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Date: 14-Oct-2013

Re. Justification for Extended Frequency operation for E2-450 radio

Dear Sirs,

For the FCC's Rule Parts 90 applications, this radio is used in systems by Federal and Public Safety agencies including Police, Fire, and Emergency Medical Services, etc. Equipment programming is the responsibility of Authorized Service Personnel.

The E2-450 embedded radio module is designed to operate in frequency bands as listed below. ELPRO seeks FCC approval for the highlighted models E2-450-WR-P5W-F430-X through E2-450-WR-P5W-F500-X.

Model (X is W for 25kHz bandwidth, N for 12.5kHz)	Supported Frequency Band
E2-450-WR-P5W-F430-X	420-440MHz
E2-450-WR-P5W-F440-X	430-450MHz
E2-450-WR-P5W-F460-X	450-470MHz
E2-450-WR-P5W-F480-X	470-490MHz
E2-450-WR-P5W-F500-X	490-512MHz

ELPRO plans to incorporate radios from this range into devices for sale to a number of countries in addition to the USA, for operation on licensed frequencies and where available on unlicensed frequency bands.

ELPRO has no plan to make this module available to third parties for use in products other than those manufactured by ELPRO. ELPRO currently plans to incorporate this radio into the products 450U-E and 915U-2. These devices are limited in frequency range according to their target locale. In the case of the US (North America) locale, the frequencies that can be selected are as follows:

Model (450U-E model)	Available Frequencies when Locale "US" selected
450U-E-H-N-430 (12.5 kHz Bandwidth)	421.00625-440MHz
450U-E-H-W-430 (25 kHz Bandwidth)	421.0125-440MHz
450U-E-H-X-440 (12.5 or 25kHz channel space)	430-450MHz
450U-E-H-X-460	450-470MHz
450U-E-H-X-480	470-490MHz
450U-E-H-N-500 (12.5 kHz Bandwidth)	490-511.99325MHz
450U-E-H-W-500 (25 kHz Bandwidth)	490-511.9875MHz

As stated in the user manual, the 450U-E is designed to be installed by professional personnel. Additionally, the operator of the radio cannot program the transmit frequency using any external control. The only function available via external controls is to return the module to factory default, which disables the radio until the locale has been selected. Finally, the user manual provides an explicit warning about operating the radio outside the allowed frequencies.

Sincerely,

Harry Courtice,
Engineering Manager
Eaton
Controls and Power Conversion Division

