DE LA ROSA
RESEARCH

COLOR MIXER

USER´S GUIDE

Model
13010A

DE LA ROSA
RESEARCH

Congratulations!

You have just acquired an innovative, high quality product. We have put our highest effort into each development stage. We are sure that you will find this equipment most reliable and accurate - exceeding your expectations.

Before using this device, we strongly recommend that you carefully read the user manual. There you will find all related information for correct handling and usage of this product.

We hope that you enjoy using this equipment as much as we did creating it.

De la Rosa Research Team.

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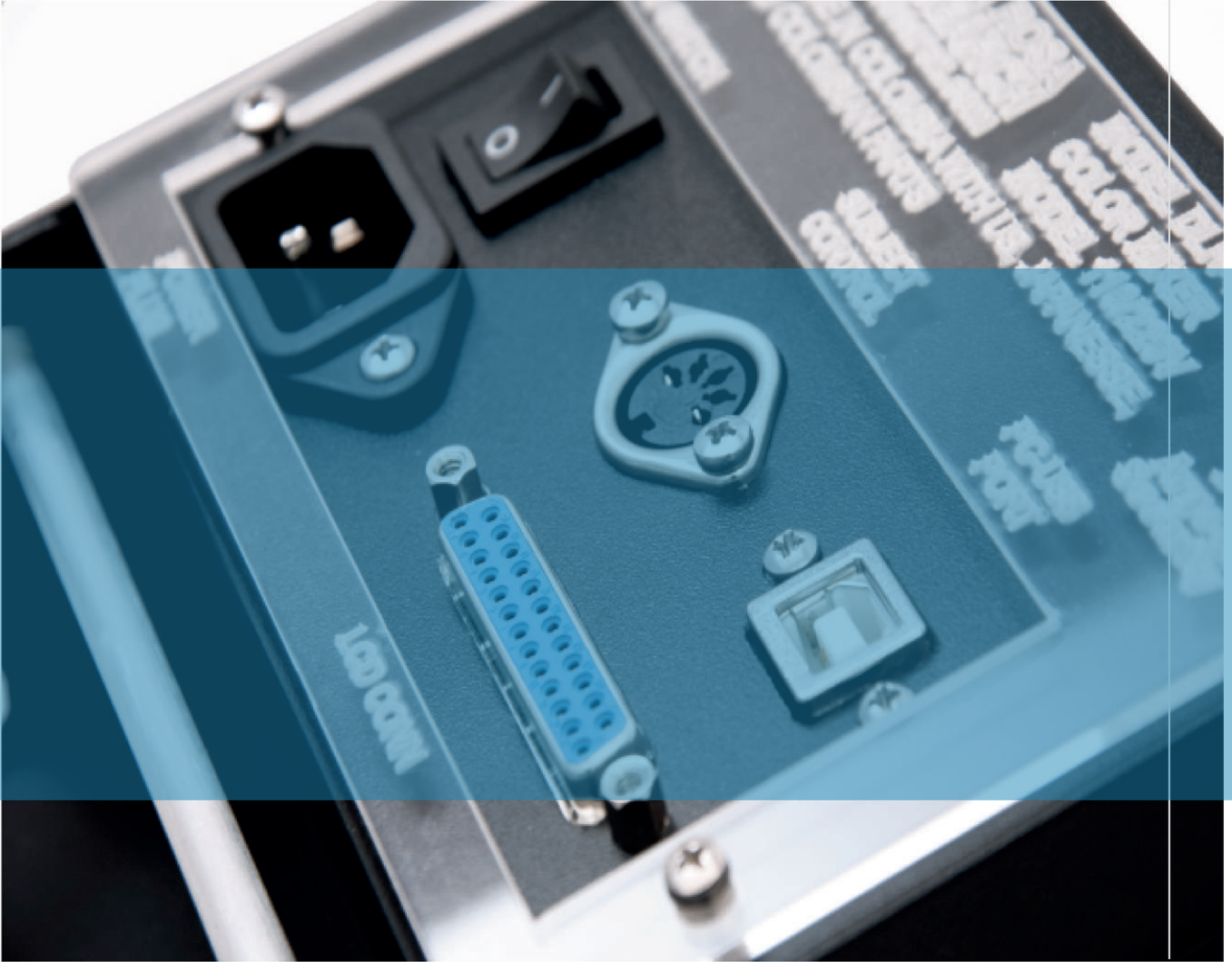
DETAIL

The Color Mixer is used to demonstrate how the eye combines color surfaces. This basic Color Mixer was specifically designed for classroom use. The color wheel spins the included color paper disks at speeds ranging from 200 to 2350 RPM. The 5-inch wheel includes degree marks so that varied proportions of color can be spun for different effects. The drive motor operates smoothly and quietly. The color disk replacement set - model AA86828-1- includes 19 precut -114 mm colored paper disks.



SPECS

Line Voltage: 110/220 V AC - 60/50 Hz

Number of rotating motors: one (1).
Engine Speed 1 (front engine): Maximun 3000 RPM

English or Spanish instruction manual is included

The package includes 37 discs of color, 1 disc of reference.

