U.S. TECH
A TRADITION IN TESTING SERVICES

RE: FCC ID: RM8AMOIA90_ATCB001046
Attention: Lou Feudi
I have a few comments on this Application.
1. Please note that the equipment code PUE is for a part 101 unlicensed device. This device is a Part 24 device. Please correct the 731 to provide the proper equipment code (PCE).

The Form 731 has been corrected and uploaded.

2. Please provide a 731 form that give the EIRP power, frequency tolerance and emissions designator of this device.

The Form 731 has been corrected and uploaded.

3. Please note that the max conducted power in the EMC report is 28.02dBm while the maximum conducted power in the SAR report is 29.18dBm. Please note that this is a difference of more than 1 dB. If this were EIRP values the difference would be acceptable. However, since they are conducted powers, the FCC requires that the values between the EMC and SAR report be within 5%. Please explain why the EMC and SAR conducted power levels are about 25% different. Please correct as necessary.

The sample tested for SAR was originally non functional. The manufacturer sent new software to the SAR lab, which produced slightly higher results. In addition, the SAR lab allowed for a-.5 dB cable loss on the output cable. This accounts for the inconsistency in max conducted power. Yet, the SAR readings were still higher than the EMC readings.

We corrected the conducted power measurement for the low channel. However, in order to assure correct EIRP radiated power measurement, we repeated the EIRP test on the low band, which had the highest EIRP measurement, at the higher conducted power level, using the upgraded software. Since the antenna has a –1dB gain at low channel, and a –2.2 dB gain at mid and high channel, the low channel EIRP measurement is the worst case application for the EIRP Power rating.

Upon completion of the low channel measurement, we repeated mid channel and high channel conducted power and EIRP radiated power. Conducted power measurements were measured within .1 db lower than the original, so the original plots were provided. Radiated power has been repeated using the updated software commands, as well, and corrected based upon the values measured.

The report and the Form 731 have been corrected to reflect the higher data, providing worst case results in all instances.

4. Please note that once the initial device level and the substitution antenna level have been correlated, TIA603 EIRP calculation consists only of adding the measured signal generator output and the substitution antenna gain and then subtracting the cable loss giving a TIA603 EIRP value of 27.03dBm. As they have no appropriate place in the EIRP calculation, please explain why you included the other two values. Was this to correct for minor variations in the two initially measured values?

Yes. US Tech wished to be as accurate for each measurement as possible, so we included the values for each measurement.

5. Please note that the OBW plots do not appear the same as an expected GSM signal. The OBW plots show an unexpected ‘spike’ that is 10dB higher than the rest of the signal. Please explain this spike.

Prior to submitting the application, and during testing, we noted the same “spike” on the OBW plots. After discussion with Tim Johnson and Bill Graff, Bill indicated that the design has a large over or undershoot on the PA turnoff. After further discussions, it was decided that the design flaw, while possibly a problem with the carrier purchasing the phones, was not a problem with the FCC.

A copy of Bill’s and Tim’s email follows at the end of this correspondence.

6. Please note that the manual states GSM900 and GSM1800 use. Please note that these are EU frequencies and not US frequencies. Please provide a manual with reference to US frequencies.

A copy of the manual is uploaded. On page 57, the manual references US frequencies.

Also, does this device also operate on EU frequencies?

Yes, it does.

7. Please note that the manual provides no rf exposure information. Please provide a manual with all of the appropriate FCC information.

An updated copy of the manual has been uploaded

8. Please note that the schematics are unreadable. Please provide readable schematics for this device.

The schematics are uploaded. Please note page 7 and 8 were uploaded separately.

9. Please provide an operational description of the phone. You have only provided a theory of operation for the antenna.

Theory of operation of the phone has been uploaded.

10. Please provide the parts list and the factory tune up procedure for this device. Please note that if you want these held confidential, you will have to include them in the confidentiality request letter.

Parts list and factory tune up procedure have been uploaded

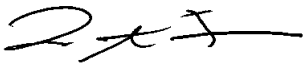
11. Please note that external and internal photos cannot be held confidential. Please provide a confidentiality request that only requests confidentiality for those items that can be held confidential. These include – Parts list, operational descriptions, schematics, Block diagrams and tune up procedures.

An updated letter has been uploaded

12. Please explain how the FCC ID label is permanently affixed to the device.

The FCC ID is permanently affixed via an adhesive label inside the battery case. A Photo has been uploaded.

Sincerely,



Louis A. Feudi
Operations Manager

From: **"William Graff" <whgraff@atcb.phxcoxmail.com>**
To: "'Timothy R. Johnson'" <TRJ@adelphia.net>
Subject: RE: 3 plots
Date: Thu, 6 Nov 2003 11:02:32 -0700
X-Mailer: Microsoft Outlook, Build 10.0.4510
Importance: Normal

Tim,

They screwed up the design...

Actually, try some zero-spam SA plots, or some o-scope plots with a diode detector. I think they will find a big over or undershoot during the PA turn on or turn off.

Bill

-----Original Message-----
From: **Timothy R. Johnson [mailto:TRJ@adelphia.net]**
Sent: Wednesday, November 05, 2003 11:51 AM
To: bgraff@AmericanTCB.com; bgraff@ATCB.com; whgraff@atcb.phxcoxmail.com
Subject: Fwd: 3 plots

Bill,

Can you comment on the attached plots . U.S. Tech is testing I believe to be a GSM PCS phone that has already undergone European Approval for certain bands of TX. Any explanation for the "unhealthy" look to the carrier?

Thanks,

Tim

X-Symantec-TimeoutProtection: 0
Date: Wed, 05 Nov 2003 07:25:12 -0500
From: **David Blethen <dblethen@ustech-lab.com>**
Subject: 3 plots
To: "'trj@adelphia.net'" <trj@adelphia.net>
Reply-to: "dblethen@ustech-lab.com" <dblethen@ustech-lab.com>
Organization: U.s. Technologies

Hey Tim,

Here are the 3 plots of those channels.

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