## Garage equations

## Type LS formulas

1. Sort descending equation

The colors are sorted from the biggest quantity to the smallest

## Type 2K/BC formulas

The equations below are applied in the following order:

1. BC equation

This equation is applied only for the BC formulas:

Description: the 4002 is put first, the 4110 is put last, and the rest is put is a descending order.

1. Apply Eq.:

This equation is applied to the garages having “Apply Eq.” chosen🡺



Description:

* the following colors quantity is doubled🡺(4091,4101,4206,4581,4705,4107,4306,4307,4308,4403,4405,4407,4504,4507,4508,4605,4606,4607 ,4707,4708,4805).
* 4010 and 4002 are reduced to half.

1. Apply Extended Eq.:

This equation is applied to the garages having “Apply Extended Eq.” chosen🡺



Description:

* the following colors quantity is doubled🡺( 4091,4101,4206,4581,4705,4107,4306,4307,4308,4403,4405,4407,4504,4507,4508,4605,4606,4607,4707,4708,4805,4111,4211,4411,4425,4436,4511,4525,4526,4528,4711,4811,4910).
* 4010 and 4002 are reduced to half.

1. Apply Eq. (no 4581-91 ):

This equation is applied to the garages having “Apply Eq. (no 4581-91 )” chosen🡺



Description:

* the following colors quantity is doubled🡺(4101,4206 ,4705,4107,4306,4307,4308,4403,4405,4407,4504,4507,4508,4605,4606,4607 ,4707,4708,4805).
* 4010 and 4002 are reduced to half.

1. Extended +:

This equation is applied to the garages having “Extended +” chosen🡺



Description:

* the “Apply Extended Eq.” is applied
* the 4002 is removed
* the 4010 is reduced to half only if the formula is not of type “Couche”

1. Apply Eq. 4201 – 180g:

This equation is applied to the garages having “Apply Eq. 4201 – 180g ” checked🡺



It will be applied after all the other equations get applied but only if the “Original” formula (before the previous equations) has a quantity of 4201 more than or equal to 180.

Description:

* the following colors quantity is divided by 2🡺

( 4025,4640,4440,4047,4041,4188,4084,4082,4030,4985,4934)

## HQ equations

## When saving an LS formula

The equations bellows are applied when saving a new formula and in the following order:

1. The 15% of 4201 equation

If the checkbox **chkEquation15perc4201** is checked, a message appears to confirm the **eq15perc4201** equation, which is as follows 🡺

* Decrease by 15% the quantity of 4201
* Return to the original total quantity

1. LS equation on color ‘**01’**

* Remove the ‘**01’** color from the formula
* Spread by the ‘**01’** color quantity by %, like the following 🡺

|  |
| --- |
| [New qty] = [Original qty] + ([Original qty] \* 100 / [Original total]) \* [total of **‘01’**] / 100 |

* Put the color with the biggest quantity first
* Return to the original total quantity

1. LS equation on color ‘**10’**

* Remove the ‘**10’** color from the formula
* Spread by the ‘**10’** color quantity by %, like the following 🡺

|  |
| --- |
| [New qty] = [Original qty] + ([Original qty] \* 100 / [Original total]) \* [total of **‘10’**] / 100 |

* Put the color with the biggest quantity first
* Return to the original total quantity

1. The Majdi % equation

If the checkbox **chkMajdi** is checked, a message appears to confirm the **majdiPerc** equation, which is as follows 🡺