APPLICATION

Colors are formed either by reflection (subtractive colors), using chromatic dye mixes, or by white light diffraction (additive colors), using filters or prisms. This system demonstrates the subtractive color formation using calibrated color disks. Disks are placed in a rotary disk plate for accurate RPM and color disk percentage selection. The system provides a way for accurately make chromatic mixes and rotate them at different RPM's to observe: color change, the effects of mixing different disks arrays and, introducing different variables to observe their effects in color perception.
Rotational speed can be easily fixed by using a smooth cue-less paddle control. Experimenters may choose to allow subjects to control the device, or to set the system at a desired speed. Start, Stop and Speed functions can be set by using stimulus software as e-prime from PST, and Observer from Noldus, among others used for experimental synchronization.

FEATURES

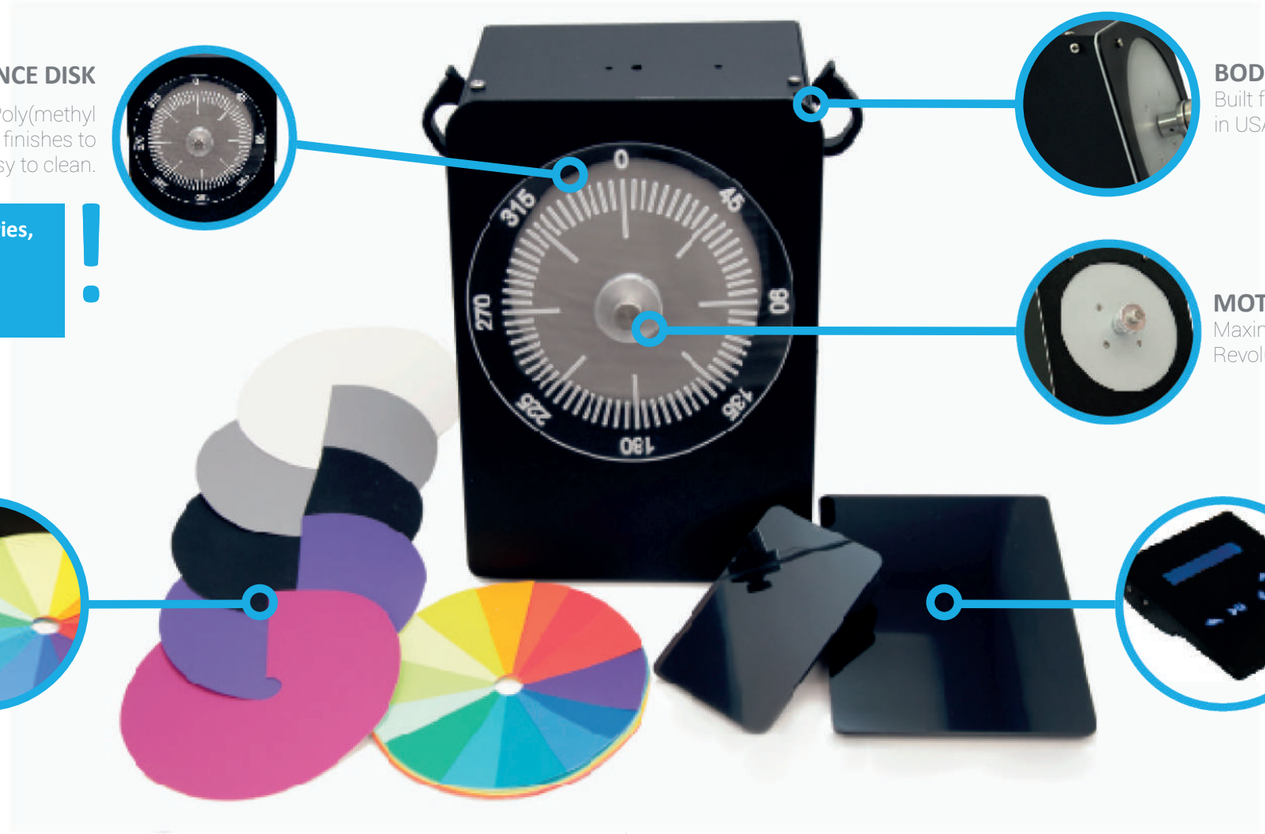
- Quality
- Durable
- Recyclable materials
- Accurate

FEATURES

ACCESSORIES/ REFERENCE DISK

High resistance disk of Poly(methyl methacrylate) with delicate finishes to avoid injuries and easy to clean.

In case you need replacement accessories, these are
The reference numbers:
Color discs: model AA86828-1



BODY

Built from high-quality components manufactured in USA, Japan, Germany, Italy, etc.

MOTOR

Maximum engine speed: 3000 Revolutions per minute (RPM)

ACCESSORIES / COLOR DISCS

Color discs in recyclable paper.

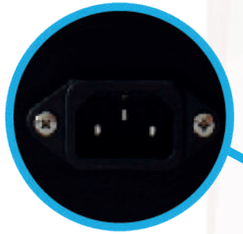
CONTROL

LCD high contrast screen control for easy reading with capacitive buttons. Allows accurate measures RPM and provide 4095 speed steps.

FEATURES

POWER SOURCE

Medical grade power source (short circuitprotected through reprogrammable fuse).



MATERIALS

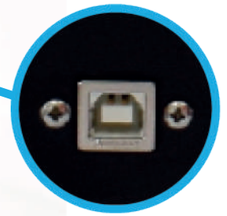
Aluminum - stainless steel and Poly(methyl methacrylate) body for sturdy usage.
High resistance (100% recyclable) and easy to clean.

HANDLE

handles with Concealed Pulls to hold and transport

USB PORT

USB port for serial communication (the software will be available and supplied at no charge).

