![TOPCON logo]

*Visi*Chart™

USER'S MANUAL

Table of Contents

System Components

- VisiChart all-in-one system
- Remote Control
- Infrared Detector
- USB Keyboard
- USB Mouse
- Power cable
- Wall Mount Adapter Plate
- Wall Mounting Bracket & Hardware
- Mouse Pad
- Users manual
- Two AAA Batteries

Mounting the VisiChart

Direct View – When mounting the VisiChart directly in front of the patient, the center of the monitor should be approximately 54" off the floor and centered in front of the patient sitting in the exam chair. Recommended minimum direct view distance from patient is 3 meters. (Approximately 10 feet)

Mirrored View – When mounting the VisiChart behind the patient and using a mirror to increase the total refraction distance, the center of the VisiChart should be located 78" off the floor and 18" from the center of the chair, opposite the stand, so that the near-rod does not interfere with the image presented in the mirror.

Electrical: It is recommended that a standard electrical outlet is installed behind the VisiChart for best appearance, however the VisiChart can be plugged into any outlet within five feet of the mounting location.

Remote Control Sensor: Plug the USB connector into any USB port on the side of the VisiChart. Attach the sensor to the VisiChart with the enclosed Velcro pad to any location facing into the exam room. Bundle and conceal the cable behind the VisiChart. Note: The use of fluorescent lighting in the exam room will decrease the sensitivity of the remote control. Incandescent lighting during VisiChart use is recommended.

Wall mounting the VisiChart

1. Remove the silver plastic cover on the rear of the VisiChart to expose the screws which attach the table mount base. (Figure 1)

