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BRUSTEC SMART COMMAND

This equipment makes it possible to change the color of the RGB LED Reflectors, and to trigger reflectors of the monochrome models. And it is also possible to use the rhythmic functions to make your pool more modern and environmentally friendly, where the pool lights will accompany the "beat" of the music you are listening to.

It has the option of activating pumps, filters or other equipment via CELL PHONE, NOTEBOOK or TABLET through the auxiliary outputs (relays).

The control panel must be dimensioned according to the quantity of LED; table follows with maximum capacity for each BRUSTEC control panel model:

COMMAND BOX MODEL	BALIZER 0.5 w	POWER LED 1w	POWER LED 3w	POWER 3.5 w	POWER LED 5 w	POWER LED 6 w	POWER LED 9 w	POWER LED 15w
2A	35	18	7	6	4	3	2	1
3A	55	25	9	9	5	5	4	2
6A	100	55	20	19	11	10	7	4
10A	185	95	34	33	19	18	12	7
20A	385	190	67	66	40	36	24	15
29A	565	290	108	98	50	54	36	22

IP 63 – Protected against dust and water splashes - COMMAND CENTER

FUNCTIONS

- The smart Brustec controller has 21 different color matching functions. **(21 Rhythmic)**
- 2 auxiliary outputs (relays 16A). For connection of pump, filter, external reflectors, etc.
- Total control of the pool through mobile, notebook, tablet... no need to download application.
- Reach by cell phone from 30 to 50 meters in free areas.
- It is not necessary to have internet connection in the property area to control the pool by mobile.
- Timer with various automatically on/off programming options for reflectors and auxiliary outputs.
- Prism with millions of colors available to set up your pool with the color you want.
- Voice command integrated with AMAZON ALEXA.

REMOTE CONTROL FREQUENCY CHANGE ***

POWER ON COMMAND CENTER

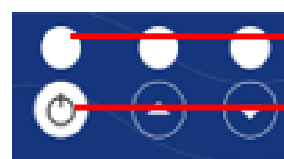
PRESS THE ON/OFF BUTTON FOR 5 SEC. UNTIL THE RED LED FLASHES.

PRESS THE REMOTE CONTROL ON/OFF BUTTON FOR 10 SEC. WHEN LIGHTING THE REFLECTOR, RELEASE THE BUTTON AND TEST THE OPERATION OF THE OTHER BUTTONS

*****NOTE: It is only necessary to do this procedure if there is another remote command or control interfering with your pool.**

YOUR CONTROL IS READY TO USE!

BELOW, THERE ARE IMAGES WITH THE BUTTONS THAT ARE USED FOR FREQUENCY EXCHANGE!



LED

ON/OFF BUTTON



GUARANTEE

BRUSTEC equipment is warranted for one year as of the store sale invoice, if installed in accordance with the manual and covering only factory defects that will be evaluated by the company's service department.

NOTE: The remote control battery is guaranteed for 90 days from the date shown on the sales invoice!

HOW TO PROCEED IF THERE IS ANY POTENTIAL DEFECT ON YOUR EQUIPMENT

1. Contact the store that sold the equipment, requesting support to find a possible solution or, if possible, a visit on-site of the technician for analysis.
2. If it is not possible to find the cause of the problem, contact the service department in our company and explain the problem so that some tests can be performed to detect the defect.

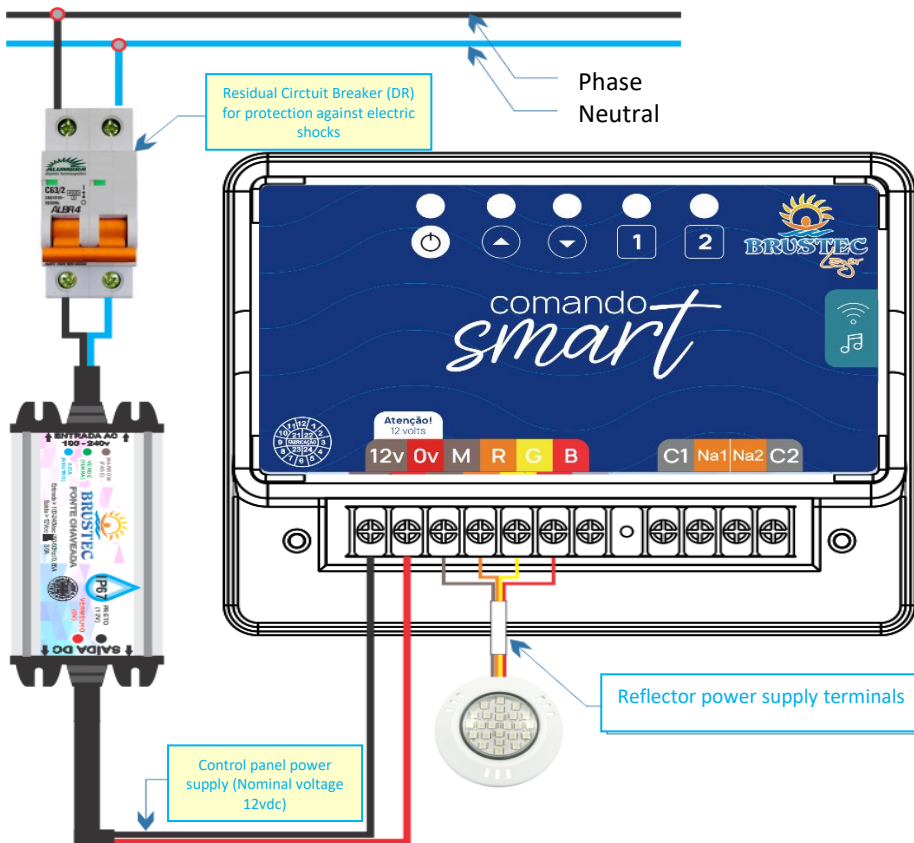
Contact phone: (47) 3350-3770

E-mail: assistencia@brustec.com.br

ELECTRICAL INSTALLATION

Control panel with rated supply voltage 12 vdc, we recommend the use of Switched Sources. Below, the connection scheme already with the use of equipment for protection (DR – Residual Circuit Breaker) that must be dimensioned according to your local installation. It is recommended that, for such safety, the installation of all equipment should be performed by a competent and qualified professional following the rules and guidelines in force.

