

FRENCH DX LISTENER EXPERIENCE FOR SWL COMMUNITY

Buddipole antenna, NRD-545 receiver and Clifton Laboratories Products For Excellent Listening SW, MW, LW, VLW

I am French DX Listener with two receivers HF: JRC NRD-525 and 545 and for the last 18 months, I've found a combination of Buddipole telescoping whip antennas, with various Clifton Laboratories active antennas, amplifiers and accessories to provide excellent results.

Buddipole Telescoping Whips

First, a word about the Buddipole whips. Buddipole sells two telescoping antennas, the "Standard Length", which extends to 9,5 feet (2,9 metres) and a "Medium Length" with a maximum length of 5,5 feet (1,7 metres.) I own three Buddipole whips, two Standard Length and one Medium Length. (Standard Length whips are black, and the Medium Length is available in either chrome or black.) Both whips have brass studs, 3/8"x24 threaded for compatibility with standard mobile radio hardware.

Flex but do not break. In France, autumn and winter regularly bring strong winds and this year is no different. Extend to its full 9,5 ft length, mounted on the balcony rail of my apartment, the Buddipole whips flexed but were not damaged and were always effective. (I made the tilt bracket).

Buddipole also has two extension arms available. These extension arms attach to the threaded stud end of the telescoping whip and extend its length. The longer arm is 22 inches (0,56 metres) and the short version is half this length, 11 inches (0,28 metres). I recently purchased two short extension arms and added them to my Buddipole whip with good results. The whip plus extension arm is mechanically solid.



Buddipole's web site is <http://www.buddipole.com/> and the telescoping whips and extension arms are in the Antenna Accessories section.

Extending the NRD-545's Low Frequency Range

You know that this wonderful receiver can receive below 100 KHz—yes the NRD-545 can! To enable tuning below 100 KHz, simply turn the "POWER ON" while holding the "ENT/kHz" button down. Your NRD-545 will now tune down to 10 kHz. (This function is covered in the NRD-545's Instruction Manual, page 17, first Special Operating Mode).

Although the NRD-545 will tune down to 10 KHz after enabling the Special Operating Mode, the receiver's sensitivity significantly degrades below 100 KHz. Dallas Lankford has developed a modification to the NRD-545 to improve LF/VLF sensitivity, details in his paper "Improving the sensitivity of the NRD-545 LF/VLF" by Dallas Lankford 05/12/2003. However, these modifications should not be undertaken unless you are experienced in electronics, know how to install and remove surface mount parts, have all the special tools, are in possession of good components and have test equipment to verify performance after the modifications.

For my part, I do not meet all these criteria are required to complete this project.

An alternative approach is to add external amplification below 100 KHz to overcome the NRD-545's lost sensitivity. This is not as desirable as modifying the NRD-545, but it's much easier and does not require opening the receiver's cabinet.

Clifton Laboratories Active Antenna, Amplifiers and Accessories

As mentioned, my main receiving antenna is a Clifton Laboratories Z1501D Active Antenna, which permits reception between 20 KHz and 30 MHz (usable to well over 100 MHz). The Z1501D uses a Buddipole Standard Length (or optionally, Medium Length) telescoping whip. Signals from the telescoping whip are amplified and impedance matched with a high performance "whip amplifier" that can be seen in the photograph above. It's inside the rectangular aluminum box.

Clifton Laboratories is owned and run by Jack Smith, who started his radio work 50 years ago as a high school student and amateur radio operator, K8ZOA. After retiring, he started Clifton Laboratories to make kits and assembled products for amateur radio operators and shortwave listeners.

In my case, I have used Clifton Laboratories' Z10042AV and Z10046A preamplifiers between the Z1501D and my NRD-545 when listening below 100 KHz. Both work well, but the Z10046A has additional gain (23.5 dB) compared with the Z10042AV (11 dB). The photograph at the right shows how I installed the Z10042AV preamplifier. (The Z10042AV is in a custom die cast box, available on special order from Clifton Laboratories.) The bottom plastic box holds a Z1505A common mode choke and the upper box holds a Z1202A DC coupler and a Z10050A two output antenna splitter.)

Above 100 KHz additional gain is not needed, and the preamplifier may be bypassed or the NRD-545's attenuator selected.

Clifton Laboratories

Clifton Laboratories main web site is www.cliftonlaboratories.com. This site is very well done, clear and practical with a wealth of useful information.

The "Current Products" page has details on Clifton Laboratories' main products. Jack tells me that he plans to have several new products introduced in early 2011 of interest to shortwave listeners.

He is also willing to modify existing designs for special applications, and will respond to your questions by e-mail. Jack.Smith@cliftonlaboratories.com.



The main Clifton Laboratories products available as of writing this paper (November 2010) are:

- [Z1501 Active Antenna](#), antenna telescopic whip and its 20 KHz to 30 MHz preamplifier.

Three Norton Amplifiers:

- [Z10040B Norton Amplifier](#). Classic through-hole component version.
- [Z10042A Norton Amplifier](#). Surface components version.
- [Z10042AV Norton Amplifier](#). Components optimized surface LW VLW version.

New preamplifier high gain

- [Z10046A High Gain Preamplifier](#).

Splitter

- [Z10050A](#) for coupling two receivers in a preamplifier.

Couplers 13.8 Volt supply

- [Z1203A DC Power Coupler](#) DC Power Coupler 13.8 Volts. I use the older (and not now available) [Z1202A](#).

Common mode choke

- [Z1505A](#) not on the site but I use the Common mode choke well minimize interference and provide more access to the LW/VLW.

This information is non-profit for me but can only be a help to our family of hardliners DX Listeners.

Very cordially from Paris city, Capital of France

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