	Funkciók és beállítás	
ZUCCHETTI Centro Sistemi	**AM4000 – Szerviz menü és speciális beállítások (új funkció)**	2024-06-11 Rev. 2023-05-24

1. Hozzáférés a Szerviz menühöz

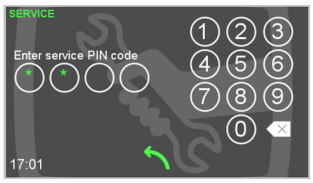
A következő lépéseket követve léphet be a Szerviz menübe:

1) Tartsa nyomva az **i** gombot néhány másodpercig, amíg meg nem jelenik egy új PIN kérést tartalmazó képernyő.

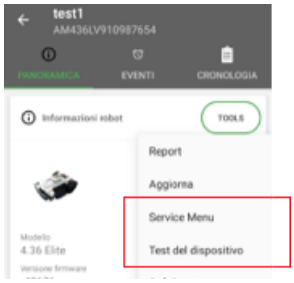
   FIGYELEM: ha megnyomja és azonnal elengedi az **i** gombot, akkor a Statisztika képernyőt érheti el.

2) Adja meg a **3816-os** pin kódot

   FIGYELEM: a pin kód nem változtatható, és minden AM4000 alaplappal felszerelt robotnál ugyanaz

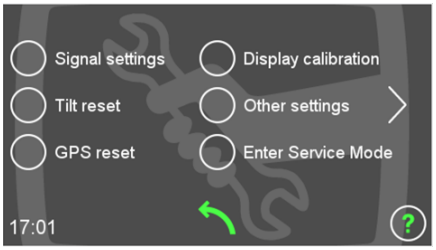


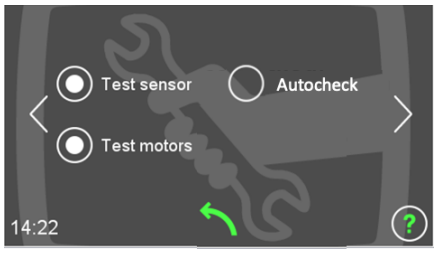
FIGYELEM: a szervizmenü a Szerviz alkalmazásból is elérhető. A kijelző elrendezése eltérő lehet, de a funkció jelentése ugyanaz.



2. Elrendezés

A Szerviz menü 2 fő képernyőre van felszerelve, amelyek az összes elérhető lehetőséget mutatják:

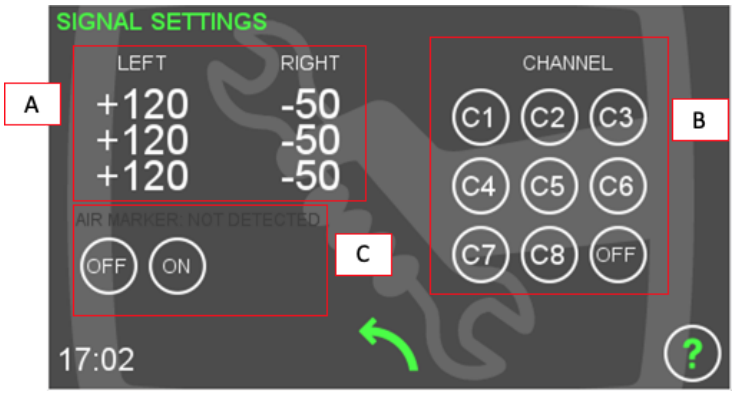




- A két képernyő között az oldalsó nyilak segítségével mozoghat
- Nyomja meg az egyes címkék melletti négyzetet a kapcsolódó almenü eléréséhez. Az alábbiakban az egyes almenüket ismertetjük .

3. Jelbeállítások

Ez az almenü lehetővé teszi a jelvevő opciók beállítását (vevő csatorna, Air Marker beállítás és a No border mód aktiválása).



A - JELMÉRÉS: itt látható a határvezeték jelének állapota a bal és jobb tekercstől mérve.

