FccID: H9PLA4111 WLAN PC Card, 11 Mbps, Trilo

Conf Num: EA97685 Class II Permissive Change

Corespondence # 17397 Date Emailed: 12/13/00

Question 1

Reply to item #1 of correspondence 15542 has indicated an incorrect transmitter, which is not related to this filing - LA 3021-500. The current transmitter is LA 4111, please verify.

Answer:

LA 3021-500 was a missprint. The correct model is LA-4111.

Question 2

The reply proposes to place a WARNING statement in the manual for the four body and wrist worn devices. The warning statement refers user to follow instructions in the manual. No specific operating instruction from the manual has been submitted. In order for this warning statements to be useful, it should be placed on the final product operating with this transmitter. Since the output for this transmitter is not high and the 2 dBi antennas (# 6 & #15) have related SAR info from other filings from the applicant for similar antenna and product configurations, a warning label on the product is not necessary provided the specific operating instructions and requirements for meeting RF exposure compliance are clearly stated in the manual for these products and users are alerted that the requirements are for FCC RF exposure compliance. Please provide the relevant pages of the manual containing these instructions. Alternatively, if the applicant chooses to use warning labels on the product, please follow the procedures described in EA 97592, EA 97674 and EA 97670 recently filed by the applicant (still pending). When warning statement or operating instructions are used, they should indicate that the operating requirements are for meeting FCC RF exposure compliance; that is, "To comply with FCC ..." instead of "To confirm to ...".

Answer:

Please withdraw antennas #6 and #10.

I have attached relevent pages of the manual for antennas #14 and 15.

Question 3

Previous info submitted for this filing indicates the antenna for the body-worn printer has less than 5 cm separation from its user's body. The most recent reply indicates 2.2 cm. There is a similar pending filings from the applicant, for another transmitter (EA 97592), using the same antenna configuration and product configuration that has indicated a separation distance of 1.5 cm. Body-worn operating configurations are required to satisfy SAR requirements. Whether SAR test data may be needed to demonstrate compliance is highly dependent on the separation distance between the antenna and its user's body. A difference of 0.5 cm could result in 50% difference in SAR. These discrepancies must be clarified in order to determine if SAR compliance could become an issue. Please provide the smallest measured distance between the antenna and the outer surface of the printer, on the side where it is carried next to the user, or its belt-clip. If a warning label is used, please also identify the location of the WARNING label to be placed on this device.

Answer:

Please withdraw antennas #6 and #10.

Question 4

The antenna summary indicates this transmitter operates with 100% duty factor, which does not agree with info submitted in several other filings from the applicant (still pending) that describes this transmitter (LA 4111) has a duty factor of 71.3% for access point configurations and 71.1% for other configurations. The actual duty factor should be used in order to avoid discrepancies, please confirm

Answer:

I have included an updated antenna table that has corrected duty cycle factors that are consistant with the other filings. Indeed the APDC is .713 and the remote DC is .711.

Please note that since this application was submitted the hand held units have be reclassified from portable to mobile units since the antenna must be kept > 20 cm from the users body.

Question 5	**Answer:**
FYI - If a single manual or single set of RF exposure statements will be used for multiple transmitters, such as those that have been filed recently by the applicant, please ensure that the RF exposure info, instructions and separation distances for fixed, mobile, hand-held, body-worn, wrist-worn and other operating configurations are consistent for all intended products. This should include all antennas in the original and subsequent Permissive Change filings for these transmitters.	

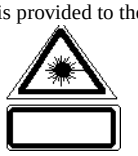
RF Devices

Symbol's RF products are designed to be compliant with the rules and regulations in the locations into which they are sold and will be labeled as required. The majority of Symbol's RF devices are type approved and do not require the user to obtain license or authorization before using the equipment. Any changes or modifications to Symbol Technologies equipment not expressly approved by Symbol Technologies could void the user's authority to operate the equipment.

Caution: Exposure to Radio Frequency radiation. To comply with FCC RF Exposure requirements this device shall only be used in accordance with the operating conditions and instructions listed in this manual. This device is only athorized for use in an arm mounted configuration as directed on pages 6 through 8.

Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

In accordance with Clause 5, IEC 0825 and EN60825, the following information is provided to the user:



ENGLISH

CLASS 1	CLASS 1 LASER PRODUCT
CLASS 2	LASER LIGHT DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT

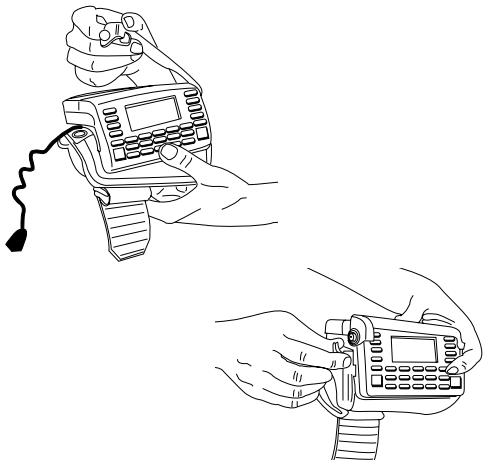
DANISH

KLASSE 1	KLASSE 1 LASERPRODUKT

Assembling the WSS 1000 System

To assemble the WWC 1000 (wrist computer):

