



**DEPTH
PERCEPTION
APPARATUS**

USER'S
GUIDE

Model
14012A



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.

INDEX



Pag. **9**
Details

Pag. **11**
Specification

Pag. **13**
Applications

Pag. **15**
Features

Pag. **21**
Procedure



DETAILS

The Depth Perception Apparatus tests depth perception acuity. Depth perception is the ability to see the world in three dimensions and to perceive distance (the ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object). In addition to being aesthetically appealing, the Depth Perception Apparatus represents the state-of-the-art in sensation and perception measurement technology, and offers feature-packed high performance, unparalleled functionality, superior accuracy, ease-of-use, and expandability. The Depth Perception Apparatus is the embodiment of an experienced psychologist's vision and technical perfection.



SPECIFICATIONS



Line Voltage: 110/220 V AC - 50/60 Hz.
Current: 10 Amps.



Height: 11" // Width: 10" // Depth: 27"
Weight: 11 kg Aprox.



Accuracy: 1mm-0.5mm



Supplied with User Guide.

APPLICATIONS

Good depth perception is critical among people engaged in certain occupations, trades, or professions is essential, e.g., airplane and helicopter pilots, crane operators, bus drivers, athletes etc. Since good depth perception is so important to these professions, testing devices that can determine the quality of an individual's depth perception are essential for use in the employment selection process. Furthermore, the Depth Perception Apparatus can be found in hundreds of psychology laboratories worldwide, where they are used for research, as well as demonstrations for sensation and perception classes.



