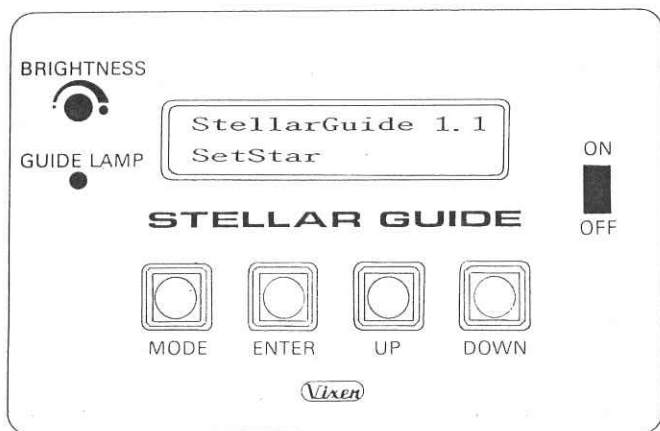




STELLAR GUIDE

ENCODER DISPLAY UNIT

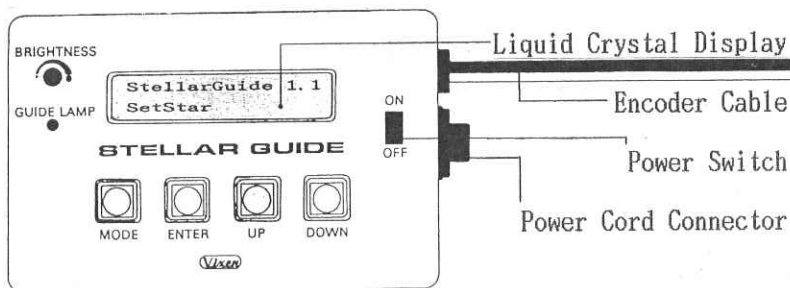
☆☆☆☆☆ Instruction Manual ☆☆☆☆☆



Major Functions of STELLAR GUIDE

- (1) The STELLAR GUIDE assists you in searching for celestial objects you want to observe. Search of celestial objects can be made speedily by moving your telescope by hand.
- (2) It displays the right ascension (R.A.) and declination (Decl.) of the direction to which the telescope is pointing.
- (3) It displays the R.A., Decl., classification and magnitude of the celestial object you have selected.
- (4) 800 celestial objects (Messier objects, main NGC objects, main fixed stars, 8 planets and your registered 10 objects) are stored in the memory.
- (5) It has a stopwatch function.
- (6) Liquid crystal display with 2 lines of 16 digits, with adjustable illumination.
- (7) English and Japanese displays are available for selection.
- (8) It is usable in both the Northern and Southern Hemispheres.
- (9) It can be used with both the equatorial and alt-azimuth mounts.

Display Unit



Functions

- MODE** : If you press the "MODE" key, the mode currently entered will be cancelled and another mode will be displayed.

- ENTER : If you press the "ENTER" key, the displayed number, item or mode will be entered.
- UP : If you press the "UP" key, the displayed number, item or mode will be changed one after another.
- DOWN : If you press the "DOWN" key, the displayed number, item or mode will be changed one after another reversely.
- BRIGHTNESS : Illumination intensity can be adjusted. Use a screwdriver for adjustment.
- GUIDE LAMP : When searching for an object, the guide lamp goes on and off.
- POWER SWITCH: When switching on again, wait more than three seconds after switching off.

Modes

The STELLAR GUIDE has the following six modes.

(1) SET STAR MODE

This mode is to set the STELLAR GUIDE to an alignment star. Select one star from the stored 30 alignment stars in STELLAR GUIDE. (In case of an alt-azimuth mount, two alignment stars should be selected.) Move the telescope until the alignment star is centered in the field of view.

(2) CATALOG MODE

This mode allows you to select objects you want to observe from the stored objects.

(3) GUIDE MODE

This mode guides you to objects selected in the "Catalog Mode". The readout tells you how far and in what direction to move the telescope to center the object for which you are looking.

(4) ADJUST MODE

This mode allows you to improve accuracy to center the object for which you are looking. If the object is not centered in the field of view, press the "ENTER" key after centering it with slow-motion control handles or motor drive.

(5) STOPWATCH MODE

It can also be used as a stopwatch.

(6) SETUP MODE

This mode allows you to change the display language, the mount type or the coefficient of encoders, and to check the operations of encoders.

Connecting the Battery Box

Install six C-size batteries in the battery box. The batteries are not included in the unit. Use Alkaline batteries. After making sure that the power switch is off, connect a power cord to the power cord connector.

Connecting the Encoders

After installing the encoders on the mount, connect the R.A. and Decl. encoder cables to the R.A. and Decl. encoders respectively. (After installing the R.A. encoder, realign the polar axis scope correctly.)

