1.Uses of Instrument

This case is widely used not only in ophthalmology department of hospital、health stations of factory、school and countryside, but also in optometry room of spectacles store、health checkup of troops and mexdical treatment in countryside.Its purpose is to test the diopper of eyes, such as myopia、hype ropia、astigm atism presbyopia strabismus achromatopsia etc.

2.Operation Instruction

(1) .Trial Frame

Knobs of frame can be easily adjusted to fit the facial size of examinee.At most four pieces of trial lenses can be put on the trial frame in order to adjust the diopter.knobs at the sides of frame can change the axis location of trial lenses of cylinder and prism.There is a graduation mark on the frame.On the left of horizontal indicates 0° right 180°and longitudinal line shows 90°,knobs at the two edges of the frame can be adjusted the pupil interval. The upper-central knob is for adjusting the pad bridge.

(2). Trial Lens

<2-1>Spherical Lens

The curved surface of lens is a part of sphere.Since the refraction of each axis location is equal,the light beam focuses on one real focus (or one virtual focus)when it passes through spherical lens.Concave (-)and convex(+) spherical lens are quite different in correcting the ametropia.Concave is for myopia and convex is for hyperopia and presbyopia.

<2-2>Cylindric Lens

The curved surface of lens is a part of cylinder.Since the refraction of each axis location is not equal,the light beam focuses on one straight line(or imaginary line)when it passes through cylindric lens.ther are two kinds of cylindric lenses.Concave(-) and convex(+)cylindric lenses are used to correct astigmatism.

<2-3>Prismy Lens

The section of prismy lens looks like a wedge.So the light is refracted towards lens bottom surface when it passes through. The image moves to the tip of prismy lens.This is used to test and exercise the strength of ocular muscles.Also in the correctness and examination of strabismus or hidden strabismus.

<2-4>Dark Lens

A covering lens through which light beam can not pass.Generally it is used to cover the eye which is not being examined in darkroom.

<2-5>Frosted Lens

A covering lens through which half of light beam can pass.Mostly used with children or put into operation outdoors instead of dark lens.

<2-6>Hole Lens

There is a little hole in the center of the lens.When light beam passes through,a man-made little pupil is formed.People with ametropia, especially astigmatism will have a better vision after wearing this lens.

<2-7>Crack Lens

There is a crack on the lens. The light beam can not pass through the area which has not the crack.This lens is used to examine astigmatism.Move lens before eyes, if you don't feel any change with your vision,that shows you are with no astigmatism.Otherwise you are with astigmatism.

<2-8>Colorless Lens

A transparent plain lens.It does but refract the light beam This is used to examine false achromatopsia.

<2-9>Color Lens

This kind of lens has quite a few colors such as red、green、blue、yellow and dark-brown.In the field of examination of color vision this is widely used.Red or green lens will help you understand more about people with refractive haze(such as cataract) in vision function.In addition,it also can be used to examine double vision and achromat-opsia etc.

<2-10> Lens of Cross Cylinder

The lens has two opposite axial refractions.This lens is used to correct the strength and axial of cylindric lens for astigmatism.Put the lens of cross cylinder before the cylindric lens used in order to make their axials coincide.Then reverse the lens of cross cylinder to make sure that the axial angle has turn to 90°. During the period,Please observe if there is a change in vision; if no change,that cylindric lens used is fit.Or adjust the strength of cylindric lens.When correct the axial,you should put two axises of lens of cross cylinder 45°at the left or right of the first axial of cylindric lens used. Then reverse to watch if there is any diffrence in vision.If there is a better vision at one place, please remove the cylindric lens so as to let the axial coincide with the axial of lens of cross cylinder. With this method,it will show the cylindric lens lies at the fittest place when you get the same vision effect.

<2-11>Wicker Lens

There is a row of glass rod on the surface of the lens. Light beam which looks like dots passes through the lens and is refracted to a line. Between this line and axial of glass rod a right angle is formed. This lens is used to test the strength of ocular muscles and examine the strabismus or hidden strabismus. Put wicker lens before one eye and the other notice the light dot ahead. The light dot of examinee with normal sight should fall on the line of wicker lens. If the light dot locates at the left and right of the line, we call it horizontal strabismus or hidden strabismus. If the light dot locates at the up and down of the line, we call it vertical strabismus or hidden strabismus. At last, use the prismy lens to correct the light dot and make it coincide with the line.The reading degree of prismy lens is the degree of strabismus or hidden strabismus.

