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Subject: SL-1550-T90 2.4GHz A/V Transmitter: No Tuning Requirements

### 1.0 Scope

The SL-1550-T90 2.4GHz Audio / Video FM transmitter by design does not require frequency tuning as part of the manufacturing or maintenance procedures.

### 2.0 SL-1550-T90 Transmitter Frequency Operation

The SL-1550-T90 transmitter frequency is based upon the following:

- A 2.4GHz Audio / Video transmitter module develops the transmitter frequency based upon the digital Phase Lock Loop (PLL) circuit contained within the Zarlink SP5655 frequency synthesizer.
- The SP5655 PLL develops the transmitter frequency based upon a fixed frequency crystal oscillator and a programmable digital frequency divider.
- The ratio of the digital frequency divider determines the exact transmitter frequency.
- The ratio of the digital frequency divider in the SP5655 is set by a micro-controller via a digital serial data (I2C) bus.
- The micro-controller develops the required programmable frequency divider value based upon the frequency selected by the end user of the transmitter.
- The micro-controller limits the user selected frequency to between 2.460GHz and 2.472Hz (in 1MHz increments).

The user selected SL-1550-T90 transmitter frequency is based upon the accuracy of the crystal used in the SP5655 PLL circuit and the 15-bit resolution of the programmable digital frequency divider. There are no adjustments or selected component values that affect the frequency of the crystal in the SL-1550-T90 transmitter design.

Sincerely,



Van Sarkiss