




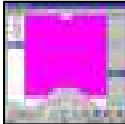
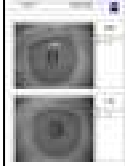





IOLMaster

How to read the Printouts

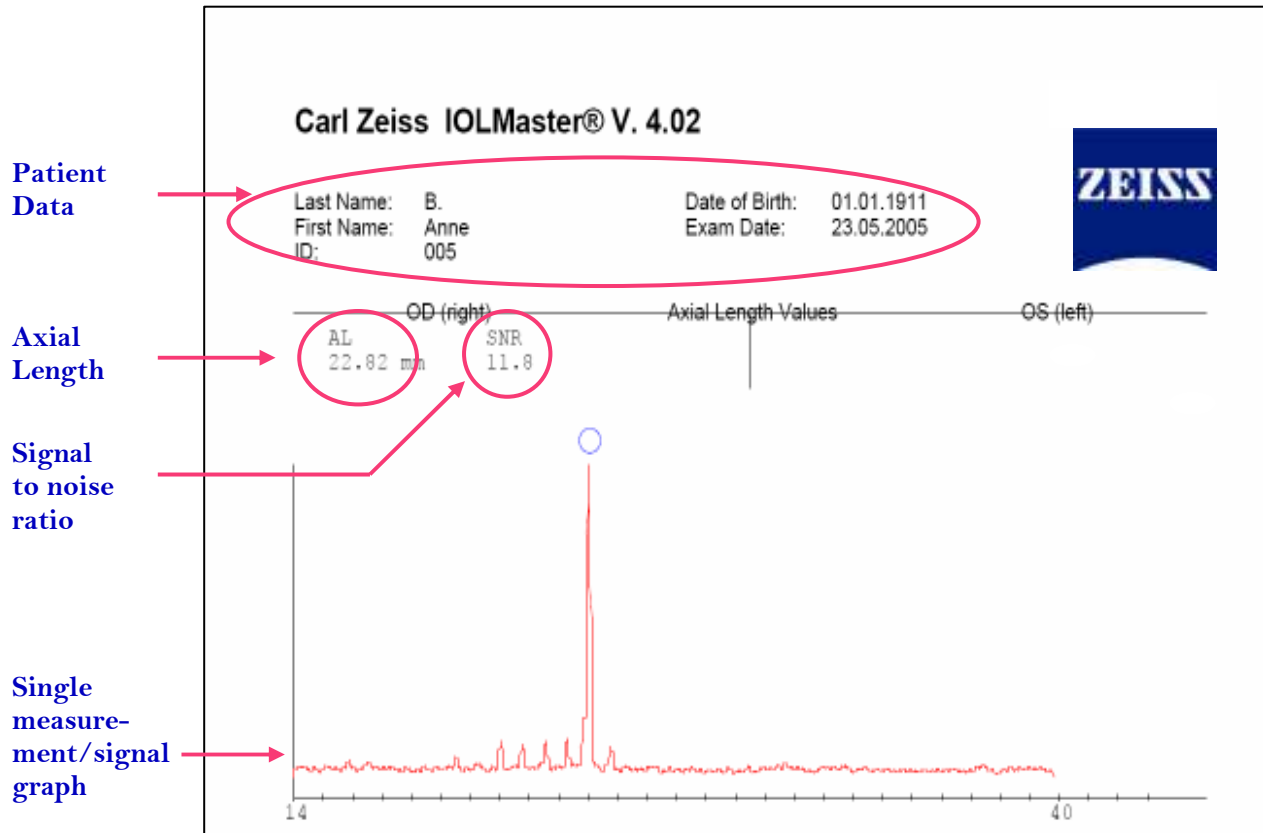


IOLMaster® Introduction

This guide will assist you in understanding valuable information provided on the printouts of the IOLMaster. If you need further assistance please contact Carl Zeiss Meditec Customer Service @ 1-800-341-6968.

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Axial Length Printout Detail



Auto-keratometry Printout Detail


The screenshot shows the Carl Zeiss IOLMaster software interface. The main window displays a pink background with a central crosshair and a dashed circle. An error message "Error !" is circled in blue at the top. In the bottom left, a cluster of colored spots is circled in blue, with a text box stating "Spots are obscured. Please let patient open eyes." Below this, instructions are listed: "1. Focus & Superimpose peripheral s...", "2. Have patient blink once", and "3. Push joystic". The status bar at the bottom shows "Ready" and "Max".

