DIM320 Handheld Dimensioner

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1   Equipment

1.1   DIM320 Kit

1. Transport and carry case

2. Tablet PC along with charger

3. Freestyle sensor

4. Calibration plate

5. USB card reader

6. Micro SD with calibration plate data

7. Optical cleaning kit

1.2   DIM320 Kit

1. Start/Stop button and Status LED lights

2. USB cable and plug

3. Infrared cameras

4. Color camera and LED flash unit

5. Infrared projector with class 1 laser

1.3   DIM320 Kit

On connecting Freestyle with the tablet PC, status lights will turn on in the Start/Stop button. They indicate the following statuses:

Status	LED Color	Description
Initializing Scanner	Red	Scanner plugged in and software starting up.
Acquiring Tracking	Blinking Blue	Scanner needs to acquire tracking. Point at the object and hold it steady until tracking is acquired.
Scanning	Blinking Blue	Tracking is acquired and point data is displayed.
Lost Tracking	Red	Scanner loses tracking when moved too fast. Hold it steady pointed at object.
Tracking Acquired	Blinking Blue	Scanner reacquires tracking.
Scan Complete	Same as at the end of previous scan	Ready to scan.
Not Ready to Scan	Same as at the end of previous scan	Start button pressed before scan is closed out.

2 DIM320 Creator Software

Start DIM320 Creator software on the tablet PC:
- ▶ If required, log in using default password in the tablet PC: sicksick
- ▶ Double click DIM320 software icon on the desktop
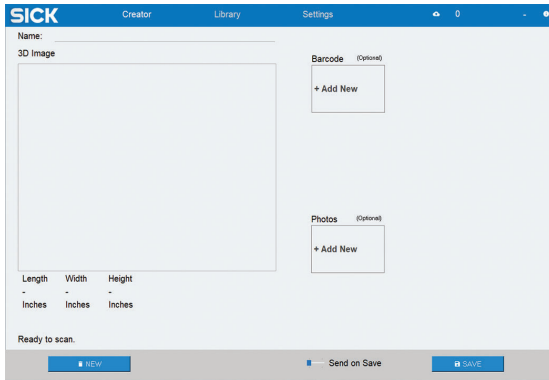
2.1 Capture Point Cloud

Prerequisites:
- ▶ Freestyle sensor connected with the tablet PC.
- ▶ Status on bottom left of tablet PC states "Ready to Scan".

Click (press and release) Freestyle button to start a new scan.
Refer to the image on the next page. The left part of the screen will display point cloud as it is captured and the right side displays the video. Initial few scans are changed to red color points, which in the overall point cloud appear as a red dot as shown in the next image. With some training, an operator can point the sensor precisely to the object to be dimensioned using this red dot, which helps the system identify which object to process.

Note that the point cloud viewer on the left can be rotated as desired using finger swiping to inspect the object just captured.
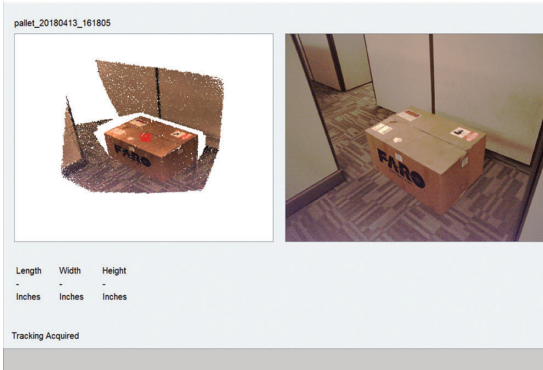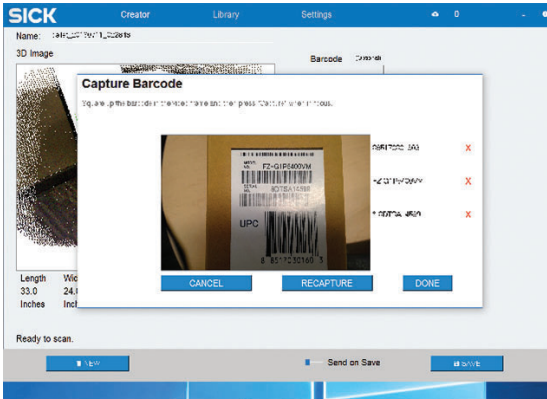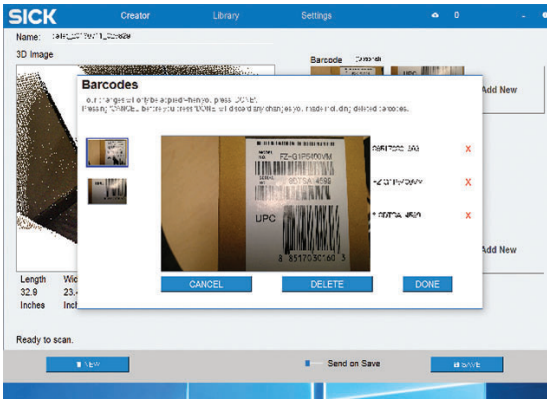
2.2 Capture Barcode

