J-Detect Pro®

User Manual v 1.0.2





Quick Start Guide and User Manual version 1.0.2

Introduction

J-Detect Pro has been developed and designed for the efficient and productive identification of CVD and HTHP laboratory grown diamonds, either as loose stones or in diamond-set jewelry. Laboratory grown diamonds (LGD) are visually indistinguishable from natural diamonds and the supply pipeline is contaminated by the undisclosed intrusion of LGD into every part of the jewelry industry.

Because all concerned interests in the jewelry industry desire to represent their products fairly and honestly, it is necessary to have some type of device that detects laboratory grown diamonds to prevent any possible confusion or misrepresentation. J-Detect Pro is the latest device designed to identify laboratory grown diamonds. Consumers have a fundamental right to know about the origins of the products that they purchase. J-Detect Pro allows the Retailer, Wholesaler, and Manufacturer to verify the content of the merchandise that they sell.

J-Detect Pro is a machine that can facilitate the screening process for CVD and HTHP laboratory grown diamonds to protect consumers from undisclosed LGD. This manual is a guide in the effective, efficient, and safe use of this instrument. Please review it carefully before the use of the instrument.

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Table of Contents

1	Saj	fety First	4
1	1.1	Symbol Notations and Definitions	4
1	1.2	Caution - Laser Radiation	4
2	Ph	ysical Specifications, Designed Functions, Capabilities and Features	5
3	Th	e J-Detect ^{Pro} Suite	6
4	Qu	ick Set Up (no tools are required for assembly)	8
4	ł.1	Un-boxing	8
4	1.2	Inventory the Contents	8
4	1.3	Set Up the Machine	8
4	1.4	Preparing for Operation	8
4	1.5	Initial Start-Up	9
5	J-D	Detect ^{Pro} Program Desktop	10
6	Pre	eparing for Merchandise Scanning	11
ϵ	5.1	Step 1	11
ϵ	5.2	Step 2: Calibration	12
ć	5.3	Merchandise Placement	12
7	Sca	anning Merchandise	13
7	7.1	Preparing to Scan	13
7	7.2	Scanning	15
7	7.3	Scanning Tips	16
8	O b	serving and Interpreting Scanned Results	17
8	3.1	Understanding Scan Results	17
8	3.2	Basic Scanning Diamond Identification	19
8	3.3	Advanced Scanning Interpretation	20
8	3.4	Navigating the Quad-Screen	20
8	3.5	Stage One Advanced Analysis	21
8	3.6	Stage Two Advanced Analysis	21
9	Ret	testing	22
9	9.1	An Important Notation	22
10	Sca	anned Image and Data Storage	22
1	0.1	Customized Lot Data	22
1	0.2	Reviewing and Searching the Archive	24
1	0.3	Three different screen views for detailed analysis and identification	26



10.4	Print options with J-Detect Pro	27
11 Mc	nintenance and Support	27
11.1	Warranty Claim Process	27
11.2	Software License	28
12 Tr	oubleshoot	28
	If the Machine is not working	
12.2	I have laboratory grown diamonds, but some of the stones are not detected by J-ct ^{Pro}	
12.3	My diamonds are natural but J-Detect Pro detects few	29
	enance and Support	
	Warranty Claim Process	
	Software License	
	arranty	
13.1	Limited Warranty	34
	Exclusion	
13.3	Terms and Conditions	34
13.4	Privacy	37
13.5	Machine Maintenance Policy	38
13.6	Machine Service Policy	38
	Using Third-Party Apps and Services Policy	

J-Detect ^{Pro}, its hardware and operating software are the exclusive property of DRC, Surat, India. The purchase of a J-Detect ^{Pro} includes only a license to operate the proprietary software that we have developed. Altering or copying the software is prohibited. It may result in the degradation of the software program and danger to the user. Tampering with the software or hardware may result in damage and inoperability of the instrument and also result in the injury of the operator. Tampering with J-Detect ^{Pro} also voids the warranty or the obligation of DRC to maintain or support the operation of J-Detect ^{Pro}.



1 Safety First

At DRC, the safety of everyone who uses our instruments is important. We recommend reading the safety information and operating instructions before operating J-Detect Pro. Failure to observe these instructions can lead to injury, damage to the device, and less than optimal operating results.

J-Detect Pro has been designed to be operated safely and effectively by conscientious operators who observe the safety and operational protocols explained in this document.

1.1 Symbol Notations and Definitions

Please observe the written and graphic cautions and warnings explained in this manual

Symbol	Description
<u></u>	This symbol indicates possible software damage or loss of data that may occur and result in a permanent loss of stored information. Attention is required by an authorized DRC technical specialist.
LASER RADIATION ON VIEW DIRECTION OF VIEW DIRECTION WITH OF VIEW DIRECTION WITH OF VIEW DIRECTION OF VIEW DIRECT	This symbol indicates potential exposure to rays of invisible laser radiation. Avoid exposing eyes and skin to direct or scattered radiation. Proper eye and skin protection is required.
DANGER Electric shock risk	Do not disable the power cord grounding plug. It is an important safety feature. Plug the power cord into a grounded electrical outlet that is always easily accessible. Unplug the power cord from the power supply to disconnect power to the equipment. Place the power cord where it is not damaged by or compressed by items

1.2 Caution - Laser Radiation

placed near it.

Adhere to all written and graphics symbol warnings in this user manual. For safe and productive operations, this instrument should only be operated by authorized and trained users who have read the procedures and guidelines of this manual.

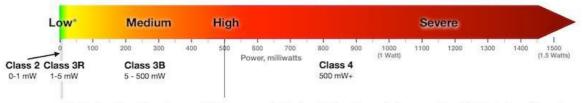
Do not stare at the internal light or view it through optical devices. This is a Class II-A laser product. Always avoid eye and skin exposure to direct or indirect radiation. Use proper, approved eye and skin protection.

Lasers are classified for safety purposes based on their potential for causing injury to humans' eyes and skin.

Most products that incorporate lasers are required by law to have a label listing the Class.



Eye injury hazard



Eye injury hazard descriptions above are valid for for exposures relatively close to the laser. Because the beam spreads, less light will enter the pupil at greater distances. The hazard decreases the farther a person is from the laser, and the shorter the exposure time (e.g., do not deliberately look or stare into the beam). For example, a 1mW Class 2 laser beam is eye safe for unintentional exposures after about 23 ft (7 m), a 5mW Class 3R beam is eye safe after about 52 ft (16 m), a 50m W Class 3B beam is eye safe after about 52 ft (16 m), and a 1500 mW Class 4 beam is eye safe after about 900 ft (275 m). (Calculations are for visible light, a 1 milliradian beam, and a 144 second Maximum Permissible Exposure limit.)

2 Physical Specifications, Designed Functions, Capabilities and Features

Physical Specifications for J-Detect Pro

• Dimensions: 315 x 275 x 380 mm. (20 x 11 x 15 inches)

• Weight: 14.5 kg (approximately 2.20 pounds)

Power Supply

Input voltage range: 100 – 240 V
 Input Current: >=6A
 Typical Response Time: 5 s

Temperature Range: 3 – 35 degrees C

The J-Detect Pro manufactured by DRC has been designed and developed for the identification of CVD and HPHT laboratory grown diamonds. It has been created with the following functions.