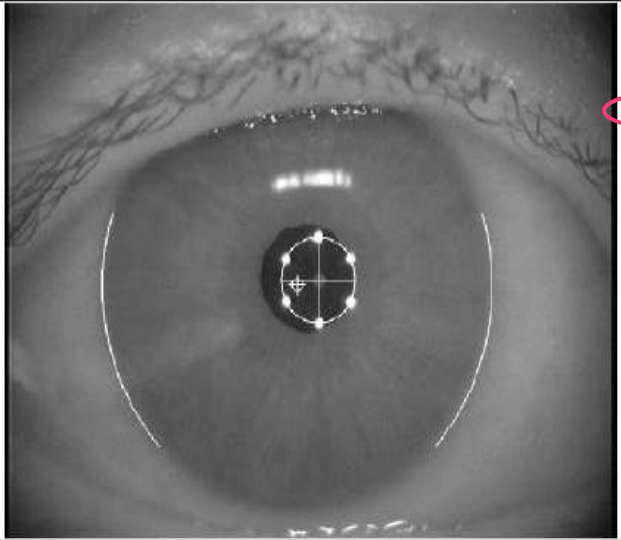
To the right, a printout table is shown. The table has a header "OD (right)" and contains several rows of data. The top row is circled in blue and contains a circled "X" in the rightmost column. A blue arrow points from this "X" to the obscured spots in the software interface.

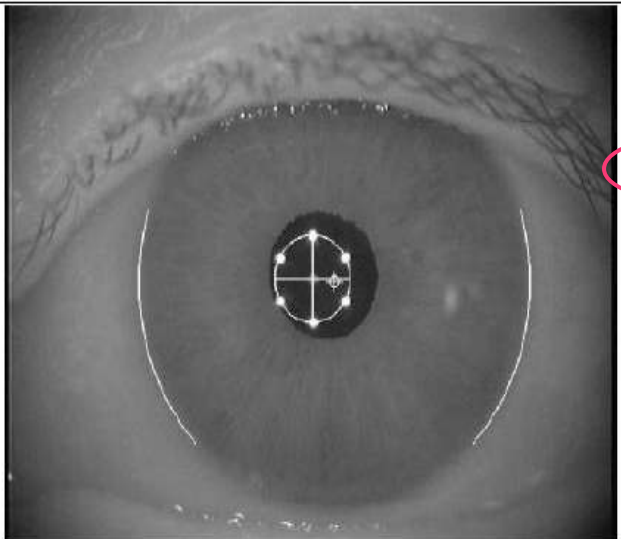
OD (right)		
K1: 43.44 D @ 91°	7.77 mm	
K2: 43.83 D @ 1°	7.70 mm	
Δ D: +0.39 D @ 1°		
K1: 43.32 D @ 89°	7.79 mm	
K2: 43.83 D @ 179°	7.70 mm	
Δ D: +0.51 D @ 179°		
K1: 43.44 D @ 91°	7.77 mm <	
K2: 44.06 D @ 1°	7.66 mm	
Δ D: +0.62 D @ 1°		
n: 1.3375		

Display and printout indicate obscured spots to warn user that data may be inaccurate.

White-to-White Printout Detail

Name: B., Anne	Date of Birth: 01.01.1911	
ID: 005	Exam Date: 23.05.2005	

	OD
	WTW : 11.6 mm
	Fp x: +0.6 mm Fp y: +0.1 mm

	OS
	WTW : 11.7 mm
	Fp x: -0.6 mm Fp y: +0.1 mm

Patient Data

Horizontal diameter of the iris (white to white)

Derivation of the visual axis from the center of the iris

Measurement Printout -SW Versions 3 and 4-

Patient Information

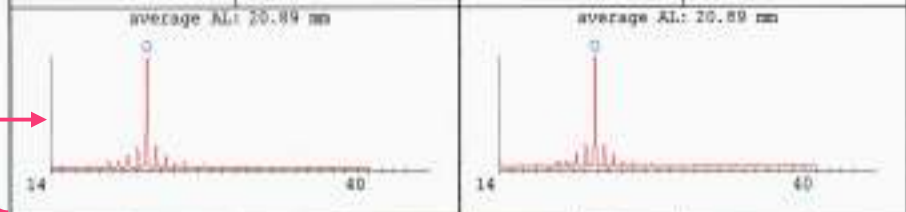
Name: <u>Smith, Snuffy</u>	Date of Birth: <u>01/01/1955</u>	
ID: <u>123ABC</u>	Exam Date: <u>02/03/2005</u>	

>< indicates printed graph (default: graph with highest SNR)