In the electrical installation of the Brustec led reflectors, it should be noted that it is expressly important that the wire splices have no contact with water or moisture. For that to happen, it is necessary that the installation is done by a qualified professional and also follows the NR-10 and the current regulations. To avoid problems, we advise you to use high fusion tape and insulation tape to insulate any splices. Failure to comply with this procedure will consequently void the product warranty, in case of claim.



WE ADVISE INSTALLATION OF THIS EQUIPMENT IN AN OPEN AND VENTILATED PLACE TO AVOID PROBLEMS LIKE MOISTURE AND OXIDATION WHICH NORMALLY OCCUR IN ENGINE ROOMS.

TECHNICAL SPECIFICATIONS

DEGREE OF PROTECTION COMMAND	IP63 - Protected against dust and water splashes
DEGREE OF PROTECTION CONTROL	IP66 – Protected against dust and water jets.
MAX. CAPACITY ACTIVATION AUXILIARY OUTPUTS (RELAY)	16A/220Vac (Resistive Load) or 2 hp/220Vac (Inductive-Motors)
EQUIPMENT SUPPLY	12Vcc
MAXIMUM POWER FOR REFLECTORS	72W
DIMENSIONS OF THE EQUIPMENT	143,42 129,76 114,28

NOTE: In this control box there is a surge protection above 6 amps total for source protection, so the outputs are limited to 2A per output (R / G / B)

IDENTIFICATION OF TERMINALS



12V	Power 12 vdc from Source
0v	Negative 0v from Source
M	Positive for Reflectors – Connect Brown Reflector Wire
R	Negative (Red LED Color) – Connect Orange Reflector Wire
G	Negative (Green LED Color) – Connect Yellow Reflector Wire
B	Negative (Blue LED Color) – Connect Red Reflector Wire
A	Antenna for wire connection if remote control signal is low
C1	Common relay 1 (Input Phase)
NA1	Relay Output 1 (Phase Output to Engine)
NA2	Relay output 2 (Phase output to motor) – TIMER FUNCTION CONTROLS THIS OUTPUT
C2	Common relay 2 (Input Phase)

