

Equatorial Mount

Temma PC
Temma PC Jr.

INSTRUCTION MANUAL

TAKAHASHI

Thank you for your purchase of the Temma-PC/PCJr equatorial mount, into which a sophisticated go-to system is built. Before attempting any go-to operation, please read this instruction manual carefully, and familiarize yourself with every part and its functions. Then, you can enjoy a lifetime of comfortable observation with the mount.

[Note]

This manual explains how to operate the Takahashi Temma-PC/PCJr Go-To System. Concerning how to operate Takahashi equatorial mounts mechanically, please refer to their own attached manuals.



WARNING

NEVER ATTEMPT TO LOOK AT THE SUN DIRECTLY THROUGH THE TELESCOPE OR FINDER. DOING SO WILL CAUSE INSTANT BLINDNESS DUE TO THE INTENSE LIGHT AND HEAT OF THE SUN.



CAUTION

- When you attach the tube assembly onto the mount, do it very carefully so as not to drop it or pinch it. It could result in accidental pain.
- Do not set the mount in an unsteady place. Doing so may possibly cause the mount to fall down, resulting in injury.
- The counter-weight is rather heavy, so be careful not to injure yourself when setting it in place.
- Be careful not to be pinched by the clamps when tuning the mount.
- Do not use on rainy days. No water proofing is provided with the mount, so water may cause damage to the electronics. Dry it completely before using it.

Contents

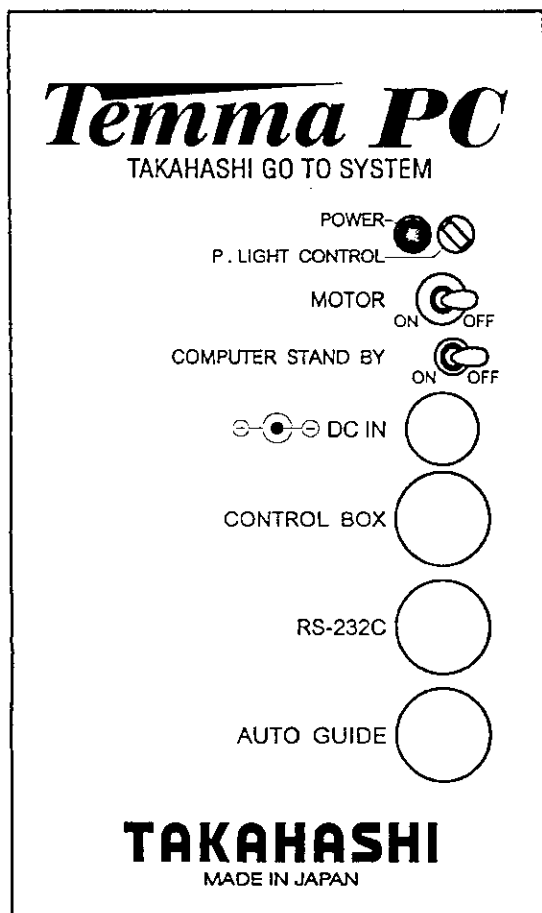
| | |
|-------------------------------------|--------|
| Warning & Cautions | Page 2 |
| Specifications | Page 3 |
| Layout of Control Panel | Page 4 |
| Control Box | Page 5 |
| Procedures for go-to operation | Page 6 |
| Cautions | Page 7 |

Specifications

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| Application : | EM-10 Temma-PCJr, EM-200 Temma-PCJr, EM-200 Temma-PC, EM-500 Temma-PC, NJP Temma-PC |
| Drive System : | Dual axes, quartz control Driving frequency: 50pps (60pps for EM-500) |
| Usable Area : | All over the world, but with limit for the latitude for some models |
| High Speed Drive : (DC24V IN) | RA: 400x (Jr: 150x) Dec: ± 6000 arc sec/sec (Jr: ± 2250 arc sec/sec) |
| High Speed Drive : (DC12V IN) | RA: 200x (Jr: 50x) Dec: ± 3000 arc sec/sec (Jr: ± 750 arc sec/sec) |
| Correcting speed : (manual operation) | RA: 0.1~1.9x to the sidereal rate by 0.1x increments Dec: $\pm 1.5 \sim 13.5$ arc sec/sec by 1.5 arc sec/sec increments |
| Power Source : | DC12V or DC24V DC12V: 200x manually (Jr: 50x) 200x go-to by a PC (Jr: 50x) DC24V: 400x manually (Jr: 150x) 400x go-to by a PC (Jr: 150x) |
| Power Consumption : | 0.7~2.5A up to the go-to mount |
| Go-To Operation : | By a PC |
| Go-To Disc : | Takahashi TT2000 |
| Accessory : | RS232C cable |

Layout of the Control Panel

◆ Control Panel



Power:

When the power switch and the Computer Stand By switch are flipped at the ON position, the power light turns orange. When the Computer Standby switch only is flipped to the ON position, the light turns green. When both switches are off, the light turns off.

