



JTR Reveal 2S



Overview

The JTR Reveal 2S is a portable desktop diamond verification instrument for loose and mounted stones designed to separate natural diamonds from synthetic diamonds. The Reveal 2S is manually operated and requires the user to interpret color images of the stones under fluorescence and phosphorescence. Images are displayed on a connected monitor, tablet or smartphone (not included). The Reveal 2s features a large analysis area of 68mm x 80mm and comes with trays for both loose and mounted stones.

The JTR Reveal 2S provides four views of the diamonds on the tray; i) Day light, ii) Fluorescence, iii) Phosphorescence, and iv) Result. The Result view will automatically identify some of the synthetic diamonds with a red dot. The remaining stones need to be visually interpreted by the operator based on the color characteristics of the stones under Fluorescence and Phosphorescence. An interpretation key with reference colors is shown on the monitor to assist with categorization of stones in one of following results:

- i) Diamond
- ii) Refer

When placing the stones on the tray, the culet was oriented in the up position. For jewelry testing, the stones were positioned at a common height above the tray in order to achieve the sharpest possible focus.

Stone Testing Capabilities

Weight range:	All
Size of stones:	All
Colour range:	D-J
Stone shape:	All
Diamond simulants:	No
Mounted stones:	Yes

Instrument Capabilities

Automated feed:	No
Automated results:	Semi-automatic
Automated dispense:	No
Detect or Refer (synthetic diamonds):	Refer
Detect or Refer (diamond simulants):	N/A
Multiple stones at once:	Yes
Training required:	Yes

ASSURE 2.0 Performance



Key ASSURE 2.0 test results for JTR Reveal 2S:

	Primary Loose	Smalls Loose	Primary Mounted
Diamond False Positive Rate (Optimal rate 0%)	0.0% +/- 0%	0.0% +/- 0%	0.0%
Diamond Referral Rate (Optimal rate 0%)	5.6% +/- 1.4%	6.2% +/- 2.1%	4.2%
Diamond Accuracy Rate (Optimal rate 100%)	94.4% +/- 1.4%	93.8% +/- 2.1%	95.8%
Test Speed Stones per hour	421 +/- 35		

Notes:

Uncertainty ranges (+/-) are based on repeatability testing (three trials) and represent spread of results in absolute terms.
Test Speed based on time to screen the full Primary Loose sample set, and includes time taken to retest challenging stones at different angles.
See Laboratory Report for full set of performance results.

Instrument Specifications

	17.5 cm (W) x 10.5 cm (D) x 13.2 cm (H)
	1.3 kg

Price: **3,500 USD** (June 2025)

Contact website: jtr.org/equipment/reveal-diamond-detector
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