FEATURES



Quality



Durable



Recyclable
materials



Accurate



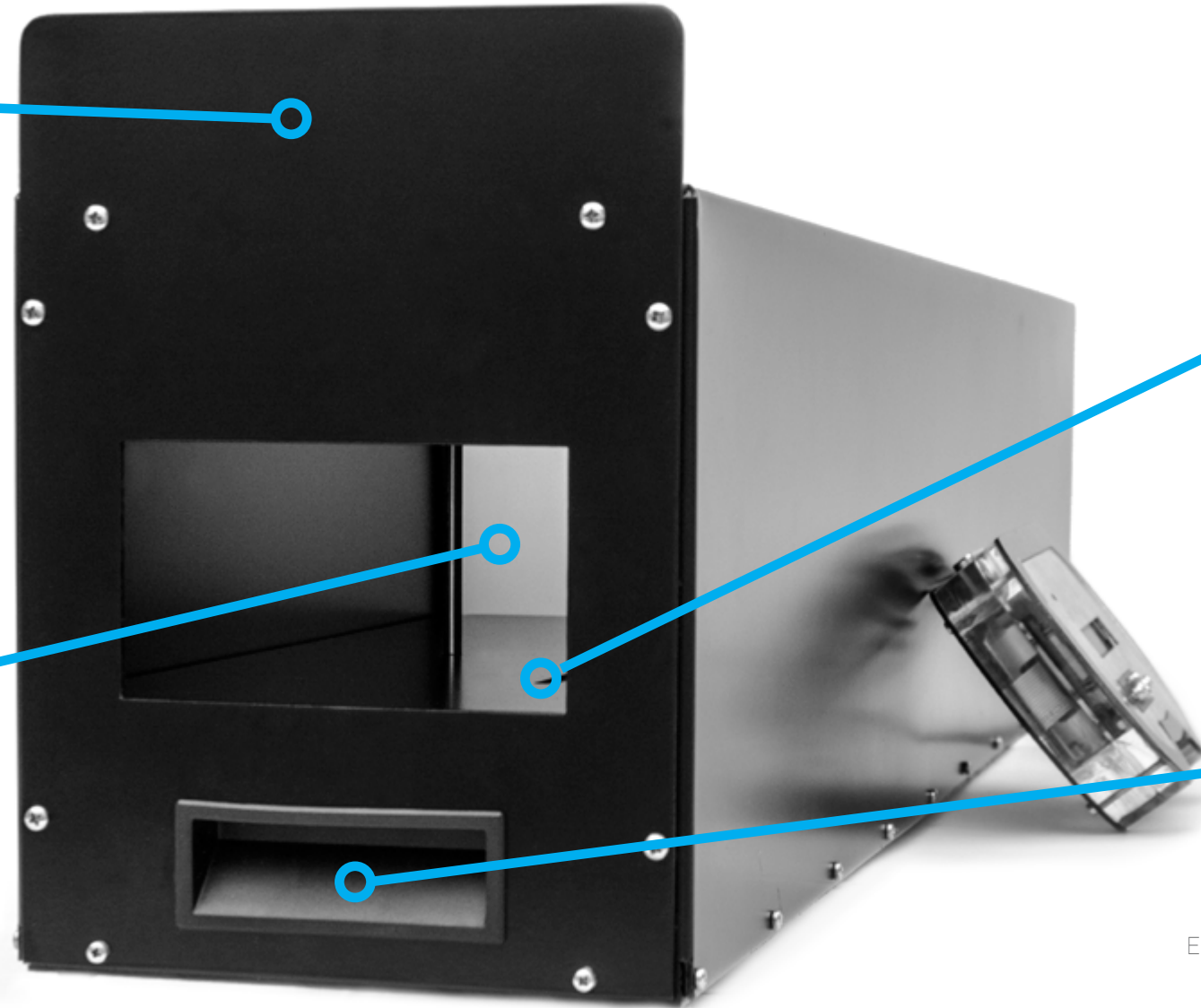
BODY

Aluminum - stainless steel, HDPE and acrylic body for sturdy usage. High resistance (and 100% recyclable) polymer base, easy to clean.



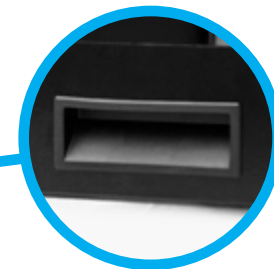
LED LIGHT

High intensity calibrated white LED.



JOY STICK CONTROL

Digital joystick for controlling displacement.



HANDLE

Ergonomic handle for easy carrying.

FEATURES



LCD CONTROL

LCD and key pad control
Easy to read LCD display
Allows RPM and time measurements.
255 step motor control.



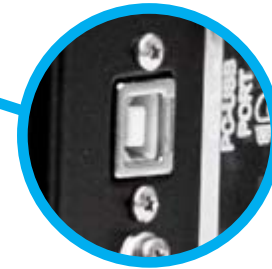
MATERIALS

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



POWER SUPPLY

Available for 110 V and 220V
countries.



USB PORT

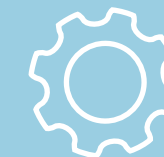
USB port for serial communication (the software
will be available and supplied at no charge).



PROCEDURE



General recommendations



Initial settings



Operating

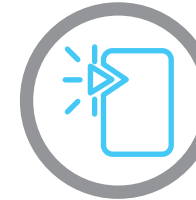


WARNING

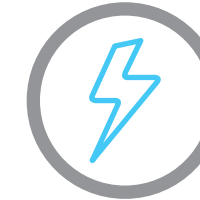
Before you plug in the equipment be sure that the electric supply of your country or region is the right one to operate the equipment. Be aware that the unit can operated at 110V or 220V (50 or 60Hz). To arrange the voltage, change the position of the red switch located in the back of the equipment and select 110v or 220v supply by sliding left or right accordingly to your country's power supply. Failure to do so may cause permanent damage to the equipment.

PROCEDURE

// GENERAL RECOMMENDATIONS



Avoid using sharp objects with the product.



Always ensure the proper power input.