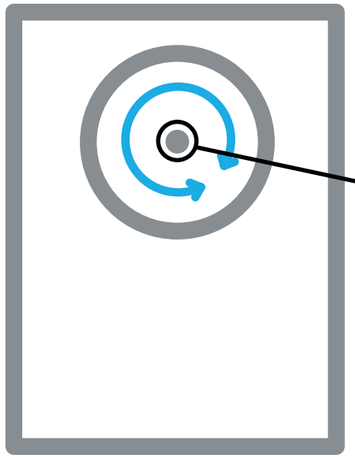


PROCEDURE

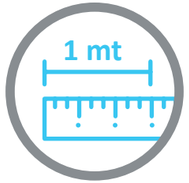
General recommendations

Initial settings

Operating

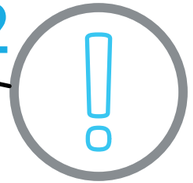


1



It is advisable to maintain a minimum margin of 1 meter between the equipment and any object or subject around it, to avoid some injury or damage.

2



Before putting in functioning this equipment, tie firmly the cables and any other accessory.
This would prevent malfunction, or any possible accident.

3

Even though all pieces have blunt edges, you should avoid touch them when they are spinning.

PROCEDURE

// GENERAL RECOMMENDATIONS

Avoid using sharp objects with the product.

Always ensure the proper power input.

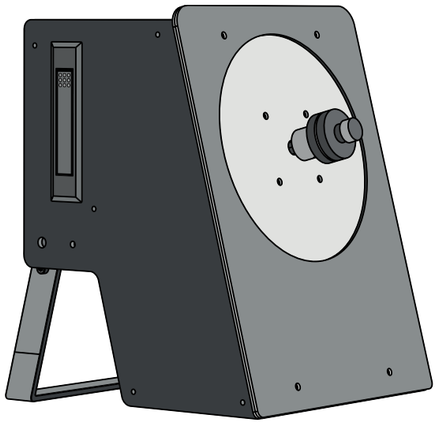
Protect the product from rain and water.

Do not try to fix or disassemble this product by yourself.

In case of malfunction, damaged or maintenance needs, contact us. We will be happy to help you solve any problem.

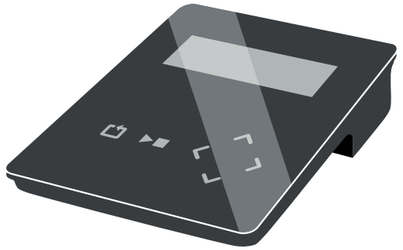
1// WHAT SHOULD BE INCLUIDED IN THE PACKAGE?

a.
x1



b.
x1

c.
x1

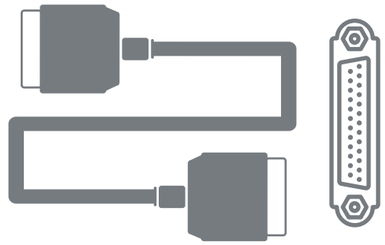


a. Color mixer body x1 // **b**. Universal Control x 1 // **c.** LCD Control x 1 // **d.** DIN 5 cable x 1
e. Serial cable DB25 x 1 // **f.** USB cable A-B x1 // **g.** Power cable (AC cable) x 1.