- Detection of both CVD and HTHP laboratory grown diamonds
 - o Diamonds of any shape, including rough or unfinished stones
 - \circ Diamonds from 0.003 carat in weight and larger, approximately .80 .85 mm., (Sieve size +0000 000)
 - Loose stones (unmounted in jewelry) or stones mounted in jewelry
 - o Diamonds in the color range of D through J-K color (GIA scale)
- Comes with high configuration external notebook PC (Laptop).
- Designed for ease of use by both technical and non-technical staff.
- Intuitive GUI (Graphic User Interface) for click-to-scan features.
- Automatic identification of laboratory grown diamonds.
- Advanced viewing and analysis features utilizing fluorescent, photoluminescent, and phosphorescent screens.
- Automatic storage of every scan in two different viewing modes.
- Sufficient field scanning of a 4.5 x 3.8-inch area.
- Average scanning time of 60 to 90 seconds.



- Keep the device dry and away from liquids to avoid electrical shorts and shocks.
- The J-Detect Pro is not heat-resistant: please keep it away from radiators and open flames.
- Repairs must be performed only by an authorized service engineer. Unauthorized tampering with the device will void the warranty.
- Do not modify or alter the device.
- Never operate any electrical device if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged. Call DRC for technical support.

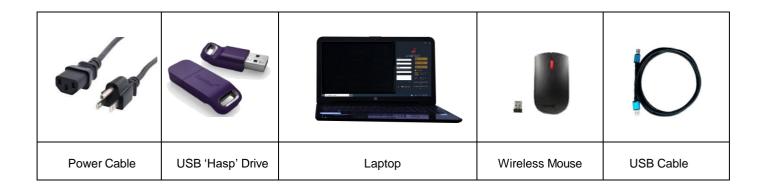
3 The J-Detect Pro Suite

The J-Detect Pro machine comes with a variety of components and accessories.



1	Main power button
2	Power outlet
3	USB Port (for hasp)
4	Sliding tray and scanning platform
5	Door close and open light indication





Scanning Trays





Loose Diamond Tray Engraved with Reference Grid (1)

Ring / Jewelry Tray: 36 Rings or Other Flat Jewelry (2)





Necklace/ Flat bracelet / Big Jewelry Tray (1)	Bangle Tray (1)

Miscellaneous Components

Ball End Hex Wrench Set

Silver Sample Pendant with three diamonds, each 0.003 carat





4 Quick Set Up (no tools are required for assembly)

4.1 Un-boxing

- 1. Cut the exterior strapping, any cellophane wrapping and discard (responsibly)
- 2. Remove the top of the package
- 3. Remove the sides of the packaging exposing the inner foamcushioned components
- 4. Separate the contents from the foam packaging
- 5. We suggest that you keep the box, if possible, for at least 60 days



4.2 Inventory the Contents

- 1. Lay out all the components
- 2. Check them against the above itemization of components and trays
- 3. Make note of any items that are missing or damaged
- 4. Contact the DRC Support Team as noted on the laminated worksheet to arrange for replacements to be sent and possibly a claim request from the carrier

4.3 Set Up the Machine

- 1. Set the J-Detect Pro on a study table, countertop, or desk
- 2. The surface should be flat and level

4.4 Preparing for Operation

- 1. Plug the Power Cord into the machine and then into a grounded outlet (as an additional safeguard, a surge-protected power bar is good protection)
- 2. Switch on the machine by pressing power button in J- Detect pro machine.
- 3. Connect the machine with laptop: Plug the USB cable in the J-Detect Pro machine and Notebook PC (Laptop)



- 4. Remove the cap from the purple flash drive and plug it into one of the USB ports on the Notebook PC(Laptop). This is a security device. The machine will not operate without it.
- 5. Insert batteries into the mouse (generally a single AA battery) and connect Laptop via bluetooth the dongle that provides a relay signal to the mouse is sometimes housed inside of the mouse. They may also have on-off switches. Turn them on.
- 6. Open the front panel of the J-Detect Pro machine and seat the sliding platform tray into position. This is a one-time process.

4.5 Initial Start-Up

- 1. Press the power button on the right-hand side of the J-Detect Pro machine. You should hear the faint sound of fans running and the button will illuminate.
- 2. Power on the Notebook PC (Laptop.
- 3. Once Notebook Pc started, click on the "J-Detect Pro Icon" to start the software. After click wait for a few seconds to open up the program.
 - a. Note that this instrument does not require an internet connection to operate on a regular basis, but a connection is required for Support, Service, and updates.
 - b. Note also that once you have an internet connection, Windows X may automatically connect to the internet to update Windows. If it does, please allow the update to take place before operating your J-Detect Pro.

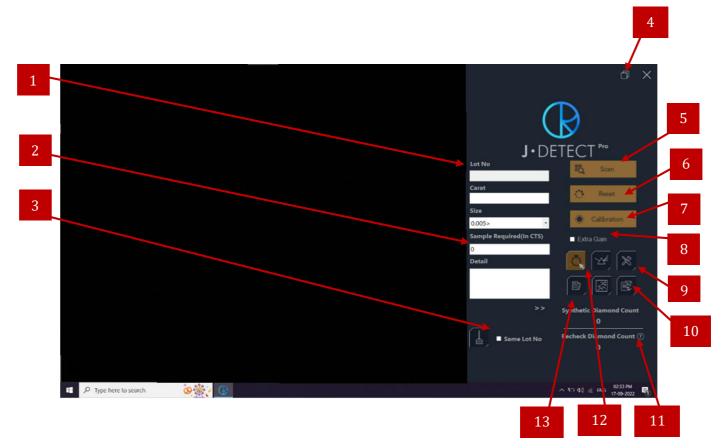




Page 9 of 40

5 J-Detect Pro Program Desktop

The opening desktop for the DRC software program is arranged for easy operation.



1	DRC automatically assigned lot number for every scan	
2	Open field for customer supplied intelligent number	
3	Click to check box for keep same lot number and machine will generate automatic sub lot number	
4	Minimize the software	
5	Scan Button : click to start scanning	
6	Reset Button: click to simply reset the camera to a live merchandise view	
7	Calibration Button: click to calibration when to start a machine	
8	Click on check box to capture an additional extra gain image	
9	Setting Button: click to customize your setting	
10	Result Button: click to open different merchandise view in new window	
11	Scan result: count of automatic marking on lab grown diamonds	
12	Merchandise Category Button: click to scan any type of jewelry	
13	Report : : click to search previous scans by date or lot number	



6 Preparing for Merchandise Scanning

6.1 Category Selection

The J-Detect Pro machine must be set to the right category (Loose Diamond or Jewelry) so that the camera can accurately capture and diagnose the image of each item that it scans.

Click on Jewelry icon



while scanning any type of studded merchandise.

6.2 Calibration

At the beginning of each day or after a session where you restart the DRC J-Detect ^{Pro} machine, you will need to calibrate the machine with empty tray. Whenever you start the J-Detect ^{Pro} program, perform a calibration by clicking on the button as shown below. It takes seconds.

- Click on the "Calibration" icon, see 7 number above.
 When you do this, calibration will start.
- The machine will then automatically perform a calibration alignment of the tray within the view of the camera.
- Within approximately 10 to 15 seconds the process is done and a popup on the screen will tell you that the calibration process has been completed.

6.3 Merchandise Placement

- Select a tray for the appropriate placement of your merchandise.
- Diamond set earrings and pendants can lie on the same black foam tray that is used for rings.
- Merchandise should be contained within the boundaries of the numbered areas using a jewelry tray. Loose diamonds should be placed within the alpha-numeric grid. Outside of these areas, merchandise is beyond the field of vision of the optics.
- While scanning the Bangle Bracelet or Eternity Ring make sure, its straight to the camera as much as possible for better camera focus.