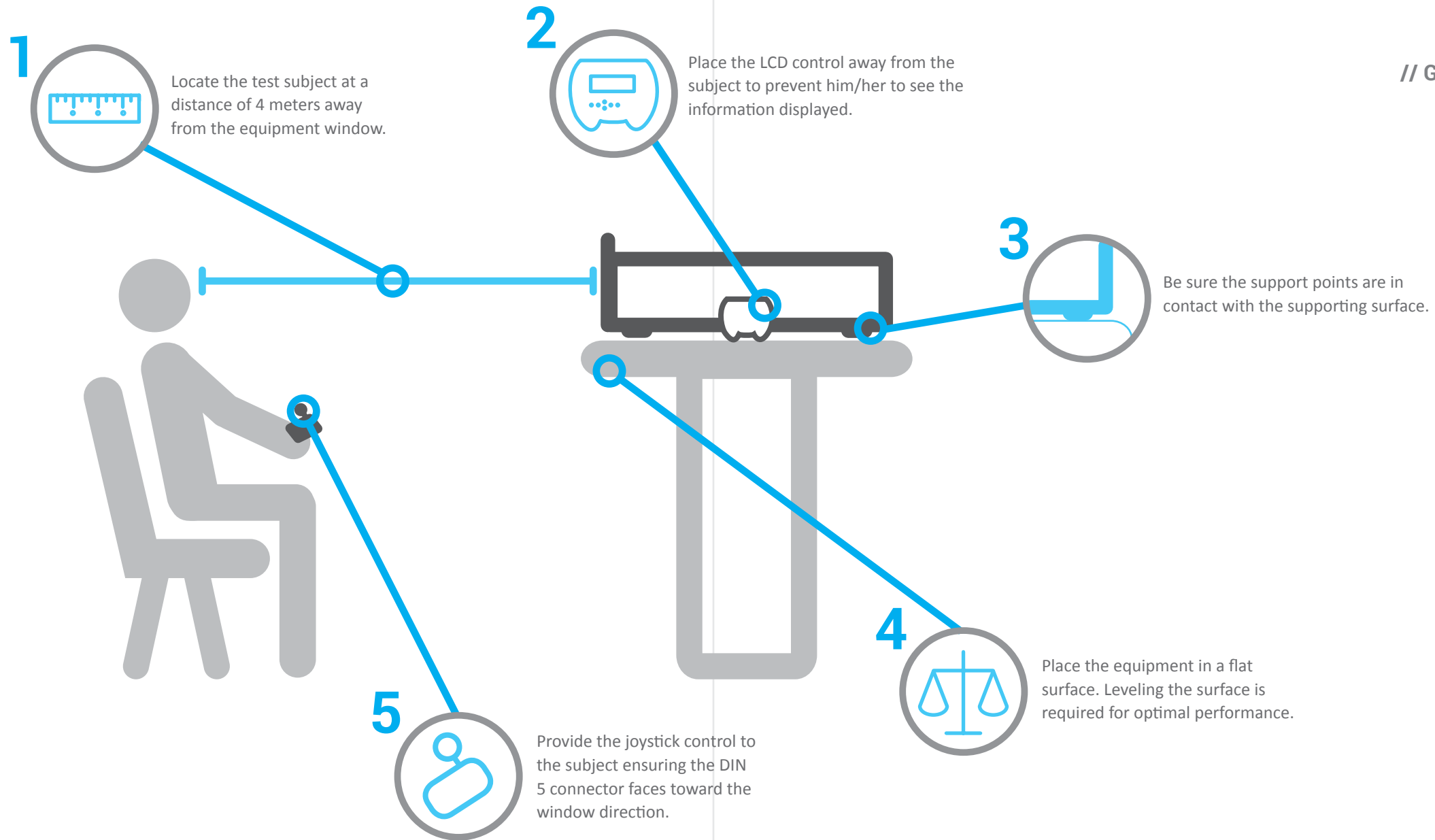
Protect the product from rain and water.



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

In case the product is not working properly, is damaged or needs maintenance, please contact us. We will gladly help you to solve any issue.



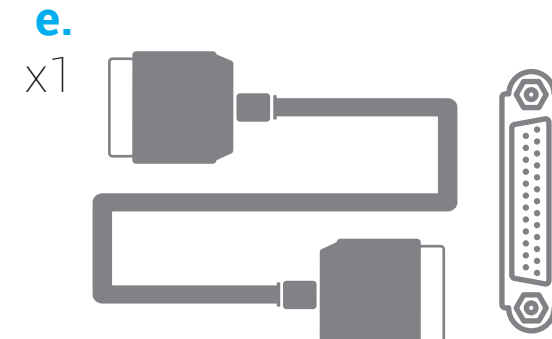
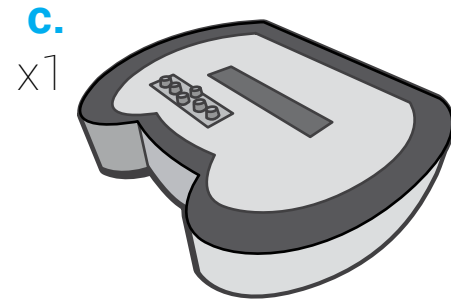
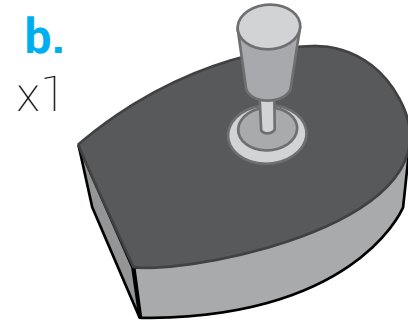
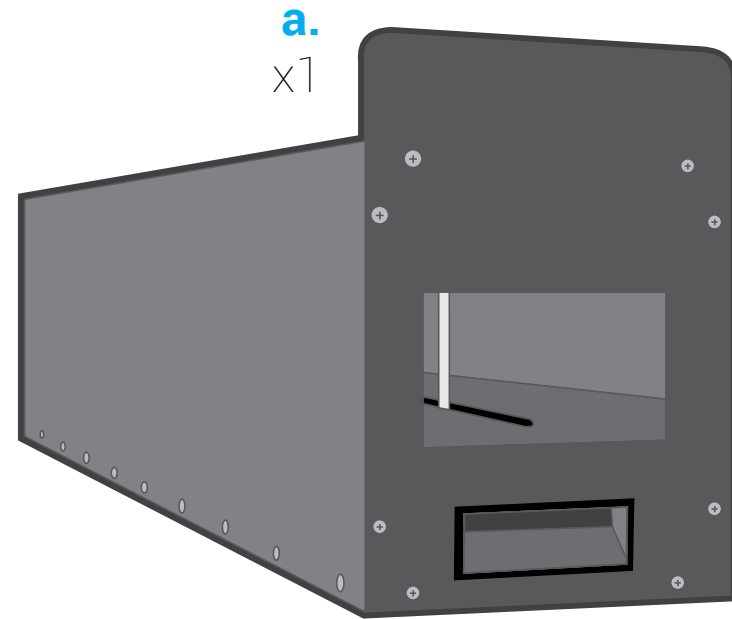


