6340 Sky Creek Drive, Sacramento, CA 95829
TEL: 01+ (916) 383-1177 FAX: 01+ (916) 383-1182
WEB: http;//www.Jampro.com E-Mail: jampro@jampro.com

# Frequently Asked Questions (FAQ) about new FM antenna installations:

Q There seems to be too high a VSWR compared to the factory test data.
A A missed bullet is the most common reason for this. Check that all were installed. Another common problem relates to proper installation of the bays. They are numbered with bay #1 being the top. Be sure that's they way your riggers installed the array. It might be wise to verify the coax was installed correctly by terminating the coax into a resistive load and measure the coax system at the point where it normally attaches to the transmitter. If it is not good here, fix the coax first and try again. And, believe it or not, a bay or two might be installed upside down. Compare the antenna to the installation drawing to be sure each bay is installed correctly. Finally, is the antenna being mounted on a tower that is different from the mounting specifed on the station's order? For this case, call Jampro customer support for help in matching to the different tower 01+916-383-1177 EXT 305. or email jampro@jampro.com.

Q I ordered a deicer equipped antenna but can't find any instructions as to where to mount the thermostat.
A Because some customers decide to use a different manufacture's sensor, check the documents with the other brand sensor for installation instructions. If you are using a Jampro dual temperature sensor, it should be mounted such that it is exposed to the same temperature as the antenna bays. On taller towers, that would be near the bays. For short towers, it can be at the bottom of the tower. Additional information is available on our web site, www.Jampro.com under Support then Technical Library and choose Diecer Information.

Q My U bolts don't fit my tower legs.
A If your tower has different diameter legs than specified on your order, call our customer support department to buy larger or smaller U bolts for your tower.

Q As I install the antenna bays, one of the brackets wants to be located right where I have a tower leg flange.
A Most Jampro tower mounting brackets are reversible. Simply turn your troublesome spot's bracket upside down to clear the tower leg flange. It might be easy to move the system up or down on the tower to clear the flanges.

Q I am leaking air.
A There are lots of possibilities for this question. First, the pressure should be normally set at about 2-3 pounds. If yours is set up near 10 pounds or more, the "pop off" value will be open and bleed air. This is normal and is how the antenna and coax system is purged. Back down the pressure to make the value shut off. Other things to look at: did each coax and antenna joint get the "O" ring installed? If the ring is missed, there will be an audible hiss at that union. For Heliax or Heliflex coax, did the riggers use the right number of hoisting grips when installing and support the coax at the appropriate intervals? If not, the coax can be stretched and will leak. The most obvious rigging error is to attach the coax fitting to the antenna without any support … then install the tower to coax mounting clips. This puts the full coax weight on the coax output connector causing the coax to stretch and leak. The coax must be cut back and the connector re-installed correctly. For Penetrator antennas, on rare occasions, the wish bone feed through (white insulator on the boom arm) connections have shaken loose in transit. Snug these down if this where the air leak occurs.

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Q I only have 50 feet (or other short link) of coax. Do I have to pressurize the antenna?
A Yes. Moisture will de-tune the antenna and can lead to failure.

Q I think some of the hardware is missing.
A Check the packing list (usually in box #1 with the instruction book) against what you received. Sometimes the bags containing the hardware tears loose during transit and spills inside the shipping container. Check inside the box if the container shows signs of being roughly handled. If the hardware slipped out of the box in transit, file an insurance claim and call Jampro customer support for replacement items. 01+916-383-1177 EXT 305. or email jampro@jampro.com.

Q Which way do my radomes get installed?
A A small notation on the installation drawing is your clue. The drain hole goes on the bottom. The radome is usually attached to the antenna bay at ground level the hoisted up the tower to be sure the bay and radome are installed right side up.

Q I dropped my Fine Matcher tool and can't find it. Is there a quick work around or do I have to order a new one and wait?
A Use a standard 9/16" deep socket (1/2" drive), Vice grip Pliers to lock / unlock. Use a screw driver to adjust matcher through the hole in the socket. Instructions for adjusting the fine matcher are at http://www.jampro.com in the support section.