Notes:Generally, a trial frame at most bears three pieces of lens for use.(One cylinder and one prismy)

3.Maintenance

Trial Lens Case has been inspected strictly. The product is up to standard.

Notice:(1)Maintain with care (2) Avoid damp (keep dry) (3) In operating use absorbent cotton with alcohol or ethyl alcohol of no water to rub the lens softly in order to avoid marks being leaved on the lens.(4)After operating, use cotton flannel to rub softly. Keep it dry clean and tidy.(5) lt is important to pick up qualified trial frame. For unqualified trial frame will easily break the lens.

SMC 266 Lens List

Spherical Lens								Cylindric Lens								Prismy Lens		Subsidiary Lens	
Hyperopia(+)				Myopia(-)				Hyperopia(+)				Myopia(-)							
Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Name	Number
0.25	2	5.25	2	0.25	2	5.25	2	0.25	2			0.25	2			0.50	2	Red Lens	1
0.50	2	5.50	2	0.50	2	5.50	2	0.50	2			0.50	2			1.00	2	Gree Lens	1
0.75	2	5.75	2	0.75	2	5.75	2	0.75	2			0.75	2			2.00	2	Dark Lens	1
1.00	2	6.00	2	1.00	2	6.00	2	1.00	2			1.00	2			3.00	2	White Lens	1
1.25	2	6.50	2	1.25	2	6.50	2	1.25	2			1.25	2			4.00	2	Wicker Lens	1
1.50	2	7.00	2	1.50	2	7.00	2	1.50	2			1.50	2			5.00	1	Frosted Lens	1
1.75	2	7.50	2	1.75	2	7.50	2	1.75	2			1.75	2			6.00	1	Intersecing Lens	1
2.00	2	8.00	2	2.00	2	8.00	2	2.00	2			2.00	2			8.00	1	Hole Lens	1
2.25	2	8.50	2	2.25	2	8.50	2	2.25	2			2.25	2			10.00	1	Crack Lens	1
2.50	2	9.00	2	2.50	2	9.00	2	2.50	2			2.50	2					Polorizing Lens	1
2.75	2	9.50	2	2.75	2	9.50	2	2.75	2			2.75	2					Lens of Cross Cylinder	2
3.00	2	10.00	2	3.00	2	10.00	2	3.00	2			3.00	2						
3.25	2	11.00	2	3.25	2	11.00	2	3.25	2			3.25	2						
3.50	2	12.00	2	3.50	2	12.00	2	3.50	2			3.50	2						
3.75	2	13.00	2	3.75	2	13.00	2	3.75	2			3.75	2						
4.00	2	14.00	2	4.00	2	14.00	2	4.00	2			4.00	2						
4.25	2	15.00	2	4.25	2	15.00	2	4.50	2			4.50	2						
4.50	2	16.00	2	4.50	2	16.00	2	5.00	2			5.00	2						
4.75	2	18.00	2	4.75	2	18.00	2	5.50	2			5.50	2						
5.00	2	20.00	2	5.00	2	20.00	2	6.00	2			6.00	2						