P-Light Control:

The brightness of the illuminator can be adjusted by turning the P-light set screw.

Motor:

Power switch for driving the motors. Connect the motor cable and then turn the switch on.

Computer Stand By:

This is the switch that can memorize the current position of the mount when the motor is turned off. Before starting observation, turn the Computer Stand By switch on and then flip the motor switch to the ON position.

DC IN:

Power connector for 12V DC or 24V DC power source.

Control Box:

Hand control box connector receptacle.

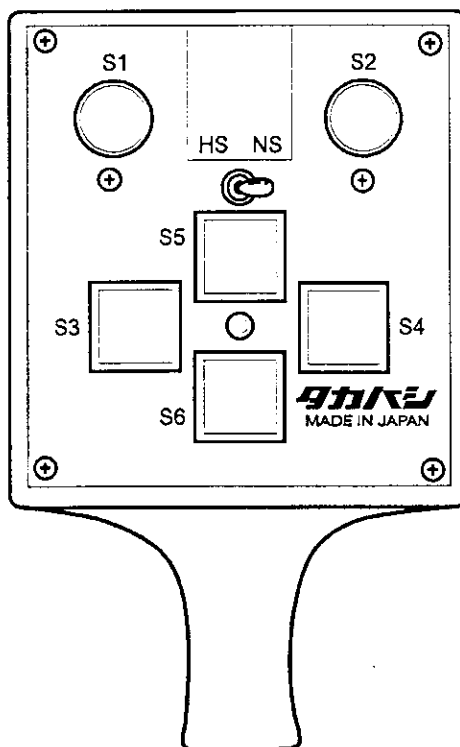
RS-232C:

RS-232C cable, which connects the go-to mount to a PC, connector receptacle.

Auto Guide:

Auto guider cable connector.

◆ Control Box



S1, S2 [Shift Keys]:

These buttons are used to change the motor driving mode.

Motor Driving Mode Switch [HS/NS]:

These buttons are used to switch the motor speed: HS = High Speed NS = Normal Speed

S3, S4 [R.A. Direction Button]:

These buttons are used to drive the mount in the R.A. direction and to change the motor driving mode as well.

S5, S6 [Dec. Direction Button]:

These buttons are used to drive the mount in the Dec. direction and to change the motor driving mode as well.

Driving Mode Indicator: This is an LED located at the center of the R.A. and Dec. correction buttons. It turns on red at High Speed Mode and green at Normal Mode or correcting operation.

◆ Motor Drive Switching Operation

● Solar/Lunar Switching

When the power switch is on, the motor drives at the sidereal rate.

*Solar Rate: Flip the Driving Mode Switch at the HS position. Press the button S5 while holding the button S1.

*Lunar Rate: Flip the Driving Mode Switch at the HS position. Press the button S6 while holding the button S1.

● Correction Speed Switching

When the power switch is on, the motor drives at the sidereal rate. When each correction button is pressed, speed up to the R.A. direction by 1.9X and slow down by 0.1X, and to the Dec. direction by 13.5 arc sec/sec.

Slow down to the R.A. direction:

Flip the Driving Mode Switch at the NS position. While holding the button S1, press the button S4. Every time the button S4 is pressed, the motor speed is slowed down by 0.1X to the sidereal rate.

Speed up to the R.A. direction:

Flip the Driving Mode Switch at the NS position. While holding the button S1, press the button S3. Every time the button S3 is pressed, the motor speed is up by 0.1X to the sidereal rate. The maximum speed up will be 1.9X and slow down 0.1X to the sidereal rate.

Slow down to the Dec. direction:

Flip the Driving Mode Switch at the NS position. While holding the button S1, press the button S6. Every time the button S6 is pressed, the motor is slowed down by 1.5 arc sec/sec. The minimum driving speed will be 1.5 arc sec/sec either on speed-up or slow-down.

Speed up to the Dec. direction:

Flip the Driving Mode Switch at the NS position. While holding the button S1, press the button S5. Every time the button S5 is pressed, the motor speeds up by 1.5 arc sec/sec. The maximum speed up will be 13.5 arc sec/sec either on speed-up or slow-down.