- + jel azt jelzi, hogy a tekercs a határon belül van
- - jel azt jelzi, hogy a tekercs a határon kívül van
- A "--" azt jelzi, hogy a robot nem tudja mérni a jelerősséget
- minden sor néhány tekercsnek felel meg. A tekercsek száma modellenként eltérő lehet.
- az érték a jel erősségét jelzi, és általában nem ad hasznos információt a hibaelhárításhoz. Az érték leolvasása hasznos lehet a gyártó számára, és a robot rendellenes viselkedése esetén kérhető.

B - CHANNEL: s válassza ki a vevőcsatornát, hogy illeszkedjen az adón beállított csatornához. Állítsa OFF állásba, hogy szegély nélküli üzemmódban működjön. Ha a No Border beállítást választja, a robot addig marad ebben az állapotban, amíg ki nem kapcsolják.

C - AIR MARKER OPCIÓ: az Air Marker jel vételének KI/BE kapcsolásához

- KI: a robot nem reagál a levegőjelző jeleinek vételére
- BE: alapértelmezett beállítás. A robot reagál, ha észleli az Air Markert

  FIGYELEM: A beállítás engedélyezése után ellenőrizze az Air Marker érzékelését a címke kijelzőjén a beállítás gomb felett, ha ki van jelölve, a robot érzékeli az Air Marker jelét.

4. Egyéb beállítások

Ez az almenü lehetővé teszi a robot összes speciális beállítását. Több oldalra van rendezve. Az oldalsó nyilak segítségével mozoghat az oldalak között.

	A funkció engedélyezve van
	A funkció le van tiltva
	A bejegyzés almenüvel rendelkezik, és a funkció engedélyezve van.

A beállítás akkor is megmarad, ha a robot ki van kapcsolva.

Iránytű és **giroszkóp** : engedélyezheti vagy letilthatja a giroszkóp és az iránytű funkciókat, amelyek lehetővé teszik, hogy a robot egyenes pályát tartson fűnyírás közben.

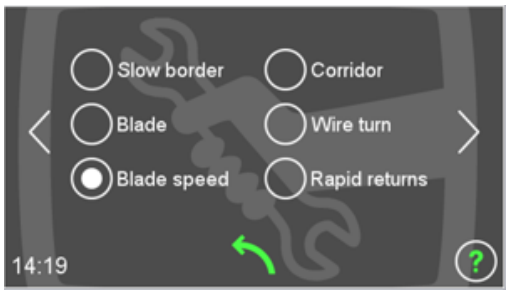
- a giroszkóp és az iránytű szenzorok is be vannak ágyazva az alaplapba
- Abban az esetben, ha a robot nagy körökben vagy nagyon íves pályákon kezd el nyírni, állítsa OFF állásba, hogy megértse, hogy a meghibásodást érzékelők okozzák-e vagy sem.
- hasznos az OFF állásba állítás is, ha bemutatni és kézzel mozgatni szeretné a robotot . Ellenkező esetben, ha engedélyezve van, a robot mindig egyenes pályát próbál tartani

Lift: to enable or disable the safety lift sensors installed on the front drop-down wheels. ATTENTION: safey feature.

Stop: to enable or disable the stop button located on top of the cover of the robot. ATTENTION: safey feature.

Bump: to enable or disable the bump sensors. ATTENTION: safey feature.

Blade Height: available only in the robot equipped with the motorized cutting height adjustment. To enable or disable the electrical cutting height adjustment.



Slow Border: to set if the robot should automatically decrease the speed when it drives close to the border wire. By default, robot automatically decreases the speed when it approaches the border wire (ON). If set on OFF, robot approaches the border wire at the standard driving speed.

Corridor: to enable or disable the detection of a narrow passage while the robot is working.