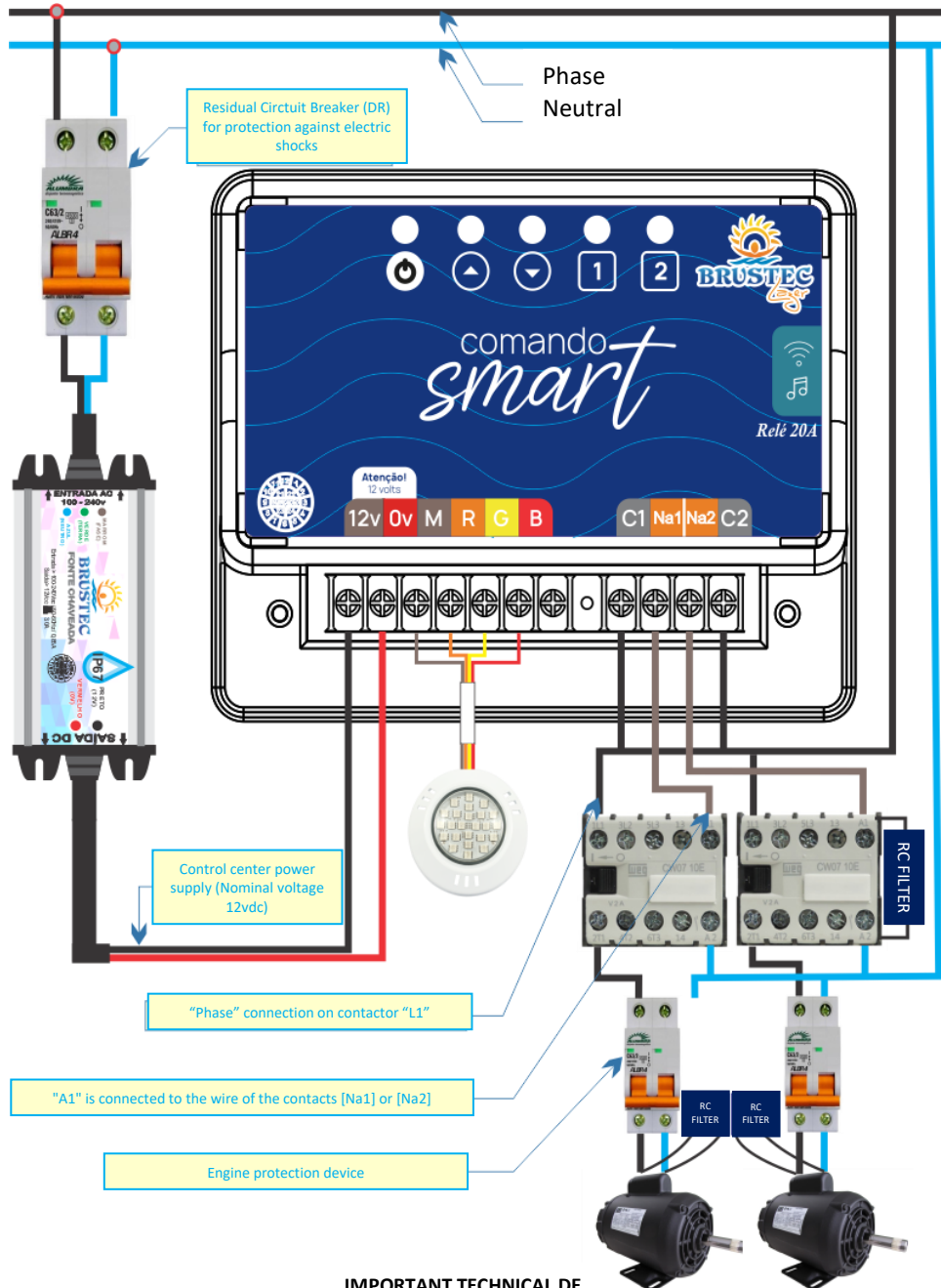
IDENTIFICATION OF BUTTONS

Power button icon	On and Off Reflectors
Up arrow icon	Advances RGB Effects
Down arrow icon	Returns RGB Effects
1	Turns On and Off relay 1 output
2	Turns On and Off Relay 2 Output

ELECTRIC INSTALLATION OF ENGINES USING CONTACTORS

Note: Load below 16A does not need contactors.

Recommended use of RC Filter between Phase and Engine Neutral and if there are contactors between A1 and A2.



IMPORTANT TECHNICAL DE

IMPORTANT TECHNICAL DETAILS

SMART COMMAND CONNECTION OPTIONS - In this Brustec reflector command, you have two options to control your pool through the mobile phone; tablet or other device that has internet access.

1. First option is to use the WIFI network that the equipment itself generates: Network named: **BRUSTEC LAZER** with **DEFAULT PASSWORD: 12345678** being this option in case you do not have internet on site.
2. Another option is for convenience in the use of equipment, but in this option is necessary access to the internet. In this option you will connect the equipment to the internet of your property (following the step-by-step described in this manual) and thus the equipment will be connected to your internet and you can normally browse the internet with your mobile phone for example and when you want to access the SMART command, just enter the IP address xxx. xxx x . _ _ _ that has been set.

ACCESS TO THE EQUIPMENT VIA BROWSER - The SMART Brustec Command does not use mobile applications to be accessed but browsers, being the most known: CHROME, INTERNET EXPLORER, FIREFOX, SAFARI, among others... the advantage of this access method is that it does not matter if your mobile or notebook operating system upgrades, for example; the equipment will continue to function normally. If there is any problem accessing the equipment after updating your operating system, it will not be necessary to send the equipment to the factory, just redo the configuration process described in this manual.

BUTTON FOR ERASING WIFI NETWORKS RECORDED IN MEMORY - All wifi networks that have been typed and saved in the memory of the equipment, can be erased through the FORWARD button (Image 01) by pressing it for 10 sec. and then the command center will restart, lighting all the leds. Then, when it goes out, it will generate again the factory wifi network called **BRUSTEC LAZER** with standard password 12345678.



Figure 01 - FWD. BUTTON

BUTTON TO ERASE PROGRAMMING FOR AUXILIARY OUTPUTS AND REFLECTORS - To erase the programming carried out for auxiliary drives and reflectors it is necessary to hold the RETURN button for 10 sec (Image 02), then all programs saved in memory, both auxiliary outputs and reflectors, will be reset.



Figure 02 - RETURN BUTTON

RESET BUTTON - If the device is not connecting to your mobile device in any way or is not accepting commands manually via the physical keypad, it may have activated its internal surge protection and you will need to RESET

the SMART command via the button between the connectors (Figure 03). This way with the equipment turned on you will keep the button pressed for 1 second.



Figure 03 - PLATE RESET BUTTON

IMPORTANT INFORMATION – RHYTHMIC FUNCTION

The rhythmic function is accessible via cell phone, through the RITMICO button, where at the moment you select, the command center ON/OFF indication led will blink intermittently, and the pool reflectors will light up according to the “DEEP” that the music generates. For this reason it is important that the equipment is installed in an open, dry place and, if possible, near the sound generating source, if any.

AUTOMATIC OPTION - If you choose the automatic option, the colors of the reflector will be changed according to the beat of the music.

MANUAL OPTION – This option will open a screen where you can choose which color for the rhythmic function (Image below).