On clicking "+ Add New" under the barcode section of Creator screen, the following screen displays the barcode capture screen.
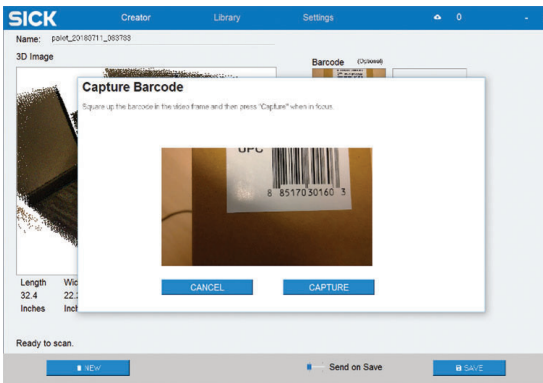
Clicking "Capture" produces more options including "Recapture" and "Done". Automatic attempt is made to decode the captured pictures of all barcodes. Clicking red X will remove a decoded barcode. Clicking "Done" saves the barcode.

Clicking an already captured image of barcode on the Creator screen brings up barcode view/delete screen. This screen allows viewing and deleting each barcode.

2.3 Capture Image

On clicking "+ Add New" under Photos section of Creator screen, the following screen displays the image capture. Clicking "Capture" will capture the image and provide more options including "Recapture" and "Done". Clicking "Done" will go back to Creator screen. Clicking an already captured image will provide options to view and delete.
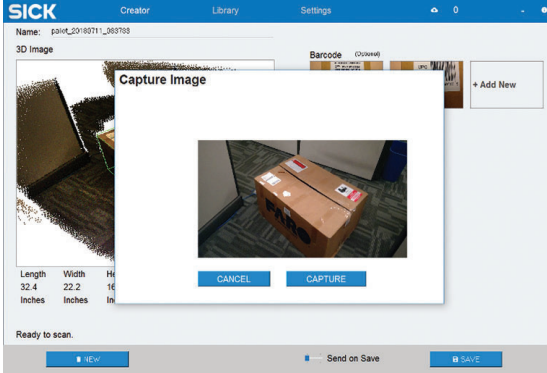
After capturing barcode and images, the main Creator screen will display all captured data.
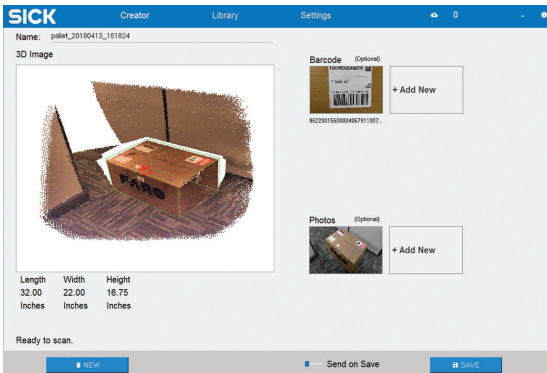
At this point, clicking the point cloud window will bring up the point cloud viewer, which allows operations such as rotating and zooming in/out.
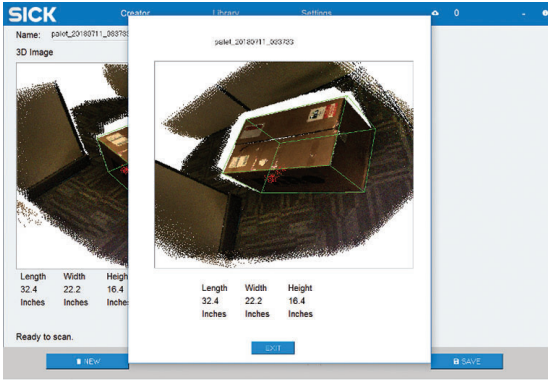
2.4   Library Screen

