MILLISCOPE HD
MILLISCOPE HDV
MILLISCOPE HDX

MODULAR FIBERSCOPE / VIDEOSCOPE & ARTICULATING VIDEOSCOPE SYSTEM USER MANUAL
V01.3

ZIBRA CORP

Contents

Front view

Power LED
Allow approx. 35 seconds for device power up
Light will turn green when ready

USB Data Storage
Image/ Video storage port

LOADING
READY

MENU
MODE

STORE
SELECT

M

S

EJECT

Hand Piece Connection

MILLISCOPEHD

Keypad

Stand

Rear view

(CMOS) Videoscope / (NTSC) Fiberscope Selector
Switch must be made prior to powering on system

USB Keyboard Port

Power plug

!CAUTION!

KEYBOARD

CMOS
VIDEOSCOPE

NTSC
FIBERSCOPE

SWITCH WITH
POWER OFF
ONLY

MONITOR

5V === 2.5 A
ONLY

MODEL : 50500
PART : HDBU100

SERIAL # MSBU0114

ZIBRA CORPORATION
640 AMERICAN LEGION HWY
WESTPORT, MA 02790
(508) 636-2155
WWW.ZIBRACORP.COM

Power switch

**HDMI Type A
Monitor Output**

Milliscope HD Analog Handle

Keypad detail

Up Arrow
Press to rotate image 180 degrees

Menu/ Mode

Store/Select
Press for still image capture
Press and hold for video capture

Down arrow
Press when ejecting USB memory storage

Connector detail

Release button

Retention tab
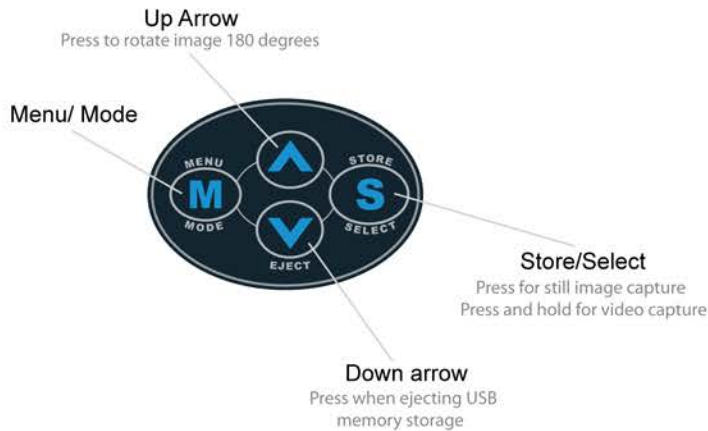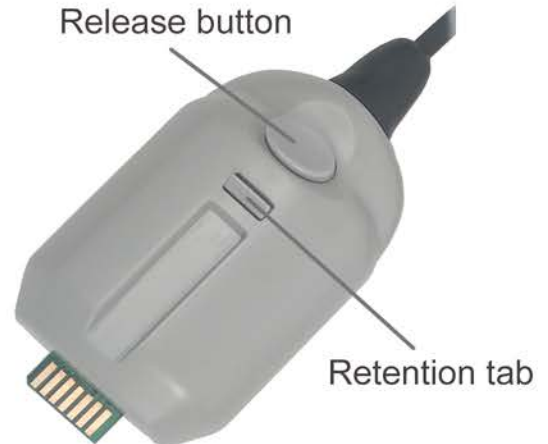
Fiberscope camera handle: top detail

Optical zoom
Increase ← → Decrease

Image Capture Button
Press to capture an image
Press and Hold for 2 seconds for Video Capture
Press and Hold again for 2 sec. to stop recording
Record up to 2 min. of Video

LED Adjustment Button
Press to adjust LED brightness (1-10)
Setting level displayed on screen

LED

Fiberscope camera handle: bottom detail

Detachable Probe

Tripod mount
(1/4 - 20) Thread
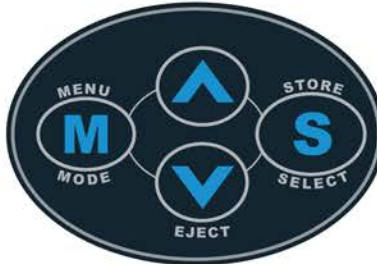
Image focus knob