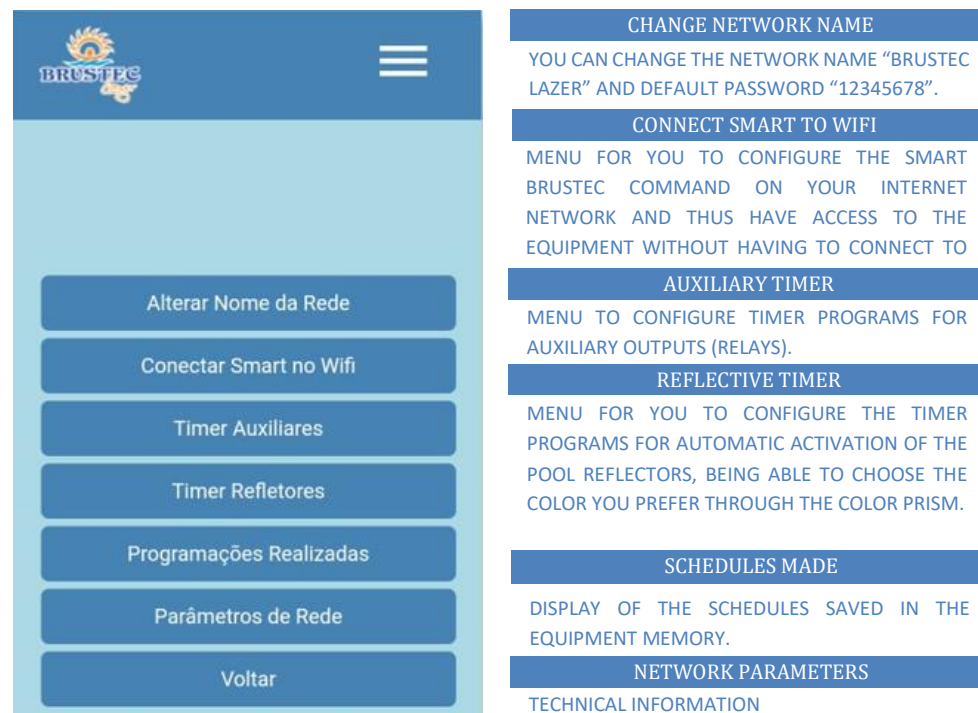
SENSITIVITY ADJUSTMENT FOR RHYTHMIC EFFECT - To adjust the sensitivity, just change the level in the bar below highlighted and press UPDATE LEVEL to save.



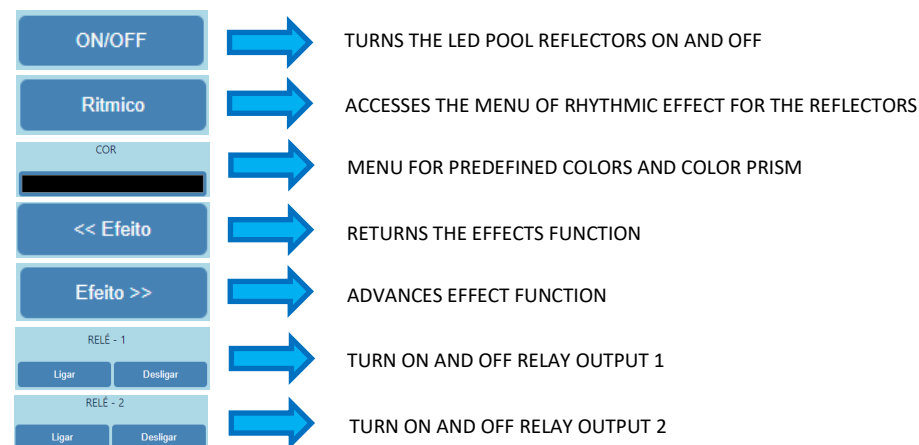
BRUSTEC MENU



To access the programming parameters of the auxiliary outputs; timer programming for reflectors and wifi settings, just click on the BRUSTEC - LAZER menu as shown in the image below.



FUNCTION OF EACH BUTTON



LOCAL ACCESS SETUP (Option 1)

The first time you turn on the machine to connect, you must do the following.

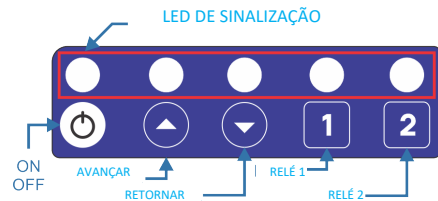
IMPORTANT - DEPENDING ON THE BROWSER YOU USE, THE APPEARANCE OF THE SCREEN MAY CHANGE SLIGHTLY AND FOR EVERY DATA ENTERED IN THE FOLLOWING SETUP STEPS YOU MAY NEED TO SET OR COMPLETE AFTER SELECTING THE OPTION FOR THE FIELD SETTINGS.

IN THE IMAGES OF THIS MANUAL THE BROWSER USED WAS: CHROME



Disconnect your 4G internet from your phone and start the following step by step to connect to the device:

1. Turn the SMART Brustec command on the power, wait for the signaling LEDs to light up and when they go out go to the next step.

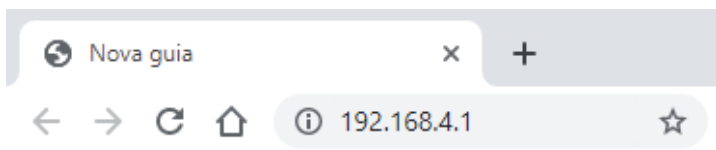


*If the LEDs do not turn on, press the RESET button. When the LEDs switch off go to the next step.

2. With your phone in hand, go to your cell phone's WIFI NETWORKS page and connect to the wifi network that will be created with the name **"BRUSTEC LAZER"**. The factory default password is **12345678**.
3. Open your internet BROWSER.



4. In the ADDRESS BAR, type the number 192.168.4.1 and press ENTER.



5. You will then be taken to the SMART Brustec command control screen (Screen below).



6. You are already connected to the equipment, now you can make use via mobile phone and perform programming for automatic activation of auxiliary outputs and reflectors. The range in unobstructed areas between the phone and the device is approximately 30 meters.

Note: The LOCAL ACCESS option (Option 1), it is necessary to do on all equipment to have option 2 of connection. However, in places that do not have WIFI internet within range of the SMART control panel, you can always use this connection method and, whenever you want to access the SMART control screen, just select the BRUSTEC LAZER network and enter the IP address 192.168.4.1 in the toolbar on your browser address bar.

