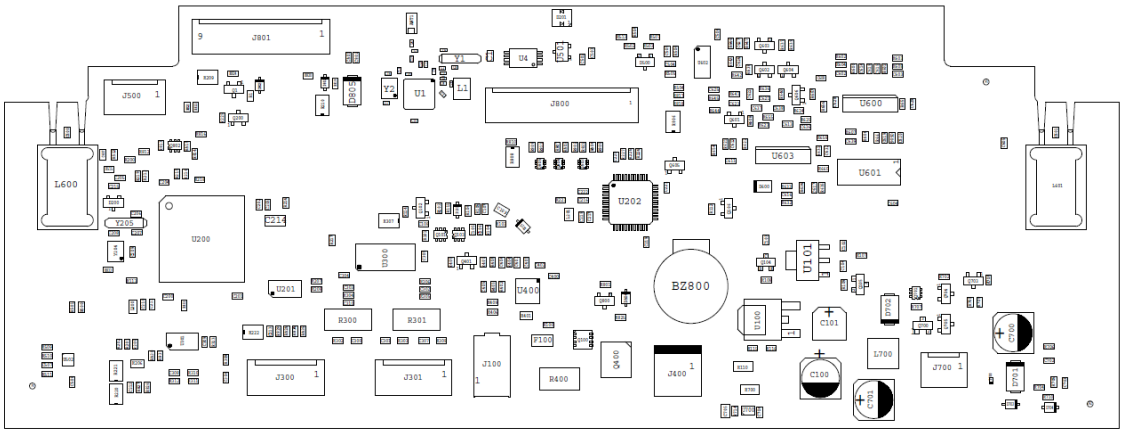
Robomow®	Main Board RX			
Original edition	28.6.2017	Part No.	**ESB9000**	Assembly Instructions
Version	V01	Edit by	Omer Siman tov	
Updating date	27.11.2017	Approved by	Eli Levi	
File location: K:\Engineering\Part Specification\				



Production process:

1. SMT + Reflow (C.S)
2. Wave soldering of T.H components (C.S)
3. Visual inspection for shortages and left over Tin.
4. Marking and Labeling
5. ICT Test (100%)
6. Cleaning
7. Touch-Up of T.H components (C.S)
8. Conductor cutting (P.S)
9. V-Cut
10. ICP – Electrical Test (100%)
11. Packaging and Shipment

Appendixes:

1. Changes control table
2. Instructions for Quality Control

Special instructions and emphasize

General

1. This electronic board should match **IPC-A-610D (Class 2)** standards. Those standards define criterions for Lead free board's assembly, SMT and T.H Placing, SMT, T.H, cables and manual soldering, mechanic assembly, cleaning, Coating and boards marking

Production Process

1. SMT and Reflow (C.S)

2. Wave soldering of T.H components (C.S)

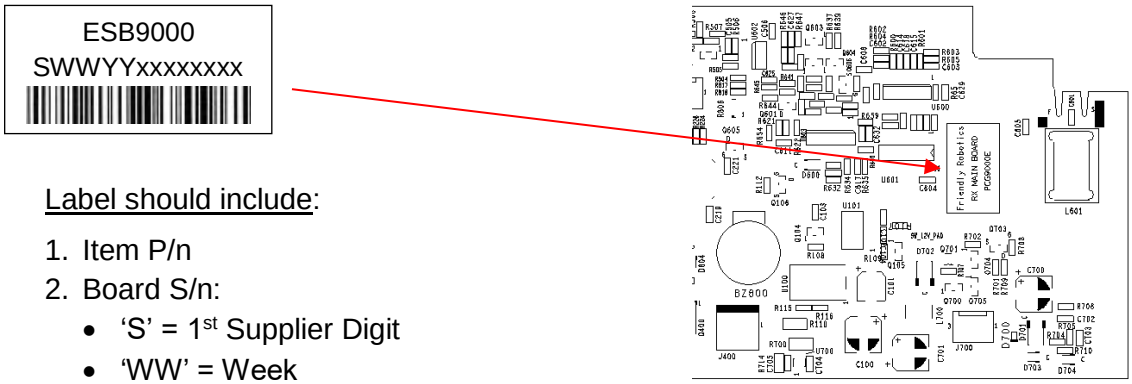
#	PN	Ref Designator	Remarks
1	BUZ9000G	BZ800	See the mark at the board insertion
2	CON0214G	J100	See the mark at the board insertion
4	CON0219G	J300,J301	See the mark at the board insertion
5	CON0213G	J400	See the mark at the board insertion
6	CON0220G	J500,J700	See the mark at the board insertion
7	CON0002G	J800	See the mark at the board insertion
8	CON0216G	J801	See the mark at the board insertion

3. Visual inspection for shortages and left over Tin.

4. Marking and Labeling

   Attach S/n & P/n label on **C.S**. (watch below image)

   Label size: 16x9.4 mm max



   Label should include:

   1. Item P/n
   2. Board S/n:
      - 'S' = 1st Supplier Digit
      - 'WW' = Week
      - 'YY' = Year
      - +8 digits for supplier use (Total 13 Digits)
   3. Barcode

5. ICT Test

6. Cleaning

7. Touch-Up of T.H components (C.S + P.S)

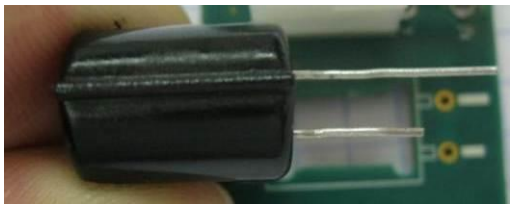
Manually solder below components.