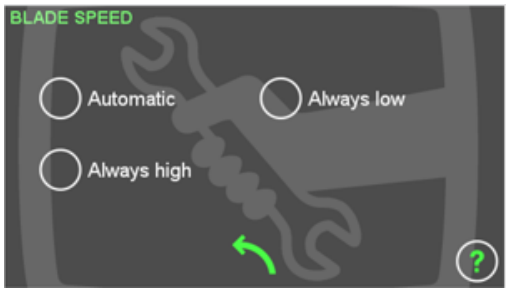
Blade: to enable or disable the blade motor.

Wire turn: to set if you want that the robot changes trajectory (45°) in case it drives parallel to the border wire (enable) or not (disabled).

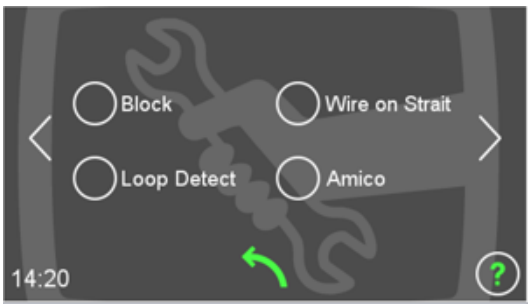
Blade High RPM: to enable blade motor working at highest speed (enabled) or standard one only (disabled). Once it is enabled, the blade motor automatically adjusts the speed between the two available values based on grass status. See the technical table for available blade motor speed values depending on robot model.

Blade speed: you can set three different value:

- Automatic: the blade motor automatically adjusts the speed between the two available values based on grass status
- Always Low: the blade motor rotates at the minimum speed even in presence of high effort
- Always High [only L400i models]: the balde motor rotates at the maximum speed even in presence of no effort. ATTENTION: in this case the average working time can be reduced.



Rapid returns: to enable or disable the identification of the quick return (arrows).



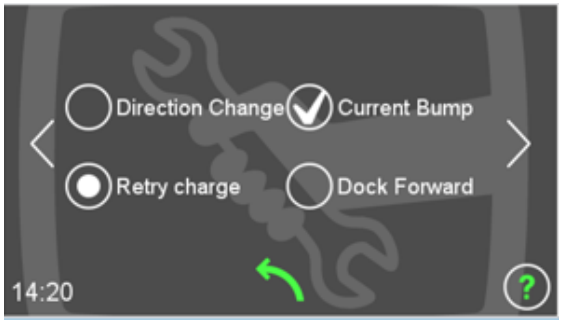
Block: to enable or disable the function by which the robot stops with BLOCKED message in case it does not find an obstacle or the border wire for more than 15 minutes. It is useful to disable only in case you have to test the robot for long time with raised wheels.

Wire on Strait: if the function is enable, the robot will automatically follow the wire for "Max Follow Wire" distance inside a corridor when it starts driving in V-meter mode (minimum about 1m large). At the same time, it is usefull to enable this function in case the robot does not properly detect the "Recall on wire" (it drives over the recall, goes to the border wire and follows it for few centimeters instead of "Max Follow Wire" distance)

Loop Detect: If Enabled the robot will see the presence of an island and travel around a few times (depending on the shape of the island wire) then depart seeking another

perimeter wire.

Amico: if disabled the robot ignores the presence of AMICO device and keeps the balde ON



Direction change: to set if the robot should change driving direction (enable) or not (disable) in case of tilt or lift. In case of Lift or TIlt:

- if the setting is enable, the robot stops the blade, moves back and turns to the right or left before restarting to drive in forward direction.
- if the setting is disable, the robot only stops the blades, but continues to drive in forward direction

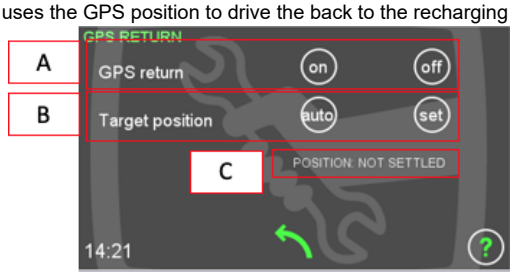
Current Bump: to enable or disable the Smart Bump feature.

