X-RITE multi-angle spectrophotometer MA91

Simple
easy to operate
& Reliable

With the X-Rite MA91+OEM, color matching has never been easier and faster than before.

X-RITE multi-angle spectrophotometer MA91

X-RITE multi-angle spectrophotometer MA91

1. General Idea about MA91 (Platform Advantages)

Colored LCD, and instrument configuration

Pressure sensors

Easier navigation for configuration (Arrows)

Rubber ring to protect the paint surface

Fig.1 Instrument description

X-RITE multi-angle spectrophotometer MA91

1. General Idea about MA91 (Platform Advantages)

(More Hardware Advantages)

    a) Lamp redesign eliminating re-mastering of standards post services

    b) Improved measurement trigger for measuring non-flat samples

    c) USB connectivity

    d) Reduced weight

    e) Easier to repair

    f) Better charging options

        i. Regular Lithium battery. Can be purchased anywhere!

        ii. Cordless charger available for battery

X-RITE multi-angle spectrophotometer MA91

1. General Idea about MA91 (Platform Advantages)
(Technical Hardware Advantages)

Angular technology :   ±0.15°
                              Fiber Optic pick up coupled with DRS technology

Measurement Area :   Approx. 12mm (.5 inch)

Measurement Time :   Approx. 2 seconds

Measurement Storage: 20 Groups, 1000 Samples

Data Interface :   USB 2.0

X-RITE multi-angle spectrophotometer MA91

1. General Idea about MA91 (Platform Advantages)

(Firmware Advantages)

a) With averaging options, user can choose to disregard measurement.

b) Scrolls through groups automatically, when group is full.

c) 1000 samples, stored in internal SD Card

X-RITE multi-angle spectrophotometer MA91

2. Compatibility with the Savant Jobs

Fig.2 Savant Jobs

X-RITE multi-angle spectrophotometer MA91

2. Compatibility with the Savant Jobs

The Savant Jobs will help you manage the reading from the X-Rite's MA60 or MA91 spectrophotometers.

Definitions:

A Job is a task with a title, which will be uploaded to the spectrophotometer, and will help you recognize this task when taking the measurement/reading.

X-RITE multi-angle spectrophotometer MA91

2. Compatibility with the Savant Jobs

With the Savant Jobs, you will be able to:

- Add jobs to the software

- Synchronize the jobs with the spectrophotometer (The Group Names will be replaced by the job names)

- Download the Measurements back to the software.

- Save your Measurement for future reference.

- Match the color with our database, same as the Color Search

- Match the color with our database, with metallic and manufacturer filter

- Automatic recognition of effect in measurement

X-RITE multi-angle spectrophotometer MA91

3. Comparison with the MA60II

Most of the above are new compared to the other Spectrophotometers!

In addition to:

- Faster synchronization with the Savant Jobs.

- Ability to take more measurements (1000 instead of 255)

- 3 angles instead of 4, nevertheless, there is improvement in accuracy in imperfect surfaces.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
   A. Before Starting

   Read the manual included on the set up CD that comes with the unit. This manual is far more detailed than the printed manual included with the unit.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
   A. Before Starting

   a) Ensure that the battery is fully charged, it can be charged from the charger supplied or inside the unit
   b) The unit can be used with the power cord supplied
   c) Ensure that you have both the black and white calibration panels
   d) Ensure that all cables are present

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

   B. Setup Notes

If GenMix Pro is already installed on your computer we recommend completely uninstalling the program and downloading the latest version from the web site.

It can be installed from the WWW.GENERALPAINT.BIZ

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

C. Driver installation

GenMix Pro must be installed before connecting the Savant to your computer.

During the installation of GenMix Pro ensure that the MA91 Driver installation has been checked.
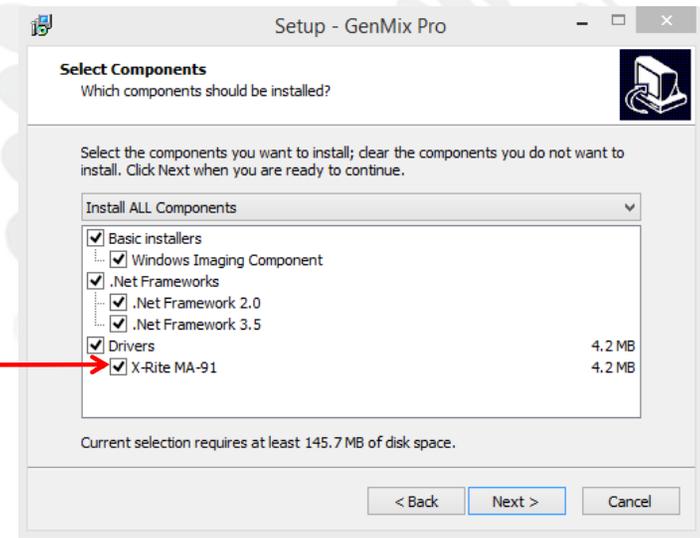
Fig.3 MA91 driver installation

