



GemSquareTM

Gemstone Color Description & Communication System

Software Installation & User Guide
February 2005

Table Of Contents

Disclaimer	2
GemeSquare System Requirements	2
GemeSquare Software	3
About the GemeSquare	4
The GIA® Gemstone Color Description System	5
GemeSquare Screen Design	7
Using the GemeSquare: A Five Step Process	10
Using the GemeSquare: Image Matching	12
Using the GemeSquare: Using the Gememail	13
Using the Color Indicator	14

Table of Figures

Figure 1: GIA® Gemstone Color Description System - Master Hue Table.....	6
Figure 2: GIA® Gemstone Color Description System - Tone Level Table	6
Figure 3: Shape Ruler.....	7
Figure 4:Gem Cutting Styles Table	7
Figure 5: Hue Window.....	8
Figure 6: Tone Ruler	8
Figure 7: Saturation Ruler	8
Figure 8: Selection Window	9
Figure 9: Help Function	9
Figure 10: Exit Function	9
Figure 11: Select a Shape.....	10
Figure 12: Select Gem Hue.....	10
Figure 13: View Primary Tone/Saturation Chart.....	10
Figure 14: Moving through Primary Tone/Saturation Charts	11
Figure 15: View Secondary Tone/Saturation Charts	11
Figure 16: Image File Display	12
Figure 17: Pop-Up Image Matching Window	12
Figure 18: Gememail pop-up	13
Figure 19: Gememail email	13
Figure 20:Color Indicator	14
Figure 21 :The relevant Tone/Saturation Chart	14

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Please direct any correspondence or inquiries to:

Email: You can email for help – help@gemewizard.com

Website: You can visit our website for help – <http://www.gemewizard.com>

GemeSquare System Requirements

	Preferred:	Minimum:
Processor	Intel® Pentium®, 2.0GHz (or higher)	Intel® Pentium®, 300MHz
Memory	256MB RAM	128MB RAM
Operating System	Microsoft® Windows® 98, ME, 2000, XP	Microsoft® Windows® 98, ME, 2000, XP
Disk Space	500MB of available hard disk space	500MB of available hard disk space
Display	LCD flat-screen monitor, supporting 1024x768 resolution in 16-bit colors	LCD flat-screen monitor, supporting 1024x768 resolution in 16-bit colors
Web Browser	Microsoft® Internet Explorer v5.0 (or above)	Microsoft® Internet Explorer v5.0 (or above)

Hardware Optimization:

To configure your hardware to optimize the performance of the GemeSquare, please note the following:

1. Disable any Internet Explorer pop-up blocking software that you may have installed.
2. Disable any Energy Saver monitor settings that you have configured. To do this, open the Display Properties window, then click on the Screen Saver tab.
3. Adjust the angle of your LCD flat-screen monitor to 90°

GemeSquare Software

The Setup program will help you install the GemeSquare on your computer.

To install and set up the GemeSquare:

1. Exit any programs that you are running prior to attempting to install this program.
2. Set up or verify your Windows Display Properties:
 - Set Screen Resolution to 1024x768 pixels.
 - Set Color Quality to 16 bit (Medium, or 65,535 colors) or above.If you are unfamiliar with how to configure these settings, contact your computer supplier.
If you have an older computer, you may need to upgrade your video card.
3. Insert the GemeSquare CD in your computer's CD-ROM drive.
4. The installation process should begin immediately. If it does not, follow the directions below:
 - Select **Run...** from the Windows Start menu.
 - Type **D:\ setup.exe**
 - Note: **D:** represents your computer's CD-ROM drive. Another letter may represent your CD-ROM drive. If so, substitute **D:** with the letter indicating your CD-ROM drive.
5. Write the license key you have received with the installation disk. Please note that the license is verified via the web, therefore during the installation process you must be connected to the web.
6. Please take a moment to look over the License Agreement, and signal your acceptance of the terms therein by checking the check-box.
7. Follow the instructions on each of the screens of the Install Wizard. Click Next to proceed to the following step. To return to a previous screen, click Back. Click install to start the installation.
8. When the installation process finishes, click the appropriate option button to indicate whether or not you want to restart your computer immediately. Then click Finish.
9. The installation places a GemeSquare icon on your desktop. To start the GemeSquare, double-click the icon. Alternatively, you can start the GemeSquare from your start menu->Programs-> Gemewizard -> GemeSquare

To stop the installation at any time, click Cancel.

