

**BOOKING SHEET FOR BOYA RANGE BARCODE STAFF CALIBRATION**

- 1) LEVEL BUBBLE CHECKED? (Circle one) YES / NO ADJUSTED? YES / NO
- 2) STAFF BUBBLE CHECKED? (Circle one) YES / NO ADJUSTED? YES / NO
- 3) COLLIMATION TEST OF DIGITAL LEVEL

See Boya Range plan for location of collimation test spikes 1-4

Use the adjusted instrument collimation constant derived from collimation test done below.

**4) RANGE OBSERVATION DETAILS**

See Boya Range plan for location of Pillar MV 83 and Pins 1-21

Set digital level to record most precise readings with multiple observations, means and standard deviations if possible. Shade instrument.

Book field information in these tables to complete documentation for calibration.

Observe a BS on Pin 1, IS on Pins 2-20 and a FS on Pin 21 for 1 complete set for a 4 m staff.

Observe a BS on Pin 1, IS on Pins 2-14 and a FS on Pin 15 for 1 complete set for a 3 m staff.

If instrument can't mean multiple observations, do at least 3 complete sets for redundancy.

DATE & TIME	16.9°C. 7/10/2021. 9.00AM		
<b>INSTRUMENT DETAILS</b>			
MAKE/MODEL	LEICA LS15		
SERIAL #	SN 702272.		
<b>STAFF DETAILS</b>			
MAKE/MODEL	LEICA INVAR GPL3.		
SERIAL#	26296		
MATERIAL	FIBREGLASS / WOOD / INVAR / .....	FIBREGLASS / WOOD / INVAR / .....	FIBREGLASS / WOOD / INVAR / .....
LENGTH OF STAFF	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....
COEFFICIENT OF EXPANSION OF STAFF (If known)			
<b>COLLIMATION TEST</b>			
COLLIMATION DIFFERENCE	5.5" OLD: -14.6" -9.0" NEW: -9.0" REMARK: 1.68233		
ACCEPT/STORE?	YES / NO	YES / NO	YES / NO
<b>RANGE OBSERVATION DETAILS</b>			
# OBSERVATIONS FOR MEAN (Min. of 5 observations)	10	10	
NUMBER OF SETS	1	1	
START TIME & TEMPERATURE	ST: 9:10AM. 16.4°C. 17.3°C.	ST: 9:42AM. 17.8°C 19.2°C	
END TIME & TEMPERATURE	FIN: 9:36. 16.2°C. 19.0°C	FIN: 10:12AM. 19.3°C 17.7°C	

pin #1-15.

pin #7-21.

I certify that the above observations were made by me at the Boya barcode staff calibration range.

SURVEYOR.....

(Name & Signature)

DATE.....



## BOOKING SHEET FOR BOYA RANGE BARCODE STAFF CALIBRATION

- 1) LEVEL BUBBLE CHECKED? (Circle one) YES / NO      ADJUSTED? YES / NO
- 2) STAFF BUBBLE CHECKED? (Circle one) YES / NO      ADJUSTED? YES / NO
- 3) COLLIMATION TEST OF DIGITAL LEVEL

See Boya Range plan for location of collimation test spikes 1-4  
Use the adjusted instrument collimation constant derived from collimation test done below.

### 4) RANGE OBSERVATION DETAILS

See Boya Range plan for location of Pillar MV 83 and Pins 1-21

Set digital level to record most precise readings with multiple observations, means and standard deviations if possible. Shade instrument.

Book field information in these tables to complete documentation for calibration.

Observe a BS on Pin 1, IS on Pins 2-20 and a FS on Pin 21 for 1 complete set for a 4 m staff.

Observe a BS on Pin 1, IS on Pins 2-14 and a FS on Pin 15 for 1 complete set for a 3 m staff.

If instrument can't mean multiple observations, do at least 3 complete sets for redundancy.

DATE & TIME	7/10/2021 10:27AM.		
<b>INSTRUMENT DETAILS</b>			
MAKE/MODEL	LEICA LS15		
SERIAL #	SN 702272.		
<b>STAFF DETAILS</b>			
MAKE/MODEL	LEICA INVAR GPL3.		
SERIAL#	79918.		
MATERIAL	FIBREGLASS / WOOD / INVAR / .....	FIBREGLASS / WOOD / INVAR / .....	FIBREGLASS / WOOD / INVAR / .....
LENGTH OF STAFF	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....
COEFFICIENT OF EXPANSION OF STAFF (If known)			
<b>COLLIMATION TEST</b>			
COLLIMATION DIFFERENCE	3.1" OLD -9.0" NEW -5.9"		
ACCEPT/STORE?	YES / NO	YES / NO	YES / NO
<b>RANGE OBSERVATION DETAILS</b>			
# OBSERVATIONS FOR MEAN (Min. of 5 observations)	10	10	
NUMBER OF SETS	1	1	
START TIME & TEMPERATURE	ST: 10:38AM. 19.8°C 20.3°C	ST: 11:04AM. 21.0°C 19.7°C	
END TIME & TEMPERATURE	FIN: 11:02AM. 19.6°C 20.7°C	FIN: 11:25AM. 20.9°C 21.9°C 20.6°C	

pin# 1-15

pin# 7-21.

I certify that the above observations were made by me at the Boya barcode staff calibration range.

V. UNG.  
SURVEYOR.....  
(Name & Signature)

7/10/2021.  
DATE.....