

Customer Support Note 020

Swapping between UNITY 2 configurations: Standalone, CIA Advantage and ULTRA

Disclaimer: It is vital that this Customer Support Note is read carefully before proceeding and that any instructions contained within the document are followed closely. Markes International will not accept responsibility for any damage done to instrumentation or personnel if any instructions within this document are not followed exactly. Any ongoing warranty or contract may be voided if failure to follow these instructions results in damage to the instrumentation. If anything is unclear, you must clarify the details with a Markes representative before proceeding.

The UNITY 2 can be upgraded to accommodate multi-tube (ULTRA) and multi-canister (CIA Advantage) capability. Changing between these options can be carried as as described below.

1. Hardware changes

- Open the tube oven cover/seal.
- Remove the heated interface by removing it from the sealing O-rings at either end of the UNITY 2 tube oven.

NOTE: Take care not to damage the 1/16" brazed connections.

- Insert the interface tube from the ULTRA, and seal the tube-oven cover/seal
- To use the UNITY 2 in standalone mode, simply remove the interface and insert a sample tube.

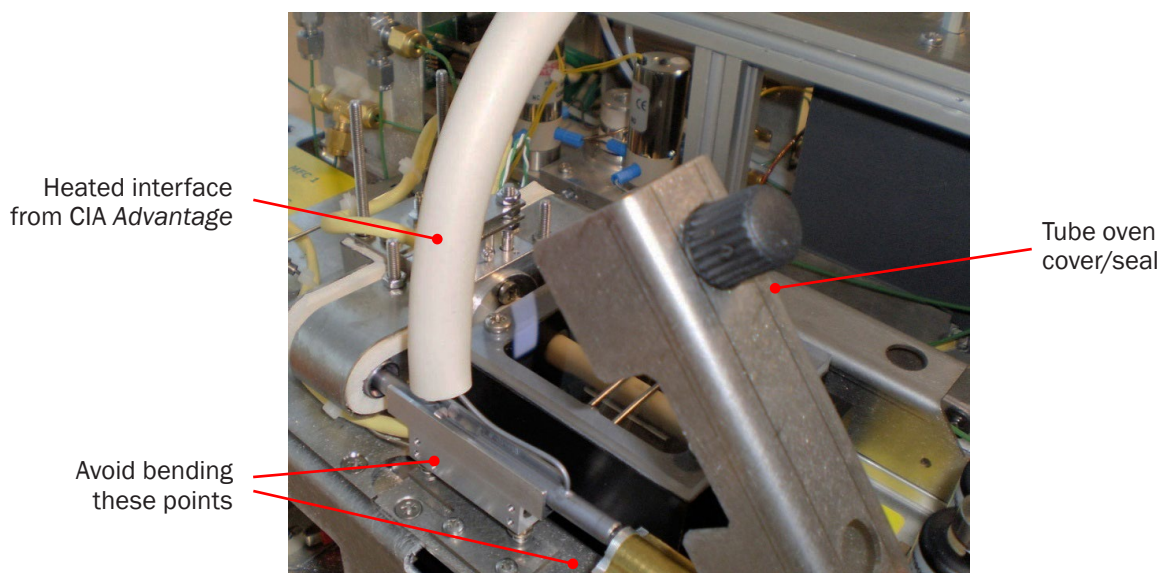
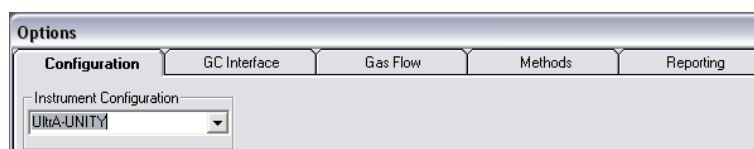


Figure 1: Removing the interface tube from the UNITY 2.