2. Loosen the four M4 Phillips screws and remove the hinge and base. (Figure 2)

3. Using the M4 screws, attach the wall mount adapter plate. (Figure 3)

4. Tighten the four screws securely. (Figure 4)

5. Installation of the wall mount adapter plate is now complete. (Figure 5)

Note: For the wall mount bracket installation, a qualified installer should follow the instructions which are included with the bracket.
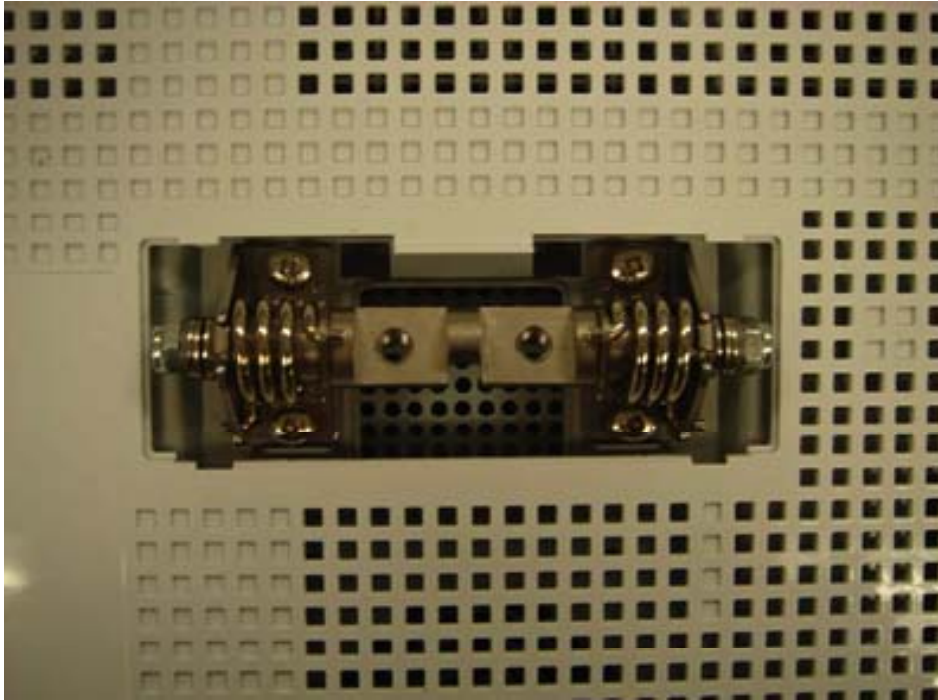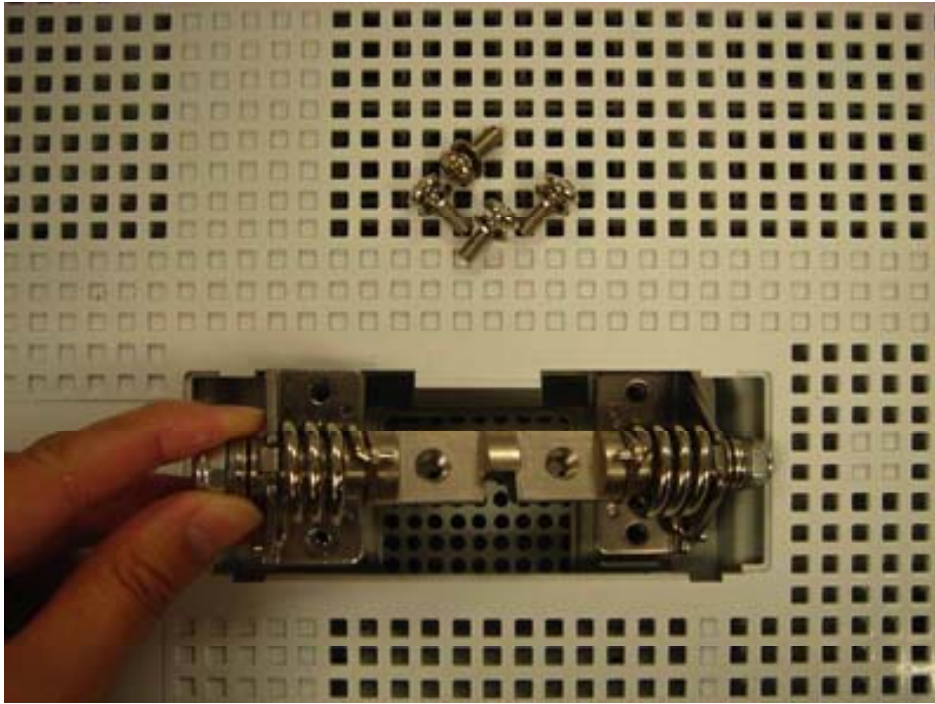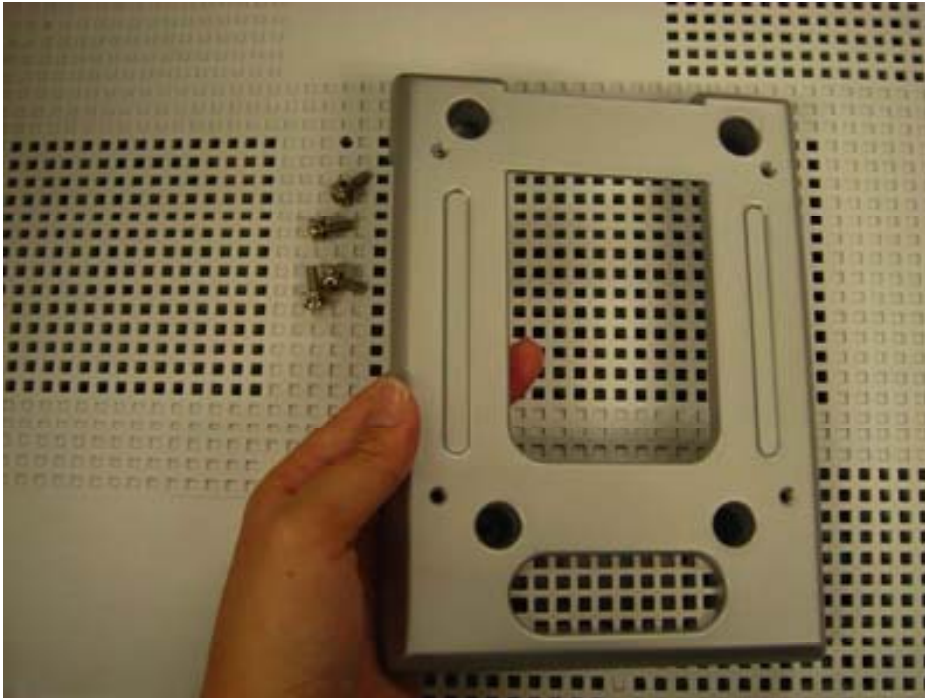
Figure 1

