OLYMPUS®

Your Vision, Our Future

Industrial Videoscope

iPLEX FX
iPLEX LX

IPLEX FX/LX STEREO MEASUREMENT REFERENCE GUIDE
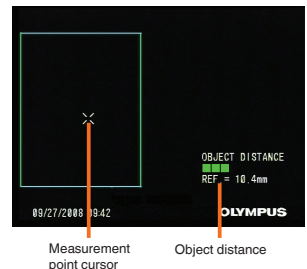
1. PREPARATIONS FOR STEREO MEASUREMENT

- Attach a stereo optical adapter to the distal end of a scope while the live screen is displayed.
  <For FX/LX 8.5-mm type>
  Select the stereo optical adapter to be used in the adapter selection screen, and press the [MEAS/ENTER] joystick.
  <For LX 4-mm and 6-mm types>
  Confirm the name of the stereo optical adapter and the set number, and then select "OK". Press the [MEAS/ENTER] joystick.
- When using a stereo optical adapter for the first time, installation will be required. Select the [NEW STEREO ADAPTER] option from the menu and follow the on-screen directions. For full details please refer to the instruction manual.
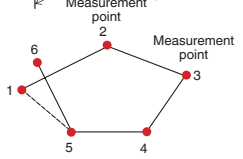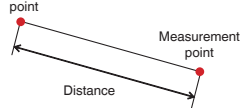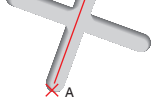
2. SPOT RANGING — OBJECT DISTANCE MEASUREMENT

- Tilt the [ZOOM] lever toward [W] to activate the measuring distance to object function.
- Highest accuracy is achieved when green zone is displayed in object distance. To achieve highest measurement accuracy, bring the insertion tube to an object as close as possible.
- Push the [MEAS/ENTER] joystick to proceed to the stereo measurement screen.
- Object distance is ceaselessly displayed in the stereo measurement screen.

OBJECT DISTANCE
REF = 10.4mm
09/27/2008 09:42
OLYMPUS

Measurement point cursor   Object distance

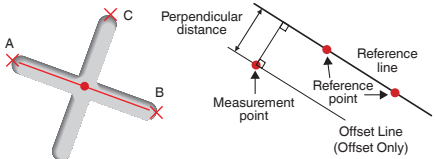## 3. MEASUREMENT METHOD (MEASUREMENT MODE)

- Immediately after executing stereo measurement or selecting "METHOD" in the stereo measurement screen, the measurement method (measurement mode) selection screen is displayed.
- Refer to the following page for the usable measurement method (measurement mode). (Some functions are not available for LX.)

Distance mode is for measuring the line segment between two measurement points

1. Place the cursor on one end of the line segment and press MEAS/ENTER on the joystick to specify point A.
2. Place the cursor on the other end of the line segment and press MEAS/ENTER on the joystick to specify point B.
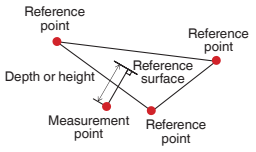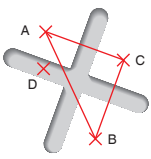→ The length of line segment A-B is displayed.

B POINT-TO-LINE
C OFFSET (FX only)

Point-to-Line and offset mode are for measuring the distance from a measurement point to the reference line defined by two points. In Offset mode, an offset line will additionally be displayed from the measurement point, in parallel to the reference line.

1. Place the cursor on both ends of the line segment and press MEAS/ENTER on the joystick to specify points A and B.
→ Reference line A-B is shown.
2. Place the cursor on the point from which you want to measure the distance to reference line A-B and press MEAS/ENTER on the joystick to specify point C.
→ The distance between reference line A-B and point C (or Offset Line) is displayed. (Offset mode is only available for IPLEX FX models.)

D DEPTH

Depth mode is for measuring the distance from a measurement point to the reference plane defined by three reference points.

1. Place the cursor on points A, B and C to define the reference plane, then press MEAS/ENTER on the joystick to specify points A, B and C.
→ Reference plane ABC is shown.
2. Place the cursor on the point from which you want to measure the distance to reference plane ABC and press MEAS/ENTER on the joystick to specify measurement point D.
→ The distance between reference plane ABC and point D is displayed. A positive value (height) means the point is closer to the tip of the scope than the reference plane, and a negative value (depth) means the point is farther away.

Area mode is for measuring the area defined by multiple measurement points. Lines mode is for measuring the total length of lines defined by multiple measurement points.

1. Place the cursor on points to define the area/lines and press MEAS/ENTER on the joystick to specify the measurement points.
→ The total length of lines defined by multiple measurement points is displayed at the bottom of the screen.
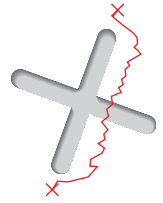Note: Up to 20 measurement points can be specified per measurement session.
2. When measuring an area, one additional point must be positioned to define the complete subject outline. This point (point 6 in the example above) needs to be located where the line between this point and the last point (point 5) cross across the first drawn line.
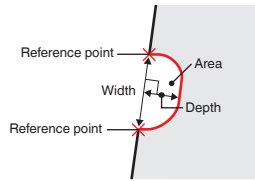→ The area enclosed by lines is displayed at the bottom of the screen.

F PROFILE (FX only)

Profile mode is for displaying the surface profile of a line connecting two points.

