

On Spot INSTRUMENTS



Near Vision Tester

Manual

NV-100

1 Summary of tests

The NV-100 near vision tester enables a complete refractive and binocular vision investigation to be carried out with the head and eyes in their normal posture at any working distance.

The refractive test include:

- a. Measurement of visual acuity using Snellen letter and illiterate E-chart, and Times Roman reading types.
- b. Accurate determination of presbyopic additions and other near corrections.
- c. Near vision astigmatism tests.
- d. Amplitude of accommodation including monocular measurement under binocular conditions.

The Binocular balance tests include:

1. Fixation disparity test for uncompensated heterophoria motor eye dominance. Accommodation-convergence relationship.
2. Quantitative evaluation of foveal suppression in heterophoria patients.
3. Near point of convergence.
4. Targets for subjective cover tests for heterophoria and harmonious ARC.

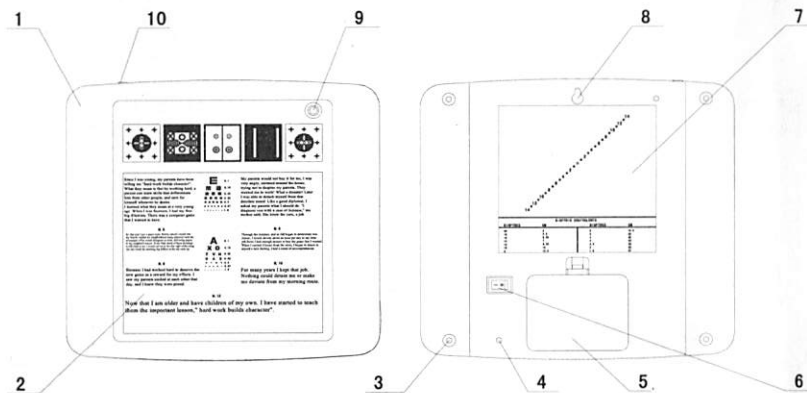
A centimeter ruler for measuring working and testing distance is included.

The chart can be illuminated individually by means of an infra red remote controller.

2 Component

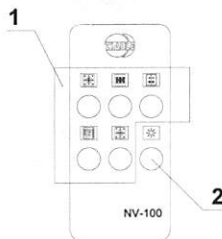
The NV-100 near vision tester has three parts. They are Main Body, remote controller and the polarized filter.

2.1 Main body



- 1 front cover
- 2 charts (refer to chapter 4.)
- 3 screws
- 4 sensor
- 5 battery cover
- 6 switch
- 7 distance-dioptre conversion table
- 8 rear cover
- 9 tape
- 10 manual switch (turns on the chart one by one)

2.2 Remote controller



- 1 chart buttons
- 2 power switch (turn on the LED light on the rear of the NV-100)

2.3 Polarized filter



Make sure that each eye can only see one part of the chart though the polarized filter.

	chart	Left	right
1			
2			
3			
4			
5			

3 Set up

NV-100 is held by hands when using.

NV-100 is powered by three AAA batteries. When installing the batteries, please pay attention to the electrode-mark on the battery box.

When taking out the batteries, picking the middle one first will make the process easy.

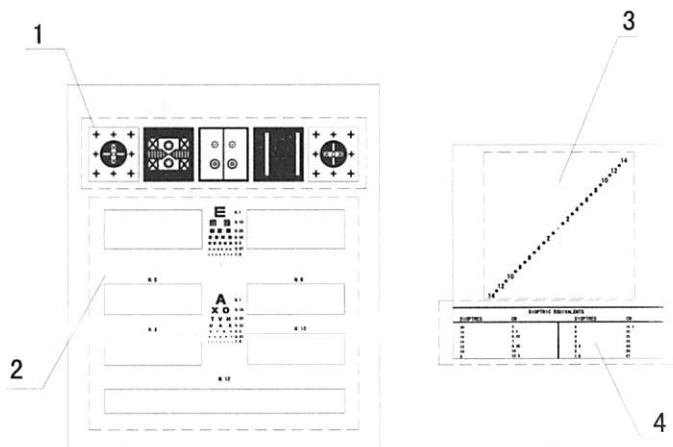
The charts are design at the distance of 36cm.

4 Usage

CAUTION:

1. Don't press the front panel when using.
2. Make sure that the film has been drawn out before the remote control is using.






NV-100 has four kinds of charts.



1、 polarized charts 2、 Vision chars 3、 Tangent scale and spotlight 4、 Distance-dioptre conversion table

4.1 Polarized charts











When you press the buttons on the controller, the polarized charts will be illuminated one by one.

	Charts	use
1		Fixation disparity test
2		Cross-Cylinder and Balance test
3		Bichromatic Test (not polarized)
4		Foveal Suppression Test
5		Fixation disparity test

Note: Please refer to the concerned medical books for more detail.

4.2 Vision charts

Snellen chart and E-chart

	0.1		0.1
	0.15		0.15
	0.25		0.25
	0.33		0.33
	0.5		0.5
	0.67		0.67
	1.0		1.0

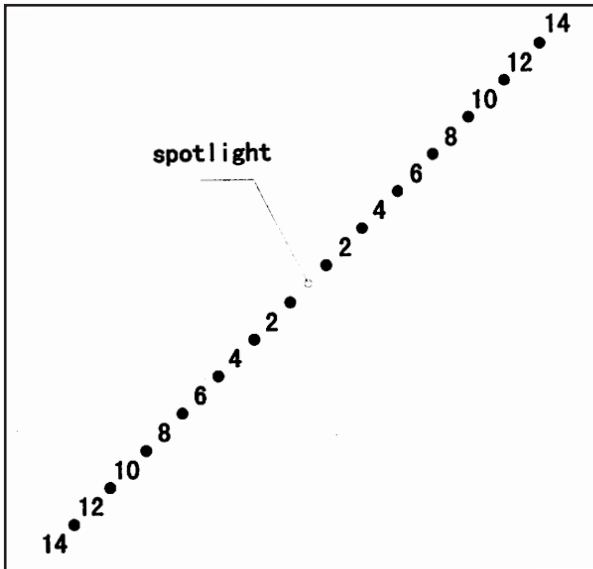
Times New Roman Reading types.

N.12

Now that I am older and have children of my own. I have started to teach them the important lesson: "hard work builds character"

**On
Spot**

4.3 Tangent scale and spotlight



This target (at the rear of the unit) provides a light source for use with striated lenses, and a tangent scale for the after-image diagnosis of eccentric fixation. The scale is graduated in prism diopter for use at 36cm.

4.4 Distance-dioptre conversion table

Dioptic Equivalents

Dioptres	CM	Dioptres	CM
20	5	6	16.5
18	5.5	5	20
16	6.25	4	25
14	7	3	33
12	8.25	2.5	40
10	10	2	50
8	12.5	1.5	67