REDSPRAY RED-PS200 VIRTUAL REALITY BASED PAINTING SIMULATOR

TECHNICAL SPECIFICATIONS

1- The paint simulator has **VR** feature.

2- It has **fast** installation and **user-friendly** interface with touch screen and can be activated with a single button.

3- The simulator can work in any **environment** where there is an electrical connection (classroom, workshop, etc.).

4- It has **HDMI** output for connection to TV or projector.

5- It works with **110 - 230 V 50 - 60 Hz**.

6- Work can be done on the following work pieces:

a.   Flat
b.   Curved
c.   Complex parts

7- The simulation has a high realism.

8- At least **12** work pieces can be worked with (Vehicle door, Vehicle roof, Welded part, Front bumper, Chair, Flat part, Cylinder, Box, Curved panel, Curved panel (Complex), Vehicle side panel, Vehicle hood).

9- The color scale includes commercially available colors and is available in gloss, semi-gloss and matt.

10- Visual aid activation panel is available.

11- Real-time scoring is available.

12- The following defects can be displayed:

a.   Dripping
b.   Orange peel defect
c.   Dry spray

13- The work can then be seen again in **3D** and **parameters** such as paint angle and distance are shown in **different colors** and the details of the work can be examined.

14- The work done by the students can be **followed** step by step and reported.

15- Movement can be **tracked** (angle, distance, speed).

16- **Errors** in painting can be **mapped** and the mistakes made can be clearly seen.

17- There are **screens** that adjustments/ pre-settings are done on the interface where the techniques and materials to be used in painting such as;

- name entry screen,
- data saving screen to **USB** memory,
- application update screen,
- paint technique selection screen,
- paint material selection screen,
- paint color selection screen,
- paint gun and specification screen,
- area selection screen,
- equipment settings (part offsets, air pressure, tip size and other configurations) screens

18- All entered data is **saved** in the local database of the simulator using the **MYSQL** database system by using the middle layer to be developed with the **Php** software language.

19- The simulator includes **abrasive blasting** and **coating** modules as well as the **painting** module.

20- The simulator have Faraday mode feature.

21- Spray angle can be adjusted.

22- For evaluation following parameters are used:

- the angles that the student makes while holding the paint gun in virtual reality,
- the distance of the gun to the material,
- the progress speed
- the parameter values selected before starting painting.

23- There is a **mapping** screen where the user can examine the part he/she is painting. On this screen, the paint on the part is mapped with blue, red and green colors. By mapping the thickness of the paint in that location according to the progress vector, the entire part can be visually analyzed.

24- All data can be **recorded** on a single platform to track real-time assessment of students.

25- Manufacturer can be reached out for **technical support** requirements.

26- User data for up to 20 users can be **compared** graphically.

27- Spray paint gun, Powder coating gun, sandblasting gun are **similar** in structure and weight to the **real** ones.

28- All analysis data can be saved as **PDF**.

29- With the **Teacher System** that can be installed on an external computer, the device can be connected remotely and the simulation can be started from the **Teacher system**.