PROCEDURE

// GENERAL RECOMMENDATIONS

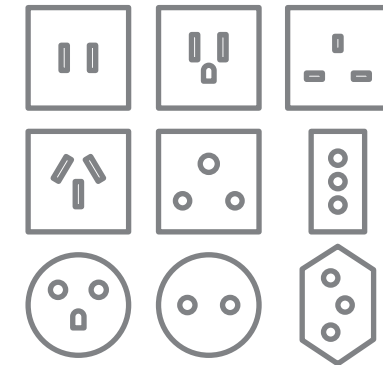
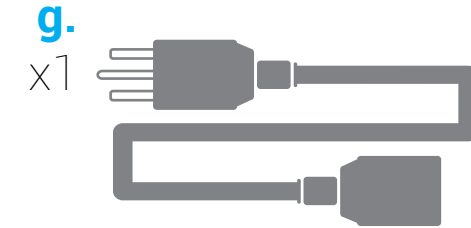


1 // WHAT SHOULD BE INCLUDED IN THE PACKAGE?



a. Depth Perception Apparatus body X1 // **b.** Joy Stick 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



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

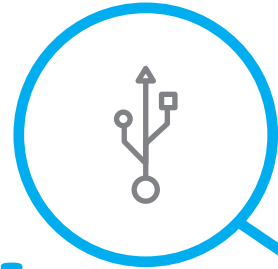
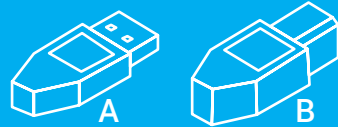


2 // HOW TO ASSEMBLE IT?