OD (right)		axial length values				OS (left)	
AL	SNR	AL	SNR	AL	SNR	AL	SNR
20.89 mm	17.6	20.89 mm	20.8	20.89 mm	20.8	20.89 mm	20.8
> 20.88 mm <	16.3	20.89 mm	19.5	20.89 mm	19.1	20.89 mm	17.9
20.89 mm	20.0	20.89 mm	18.0	20.89 mm	18.0	20.89 mm	18.0
20.88 mm	19.7						
20.89 mm	20.4						
				> 20.88 mm <	23.5		

Axial Length

Single measurement signal graph (red)



Keratometry



< indicates K used for calculation

OD (right)		corneal curvature values				OS (left)	
K: 47.01 D	7.18 mm					K: 47.07 D	7.17 mm
Error 1		×	○			Error 1	○ ×
		○	○				○ ○
K: 47.01 D	7.18 mm <					K: 47.07 D	7.17 mm <
n: 1.3375						n: 1.3375	

Anterior Chamber Depth

OD (right)		anterior chamber depth values				OS (left)	
3.17 mm	3.17 mm	3.17 mm	3.17 mm	3.17 mm	3.23 mm	3.24 mm	3.24 mm
ACD: 3.17 mm					ACD: 3.23 mm		

White to White

OD (right)		white to white values				OS (left)	
	WTW: 13.0 mm <						WTW: 13.0 mm <
	Ep: xi+0.3mm yi+0.1 mm						Ep: xi+0.6mm yi+0.5 mm

Surgeon's Remarks

Remark: Type any remarks here to be maximized with patient record and printed out on measurement and IOL Power calculation results

Representation of actual camera image

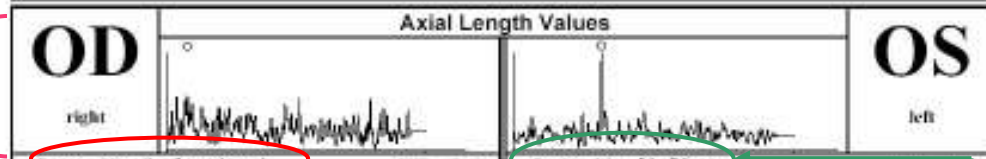
Measurement Printout -SW Version 5.02/5.2.1-

Clinic Name - Adress - City - Country

Name: Smith, Snuffy		
ID:	plano:	
Date of Birth: 01.01.1955	n: 1.3375	
Exam Date: 22.01.2008		

The AL- readings should be checked for plausibility, as there might be pathological changes.

Composite signal graph



Average K

OD		OS	
AL	SNR	AL	SNR
Error		Error	
Error		Error	
Error		Error	
Error		Error	
Error		Error	
Error		Error	
Error		Error	
Error		Error	

Flattest K

OD				OS			
Avg [mm]: 43.72/45.92		D SD: 0.01 mm		Avg [mm]: 43.44/45.98		D SD: 0.00 mm	
K1: 43.77 D @ 104°	7.19 mm	K1: 43.44 D @ 91°	7.16 mm	K2: 45.98 D @ 171°	7.34 mm		
K2: 45.98 D @ 34°	7.34 mm	K3: 43.98 D @ 172°	7.34 mm				
Ax: -2.23 D @ 104°		Ax: -2.48 D @ 83°					
K3: 43.72 D @ 101°	7.32 mm	K4: 43.44 D @ 82°	7.17 mm				
K4: 45.92 D @ 31°	7.35 mm	K5: 45.98 D @ 172°	7.34 mm				
Ax: -2.20 D @ 101°		Ax: -2.54 D @ 83°					
K5: 43.72 D @ 102°	7.32 mm	K6: 43.44 D @ 81°	7.17 mm				
K6: 45.92 D @ 32°	7.35 mm	K7: 46.04 D @ 171°	7.33 mm				
Ax: -2.20 D @ 102°		Ax: -2.48 D @ 81°					

Steepest K

Cylinder

Anterior Chamber Depth Values

ACD: 2.51 mm				ACD: 2.30 mm			
2.50 mm	2.52 mm	2.50 mm	2.52 mm	2.30 mm	2.30 mm	2.30 mm	2.28 mm

White to White Values

	WTW: 12.1 mm	WTW: 11.9 mm	
	Ep: 0.42 mm vt: 0.0 mm	Ep: 0.5 mm vt: 0.8 mm	

(* = Changed manually, ! = Borderline Value)

The systems alerts that there is not any readings (i.e. very dense cataract)

This is a valid reading with version 5.02/5.2.1 (composite)

IOL Power Calculation Printout


-SW Version 5.02/5.2.1-

Standard deviation Target refraction

Name: **B., Anne**
 ID: 005
 Date of Birth: 01.01.1911
 Exam Date: 23.05.2005

Eye Surgeon: Dr. Meier
 Formula: Haigis-L
 n: 1.3375

Valid for myopic LASIK/LASEK/PRK only! Do not use after RK or hyperopic treatments!



