



### **Jampro RCHA-323-10HD**

The Jampro RCHA-323-10 HD and smaller RCHA-222-10 HD Digital FM Radio Injectors provide high levels of isolation and have properly sized inputs for analog and digital FM transmitters. It satisfies I.B.O.C. (HD Radio) standards.

The RCHA-HD series Injectors both feature Jampro's established rugged design. The effective self cooling design provides safe combining without the need for AC powered cooling fans. Jampro can provide this injector for use with station provided coax and reject load or as a complete system with all these components included for a quick, trouble free installation.

Jampro computer aided design and manufacturing techniques ensure repeatable broad band performance for each and every unit.

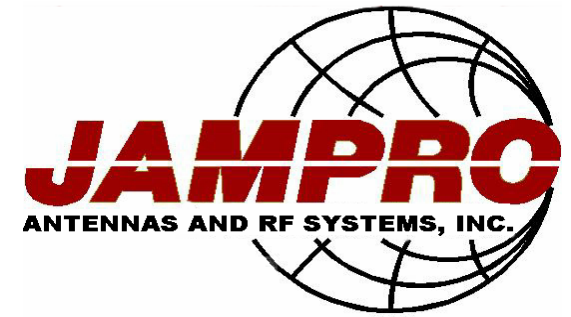
The **Jampro Dual HD FM Antenna** system provides exemplary linearity and power handling capability. The antenna is based on Jampro's 50 plus years experience of building FM and TV broadcast antennas.

The Dual HD antenna provides isolated and separate inputs for both analog and digital transmitters. This approach allows the digital transmitter to operate at its target power with NO power lost in reject loads and NO power reduction caused by 'lossy' digital injectors. There is no single point failure that can take the antenna system totally off the air.

Several other HD models are available including Dual Input Side Mount, Dual Input Panel, Space Combined Bays and Wide Band Combined arrays



**JHPC-2 +JHPC-HD-1 Separate Bays**



**Your Partner for  
HD Radio  
Solutions**

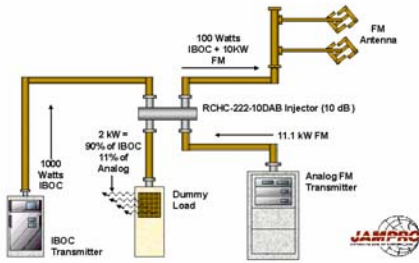


**KSL - 13 Station FM Antenna**

# Jampro - HD Radio Steps To Success

## Injector System:

### Separate Amplification IBOC FM System



#### Applications

For All Power Level Stations  
 Limited Tower Capacity  
 Omni or Directional Patterns  
 Single or Multiple Frequencies  
 Typically Single Station

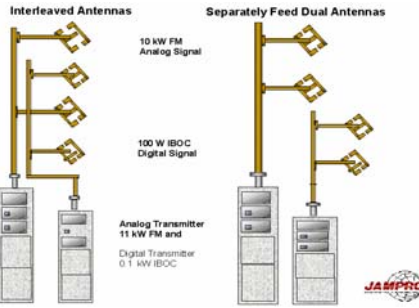
#### Pros

Inexpensive Hardware  
 Use proven antenna  
 Easy Installation  
 Use existing Analog Tx.  
 Low Cost intro to HD  
 Increased Isolation

#### Cons

One Antenna for both  
 Wasted energy in reject load  
 Single Failure points  
 High Cost of Operation  
 Low efficiency  
 Higher Power HD Tx.  
 HVAC Concerns

## Spaced Combined HD Antenna



#### Applications

For All Power Level Stations  
 Sensitive to analog signal protection  
 Tower capacity not an issue  
 Medium Cost intro to HD  
 Single or Multiple Frequencies  
 Typically Single Station  
 Omni or Directional Patterns

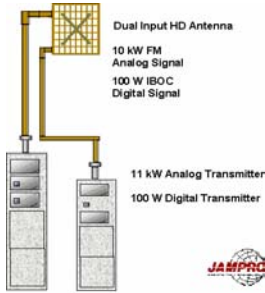
#### Pros

Lower Power HD Only Tx  
 No Injector power loss  
 Protects Analog Signal  
 Redundancy HD/Analog  
 Use existing Analog Tx.  
 Interleaved Saves Tower Space  
 Increased Isolation  
 Inexpensive intro to HD

#### Cons

More Tower Space - Separate Bays  
 Possible Elevation Pattern effects  
 Expense of 2nd Xmission line  
 Tower Loading for Separate Antenna  
 HVAC sizing issues

## Dual Input HD FM Antenna



#### Applications

For All Power Level Stations  
 Typically Multiple Stations  
 Use when HD/Analog Pattern Critical  
 Back Up Redundantly  
 Large Face Sized Towers  
 Critical Directional Patterns

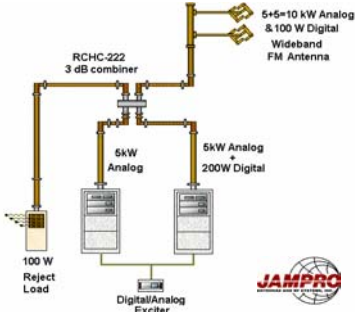
#### Pros

Ground up design for HD  
 Predictable Performance  
 Easier to do DA's  
 Bandwidth/broadband  
 No Injector power loss  
 Use existing Analog Tx.  
 Ability to add stations

#### Cons

Higher Cost  
 Higher weight & wind load  
 Larger Tower needed  
 HVAC sizing issues

## Medium Power Combined HD



#### Applications

Higher Power Levels  
 Single Frequency  
 Where AC costs are high  
 Can't change antenna  
 Can't change tower space  
 TPO not available for low level combining

#### Pros

No Injector loss  
 Use existing Analog Tx  
 Lower Power Reject load  
 Re use Xmission Line  
 Re use FM Antenna

#### Cons

More costly than other choices  
 More floor space  
 Accurate tuning of Tx's needed  
 HVAC sizing issues