1. Place the cursor on both ends of the line whose surface profile you want to inspect and press MEAS/ENTER on the joystick to specify the two points.
→ The surface profile obtained by sectioning a target object with the plane defined by the line connecting two specified points and the optical center is displayed. The surface profile graphics overlaid on the right screen show the profile viewed from the direction perpendicular to the optic axis.
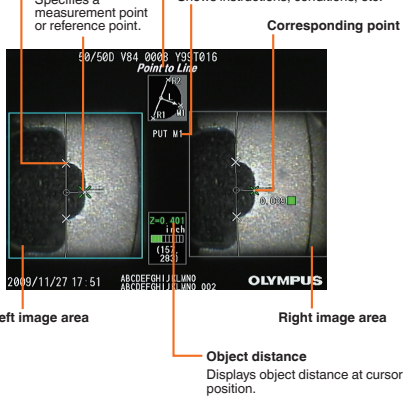
G MULTI (FX only)

Multi mode automatically detects and displays the measurement values of a region specified by two reference points. The width, depth and surface area of any missing material will be measured.

1. Place the cursor on each side of the material loss and press [MEAS/ENTER] on the joystick to specify the reference points. The region of missing material will be drawn in the left and right screen. The width, depth and area dimension of missing material will be displayed at the bottom of screen.
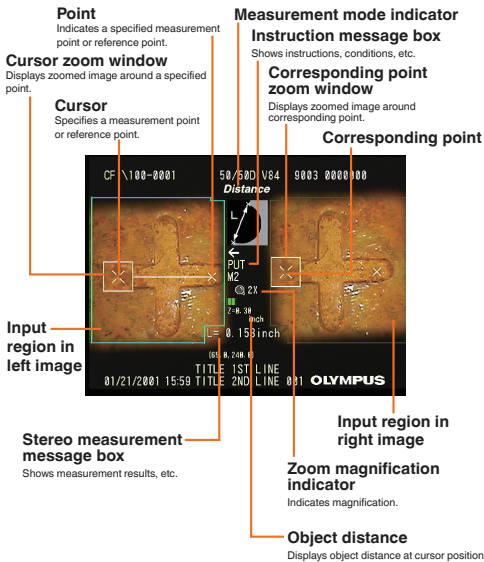
4. SAVING YOUR STEREO MEASUREMENT RESULT

• Press and hold the [FRZ/REC] button for at least two seconds to save your stereo measurement image with the measurement result.
• "STILL" indicator will confirm that the image was recorded.
• Press [VIEW] button to display the saved image at any time.

point (s).

- **UNIT** - Choose the unit of measurement (millimeters or inches).
- **MODIFY (FX only)** - Fine adjustments to cursor placement on left and right images.
- **TITLE (FX only)** - Enter a title in the measurement screen center (up to 30 alphanumerics).
- **CURSOR (FX only)** - Choose the color, shape and speed of cursor.
- **ZOOM WINDOW (FX only)** - Activated by moving the [ZOOM] lever towards the [T] position to provide 2x to 4x magnification.
- **SUBPIXEL POINTING (FX only)** - When the zoom ratio is greater than 2x, fine mode will be activated and you will have better fine cursor control under this mode. "F" is highlighted in the central cursor zoom window while fine mode is active.
- **REMEASURMENT OF SAVED IMAGES** – Remeasurement can be done via the IPLEX FX, IPLEX LX system or IPLEX VIEWER PLUS software.

Specifies a measurement point or reference point.

Corresponding point

Left image area

Right image area

Object distance
Displays object distance at cursor position.

6. MEASUREMENT SCREEN OVERVIEW

<For FX>

Point
Indicates a specified measurement point or reference point.

Cursor zoom window
Displays zoomed image around a specified point.

Cursor
Specifies a measurement point or reference point.

Measurement mode indicator

Instruction message box
Shows instructions, conditions, etc.

Corresponding point zoom window
Displays zoomed image around corresponding point.

Corresponding point

Input region in left image

Stereo measurement message box
Shows measurement results, etc.

Input region in right image

Zoom magnification indicator
Indicates magnification.

Object distance
Displays object distance at cursor position.

Notes: For proper and safe operation, consult the manual before use.
Warning: Never use this instrument to observe human or animal body cavities. This could cause injury.
Never use this instrument in an area exposed to flammable gas. This could cause a fire or explosion.
Never use this instrument in an environment filled with fine particles such as metal dust.
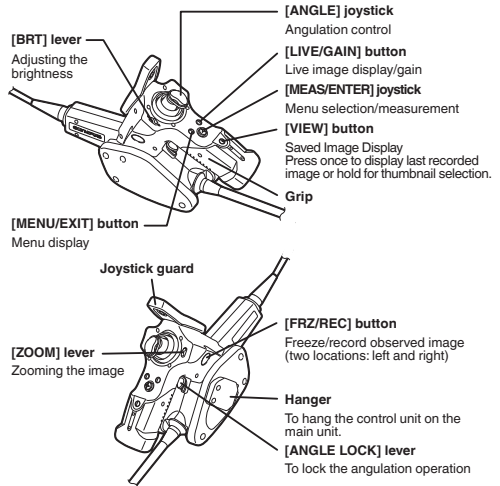
7. BASIC FUNCTIONS AND TERMS

[BRT] lever
Adjusting the brightness

[MENU/EXIT] button
Menu display

[ANGLE] joystick
Angulation control

[LIVE/GAIN] button
Live image display/gain

[MEAS/ENTER] joystick
Menu selection/measurement

[VIEW] button
Saved Image Display
Press once to display last recorded image or hold for thumbnail selection.

Grip

Joystick guard

[ZOOM] lever
Zooming the image

[FRZ/REC] button
Freeze/record observed image (two locations: left and right)

Hanger
To hang the control unit on the main unit.

[ANGLE LOCK] lever
To lock the angulation operation

- OLYMPUS CORPORATION obtains the ISO9001/ISO14001.
Specifications, design and accessories are subject to change without any notice or obligation on the part of the manufacturer.