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
   D. Configuration

Go to the "Parameters" section of GenMix Pro
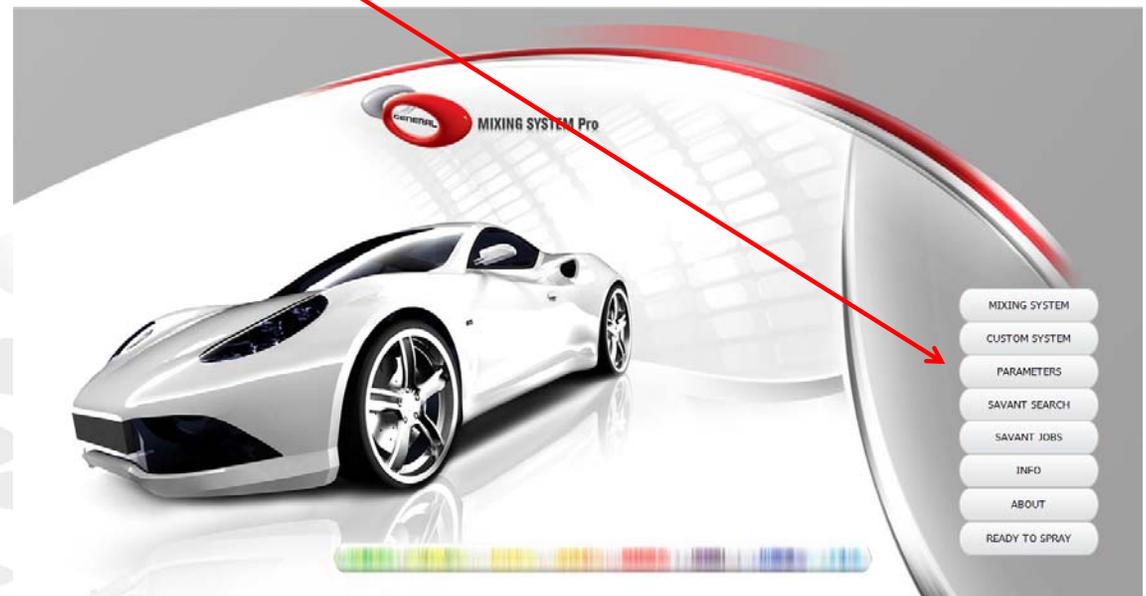
Fig.4 Access to parameters

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
D. Configuration

Plug the unit into your computer with GenMix Pro installed.
Make sure that the correct spectrophotometer is selected in the parameters section & click on "Reset Defaults".
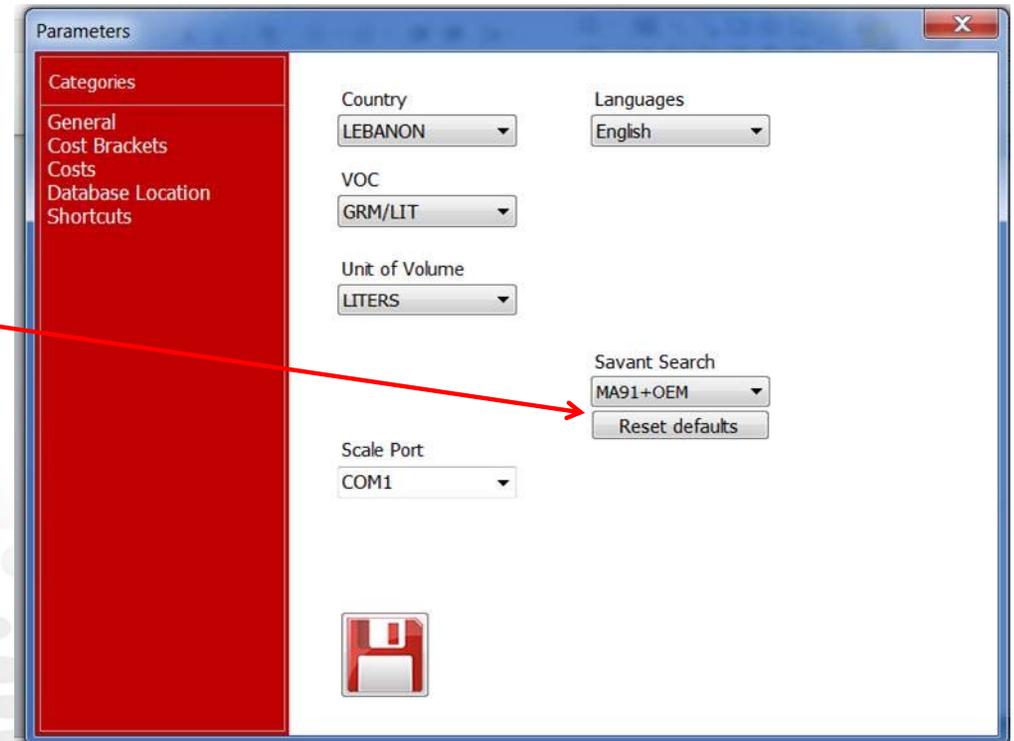
X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
D. Configuration