Q I was planning on using Nitrogen to pressurize my antenna. Any thoughts?
A There is an on-going debate about the use of Nitrogen as a RF pressurization gas. A reprint of an article on the topic is available on the Jampro web site (http://www.jampro.com) in the Support area. The preferred method is dry air.

Q How can I tell if all my deicers are working?
A A tower climber's solution: feel the bay (with RF off and deicers on). The engineer's solution, measure the current in the AC line. A little bit of math will tell you if all the elements are working. There is a chart in your instruction book to help. Lost the book? The deicer document is available on line at http://www.jampro.com in the support section.

Q Causes for deicer failure?
A Jampro uses very rugged, long life deicer elements. The most common reason for one or two heater elements not working is the AC wiring in the break out box at the rear of the antenna bay attached to the antenna mounting bracket. The wing nuts that hold all five element wires together with the AC supply can work loose over time and cause one of the elements to not heat. Disassemble, clean and re-assemble with a conductive paste and the wing nut to keep out moisture. Of course, a lightning discharge in the AC wiring can also break the cables going to the deicer element inside the bay. This requires replacing the heater element. A call to customer support at 01+916-383-1177 EXT. 305 will help you decide on the best replacement approach for your situation.

Q Can I change the operating frequency of my antenna?
A Probably, if you are comfortable working with a network analyzer and replace the frequency determined components (the matching transformers inside the shunt line of most antennas).

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Q How do I effect field tuning of the antenna?
A In most cases, field tuning is not needed for Jampro FM antennas. To touch up tuning; if the antenna was ordered with a Fine Matcher (FM part was order with antenna), see the instructions in the manual. Lost the manual? Go to the Support section of our web site and download the Penetrator (or JLST) tuning instructions. http://www.jampro.com. These instructions cover both antennas with and those without Fine Matchers.

Q Can I take a DA antenna and convert to non-DA?
A Probably. Remember that any antenna mounted on any structure will have some pattern distortion and the antenna was optimized for your particular DA. If coverage is critical, contact Jampro for help in assessing the best approach for your particular circumstance.

Q My coverage is not like I expected.
A There are many possibilities here. Check first for problems in the antenna installation (bay or bays upside down, bullets missing, bullets put in crooked, moisture in the antenna, bays not installed in order, the tower in use is not the tower the antenna was ordered for, etc.). If the order was for FCC Directional, Pattern Measurements or Pattern Optimization, verify the antenna is aimed correctly per the drawing provided in the instruction book. We have had circumstances where a rigger installed the antenna aimed 180 degrees away from where the drawings showed. Most often the error is in aiming. Your surveyor should be sighting the antenna boom arm vs. what is on the test data. Then the mechanical settings should be verified against the installation drawing. Tolerances for mounting FM antennas are typically ±1/8" (1/4" total) or smaller. Your consultant can run the azimuth pattern through one of the Longley-Rice software packages to give an indication of the expected coverage to be sure your expectations are not out of line with reality. Most of these software packages are very expensive, so stations seldom have their own copy. They create approximations, not explicit coverage patterns.

Q I've misplaced my installation drawings.
A Contact customer support at 01+ (916) 383-1177 EXT 305 or email us at jampro@jampro.com for a replacement. For new antennas, these drawings are in PDF format and can be emailed. Older antennas are paper only and must be faxed. Make a copy and put in a safe place for future reference.

Q Which way should I aim the FM antenna?
A If you ordered Pattern Measurements, Pattern Optimization or as a FCC Direction Antenna, the installation drawing will indicate the correct azimuth referred to True North. If these measurements were deemed not necessary, arrange the bays such that the back side of the tower (opposite of the side of the tower where the bays are mounted) is aimed an area where tall building and auto penetration are less important. The bays are, more or less, aimed where the most important reception is desired. Typical patterns are available from customer support for various size towers; email jampro@jampro.com or call 01+ (916) 383-1177 EXT 305.