

## The AlexLoop WalkHam Portable Loop Antenna Phil Salas – AD5X

As discussed in QST and other publications, a small loop antenna can be an effective radiator if it is properly designed so as to overcome any issues associated with its high RF currents and voltages, and very low radiation resistance. Alexandre Grimberg PY1AHD has experimented with loop antennas for over twelve years, specifically with low power, efficient, portable operation in mind. His work has resulted in the AlexLoop WalkHam portable loop antenna.



Figure 1: Packaged AlexLoop WalkHam



Figure 2: The disassembled WalkHam

### Description

The WalkHam is rated at 20 watts PEP/10 watts continuous transmit power and covers 7-30MHz. It comes in a small cushioned bag and consists of a DLC-213 flexible coax loop, a feed-loop assembly, a middle section, and a manual tuner assembly. The DLC-213 coax is similar to LMR-400, but holds a circular shape better. The manual tuner uses a split-stator capacitor to avoid mechanical contact losses. Internal gearing permits smooth and easy tuning from 6.9-30 MHz over the 270 degree rotation angle of the variable capacitor. Assembly takes just 1-2 minutes and consists of slipping three tubes together, unrolling the coax loop, snapping the loop's center to the upper end of the feed-loop assembly, and attaching the loop's coax connectors to the tuning assembly. The connect the pendant coax cable to your transceiver and you are ready to operate!

### Operating the WalkHam

When vertically oriented, the WalkHam radiates a bi-directional signal with maximum radiation in the plane of the loop, and deep nulls perpendicular to the loop. And because the antenna is very high Q, you will need to re-tune with even fairly small frequency changes. Alex recommends operating while sitting in a chair or bench, holding and tuning the WalkHam with one hand and operating your radio with the other hand. I found it easier to support the WalkHam on an inexpensive camera tripod. That way I could easily tune the antenna, orient it for best signal strength, and then concentrate on operating my radio.

The WalkHam works well just 3-4 feet above ground level, and is easy to tune as the tuning assembly is located at the base of the loop. To tune the antenna, adjust the tuning capacitor for maximum receiver noise. Then transmit and touch up the tuning for best SWR. I found this very easy to do with my KX3. After peaking receiver noise, pushing the KX3 TUNE button enables a continuous carrier and displays SWR. Within seconds I could easily tweak the loop for a minimum SWR of 1.3-1.4:1 on 40-12 meters, and 1.6:1 on 10 meters. Incidentally, I did find that the proximity of my hand to the tuning capacitor did NOT noticeably impact tuning. As a matter of fact, after tuning for minimum SWR, removing my hand from the tuning knob often resulted in a slightly lower SWR.

I operated primarily on 40-, 30-, 20-, and 17-meters due to band conditions during the review. Transmit power was 10 watts. Overall, I thoroughly enjoyed WalkHam operation (Figure 3)! I found that when operating CW (my preferred mode), I could work anyone I could hear. SSB was challenging on 40 meters, though I did have success calling S9-level stations. However, SSB QSOs were easy to make on 20-meters, and a real joy on 17-meters. I can only imagine that performance on 15-10 meters would be outstanding when those bands are open due to the higher efficiency of the antenna on the higher bands.



Figure 3: AD5X enjoying outdoor QSOs with the WalkHam and battery-powered KX3

## Conclusion

The WalkHam is an effective antenna worth considering for light-weight quick set-up/tear-down portable low power operation, and for hams located in apartments or homes with CCRs. And while it may not be as efficient as a much larger properly installed antenna, its directive nature, compact size, low height performance and easy tuning can equalize any efficiency trade-off.

Manufacturer: PY1AHD Alexandre Grimberg, [www.alexloop.com](http://www.alexloop.com).

List Price: \$366 shipped

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Side Bar – Addendum: Camera Tripod adapter for the AlexLoop WalkHam

A camera tripod is an effective WalkHam support, and many tripods will even fit in the WalkHam carrying case with the antenna. The standard camera employs a 1/4-20 insert for mounting. To build a WalkHam/tripod adapter, purchase a 1/4-20x7/8" threaded stainless-steel coupling, a sprinkler system 1/2" plastic barb coupling, and a sprinkler system 1/2"x6" plastic cut-off riser from your local big-box hardware store. Cut the 6" riser to 4". Use a bench vise to press the 1/4-20x7/8" coupling into the 1/2" barb coupling and then press this assembly into the 1/2"x4" riser. Figure 4 shows the final assembly, and Figure 5 shows the adapter screwed onto the tripod camera mount screw.



Figure 4: Camera Tripod Adapter for WalkHam    Figure 5: Tripod Adapter on camera tripod

Now just slip the WalkHam over the adapter. For windy conditions you may wish to wrap some electrical tape around the adapter to create a slight friction fit between the tripod adapter and the WalkHam.