

Update on FCC Narrowbanding Regulations for US Operation

30 April 2012

Important Clarifications from the FCC

On January 1, 2013 all radios transmitting data between 421 and 512 MHz within the US must operate in either of two modes:

- 12.5 kHz channels, at any radio link rate
- 25 kHz channels, at 19200 bps

These narrowbanding restrictions apply to all models of Pacific Crest radios transmitting data in the U.S. There are no restrictions on receivers, just transmitters.

You do not need to contact the FCC regarding existing licenses. Existing licenses will remain valid and existing radios will remain legal as long as you transmit in either of the above narrowband modes. Note that on January 1, 2013, the Narrowbanding requirements will supersede the terms of any license and you will not be permitted to transmit in 25 kHz channels with a radio link rate less than 19,200 bps.

If you need a new license or wish to renew or modify an existing license, you may do so online at <http://wireless.fcc.gov/uls/>. If you wish to transmit in the 25 kHz / 19200 bps narrowband mode, you will be prompted to fill out a special on-line form. Pacific Crest will provide you with the wording for this form that will facilitate FCC approval.

Unchanged FCC Restrictions

- You must have a valid license to transmit, at any power level, between 421 and 512 MHz
- US users must set CSMA to ON so that voice transmissions have priority over data transmissions
- You must configure your radios to transmit a call sign

Important Implications for Pacific Crest Radios

- All PDL radios support narrowbanding but use older technology that suffers range loss when transmitting either 9600 bps in a 12.5 kHz channel or 19200 bps in a 25 kHz channel. Narrowbanding permits 12.5 kHz PDL radios to transmit 4800 bps, but this may not be fast enough to support RTK corrections for GPS and GLONASS satellites (except with CMRx or ATOM format). Narrowbanding restricts 25 kHz PDL radios to 19200 bps and so range is decreased.
- ADL radios were designed to handle both 12.5 kHz channels and 19200 bps in 25 kHz channels without loss in range.
- Almost all PDL customers in the US have 25 kHz variants and so when they migrate to narrowbanding, they should replace their PDL transmitters with ADL transmitters. The ADL Vantage Pro is the replacement for the PDL HPB.
- Pacific Crest does not have enough parts to convert 25 kHz PDL radios to 12.5 kHz. Trimble's Survey division has stopped their conversion program for the same reason.

25 kHz PDL Radio Part Numbers Affected by Narrowbanding

PDL HPB

A02531
A02533
A02535

HPB450

A02549	56651-42-00
A02551	56651-44-00
A02553	56651-46-00

PDL LPB

A02271	A02276
A02272	A02279
A02275	A02281

PDL450

A02291	A02297
A02293	A02299
A02295	A02301

EDLII

A02305	A02319	A02331
A02308	A02320	A02332
A02309	A02321	A02333
A02313	A02325	A02337
A02314	A02326	A02338
A02315	A02327	A02339

SITECOM

A02355	A02361
A02356	A02362
A02357	A02363

Supporting Documents

Contact support@pacificcrest.com for more information on Narrowbanding including FAQs, how to configure a radio for Narrowbanding, and how to apply for a 25kHz/19200bps license.