

30 April 2012

Update on FCC Narrowbanding Regulations

Discontinuation of HPB450 Rework Service Program

In June, 2011 a rework program was announced for HPB450 radios which would allow customer to get a 25 kHz bandwidth radio changed to a 12.5kHz bandwidth radio. This rework program is no longer available due to the obsolescence of many parts required to service these radios.

Important Clarifications from the FCC

On January 1, 2013 all UHF radios transmitting data 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

Existing licenses will remain valid and existing radios will remain legal as long as you transmit in either of the above narrowband modes.

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 operate in the 25 kHz / 19200 bps narrowband mode, you will be prompted to fill out a special on-line form. Trimble 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
- HPB450 user's must set CSMA to ON so that voice transmissions have priority over data transmissions
- Trimmark 3 user's must have Channel Sharing turned ON (enabled), so that voice transmissions have priority over data transmissions
- Radios must be configured to transmit a call sign

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New FCC Restriction

As previously announced, on January 1, 2013, the Narrowbanding requirements will supersede the terms of any license and you will not be permitted to transmit at any speed less than 19,200 bps in 25 kHz channels.

What does this mean to existing HPB450 or PDL450 25 kHz Customers?

Purchase a TDL 450 series radio

The only viable option for existing customers with PLD450 or HPB450 25 kHz bandwidth radios is to purchase a new TDL 450 series radio. The following list of HPB450 and PDL450 radio part numbers will be illegal to operate in the United States after December 31, 2012:

HPB450 Radios	PDL450 Radios
56651-42-00	56013-42-00
56651-44-00	56013-44-00
56651-46-00	56013-46-00
56651-44-10	56013-42-10
56651-46-03	56013-44-10
	56013-46-10

What Should a Distributor do for TDL450 Series radios

The Distributor can change the channel bandwidth of the radio via software. They must have a TDLCONF USB key, or service provider PASS USB key and the latest version of TDLCONF or PASS.

Using the TDLCONF or PASS configuration software, connect to the TDL radio. The channel bandwidth can be configured on the 'Dealer' tab then press 'Program' to send the configuration to the radio.

What Protocols are Legal for TDL 450 Series Radios?

TDL 450L, TDL 450H Protocol	Legal Link Rate/Channel Bandwidth Modes	
	12.5 kHz	25 kHz
TRIMTALK 450s	4800, 8000	n/a
TRIMMARK II/IIe	4800	n/a
TT450S (HW)	4800	n/a
TRIMMARK 3*	9600	19200
Transparent EOT, EOC and Packet Switched	4800	n/a
Transparent FST	9600	19200
SATEL	9600	19200

*Recommended

Additionally, Trimble recommends using CMRx to optimize the transmissions of RTK corrections. CMRx uses 40% of the bandwidth of older CMR+ messages and using CMRx will reduce heat, double battery life and ensure enough bandwidth to transmit corrections at 4800 bps.