USB CABLE

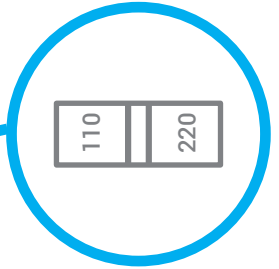
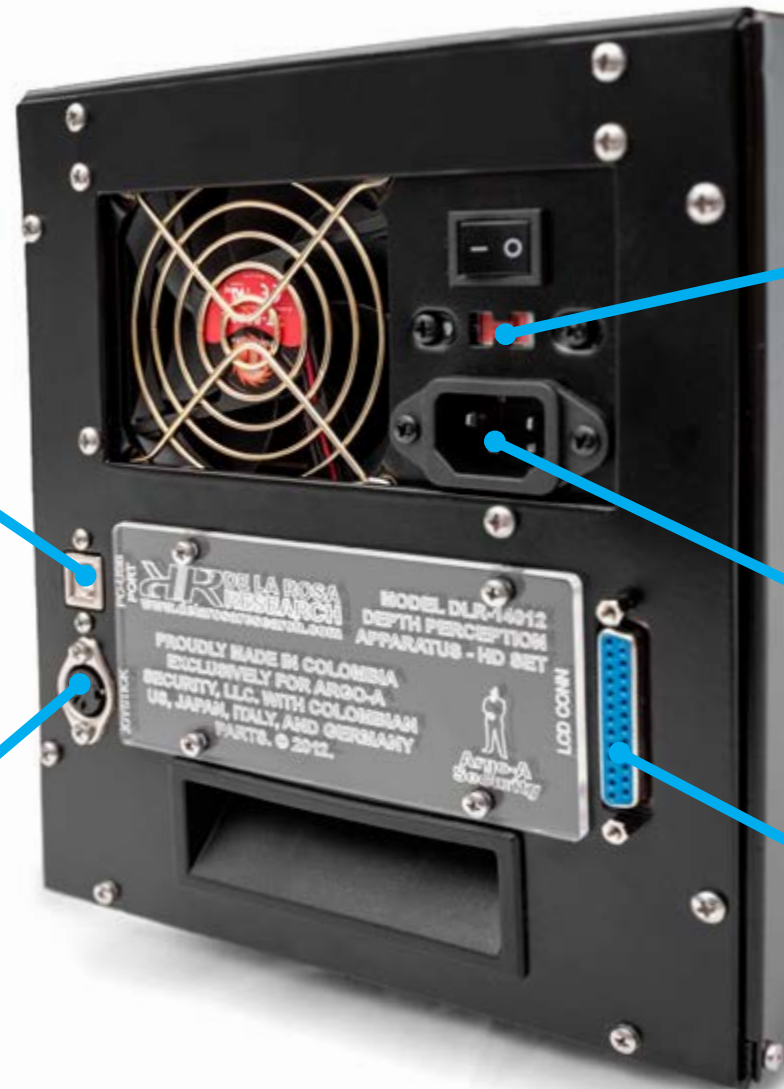
USE ONLY IF USING CONTROL SOFTWARE.
 The smallest end B of the USB cable (f) should be connected to this port.
 The opposite end of cable A should be connected to a computer USB port.

This USB cable has two different ends:



DIN 5 CABLE

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



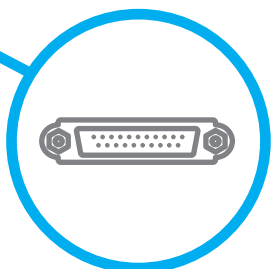
POWER VOLTAGE SELECTOR

BEFORE start, select the proper Power Input Voltage. If don't the equipment could suffer serious damage and it will not work again.
 Choose between 110 or 220 by sliding right or left depending on your country's power supply.



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.



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).

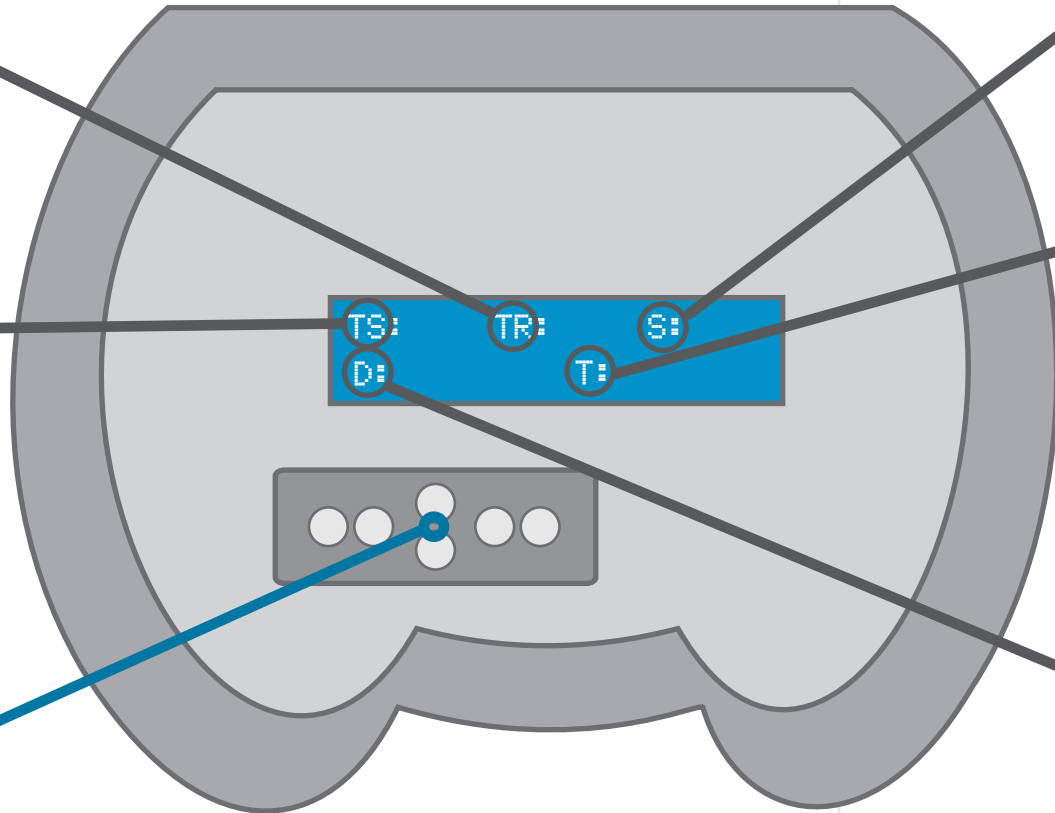
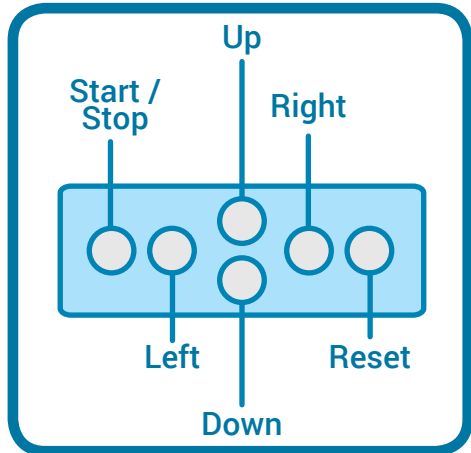
3 // WHAT DOES IT MEAN?