At this point if an MA60 or MA68 unit is being installed the model needs to be selected, the serial port adaptor connected and the COM port info from the "Device Manager" needs to be added.
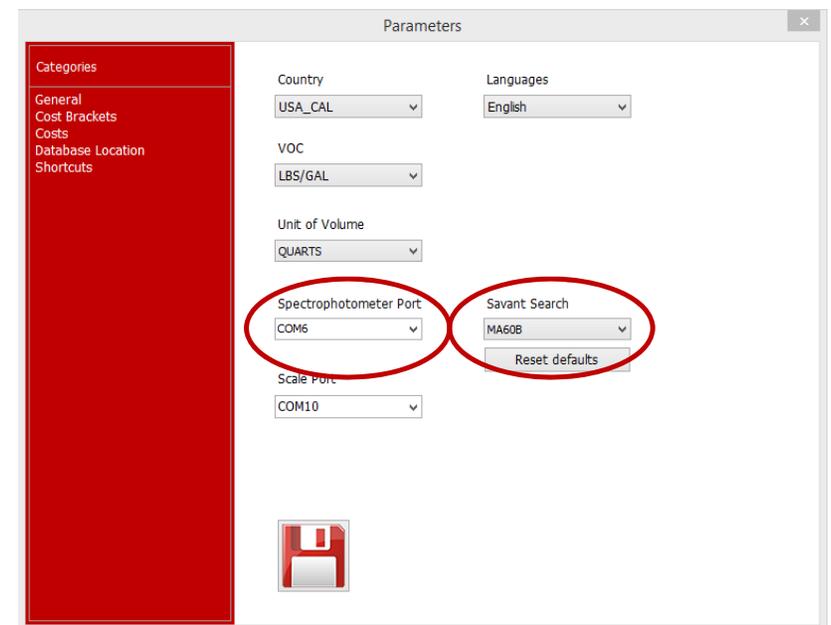
Fig.6 MA60 & MA68B configuration

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

E. Machine UI Description

When powered up the start screen appears. At this point the unit will need calibrating with the white and black "standards". This operation needs to be performed every 24 hours.