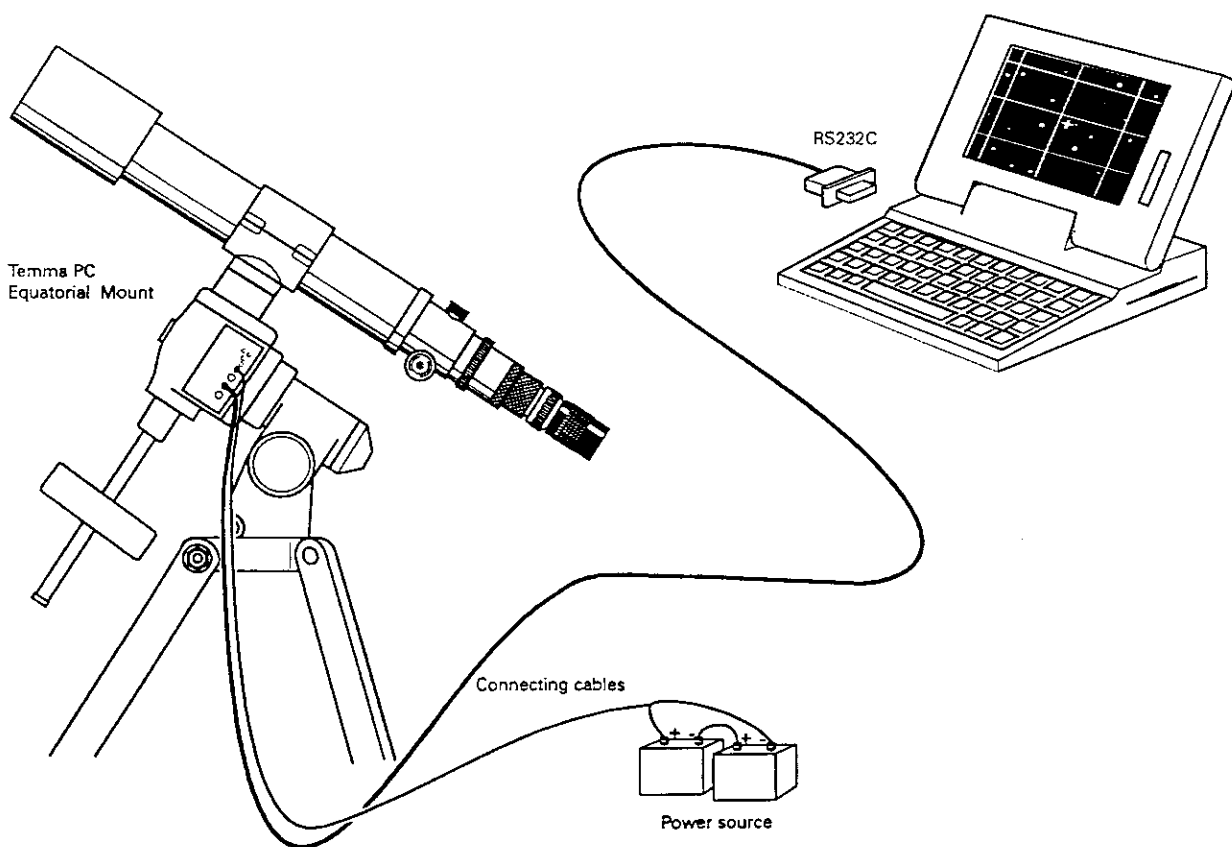
● Southern Hemisphere Operation

When the power turns on, the motor drives for the Northern Hemisphere operation. In order to use the motor drive for the Southern Hemisphere, flip the Computer Stand By Switch at the ON position while holding the button S1. Then, the motor drives for the Southern Hemisphere operation.

Procedures for Go-To Operation

Do go-to operation by Temma-PC

1. Install the TT2000 disc into a PC.
2. Align the go-to mount precisely. When the highly accurate alignment is required, do it as precisely as possible. Go-to accuracy is entirely up to the polar alignment.
3. Connect the go-to mount to a PC with RS-232C cable provided.
4. First, turn on the go-to mount and then turn a PC switch on.
Then, actuate go-to disc.
5. Now follow the instructions described in the TT2000 manual.





Cautions

- When an object near the zenith is the target, the tube assembly and the observing gears will possibly touch the tripod. Especially when a long tube assembly is used, be certain, before starting go-to operation, that the tube never touch it.
- Be certain, before operation, that go-to can be done safely. You must be always ready for an emergency.
- The go-to mount will give out emission, which may affect medical instruments.

TAKAHASHI SEISAKUSHO Ltd.

41-7 Oharacyo Itabashi Tokyo 174-0061, JAPAN
PHONE:+81-3-3966-9491 FAX:+81-3-3966-9524