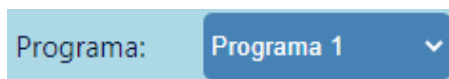
IMPORTANT NOTE: FOR REFLECTOR PROGRAMMING AND AUXILIARY OUTPUTS, MAKE SURE YOU ARE IN THE WIFI NETWORK COVERAGE AREA OF THE EQUIPMENT OR IN THE NETWORK THAT THE EQUIPMENT IS CONNECTED TO!

SETTING OF TIMER PROGRAMS FOR AUXILIARY OUTPUTS

To have access to this, select in the **MENU screen -> AUXILIARY TIMERS** and then you will be directed to the schedule screen of days and times, where you will be able to make up to 14 different programs.



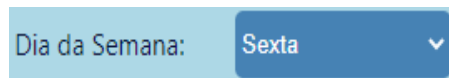
1. In the PROGRAM option you can choose the program and can record up to 14 different ones. Ex: PROGRAM 01



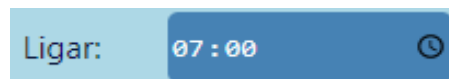
2. Then, in RELAYS you must define which auxiliary output you want to turn on, being possible to define only one output for each program that will be created. In the following example RELAY 1 or AUXILIARY OUTPUT 1 was selected.



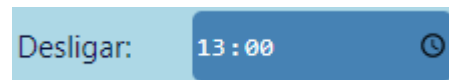
3. Then choose the WEEKDAY for the equipment to turn on. E.g. FRIDAY



4. Pressing ON you set the time when the auxiliary output will turn on. E.g. 7:00 AM

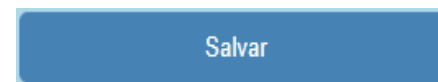


5. Pressing the OFF option you will set the time when the auxiliary output will turn off. E.g. 1:30 PM



NOTE: Pressing OFF, the time can never be shorter than in the previous field.

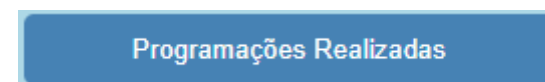
6. Once all fields have been completed, select SAVE to save the program to the machine's memory.



Below, the screen without configuration left and side with the step by step performed of this manual.



Program changes can be made endlessly. To view and delete the programs saved in memory it is necessary to access the MENU -> PROGRAMS MADE.

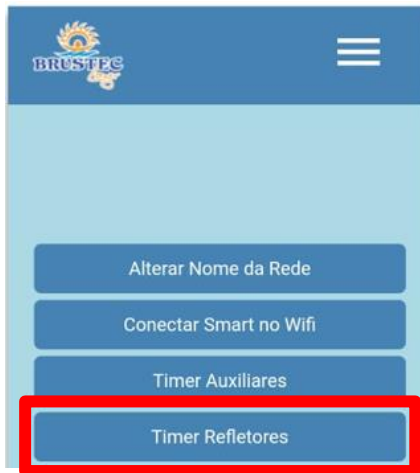


To DELETE the program you select the "X", as marked in red in the image below.



CONFIGURING TIMER PROGRAMS FOR REFLECTORS

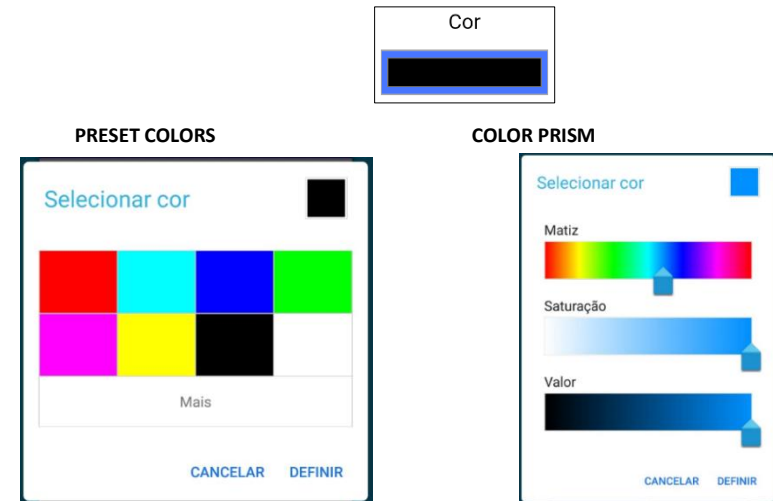
To access this, select from the **MENU screen -> TIMER REFLECTORS**



Then you will be taken to the following screen where you can make up to 14 different programs, just like the programming of auxiliary drives, the only difference is that in step 2 you will choose the color you want the pool to turn on at the scheduled time.



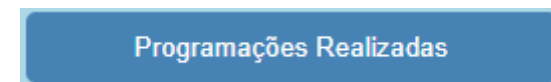
Another distinguishing feature of the SMART command is the choice of choosing the default colors or creating the color you want through the color prism, while changing the intensity and hue of the defined color. To access this color selection screen, you must access the MENU below:



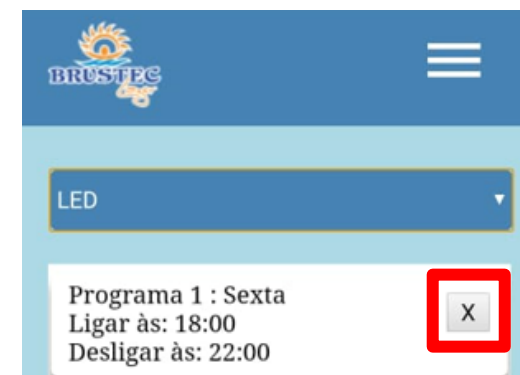
NOTE: Black will turn off the reflectors.