Friendly recommendation is using selective soldering technology

#	PN	Ref Designator	Remarks
1	IND5005G	L600,L601	
2	INJ7110A	L600,L601	

7.1 Insert the Sensor to the Spacer.

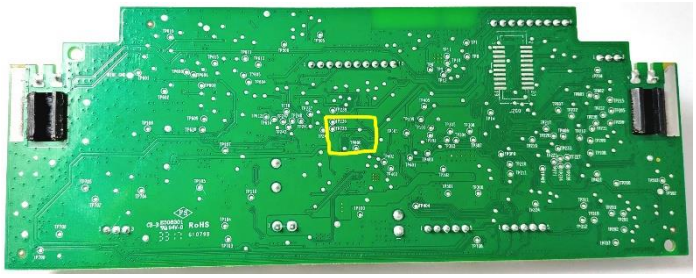
7.2 Assemble the Sensor to its location on the board in correct polarity and solder the Sensor legs.

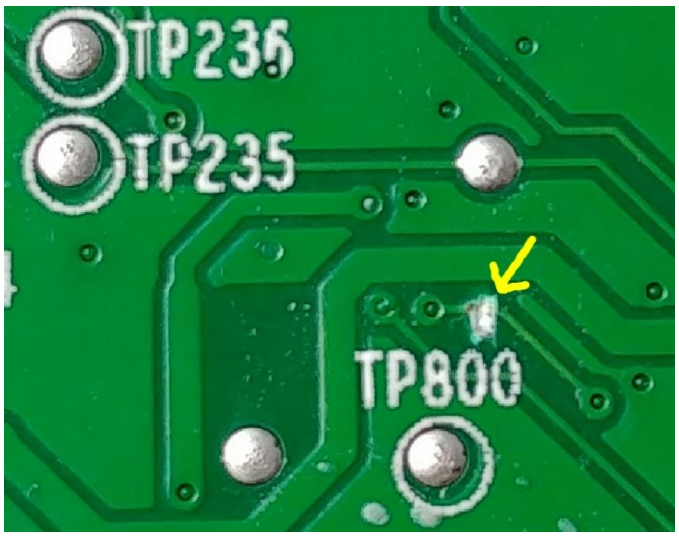


See the silk mark on the board how to assemble the sensor (long leg and small leg)

8. Conductor Cutting (P.S)

Cut the conductor near TP800 from P.S according below images





9. V-Cut
   Separate the boards from the panel.

10. ICP – Electrical Test (100%)

11. Packaging and Shipment
    10.1 Pack each board in antistatic nylon bag
    10.2 Pack the board in carton box with inner cells

Appendix 1: Control table for changes

Spec ver.	Date	Decisions and changes description	Reason for change	Approved By
F1 – V01	27.11.17	1. conductor cutting near TP800 from P.S		

Federal Communications Commission (FCC) Statement

Radio Frequency Interference (RFI) (FCC 15.105)
This equipment has been tested and found to comply with the limits for Class B digital devices pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications (FCC 15.21)
Changes or modifications to this equipment not expressly approved by F. Robotics Acquisitions Ltd. may void the user's authority to operate this equipment.

Warning: Insertion of a ESB9000 BLE Robot Board/RF Module into any host other than the RX12, RX20, RX50, XR1 150, XR1 300, XR1 500 invalidates the FCC ID of the ESB9000 BLE Robot Board/RF Module.

Labeling Requirements (FCC 15.19)
This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

The host product must be labelled to refer to the enclosed module:

Contains FCC ID: 2ABHE-RB-3
Contains IC: 23524-RB3

RF Exposure info (FCC 2.1093) - for module radio
This equipment has been approved for mobile applications where the equipment should be used at distances greater than 20cm from the human body (with the Exception of hands, wrists, feet and ankles). Operation at distances less than 20 cm is strictly prohibited.

Canadian Compliance

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas tre Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

This radio transmitter with model: **ESB9000** has been approved by Industry Canada to operate with the antenna type listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna type not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio with model: **ESB9000** a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Antenna	Manufacture	Brand	Module Name	Antenna Type	Connector	Gain (dBi)	Frequency band
Chip P/n 2450AT18B100	Johanson	Johanson Technology	CSR1010	High Frequency Ceramic Antenna	None	0.5dBi	2400 – 2500MHz

RF Exposure info

"The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Heath Canada's website www.hc-sc.gc.ca/rpb."

Class B Notice for Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.