

TIMCO ENGINEERING INC.

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TCB & FCB

*FCC Approvals
Industry Canada Approvals
Notified Body for Europe*

1/22/2007

MR. SHAIKE RAZ
ISRAEL TESTING LABORATORIES
972-897-9779 x9 972-897-9770 x2
SRAZ@ITL.CO.IL

SUBJECT: MOBILE ACCESS NETWORKS - FCC ID: OJFMA86WCE

REFERENCE: JOB 3674IC7

Dear MR. RAZ:

This application is on hold until these questions are resolved. Please answer all question(s) together and only respond to tei@timcoengr.com. Any other method will cause **unnecessary delay**.

DO NOT HIT REPLY! Your response should be sent **ONLY** to tei@timcoengr.com. Any additional exhibits that are sent should be **UPLOADED** at our web site – please do not attach files to your email. Responses should also contain the job number, applicant name and FCC ID of the device. If an acceptable response is not received within 2 weeks the job will be closed & there will be additional charges to reopen.

ANSWER ALL QUESTIONS. Be sure to number or identify your answer with the corresponding question. If you are referring to another document, be sure to give the page number and paragraph reference where your response can be found.

Based upon our review of this application we have the following questions:

1. 731 FORM: Please be sure that the applicant electronically signs the 731 form. If someone other than the applicant signs the form an authorization letter from the applicant must be provided giving this contact permission to sign.
2. 731 FORM – item 14. Please list the lowest and highest frequencies according to the frequency tested and that will be authorized for use: 5180-5240 and 5745-5805MHz. Please use one line item per band and list corresponding maximum output conducted power.
3. The cover letter states that the users manual is separated into three files. We only have the manual submitted in the original filing (please see attachment). Please provide the manual in question.

4. User's manual: Please include clear instructions that this 860+WCE requires professional installations.
5. Cover/letter attestation – part 15.204(d)(1): The following 3 points must be addressed to demonstrate professional installation:
 - a. The intended application, or use, of the device, dictates that it be professionally installed.
 - b. The method of marketing (state what it will be), precludes the possibility of non-professional installation (e.g., if you sell it at Radio Shack, then it may not be professionally installed!).
 - c. The installation requirements of the device (state what they are) demonstrate that it requires professional installation.
6. User's manual: Please include AP FCCIDs in a conspicuous location.
7. User's manual - fig 1-6: Will 860 sometimes be used direct to antenna without WCE? What is terminal output power? or WCE always there?
8. Test setup/System configuration: it is difficult to identify the EUT and supporting/auxiliary equipment on the photos provided. Please provide close-up photos of the test setup, so as to identify clearly each piece of equipment and associated cables.
9. Please confirm that 860 serves function of "non-transmitting host unit" per KDB pub 935210, i.e. "860(M/R) Module Standalone" exhibit does not show output power.
10. Your reply for item 3. of our original correspondence about “Photos showing the label locations on the combiner box and amplifier box” What do you mean by combiner box vs. amplifier box? As far as I know, no combiner is part of the filing/and configurations tested. Please explain.
11. Approved antennas – part 15.204(c): item 17: It is stated in the test reports and user manual that the maximum antenna gain is 7dBi. Any 3PE antenna of equal or lower gain as required by the FCC can be used. Your reply: “See revised information concerning antennas in Section 3.4.1 of the revised user manual.” Please note that a antenna of equal or lower gain is not sufficient. Other authorized antenna(s) must be also of the same type. Same type is described under 15.204(c)(1), that is “antennas that have similar in-band and out-of-band radiation patterns”. This must be clearly stated. Please update manual accordingly.
12. Please refer to this previous guideline from the FCC to address the following issues:

https://fjallfoss.fcc.gov/prod/oet/forms/blobs/retrieve.cgi?attachment_id=680519&native_or_pdf=pdf

 - 12.1 Please explain whether 11b and 11a signal are coordinated, and whether composite power applies.
 - 12.2 Amplifier should be tested with a representative sample of licensed services signals. Was this done?
 - 12.3 Was the amplifier tested (radiated and antenna conducted emissions) with 4 identical APs in 11bg mode and 11a mode?
 - 12.4 Comparison of input versus output bandwidth for 11bg and 11a modes.
 - 12.5 Radiated emissions in simultaneous operation mode: Complete system testing in 11bg + 11a + licensed mode.

12.6 Intermod emissions: Antenna conducted emissions when multiple transmitters share the same antenna. Was this done? Please explain in more details.

Sincerely,

Bruno Clavier
Timco Engineering, Inc.