Figure 2

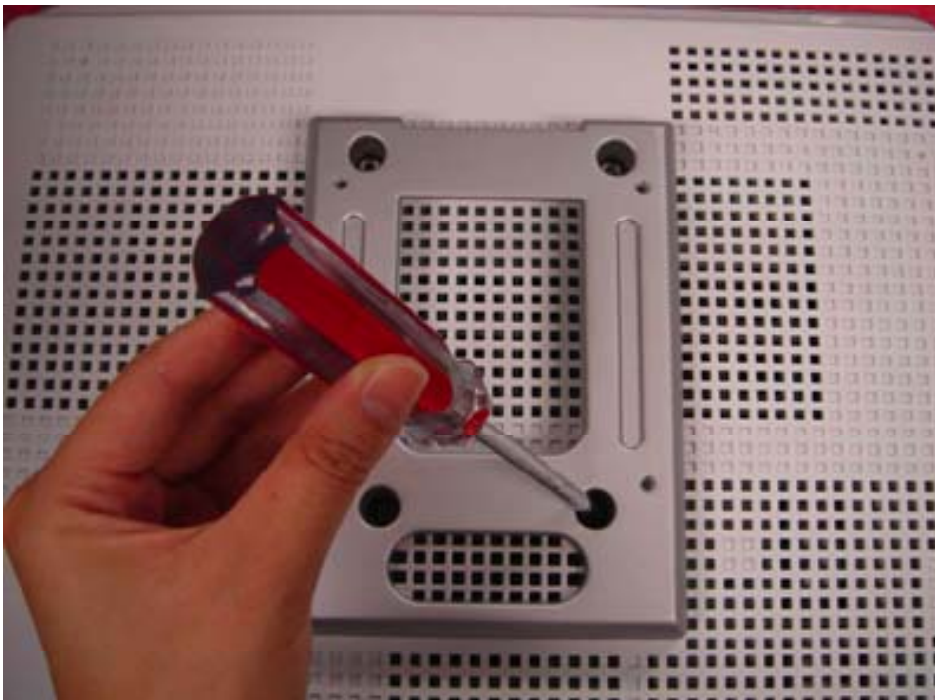**Figure 3**

Figure 4

Figure 5
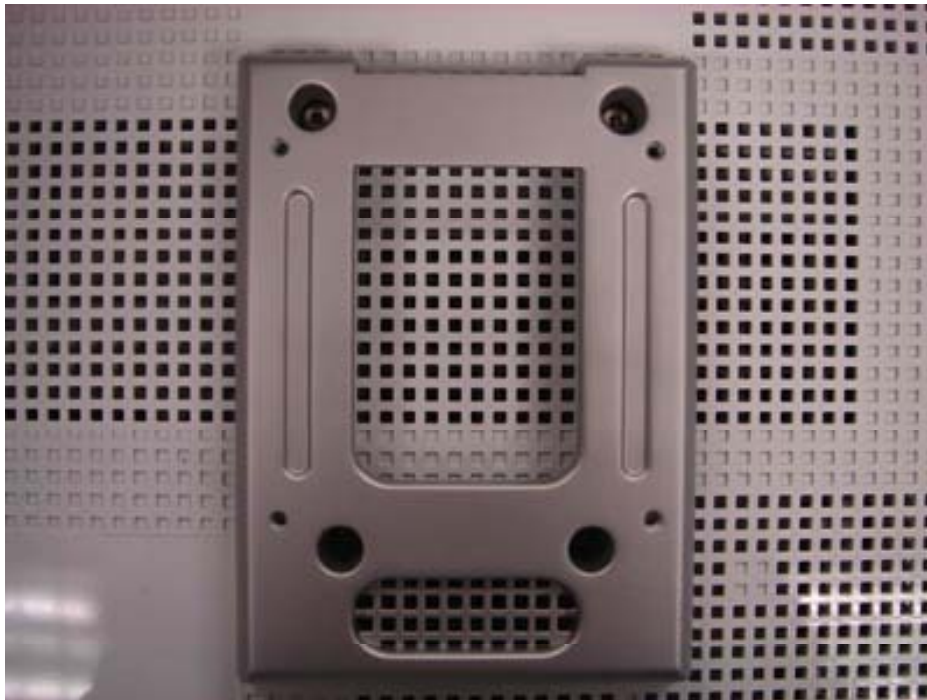
VisiChart Features

Charts

- Snellen
- HOTV
- Numbers
- Allen Pictures
- Tumbling E's
- ETDRS Charts
- Contrast

Isolations

- Horizontal Line
- Vertical Line
- Single Character
- Three Lines Same Size
- Pointer for Horizontal and Vertical Lines

Additional Features

- Customizable Test Sequence
- Red/Green Duochrome available for all charts
- White Optotypes on Black Background available for all charts
- Worth 4 Dot Test
- Single Fixation Dot
- Full Randomization of all charts
- Black Screen
- Corner Size Indicator
- Astigmatic Dials and Fixation Disparity
- Cycle Timer for hands-free randomization
- Fixation Animation
- Size buttons for 20/10 – 20/400

Turning the VisiChart On

1. To turn the VisiChart on and begin testing press the power switch on the front of the system

2. VisiChart will automatically launch to the Snellen Chart

Turning the VisiChart Off

1. Exit VisiChart by pressing ALT + BLACK on the remote control

2. VisiChart will exit to Microsoft Windows

3. Press the power switch on the front of the system and the system will power off

Configuring VisiChart

1. Plug the keyboard and mouse into the VisiChart before starting the system.
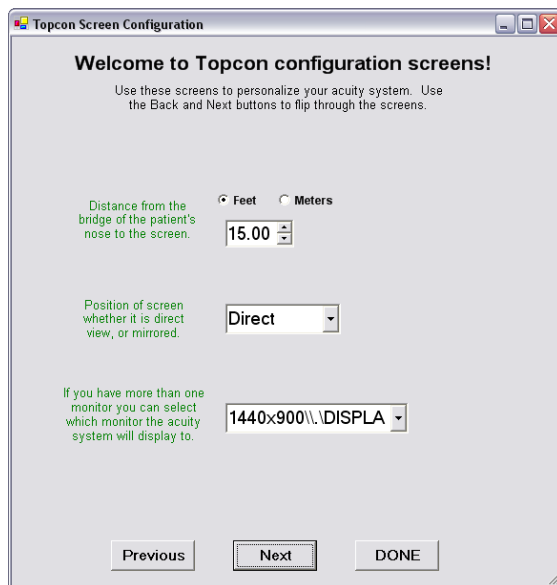
2. VisiChart will launch.

3. Press "?" on the keyboard to enter the configuration screens.

4. Set the distance, measuring from the bridge of the nose to the VisiChart. With a mirrored room, measure from nose to mirror and the mirror to the VisiChart, adding these numbers.