PROCEDURE
// INITIAL SETTINGS

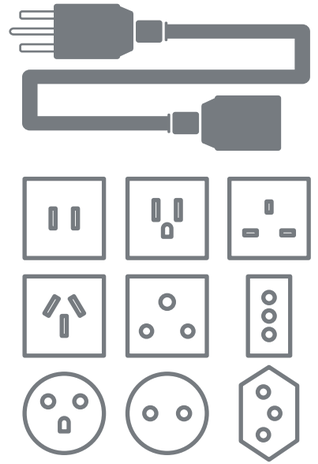
d.
x1

e.
x1



f.
x1

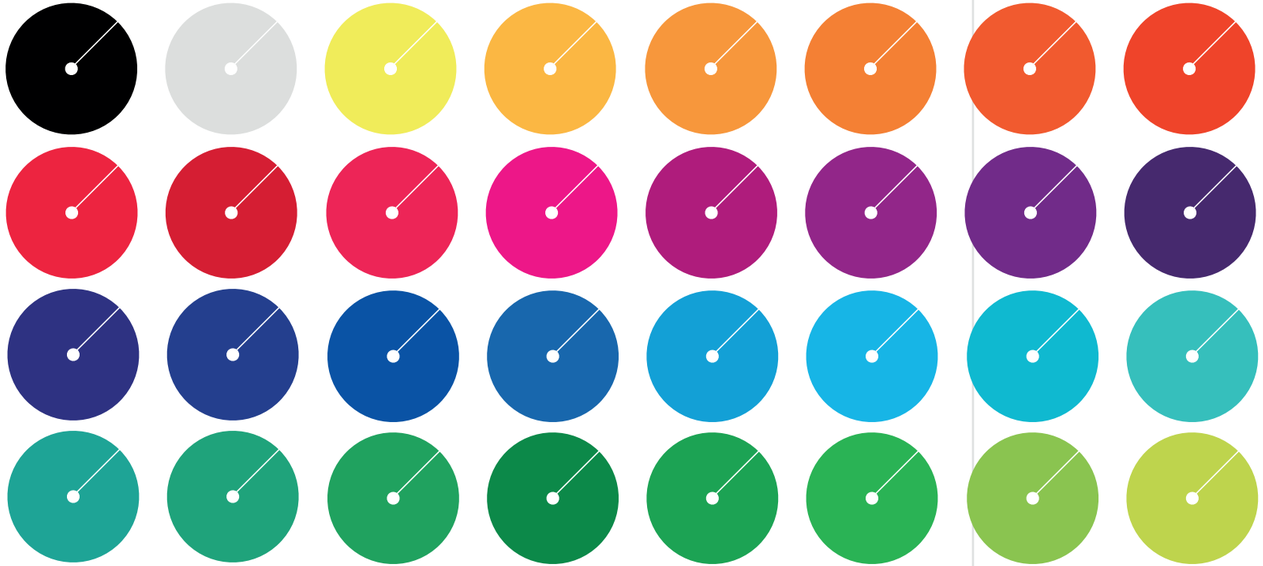
g.
x1



Depending on the geographical area, you will be given one of these AC cables (one per package).

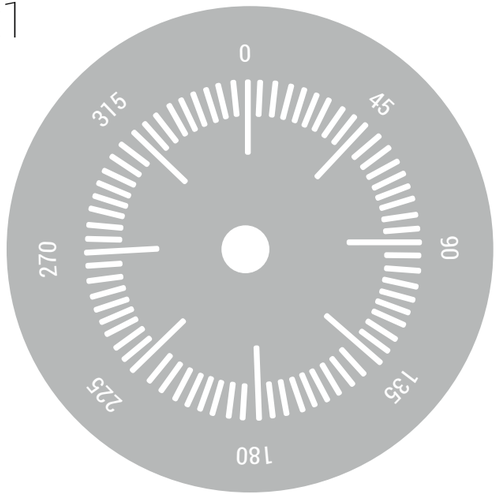
1// WHAT SHOULD BE INCLUIDED IN THE PACKAGE?

h.
x37



h. Color Discs x37 // **i**. Reference Disc x1 //

I.
x1



2// HOW TO ASSEMBLE IT?
MAIN BODY

USB CABLE

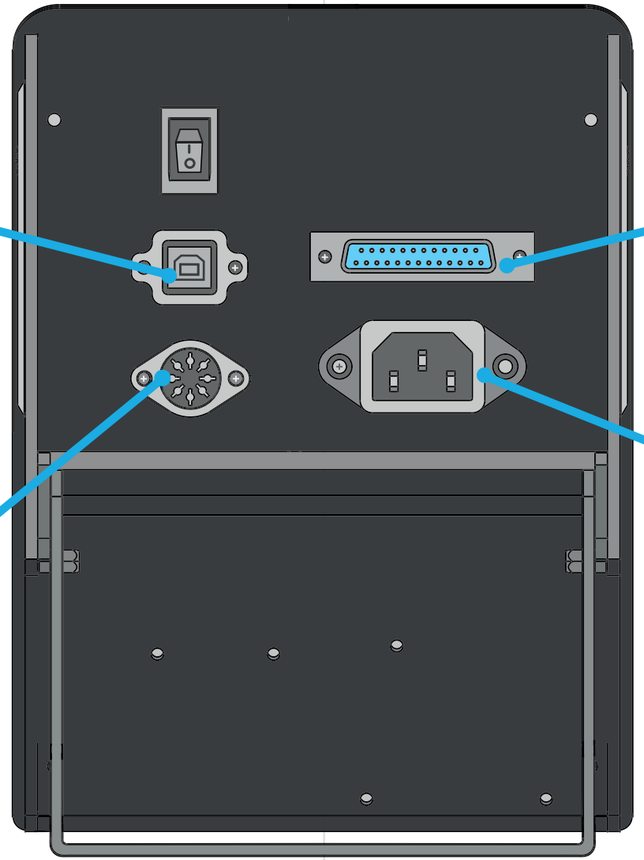
USE ONLY IF USING CONTROL SOFTWARE.
The smallest end B of the USB cable **(f)** should be connected to this port.
The opposite end of cable A should be connected to a computer USB port.

This USB cable has two different ends:

!

CABLE DIN 5

Connect the male end of any DIN 5 cable **(d)** to the Left DIN 5 female left side connector. The opposite end of the cable should be connected to one knob control **(b)**
Repeat the process with right side connector.
*Knob controls works in any DIN 5 port of this device



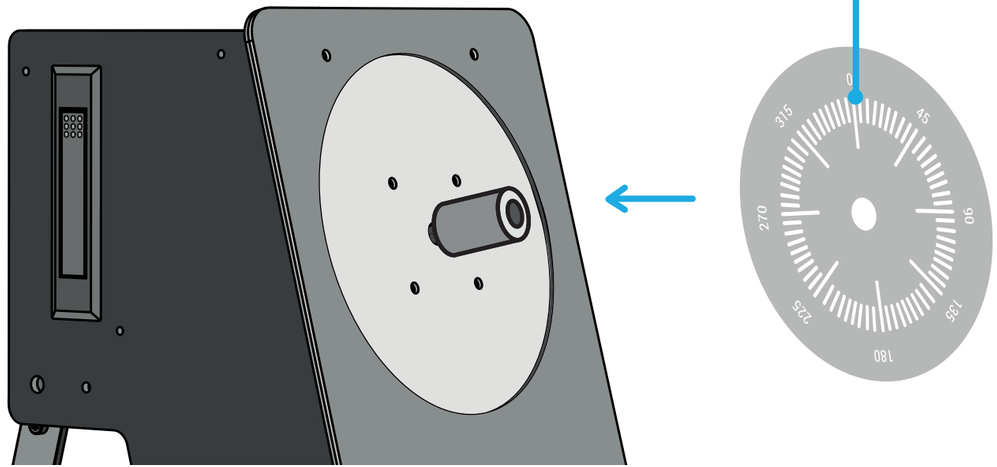
SERIAL DB25 CABLE

Connect the male end of the Serial DB 25 cable **(e)** to this port.
The female end of the cable should be connected to the LCD control **(c)**

A/C POWER CABLE

Connect the A/C cable **(g)** to this port. The opposite end should be connected to a 110/220VAC-50/60Hz power outlet.