SMC 232 Lens List

Spherical Lens								Cylindric Lens								Prismy Lens		Subsidiary Lens	
Hyperopia(+)				Myopia(-)				Hyperopia(+)				Myopia(-)							
Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Name	Number
0.12	2	5.50	2	0.12	2	5.50	2	0.12	2			0.12	2			0.50	2	Red Lens	1
0.25	2	6.00	2	0.25	2	6.00	2	0.25	2			0.25	2			1.00	2	Gree Lens	1
0.50	2	6.50	2	0.50	2	6.50	2	0.50	2			0.50	2			2.00	2	Dark Lens	1
0.75	2	7.00	2	0.75	2	7.00	2	0.75	2			0.75	2			3.00	1	White Lens	1
1.00	2	7.50	2	1.00	2	7.50	2	1.00	2			1.00	2			4.00	1	Wicker Lens	1
1.25	2	8.00	2	1.25	2	8.00	2	1.25	2			1.25	2			5.00	1	Frosted Lens	1
1.50	2	9.00	2	1.50	2	9.00	2	1.50	2			1.50	2			6.00	1	Intersecing Lens	1
1.75	2	10.00	2	1.75	2	10.00	2	1.75	2			1.75	2			8.00	1	Hole Lens	1
2.00	2	11.00	2	2.00	2	11.00	2	2.00	2			2.00	2			10.00	1	Crack Lens	1
2.25	2	12.00	2	2.25	2	12.00	2	2.25	2			2.25	2					Polorizing Lens	1
2.50	2	13.00	2	2.50	2	13.00	2	2.50	2			2.50	2					Lens of Cross Cylinder	2
2.75	2	14.00	2	2.75	2	14.00	2	2.75	2			2.75	2						
3.00	2	15.00	2	3.00	2	15.00	2	3.00	2			3.00	2						
3.25	2	16.00	2	3.25	2	16.00	2	3.50	2			3.50	2						
3.50	2	18.00	2	3.50	2	18.00	2	4.00	2			4.00	2						
3.75	2	20.00	2	3.75	2	20.00	2	5.00	2			5.00	2						
4.00	2			4.00	2			6.00	2			6.00	2						
4.50	2			4.50	2														
5.00	2			5.00	2														

SMC 158 Lens List

Spherical Lens								Cylindric Lens								Prismy Lens		Subsidiary Lens	
Hyperopia(+)				Myopia(-)				Hyperopia(+)				Myopia(-)							
Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Name	Number
0.25	2	4.00	2	0.25	2	4.00	2	0.25	2			0.25	2			0.50	1	Dark Lens	1
0.50	2	4.50	2	0.50	2	4.50	2	0.50	2			0.50	2			1.00	1	Red Lens	1
0.75	2	5.00	2	0.75	2	5.00	2	0.75	2			0.75	2			2.00	1	Gree Lens	1
1.00	2	6.00	2	1.00	2	6.00	2	1.00	2			1.00	2					Hole Lens	1
1.25	2	7.00	2	1.25	2	7.00	2	1.25	2			1.25	2					Crack Lens	1
1.50	2	8.00	2	1.50	2	8.00	2	1.50	2			1.50	2					Frosted Lens	1
1.75	2	9.00	2	1.75	2	9.00	2	1.75	2			1.75	2					Lens of Cross Cylinder	1
2.00	2	10.00	2	2.00	2	10.00	2	2.00	2			2.00	2						
2.25	2	11.00	2	2.25	2	11.00	2	2.50	2			2.50	2						
2.50	2	12.00	2	2.50	2	12.00	2	3.00	2			3.00	2						
2.75	2			2.75	2			3.50	2			3.50	2						
3.00	2			3.00	2			4.00	2			4.00	2						
3.25	2			3.25	2														
3.50	2			3.50	2														
3.75	2			3.75	2														

SMC 104 Lens List

Spherical Lens								Cylindric Lens								Prismy Lens		Subsidiary Lens	
Hyperopia(+)				Myopia(-)				Hyperopia(+)				Myopia(-)							
Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Degree	Number	Name	Number
0.50	2	11.00	2	0.50	2	11.00	2	0.25	2			0.25	2			0.50	1	Dark Lens	1
1.00	2	12.00	2	1.00	2	12.00	2	0.50	2			0.50	2			1.00	1	Red Lens	1
1.50	2	14.00	2	1.50	2	14.00	2	0.75	2			0.75	2					Gree Lens	1
2.00	2			2.00	2			1.00	2			1.00	2					Hole Lens	1
2.50	2			2.50	2			2.00	2			2.00	2					Crack Lens	1
3.00	2			3.00	2			3.00	1			3.00	1					Frosted Lens	1
3.50	2			3.50	2			4.00	1			4.00	1						
4.00	2			4.00	2														
4.50	2			4.50	2														
5.00	2			5.00	2														
6.00	2			6.00	2														
7.00	2			7.00	2														
8.00	2			8.00	2														
9.00	2			9.00	2														
10.00	2			10.00	2														