To uninstall the GemeSquare:

To uninstall the GemeSquare, choose one of the two options below:

Option 1:

1. Select **Add or Remove Programs** from the Windows Control Panel.
2. Locate GemeSquare in the list of programs and click on it.
3. Click the **Remove** button.

Option 2:

1. Select **All Programs** from the Windows Start menu.
2. Select GemeSquare from the programs listed.
3. Select **Uninstall GemeSquare** from the options.

About the GmeSquare

The GmeSquare is a digital implementation of the industry-standard GIA® gemstone color description system. It has been designed to be used by the entire gemstone industry, from gemology students to jewelers, gem dealers and gem appraisers.

The GmeSquare was developed by Menahem Sevdermish of Gemewizard Inc., the inventor of the Gemewizard suite of software applications for the gem and diamond industry, in conjunction with the GIA®

To create the GmeSquare, over 10,000 colored gemstones were gathered from a wide range of industry sources and photographed at high-resolution.

Using a US patent-pending program, each gemstone image was digitally recreated in 15 different cutting styles (or color rulers), making a total database of some 150,000 images. The color rulers were then arranged according to their position in the visible spectrum, enabling the software to easily access any image or shape alphanumerically.

The GmeSquare enables users to quickly and accurately identify the color of a gemstone, and to communicate that color information, using industry-standard nomenclature, to other GmeSquare and Gemewizard software users.

It does this by displaying a base palette of the 31 GIA® master hues - the most common basic hues of the visible spectrum - and allows users to view the tone and saturation levels of each hue: making a total of 1146 colors.

The GmeSquare represents a giant step forward in gemstone color definition and communication; providing an easy-to-use digital solution that addresses the major color issue that has faced the gemstone industry for many years.

It can be used as a standalone product, can be integrated within existing gemstone software systems and trading platforms, and can also work within educational and laboratory environments.

Please direct any correspondence or inquiries to:

Gemewizard, Inc.
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Suite 300
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52521
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The GIA® Gemstone Color Description System

Because gem color descriptions are so varied and subject to individual perception, the GIA® developed the Colored Stone Grading System. It helps you judge a stone's color from the "most preferred" to the "least preferred" available for its species.

To describe a gem's color using the system, you will have to answer three questions:

- What is the gem's color? ... **Hue**
- How light or dark is the gem? ... **Tone**
- How strong is the gem's color? ... **Saturation**

Hue:

Hue is the first impression of an object's basic color. It is described as red, orange, yellow, green, blue, violet and purple, or a combination of these colors.

The GemSquare uses 31 master hue names - see the table below - which combine the basic hue names (red, orange, yellow etc.) with any modifying hue names that might be necessary.

Shorthand notation is used: the dominant (or stronger) hue is capitalized. For example:

- red modified by a slight amount of purple: slpR (slightly purplish Red)
- if purple is strong: stpR (strongly purplish red)
- if equal amounts of purple and red: RP/PR (Red-Purple or Purple-Red)
- if purple dominates: rP (reddish Purple)

GIA® Gemstone Color Description System Master Hues		
Number	Hue	Abbreviation
1	Red	R
2	orangy Red	oR
3	Red-Orange or Orange-Red	RO/OR
4	Reddish-Orange	rO
5	Orange	O
6	Yellowish Orange	yO
7	orangy Yellow	oY
8	Yellow	Y
9	greenish Yellow	gY
10	Yellow-Green or Green-Yellow	YG/GY
11	strongly yellowish Green	styG
12	yellowish Green	yG
13	slightly yellowish Green	slyG
14	Green	G
15	very slightly bluish Green	vslbG
16	bluish Green	bG
17	very strongly bluish Green	vstbG
18	Green-Blue or Blue-Green	GB/BG
19	very strongly greenish Blue	vstgB
20	greenish Blue	gB
21	very slightly greenish Blue	vslgB
22	Blue	B
23	violetish Blue	vB
24	bluish Violet	bV
25	Violet	V
26	violetish Purple	vP
27	Purple	P