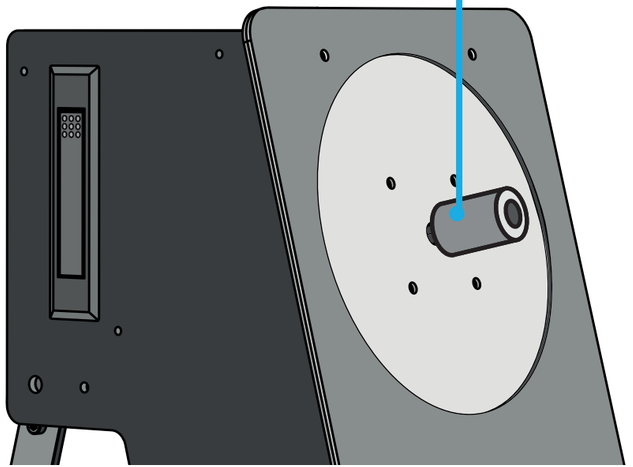
2// HOW TO ASSEMBLE?
FRONTAL MOTOR



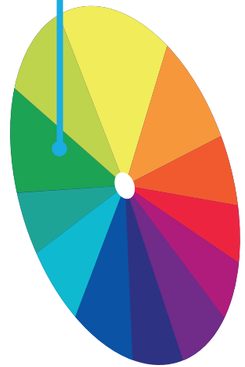
SCREW
The reference disk is screwed before the color disk

PROCEDURE
// INITIAL SETTINGS

SHAFT



COLOR DISCS
The disc must be placed between the reference disk and the screw.

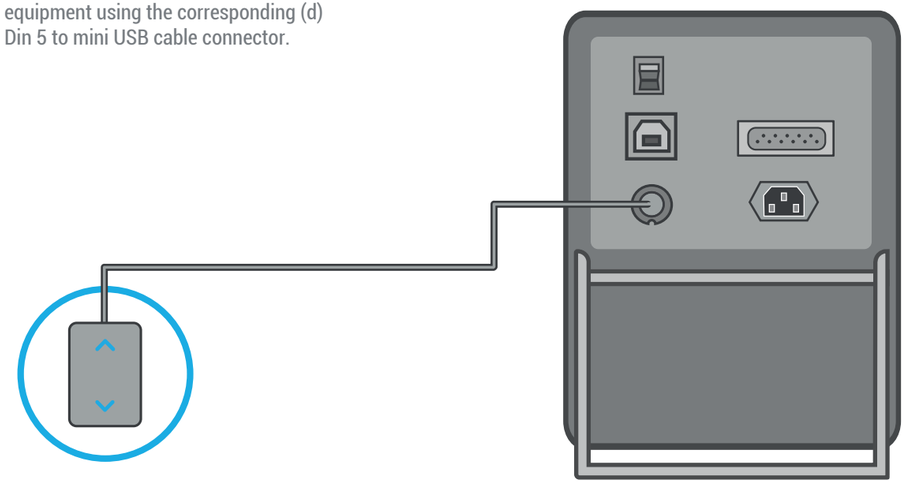


THUMBSCREW
The selected disk must be screwed firmly with this screw to the shaft.

1" HOW DO I MAKE THE CONNECTION?