Milliscope HDV Video Handle

Base unit Keypad detail

Up Arrow
Disabled in Milliscope HDV (CMOS) mode

Mode/Menu

Store/Select
Press for still image capture
Press and hold for video capture

Down Arrow
Press when ejecting USB
memory storage

Connector detail

Release button

Retention tab

Top View

Videoscope
Part, Product, and Serial Number
Info

MILLISCOPE HDV
CMOS VIDEOSCOPE
PART #
PRODUCT #
SERIAL # HDVXXXX

Bottom View

Milliscope HDV
Video Handle Controls

Power Indicator
Green when powered *on*

Rotate Button
Rotate image
90 deg. clockwise

Capture Button
Press to capture still image
Press and hold for video

LED Button
Adjust probe illumination
through 5 power settings

Mode Button
Two operating modes available
AUTO and MAN(manual)

Press and hold mode button
for (3) seconds to switch
between AUTO and MAN

Decscription of mode level
functionality outlined below

Manual Mode Detail

Press LED or Mode button once to view current level settings on screen
Press LED or Mode button again while level settings are displayed to change setting(s)
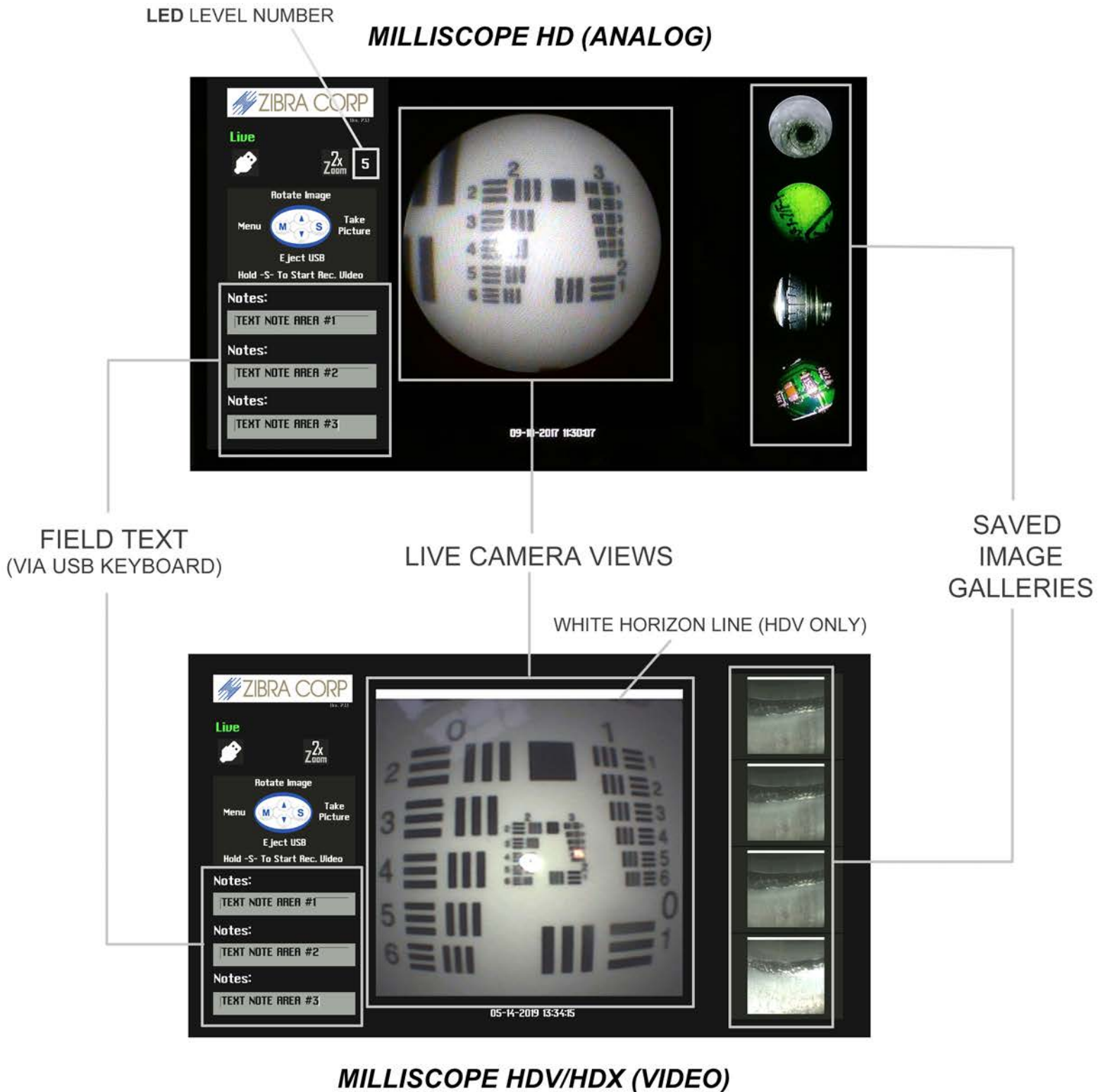