5. Set **Direct** or **Mirror.**

6. Click **Next**.
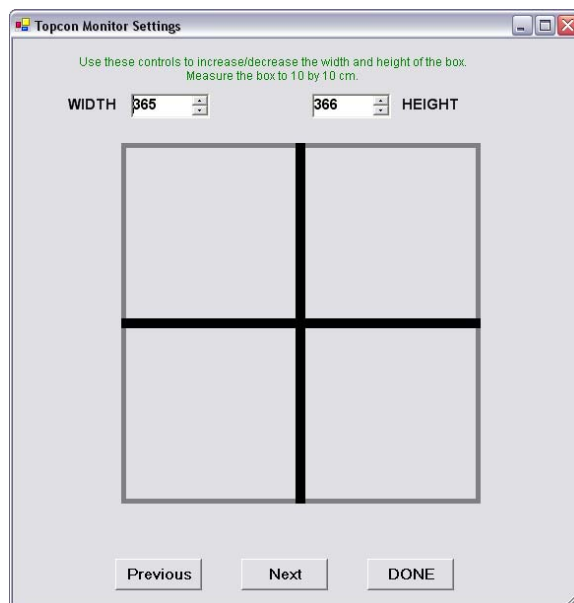
7. Set the 10 cm by 10 cm square.

8. Click **Next.**

9. Set the **Black Screen Timer** if desired, the display will go to a black screen in the set number of minutes.

10. Set the **Random Letter Timer** if desired.

11. Set whether to **Show Screen Size** Note this can be toggled with ALT + W4D.

12. Set whether to use a Green or Blue Worth 4 Dot.

13. Click **Next.**

14. Optional – Click **Next** to continue without modifying the default chart options.

15. The Default Chart can be adjusted, changing the number of rows and number of optotypes shown per line.

16. Check **Always Random** to never show the default chart.

17. Using the **Select Opto Size here for settings** choose a line of the chart.

18. The **Number of lines displayed** and **Number of Characters per Line** as well as the **Default Characters** can now be set.

19. Repeat 17 and 18 for each line.

20. Click **Next** to continue.

21. Optional **Test Sequence (Protocol) Setup** – click **Next** if a customized sequence is not needed.

Protocol

Topcon Protocol: You can assign commands that run in sequence here. Select your opto size, letter type and function and then click add. Below will give you the command to start your protocol, after that you can use the up and down arrows to move up and down through the sequence.

Opto Size	Letter Type	Function	
20	Numbers	Chart	ADD

Snellen: Chart, Size = 20
Allen: Chart, Size = 20
Numbers: Chart, Size = 50

Remove command from series.
Delete

Use Move Up and Move Down to move the selected command in the box.

Move Up
Move Down

Start Protocol: MISC button

Previous   Next   DONE

22. Choose a **Size, Chart** and **Function** using the drop-down controls and click **Add.**

23. Continue adding charts.

24. By clicking on the newly added row, use **Move Up** and **Move Down** to order the list.

25. Use **Delete** to remove any item not needed.

26. When complete click **Next.**

27. The main calibration screen is again shown, click **Done.**

28. The VisiChart is now ready for use!

29. The Snellen Chart will be displayed.

VisiChart Remote Diagram

Topcon VisiChart Remote Control Functions

- **ALT**: See below

- **HOTV**: Charts displaying these letters only.

- **LTR**: Standard letter charts

- **NUM**: Standard number charts

- **Center Dial**:
  - Right/Left arrows randomize current chart.
  - Up/Down arrows scroll chart size

- **HLINE**: Single horizontal line (Current chart & size)

- **VLINE**: Single vertical line (Current chart & size)

- **3LINE**: Three lines, same size (Current chart & size)

- **400, 300, etc.**: Direct access to specific size chart size

- **W4D**: Worth four dot

- **DOT**: Single white dot

- **E**: Tumbling E's

- **PIC**: Allen Pictures

- **RG**: Displays Red/Green on any chart

- **CYC**: Randomizes at regular intervals

- **MISC**: Starts custom chart sequence. Use Up/Down arrows to scroll

- **ETDRS**: Standard ETDRS Chart

- **SGL**: Single optotype (Current chart & size)

- **BLACK**: Toggles black screen

- **Up/Down Arrows** (Both sides): Scroll chart size
- **Pointer**: (Round Button) Places a pointer next to optotype when in single line mode. Pointer can be moved using Up/Down arrows

ALT Key Combinations:
Press **ALT**, then press -
MISC = Various lesser used charts. Up/Down arrows to scroll.
BLACK = Exit VisiChart software to Windows.
W4D = Toggles on-screen size display of top line size.
HLINE = Toggles black to white optotypes on black or white background.
RG = Contrast Chart. Use Up/Down buttons to change contrast.
HOTV = Animated Fixation.