TR

Makes reference to the trial number. System is ready to save a maximum of 10 trials. Each trial saves position and time.

TS

TS means TEST and makes reference to the kind of test that you are running out. TEST can be A: Automatic or M: Manual



S

S means STATUS and makes reference to the TEST STATUS.

T

T means TIME and make reference to time taken by the subject to align mobile row with static row. It will be measured in milliseconds.

1000 = 1 !

milliseconds second

D

D means DISTANCE, in this space you will see the mobile row distance in reference to the static row. This distance can be positive or negative. It will be measured in thousandths.

10 = 1 !

thousandths centimeter

PROCEDURE

// INITIAL SETTINGS



FAMILIARIZE WITH STATUS CODES

STRT
Means that there is a test on course.

STP
Means that there is NO test on course.

CAL
Means that equipment is being calibrated. Moving row is aligning to static row.

ADJ
When TS is Automatic, ADJ means that moving row is adjusting to an automatic position

SLCT
When TS is Manual, SLCT means that mobile row's position is being selected by evaluator.

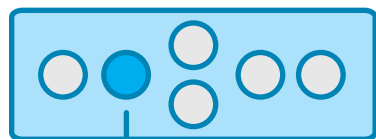
SAVE
Means that Trial information is being stored. It will take a few seconds.



1 // SELECT THE KIND OF TEST. Manual Test // Automatic Test

a.

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

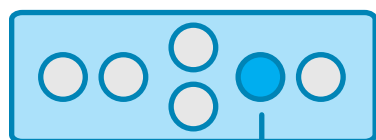


Left

Press the LEFT button to choose Manual Mode (M)



b.



Right

Press the RIGHT button to choose Automatic Mode (A)



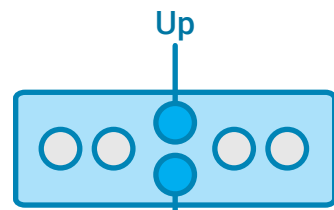
The manual test allows the researcher to manually adjust the distance from which he/she will set the starting point of the rod for depth perception evaluation.

The automatic test the equipment automatically adjusts the distance for the depth perception evaluation. In this mode you can select up to ten (10) different distances presented by the manufacturer.

2 // SELECT THE TRIAL MEMORY LOCATION

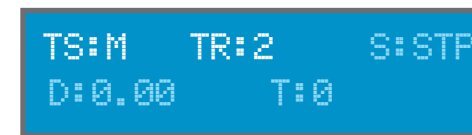
a.

Once test mode has been selected, you should select the position to store the data of each test. Follow this steps:



Down

By pressing UP or DOWN buttons, you can select one of the 10 possible location to store the data.



Please note that if you do not change location number each time that a new test starts, the information will be rewritten in the same location. To avoid that, each time that you end a test, change the location number to prevent data lost.



PROCEDURE // OPERATING

The equipment has 20 memory locations, ten (10) correspond to manual mode and ten (10) for automatic mode. These positions go from zero (0) to (9) in either of the two modes.