CAUTION. When scanning jewelry, it is best to conceal any tags that are attached. J-Detect uses light to perform its analysis. Jewelry tags are highly fluorescent which disrupts and slows the scanning process

- Do your best to conceal these tags or turn them on edge so that are not scannable by the instrument.
- Any use of other displays or jewelry box inserts to scan diamond set jewelry will generally be unsuccessful. Most of these inserts are made of highly fluorescent materials which will disrupt the scanning process.
- When there are large tags or display boxes showing on the tray the length of the scan time will increase as the machine tries to scan them because of their fluorescence



7.0 Scanning Merchandise

7.1 Preparing to Scan

- Note that the most accurate scanning results are achieved with merchandise that is clean.
- Scanning is done by means of an overhead optical system. It is not required that the diamond tables be strictly horizontal (parallel to the platform), but diamonds set into surfaces (sides or into gallery work) that are not visible when looking straight down will not be scanned.



- Repositioning the jewelry for additional scans may be required.
- Try to conceal jewelry tags by tucking them into ring slots or through the slots intro the back of the provided tray. Paper, plastic, and Mylar tags are by their nature highly fluorescent which disrupts the scanning process.

Similarly, scanning jewelry while it is mounted onto jewelry pads is not effective.

- 1. Select the appropriate type of tray for the merchandise that you want to scan. (See Next Table)
- 2. Place it on the tray and place the tray on the sliding platform.
- 3. Push the tray fully into the machine until it will go no further.
- 4. Close the machine door. The door must be closed for the machine to operate correctly. Accurate scanning cannot take place with the door in an open position.

Always make certain that the proper merchandise category is selected (Select Jewelry Icon while scanning jewelry) . Scanning may not be accurate, and the clarity of the merchandise scanned may not be in focus without the proper setting.

- 1. Rings with narrow shanks can be scanned using the Ring/Jewelry tray.
- 2. The same tray should be used for pendants, earrings, necklaces, broaches, or straight-line bracelets.

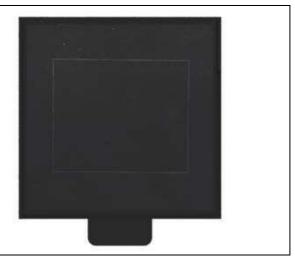


Recommended Uses	Tray/Accessory
1. Loose Diamond Tray a. Unmounted Diamonds of Any Size	AT AZ
 2. Ring and Jewelry Tray a. Rings (up to 15 at one time) in no particular arrangement b. Pendants or small necklaces c. Earrings d. Link or straight-line bracelets e. Cuff links 	
 3. Bangle Tray a. Eternity Bangles b. Regular Bangles c. Wide Rings with Shanks That Do Not Fit into Ring Tray Slots d. Rings with Diamonds That Surround the Shank of the Ring 	



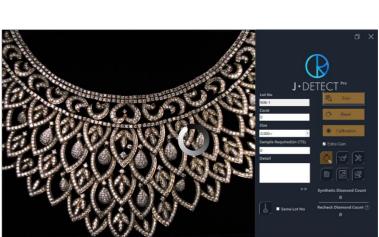
4. Necklace Tray

- a. Necklace
- b. Big Jewelry



7.2 Scanning

- If you want to take additional high gain photoluminescent images, check the "Extra Gain" check box below the calibration button.
 (Please keep in mind that additional images will take 5 to 10 seconds to capture
- Click on Scan Icon to start scanning process.
- Seconds after you click on the icon, a rolling circle of dots will appear in the center of the screen. This indicates that the scanning process has begun.
- The scanning process generally takes approximately 45 to 90 seconds.
 - a. You will see a rotating circle of dots while the scan is taking place.
 - b. For approximately 20 seconds, once the scan button is clicked there will be a shrill whining sound, like an ultrasonic cleaner.
 This sound is made by highly specialized lighting of the J-Detect Pro.
 - c. Once the sound is done, the scrolling dots will remain while the computer compares the digital output of the stone(s) scanned and compares it with our database of known diamond results.







7.3 Scanning Tips

- WARNING. Always select appropriate the Scanning Category and Scanning Tray for the scanning target. If the correct setting is not used, the focal length of the digital camera will be incorrect and scanning results may not be accurate in automatic marking detection.
- Scanning will be most accurate if the items scanned are centered in the display field as much as possible.
- When scanning jewelry, it is always advisable to minimize the visibility of jewelry tags. These tags are made with materials that tend to be highly fluorescent and they can affect the operation of the machine.

7.3.1 Scanning Loose Diamonds: from 0.003 carats and larger of any shape

- Use the loose diamond tray and adjust the scanning category to loose diamonds before scanning.
- Clean diamonds are more effectively scanned
- Loose (or mounted) diamonds do not need to be oriented in any particular manner. They can sit face up, table down, on edge, or at any angle so long as light can be reflected off a surface of the stone.
- For the most effective scanning, diamonds should lie in a single layer, preferably without touching or overlapping.
- For the best and most accurate results, diamonds should not be scanned while in a polybag or display box. The layer of plastic over the diamond can affect the results of the scan.

7.3.2 Scanning Mounted Diamonds: from 0.003 carats and larger of any shape

- Use one of the flat felt slotted trays for rings and other jewelry.
- Clean diamonds are most effectively scanned.
- Jewelry tags are highly fluorescent and can interfere with the scanning process. As much as possible, conceal them from the scanning field. One of the ring trays has slots that are pierced through the back of the tray so that tags can be pushed through the slot and concealed.
- Diamonds can be scanned regardless of the angle of the stone in the setting. Diamonds sitting on their side with only the girdle exposed can be scanned.
- Jewelry should be removed from any box or case. Generally, the materials used for these cases are highly fluorescent and distort the results. Additionally, displays change the height of the jewelry item and can therefore alter the focal distance to the digital camera.



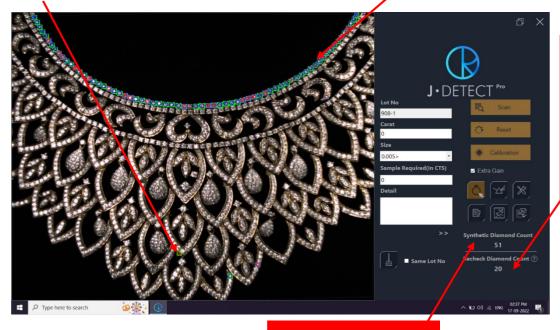
8.0 Observing and Interpreting Scanned Results

8.1 Understanding Scan Results

- After Jewelry or Loose Stones are scanned, J-Detect Pro software automatically identifies laboratory grown diamonds or stones that may be LGD but require further investigation with alternate viewing screens.
- These stones are identified by means of <u>flashing boxes and circles</u> that surround the diamond.
- The flashing shapes are a means to easily identify diamonds that require the operator's attention.
- They may indicate identified laboratory grown diamonds or stones which require further review using supplemental screens.
- A key to these geometric identifiers is illustrated below.