Note:
1. Pressing the same key again randomizes any chart currently displayed.
2. Current chart size represents top line shown on screen.

Using the VisiChart

VisiChart is controlled with the remote control. The chart below provides information on each function

Button	Function
ALT	Provides access to lesser used functions
HOTV	HOTV Chart
W4D	Worth 4 Dot Test
Dot	Fixation Dot
LTR	Snellen Letter Chart
NUM	Number Chart
E	Tumbling E Chart
PIC	Allen Pictures Chart
Round L & R	Randomize the current chart
Round U & D	Increase/Decrease chart size
RG	Red/Green Duochrome Chart
CYC	Randomize the chart every four seconds
MISC	Custom Chart Sequence
HLINE	Horizontal Line
VLINE	Vertical Line descending in size
3LINE	Three lines of same size
ETDRS	ETDRS Charts
SGL	Single Optotype
BLACK	Black Screen
Up/Down	Increase/Decrease Chart Size
Arrow	Add a pointer to the Horizontal or Vertical Line – use up/down to move
400 – 10	Directly set the top line of the chart or the horizontal line to be that size
	NOTE: For ALT functions, the ALT key should be pressed and released.
ALT - MISC	Astigmatic Dials and Fixation Disparity
ALT - BLACK	Exit VisiChart
ALT - W4D	Toggle the Corner Size Indicator
ALT - HLINE	Reverse the chart for white optotypes on black screen
ALT - RG	Contrast Line – Use Up/Down to increase/decrease contrast percentage
ALT - HOTV	Fixation Animation

Troubleshooting Procedures

The VisiChart troubleshooting section summarizes some common issues and possible areas to check to resolve the problem. If the matter is related to VisiChart operation, please refer to other sections of this User's Manual for detailed information on the operation, adjustment, and features of the VisiChart. If the issue cannot be resolved by using the trouble-shooting guide, a Topcon authorized customer service technician should be called upon for assistance.

Issue/Problem	Possible Solution
1. VisiChart does nothing (no power light or function)	1a. Check to see if the VisiChart is connected to the AC power source, and that the power source is live. 1c. Check cabling for damage.
2. VisiChart is ON, but does nothing (Black Screen, no function from remote control)	2a. Unplug and re-plug the IR sensor. 2b. Check remote control batteries. 2c. Press power button to restart system.
3. VisiChart is ON and displays a chart, but does not respond to remote control.	3a. Unplug and re-plug in IR sensor. 3b. Check remote control batteries. 3c. Press power button to restart system.
4. VisiChart begins to start, but an error during start-up occurs before displaying a chart.	4a. Press power button to restart system. 4b. Call Topcon customer service for assistance.
5. VisiChart begins to start, but a "keyboard not found" error during start-up occurs before displaying a chart.	5a. Verify that the IR sensor is firmly plugged into a USB port and restart the system by pressing the power button. 5b. Call Topcon customer service for assistance.

Hardware Specifications

Operating System
Windows® XP
Processor
Intel Pentium 4
Chipset
i945g chipset
Dimensions/ Weight
16.1"W x 13.9"H x 3.78"D (w/o stand)
16.1"W x 17"H x 8.5"D (w/stand)
25.5 lb (w/stand)
21.6 lb (w/o stand)
Memory
512k DDR2 SDRAM
Video
Integrated Intel GMA graphics
Display
17" SXGA LCD panel, 1280 x 1024
Storage
80GB 2.5" hard drive, DVD/CD-RW combo drive
Network Interface
Integrated Intel 10/100/1000 Gbit Ethernet
Wireless LAN
802.11b,g wireless LAN
Audio
2-Channel High-Definition audio, integrated 2x speakers
Expansion Slots
Two Type II slots, or one Type III PCMCIA slot
I/O Ports
Two PS/2 ports (keyboard/mouse)
Four USB 2.0 ports (4x on chassis)
One serial port
One parallel port
One RJ45
One VGA
Audio ports (Mic-in, Line-in, Line-out)
Power
Input: AC/100~240V (50/60Hz) 4.0A
Certification
FCC, CE, UL