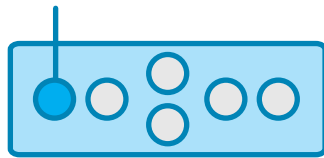
You can store distance (D) and time (T) information acquired during the performed test in any of the ten (10) memory positions that are independent for each mode.

2 // MANUAL MODE Calibration.

a.

If the rod is not at zero position (0) or if not aligned with the fixed rod indicator, the system will need a self-calibration to zero position (0).

Start / Stop



Press START/STOP button.



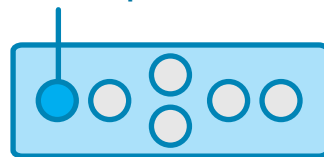
```
TS:M   TR:2   S:CAL
D:0.00   T:0
```

The equipment state (S) changes from Stop (STP) to Calibration (CAL).

b.

In the case when the distance is zero (0) or the indicators are aligned, system will not need to calibrate. System will start immediately.

Start / Stop



Press START/STOP button.



```
TS:M   TR:2   S:SLCT
D:0.00   T:0
```

The equipment state (S) changes from Stop (STP) to Select (SLCT).

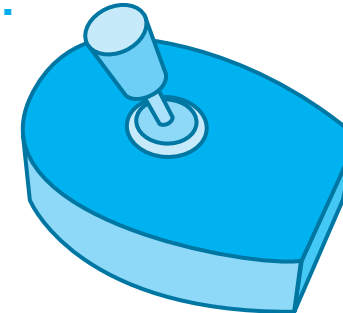
PROCEDURE // OPERATING



Selection moving rod position.

This has to be done at the beginning of each test trial.

a.



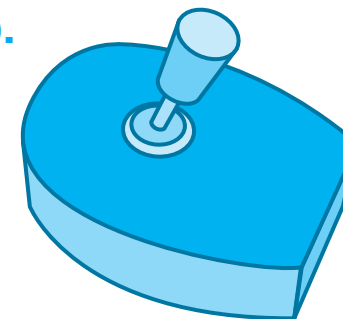
Use the joystick control to slide the rod FORTH to the desired position.



```
TS:M   TR:2   S:SLCT
D:2.56   T:0
```

Distance (D) will show the distance of the moving rod in reference to the static rod position.

b.



Use the joystick control to slide the rod BACK to the desired position.



```
TS:M   TR:2   S:SLCT
D:-2.56   T:0
```

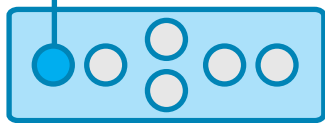
Distance (D) will show the distance of the moving rod in reference to the static rod position.

2 // MANUAL MODE

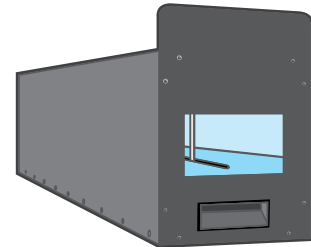
Starting a test.

a. Once the desire position has been selected, evaluator should give the JoyStick control to the subject.

Start / Stop



Evaluator should press START/STOP button to Start the test.

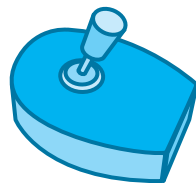


A white light inside the equipment body will turn on.

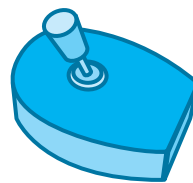
```
TS:M  TR:2  S:STRT
D:2.58  T:2000
```

Time (T) will start running.

b. Subject should decide if moving the joystick lever forth or back to align both rows.



When Joystick lever is incline FORTH the moving rod will move FORTH in the rail.

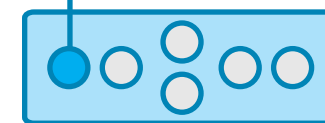


A When Joystick lever is incline BACK, the moving rod will move BACK in the rail.

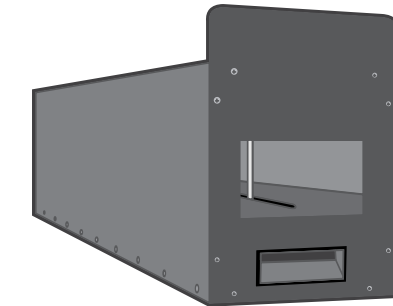
Ending a test.

a. Once evaluated subject has announce that both rows are aligned, follow these steps:

Start / Stop



Press START/STOP button.



