ROGERS LABS, INC.

4405 West 259th Terrace
Louisburg, KS 66053
Phone / Fax (913) 837-3214

January 9, 2001

Federal Communications Commission
Equipment Approval Services
P.O. Box 35815
Pittsburgh, PA 15251-3315

Applicant: INTERMEC TECHNOLOGIES CORPORATION
                6001 36th Avenue West
                Everett, WA 98203-9280
                Phone: (505) 856-8054

RE: Correspondence Reference Number: 17151

Equipment: FCC ID: HN21555-900

Gentlemen:

Please find enclosed the response to request for additional information regarding the submittal for grant of certification of Intentional Radiators operated in the frequency range of 902 – 928 MHz. It has been requested that the information contained in the block diagrams, operational description and schematics of the application be held confidential per Section 0.459.

A copy of the information request has been reproduced here for reference.

To: Scot Rogers, Rogers Labs, Inc
From: Joe Dichoso
                jdichoso@fcc.gov
                FCC Application Processing Branch

Re: FCC ID HN21555-900
Applicant: Intermec Corporation
Correspondence Reference Number: 17631
731 Confirmation Number: EA98687

The RF safety issues are numbered below.
FYI, you did address the following which was requested via e-mail with correspondence number 17505. please address it separately. FYI, with regard to the output power issues, you are using the formula to calculate the conducted output power but list it as EIRP.
EIRP= (E*d)^3/30. P(conducted)= (E*d)^2/30G.
EIRP= P*G.

The only other item is whether or not the device meets the definition of a FHSS system. We are on the "lookout for TAG readers that send only a CW signal to the TAG. These do not meet the definition as they do not meet the have a carrier that is modulated with information and the information is written to the tag. Please describe the information that is modulated onto the the carrier and verify that the information is written to the TAG.

ROGERS LABS, INC.	INTERMEC TECHNOLOGIES CORPORATION		
4405 W. 259th Terrace	MODEL: 1555 Hand Held Reader		
Louisburg, KS 66053	Test #: 000815	FCCID#: HN21555-900	
Phone/Fax: (913) 837-3214	Test to: FCC Parts 2 and 15	FCCresponseletterref16801.doc	01/09/2001

RF SAFETY ISSUES...

Intermec, EA 98687 -

1. The response to output power is incorrect. When EIRP is computed from measured field strength, there should not be any adjustments for the antenna gain. The antenna gain should have already been considered in the field strength results. Please review the applicable equations, computations and clarify accordingly.

2. Rules in 15.247 requires peak conducted output to be listed on the grant. The SAR report has indicated a conducted output of 29.8 dBm, which implies it is feasible to measure peak conducted output for this device. Please provide the peak conducted output measurements for the applicable channels.

3. The antenna is at the front of this device. The bottom side (touching) SAR was positioned with the antenna tilting away from the phantom (non-touching). This generally results in lower SAR and will not be acceptable for future filings. For the current filing, since this is a hand-held only device and RF exposure is not expected to become an issue, therefore, additional testing is not requested. Please confirm that the RF exposure statement submitted earlier that requires a 4 cm separation distance from the bodies of users and bystanders will be incorporated in the manual.

Note: Output is Unknown, submitted incorrect EIRP, need to re-confirm conducted output in SAR report.

Proposed Grant Condition - This transmitter operates in a specific hand-held RF tag reader. The device has been tested for SAR compliance for typical hand-held use and must be operated in a person's hands with a separation distance of 4 cm or more from the body of users and bystanders (except for hands and wrists) to satisfy RF exposure compliance. Users must be informed of the operating requirements for satisfying RF exposure compliance. The highest reported SAR values are Body: 0.57 W/kg; Hands: 2.97 W/kg.

Kwok Chan

RESPONSE

The corrected calculations for the EIRP are giving in the following table. The measured 128 dBuv was first converted to volts per meter at three meters using the equation $E(v/m)=10^{(dBuv-120/20)}$ and using this to calculate the EIRP from the equation $EIRP(w)=(Ed)^2/30$.

FSM (dBuv)	Calculated volts/meter	Calculated EIRP
128	2.512	1.89

The output power of the unit was also measured at the manufacturer service port for three frequencies.

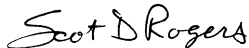| Frequency (MHz)	Output Power (dBm)
902.6	29.8
915.0	29.7
927.4	29.6

The information requested about the information sent in the modulated transmission will be sent soon. Intermec has had some computer system failures within their organization and the information has not been supplied as of yet.

Please use this corrected data and continue processing the application for a grant of certification.

Should you require any further information, please contact the undersigned.
Thank you for your consideration in this matter.
Sincerely,

Scot D Rogers

Scot Rogers
Rogers Labs, Inc.
Enclosures