Retry Charge: three different option:

1. Enable: the robot always leaves the docking station in case it loses the recharge power
2. On schedule: the robot leaves the docking station in case it loses the recharge power only within the working cycle
3. Disable: if disabled the robot does not leave the recharging station in case it loses the recharge power.

Dock Forward [only 4.0 platform]: if enable the robot will bump on the docking station at reduced speed, it moves back to exit from the docking station and rotates 180° to dock in reverse direction. ATTENTION: the feature is based on the Airmarker detection.

GPS return: to enable the advanced algorithm that uses the GPS position to drive the back to the recharging station and set the terget position.



A - GPS RETURN: Enable or disable the GPS return feature
B - TARGET POSITION: Choose the method to set the GPS point:

- Auto: the robot automatically set the GPS point
- Set: the manual setting

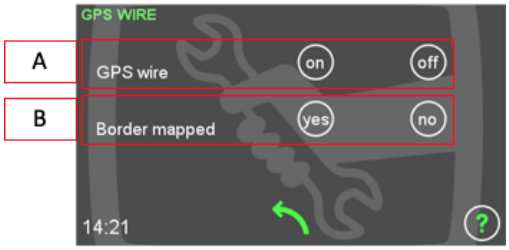
C - POSITION: The stasus of the Target position, it will be "Settled" when the Target position is set.

For more details please refer to the document GPS Return (/cassiopea_zcs/_documentazione/documentazione/Documentazione!vediDoc.action?idDocumentazioneTFrom=148&idDocumentazioneT=132).

Obstacle map: to enable or disable the function by which the robot automatically reduces the speed when approaching an obstacle, based on the GPS coordinates of the obstacle. The robot records obstacle position after the first time it bumps (the first time it bumps on a new obstacle, it bumps at full speed). The robot automatically resets obstacle position in case it travels close to the obstacle and does not bump for some times. This is necessary to avoid to record on robot memory temporary obstacles (chairs, toys, etc...)

Smart coverage: to enable or disable the advanced mowing algorithm that uses the GPS coordinates to move to the different areas of the garden

GPS wire [Only L400i platform]: to enable the advanced algorithm that uses the GPS position to allow the robot working without the border wire signal.



A - GPS wire: in order to enable the advance algorithm that uses the GPS position and maps to allow the robot working without the signal wire.
The robot does not stop with NO SIGNAL notification in case:

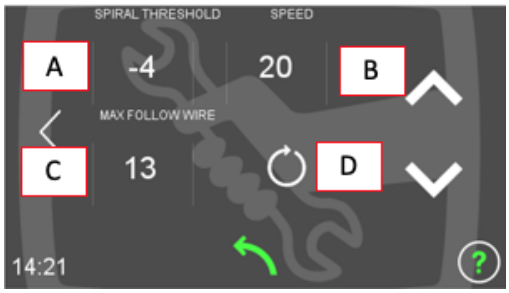
- it loses the border wire signal
- thanks to the GPS position reading it knows to be far from the border wire (more than about 10m) and in a position where it already worked before with correct border wire signal

For better understanding, please consider the following scenario.
The robot starts working in a new area and suddenly, where it is far from the border wire, it looses the signal due to some interferences. Normally, excluding serious issues with robot hardware or interferences coming from the ambient, as soon as the robot shuts down the blades, it recovers the signal and restarts. In this case, if the function is enabled, the robot marks the position in the map (saved in the SD card) as a known one with the following characteristics: far from the border wire, border wire signal present. Then next time the robot will reach the same position, even in case it will not be able again to measure the border wire signal, it will not stop.
If the function is disabled, the robot will stop again with NO SIGNAL notification.

B - Border mapped: to notify to the robot that border has been mapped. Chose "YES" only after that you have performed a complete mapping of the border wire position. We suggest to run the follow-wire all around the installation edges starting just after the recharging station and around the edges of the dangerous areas delimeted with the border wire (for example swimming pool).
This feature has to be enabled only in case the GPS WIRE is not enough to allow proper robot operation (for example very wide area: the robot takes a long time to completely discover and map).