REVIEW WITH THE FLUORESCENT LIGHT	CVD or HPHT Laboratory Grown	RECHECK/REFER
Green Box Red Circle Review under external or internal UV light: if they fluoresce, consider them	Green Box Blue Circle These stones are almost certainly laboratory grown	Blue Box Red Circle Recheck these stones using phosphorescent and photoluminescent views
natural		

Diamonds in Green Boxes with Red Circles are requiring fluorescent screen recheck. Diamonds in Green Boxes with Blue Circles are identified as laboratory grown diamonds. No further examination is required

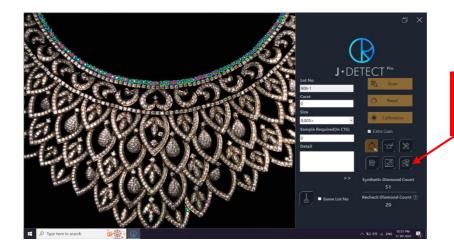


"Re-Check"
Total of diamonds
requiring further
examination or
clean it, arrange
separate and rescan once.

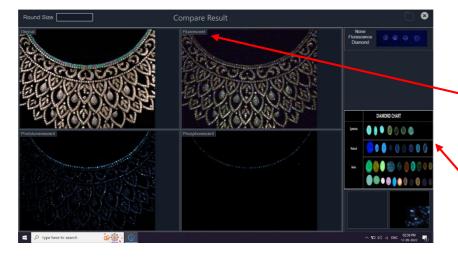
Total of laboratory grown diamonds with Green Box Blue Circle.



Images in this view can be enlarged using the mouse scroll wheel or with the touch pad in Laptop

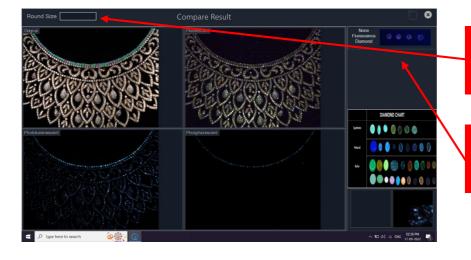


Click Result Icon to See Advance Screening Images



Result Comparison View: Screen Name

Color Reference Chart



Governing the diameter of the round cursor

Examples of non-fluorescing diamond views



8.2 Basic Scanning Diamond Identification



This mark indicates a confirmed CVD or HTHP laboratory grown diamond. No further examination is required.



This mark identifies a diamond that requires review under an internal or external fluorescent lamp. If this stone glows from faint to intense fluorescent color as the examples that are shown below, it can be considered natural. Shown below are instances of fluorescent colors.



Common Natural Diamond Fluorescence



Natural Rough Diamond Fluorescence



Natural Diamond Fluorescence Examples

More than 30% of all natural diamonds exhibit some degree of fluorescence while nearly all laboratory grown diamonds are inert or display only extremely faint fluorescence.



This mark indicates that the machine cannot automatically identify this stone. To identify this stone, use the quad-screen view to simultaneously see comparative views as scanned and under fluorescent, phosphorescent, and photoluminescent screens.



If diamonds look like these examples in **both** the phosphorescent and photoluminescent views, they are laboratory grown diamonds.



8.3 Advanced Scanning Interpretation

 Those diamonds whose scan displays a 'Recheck' box can often be identified through advanced scanning interpretation or re-scan again after cleaning the diamond and placing separately.

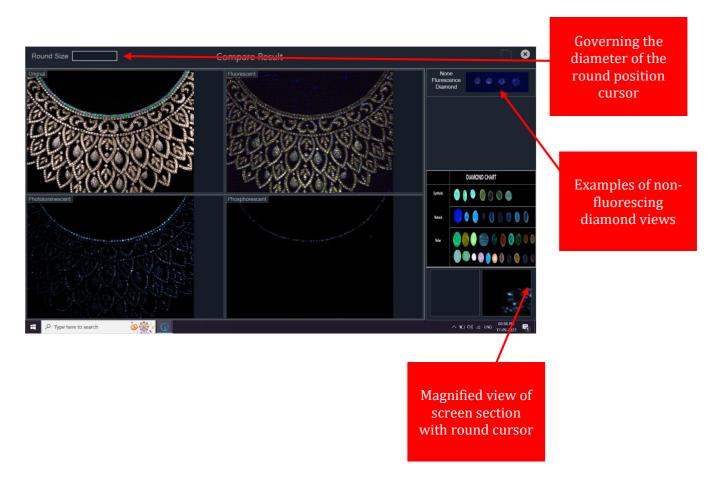


✓ Extra Gain

- To accomplish this, utilize a screen view that displays all four viewing modes. You can view these screens by clicking on the 'Result/Compare Images Icon'. These are the views that are available.
- Original (as scanned)
- Fluorescent
- Phosphorescent
- Photoluminescent
- Note that each of these views is stored as a separate *.JPG file within the file folder stored as the Lot Number.

8.4 Navigating the Quad-Screen

This view of scanning results allows the user to view results under multiple wave lengths at the same time to allow for in-depth analysis.



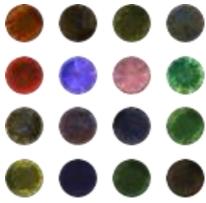


8.5 Stage One Advanced Analysis

8.5.1 Compare the photoluminescent and phosphorescent views.

If a stone is radiating any of the illuminated colors like the examples below and the stone
glows in <u>both</u> screens, consider the diamond to be laboratory grown. These colors may be
intense or muted.

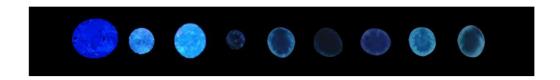
• Colors in each of the screens may be similar but may also be different from one screen to the other.



Samples of laboratory grown diamonds

8.6 Stage Two Advanced Analysis

- Examine the rescan or recheck stones that require in-depth analysis in the **Photoluminescent** screen. If they radiate any of the colors shown below and they **do not** show any **Fluorescence** in the **Fluorescent** view (or when viewed under an external fluorescent light source) or colors of the examples below, they are **laboratory grown diamonds**.
- Examples of natural blue fluorescence



• Diamonds that glow like the samples above in the Photoluminescent view and do not glow in the Phosphorescent screen, they should be considered Natural.



9.0 Retesting

9.1 An Important Notation.

Laboratory grown diamonds, particularly, CVD grown stones are continuing to evolve at a rapid rate of development. The formulae for these stones literally change on a daily basis as manufacturers strive to improve or obscure the origin of their laboratory grown diamonds. Therefore, we encourage users to go beyond automatic testing if there is any question about the origin of a particular diamond.

- It can be helpful to remove a loose diamond or jewelry with an identified diamond from the original scanning tray and to scan it by itself or with other suspect items. Look for differences in the results and observe these stones in different views.
- DRC updates the software for J-Detect Pro as we continually work to provide the most accurate analysis of diamonds.
- Additionally, our Support Team and our Research and Development Team is available to assist users in the testing and analysis process. Contact our Support Team for further assistance.

10.0 Scanned Image and Data Storage

Every scan on the J-Detect Pro is saved. Additionally, every scan is saved as a unique data folder of four separate images: as-scanned, fluorescent, phosphorescent, and photoluminescent. These files are saved in *.JPG format.

- J-Detect comes with 500GB of storage on its hard drive.
- Additional storage can be realized with the addition of a USB hard drive. DRC Support will assist you in mirroring the storage on both drives.
- Periodically, as the 500GB of storage is filled (typical capacity is over 10,000 images) old files can be deleted or off-loaded onto a remote USB flash drive or separate hard drive.
- For purposes of security, you can attach a USB hard drive and safely detach it for secure storage every night.
- Data can also be shared with your system server by means of a Wi-Fi or cable connection.

