

SIRIUS OBSERVATORIES

OPTIONS



Hand Operation



School Model—Upper Shutter Winding Mechanism



Dome and shutter motor boxes

Dome and Shutter operation

- Easy to use hand operated dome rotation and shutter operation (Home and School Models) School Model uses winding mechanism for upper shutter.
- Motorised dome rotation, or motorized dome rotation and shutter operation
- Pendant control of rotation motor from anywhere inside the observatory
- Motorised dome rotation: clockwise and anti-clockwise
- Computer driven dome rotation and / or shutter operation – MaxDome (must have motorisation option). MaxDome can be added at any time post installation.
- Motorised dome rotation can be retro fitted, but it is preferable to have the shutter motorisation fitted in the factory at time of order.



Storage locker in wall panel

Storage Lockers

Wall panels can be substituted with a panel containing a LOCKER recess which can be used for housing a computer or storing books.

There is no limit to the number of storage lockers.

Home Model - 1 door panel plus 5 panels (wall or locker)

School Model - 1 door panel plus 7 panels (wall or locker)



MaxDome Board

MaxDome

The MaxDome controller system provides complete automated control of a telescope dome and associated shutter. For lower-cost installations, rotation-only operation is also supported. MaxDome is manufactured and supported by Diffraction Ltd, Canada. It is supplied and fitted by Sirius Observatories at time of manufacture, or can be retro-fitted by the owner .



Dome rotation motor box with MaxDome installed

Mains Battery Charger

The motors for the dome rotation and shutter operation are each powered by a 12v battery. The motor units are attached to the internal walls – dome rotation box on the wall panel and shutter operation box on the dome itself. The 12v battery in each of these motor boxes is charged by a solar panel, one on the outside wall corresponding to the position of the inside battery box, and the other on the dome corresponding to the shutter battery.



Battery Charger in dome rotation motor box

An alternative source of charging the batteries is via a 110-240v mains battery charger which can be installed within the existing dome rotation box and connected to 110-240v mains power. This unit can also be connected to the shutter battery box (on dome) via a self disconnect plug and is used to charge the shutter battery when the dome is not in use, and therefore not rotating. If the dome is rotated while the shutter battery charging lead is connected, the plug is designed to simply pull apart without causing any damage.



Galib connecting 2 motorbatteries for re-charging

Neither of the charging units, i.e. solar panel or 110 – 240v charger, are designed to charge a flat battery. They are designed to keep the battery topped up.

Mains Battery Charger 110-240v, Single - used for motorised dome rotation only

Mains Battery Charger 110-240v, Double - used for motorised dome rotation and shutter operation



Solar Panel

A solar panel is supplied with the motorised dome rotation option and also with the motorised shutter option. The solar panel can be placed on any of the wall panels depending on the orientation of the observatory. Position should be specified relative to door panel, on ordering. The shutter motor solar panel is positioned on the dome.



Day and Night Solar Vent

The solar vent is installed near the top of the dome and functions to circulate fresh air.

Features:

- Moves 700 cubic feet per hour
- Solar panel cells recharge the Ni Cad battery for 24 hr operation
- High capacity battery operates vent for 48 hours without sunlight
- No wiring is required

High Wind Kit

The standard observatory is rated for a wind loading of up to 144 kph (90 mph).

The High Wind Kit option increases this loading to 225 kph (140 mph).

Additional hardware included with the High Wind Kit:

- 2 x Dome tie-down plates
- 2 x Wall tie-down plates
- 2 x Stainless steel rigging screws (turnbuckles)
- Lower shutter hinge backing plates
- 1 extra masonry anchor per wall unit



Packing and Palleting

All observatories are assembled and tested in the factory prior to shipping. Depending on the destination and the shipping option, the observatories are packed either on an open pallet and covered with shrink wrap, or crated and boxed eg. for export.

星河科研社

Galaxy Scientific Group

<http://www.astro.hk> info@astro.hk

Tel 81060660 Fax 81060670

Kowloon Central P.O. Box 73550



Options available:	Comments
Motorised Dome Rotation	This provides a motor housed in a motor drive box which is attached to the observatory wall. It is operated by a hand switch to the power source (either 12v battery or mains power), and the dome can be driven to the left or the right, by flicking the switch.
Motorised Shutters	Two motors are provided with this option. One is attached to the top of the dome and it operates the upper shutter by sliding it back over the roof. The second motor opens the lower shutter outwards. Open and close switches are on the motor box.
MaxDome (Computerised dome rotation only)	This is a circuit board which is wired into the dome rotation motor control board. We provide the MaxDome software which enables the motor to be driven from a computer. With software (that we don't supply) the dome can be rotated remotely by a computer, nearby or across the world.
MaxDome (Rotation and shutter operation)	This option provides 2 circuit boards, one in the dome motor drive box and one in the shutter drive box. Once again this enables the shutters to be opened and closed via a computer. The MaxDome can be interfaced to the telescope to automate dome rotation shutter operation and telescope positioning.
Mains battery charger 110-240v to 12 v Single	Used to re-charge the 12v battery with the motorised dome rotation option.
Mains battery charger 110-240v to 12 v Double	Used to re-charge both batteries if motorised dome rotation and shutter operation are chosen.