28	reddish Purple	rP
29	Red-Purple or Purple-Red	RP/PR
30	strongly purplish Red	stpR
31	slightly purplish Red	slpR

Figure 1: GIA® Gemstone Color Description System - Master Hue Table

Tone:

Tone is the degree of darkness or lightness of a color. The GIA® divides tone into 11 levels, ranging from colorless (transparent) or white (opaque) - designated as 0 - through increasingly darker grays to black - designated as 10.

In practice, only levels 2 (very light) through 8 (very dark) apply to transparent colored stones. Tones that are any darker or any lighter are nearly impossible for the human eye to detect. Hence the GemeSquare describes tone between 2 and 8.

Three standard tone levels are 3 (light), 5 (medium) and 7 (dark).

GIA® Gemstone Color Description System Tone Levels	
Number	Tone
2	very light
3	light
4	medium light
5	medium
6	medium dark
7	dark
8	very dark

Figure 2: GIA® Gemstone Color Description System - Tone Level Table

Saturation:

Saturation is a color's strength or intensity. It is assessed on a six-level scale (1 through 6).

If the hue has any brownish or grayish components, saturation is 3 or lower. If brown or gray appear distinctly, saturation is 1 or 2. If you can only see the slightest hint of brown or gray, then saturation is around 3. If there is no trace of brown or gray, saturation is 4 or higher. A saturation rating of 4 or higher makes an attractive colored stone, all other things being equal.

For most colored stones, valuable colors tend to fall within medium-light to medium-dark tone (4, 5, 6) and higher saturation (4, 5, 6).

GIA® Gemstone Color Description System Saturation Levels	
Number	Saturation
1	brownish or grayish
2	slightly brownish or slightly grayish
3	very slightly brownish or very slightly grayish
4	moderately strong
5	strong
6	vivid

Figure 3: GIA® Gemstone Color Description System – Saturation Level Table

Therefore, each GemeSquare color bears a three-digit code, representing the hue, tone and saturation values, which equate to the GIA® color description codes.

For example: **R(1) 6/4**

R (1)	6	4
Hue	Tone	Saturation

GemeSquare Screen Design

The GemeSquare screen is comprised of seven elements:

Screen Element 1: Shape Ruler

The Shape Ruler displays graphic representations of the 15 most popular gem cutting styles to aid you in grading and color-matching your gemstone. Their names appear on mouse roll-over.

To select a shape, simply click on it. Note that all on-screen shapes will change to match your selection.

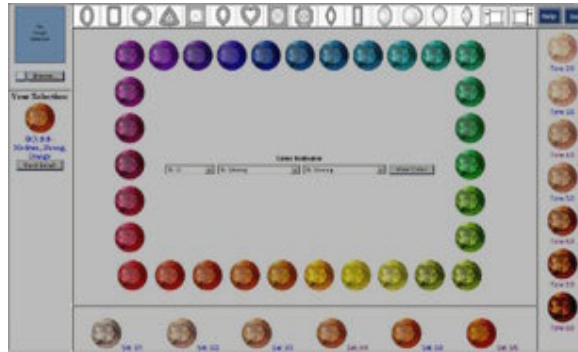


Figure 3: Shape Ruler

The on-screen gem cutting styles are as follows:

GemeSquare Shape Ruler Gem Cutting Styles	
Number	Description
1	Oval
2	Emerald Cut
3	Round
4	Trillion
5	Square
6	Pear
7	Heart
8	Princess
9	Radiant
10	Marquise
11	Baguette
12	Cabochon Oval
13	Cabochon Round
14	Cabochon Pear
15	Cabochon Marquise

Figure 4: Gem Cutting Styles Table

Screen Element 2: Hue Window

The Hue Window displays graphic representations of the 31 master hues in the GemSquare. Their names and abbreviations appear on mouse roll-over.

To select a hue, simply click on it. Note that the colors in the Saturation Ruler and Hue Ruler will change accordingly.