This data can be of value for reference or reports. Searching this data and configuring it as you require is possible in several different ways.

10.1 Customized Lot Data

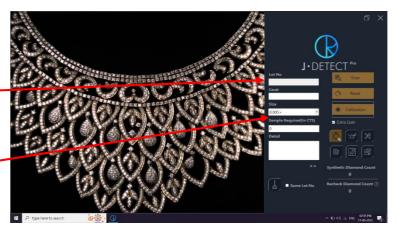
The J-Detect ^{Pro} software automatically assigns a unique lot number to every scan. However, the user can also provide merchandise information that will be stored with the scan. If details about the merchandise needs to be associated with the scan and stored, manual input is allowed.



The information contained herein is the property of DRC.

From the J-Detect Pro Home Screen on the Desktop:

- Automatic Lot (batch) number is always the default reference label.
- The user can assign their own number by (single) clicking the file icon to the right of the Lot Number.



Data must be entered before the scan takes place. Adding information is a very easy single step process.

Customer Assigned Information Process

- 1. Input data in the fields where it is desired.
- 2. If you want to scan a single lot in different benches, check the "Same Lot Number" box. It will generate sublot numbers automatically while keeping the master lot number the same. For example: 2255-1,2255-2,2255-3, and so on until you uncheck the box.



Your data is now stored with the information that you desire.

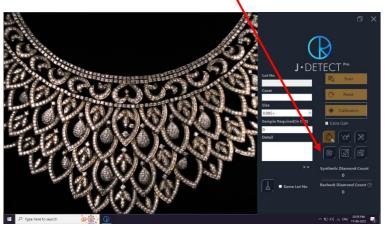
Data can also be added through use of a barcode scanner using the USB or serial port. Ask the DRC Support Team to assist you in aligning the scanned information.



10.2 Reviewing and Searching the Archive

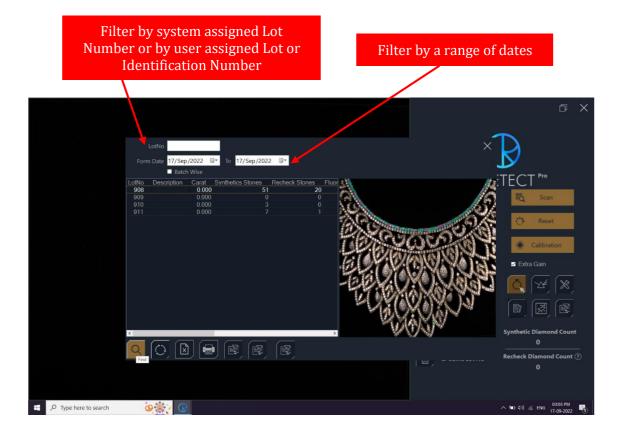
10.2.1 Finding Your Data

Begin the process of locating archived data by clicking on the Reports Icon. This opens the Reports detail screen.



10.2.2 Navigating the Reports Screen

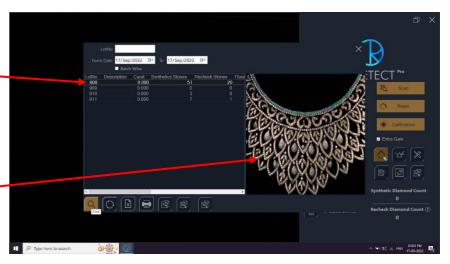
The Reports Screen enables the user to review all the previous scans in either the as-scanned view, fluorescent, phosphorescent, or photoluminescent views.





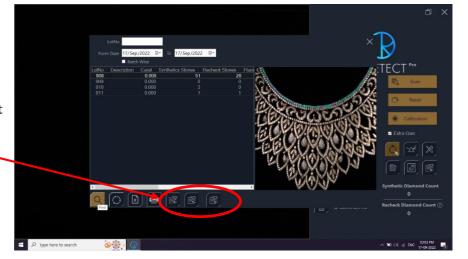
10.2.3 Step one: Selecting an archived

- Click on the Lot Number ("Lot No") to see a preview of the lot.
- The row will lighten to indicate its selection.
- Then a preview of the lot will appear on the right side of window as scanned views.



10.2.4 Step Two: Selecting a view from the archive

• Click on eye icon to see the different review formats.

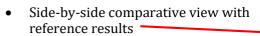




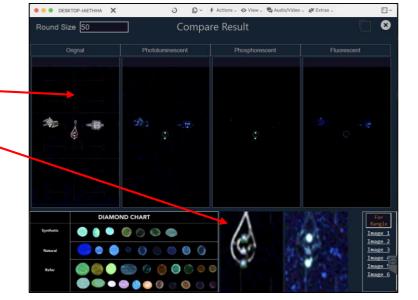
10.3 Three different screen views for detailed analysis and identification

- The original as-scanned view with graphic markings on identified laboratory grown diamonds and/or specially marked stones
- Click to light icon check extra gain (high exposure) view of photoluminescent image

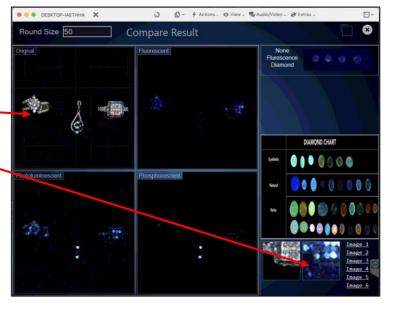




Also, close-up screen



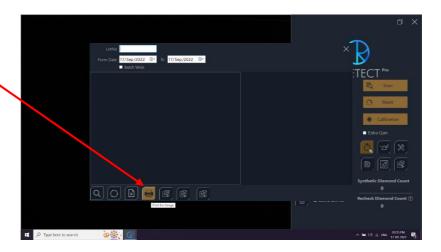
- Quad-screen comparative view with reference results
- Also, close up screen





10.4 Print options with J-Detect Pro

- Print reports are also available in the J-Detect Pro software.
- Printing is possible either to your local network printer or in the drop-down menu as a PDF file using the normal Windows 10 defaults.



11.0 Maintenance and Support

- J-Detect^{Pro} requires little maintenance or upkeep. It is best, whenever possible, to keep the machine clean and dust free. The Parts used in the machine are sensitive to dust and debris contamination. If you experience a problem, contact DRC 's 24-hour-a-day Support Team for their assistance.
- Your J-Detect^{Pro} machine comes with a one-year comprehensive warranty. All hardware, software, and labor are covered. Also included are unlimited updates from DRC. As the development in the manufacturing of laboratory grown diamonds changes, it is important to keep the software current and up to date.
- Shown below is contact information and procedures for speaking with someone on our Support Team. We will assist you, at no charge, in learning how to operate your J-Detect^{Pro} and in answering your questions about laboratory grown diamond identification.
- If you experience a particular operational or identification problem, advise Support. They will do their best to be of assistance.

11.1 Warranty Claim Process

- If the original purchaser J-Detect^{Pro} believes that the J-Detect^{Pro} is defective, then the original purchaser will promptly contact DRC Warranty or Customer Service at +91 99099 90867 or Support@drcindia.in.
- The original purchaser will provide to the DRC customer service representative the product model and serial number, the date of purchase, and details of the alleged defect. In addition, if requested by the DRC customer service representative, the original purchaser will also provide to DRC customer



service representative additional information regarding the alleged defect and the use of the J-mini $_{\text{Pro}}$

• DRC will review the information provided by the original purchaser to confirm that the Warranty Period has not yet expired, and (c) DRC's belief that the J-mini Pro is likely defective, DRC will guide the further steps to the original purchaser.