R.A. Encoder Cable (BLACK color)

Decl. Encoder Cable (SILVER color)

R.A. Encoder

Decl. Encoder

Using the STELLAR GUIDE with the equatorial mount
(GP or GP-DX mount)

1. Before Using

① Initial Setting

With the SETUP MODE, set the display language, the mount type and the coefficient of encoders, and check the operations of encoders first. As a backup memory is provided with the STELLAR GUIDE, it is not necessary to do the initial setting for the next use.

② Polar Alignment

Align the polar axis of your telescope accurately. If it is not aligned accurately, the object for which you are searching with the STELLAR GUIDE cannot be centered in the field of view.

2. Alignment Star Setting

① If you press the "ENTER" key when the readout displays [Set Star], [Set Star E or W? E] will be displayed. You are now in the SET STAR MODE, and are asked if the alignment star you will select is located at the east side or the west side to the meridian. If you press the "UP" key or the "DOWN" key, E and W will be displayed alternately at the right side of the lower line. If the alignment star is located at the east side to the meridian, display E. If it is at the west side, display W. Press the "ENTER" key, and the readout displays [Set Star Achernar].

② By pressing the "UP" key or the "DOWN" key, display the alignment star you have selected from the 30 alignment stars. Center the alignment star in the field of view of your telescope. Press the "ENTER" key again. The alignment star setting is now completed.

Note:

- (a) When centering the alignment star in the field of view, use a high-power eyepiece (more than 100 magnification).
- (b) Select the alignment star which can be seen keeping the counterweight below the telescope.

③ When the alignment star setting is completed, the SET STAR MODE will be automatically finished and the readout will display like the following:

14h15.7m +19° 11'
Catalog

The upper line of the readout shows the R.A. and Decl. of the direction to which the telescope is now pointing. If you move the telescope, the R.A. and Decl. display will be changed simultaneously. (If you move the telescope too fast, the STELLAR GUIDE may not read the encoders' signal correctly.)

3. Object Selection

An object can be centered in the field of your telescope by corresponding the R.A. and Decl. display to the coordinates of the object for which you are looking. The coordinates of each object can be found in the Star Data Table. With the CATALOG MODE and GUIDE MODE, you can also center the object easier in the field of view.

① When the readout displays [Catalog], press the "ENTER" key and you will be in the CATALOG MODE. The readout will display [Catalog Messier]. If you press the "UP" key or the "DOWN" key, the following will be displayed in turn.

[Catalog Messier]
[Catalog Star]
[Catalog User]
[Catalog Mercury]

[Catalog Venurs]
 [Catalog Mars]
 [Catalog Jupiter]
 [Catalog Saturn]
 [Catalog Uranus]
 [Catalog Neptune]
 [Catalog Pluto]

For instance, if you want to center M13 in the field of view, press the "ENTER" key while the readout displays [Catalog Messier]. The display will be changed to [Catalog M000], and the first "0" will begin to blink. If you press the "ENTER" key again, the next "0" will begin to blink. Press the "UP" key or the "DOWN" key until "1" is displayed. (The "UP" key is to increase the number displayed and the "DOWN" key is to decrease the number displayed.) If you press the "ENTER" key again, the last "0" will begin to blink. Press the "UP" key or the "DOWN" key until "3" is displayed. If you press the "ENTER" key again, the object selection will be completed and the following readout will be displayed.

M013 Her 1642+ 363
GlobCl 5.7 10'

The upper line shows "object name", "constellation" and "coordinates (R.A. and Decl.)". The lower line shows "object classification", "magnitude" and "object size".

② After completing the object selection, change the mode to the GUIDE MODE by pressing the "MODE" key. The readout will display [Guide].

4. Pointing

① While the readout displays [Guide], press the "ENTER" key. The readout will display like [Guide +32 -17]. The numbers displayed in the lower line indicate angles (in degree) to move the telescope to center the object you have selected. The left number is for the R.A. axis

and the right number is for the Decl. axis. Now, release the R.A. and Decl. clamps and move the telescope until the numbers are "0.0". When the values are greater than 10 degrees, the readout will display in whole degrees. Once you are within 10 degrees, the readout will display to one-tenth of a degree like [Guide +0.8 -0.5]. It is advisable to move the telescope with slow-motion control handles or motor drive when you get such a display. When the readout displays [Guide +0.0 -0.0], look through the telescope. The object will be centered in the field of view.

② If you want to select another object, press the "MODE" key to exit the GUIDE MODE. The readout will display [Catalog] again. Repeat the above-mentioned "Object Selection" and "Pointing" procedures.

- Note:
- (a) When centering the object in the field of view, use a low-power eyepiece (about 40 magnification).
 - (b) When pointing the telescope, the numbers can be "0.0" at two telescope positions. One position is when the telescope is above the counterweight and the other position is when the telescope is below the counterweight. Point the telescope keeping it above the counterweight.
 - (c) If you cannot make the numbers "0.0" in the readout, look through the telescope by setting the numbers to "+0.1" or "-0.1".
 - (d) When entering the GUIDE MODE, the guide lamp begins to go on and off at intervals of 1.5 seconds. If you get closer to the object, it will go on and off faster. When both the numbers are within ± 0.5 , it goes on lighting for 10 seconds and goes out.