Library stores history of scans and allows operations such as Edit, Delete and Send.
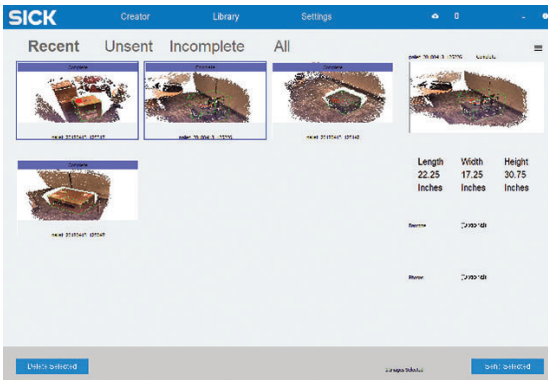
The following screen shows operations available on selecting a single scan.
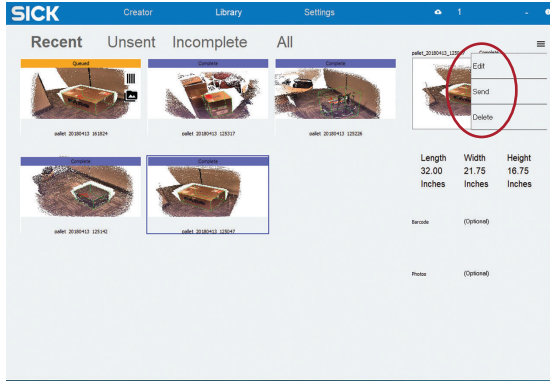
The following screen shows operations available on selecting multiple scans.
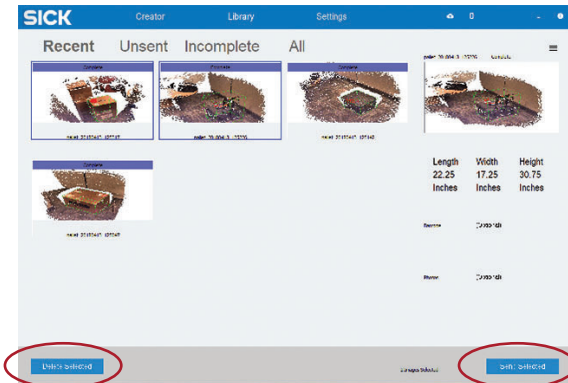
3   On-Site Calibration

DIM320 is calibrated before delivery. The calibration may have been affected under certain transport conditions. If so, recalibrate it so that it is ready to capture accurately. The best time to recalibrate DIM320 is on-site, preferably daily right before starting to capture.

DIM320 is shipped with Calibrate software installed on the tablet PC. Double click on icon on the home screen to start calibration. Ensure DIM320 software itself is not running before starting to calibrate as only one software can connect to the Freestyle sensor at one time.

Each DIM320 kit includes a calibration plate and a corresponding calibration file, which can be found on the micro SD card that is contained in the transport and carry case.

Please refer to the operating manual for more details on calibration procedure.

4   Operating Guidelines

4.1   Using Handheld

- ▶ Start scanning in an isometric view (covering 3 sides) as much as possible. For very tall objects, use a ladder as needed
- ▶ Use more of gross movement to reduce incidents of "lost tracking"
- ▶ Use the movement in the following order: legs, shoulder, elbow, wrist
- ▶ If one position, use shoulder and elbow more than wrist
- ▶ Move steadily instead of abruptly
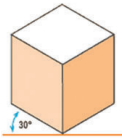
4.2   On Screen Messages

Status messages and dimensioning errors show up on screen to help operator. Dimensioning errors are red text and status messages are in black text. They are labeled in an intuitive fashion and describe what you see. Refer to the Operating Instructions for a list of such messages.

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