* If the formula contains **4201**, then decrease its quantity by **40**%.
* If the formula contains **4014**, then decrease its quantity by **20**%.
* If the formula contains **4110**, then increase its quantity by **50**%.
* If the formula contains **4920**, then decrease its quantity by **40**%.
* If the formula contains **4940**, then decrease its quantity by **60**%.
* If the formula contains **4941**, then decrease its quantity by **30**%.
* If the formula contains **4980**, then decrease its quantity by **40**%.
* If the formula contains **4030**, then decrease its quantity by **10**%.
* If the formula contains **4041**, then increase its quantity by **80**%.
* If the formula contains **4047**, then decrease its quantity by **15**%.
* If the formula contains **4051**, then decrease its quantity by **25**%.
* If the formula contains **4060**, then decrease its quantity by **30**%.
* If the formula contains **4070**, then increase its quantity by **50**%.
* If the formula contains **4081**, then decrease its quantity by **10**%.
* If the formula contains **4082**, then decrease its quantity by **10**%.
* If the formula contains **4188**, then increase its quantity by **50**%.
* If the formula contains **4283**, then decrease its quantity by **10**%.
* If the formula contains **4440**, then decrease its quantity by **20**%.
* If the formula contains **4580**, then decrease its quantity by **10**%.
* If the formula contains **4681**, then increase its quantity by **200**%.
* If the formula contains **4025**, then increase its quantity by **90**%.
* If the formula contains **4080**, then decrease its quantity by **25** %.
* If the formula contains **4111**, then increase its quantity by **50** %.
* If the formula contains **4511**, then increase its quantity by **10** %.
* If the formula contains **4526**, then increase its quantity by **25** %.
* If the formula contains **4910**, then increase its quantity by **15** %.
* If the formula contains **4091**, then increase its quantity by **10** %.
* If the formula contains **4101**, then increase its quantity by **500** %.
* If the formula contains **4206**, then increase its quantity by **200** %.
* If the formula contains **4581**, then increase its quantity by **10** %.
* If the formula contains **4704**, then increase its quantity by **200** %.
* If the formula contains **4107**, then increase its quantity by **100** %.
* If the formula contains **4307**, then increase its quantity by **50** %.
* If the formula contains **4308**, then decrease its quantity by **10** %.
* If the formula contains **4403**, then decrease its quantity by **15** %.
* If the formula contains **4405**, then decrease its quantity by **40** %.
* If the formula contains **4508**, then decrease its quantity by **10** %.
* If the formula contains **4606**, then increase its quantity by **200** %.
* If the formula contains **4811**, then decrease its quantity by **20**%, and increase the quantity of **4403** by **2**% of the **4811** quantity (if **4403** doesn’t exist then add it).
* If the formula contains **4017**, then increase the quantity of **4517** by **20%** of the **4017** quantity (if **4017** doesn’t exist then add it).
* If the formula contains **4026**, then increase the quantity of **4025** by **30**% of the **4026** quantity (if **4025** doesn’t exist then add it).
* If the formula contains **4117**, then decrease its quantity by **20**%, and increase the quantity of **4517** by **20**% of the **4117** quantity (if **4517** doesn’t exist then add it).
* Return to the original total quantity

1. The ClearLS % equation

If the checkbox **chkClearLs** is checked, a message appears to confirm the **clearLsEquation** equation, which is as follows 🡺

* If the formula contains ‘**69’** and its quantity is equal or more then **30**, then increase the quantity of ‘**67’** by **8%** of the ‘**69’** quantity (if ‘**67’** doesn’t exist then add it).
* If the formula contains ‘**29’** and its quantity is equal or more then **30**, then increase the quantity of ‘**20’** by **15**% of the ‘**29’** quantity (if ‘**20’** doesn’t exist then add it).
* Return to the original total quantity

1. The ‘4503’ equation

This equation is applied only if the formula has the ‘**4503’** color, and it is as follow:

* Add **half** the quantity of the ‘**4503’** to the ‘**4403’** color. If the color ‘**4403’** is not in the formula then add it having **half** the quantity of the ‘**4503’.**
* Add **half** the quantity of the ‘**4503’** to the ‘**4508’** color. If the color ‘**4508’** is not in the formula then add it having **half** the quantity of the ‘**4503’.**

1. The ‘4761’ equation

This equation is applied only if the formula has the ‘**4761’** color, and it is as follow:

* Add **60**% of the quantity of the ‘**4761’** to the ‘**4063’** color. If the color ‘**4063’** is not in the formula then add it having **60**% of the quantity of the ‘**4761’.**
* Add **40**% of the quantity of the ‘**4761’** to the ‘**4561’** color. If the color ‘**4561’** is not in the formula then add it having **40**% of the quantity of the ‘**4761’.**

1. The ‘4001’ equation

This equation is applied only if the formula has the ‘**4001** color, and it is as follow:

* Add **150**% of the quantity of the ‘**4001** to the ‘**4111’** color. If the color ‘**4111** is not in the formula then add it having **150**% of the quantity of the ‘**4001’.**
* Return to the original total quantity.