Preoperative Data:
 AL: 22.82 mm (SD = 0.02 mm, SNR = 13.4)
 K1: 42.99 D / 7.85 mm @ 160°
 K2: 43.38 D / 7.78 mm @ 70°
 SE: 43.19 D
 Cyl.: -0.39 D @ 160°
 R: 7.81 mm (SD = 0.00 mm)

Target Ref.: 0.0 D
 opt. ACD: 2.88 mm

Visual Acuity: 20/100
 Refraction: +2.25 D -1.00 D x 10°
 Eye Status: phakic

OD
right

IOLtech Haptibag		Allergan AR40E		Allergan ClariFlex		Alcon SA60AT	
ACD Const:	5.09	ACD Const:	5.21	ACD Const:	4.96	ACD Const:	5.21
A0 Const:	0.84	A0 Const:	1.06	A0 Const:	0.89	A0 Const:	0.092
A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.271
A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.163

IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)
25.5	-1.07	26.0	-1.07	25.5	-0.98	26.5	-1.27
25.0	-0.69	25.5	-0.69	25.0	-0.60	26.0	-0.89
24.5	-0.30	25.0	-0.31	24.5	-0.22	25.5	-0.52
24.0	0.07	24.5	0.06	24.0	0.15	25.0	-0.15
23.5	0.45	24.0	0.43	23.5	0.52	24.5	0.22
23.0	0.81	23.5	0.79	23.0	0.89	24.0	0.58
22.5	1.18	23.0	1.15	22.5	1.25	23.5	0.94

Preoperative Data:
 AL: 22.94 mm (SD = 0.03 mm, SNR = 16.4)
 K1: 42.99 D / 7.85 mm @ 22°
 K2: 43.49 D / 7.76 mm @ 112°
 SE: 43.24 D
 Cyl.: -0.50 D @ 22°
 R: 7.80 mm (SD = 0.03 mm)

Target Ref.: 0.0 D
 opt. ACD: 2.96 mm

Visual Acuity: 20/100
 Refraction: +2.50 D -0.75 D x 10°
 Eye Status: phakic

OS
left

IOLtech Haptibag		Allergan AR40E		Allergan ClariFlex		Alcon SA60AT	
ACD Const:	5.09	ACD Const:	5.21	ACD Const:	4.96	ACD Const:	5.21
A0 Const:	0.84	A0 Const:	1.06	A0 Const:	0.89	A0 Const:	0.092
A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.271
A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.163

IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)
25.0	-1.02	25.5	-1.02	25.5	-1.32	26.0	-1.24
24.5	-0.64	25.0	-0.64	25.0	-0.93	25.5	-0.86
24.0	-0.26	24.5	-0.27	24.5	-0.55	25.0	-0.48
23.5	0.12	24.0	0.10	24.0	-0.17	24.5	-0.11
23.0	0.49	23.5	0.46	23.5	0.20	24.0	0.25
22.5	0.86	23.0	0.83	23.0	0.57	23.5	0.61
22.0	1.22	22.5	1.18	22.5	0.93	23.0	0.97

Flattest meridian
 Steepest meridian
 Spheric equivalents
 Cylinder with axis
 Bold number is closest power to target refraction

Preoperative Data (right eye)
 Axial length settings
 Selected IOL
 Lens constants for selected formula (Haigis here)
 IOL power and predicted refraction

Measurement Printout

-SW Version 5.4-

Clinic Name - Adress - City - Country

Name: Smith, Snuffy		ZEISS	
ID:		plano:	
Date of Birth: 01.01.1955		n: 1.3375	
Exam Date: 22.01.2008			

The AL- readings should be checked for plausibility, as there might be pathological changes.

OD				OS			
right				left			
Comp. AL: Evaluation !				Comp. AL: 21.74 mm			
AL	SNR	AL	SNR	AL	SNR	AL	SNR

Corneal Curvature Values			
Avg [mm]: 43.72/45.92		D SD: 0.01 mm	
K1: 43.77 D @ 104°	7.17 mm	K1: 43.44 D @ 82°	7.17 mm
K2: 45.98 D @ 14°	7.34 mm	K2: 45.98 D @ 171°	7.34 mm
Ax: -2.23 D @ 104°		Ax: -2.48 D @ 82°	
K1: 43.72 D @ 101°	7.17 mm	K1: 43.44 D @ 82°	7.17 mm
K2: 45.92 D @ 11°	7.35 mm	K2: 45.98 D @ 172°	7.34 mm
Ax: -2.20 D @ 101°		Ax: -2.54 D @ 82°	
K1: 43.72 D @ 102°	7.17 mm	K1: 43.44 D @ 81°	7.17 mm
K2: 45.92 D @ 12°	7.35 mm	K2: 46.04 D @ 171°	7.33 mm
Ax: -2.28 D @ 102°		Ax: -2.40 D @ 81°	

