

When the marCCD detector is not being used.

It is recommended that, for short-term periods of inactivity (say less than 1 month), the detector be left operating with the cooler running and the detector at operating temperature. If possible, the detector should remain connected to the workstation with the marccd software running, which will keep a log of the temperature and pressure within the detector head. This log is helpful if a problem develops during this time.

For longer periods of disuse, the detector can be shut down. It is not necessary to shut it down, but, since the detector head is likely to require routine refresh of the vacuum before it is put back into service after a long shutdown, it may be easier to simply shut it down at the beginning of storage.

Shutting down the marCCD detector.

Before powering down the detector, it is a good idea to quit the marccd program because the program will start to complain and may act sluggishly when the detector stops operating. After stopping the software, the CCD133 and CCD165 detectors may be shutdown by simply turning off the lighted red power switch located at the bottom of the cooler/electronics cabinet.

Storing the marCCD detector.

When the detector is not to be used for some time, it may be necessary to store the detector.

It is strongly recommended that the cooling hoses remain attached between the detector head and the cooler. If the cooling hoses must be disconnected it is important that all open ends of the hoses and the fittings on the detector head and/or the cooler be capped! A set of caps is supplied in the detector toolkit for capping the hoses at one end and capping the detector head cooling ports. Capping the fittings prevents moisture from entering the system and refrigerent gas from escaping.

Shipping the marCCD detector.

The marCCD detector does not need to be serviced in normal operation and most problems that may appear can be addressed by the user or by a Mar service person working on-site. If the detector does need to be returned to the factory for service, it should be properly packed. It is very unlikely that the entire system will be shipped, but rather only the detector head and/or the detector electronics chassis.

If the detector head is to be shipped, it is very important that it be packed properly. It is strongly recommended that the original shipping carton for the detector head be saved so that it can be reused for shipping. This carton is specially designed to protect the fragile (and most expensive) components – the CCD chip and fiber-optic taper. If this box is not available, please contact Mar USA for a new shipping carton.

Before placing the detector head into the shipping box, check that the cooling gas supply and return lines are capped as described above under “Storing the marCCD detector”.

Unplug the heater cable that runs from the rear of the detector head to the front window retainer ring. Carefully coil this cable and/or tape it to the side of the detector. Failure to unplug the power cable before packing may result in damage to the connector when the detector is placed in the box.

If possible, cover the detector with a static free plastic bag. Then place the detector into the box and into the bottom half of the foam packing material. Check that the detector fits into the foam, particularly at the large end, so that the detector cannot slide out of the foam cradle. Place the top half of the foam cradle over the detector and push it down firmly at the front, taking special care that the large end of the detector also fits into the top half of the foam. Close and seal the inner box with tape before closing and sealing the outer box.

The detector electronics chassis can be dismantled from the cooler/electronics cabinet to be shipped. Disconnect all cables from the rear of the chassis. Remove the two M6 screws and washers from the front panel. Slide the chassis forward until it locks in place, then depress the green button on each slide-rail and pull the chassis further forward until it comes completely free of the rails. The chassis does not contain any particularly fragile components. Nonetheless, it should be properly packed in a sturdy box with sufficient padding to prevent damage to the corners and to the connectors. The controller chassis is quite heavy, so be sure that the packing is strong enough to not become damaged nor deformed during shipment.

In the unlikely event that the entire detector system is to be shipped, including the cooling unit, then the cooler/electronics cabinet should be shipped in the original shipping container. If this is not available, please contact Mar USA for a new container.