

March 22, 1999

Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, Maryland 20146

Re: Amtech Systems Division of Intermec Technologies Corp.
Amendment to Application for Equipment Authorization
Proposed FCC I.D. No. FIH11010533401
Correspondence Reference Number: 6554
731 Confirmation Number: EA92585
Application Dated: 12/2/98; Electronically Filed: 12/10/98

To the Commission:

In response to your e-mail transmitted to Amtech on 3-15-99 from Mr. Greg Czumak (Ref. No. 6554) concerning the pending grant of authorization for type acceptance of the AH1101, we are submitting the following amendments to our application as described herein.

1. PHOTOS: The photos are being submitted in a separate file. During the compilation of the submittal package, we inadvertently did not include them in the file that was scanned for electronic filing. We apologize for the inconvenience.

2. CONFIDENTIALITY: The request was made in the name of Intermec Technologies because that is the immediate parent of Amtech as a result of a transaction reported to the Commission last summer. A file containing the notification letter of July 7, 1999 is being resubmitted with this amendment. Apparently the database was not changed in response to this earlier submittal. We did, however, subsequently file an application in the name of Amtech Systems Division - Intermec Technologies Corporation on September 1, 1998, under FCC ID FIH111005276. In checking, however, it appears that this, too, was granted in the name of Amtech Systems Corporation rather than Amtech Systems Division - Intermec Technologies Corporation. Accordingly, we once again respectfully ask that the Commission's records be changed to associate the name " Amtech Systems Division - Intermec Technologies Corporation with our grantee code FIH.

The particulars on the request for post-grant confidentiality are set forth below:

	Description of Exhibits	Per Rule Sec.	No. of Pages
	Circuit Components in the RF Module	2.983(d)(6)	1

Block Diagrams of RF Module, Power Amplifier, Filter, SAW resonator oscillator and 1st filter, and receiver; Schematics of Hand-Held receiver	2.983(d)(7)	7
Technician tune-up procedures	2.983(d)(9)	2
Frequency stabilizing components	2.983(d)(10)	1
Circuits for spurious suppression, limiting modulation and limiting power	2.983(d)(11)	2

3. POWER: As with various of our prior products, the unit that was tested was designed to have a nominal output of 1.0 watts. Because of manufacturing variances, the unit's measured output was 0.660 watts or 1.8 dB below 1.0 watts. We did not try to "tweak" the equipment to bring it up to the rated design since the device was not intended to be other than a typical device. We do know from experience, however, that the output will be between about 500 mW and a watt. The test data showed at least 5 dB of margin in terms of compliance with the emissions limits. There is no aspect of this design that is likely to be nonlinear over a power change of 1.8 dB. Thus, there should continue to be adequate margin even if a particular unit were to have a one watt output. Indeed, over the years we have found that it is not unusual for units of this kind to have slightly less than one watt output. For example, the most recent grant for similar equipment to operate under Part 90 (FCC ID F1H111005276) shows on the grant output power of 1 Watt, but the test report shows that the particular unit examined had an output of 0.700 Watts. Accordingly, we respectfully ask that you reconsider putting 660 mW on the grant as the output and show it as 1.0 Watt, which would be consistent with prior practice. If there is a real concern with compliance, notwithstanding the margin, please let us know so that we can spend the money to have it tested again.

FREQUENCY: The unit in question was designed to operate in the LMS non-multilateration bands. A surface acoustic wave resonator determines the frequency of the device. We provided data on three different frequencies, which represent the performance of the product using three different surface acoustic wave resonators available to us at the time the devices were assembled. The manufacturer of the resonator has informed us that resonators at other frequencies can be made available to allow the device to operate over the range 909.75 - 921.75 MHz within the licensed LMS band.. The antenna used is very broadband (+/- 1 dB over the range of 915 MHz +/-50 MHz). The low pass filters on the board are designed to begin reducing out of band emissions above 950 MHz. Moreover, the SAW resonators do not present subharmonics as would be the case in a crystal controlled oscillator. Thus, a high pass filter is not needed.

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Accordingly, given the margin shown in the data provided, we would not expect any significant variation in compliance with the device operating at other possible frequencies. Therefore, we respectfully ask that the device be approved over the range 909.75 - 921.75 MHz. Such an approval would also be consistent with the Commission's recent treatment of a very similar product (FCC ID FIH11010533402). This was a much lower powered unit approved under Part 15, but it used the same SAW resonators for frequency determination. Similar questions regarding frequency coverage were raised when that product was reviewed. At the time the Part 15 unit was tested, only resonators for three frequencies were available: 913.6, 915, and 916.7 MHz. Upon considering the nature of the device and its design, the Commission approved the Part 15 device over the range of 905 - 925 MHz, which covered the range that SAW resonators were expected to become available. Of course, in the case of a device subject to station licensing, the frequency coverage under the Part 90 rules would be lower. Accordingly, we respectfully ask that you reconsider limiting the frequency range so that the grant could specify 909.75 - 921.75 MHz. This, too, would be consistent with our last Part 90 grant (FCC ID FIH11005276), which was tested at 913.6, 915, and 916.7 MHz , but approved over the range 909.75 - 921.75 MHz.

Thank you for working through this with us. Please contact me if there are any additional questions.

Sincerely,

Wes Mays
Manager, Microwave Design

Enclosure:

Letter of July 7, 1998, regarding acquisition by Intermec
Photos: Pages 18-21