Updating older antennas

Since obtaining Directive Systems from K1WHS in 2013 and resurrecting the original Rutland/C3i K1FO designs, we have made some significant changes to enhance the robustness of our antennas and make the antennas easier to assemble and match.

6 meter antennas – All of our 6m antennas are the original design by K1JX sold by both C3i and Ariane Arrays from 1999 through 2009. Any repair parts will be direct replacements.

2 meter antennas – The 144-6RS now uses ¼" elements and uses a uniform 1 1/8" two-piece boom. It now uses the same driven element assembly as the FO144-12 which is the original design by K1FO sold by Rutland Arrays and C3i. The original 144-6RS and FO144-12's sold prior to 2013 use 3/16" elements and use brass driven elements, tee arms and have soldered shorting bars on the driven element. Parts are no longer available but we offer a new driven element complete (see the "Parts and Acc" tab on our website). All of our 2m antennas now use ¼" elements as did the original K1FO designs sold by Rutland Arrays and C3i. ¼" elements are far more resilient to large birds bending elements (and branches from roving!!) and give wider bandwidth.

135cm (222 MHz) antennas – Mechanically, all of these antennas remain the same except for new driven element components. The infamous "blue insulators" are no longer used. They became much too hard to find and the price went out of sight, not to mention they were VERY prone to breaking due to UV attacking the plastic. Our new insulators are made from pure Delrin® rod 3/8" in diameter, these WILL NOT BREAK!! In addition, we're now use brass rod for the tee arms instead of #12 soft copper wire. We've replaced the soldered shorting bars with nicely machines brass bars with stainless steel set screws. The 222-10RS now uses a two-piece 1 1/8" boom, the FO222-16 and FO222-22 are identical to the ones sold by Rutand Arrays and C3i except for the updated driven elements.

70cm antennas – All of our 70cm antennas have followed the same upgrades as our 222 antennas.

33cm loop yagis – All of our 33cm loop yagis are the same as they have been for many years – no reason to mess with a great product!! We've made some slight changes to the 3347 sub-boom, so it now uses the same parts as the 2355's.

23cm loop yagis – Once again, all of our 23cm loop yagis remain unchanged except the 2355's. After having an H frame of 2355's up at the K8GP location at W4RX's QTH, it became apparent to me these needed a boom sag. A 15' long 1" diameter boom is just on the limit of sag. So we redesigned the antenna layout so the boom now consists of a 6' rear section, the 3' section is now in the middle and the front is a 6' section. With a 6' long ¾" X .125" wall square tube boom sag, there is no sag at all and the antenna will survive just about anything! We used the same components as the 3347, the 1376 and the 9112 so it saves us manufacturing costs which saves you $$$!!

13cm and 9cm loop yagis – no changes

6cm and 3cm feeds and dishes – We no longer have the heavy steel dish rings. The price to custom manufacture them just got too expensive and I don't think anyone wants to pay $150 for a mount! We've added a large, stainless steel washer to use with the cast aluminum mount that better supports the center of the dish and in my testing up to 90 MPH winds, our 2' dish is fine. All of our feeds remain the same fine W5LUA designs. We now paint the feeds which prevents them from oxidizing and we recommend using Styrofoam in the mouth to keep little critters from making the feeds their homes. Organic material and RF really don't get along! We also don't offer the "high isolation" option on the DB feeds any more. After testing, I've found that placing a feed in front of the reflector can make an hours' worth of adjusting pretty well useless. It is recommended to always use a relay on both feeds (especially the 5GHz portion) to protect your receiver from RF overload. On all of my systems, I put the N.O. contact of my relays to the receiver and the N.C. contacts to my PA. When you switch to that band, the relay energizes only in rx and in tx, voltage is removed.