Once in Manual Exposure Mode press MODE button to adjust exposure setting.
Manual Mode has 10 settings with 1 being the dimmest and 10 the brightest.
When system is powered off/on MHDV handle will remain in whichever *mode* is currently selected.
However, the Manual Mode level setting will default to level 1
when switching between AUTO and MAN modes.

Milliscope HDX
Articulating Video Handle Controls

Power Indicator
Green when powered *on*

Rotate Button
Rotate image
90 deg. clockwise

Capture Button
Press to capture still image
Press and hold for video

Articulating Handle

articulate down

lock
articulation

unlock
articulation

articulate up

Mode Button
Two operating modes available
AUTO and MAN(manual)

Press and hold mode button
for (3) seconds to switch
between AUTO and MAN

Decscription of mode level
functionality outlined below

LED Button
Adjust probe illumination
through 5 power settings

ROTATE
CAPTURE   MODE
LED
MILLISCOPE HDX
ARTICULATION

Manual Mode Detail

Press LED or Mode button once to view current level settings on screen
Press LED or Mode button again while level settings are displayed to change setting(s)

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Live

Zoom 2x

Rotate Image

Menu M S Take Picture

Eject USB
Hold -S- To Start Rec. Uideo

Notes:
TEXT NOTE AREA #1

Notes:
TEXT NOTE AREA #2

Notes:
TEXT NOTE AREA #3

MAN   6   LED   1
05-14-2019 13:19:14

Once in Manual Exposure Mode press MODE button to adjust exposure setting.
Manual Mode has 10 settings with 1 being the dimmest and 10 the brightest.
When system is powered off/on MHDV handle will remain in whichever *mode* is currently selected.
However, the Manual Mode level setting will default to level 1
when switching between AUTO and MAN modes.

Monitor Interface Layout

The Milliscope HD/HDV/HDX contains an integrated firmware system that allows you to use any High Definition compatible external monitor as your display.
Since the software and display characteristics are built directly into the camera system, the information will display correctly with minimal setup required.
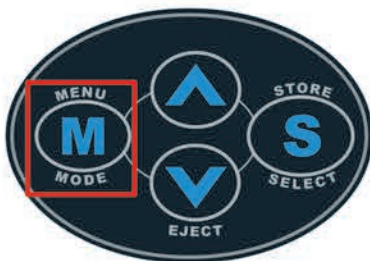
LED LEVEL NUMBER

MILLISCOPE HD (ANALOG)

FIELD TEXT
(VIA USB KEYBOARD)

LIVE CAMERA VIEWS

SAVED
IMAGE
GALLERIES

WHITE HORIZON LINE (HDV ONLY)

MILLISCOPE HDV/HDX (VIDEO)