The white light inside the equipment body will turn off.

```
TS:M  TR:2  S:SAVE
D:2.30  T:5582
```

TIME (T) will stop and will save the data at the selected position.



```
TS:M  TR:2  S:STP
D:2.30  T:5582
```

A few seconds after stopping the test the STATUS (S) will change from SAVE to STOP (STP)



After this steps you will be able to startup a new trial, repeat the current trial or start a new test.

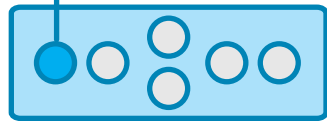
PROCEDURE

// OPERATING

3 // AUTOMATIC MODE

Starting a test // Calibrating

Start / Stop



Evaluator should press START/STOP button to Start the test.

a.

If the rod is not at zero position (0) or if not aligned with the fixed rod indicator, the system will need a self-calibration to zero position (0).

```
TS:A  TR:4  S:CAL
D:0.00  T:0
```

The STATUS (S) will change from STOP (STP) to CALIBRATING (CAL).

b.

In the case when the distance is zero (0) or the indicators are aligned, system will not need to calibrate. System will start ADJUSTING (ADJ) mobile rod distance immediately.

```
TS:A  TR:4  S:ADJ
D:-90.2  T:0
```

The STATUS (S) will change from STOP (STP) to ADJUSTING (ADJ).

Warning: Once the equipment has finished the automatic adjustment of the movable rod the equipment state (S) will change immediately from Adjust (ADJ) to Start (STRT), be sure the evaluated subject holds the joystick control, as evaluation will begin right at this point.



Starting a test

PROCEDURE

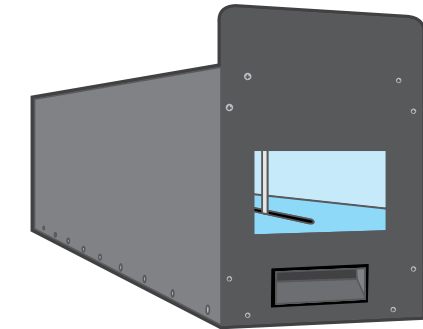
// OPERATING



a.

```
TS:A  TR:4  S:ADJ
D:-87.6  T:0
```

Immediately after STATUS (S) will change from ADJUST (ADJ) to START (STRT), these two things will happen:



A white light inside the equipment body will turn on.

```
TS:A  TR:4  S:STRT
D:-87.6  T:2000
```

Time (T) will start running.



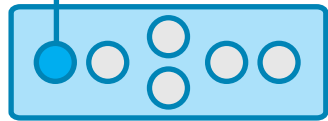
When equipment is set at Automatic (A) mode, each Trial Location (TR) has a predetermined distance for the moving rod, these are the values for each TR:

TR # 0: -90.2	TR # 5: 37.53
TR # 1: 1.25	TR # 6: -37.53
TR # 2: 62.57	TR # 7: -1.25
TR # 3: 87.6	TR # 8: -62.57
TR # 4: -87.6	TR # 9: 90.2

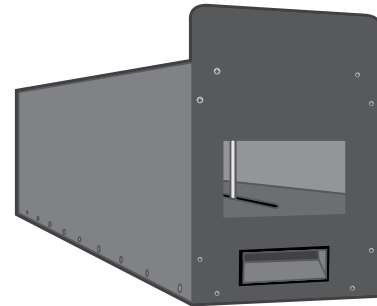
Ending a test

a. Once evaluated subject has announce that both rows are aligned, follow these steps:

Start / Stop



Press START/STOP button.



The white light inside the equipment body will turn off.

```
TS:A   TR:4   S:SAVE
D:-80.5 T:5582
```

TIME (T) will stop and will save the data at the selected position.




```
TS:A   TR:4   S:STP
D:-80.5 T:5582
```

A few seconds after stoping the test the STATUS (S) will change from SAVE to STOP (STP)



After this steps you will be able to startup a new trial, repeat the current trial or start a new test.



THIS IS THE END OF THIS USER GUIDE.

This was all the basic information you need for using the DEPTH PERCEPTION APPARATUS; 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.

support@delarosaresearch.com
 (+57 1) 6275686
 (+57) 3003642343
 Cll 147 A # 48 - 08. Bogotá, Colombia
 2550NW 72nd Ave. Suite 115. Miami, Fl. 33122.

De la Rosa Research Team.



support@delarosaresearch.com
(+57 1) 6275686
(+57) 3003642343
Cll 147 A # 48 - 08, Bogotá, Colombia
2550NW 72nd Ave. Suite 115. Miami, Fl. 33122.