ONCE THE AUXILIARY OUTPUT PROGRAMS AND PROGRAMS FOR THE REFLECTORS ARE SAVED, IT IS NO LONGER NECESSARY FOR THE CELL PHONE TO BE CONNECTED TO THE COMMAND CENTER FOR THEM TO WORK, AS THEY ARE ALREADY SAVED IN THE EQUIPMENT MEMORY.

Program changes can be made endlessly. To view and delete the programs saved in memory it is necessary to access the MENU -> PROGRAMS MADE.



To DELETE the program you select the "X", as marked in red in the image below.



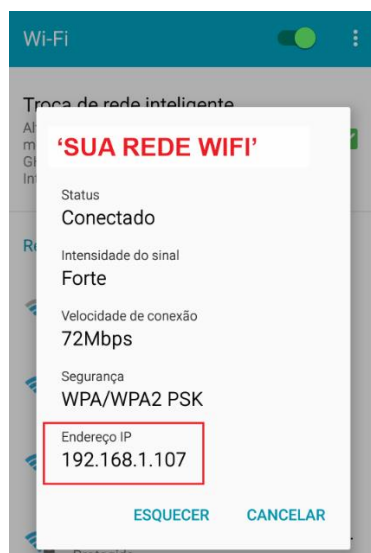
CONFIGURATION TO CONNECT the SMART COMMAND TO YOUR INTERNET (option 2)

If you have a WIFI network that has a signal in the range of the SMART command center, we advise you to use this method because it generates more convenience in the use of the device, as you will not need to change the network on your cell phone and enter the password again, since the SMART command will be connected to your WIFI. Then, when you have connected the SMART command center to your WIFI network, just log in to your browser and enter the IP address you have configured and you will have access to the equipment.

To begin with, you need to find out what the IP of your WIFI network is. Therefore, we will do the step by step below. You **will not need to change any settings on your phone, it's only to find out your IP following the steps below, but the wifi network and your password can not be more than 10 characters.**

1. Access the network screen of your still-connected phone on your WIFI.
2. Click once on the network and then a screen will appear according to the following image with your IP highlighted in red.

On some devices to find the IP, it is necessary to access the advanced configuration screen or other menu, in case your IP is not displayed immediately after clicking on your wifi network.



Note: The number of numbers in your IP may be smaller, but what will be changed is only the last sequence. For example, there may be IPs with only one or two decimal places in the last sequence, so only these will be changed. EX: 10.1.1.15; "15" is going to be changed to 99, for example.


In the example of this manual, the IP is 192.168.1.107 and what we will use to configure the SMART command center, will be **only the first numbers** 192.168.1.____. At the end the number 199 should be used, or another value that is not being used by another wifi network or equipment. This final value must comply with the number of decimal places of your IP!

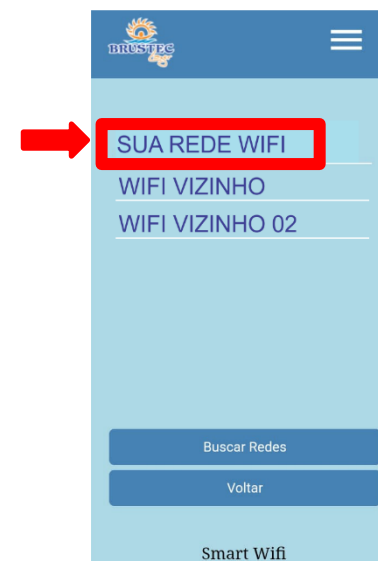
THE IMPORTANT THING IS THAT ONLY THE LAST NUMBERS OF YOUR IP WILL BE CHANGED!

YOU CANNOT USE THE SAME IP, YOU NEED TO CHANGE THE LAST NUMBERS

So the IP to be used in the following configuration **will** be 192.168.1.199

Below, there's a step by step on how to set up SMART command on your wifi network:

1. Connect to the BRUSTEC-Lazer network of the equipment.
2. Open your browser and enter the IP of the device 192.168.4.1
3. Enter the BRUSTEC LAZER menu 
4. Select WIFI Option.
5. Then it will show the available networks in your region. Select "YOUR WIFI NETWORK".

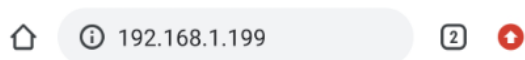


6. Enter your password.
7. Enter the IP you set earlier, which in this manual example is 192.168.1.199.
8. Select SAVE.
9. The equipment will then restart and the signaling LEDs will light one at a time and attempt to connect to the selected network for 30 seconds. If you do not notice turning on the signaling LED on the control panel, it is because the equipment has already connected to your wifi network.

NOTE: If not, the equipment will regenerate the wifi network BRUSTEC LAZER, because the internet signal is low or there was a typo in the fields that were filled. If this occurs, the setup process must be redone.

10. Open your browser on your phone.

11. Type the IP you set in step 7 and press ENTER.



12. Then it will open the program screen and so, for you to access the SMART command, just enter the IP set in step 7, having the possibility to connect up to 4 cell phones.

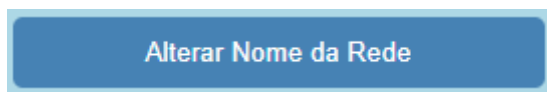
CONFIGURED WIFI NETWORK EXCHANGE (ONLY IF NECESSARY) – If you have more than one Wi-Fi network option and want to change the configured network, you need to erase the saved networks by pressing the FORWARD button of the SMART command center for 10sec and redo the step-by-step of the second connection option in this manual, using the IP of the other WIFI network that you have.