For a full listing of the master hues, including names and abbreviations, refer to **Figure 1: GIA® Gemstone Color Description System - Master Hue Table**.

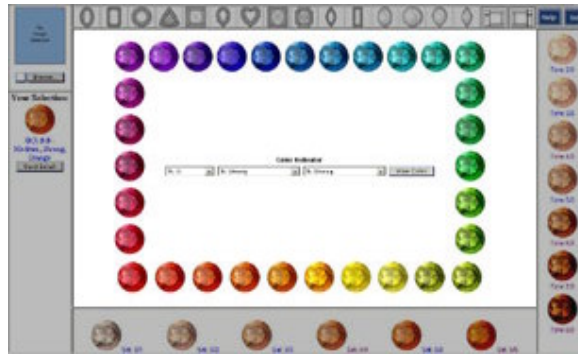


Figure 5: Hue Window

Screen Element 3: Tone Ruler

The Tone Ruler displays graphic representations of the seven tone levels of the chosen hue in a particular saturation.

For a full listing of the tone levels, refer to **Figure 2: GIA® Gemstone Color Description System – Tone Level Table**.

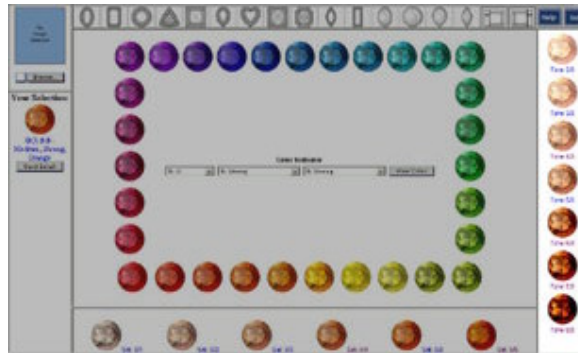


Figure 6: Tone Ruler

Screen Element 4: Saturation Ruler

The Saturation Ruler displays graphic representations of the six saturation levels of the chosen hue in a particular tone.

For a full listing of the saturation levels, refer to **Figure 3: GIA® Gemstone Color Description System – Saturation Level Table**.

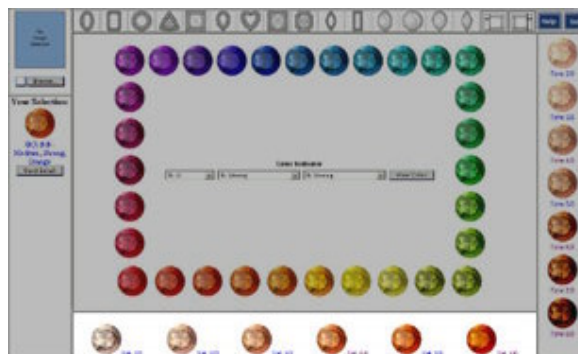


Figure 7: Saturation Ruler

Screen Element 5: Selection Window

The Selection Window enables you to compare a browsed image of a gem and match it to images of chosen colors created by the GemSquare.

Up to three colors can be displayed, with their color codes, names and abbreviations. For more information, refer to **Using the GemSquare: Image Matching**.

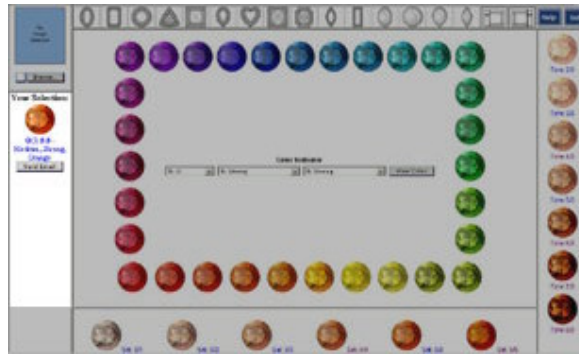


Figure 8: Selection Window

Screen Element 6: Help Function

The GemSquare software includes an extensive Help facility.

To access it at any time, simply click on the 'Help' button.



Figure 9: Help Function

Screen Element 7: Exit Function

To exit the GemSquare at any point, click on the 'Exit' button.

Note that an Internet Explorer browser window will appear on-screen, asking you to confirm your selection.