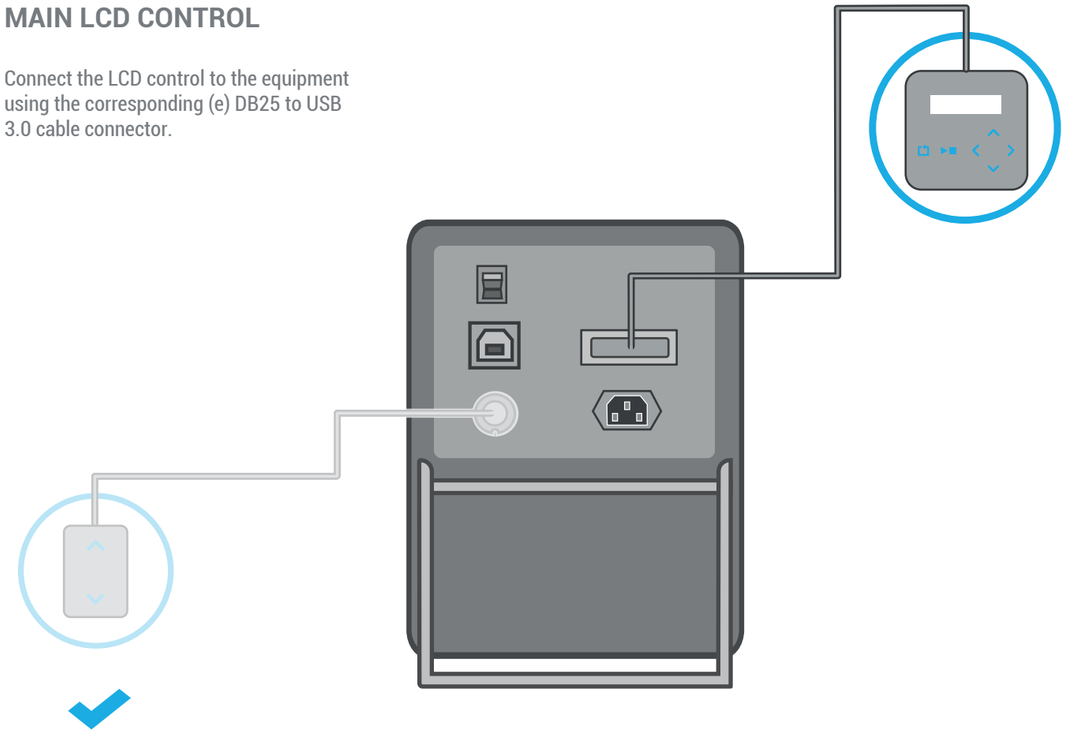
UNIVERSAL CONTROL

Connect the universal control to the main equipment using the corresponding (d) Din 5 to mini USB cable connector.



MAIN LCD CONTROL

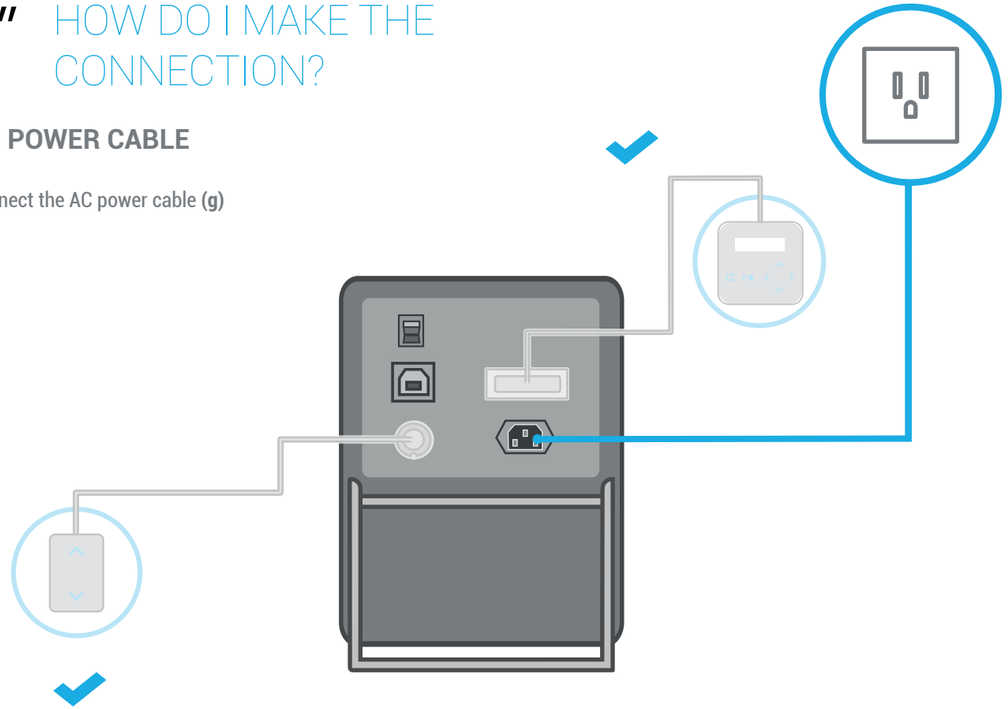
Connect the LCD control to the equipment using the corresponding (e) DB25 to USB 3.0 cable connector.



1" HOW DO I MAKE THE CONNECTION?