ATTENTION:

- those features work thanks to the GPS position so, if the robot loses the GPS position, it may stop even if the map is known.
- start the robot only inside its own perimeter wire and be sure that the channel setting is the same on the robot and trasmitter
- if you set "BORDER MAPPED" on YES, the robot will work without border wire signal, so it could leave the cutting area in case the signal is really not present.



Spiral threshold - Speed - Max Follow wire - Docking direction: For such parameters it is possible to set parametric values rather than to enable or disable only. In order to set the values: push on the button A - B - C to select the value to change, then act on the arrows on the right side of the screen to change the value

A. Spiral threshold: to enable / disable spiral movement that the robot makes when it finds tall grass. It also allows to set the sensibility of the spiral function and the blade High RPM function. By default, the setting is DEFAULT. It is possible to:
   - increase spiral function sensibility (robot will start driving in spiral mode in shorter grass than under DEFAULT setting) by changing the setting to positive values, from +1 up to +4 (spiral
     sensibility increases from +1 to +4). This affect with the same logic also the control on the blade speed, so the robot will change the blade speed to the maximum value more often (ATTENTION: the setting Blade Speed has to be on Automatic)
   - decrease spiral function sensibility (robot will start driving in spiral mode in taller or stronger grass than under DEFAULT setting) by changing the setting to negative value, from -1 down to -4 (spiralsensibility decreases from -1 down to -4). This affect with the same logic also the control on the blade speed, so the robot will change the blade speed to the maximum value less times (ATTENTION: the setting Blade Speed has to be on Automatic)

   It could be necessary to change spiral function sensibility to adapt to different working conditions, like, for example:
   - stronger or weaker grass
   - presence of high humidity on the lawn
   - cutting height (at very low cutting height, robot normally has much higher effort from the blade motor and drives too often in spiral mode)
   - customer desires
   - blade motor wear over the time

B. Speed: to set robot driving speed. By default it is set to 30m/minutes. Change of this value does not change the speed when the robot drives close to the border wire or following the border wire
C. Max follow wire: to set the wire following distance after a “Recall on wire” while following the wire at the set distance (V-meter)
D. Docking direction: clockwise or counter-clockwise. Not selected, default value, the robot is searching the docking station in clockwise direction.

Additional entries have been added on more recent software update and there are not always present on all the product:

- **Bounce on wire** [only 9015DE0]: if disabled, when the robot is touching the wire will move like following:
  1. reverse movement

2. rotate to change the direction on place
3. drive forward

- **Blade offset** [only L400i platform with electrical cutting height adjustment]: if disabled, the different of cutting height between the middle and lateral blade motors is not present

5. Service Mode

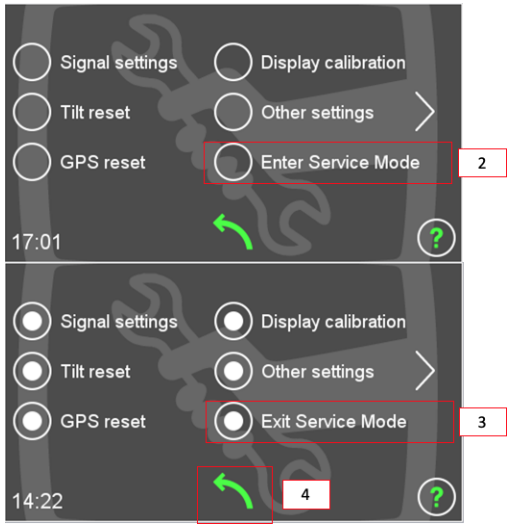
Service Mode allows to operate the robot while it shows on the display important parameters about robot operation.

