

Instruction for implementing *Bluetooth*[®] functionality into robotic mower: Certification Requirements

In addition to technical implementation specifications, the following instructions shall be followed when implementing the HMI Boards incorporating Bluetooth functionality, i.e. the **HMI BLE1A** and **HMI BLE1B**, for the below mentioned certifications to be valid.

These instructions shall be followed for all boards with the Bluetooth design on them:

- HQ-BLE-1: 590 54 13

The design is on all PCBs with any of the numbers:

- 582 87 12
- 590 11 35

Changes or modifications made to this equipment not expressly approved by Husqvarna compliance department may void the validity of the certification, for instance the FCC authorization to operate this equipment.

The Bluetooth boards with design HQ-BLE-1 can only be used in robotic lawn mowers developed and manufactured by Husqvarna. The boards are only allowed to be mounted during the manufacturing process of the robotic lawn mower. The boards are not for sale for use in any other product. The boards are only allowed to be used in the robotic lawn mower models which are covered by the certification.

1 Identification of the certified boards

Board Level	PCB: 582 87 12-01	PCB: 590 11 35-01
	Common Robotic Mower BT design, incl antenna. Design Reference: 590 54 13-01 ("HQ-BLE-1")	

2 Worldwide

2.1 Bluetooth Special Interest Group

For Bluetooth certification to BT SIG, the design HQ-BLE-1 is certified. All products that uses HMI-boards with Bluetooth functionality activated shall be listed in the BT SIG community database.

The guidelines from Bluetooth SIG regarding word mark and logos shall be followed for documentation and information.

3 Europe

3.1 Robotic mower

Make sure the robotic mower is verified with appropriate EMC and spurious emission standards.

3.2 Manual and other documentation

The manual of the mower shall state the frequency and output power of the radio signals.

4 USA and Canada

The HMI boards (**HMI BLE1A** and **HMI BLE1B**) have FCC and ISED approvals. The boards are marked with the following FCC and IC IDs:

Board id	FCC ID	PMN	IC ID
582 87 12-01	ZAS HQ-BLE-1A	HMI Board Type 10 HMI Board Type 11 HMI Board Type 12	23307-HQBLE1A
590 11 35-01	ZAS HQ-BLE-1B	HMI Board Type 13	23307-HQBLE1B

4.1 Robotic mower

4.1.1 FCC ID label

If the HMI boards with Bluetooth functionality are mounted so that the FCC ID cannot be seen from the outside, the robotic mower shall be marked with a label with the FCC ID. The label should be seen from the outside of the mower and easy for the customer to find. The following wording is recommended on the label:

This device contains modules FCC ID XXXXXXXX

4.1.2 SDoC requirements

Verify that the robotic mower fulfills requirements for EMC and spurious emission as required for a SDoC to be issued.

It is allowed on a voluntary basis to use the FCC-logo on the machine as below:



4.2 Manual

4.2.1 Warning

The following information shall be in the manual for US market. It shall be placed among other warnings.

Notice

Changes or modifications made to this equipment not expressly approved by Husqvarna may void the FCC authorization to operate this equipment.

4.2.2 Label information

If a label is needed on the outside of the mower (see 4.1 above), there shall be information in the mower manual describing where inside the mower the HMI-boards are mounted and the FCC ID can be found.

4.2.3 Notice

The following information shall be in the manual, especially following the HMI Bluetooth boards if there is more than one manual:

NOTICE:

This device complies with Part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- *this device may not cause harmful interference, and*
- *this device must accept any interference received, including interference that may cause undesired operation.*

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:

- *l'appareil ne doit pas produire de brouillage, et*
- *l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

4.2.4 SDoC information

It is recommended that the following information is included in documentation provided at the time of marketing or importation for meeting the FCC SDoC requirement. No specific name or signature is needed.

Unique Identifier: (e.g., Trade Name, Model Number)

Party issuing Supplier's Declaration of Conformity

Company name

Street Address

City, State

Postal Code

Country

Telephone number or internet contact information

Responsible Party – U.S. Contact Information

Street Address

City, State

Postal Code

United States

Telephone number or internet contact information

4.2.5 Robotic mower information

The following information is applicable for the manual for the complete robotic mower system, on the level for the SDoC.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and 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.*

5 RoW

5.1 Japan

The design HQ-BLE-1 (590 54 13) is certified according to Japanese Radio, and may not be changed in any way.

The user manual shall be in English- or Japanese language and shall include instructions required for the user. In case of module approval installation descriptions shall be available.

Reference of the Japanese approval should be given, indicating the rule by which conformity has been approved, i.e. the following text shall be in the manual which covers Bluetooth specific instructions:

This robotic mower contains an internal module which are approved for use in Japan according to:

Japanese Radio Law Compliance.

This device is granted pursuant to the Japanese Radio Law (電波法)

5.2 Brasil

In Brasil is the Bluetooth functionality certified under two licenses:

- HMI Board Type 10, 11 and 12 as a family with one certificate number,
- HMI Board Type 13 with one certificate number.

Please check with Husqvarna compliance department for exact certificate numbers.

5.2.1 Manual

In the manual there has to be a clear reference to the included radio module as a verbatim text. The text shall be:

Este produto contém a placa HMI Board Type XX código de homologação ANATEL XXXXX-XX-XXXXX.

It is not allowed to add multiple board type numbers or put the info in a table etc. If the manual covers more than one model (i.e. AM105, AM310, AM315 and AM315X) where some models have Bluetooth and some don't, we should put:

Husqvarna AM310 contém a placa HMI Board Type XX código de homologação ANATEL XXXXX-XX-XXXXX.

Husqvarna AM315 contém a placa HMI Board Type YY código de homologação ANATEL YYYYY-YY-YYYYY.

5.2.2 Marking on product

The product should be marked in a similar way as for US FCC labeling.

“Este produto contém a placa HMI Board Type XX código de homologação ANATEL XXXXX-XX-XXXXX”