

Preston Cinema Systems

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Federal Communications Commission
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, Maryland 21046
December 15, 2016

Re: Request for Full Modular Approval for Mobile Application / FCC Part15C, Section 15.247 for Digital Transceiver Model TR4-32 / FCC ID: NMRTR432

Dear Application Engineer:

Modular Approval is being requested for this device. The following statements detail these requirements as stated in the FCC 15.212 and the manner in which the device meets them. The module has its own complete RF transceiver with antenna and reference oscillator. The module meets all of the technical specifications applicable to the frequency band of operation.

1. RF Shielding The module contains a metal shield over the transmitter section to ensure that it does not have to rely upon shielding provided by the device into which it is installed and to prevent coupling into which the device will be installed. See Figures 1a, 1b, 1c.
2. Buffered Modulation / Data Inputs Data to the modulation circuit passes through buffers and a microprocessor before being applied to the RF modem IC. Refer to "Theory of Operation", TR4-32 Transceiver Block Diagram.
3. Power Supply Regulation All of the circuitry is powered by 3.3V regulator. The range of allowable input voltage is 4.0 – 10VDC, 5.0V nominal.
4. Antenna Requirements of §15.203: The module is configured with two Hirose U.FL receptacles. Some devices into which this module is installed contain a U.FL to RPSMA adapter. Both the U.FL and RPSMA connectors comply with the requirements of sections 15.203 and 15.204(c).
5. The modular transmitter must be tested in a standalone configuration Test data contained in this application is for the device tested as a standalone device. The transceiver module is battery powered and therefore does not require testing for compliance with AC line conducted requirements. Radiated

spurious emissions data demonstrating compliance with the requirements of Part 15 of the FCC rules for intentional radiators has been provided. Please refer to the test report for details.

6. The modular transmitter must be labeled with its own FCC ID number

The module will be labeled with its own FCC ID number. Since the FCC ID number will not be visible when it is installed into equipment, the equipment will also display a label stating the “Contains Transceiver Module FCC ID NRMTR432”. Refer to the label location and drawings contained within this application.

7. Operating requirements. The module has no serviceable parts. The module’s data transmission modes, data rates as well as predefined output power settings are configured in firmware by the manufacturer. The module is compliant with all applicable FCC rules.

8. RF Exposure requirements. The module meets the requirements for a mobile device as per FCC RF exposure requirements. A separation distance greater than 20cm is normally maintained between the transmitter’s radiating structure and the body of the user or nearby persons. The module has a ERP of less than 1 Watt and an antenna gain of less than 6dBi.

This module will only be installed into host devices by the Grantee.

Sincerely,



Howard Preston

President, Preston Cinema Systems

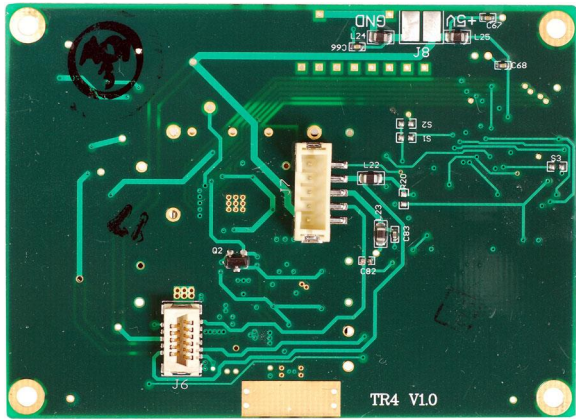


Figure 1a. TR4 bottom. Connectors

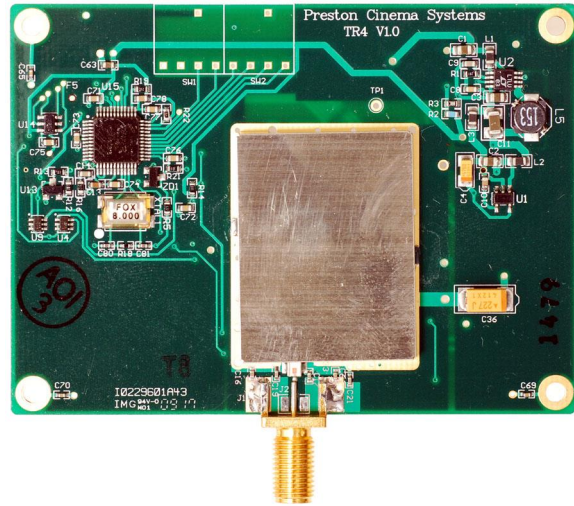


Figure 1b. TR4 top. RP-SMA and RF Shield.

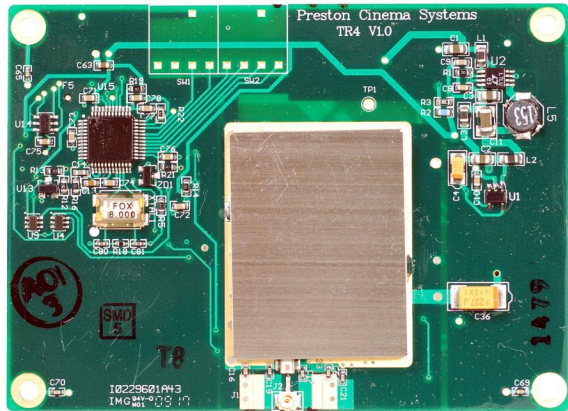


Figure 1c. TR4 top. U.FL receptacle and RF Shield.