this little radio is that it's wrapped in bubble-wrap and sealed in a heavy-duty, zip-lock, plastic bag. Don't throw it away! It makes a great all-weather protector for a radio which is small enough and light enough to take camping or backpacking.

The KA009 is in a one-piece molded plastic case which includes a substantial handle. The front of the radio features a 2" high and 2-1/2" wide analog dial panel on which is displayed an incredible 10 bands. The layout is clean and the alternating black and light blue lines makes identifying which band you're on quite easy. The print is big enough and clear enough for even older eyes to see easily. A slightly darker blue slide-rule dial pointer indicates the frequency tuned.

This radio uses a minimum of space on controls. There are only two knobs: a main conventional tuning knob and below it a smaller volume control. Below these knobs and the tuning dial are three multi-function slide switches controlling an amazing 14 functions.

At the upper left of the front panel are three LEDs. The first two indicate the status of the internal batteries. When the red "Lo" LED is lit, it means the NiMH batteries need to be charged. When the green "Hi" LED is lit, it indicates the NiMH batteries are charged. A third LED glows red when a strong signal is properly tuned and it also lights when the internal batteries are being charged.

The back of the radio houses a conventional 26" fold-over, telescoping whip antenna and the solar panel, as well as the "hide-away" dynamo hand crank.

The left cabinet panel has a headphone jack which doubles as an antenna connection for the external 46" flexible antenna which is included. Below that is a white LED bulb with a controlling on/off switch just below it. The light throws a good deal of light, certainly enough to be used as an emergency flashlight.

Putting a Charge into the KA009

The biggest feature on this radio is its four way power supply. The KA009 can use three AA alkaline batteries (not included); three built-in NiMH batteries (included) which are charged by a hand-cranked dynamo, a solar panel built-in to the back panel or a plug-in AC adapter (included).

The wall adapter is also a battery charger for the NiMH internal batteries. The owner's manual suggests that the first time you charge the internal battery you should charge it for at least 25 hours, but not more than 35 hours. A full charge will give you 10 hours of continuous playing time. To charge the batteries by the solar panel, simply turn off the main power switch and set the radio with the solar panel facing the sun. The manual suggests you'll need 12 hours of direct sunlight for a full charge.

It's not practical to use the hand-crank dynamo to fully charge the internal batteries: you'll only get 10 minutes playing time with every two minutes on the crank. You'll need to be on the crank 6 minutes for a half hour and 12 minutes for a full hour. If you've ever cranked one of these radios, it's pretty much a chore after the first 60 seconds.

The manual is a little uncertain about the NiMH battery pack life span. It states that the pack may be recharged from at least 500 times to as many as 1,000 times. The real worth of the dynamo is during emergencies when commercial power is down, it's totally overcast, and your home supply of AA batteries has been depleted. In other words: a hurricane, ice storm, tornado aftermath or similar weather disaster.

Tuning with the KA009

Before assessing the tuning capabilities of this radio, it's helpful to put it in its place. Its main role is to provide emergency reception of local AM, FM, TV or NOAA weather frequencies in times of power outages caused by severe weather or other regional calamities. With that in mind, it does a very creditable job. The KA009 is prepared for emergencies.

The aspirations of the radio go far beyond that role and that's exactly where it starts to run into trouble. Performance on all bands is pretty much what you'd expect from a small analog tuned radio. It's not a star performer on any band, but it does exactly what it says it will: tune the AM, FM, WX, TV and continuous shortwave from 4-26 MHz.

You can only expect so much from any analog tuned portable, but for the air craft band to be really useful it really needs a squelch control. Without it you'll be forever playing with the volume control and having to put up with band noise in between transmissions. Of course, the analog tuning means you'll be guessing when trying to locate local towers and ATS transmissions. Further, there's substantial receiver overload when overhead planes key-up, and I was able to pick up the local sheriff's office on one popular Air frequency.