## When saving a BC formula

The equations bellows are applied when saving a new formula and in the following order:

1. The 15% of 4201 equation

(Already described in the paragraph **II.1.i**)

1. The Majdi % equation

(Already described in the paragraph **II.1.iv**)

1. The ClearLS % equation

(Already described in the paragraph **II.1.v**)

1. The ‘4503’ equation

(Already described in the paragraph **II.1.vi**)

1. The ‘4761’ equation

(Already described in the paragraph **II.1.vii**)

1. The ‘4001’ equation

(Already described in the paragraph **II.1.viii**)

## When saving a 2K formula

The equations bellows are applied when saving a new formula and in the following order:

1. The 15% of 4201 equation

(Already described in the paragraph **II.1.i**)

1. The render equation:

This equation is applied if the checkbox **chkApplyEquation** is checked and it is as follow:

* 1. part 1
* For the colors different than “**2019**, **2960**, **2980**, **2920** and **2002**”, apply the following:

|  |
| --- |
| [New qty] = [Original qty] \***1100** /[total of **‘2019’🡸🡺 white**] |

* If the color “**2960**” exists, replace it with “**2060**”, and apply the following:

|  |
| --- |
| [New qty] = [Original qty] \***1100**\***0.08**/[total of **‘2019’🡸🡺 white**] |

* If the color “**2980**” exists, replace it with “**2580**”, and apply the following:

|  |
| --- |
| [New qty] = [Original qty] \***1100**\***0.06**/[total of **‘2019’🡸🡺 white**] |

* If the color “**2920**” exists, replace it with “**2025**”, and apply the following:

|  |
| --- |
| [New qty] = [Original qty] \***1100**\***0.1**/[total of **‘2019’🡸🡺 white**] |

* If at least one of “**2960**”, “**2980**” or “**2920**” did exist, then remove the “**2002”.**
  1. part 2
* Modify the quantity of the **‘2019’🡸🡺 white**, as follow:

|  |
| --- |
| [New 2019 qty] = 1100 – [total qty] + [original total of **‘2019’🡸🡺 white**] |

1. The Majdi % equation

(Already described in the paragraph **II.1.iv**)

1. The ClearLS % equation

(Already described in the paragraph **II.1.v**)

1. The ‘4503’ equation

(Already described in the paragraph **II.1.vi**)

1. The ‘4761’ equation

(Already described in the paragraph **II.1.vii**)

1. The ‘4001’ equation

(Already described in the paragraph **II.1.viii**)

## When saving a BC/2K formula

The equations bellows are applied when saving a new formula and in the following order:

1. The 15% of 4201 equation

(Already described in the paragraph **II.1.i**)

1. New formula creation

A new formula of type “**2K**” is created, while the original one will be saved as a “**BC”** formula.

The equation applied on the new “**2K**” formula is as following:

* Replace the “**4960**” color by “**2060**”, having **0.06** the “**4960**” quantity.
* Replace the “**4920**” color by “**2025**”, having **0.06** the “**4920**” quantity.
* Replace all the others colors except the “**4002**” as follow: [**new code**]=[**old code**] - **2000**

While keeping the same quantity.

* Remove the “**4002**” from the formula.
* Return to the original total quantity.
* Apply the 2K “render equation” as described in the paragraph **II.3.ii**

**Note: the rest equations below are only applied to the original “BC” formula🡺**

1. The Majdi % equation

(Already described in the paragraph **II.1.iv**)

1. The ClearLS % equation

(Already described in the paragraph **II.1.v**)

1. The ‘4503’ equation

(Already described in the paragraph **II.1.vi**)

1. The ‘4761’ equation

(Already described in the paragraph **II.1.vii**)

1. The ‘4001’ equation

(Already described in the paragraph **II.1.viii**)