11.2 Software License

DRC hereby grants to the original purchaser of the J-Detect Pro a non-exclusive, non-transferable license, without the right to sublicense, to use the software embedded in the J- Detect Pro (the "Software") solely with the J- Detect Pro and solely for the purpose for which it was designed, and not for any other purpose. This license terminates when the owner of the J- Detect Pro ceases to possess the J- Detect Pro (including without limitation upon the transfer or sale of the J- Detect Pro to a third party). No license is granted and no person or entity has the right to sell, transfer, license, loan or otherwise make available in any form to third parties the Software other than the transfer of the Software to the purchaser or transferee of the applicable J- Detect Pro. No owner of the J- Detect Pro may disassemble, decompile or reverse engineer, copy, modify, enhance, or otherwise change or supplement the Software without DRC's prior written consent. DRC retains all right, title, and interest in and to the Software and the intellectual property rights in the Software and the J- Detect Pro, whether such intellectual property rights are registered or unregistered, and wherever in the world those rights may exist.

12.0 Troubleshoot

12.1 If the Machine is not working.

- Plug in the right power supply as specified in the operation manual. Switch on the "Device".
- Inspect the diamond/ jewellery tray to see if it is properly inserted into the machine.
- Switch on the software and wait for the device to get started.
- Wear gloves while mounting the jewellery so as to keep it free from masking, coating, greasy or dusty surface.
- Make sure that diamonds are properly boiled at 250 degrees Celsius for 30 minutes with a solution mix H₂So₄ 30% and HNO₃ 70% for testing the diamonds appropriately.
- Slide the tray inside the device until it gets locked.
- Initiate the scanning process.
- This device has been invented to detect laboratory grown diamonds only.
- The machine should be switched off for 15 minutes in every four hours for better performance.

12.2 I have laboratory grown diamonds, but some of the stones are not detected by J-Detect^{Pro}.

- Ensure you have followed all the operation instructions correctly.
- It is common to face such a scenario; we have gone through them too. After a deep analysis we have found that these diamonds are not lab-grown but natural diamonds.
- There are chances that they were accidentally replaced during the manufacturing process or the grading process.



- There might be a possibility of them being coloured diamonds.
- There might be a chance of them not being properly cleaned or masked.
- Scan it again, if the result remains the same, click on the "Help" button in the software and our technical team will provide you with the necessary assistance.

12.3 My diamonds are natural but J-Detect^{Pro} detects few of them as Lab-Grown.

- Ensure you have followed all the operation instructions correctly.
- It is common to face such a scenario; we have gone through them too. After a deep analysis we have found that these diamonds are not Lab-Grown but natural diamonds.
- There are chances that they were accidentally replaced during the manufacturing process or the grading process.
- They may be a possibility of them being coloured diamonds.
- They might be a chance of them not being properly cleaned or masked.
- Scan it again, if the result remains the same, click on the "Help" button in the software and our technical team will provide you with the necessary assistance.

FAQ

1. What does J-Detect^{Pro}?

The sole purpose of the J-Detect^{Pro} is to uphold consumer confidence in the natural diamond industry. Most of the diamonds or diamond jewellery purchased today is for emotional occasions like weddings, engagements, anniversaries or birthdays, so on and so forth. The consumers should know what they are buying. Lab-Grown diamond may have a place in the jewellery segment but mixing or unethically selling Lab-Grown diamonds with the tag of it being a Natural diamond is playing with the customer's emotions, resulting to lack of consumer confidence in the industry. This concern was shared with us by many players of the fraternity. Thereafter as being a part of this industry we have taken this situation as a challenge and invented J-Detect^{Pro} as a result.

2. Why J-Detect^{Pro}?

Most of the detection tools or devices available in the market are either very costly or are limited to specific sizes, shapes, speed, accuracy or the device is being made for specific clientele alone. Most devices can only detect TYPE- IIA which requires further testing and analysis to be done in the Lab. It requires a lot of time and energy to make sure that all purchases are Natural Diamonds. After years of research of the perennial issues, we have consolidated the solution in one single device i.e. J-Detect^{Pro}. J-Detect^{Pro} was developed to detect Lab-Grown Diamonds.

3. What size of diamonds it detects?

J-Detect^{Pro} is a device that detects lab grown diamonds of all sizes from 0.003Cts (+0000 Sieve size) and larger, whether colourless or near to colourless Lab-Grown diamonds.



4. What diamond shapes does it detect?

Any shape is detectable, but for small (below +11) fancy shapes it needs a replaceable attachment.

5. Is it type II-Identification, does further identification required?

J-Detect^{Pro} directly detects lab grown Lab-Grown diamonds (Diamond grown in laboratory by HPHT as well as CVD techniques) within all colourless or near colourless diamonds. It does not require further testing as the results are shown on the spot.

6. Is it good for rough diamonds also?

Yes.

7. What is the speed?

Currently, it scans one tray filled with diamonds in about 45-90 seconds.

8. How to operate?

Operating this device is very simple and easily understandable. The operator needs to go through the operation manual before operating J-Detect^{Pro}. For the test, ensure that the right size tools are chosen, colourless diamonds must be properly cleaned/boiled and they should not overlap one another.

9. How about after sales service?

While designing the machine, we have taken care of using limited parts that require service in the machine. If anything happens to the machine within the warranty period or even after the warranty period, the customer is advised to contact our India support centre.



Warranty & Service Contact Information



DRC is a manufacturer of highly technical instruments. They come with a one year, all-inclusive Warranty. After one-year optional service and warranty programs are available on a subscription basis. To initiate your warranty, register it at www.drcindia.in/register.

DRC Support Contact Options

Email DRC Support Teamsupport@drcindia.in
Telephone in Surat, India (charges may apply)+91-990 999 0867 or
Or call us on WhatsApp (free) +91-990 999 0867
SKYPESupport DrcIndia

Although your instrument does not require a continual internet connection, most problems and any updates can be handled online in cooperation with our Support Team. We encourage our customers to communicate directly with our support engineers who are generally available 24 hours a day.

Our online service engineers have extensive training on both the hardware and software parts of our instruments, they occasionally require the additional support of hardware engineers, programmers, database software engineers, or someone from our research and gemology teams.

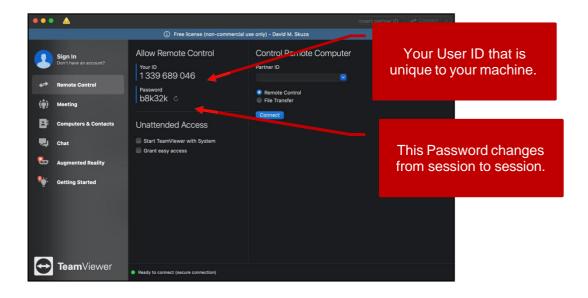


Follow these steps so that we can help you in the resolution of any question or problem.

- 1. Make sure that you have a proper internet connection. If you elect not to have a constant connection, please have your someone from your technical service team establish a stable connection.
- 2. Be prepared to provide a full description of the problem or issue to the service engineer. Stay available in the event that they require your hands-on intervention.
- 3. Start TeamViewer. It is a program that allows our Support Team access to your DRC instrument for service.
 - a. Click on the TeamViewer icon on the desktop of your DRC instrument. This begins the TeamViewer program which allows us to remotely diagnose and repair your instrument.