FORWARD BUTTON : AVANÇAR

CHANGE BOARD WIFI NETWORK NAME

You can change the network name and password of your equipment which by default is BRUSTEC LAZER and password 12345678. To do this, go to MENU -> CHANGE NETWORK NAME



➤ Choose a name of up to 8 characters and password with a minimum of 8 and a maximum of 10 characters:

Nome - max 8 caracteres

Senha - min 8 max / 10 caracteres

Salvar

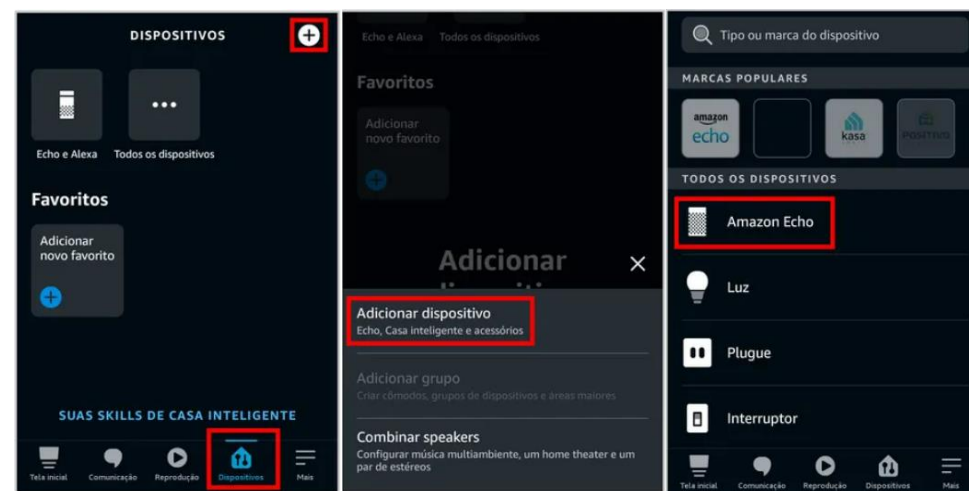
➤ Select SAVE and then the equipment will restart and you will need to reconnect your phone to the new network created.

SOLVING FAILURES

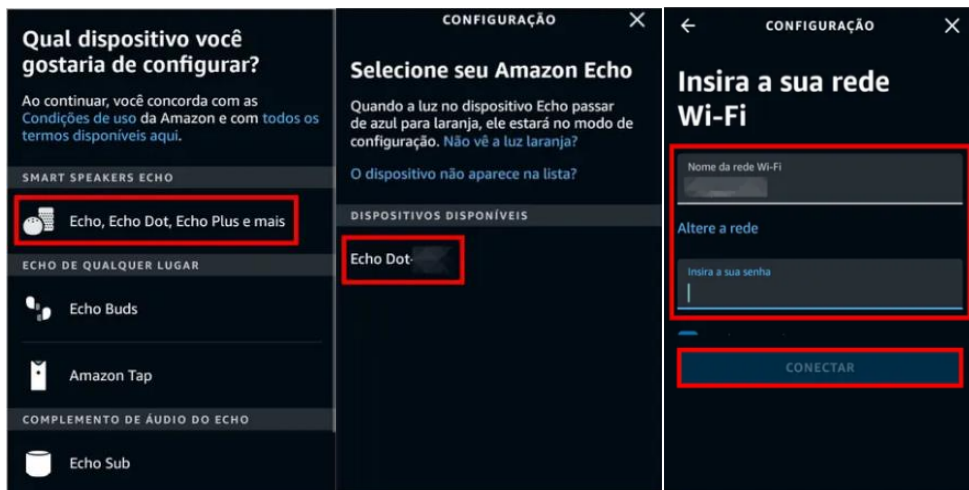
- Reflectors do not light up: Check supply voltage, cable connection at terminal, physical integrity of shunt cables and splices. Advance reflector functions as it may be in rhythmic functions.
- Command center does not accept command: Press the reset button between the terminals and if you turn on the signaling leds on the keyboard wait for them to go out and then redo the settings with the cell phone
- Connection to local mobile phone does not work: Equipment may be turned off or too far away from mobile.
- Control panel does not turn on: Check the supply voltage, remove the cables from the reflectors connected to it and connect the control panel, if it works the problem may be in the reflectors or cables.
- Equipment shutting down when starting the engines: Place suppressor filter between phase and neutral at engine closure. See mains voltage, minimum that the source supports is 110v.

CONNECTING ALEXA TO WIFI

1. Open the ALEXA **app** and log in with your Amazon account;
2. In the lower right corner of the screen, go to "DEVICES" and in the upper right corner tap the "+" icon and choose the **option** "ADD DEVICES" -> "**AMAZON ECHO**" according to the images below.



3. Select "**ECHO, ECHO DOT, ECHO PLUS**" to set up the Amazon device;
4. If the Alexa light color is ORANGE, select "YES" in the app. If not, press and hold the "ACTION" button until the color changes to orange and then select "**YES**" in the application notice;
5. Locate and Select the ALEXA device that is usually displayed as "**ECHO DOT**". If you don't show any devices, make sure Bluetooth is turned on.
6. Select the **WIFI** network you want to connect the **ALEXA** device to and enter the password to then **select CONNECT** to finish the connection process.