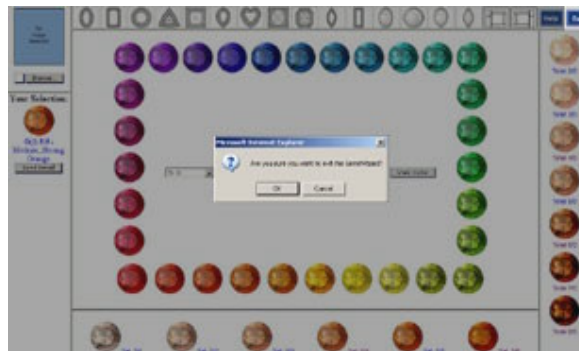


Figure 10: Exit Function

Using the GmeSquare: A Five Step Process

Using the GmeSquare to precisely ascertain the color of a gemstone is a simple five-step process...

Step 1: Select a Shape

Firstly, select a shape from the Shape Ruler to match the shape of the gemstone whose color you are attempting to identify.

There are 15 shapes available, representing the most popular gem cutting styles.

Once you have made your selection, the shapes in the Tone and Saturation Rulers will change accordingly.

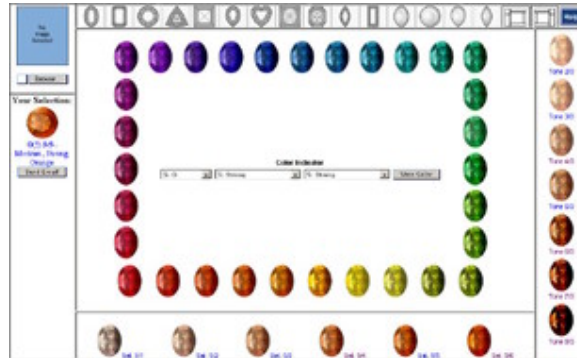


Figure 11: Select a Shape

Step 2: Select Gem Hue

Next, select the hue in the Hue Window that most closely matches your gemstone by clicking on it.

The values in the Tone and Saturation Rulers will change accordingly.

Note that your selection appears in the Selection Window on the left-hand side of the screen.

Up to three selections can be displayed, with their color codes, names and abbreviations.



Figure 12: Select Gem Hue

Step 3: View Primary Tone/Saturation Chart

Then, double-click on your chosen hue in the Hue Window.

The primary Tone/Saturation Chart, showing all values for that hue, will be revealed.

The hue name and tone/saturation descriptions for each of the displayed colors will appear on mouse roll-over.

Click on the color that is closest to your gemstone... it will be added to the Selection Window, together with its color code, name and abbreviation.

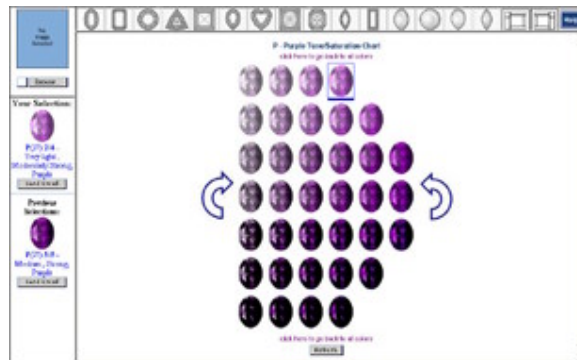


Figure 13: View Primary Tone/Saturation Chart

Step 4: Move through Primary Tone/Saturation Charts

To verify or refine your initial hue selection, you can navigate through the entire library of primary Tone/Saturation Charts (for all 31 master hues in the GemoSquare) using the on-screen arrows.

At any point you can select a color and add it to the Selection Window by clicking on it.

