RITRON, Inc.
505 West Carmel Dr.
Carmel, IN 46032

Sid Sanders
TIMCO Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

November 20, 2003

Re: Modular Approval for Ritron's DR-142 Receiver

Dear Sid:

Ritron is currently seeking modular approval for the DR-142 Receiver. This product is a PC Board based design without a case and is intended to be used inside OEM equipment. As you know, the FCC's policy towards modular approvals is limited to Part 15 unlicensed transmitters and is contained in DA 00-1407, released June 26, 2000. Receivers and the receive portion of transceivers are not specifically addressed. If, for the purposes of this submission, we were to consider the EMI generating portions of our product as a transmitter, albeit at a very low power, I believe that the intent of the FCC's policy document is being met.

Taking each of the eight requirement for modular transmitter approvals in order:

1. "The modular transmitter must have its own shielding." This is to make the module effectively enclosure independent with regards to spurious emissions and to prevent unwanted coupling into the host electronics. In our product, the EMI generating circuitry, specifically the local oscillator and switching power supply regulator are shielded with their own independent shields. In addition, shields exist on those components which would be most likely to radiate emissions. This includes the front-end resonator inductors and IF matching transformers.

2. "The modular transmitter must have buffered modulation/data inputs…" This is to insure that over-modulation cannot occur which could, in turn, lead to excessive occupied bandwidth. This requirement in not applicable in this product since no modulation takes place.

3. "The modular transmitter must have its own power supply regulation." This makes the voltages supplied to the transmitter independent of the host power input. Our product has all of its supply voltages supplied via internal regulators.

4. "The modular transmitter must comply with the antenna requirements of Section 15.203…" This is to ensure that the radiated power cannot be different than that which was Certified. Receivers, in general, have never been limited via the approval process to the way an antenna may be connected and what types of antennas may be used. This is understandable considering that the antenna conducted limits for a receiver are typically 50-60 dB below that of unlicensed Part 15 transmitters.

5. "The modular transmitter must be tested for electromagnetic compatibility in a stand-alone configuration… it must comply with the AC line conducted requirements found in Section 15.207." The test results shown in the submission were taken with the product in a stand-alone configuration. In addition, AC line conducted measurements were also taken and provided in the test report.

6. "The modular transmitter must be labeled with its own FCC ID number, and, if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which

the module is installed must also display a label referring to the enclosed module." Our product will have its own FCC ID number and label and, in addition, the following text appears in the users manual:

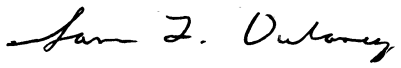
> An FCC label must be visible on the unit as installed in its final configuration. If the unit is to be used as shipped from RITRON, this would be no problem since an FCC label is affixed to the bottom of the PC board. If the DR-142 is to be installed in an enclosure, the installer must ensure that either the FCC label on the unit is visible through a door, window or other opening, or add a label to the outside of the enclosure. If a label is to be added to the outside of the enclosure, the label must be of a type which is not easily removed or damaged and contain wording: Contains FCC ID: AIERIT17-142R.

7. "The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter…" There are no specific rules or operating requirements applicable to this product.

8. "The modular transmitter must comply with any applicable RF exposure requirements." The level of the radiated emissions is well below that which would require any type of RF exposure evaluation. At the 20 cm minimum separation distance expected for users of this product, the RF levels would be at least 70+ dB below current limits.

Based upon the reasoning above, I feel that Ritron is justified in requesting a modular approval for this product. The intent of the FCC's published requirements for modular transmitters is being met even though this product is only a receiver with RF levels many orders of magnitude lower than that found in transmitters.

Regards,



Sam L. Dulaney
Chief Engineer
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