Anterior Chamber Depth Values			
ACD: 2.51 mm		ACD: 2.30 mm	
2.50 mm	2.52 mm	2.28 mm	2.29 mm

White to White Values			
WTR: 12.1 mm		WTR: 11.9 mm	
Ep. ax: 0.42 mm y: 0.0 mm		Ep. ax: 0.5 mm y: 0.6 mm	

(* = Changed manually, ! = Borderline Value)

Composite signal graph (points to OD and OS signal graphs)

Average K (points to the 'Avg [mm]' row in Corneal Curvature Values)

Flattest K (points to the K1 row in Corneal Curvature Values)

Steepest K (points to the K2 row in Corneal Curvature Values)

Cylinder (points to the Ax row in Corneal Curvature Values)

The systems alerts that there is not any readings (i.e. very dense cataract)

This is a valid reading with version 5.02/5.2.1 (composite)

IOL Power Calculation Printout

-SW Version 5.4-

Carl Zeiss Clinic - Jena - Germany

Name: **Example, Patient**
 ID:
 Date of Birth: 15.11.1964
 Exam Date: 25.10.2007
 Eye Surgeon: Dr. Smart

Formula: Haigis
 Target Ref.: 0.0 D
 n: 1.5575

The AL- readings should be checked for plausibility, as there might be pathological changes.

OD right **OS** left

AL: 26.65 mm (SNR = 355.4) AL: 26.29 mm (SNR = 117.2)
 K1: 40.71 D / 8.29 mm @ 1° K1: 40.76 D / 8.28 mm @ 173°
 K2: 42.78 D / 7.89 mm @ 91° K2: 42.29 D / 7.98 mm @ 83°
 R / SE: 8.09 mm (SD = 41.75 mm) R / SE: 8.13 mm (SD = 41.52 mm)
 Cyl: -2.07 D @ 1° Cyl: -1.53 D @ 173°
 opt. ACD: 3.88 mm opt. ACD: 3.76 mm

Eye Status: phakic Eye Status: phakic

Acrimed Acriflex 42CSE		Acritec 44S		Acrimed Acriflex 42CSE		Acritec 44S	
A0 Const:	1.44	A0 Const:	0.93	A0 Const:	1.44	A0 Const:	0.93
A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.40
A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.10
IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)
15.5	-1.00	15.0	-1.10	17.0	-1.15	16.0	-0.94
15.0	-0.65	14.5	-0.74	16.5	-0.80	15.5	-0.57
14.5	-0.30	14.0	-0.37	16.0	-0.45	15.0	-0.21
14.0	0.04	13.5	-0.02	15.5	-0.10	14.5	0.15
13.5	0.38	13.0	0.33	15.0	0.24	14.0	0.50
13.0	0.72	12.5	0.68	14.5	0.58	13.5	0.85
12.5	1.05	12.0	1.03	14.0	0.92	13.0	1.20
Emme. IOL: 14.06		Emme. IOL: 13.47		Emme. IOL: 15.36		Emme. IOL: 14.71	
IOLtech Hydromax		IOLtech Haptibag		IOLtech Hydromax		IOLtech Haptibag	
A0 Const:	1.55	A0 Const:	0.84	A0 Const:	1.55	A0 Const:	0.84
A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.40	A1 Const:	0.40
A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.10	A2 Const:	0.10
IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)
15.5	-0.90	15.0	-1.18	17.0	-1.04	16.0	-1.02
15.0	-0.55	14.5	-0.81	16.5	-0.69	15.5	-0.65
14.5	-0.21	14.0	-0.45	16.0	-0.34	15.0	-0.29
14.0	0.13	13.5	-0.09	15.5	0.00	14.5	0.07
13.5	0.47	13.0	0.27	15.0	0.34	14.0	0.43
13.0	0.80	12.5	0.62	14.5	0.68	13.5	0.78
12.5	1.13	12.0	0.97	14.0	1.01	13.0	1.13
Emme. IOL: 14.20		Emme. IOL: 13.37		Emme. IOL: 15.50		Emme. IOL: 14.60	

(* = Changed manually, ! = Borderline Value)