Instructions for setting Milliscope HD/HDV/HDX system *Digital Zoom*

System set at 2X zoom(recommended for most applications)
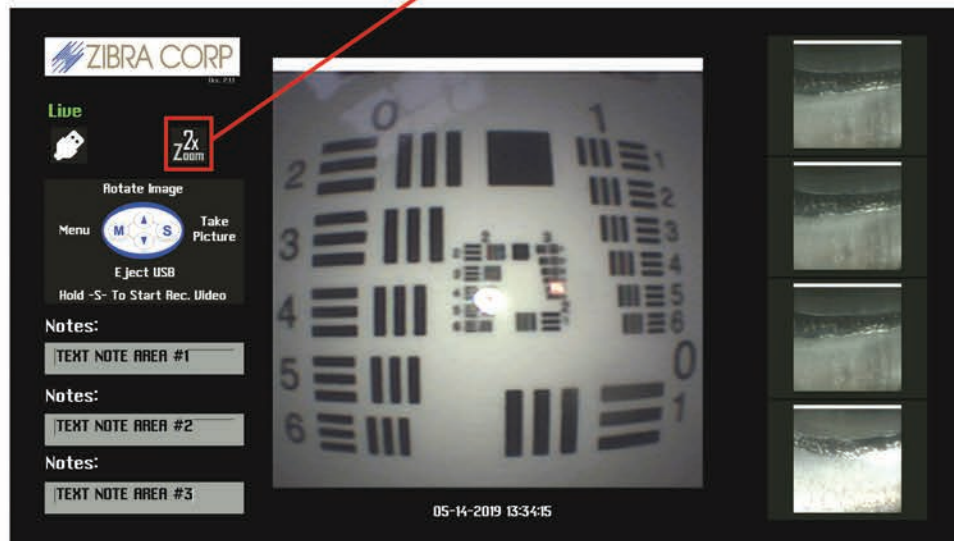
Step 1: Press *Menu* button on front of Milliscope HD base unit

Step 2: The Mode Menu will appear and Set Zoom will be highlighted in white

Step 3: Press Select button to choose desired magnification
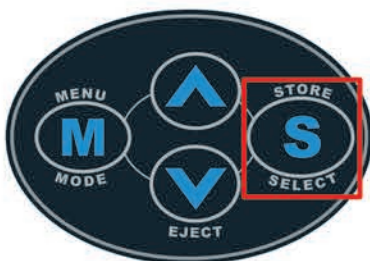
Milliscope HD product #51217
Battery Powered Base Unit
QUICK START GUIDE

1.a CONTENTS

Foam set to fit (1) HDV scope,(1) #50501-B & (2) HDF scopes

12" HD Monitor w/ Pan & Tilt Mount

Removable Lithium Polymer Battery #51124

Spare #51124 Lithium Polymer system battery

Milliscope HD wireless keyboard & charging systems

Custom Milliscope HD base unit

Milliscope HD product #51217
Battery Powered Base Unit
QUICK START GUIDE

1.b POWER SETUP

Step1: Install a fully charged #51124 system battery and connect base unit power and monitor power cables to battery as shown (use two outside battery ports)

Step 2: Power ON monitor (see green arrow)

Step 3: Power ON Milliscope HD base unit (see green arrow)
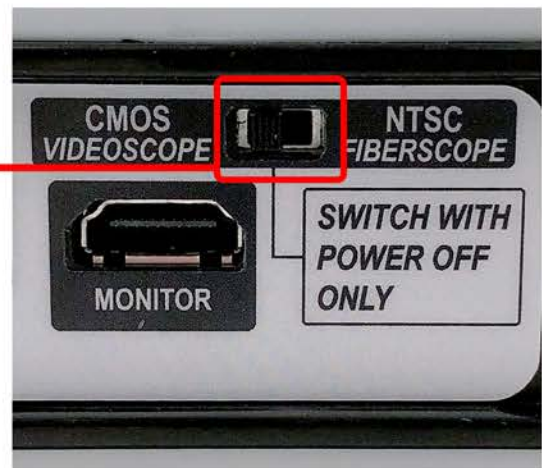
Milliscope HD product #51217
Battery Powered Base Unit
QUICK START GUIDE

1.c POWER SETUP cont.

Step3: Carefully lift the Milliscope HD base unit up and out of it's foam housing to access rear panel for power button.
Also to access CMOS VIDEOSCOPE / NTSC FIBERSCOPE mode selection.