- b. Go to the menu bar for TeamViewer in the upper left hand corner. Open the **Help** menu, then Check for Updates. If there is an update available, download and install it. Exit TeamViewer and then restart the TeamViewer program.
- c. When TeamViewer is running, you will see a pop-up window that displays a User ID (a unique, static number for your machine) and Password.



- d. DRC needs this information to access your machine. Be prepared to provide this login to the Support Team by email, SKYPE, phone, or messaging picture.
- e. Contacting our Support Team directly is the best way to resolve your issue.
 - i. We log in only for the duration of the session.
 - ii. The Support Team only resolves an issue or performs an update. We do not access your archive of scanned images without your request and permission.



Maintenance and Support

J-Detect_{Pro} requires little maintenance or upkeep. It is best, whenever possible, to keep the machine clean and dust free. The lenses and filters used in the machine are sensitive to dust and debris contamination. If you experience a problem, contact DRC 's 24-hour-a-day Support Team for their assistance.

Your J-Detect^{Pro} machine comes with a one-year comprehensive warranty. All hardware, software, and labor are covered. Also included are unlimited updates from DRC. As the development in the manufacturing of laboratory grown diamonds changes, it is important to keep the software current and up to date.

Shown below is contact information and procedures for speaking with someone on our Support Team. We will assist you, at no charge, in learning how to operate your J-Detect^{Pro} and in answering your questions about laboratory grown diamond identification.

If you experience a particular operational or identification problem, advise Support. They will do their best to be of assistance.

12.4 Warranty Claim Process

If the original purchaser of the J- Detect Pro believes that the J- Detect Pro is defective, then the original purchaser will promptly contact DRC Warranty or Customer Service at +91 99099 90867 or Support@drcindia.in.

The original purchaser will provide to the DRC customer service representative the product model and serial number, the date of purchase, and details of the alleged defect. In addition, if requested by the DRC customer service representative, the original purchaser will also provide to DRC customer service representative additional information regarding the alleged defect and the use of the J- Detect Pro.

DRC will review the information provided by the original purchaser to confirm that the Warranty Period has not yet expired, and (c) DRC 's belief that the J- Detect Pro is likely defective, DRC will guide the further steps to the original purchaser.

12.5 Software License

DRC hereby grants to the original purchaser of the J- Detect Pro a non-exclusive, non-transferable license, without the right to sublicense, to use the software embedded in the J- Detect Pro (the "Software") solely with the J- Detect Pro and solely for the purpose for which it was designed, and not for any other purpose. This license terminates when the owner of the J- Detect Pro ceases to possess the J- Detect Pro (including without limitation upon the transfer or sale of the J- Detect Pro to a third party). No license is granted and no person or entity has the right to sell, transfer, license, loan or otherwise make available in any form to third parties the Software other than the transfer of the Software to the purchaser or transferee of the applicable J- Smart Pro. No owner of the J- Detect Pro may disassemble, decompile or reverse engineer, copy, modify, enhance, or otherwise change or supplement the Software without DRC's prior written consent. DRC retains all right, title, and interest in and to the Software and the intellectual property rights in the Software and the J- Detect Pro, whether such intellectual property rights are registered or unregistered, and wherever in the world those rights may exist.



13.0 Warranty

13.1 Limited Warranty

Subject to the exclusions, limitations, and conditions set forth below, DRC warrants to the original purchaser of the J- Detect ^{Pro} will be free from defects in material and workmanship, when subjected to normal, proper, and intended usage by properly trained and informed users, for twelve (12) months from the date of shipment of the J- Detect ^{Pro} to the original purchaser (the "Warranty Period".)

DRC shall not have any liability if the J-Detect^{Pro} (a) is unable to determine, distinguish or detect whether an item being analyzed by the J-Detect^{Pro} is a natural diamond, potential laboratory-grown, processed or treated, or potentially a diamond simulant or (b) makes an inaccurate determination or gives an inaccurate reading as to whether the item is a natural diamond, potentially laboratory-grown, treated, or processed, or is potentially a diamond simulant.

For any defective J- Detect Pro that is returned to DRC by the original purchaser during the Warranty Period in compliance with the process specified below, DRC will, at DRC 's option, repair or replace the defective J- Detect Pro , or refund the price paid to DRC for the defective J- Detect Pro . A replacement may be a new or refurbished J- Detect Pro in DRC's sole discretion and any such replacement will continue to be subject to the warranty set forth above for the balance of the Warranty Period for the J- Detect Pro initially purchased.

13.2 Exclusion

J- Detect Pro will not be deemed defective and DRC will not have any obligation to repair or replace a J- Detect Pro, or refund the price paid for the J- Detect Pro as a result of any one or more of the following: (I) normal wear and tear, (ii) accident, disaster, or event of force majeure, (iii) misuse, fault, or negligence of or by any user or other person, (iv) use of the J- Smart Pro in a manner for which it was not designed, (v) causes external to the J- Detect Pro such as, but not limited to, power failure, electrical power surges, exposure to fire, water, other liquids, excessive humidity or temperature, virus software attacks (vi) improper storage or handling of the J- Detect Pro, or (vii) use of the J- Detect Pro in combination with equipment or software not supplied by J- Detect Pro.

13.3 Terms and Conditions

13.3.1 DEFINITION

In this document the following words shall have the following meanings:

- "Buyer" means the organization or person who buys Goods.
- "Goods" means the articles to be supplied to the Buyer by the Seller.
- "Intellectual Property Rights" means all patents, registered and unregistered designs, copyright, trademarks, know-how and all other forms of intellectual property wherever in the world enforceable.
- "Seller" means an individual or entity that exchanges any type of good or service in return for the payment.



13.3.2 GENERAL

These Terms and Conditions shall apply to sales of Goods by the Seller to the Buyer to the exclusion of all other terms and conditions referred to, offered or relied on by the Buyer whether in negotiation or at any stage in the dealings between the parties, including any standard or printed terms tendered by the Buyer, unless the Buyer specifically states in writing, separately from such terms, that it wishes such terms to apply and this has been acknowledged by the Seller in writing. Any variation to these Terms and Conditions (including any special terms and the conditions agreed between the parties) shall be in applicable unless agreed in writing by the Seller.

13.3.2.1 ORDER

Order is only valid once 30% deposit received. Once the buyer fills the complete order-form, a Performa Invoice will be generated through which the buyer needs to pay 100% of the price of the goods.

13.3.2.2 PRICE & PAYMENT

- The price shall be the Recommended Retail Price less agreed discount, unless otherwise agreed in writing between the parties. The price is exclusive of VAT or any other applicable taxes.
- Credit terms may be offered subject to satisfactory credit vetting of the Buyer by the Seller. The offer of credit will be at the sole discretion of the Seller.
- Where credit is offered payment of the price and VAT and any other applicable taxes shall be due within 15 days of the date of the invoice supplied by the Seller, unless otherwise agreed in writing. In cases where credit is not offered payment will be required before release of goods by the Seller.
- The Seller shall be entitled to charge interest on overdue invoices from the date when payment becomes due from day to day until the date of payment at a rate of 12 per cent per annum.
- If payment of the price or any part thereof is not made by the due date, the Seller shall be entitled to:
- Require payment in advance of delivery in relation to any Goods not previously delivered.
- Refuse to make delivery of any undelivered Goods without incurring any liability whatever to the Buyer for non-delivery or any delay in delivery.