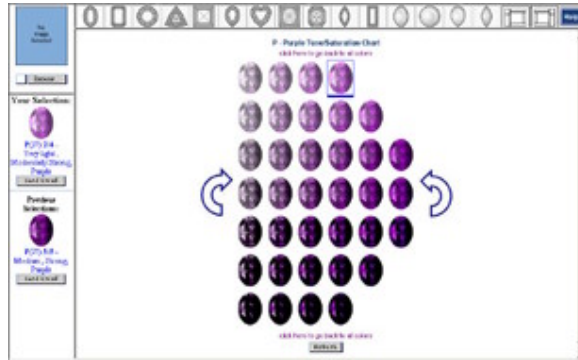


Figure 14: Moving through Primary Tone/Saturation Charts

Step 5: View Secondary Tone/Saturation Charts

You can further refine your selection by accessing secondary Tone/Saturation Charts, which display the tone and saturation levels of the surrounding hues to the one that you initially selected.

To do this, simply double-click on the closest matching color in the primary Tone/Saturation chart. You can continue to click on the closest match in each subsequent screen, until you locate the exact color for which you are looking.

Note that you can navigate back to either the primary Tone/Saturation Charts or full Hue Window using the text links at the bottom of the screen.



Figure 15: View Secondary Tone/Saturation Charts

Using the GameSquare: Image Matching

The GameSquare enables you to precisely match the color of an existing gemstone using a digital image of it...

Image Matching Step 1: Locate the Image File

To locate the image file on your computer (or network or external device, such as a digital camera), use the Browse button at the top-left of the screen.

Once you have selected the image, it will appear above the Selection Window.



Figure 16: Image File Display

Image Matching Step 2: Match Image File Color and Shape

Use the Shape Ruler to match the gemstone cut; and the Hue Window and Tone/Saturation Charts to match the gemstone color, as outlined above in **Using the GameSquare: A Five Step Process.**

At any point, you can click on either the image file or on your selected color in the Selection Window. A pop-up Image Matching Window will be displayed, showing the image file and your GameSquare color selection side by side.



Figure 17: Pop-Up Image Matching Window

Using the GemSquare: Using the Gememail

Once your selection has been made, as explained in the "Using the Gemesquare", you can Gememail it to a customer, supplier or colleague.

To use the Gememail :

Sending email step 1:

Click the "Send Email" button located below "your selected image". The Gememail popup screen will appear. Fill in the required details.



From: test@gemwizard.com
To: s@gemwizard.com
Subject: Gem Image

rP(28) 6/5 -
Medium dark, Strong, reddish
Purple

Dear Mike,
We have found you an amazing 5.32 cts pink sapphire from
Ilakaka, Madagascar.
Call me

Send

Figure 18: Gememail pop-up

Sending email step 2:

Click the send button. The recipient will receive an attached email.



Figure 19: Gememail email

Using the Color Indicator

You can describe and communicate a gem color by using the Color Indicator option drop-down lists. These three lists allow you to set values for the hue, tone, and saturation characteristics of a gem color.

Color code information can be shared with any GemWizard user by sending him the color code, which describes the exact color, tone and saturation values, as in the following Example:

Example:

Color Code: rP (28) 6/5

Color Code Information

Color Indicator step 1:

Using the drop-down lists of hue, tone and saturation, enter the color code of your selected image.

Color Indicator step 2:

Click "View Color". The relevant tone/saturation chart will appear in which your color selection is outlined.



Figure 20:Color Indicator

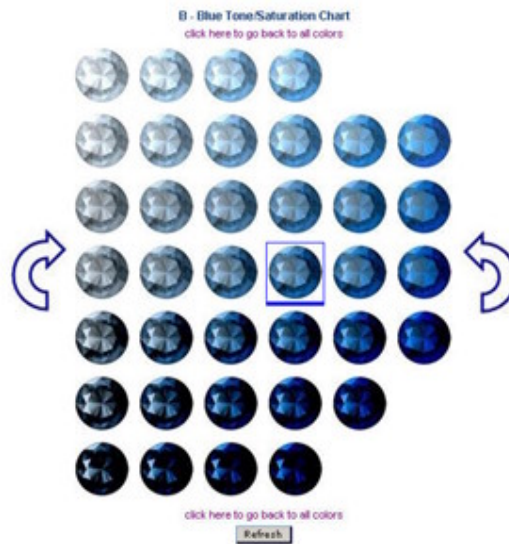


Figure 21 :The relevant Tone/Saturation Chart

The color indicator can be entered only from the main screen of the GemSquare.