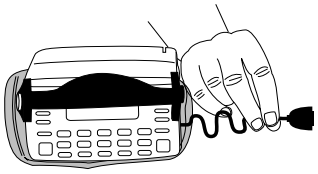
1. Place the WWC 1000 wrist computer onto the wrist mount, facing you. Be sure the mount is oriented so that the longer strap will be further up the forearm.
2. Snap the bar over the WWC 1000 using the snaps on either side of the mount. The straight part of the bar should lay across the front of the WWC 1000; the curved part in back.



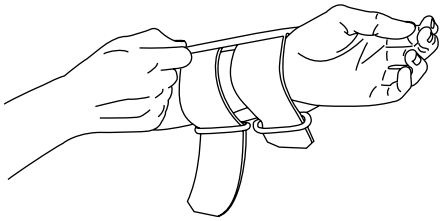
Note: The snaps on the wrist mount act as a tear-away

device allowing the wrist computer to detach from the mount if it catches on an object.

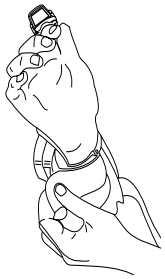
3. Plug the cable connector from the WWC 1000 in the interface port on the back of the scanner.



4. Place the WWC 1000 on your arm:
   a. Slide the wrist mount on your arm, so that the WWC 1000 wrist computer faces you.



b. Pull the straps through the buckles so the wrist mount is secure but not tight.



c. Use the Velcro to secure the straps.

5. Assemble and mount your scanner. See your scanner's *Quick Reference Guide*, or the *WSS 1000 Product Reference Guide*.

RF Exposure Antenna Summary

Network Systems Organization

FCC ID: **H9PLA4111** WLAN PC Card, 11 Mbps, Trilogy

Output Power: 60 mW Class II Permissive Change

Source Based

AP DC Factor: 0.713

Remote DC Factor: 0.711

Mobile Antennas (R>20cm)

Ant No	Model	Symbol P/N	Type	Gain (dBi)	Cabel Loss (dB)	Pout (dBm)	MPE (cm)	TR Status	Device Use
01.	7546	10-38649-02	F-Element	0.0	0.31	17.47	1.8	Tested	Hand Held Ocp
02.	2742	703624-2	F-Element	0.0	0.13	17.65	1.8	Tested	Hand Held Ocp
03.	XP	50-21900-024	Slot	0.0	0.58	17.21	1.7	Tested	Hand Held Ocp
04.	7242	10-35477-01	F-Element	0.0	0.12	17.66	1.8	Tested	Hand Held Ocp
05.	Toko	50-21900-022	Puck	0.0	0.00	17.78	1.8	Tested	Hand Held Ocp
07.	6846	10-32290-02	F-Element	0.0	0.34	17.44	1.8	See # 2	Hand Held Ocp
08.	7546D	10-40948-01	F-Element	0.0	0.22	17.57	1.8	See # 2	Hand Held Ocp
09.	1742	703549-2	F-Element	0.0	0.11	17.67	1.8	See # 2	Hand Held Ocp
11.	6846D	10-41003-01	Slot	0.0	0.37	17.41	1.8	See # 2	Hand Held Ocp
12.	6146D	10-41361-01	F-Element	0.0	0.23	17.55	1.8	See # 2	Hand Held Ocp
13.	3146BD	10-41359-01	F-Element	0.0	0.09	17.69	1.8	Tested	Hand Held Ocp

Portable Antennas (R < 5cm)

Ant No	Model	Symbol P/N	Type	Gain (dBi)	Cabel Loss (dB)	Pout (dBm)	EIRP (mW)	TR Status	Device Use
06.	Vocollect MMCX	50-21900-025	Dipole	2.0	0.25	17.53	63.9	Withdrawn	Belt Worn 5-
10.	Oniel MMCX	50-21900-031	Slot	0.0	0.37	17.41	39.2	Withdrawn	Belt Worn 5-
14.	1046	10-32447-02	F-Element	0.0	0.15	17.63	41.2	See # 2 + SAR	Wrist Worn
15.	1046DP	10-41370-01	Dipole	2.0	0.20	17.58	64.6	See # 6	Wrist Worn

Antenna Gain listed without cable
TR Status refers to weither the antena was tested. If not refer to the directed antenna test data

Duty Cycle Factors are applied to MPE and EIRP

Tx Limited configurations are for low power versions of the radio. See the specific antenna exhibit for