Measurement mode

Bluetooth if available

Configuration
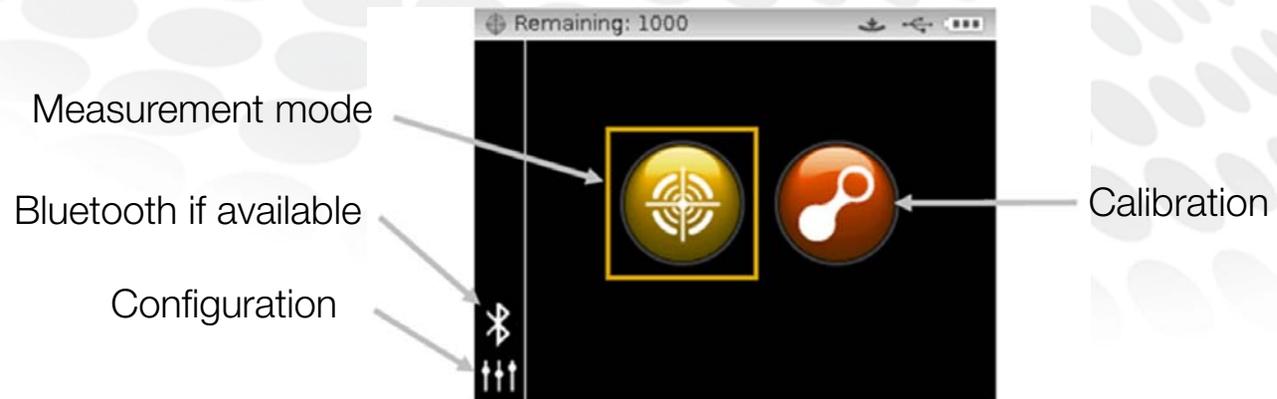
Calibration

Fig.7 Main screen in the MA91.
NB: Bluetooth not available yet

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

F. Calibration

The system will prompt you to measure both the black and white standards.

It will also advise when calibration is needed.

Follow the calibration instructions until Fig.9 appears.

Calibration selected
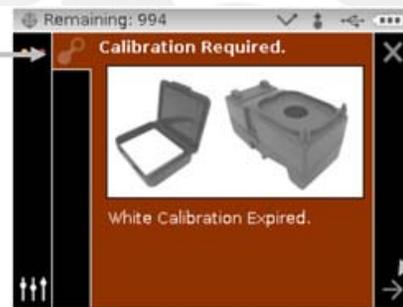
Exit

Next

Fig.8 MA91 Calibration

Fig.9 MA91 Calibration completed

4. Setup & Usage

G. Measurement

By accessing the measurement mode you will find various icons, an explanation for these is giving manual found on the CD.

Access the main measurement screen.

Access sample timestamp screen. Displays sample stored in the selected group.

Access group selection screen. Arrow points to current group selected.

Delete a single sample or all samples in a group.

Exits the averaging measurement sequence for the current sample.

Appears in the display after the third SMC measurement. Cancels the SMC sequence and calculates an average of all previous measurements on the current sample.

Measurement mode selected →

Access groups →

Fig.10 Measurement mode

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

   H. Measurement Guidelines

To take a proper measurement, we recommend the following guidelines:

1. Measure close to the damaged area of the vehicle.

2. Ensure that the area is completely cleaned and polished.

3. Avoid measuring a very hot panel, it can affect the results.

4. Very often, a coat of clear on the panel can help with getting accurate results.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

I. Measurement Groups

Select the group where you would like to save the measurement.

Take your measurement either using automatically or by clicking on the button located at the side of the machine.

Click on the arrows on the machine to move from the **measurement mode** to the **groups mode**

Fig.11 Moving from measurement mode to groups mode.

Available Groups

Group 3 is selected & contains 5 measurements

Fig.12 Selecting the groups

4. Setup & Usage

I. Measurement Groups

When measuring ensure that the three pressure sensor indicators remain green (Fig.13), if not, the system will prompt you to retake the measurement.

The panel is measured three times, if possible move the unit 30 degrees between each measurement.

Back LED

Front LED

Back LED

Fig.13 LED design
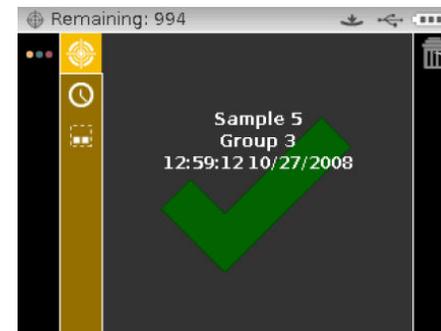
Fig.14 Measurement is correct & has been accepted

Fig.15 Measurement is incorrect

4. Setup & Usage

J. Savant Search

Take a measurement, then go to Savant Search.

From this point on all the Savant units work the same way with only small differences.

Fig.16 Savant Search access

4. Setup & Usage

J. Savant Search

Ensure that a USB connection is indicated and click the download icon to access the measurements.