I found there was consider-

The KA009 from Kaito USA could be the inexpensive, all-in-one, camping/survival radio you've been looking for. It tunes AM/FM/WX/TV/AIR and 4 SW bands from 4-26 MHz continuous coverage. Available in graphite gray, red and blue. (Courtesy: Kaito USA)

able ingress from local FM broadcasters on the TV bands, which is not uncommon in this type of analog radio. FM broadcasts are received as monaural despite the included stereo ear buds.

Tuning on the AM and FM bands was pretty close to reality. But, tuning on the shortwave bands was considerably off, which is also not uncommon in small analog tuned radios. Listeners are forced to use intuition, the fingers of a safecracker, and ESP to know where to tune.

Since tuning is continuous from 4 to 26 MHz, you might be able to tune the 40, 20, 17, and 15 meter ham bands, but there's no BFO available to tune in SSB transmissions. You'll have to step up to the KA1101, KA1102 and KA1103 for SSB capability, phase lock loop tuning, digital displays and a bigger price tag.

The audio from the miniscule 2" speaker is adequate for emergency listening, but would surely get tiresome for any length of time.

And, finally, despite the abundance of "free" power, there's no provision for a dial light, which leaves you pretty much guessing as you tune around in the darkness of a power outage.

Kaito KA009
Manufacturer Specifications
Size: 5.5" H x 6.5" W 2.25" D
Weight: 1 pound (with 3 NiMH batteries)
Tunes:
AM (530-1710 kHz)
FM (88-108 MHz)
Air (118-137 MHz AM mode)
NOAA WX: 162.400/162.425/162.475 /162.50/162.525/162.55 (continuous coverage)
TV1: Channels 2-6
TV2: Channels 7-13
SW1: 4 MHz-9 MHz
SW2: 9 MHz-14 MHz
SW3: 14 MHz-19 MHz
SW4: 19 MHz- 26 MHz

Audio Output: 200 mW peak power using built-in speaker.
Headset jack: 3.5 mm (monaural earbuds included).
External DC supply socket: 6 mm (positive center). External AC adapter (included) charges batteries and powers the radio. 6 Hours charging: 72 hours playing.
Internal DC supply: 3 NiMH batteries 600 mAh (included); hand-crank dynamo; solar panel on back of radio also charges the batteries. 12 hours of sun charging gives you 6-8 hours playing, depending on volume level.
Antenna: Built-in 24" telescoping whip for AM/FM/TV/WX/SW. 46" flexible wire antenna plugs into headphone jack for SW reception. Internal AM ferrite bar antenna.
This product is made in China.

Bottom Line

The KA009 is a capable emergency radio which can also serve as a daily use general coverage radio. The versatile four way power supply means you'll never worry about batteries in a real emergency. The enormous tuning capability means you can tune in local emergency broadcasts on NOAA WX radio, local VHF-TV stations, local AM and FM stations, and listen to the powerhouse shortwave broadcasters. It shouldn't be your only radio, but it can definitely be your emergency radio.

The competition to the KA009 is the Grundig FR-300 (see *MT* Oct. 2005) and the Grundig FR-200 (see *MT* October 2002). The fact that the KA009 combines the features of both the FR-200 and FR-300 in one radio gives the edge immediately to the KA009. The one thing the FR-300 does which the KA009 doesn't is allow the charging of a variety of cell phone batteries using the hand crank and an included adaptor. That's a great feature which Kaito might consider adding to a future edition of the KA009.

I've always thought this type of radio was a great present to introduce a youngster to radio. There are lots of knobs and switches, interesting bands to tune in and potential experiments to be tried with the solar panel, the hand-crank, and the LED light. It's the kind of radio which could kindle the interests of the young into going deeper into a hobby you already enjoy. And, it's tough enough to take the kind of knocking a kid might give it.

The KA009 is available in graphite gray, a brilliant blue, and what can only be described as emergency red. It comes with a wall mount power supply, rechargeable NiMH batteries, ear buds and 46" flexible external antenna. On the Kaito home page, the list price is $54.95. It's a new model and not yet widely available, but I did find it at 21st Century Solar for $41.99: **www.21st-century-solar.com**