5.1. Enable Service Mode

In order to enter Service Mode, follow the next steps:

1) Enter Service Menu

2) Push the ENTER SERVICE MODE button



3) The robot is not set to work in SERVICE MODE. The label changes to EXIT SERVICE MODE

4) Push the BACK button in order to return to the main menu and start the robot

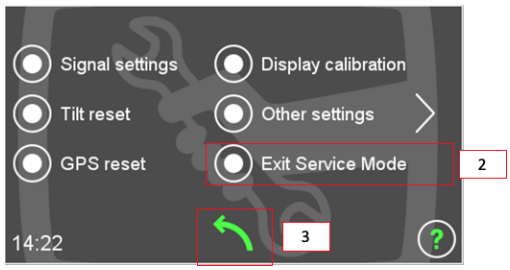
5.2. Disable Service Mode

In order to exit Service Mode, follow the next steps:

1) Enter Service Menu

2) Push the EXIT SERVICE MODE button

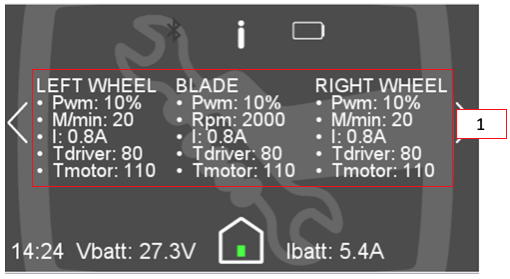
3) Push the BACK button in order to return to the main menu and start the robot



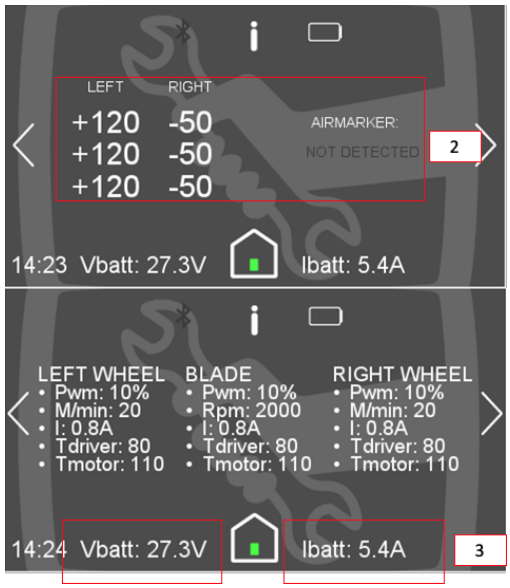
5.3. Information under Service Menu

When the robot is set to work in SERVICE MODE, while it works shows important information about:

1) motors operation



2) signal measurament



3) battery voltage and current, both during battery discharge and recharge

NOTE: The information displayed changes based on the hardware installed inside the robot.

6. GPS reset

Push the button to reset the GPS map of the garden and the map of the recorded obstacles.
Reset is necessary if you move the robot to a different garden or you implemented very important changes to the border wire layout.

ATTENTION: when you reset the GPS map the robot loses information about the target point for the GPS Return.

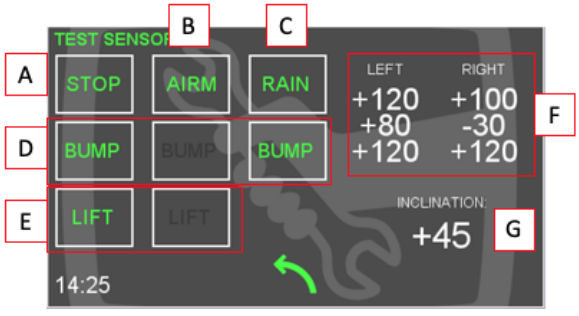
7. Tilt reset

Push the button to reset the inclinometer sensor embedded in the motherboard. It is necessary to reset the values when a new motherboard is installed in the robot.

ATTENTION: the reset has to be performed when the robot is placed on a flat surface with the robot properly assembled.

8. Test Sensor

This sub-menu allows to test all the main sensors installed in the robot, the available sensors depend on the hardware structure of the robot.
No settings can be performed from this sub-menu.