Rear panel CMOS VIDEOSCOPE/
NTSC FIBERSCOPE mode selection
switch(make selection prior to
base unit power up)

Please be aware that the system battery will automatically enter a *power off storage mode* if it does not sense a system power draw for more than 15 seconds. IF THIS OCCURS AND YOUR SYSTEM WILL NOT POWER ON NORMALLY, SIMPLY *PRESS THE BUTTON* ON THE LEFT SIDE OF THE BATTERY(SEE GREEN ARROW) TO INITIATE NORMAL POWER STATE. YOUR SYSTEM WILL NOW POWER UP NORMALLY.

Milliscope HD product #51217
Battery Powered Base Unit
QUICK START GUIDE

1.d POWER SETUP cont.

The #51217 portable base unit with 12"video monitor system is assembled and ready for use. Please refer to the rest of user manual v1.03 for all other system usage instructions.
Thank you!

Milliscope HD product #51122
Battery Powered Base Unit
QUICK START GUIDE

2a. Base Unit power connect

Step 1: Remove battery cover (slide to right)

Step 2: Insert battery w/ indicator lights facing down

Step 3: Slide on battery cover

Step 4: Plug base unit power cable from battery USB port (either green circled port) to base unit

Base unit Power cable

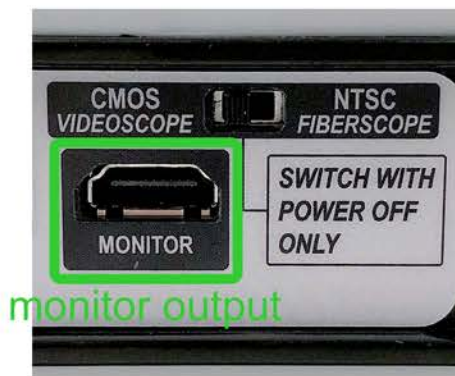# Milliscope HD product #51122
Battery Powered Base Unit
QUICK START GUIDE

2b. Monitor Setup

Step 5: Connect 7" portable monitor system video & power cables to monitor

HDMI video input

5 vdc USB power input

Step 6: Plug monitor power cable into battery USB (either green circled port)
plug HDMI video cable into base unit monitor output

CMOS VIDEOSCOPE   NTSC FIBERSCOPE

SWITCH WITH POWER OFF ONLY

MONITOR

monitor output

Milliscope HD product #51122
Battery Powered Base Unit
QUICK START GUIDE
2c. Battery Power Indicator
and Restart Function

To check the power status of the portable Milliscope HD base unit without removing the battery, firmly press button (circled above) on front of base stand. The indicator lights visible on the bottom of the unit(see below) will light to show charge status.

Please be aware that the system battery will automatically enter a *power off* storage mode if it does not detect a power draw for more than fifteen seconds.
If this occurs and your MHD system will not power on normally, firmly press the battery indicator/ restart button on base unit stand. Your system will now power up normally.

Milliscope HD product #51122
Battery Powered Base Unit
QUICK START GUIDE
2d. Ready for use

The #51122 portable base unit and 7" video monitor system is assembled and ready for use. Please consult the Milliscope HD/HDV/HDX Modular Fiberscope/ Videoscope User Manual V1.03 for all other system usage instructions. Thank you!

General Operating and Maintenance Information

- Always place and keep *Milliscope HD* unit on a flat, level, and secure surface.

- In the event of suspected damage or failure, do not operate. Have the device inspected by qualified personnel.

- Do not operate this product if there are signs of tampering or any of the covers are removed.

- Do not allow spilling of liquids on the *Milliscope HD unit.*

- *Do not immerse any of the components in liquid.*

- Do not operate the device outside of the specified input voltage range.

CLEANING

- Use a lightly damp cloth to wipe down exterior of unit. Allow unit to dry before use.

- Use Isopropyl alcohol and a soft, clean wipe or cotton swab to clean optical surfaces.

- Contact with acids and strong solvents should be avoided as serious damage can result.

<u>Warranty Statement</u>

Zibra Corporation certifies that all our factory borescopes and accessories
will be free of defects in materials and workmanship for one year from the date of
first retail purchase.
Video, lighting and some accessory products are covered by and subjected to the
terms of the manufacturer's warranty.

MILLISCOPE HD
MILLISCOPE HDV
MILLISCOPE HDX

Service & Support

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