

OBSERVATORY OVERVIEW

If all else fails... Read the
instructions...

Access & Security

- ▣ Door Locks
- ▣ Door Restraint
- ▣ Securing the observatory:
 - CEM120 **PARKED??**, Dome **PARKED??**, Everything **OFF??**
 - Checklist **COMPLETE??** Keys in hand?? **Don't lock them in!!**
 - Close & lock Door

Lighting

- ▣ Control Hub LED - Switch on Top Left
- ▣ DC Circuit Lights:
 - Single light – Power available, Switch **OFF**
 - Double light – Switch **ON** & Circuit **ENERGISED**
- ▣ AC Bay & Pier powerboard LEDs – AC **ON** first!

Dome & Shutter

- ▣ 12V DC Power from 2 sources:
 - internal battery recharged by a small solar panel
 - From the DC Control Hub switched circuit labelled **Dome**
- ▣ **Park State:**
 - Both Shutters **CLOSED**
 - Dome at the **HOME** position facing North (above North Work Bay)
- ▣ Shutter movement extent is controlled by limit switches – hold the **OPEN/CLOSE** switch until all movement stops.
- ▣ Dome rotation will be interrupted at the **HOME** position when rotating **LEFT**. Dome rotation will continue when moving to the **RIGHT**.

Power Supplies

- ▣ DC - Battery Storage with Solar recharge. Connections, Switching & Fusing is via the DC Control Hub.
 - ▣ Battery & Solar **IN**
 - ▣ AC Inverter & Equipment **OUT**
 - Switched Circuits **OUT**:
 - ▣ Dome, CEM120, PC/Hub, 24/7 & a spare.
 - Sockets **OUT**:
 - ▣ Lighter x 2, USB 5V DC x 2, USB C x 2
- ▣ AC – 700W inverter **OUT** with distribution by extension cords & 3 x powerboards – work bays x 2 & Pier x 1

Data & Communications

- ▣ Observatory PC:
 - 4 GHz i7, Windows 11 fanless industrial format
 - Connects to all systems via USB, LAN, RS232, WiFi
 - Display screen, keyboard & mouse
 - Webcam
- ▣ TP-Link Network switch
- ▣ TP-Link Wireless Access Point
- ▣ Ubiquiti LOCO M2 Router connecting to UOW Wireless network

CEM120 Mount

- ▣ IOptron CEM120 – Pier mounted, 52Kg capacity
- ▣ Multiple connections for power & data
- ▣ Fixed Datum (**Zero**) Position & multiple **Park** positions
- ▣ Controlled via 8410 Hand Controller and/or PC

OTAs & Guidscope

- ▣ GSO RC-14A fitted with primary imaging equipment
- ▣ Esprit 100mm APO refractor fitted with 2" diagonal & eyepieces various...
- ▣ Evostar 72 Guidscope fitted with guiding imaging equipment
- ▣ 50mm Finderscope fitted to the RC-14A
- ▣ Red dot finder fitted to the Esprit 100mm

Imaging Train

- ▣ Imaging Camera - ZWO ASI 183 MC Pro
 - 20 MP Cooled astronomy camera - control via PC
- ▣ Guidance Camera – ZWO ASI 585 MC
 - 8.29 MP Planetary / Guidance camera – control via PC
- ▣ Motorised Focuser – control via a dedicated hand controller and/or PC
- ▣ Motorised Rotator – control via PC only.

Accessories

- ▣ Additional Eyepieces:
 - 9mm TeleVue Delite
- ▣ xxx

Startup & Shutdown - Manual Visual Activities

- ▣ Startup:
 - DC Control Hub CEM120 Switch **ON**
 - If required, energise ancillary equipment
- ▣ Shutdown:
 - **Park** CEM120,
 - If used, de-energise ancillary equipment
 - DC Control Hub CEM120 Switch **OFF**
 - **Park** the observatory

Startup & Shutdown - PC assisted Activities

▣ Startup:

- DC Control Hub CEM120 Switch **ON**,
- If required, energise ancillary equipment ,
- DC Control Hub PC/Hub Switch **ON**,
- Switch **ON** AC power,
- Switch **ON** Monitor, mouse & keyboard

▣ Shutdown:

- **Park** CEM120,
- DC Control Hub CEM120 Switch **OFF**,
- If used, de-energise ancillary equipment
- **Shutdown** PC,
- DC Control Hub PC/Hub Switch **OFF**
- Switch **OFF** Monitor, mouse & k'board
- Switch **OFF** AC power,
- **Park** the observatory

Baseline Configuration - 1

- ▣ *RC-14A*: Return to baseline imaging physical configuration
 - Primary mirror cover **ON**
 - Secondary mirror cover **ON**
 - Focuser @ Infinity focus (**6200**)
 - Rotator@ **0**
 - Cooler **OFF**
- ▣ *Esprit 100mm* : Return to baseline visual physical configuration
 - Objective cover **ON**
 - Eyepiece cover **ON**
 - Focuser @ Infinity focus (**4.5**)
- ▣ *Evostar 72mm*: Return to baseline guiding physical configuration
 - Objective cover **ON**
 - Focuser @ Infinity focus (**xx**)
- ▣ *50mm Finderscope*:
 - Objective cover **ON**
 - Eyepiece cover **ON**
 - Focuser @ Infinity focus (**xx**)
- ▣ *Accessories & Spares*:
 - Safely **STORED**

Baseline Configuration - 2

▣ *Data & Comms:*

- All applications **CLOSED**
- Observatory PC **SHUTDOWN**
- Mouse **OFF**
- Keyboard **OFF**

▣ *AC/DC Control Switches:*

- Dome **OFF**
- CEM120 **OFF**
- PC/Hub **OFF**
- 24/7 **ON**
- Spare **OFF**
- Ancillary equipment de-energised
- AC Inverter **OFF**
- Observatory – **Parked & Secured**

Documentation - 1

▣ *Observatory Facility:*

- *MaxDome Observatory Control:*
 - ▣ Manual
- *Boltwood Cloud Sensor II:*
 - ▣ Manual

▣ *Mount & OTAs:*

- *Ioptron CEM120 Mount:*
 - ▣ Manual
- *SkyWatcher Esprit 100mm:*
 - ▣ Manual
- *GSO RC-14A:*
 - ▣ Manual
- *SkyWatcher Evostar 72mm:*
 - ▣ Manual

▣ *Imaging:*

- *Pegasus Prodigy Focuser:*
 - ▣ Manual
- *Pegasus Falcon Rotator:*
 - ▣ Manual
- *ZWO ASI 183 MC Pro:*
 - ▣ Manual
- *ZWO ASI 585 MC:*
 - ▣ Manual

▣ *Power Supplies:*

- *KickAss DC Control Hub:*
 - ▣ Manual
- *KickAss DC-DC Charger:*
 - ▣ Manual
- *KickAss AC Inverter:*