

May 19, 1999

Federal Communications Commission
Application Processing Branch
7435 Oakland Mills Road
Columbia, MD 21046

Attention: Frank Coperich/Kwok Chan

Reference: Advanced Business Sciences Application, Ref # 7183
FCC ID: OAM170102
Confirmation #EA93180

Gentlemen:

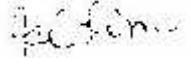
This is in response to the letters dated 4/7/99 and 4/13/99.

For Item 1, the 240 mW ERP is okay.

I also have received the answers from our client, Advanced Business Sciences regarding the Items 2, 3, & 4 questions. Please refer to the attached pages.

Should you need more or have questions, please contact C.K. Li of our engineering department, email address is ckli@itsqs.com or call at (650) 463-2922.

Thanks and regards,


Gaspara Lim

Gcl/

Enclosures

FEDERAL COMMUNICATIONS COMMISSION
Equipment Authorization Division, Applications Processing Branch
7425 Delaird Mills Road, Columbia, MD 21046
Telephone: (301) 362-3000, Facsimile: (301) 344-2050

Date: April 12, 1999 12:01 pm
From: Frank Czepielik _____ Telephone: (410) 362-3023
To: David Cherecinski _____
Organization: Interisk Testing Services
Telephone: (650) 463-2900 _____ Facsimile: (650) 463-2210
This cover sheet is page 1 of _____. Please direct inquiries to the sender of the above extension.

Reference FCC ID: QAM170102

Applicant: Advanced Business Sciences Inc

The items indicated below must be submitted before processing can continue on the above referenced application.
Failure to provide the requested information within 60 days may result in application dismissal pursuant to Section
2.917(e) and forfeiture of the filing fee pursuant to Section 1.1108.

Please see attached Pages for SAR questions.

Replies to this letter MUST contain the Reference Number: 7183

From: Kwok Chan
To: POOPERIC
Date: 4/7/99 10:32am
Subject: SAR # 93180 -Reply

Frank:

This is the ABSContract personal tracking unit, SAR 93180 -

240Wd
1. They are requesting 200 mW. The test data has 300 mW conducted and 236 mW ERP. SAR was performed at about 300 mW conducted output. We can only grant it for 240 mW ERP (round up), after the following issues have been addressed.

2. The antenna is a monopole. It is embedded in the shoulder strap of the banding that holds the rest of the equipment. We are not certain of the exposure conditions during actual use - how the bag can be carried. If it is carried on the shoulder, does the antenna conform to the contour of the person's shoulder? Can the bag be carried in a person's hand or in other manners. I also understand that, from earlier discussions, the user is not supposed to know where the antenna is, therefore, warning statements and labels are not appropriate for satisfying RF exposure issues. However, we do need further clarifications on the locations of the antenna on the shoulder strap, with respect to the operating and carrying positions of the bag by its user, to determine new test configurations and compliance.

*get
JL*
3. The SAR was performed with the antenna in the shoulder strap lay flat at 3 cm from a flat body equivalent phantom. The test data indicate this separation distance is needed to satisfy SAR compliance. We do not have information to determine if this distance can be maintained by the users of this transmitter to satisfy SAR compliance.

SLR
4. The SAR report indicated the bag was oriented on all 6 sides during SAR evaluation. Was the antenna maintained in the same configuration? If there is no significant RF emitted from the bag, one should not expect SAR to change for the 6 bag-orientations. Please clarify bag location (proximity) with respect to antenna and any changes in SAR for such configurations.

5. At this point, we do not have sufficient information to determine how the SAR test data can be used to determine RF exposure compliance with respect to the exposure conditions expected by the users.

Kwok Chan

>>> Frank Cuperlich 04/06/99 10:40am >>>
Please see SAR report.

This is a body worn device. Photos are missing from file.

Data shows .1 W conducted, .24 ERP and 121.1 dBuV/M field strength.

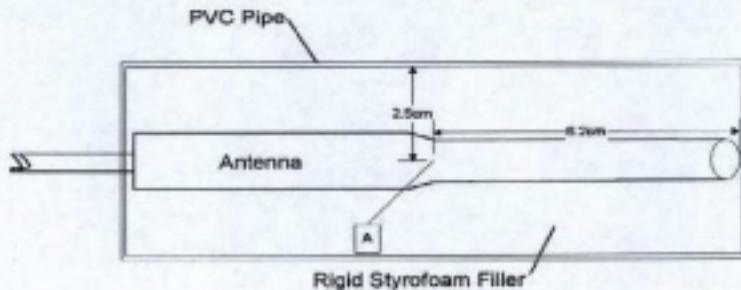
CC: kchan

(To answer Items 2 & 3 of the letter dated 4/7/99)

ALL POSSIBLE OPTIONS FOR CARRYING COMTRAK BAG, AND ASSOCIATED ANTENNA ORIENTATIONS

1. Explanation of antenna housing and position on shoulder strap.

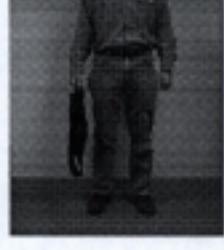
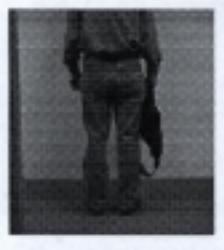
A. The antenna is placed in a PVC pipe that is 2" in diameter, and extends 5" in length. The antenna is held in the center of the pipe with rigid Styrofoam hollowed to hold the antenna snugly. The point of the antenna where the most emission (point A) occurs is therefore held over 6cm from the end of the pipe, and over 2.5cm from the outside edge of the pipe.



B. The pipe is then inserted into the shoulder strap of the bag so that no tampering can occur. Although the requirements state that 3cm distance is necessary at all times, it is assumed that the thickness of the bag coupled with the thickness of any clothing worn by the person carrying the bag will accommodate for the extra needed 0.5cm not accounted for with the PVC pipe. This picture shows the actual arrangement of the pipe and antenna inside of the bag.



2. The following pictures show every possible way in which the bag can be carried or worn. It is obvious from these pictures that the main antenna emission point never gets closer than 3cm to the body.



Response to question number 4 of FCC reference number 7183.

To ensure that the worst case SAR emissions were solely emanating from the antenna and not from any other part of the system, all other parts of the system were tested. The rest of the system consists of a metal chassis/box where all the system's electronics are housed. The chassis/box was taken out of the bag and the antenna was taken out of the bag's strap for the SAR tests. Each side of the chassis/box was positioned under and making contact with the SAR phantom during testing. The antenna was left to lay on the floor of the phantom stand while the individual sides of the chassis were tested. No significant SAR was measured from any of the sides of the chassis. The worst case measured SAR came from the antenna and that test data was included in the report.