AC POWER CABLE

Connect the AC power cable **(g)**

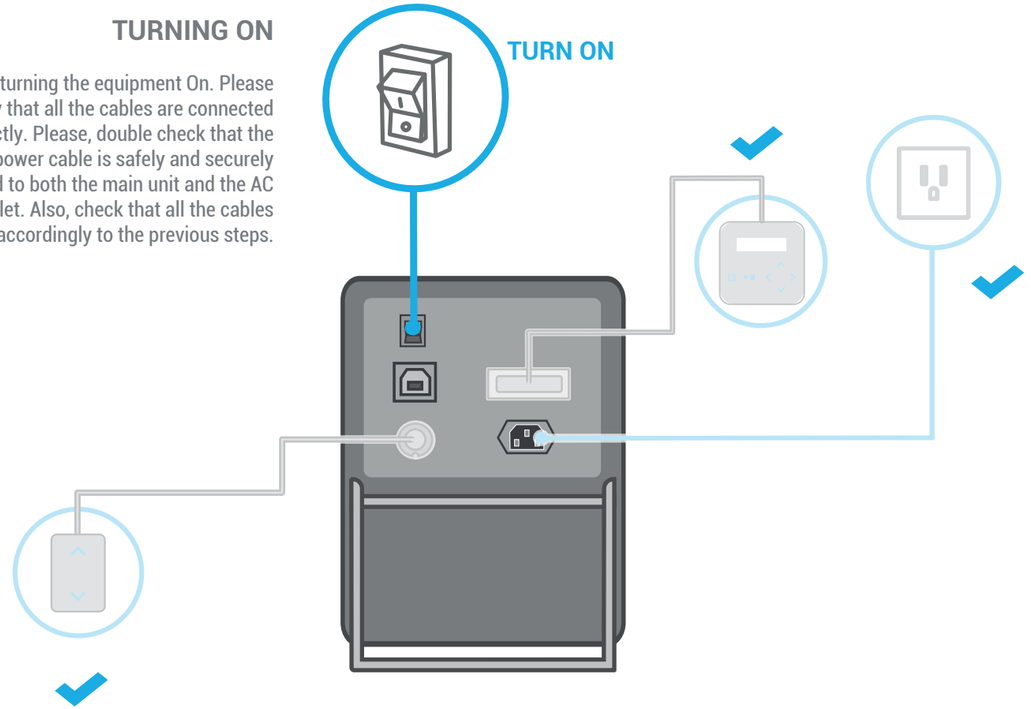


ATTENTION!

Verify that the cable (f) USB A-B is not connected to the computer at the time of starting the device.

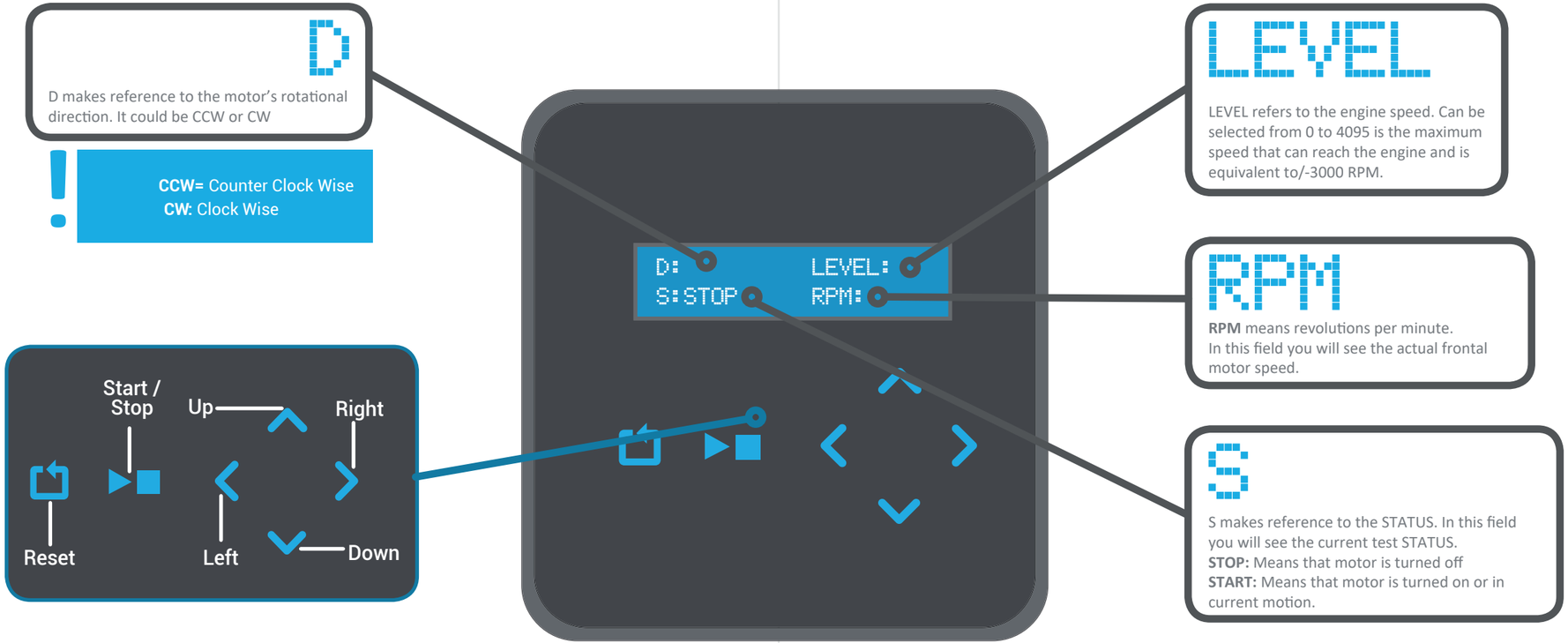
TURNING ON

Before turning the equipment On. Please verify that all the cables are connected correctly. Please, double check that the AC power cable is safely and securely plugged to both the main unit and the AC wall outlet. Also, check that all the cables are set accordingly to the previous steps.



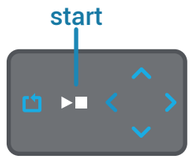
If you wish to implement the use of the equipment with the software go to page 41 otherwise continue with the steps without connecting the USB cable.

2// WHAT DOES IT MEAN?



1// SELECT MOTOR'S R 1 OTATIONAL DIRECTION.

a.



Press the Start button to start

b.

Once the device has been plugged and turned ON, follow these steps.

Press the RIGHT button to choose CW direction.

c.

Press the LEFT button to choose CCW direction.

To choose movement direction, the first step should be accomplished and STATUS should be (S):STOP.

If STATUS (S) is START, and you want to change rotational direction, press START/STOP button until you see STATUS (S) changed to STOP.

2// SELECT ROTATIONAL SPEED.

PROCEDURE
// OPERATING

a.

