MODEL 632 DESCRIPTION

Inovonics' Model 632, introduced in 2010, is a 'confidence monitor' radio receiver for standard FM analog radio broadcasts and the accompanying hybrid-digital broadcasting channels utilizing the iBiquity HD Radio on-channel transmission system. The 632 provides left/right analog and AES digital program-audio line outputs for audible monitoring, a front-panel display of FM-RDS and HD-PAD 'metadata' that accompanies these transmissions, plus a selection of received-signal quality indicators.

HD RADIO 'DIVERSITY DELAY'

The HD Radio digital component of the hybrid FM broadcast requires significant time for its transmission encoding, reception decoding and buffering for effective error correction. While an analog FM transmission is near-instantaneous, the HD Radio component has a built-in latency (delay) of about 8 seconds. Common practice is to delay the FM signal by this same 8 seconds, thus making the transition between reception modes unobtrusive as the radio blends from FM to HD.
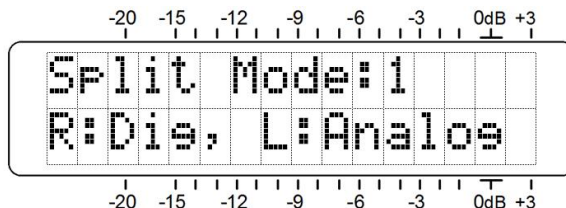
'SPLIT-MODE' OPERATION

An important feature of the 632 receiver is that it will remain in whatever reception mode it is set for, either analog FM or HD Radio. But to confirm coincidental reception of the two modes it is necessary to hear both at the same time. Although this feature is not included in its main menu structure, the 632 is nonetheless able to provide this function via a secondary sub-menu. The following steps show how to get into the Split Mode.

1. Set the 632 to receive the HD1 digital program as shown in the top screenshot on the right.

2. Push and hold the ←MENU→ knob until the LDC display changes to the Firmware Revision screen shown in the second illustration. This requires holding the knob down for several seconds.

3. Once the Revision screen appears on the LDC display, release the knob, and then turn it clockwise three notches. This will bring up the Split Mode screen shown in the bottom picture. Note that the default setting for this option is 0 (zero), meaning that the Split Mode is not activated. This is the normal operating mode of the 632, which must be restored after you have finished Split-Mode testing.
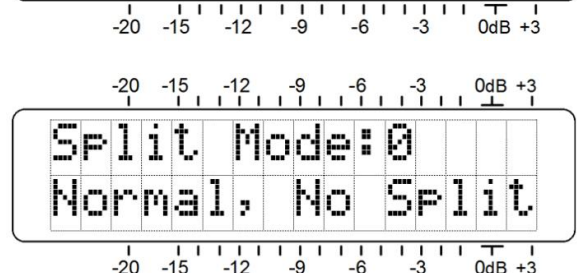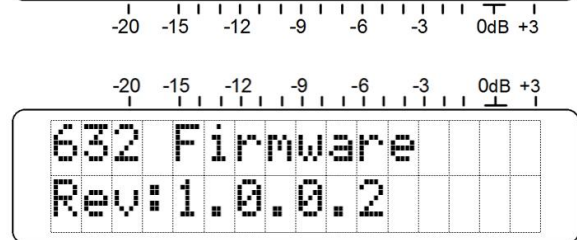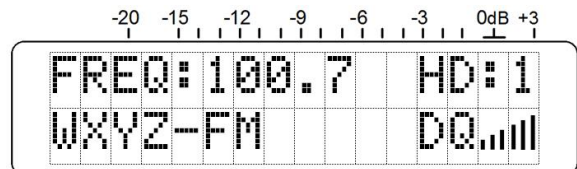
4. Push the knob again. The 0 (zero) will begin blinking. Now turn the knob one notch clockwise to change the 0 to 1, as depicted here, and push the knob once again to lock-in this mode.

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-20  -15   -12    -9    -6    -3    0dB +3
 |    | |  | | | | | | |  | | | |  |    |
┌────────────────────────────────────────┐
│ Split Mode:1                           │
│ R:Dig, L:Analog                        │
└────────────────────────────────────────┘
 |    | |  | | | | | | |  | | | |  |    |
-20  -15   -12    -9    -6    -3    0dB +3
```

At this point the HD Radio digital audio program will be heard in the right channel, and the analog FM signal in the left channel.

Split Mode is intended for temporary use only. It is not backed-up in memory, meaning that a power cycle will restore the 632 to regular operation. Split Mode is relegated to adjusting and confirming a proper diversity delay setting.

When you have completed your Split Mode testing, push the knob and rotate it one notch counterclockwise to change Split Mode:1 back to Split Mode:0. Push the knob again to lock the 632 back into normal operation. You can then escape back to the main menu by rotating the knob three notches to the left, and when the Firmware Revision screen appears just push the knob one last time.

ADDITIONAL OPTIONS

The secondary sub-menu does give a few additional test-mode options for Split Mode operation. In Step 4, above, this mode offers these further alternatives:

Split Mode:2	This gives Split Mode operation as described above, except that the analog FM channel will be heard in the right channel, and the HD Radio digital program in the left.
Split Mode:3	The analog-FM stereo program will be heard in the audio output.
Split Mode:4	The HD Radio digital stereo program will be heard in the audio output.

Again, after using any of the Split Mode features, be sure to return the setting to Split Mode:0 before exiting this menu.