Choose a group & a measurement, then click again on Download Data.
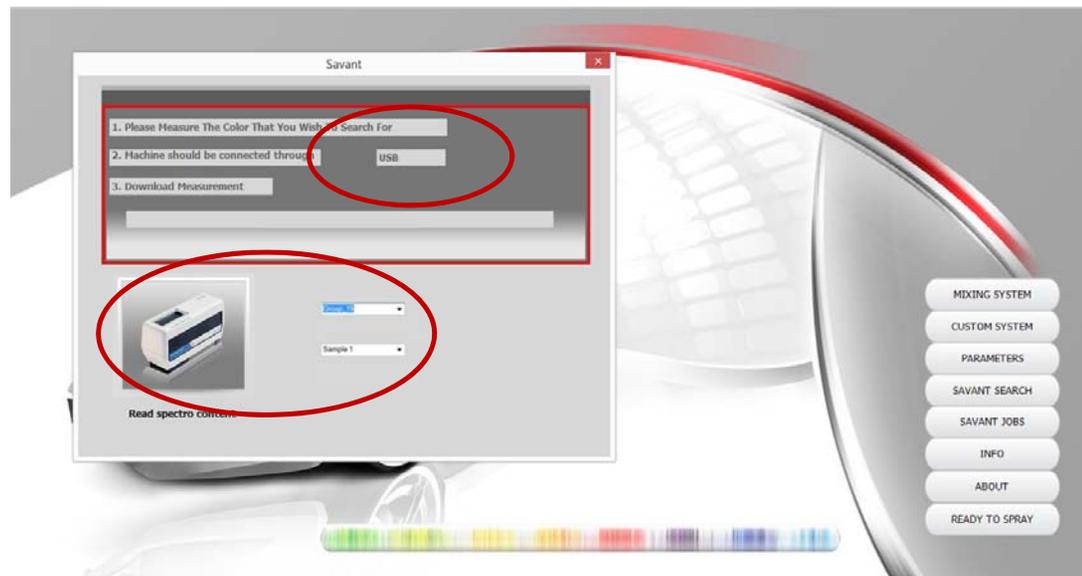
Fig.17 Savant Search

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

J. Savant Search

To match the color with our system, click on "Find Formula".

Fig.18 Savant Search – Find Formula

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
  J. Savant Search

The General Paint Index or GPI is listed as shown, the lower the number, the better the match.

Fig.19 Savant Search – Find Formula

4. Setup & Usage

K. Tips & Tricks

- Pick the closest result from your car make that is nearest to zero.

- If your car make is not in the list, you "can" pick the color with the lowest GPI.

- *Hint, if you have color docs available find the chips for as many of the colors listed as possible and compare.

- If the color is a metallic, select the color from the list of chips that has the best matching metallic effect and let the system tint the color.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

K. Tips & Tricks

The results are shown as two formulae.

The first is from the GenMix Pro Database.

The second has been corrected by the Savant software.

From this page the selected formula can be mixed, sent to the scale or made into a ready to spray formula.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

K. Tips & Tricks

Mix the color according to the Savant prediction and confirm the accuracy of the match by producing a spray out test card.

Fig.21 Tips & Tricks

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

K. Tips & Tricks

Proceed to paint the vehicle ONLY when the color is confirmed as satisfactory

Fig.22 Tips & Tricks

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage
  K. Tips & Tricks
  - Create a customer database in the GenMix Pro system.

  - Record the formula for future reference.

  - Spray out samples for future reference.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

    L. Reminder

- The surface being measured needs to be clean, polished and free from scratches (clear can be used to improve the surface).

- Avoid measuring in direct sunlight when the panel is hot.

- Three measurements are taken, these should be taken with at least a 30° angle between each.

- Measure in the damaged area of the vehicle.

X-RITE multi-angle spectrophotometer MA91

4. Setup & Usage

L. Reminder

When selecting a color from the results page try to chose a matching vehicle make

If possible, check swatches of alternate colors listed to match the metallic sizes

Always check and spray out a color before applying paint on a vehicle

ALWAYS REMEMBER, Savant is a tool in the color tool box, it must be used with a combination of training and common sense

X-RITE multi-angle spectrophotometer MA91

5. Savant Jobs

For more information please refer to our online PDF, available at:

http://www.generalpaint.biz/external/genmix/help/Savant%20Jobs.pdf

X-RITE multi-angle spectrophotometer MA91

General Paint Co. SAL
info@generalpaint.biz
General Paint Co. S. A. L.
P. O. Box 7623
Beirut, Lebanon

Software and IT Support:
support.it@generalpaint.biz

Technical Support:
support.technical@generalpaint.biz

Tel:
+961 9 925 990
+961 9 925 991
+961 9 925 992
Fax:
+961 9 925 993

Street Address
General Paint Co. SAL
Ghazir Industrial City
Ghazir, Lebanon