Press START/STOP until you see STATUS (S) changing to START.

Immediately after STATUS changes to START, both motors will start moving.

b.

By pressing the UP button, the rota - tional speed will increase.
To decrease rotational speed, press the DOWN button.

RPM will show the corresponding information for the selected LEVEL.

Whenever you oppress the key UP or DOWN, the level it will increase or diminish according to the control;
if you want to increase or diminish the most rapid form speed use the control LCD it increases and desminuye the speed from 50 to 50, if on the contrary he wants to change the speed more slowly uses the control Up Down cambaiara from 1 to 1.

3// CHANGE THE DIRECTIONALITY OF THE MOVEMENT

a.

Start / Stop

Press the START/STOP button if the equipment is currently rotating. The motor's motion will stop.

b.

Select the new desired direction by following the procedure described in STEP 1 (Page. 32).

c.

Start / Stop

Press the START/STOP button again to start the system disk rotation in the desired direction or new direction.

Color Mixer // User's manual

Note

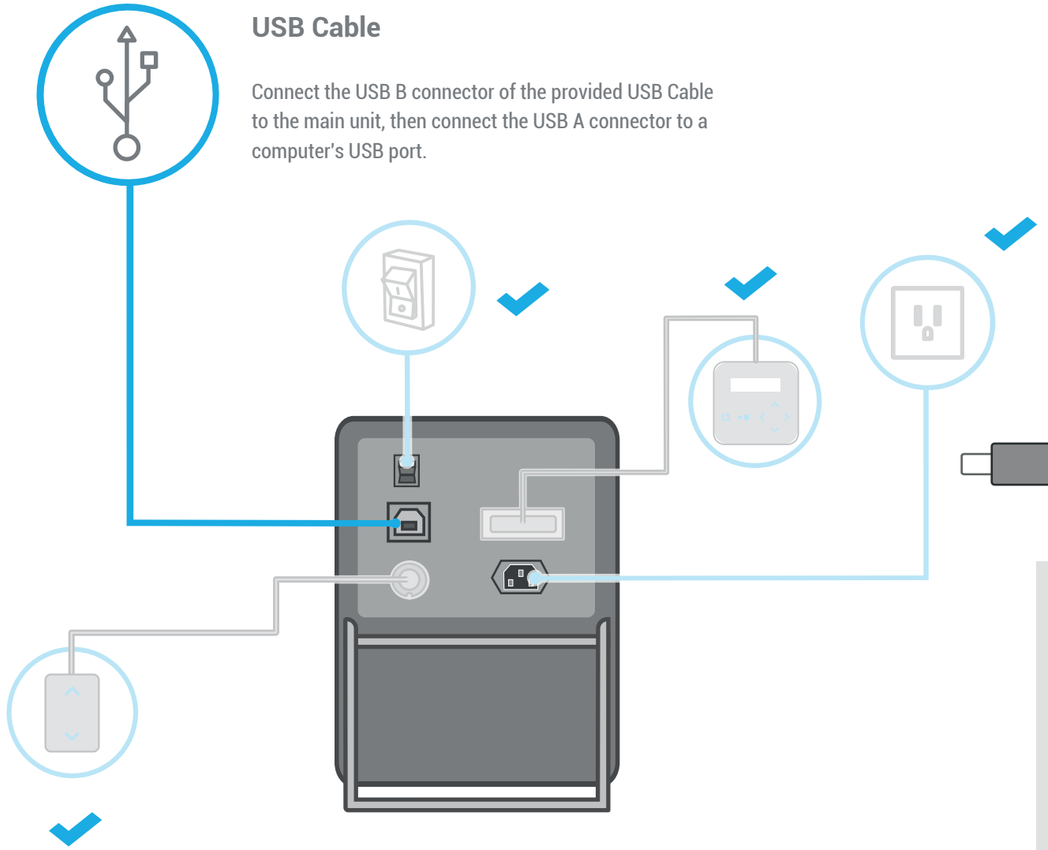
At this point the connection and execution steps have been followed without the software; If you want to deploy the device with this, you can go to:

www.delarosaresearch.com/downloads.php?t=delarosa

Then follow the steps below to connect your device to your computer.

USB Cable

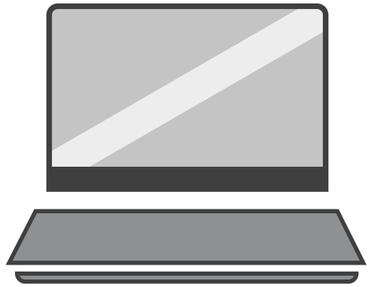
Connect the USB B connector of the provided USB Cable to the main unit, then connect the USB A connector to a computer's USB port.



Running the Controlling Software

While the computer is on and OS is running, execute the Controlling software by double-clicking on its icon. Follow up the instructions presented therein.

TURN ON



Please keep in mind that the equipment will start the communication protocol once the USB is plugged into the computer. The main unit will re-start automatically and the LCD control will display the re-start sequence. That means the unit has been reset by the computer to initiate the communication protocol.

If you wish to acquire the controlling software please follow this link:

http://www.delarosaresearch.com/downloads.php?t=delarosa

THIS IS THE END OF THIS USER GUIDE.

This was all the basic information you need for using the COLOR MIXER; but this is just the beginning of the fun.

If there is something that is not clear to you, or if you have any questions, please feel free to contact us at any time.

We will be very happy to hear from you.

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