13.3.2.3 DESCRIPTION

Any description given or applied to the Goods is given by way of identification only and these of such description shall not constitute a sale by description. For the avoidance of doubt, the Buyer hereby affirms that it does not in any way rely on any description.

13.3.2.4 DELIVERY

 Unless otherwise agreed in writing, delivery of the Goods shall take place at the address specified by the Buyer on, or as close as possible to the date required by the Buyer. The Buyer shall make all arrangements necessary to take delivery of the Goods whenever they are tendered for delivery.



The information contained herein is the property of DRC.

- If the Seller is unable to deliver the Goods because of actions or circumstances under the control of the Buyer, then the Seller shall be entitled to place the Goods in storage until such times as delivery may be affected and the Buyer shall be liable for any expense associated with such storage.
- Any damages, shortages, over deliveries and duplicated orders should be reported to the Seller within 14 days of signed receipt to enable replacement or refund.
- Delivery is strictly based on First come First Serve bases and sole discretions of DRC.

13.3.2.5 RISK

Risk in the Goods shall pass to the Buyer upon receipt of the goods. Where the Buyer chooses to collect the Goods itself, risk will pass when the Goods are entrusted to it or set aside for its collection, whichever happens first.

13.3.2.6 TITLE

Title in the Goods shall not pass to the Buyer until the Seller has been paid in full for the Goods.

13.3.2.7 RETURN OF UNUSED GOODS

- All goods are sold on a firm sale basis, i.e. the Seller will not take back any goods not required or sold by the Buyer, unless otherwise agreed, in which case the following terms apply.
- Any returns must be authorized by a representative of the Seller before any credit will be given.
- Credit of amount due or paid-in will only be given for goods that are in saleable condition.

13.3.2.8 LIMITATION OF LIABILITY& WARRANTY

Warranty is void if the device is tampered / physically damaged / dispersed or dissipated by other than the authorized technician; will full damage is offensive under IP law.

13.3.2.9 INTELLECTUAL PROPERTY RIGHTS

All Intellectual Property Rights produced from or arising as a result of the performance of this Agreement shall, so far as not already vested, become the absolute property of the Seller, and the Buyer shall do all that is reasonably necessary to ensure that such rights vest in the Seller by the execution of appropriate instruments or the making of agreements with the third parties.

13.3.2.10 **FORCE MAJEURE**

The Seller shall not be liable for any delay or failure to perform any of its obligations if the delay or failure results from events or circumstances outside its reasonable control, including but not limited to acts of God, strikes, lock outs, accidents, war, fire, breakdown of plant or machinery or shortage or unavailability of raw materials from a natural source of supply, and the Seller shall be entitled to a reasonable extension of its obligations. If the delay persists for such time as the Seller considers unreasonable, it may, without liability on its part, terminate the contract.



13.3.2.11 RELATIONSHIP OF PARTIES

Nothing contained in these Terms and Conditions shall be construed as establishing or implying any partnership or joint venture between the parties and nothing in these Terms and Conditions shall be deemed to construe either of the parties as the agent of the other.

13.3.2.12 ASSIGNMENT AND SUB-CONTRACTING

The contract between the Buyer and Seller for the sale of Goods shall not be assigned or transferred, nor the performance of any obligation sub-contracted, in either case by the Buyer, without the prior written consent of the Seller.

13.3.2.13 WAIVER

The failure by either party to enforce at any time or for any period any one or more of the Terms and Conditions herein shall not be a waiver of them or of the right at any times subsequently to enforce all Terms and Conditions of this Agreement.

13.3.2.14 SEVERABILITY

If any term or provision of these Terms and Conditions is held invalid, illegal or unenforceable for any reason by any court of competent jurisdiction such provision shall be severed and the remainder of the provisions hereof shall continue in full force and effect as if these Terms and Conditions had been agreed with the invalid, illegal or unenforceable provision eliminated.

13.3.2.15 GOVERNING LAW AND JURISDICTION

This Agreement shall be governed by and construed in accordance with the laws of India and the parties hereby submit to the exclusive jurisdiction of Surat district court.

13.4 Privacy

- 13.4.1 Buyers/Users of this device must keep it periodically connected to the internet to receive regular over the air software updates.
- 13.4.2 Buyers/Users are not allowed to resell without prior permission, J- Smart Pro is running on an online validation process: the system will stop working if owner details do not correlate.



13.5 Machine Maintenance Policy

13.5.1 Following is the significance of the maintenance policy:

- 1. It ensures that the equipment is always operational and in the best working condition.
- 2. It ensures that the equipment is always maintained and calibrated to provide good result.
- 3. It ensures that your operators should be aware with the machine software and its operations.
- 4. It ensures to maintain proper earthing, power supply and spacing (for ventilation) as per the machine standard.

13.5.2 If the purchaser does not implement an effective maintenance policy, then it can result in the following results:

- 1. It reduces the production time.
- 2. It reduces the machine efficiency.
- 3. It requires increased, more frequent maintenance/service.
- 4. Parts may be damaged before their expected life.
- 5. The overall machine accuracy may be compromised.

13.6 Machine Service Policy

A. Online Troubleshooting

- Client must have a High-Speed internet facility for the service support.
- Online service support will help you to troubleshoot on the basis of the virtual analysis.
- Online service support will help you to find out the cause of the problem.
- Online service support will try to resolve the problems through online but in rare cases it needs the engineer visit for further troubleshooting.

B. Physical Troubleshoot

a) Customer Premises (Engineer visit)

- Our engineer will inform the client for critical/non-critical damaged parts in machine.
- Our engineer will inform/alert the client that which parts would get expired in future.
- Our engineer will guide you how to maintain external accessories and standard to be maintained.
- During Machine health check-up visit, our engineer will provide you detailed report.

b) Company Premises (DRC Office)

• During in house service if additional parts found to be damaged in machine, then it will be replaced after getting the confirmation from the client.

C. Machine Transfer Policy

• If any client will sell or transfer the product, then client must have provided the supportive legal documents to the DRC for continuing service support.



13.7 Using Third-Party Apps and Services Policy

- At the time of troubleshooting, client must have enabled all the permissions and removed security restrictions from the machine.
- DRC will not take the responsibility of the accidental data loss, due to a third party product that has stopped or malfunctioned. (i.e. Corrupted MS Windows and HDD and accidental data loss.) We always recommend that users backup their data for safety and security.
- Third-Party app requires the permission and continuous attention for smooth operation.
- MS Windows security may inhibit third-party applications and their services which may require the user to update MS Windows software as well the third party app time to time.



About DRC

DRC is a privately held, not-for-profit company based in Surat, India. The company's principal focus is on technological advancements for use in the diamond industry. In addition to a variety of instruments designed for the detection of laboratory-grown diamonds, DRC has created a variety of instruments to photograph gemstones or jewelry, uniquely identify diamonds, and assist in the evaluation of their qualities for the trade.

Also, DRC is an industry leader in machinery for the manufacture and finishing of diamonds for factories around the world.

SUPPORT

Mobile Number: +91 99099 90867

Email : support@drcindia.in

Skype Name : Support DrcIndia

WARRANTY

Mobile Number: +91 99099 92585

Email Id: warranty@drcindia.in

Skype Name: Warranty DrcIndia

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