2. Software changes

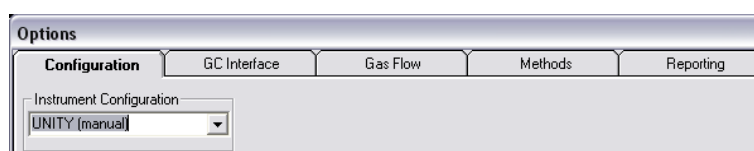
2.1 ULTRA-UNITY

- Run the latest version of the Maverick software – contact support@markes.com to determine the latest version.
- Go to View > Options > Configuration, and set the instrument configuration as ‘ULTRA-UNITY’:



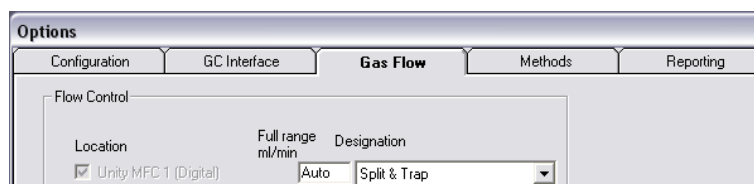
2.2 UNITY (manual)

- Go to View > Options > Configuration, and set the instrument configuration as ‘UNITY (manual)’:



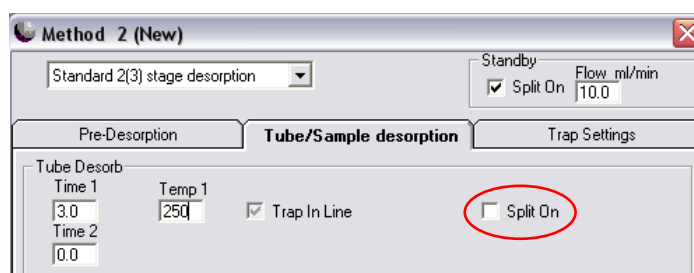
2.3 MFC designation

- Once selected, the software will shut down. Power-cycle the instruments and restart the software.
- When the software has reopened, select View > Options > Gas Flow.
- Check that the MFC for the UNITY 2 is designated to ‘Split & Trap’.
- If it is not, select ‘Scan for Flow Controllers’ button and use the drop-down box to set it correctly:



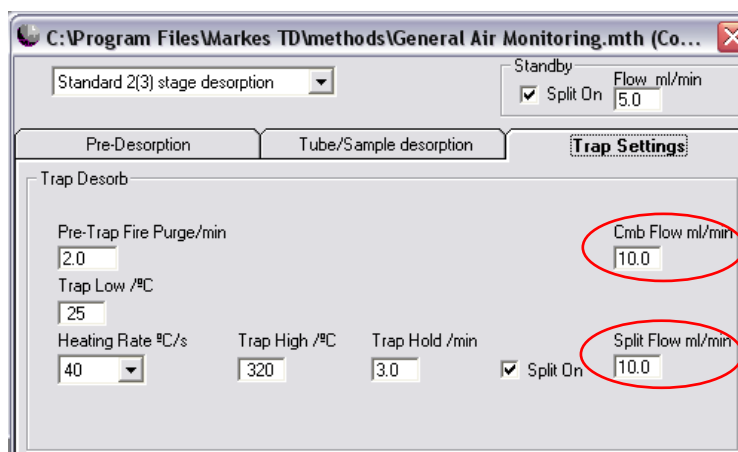
3. Additional information

- Ensure the desorb and split flows are T'd together and controlled by a single MFC.
- As a result of this, when running in tube mode with standalone UNITY 2, it will not be possible to use an inlet (tube) split, and the ‘Split On’ option should not be selected:



This is because when the flows are T'd together, the flow through the MFC is a combination of trap and split flows. Due to the varying impedances of the sorbents in the cold trap and the split tube, the flows will not be accurately set and so the tube desorption cannot be used

- If an inlet split is necessary, a few hardware modifications will be required, including the installation of an additional MFC.
- The pre-trap-fire purge combined split and trap flow ('Cmb Flow' in the software) should be set the same as the trap split flow:



This allows the MFC flow to stabilise before trap fire, ensuring greater reproducibility.

For all technical support queries, please contact Markes International.

Email: support@markes.com Tel.: +44 (0)1443 233922