A - the icon lights up when the stop button installed on top of the cover is pushed. As a note, the icon lights up if the button is physically disconnected from the motherboard
B - the icon lights up when the robot feels the Air Marker signal coming from the recharging station. Normally, the robot has to measure the Air Marker signal only when close to the recharging station (about 3 meters)
C - the icon lights up when the rain sensor is activated. In order to test the sensor, short circuit the two probes of the sensor. The icon has to turn ON and turn OFF when the short circuit is removed
D - the icon related to the bump sensors, lights up when the sensor is activated. As a note, the icon lights up if the button is physically disconnected from the motherboard. The position and number of the sensor change from model to model. The sequence here in the test is the same of the motherboard connection.
E - the icon related to the lift sensors installed on the front drop-down wheels, lights up when the sensor is activated (related wheel dropped down). As a note, the icon lights up if the button is physically disconnected from the motherboard
F - the status of the border wire signal measured from the left and right coils is shown here:

- + sign indicates that the coil is inside the border
- "--" indicates that the robot is not able to measure the signal strengh
- each row correspond at a couple of coils. The number of coils may differs from model to model
- the value represents the signal strength and normally does not provide any useful information for troubleshooting to standard users. Reading of the value may be useful to the manufacturer and requested in case of anomalous robot behaviors.

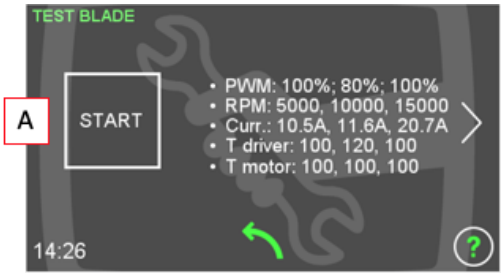
ATTENTION: the measurement refers to the receiver channel set from the SIGNAL SETTINGS menu

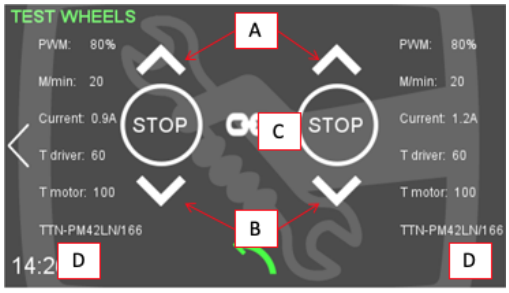
G - the value indicates the degrees of inclination of the robot with respect to an horizontal reference frame.

ATTENTION: the sensor that measures the inclination of the robot is installed in the motherboard. If the motherboard is not properly installed or the robot is open while reading the measurement, the value may be wrong. In order to reset the value to the 0 reading, you can use the TILT RESET menu.

10. Test Motors

This sub-menu allows to test the blade and wheel motors.
No settings can be performed from this sub-menu.
Use the lateral arrows to move from the TEST BLADE and TEST WHEELS screens.





A - indítsa el a motort. A kerekek motorjai különböző teljesítményszinteken tesztelhetők előremenő irányú működéssel.
B - indítsa el a kerékmotort hátrafelé.
C - állítsa le a kerékmotor forgását
D - lánc gomb, a kerékmotor összehajtásához (kigyullad) vagy önállóan a kerékmotor
E - kerékmotor típusa, olvassa el a Kerékmotor kódjának azonosítása (/cassiopea_zcs/_documentazione/documentazione/Documentazione!vediDoc.action?idDocumentazioneTFrom=148&idDocumentazioneT=64) című dokumentumot , hogy megértse a kód jelentését.

FIGYELEM: a fordulatszám, áram, T meghajtó és T motor értékek csak referenciaként jelennek meg. Nem szükséges összehasonlítani ezeket a névleges értékekkel, hogy megértsük, a motorok megfelelően működnek-e vagy sem. A motor meghibásodása esetén hibaüzenet jelenik meg a képernyőn.

11. Autocheck

FIGYELEM: EZ A FUNKCIÓ HAMAROSAN FRISSÜL.