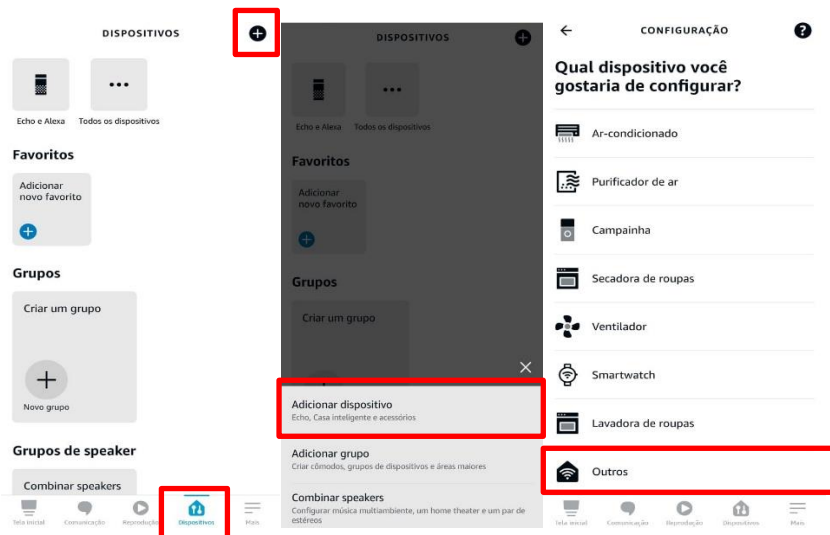


IS YOUR WIFI NETWORK NOT SHOWING UP ON THE NETWORK LIST?

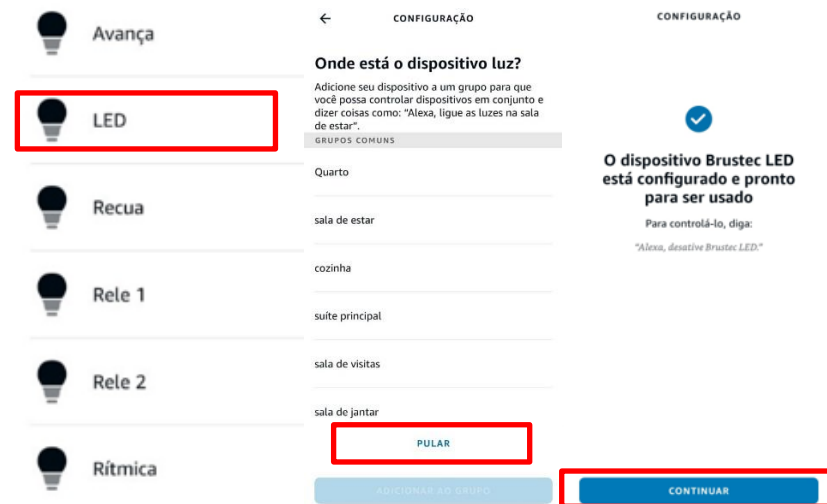
Scroll down and select “ADD A NETWORK” or “SEARCH” again to find the network you want. If it doesn't work, restart your internet and make sure it's within range of your ALEXA device.

ADDING THE SMART COMMAND IN THE ALEXA APP

1. Connect the SMART Brustec command to the same WIFI network that Alexa is connected to according to the connection OPTION 2 that follows on page 8 of this manual.
2. In the lower right corner of the screen, go to “DEVICES” and in the upper right corner tap the “+” icon and choose the option “ADD DEVICES” -> “OTHER” according to the images below.



3. When you show the list of devices found, select one at a time and add the list of devices connected to Alexa; it is not necessary to identify the location where each device is. Then, select the option “SKIP” and then “CONTINUE” to add the other devices.



4. You should add to all 6 devices which are: LED / FORWARD / RETREAT / RELAY 1 / RELAY 2 / RHYTHMIC. When finished, you can return to the main screen of the Alexa App and test the voice commands according to the examples below:

ALEXA, TURN ON LED = Will turn on the pool reflectors.
 ALEXA, TURN ON NEXT = It will advance the effects.
 ALEXA, TURN ON RETREAT = Will return the effect.
 ALEXA, TURN ON RHYTHMIC = Will activate the rhythmic effect.
 ALEXA, TURN OFF RHYTHMIC = Turns off the rhythmic effect.
 ALEXA, TURN ON RELAY 1 = Will start engine on auxiliary output 1.
 ALEXA, TURN OFF RELAY 1 = Will turn off auxiliary output 1.
 ALEXA, TURN ON RELAY 2 = Will start engine on auxiliary output 2.
 ALEXA, TURN OFF RELAY 2 = Will turn off auxiliary output 2.

Once this procedure is done, it is okay to turn off the Alexa from the power or the SMART command, as it will be saved in the memory of the equipment, but it is always NECESSARY that BOTH are connected to the same WIFI network. Otherwise it won't work. If any of these 6 devices are not accepting the voice command, it is necessary to uninstall, and redo the procedure from the 2nd step, in ADD DEVICES -> OTHERS... so that it is possible to reinstall.

NOTE: There are several functions and possibilities for changes within the Alexa APP, which can be applied to optimize or facilitate use, but they are Alexa functions that are constantly updated and, for this reason, Brustec shows only the basic and functional, as it goes from the knowledge and interest of each client to choose these other options that are demonstrated in several tutorials on the Amazon website and also videos on Youtube. In addition, once connected to Alexa, you can control your pool through the 4G network by activating the “ALEXA HANDS-FREE” mode within the ALEXA APP settings, where your phone is used to receive voice commands. It is necessary to leave the ALEXA device connected to the WIFI network of the house or condominium.