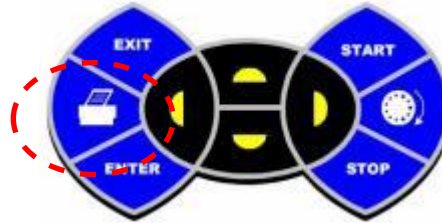


## Testing the Humidity System – Apollo 2 (800)

**WARNING:** Any maintenance work undertaken on a James Heal instrument must be done so by a trained and competent person. Where electrical work is detailed, this should only be completed by a qualified engineer. James Heal is not responsible for damage or injury arising from work carried out by any person not qualified to do so. If in doubt, please contact James Heal or your local James Heal Agent.

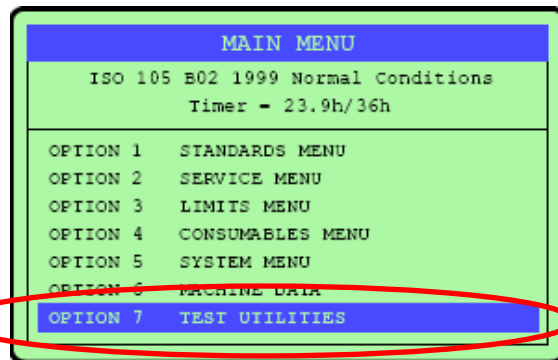
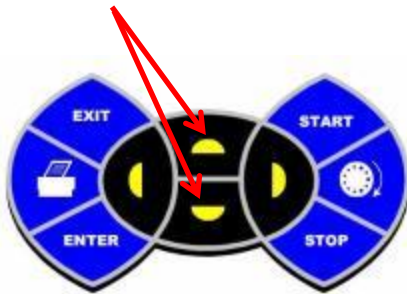
1. Press and hold the **PRINT** key while switching on the power to the Apollo.



The Apollo should beep and show a message saying that **Test utilities are unlocked** for a short time, and then show the **MAIN MENU** screen.

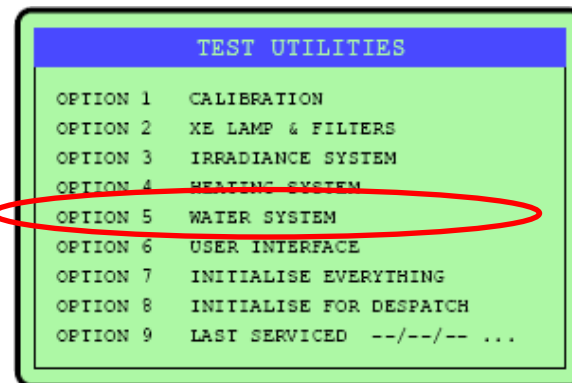
2. Use the **Up/Down** keys to select **OPTION 7 TEST UTILITIES**, then press the **ENTER** key.

UP/DOWN keys



3. Use the **Up/Down** keys to select **OPTION 5 WATER SYSTEM**

Then press the **ENTER** key to enter the Water system menu.



You should now be in the Water system menu.

#### 4. Test the pump

WATER SYSTEM	
OUTPUTS	INPUTS
Humidifier:ON	CHRH : 45.5%RH
Fan DAC :155/155	Fan 1 : 100%
vane Motor: OFF	Fan 2 : 100%
Pump : OFF	Recirc Air:ON
Spray Sol : Closed	Fresh Air :OFF
Drain Sol : Closed	Hm Water :OK
	Hm Temp : OFF
	Tnk Water :OK

Select “Pump” then press and hold the tight arrow key to run the pump for 30 seconds. While the pump is on you should hear the noise of the pump running. Is this running?

After 30 seconds the “Hm water” input should display “OK”.

**Is this happening?**

If “OK” is not displayed run the pump a little longer until the input changes to OK.

Note : The input will not change state while you are pressing the arrow key so run the pump for 10 second intervals and then check the input status.

**How long did it take to change the “Hm water” input?**

#### 5. Test the vane

Select “Vane Motor”

Using the left or right arrow keys you should be able to move the air vane in from of the fans.

**Is this happening?**

## 6. Test the fans

Remove the chamber air filter so the fans can be seen

Select "FAN DAC"

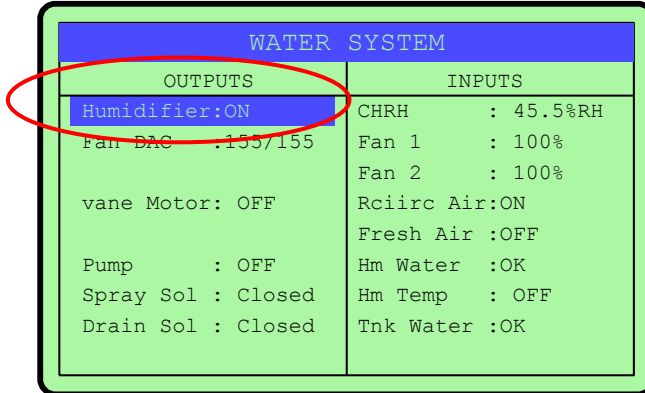
WATER SYSTEM	
OUTPUTS	INPUTS
Humidifier:ON	CHRH : 45.54RH
Fan DAC :155/155	Fan 1 : 100%
vane Motor: OFF	Fan 2 : 100%
Pump : OFF	Recirc Air:ON
Spray Sol : Closed	Fresh Air :OFF
Drain Sol : Closed	Hm Water :OK
	Hm Temp : OFF
	Tnk Water :OK

- The "Fan DAC" setting in the "OUTPUTS" column on the left should initially be zero ( 0 / 160).  
The "Fan 1" & "Fan 2" in the "INPUTS" column on the right should be 0%.  
Remove the chamber air inlet at the left side of the chamber, then remove the air filter so that the 2 fans can be seen.
- Select "Fan DAC" using the Up/Down keys.  
Once highlighted repeatedly press the right key to increase the DAC setting.  
**What value DAC did the fans start to turn?**
- Keep using the right key to increase the fan speed and make a note of the DAC setting when the Fan 1 & 2 inputs start to register.  
**What value DAC did the fans input give a % value on the right of the display?**
- Increase the Fan DAC to 160/160.  
**Do both fans reach 100% (or close)?**

## 7. Test the humidifiers

Reduce the Fan DAC to around 50 or 60 (or Fan 1 & Fan 2 with around 30% input).

Open the test chamber door.



WATER SYSTEM	
OUTPUTS	INPUTS
Humidifier:ON	CHRH : 45.5%RH
Fan DAC : 133/155	Fan 1 : 100%
	Fan 2 : 100%
vane Motor: OFF	Rciirc Air:ON
	Fresh Air :OFF
Pump : OFF	Hm Water :OK
Spray Sol : Closed	Hm Temp : OFF
Drain Sol : Closed	Tnk Water :OK

Select “Humidifier” and then press the right arrow key to increase this to fully on.

You should be able to see mist/fog entering the sample test chamber from the rear.

**Is this happening?**