

# MTCI-Auxiliary



## Multiple Temperature Chambers Interface in Arbin Testing System

Arbin provides system and software interface to third-party temperature chambers for customer needing temperature-controlled testing environment. The auxiliary MTCI can support commercially available third-party temperature chambers that are controlled with RS-232 serial communication. The following temperature chamber models have been successfully tested to operate together with Arbin testing system using Arbin testing software. Custom configuration is available for other temperature chamber models with RS232 serial communication.

**Sigma System™:** Chambers with C4 programmable controllers

**Thermotron™:** Chambers with 2800, 3800 or 7800 controllers

**Delta Design™:** All chambers

**Espec™:** Chambers with SCP-220 controller

**Honeywell™:** Chambers with IPC 1000 controller

**Giant Force™:** All chambers



## Communications Connection with Temperature Chamber

The communication interface between the temperature chamber and Arbin system is facilitated through RS232 serial communication cable. Figure 1 below shows the general communications layout of the test chambers and Arbin testing system. One MTCI auxiliary module can interface with up to two temperature chambers. Up to four chambers per system can be supported. The chambers are operated through the MITS Pro software as described on the next page.

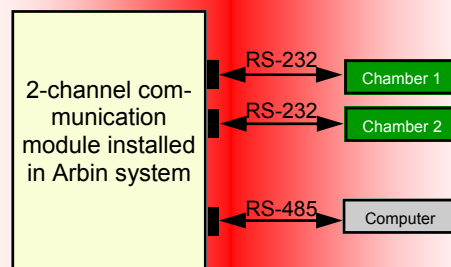


Figure 1. Layout of temperature chambers communication interface.





## Temperature Chamber Operation with MITS Pro Software

The user operates the temperature chamber using Arbin MITS Pro testing software. The software allows the user to run and stop the chamber operation, as well as program, set, read, and record the chamber's operating temperatures according to set test schedule. The operator can simulate dynamic temperature operating conditions through each step in a test schedule. The software takes the control of starting and stopping each step according to the programmed test schedule. Figure 2 below shows the configuration screen of initial setup. Figure 3 and 4 show the software screens where the operator programs the test settings/conditions and test steps to create a test schedule. Figure 5 shows the assignment of particular test schedule to the I/V channel. Minimal manual work is involved in this automated testing operation.

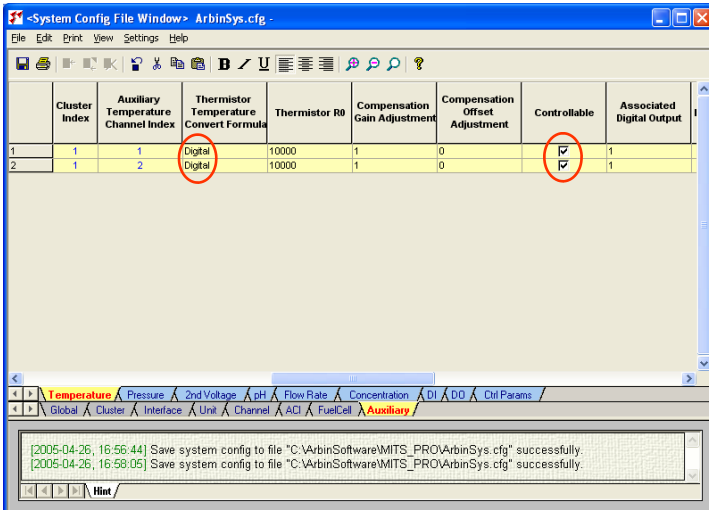


Figure 2. Configuring the auxiliary temperature-chamber setup.

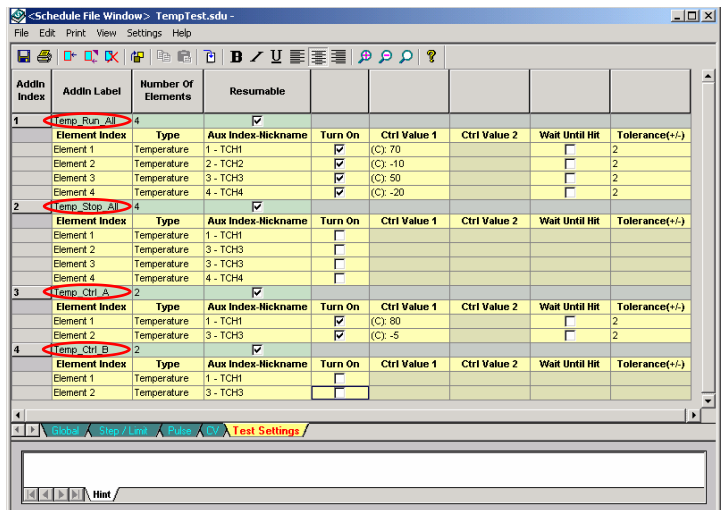


Figure 3. Programming test settings in MITS Pro software.

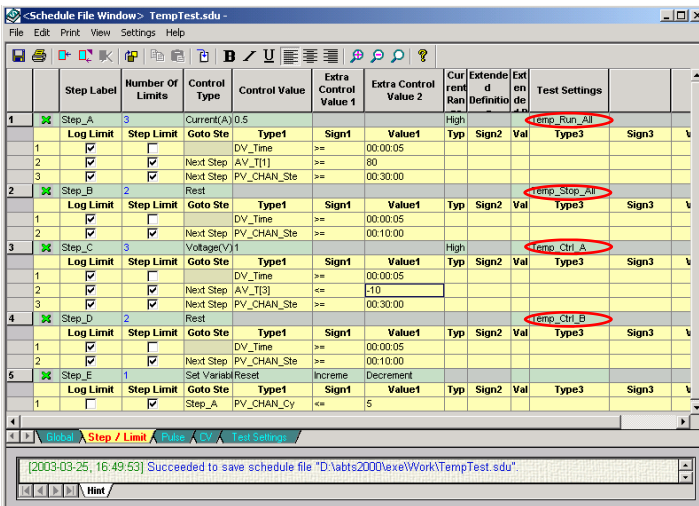


Figure 4. Programming test steps (test sequence) by calling upon pre-programmed test settings to create a test schedule.

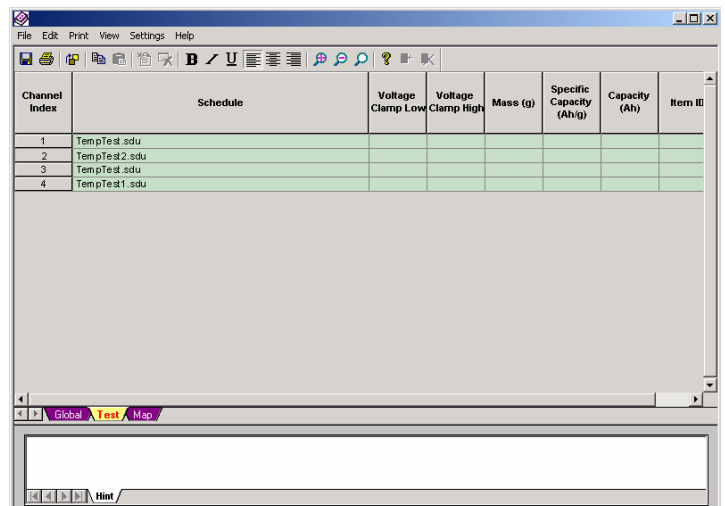


Figure 5. Assigning programmed test schedule to each main I/V channel of the test system.