

Installation Instructions

Interface Part Number: 14-5825-086

Interfacing a Tekmar™ 2000/7000/3000/6000 to the GC by Way of the Timer Box

The timer box enables the Tekmar unit to operate automatically with gas chromatographs (GCs) that do not provide a GC READY signal. The timer box simulates this signal.

To complete the following steps, you need the Tekmar interface cable that connects the Tekmar unit to your particular GC. If you do not have this cable, call (800) 543-4461 or outside the U.S. at (513) 247-7000. (The installation instructions shipped with the Tekmar-to-GC interface cable tells you how to connect the cable to the GC.)

Connecting the Timer Box to the Tekmar Unit

1. Turn off the Tekmar unit.
2. Locate the input/output (I/O) or interface board on the Tekmar unit. It has two connectors extending out of its bracket and can be accessed at the rear of the Tekmar unit.
3. If you have a Tekmar-to-GC interface cable plugged into the I/O board, disconnect it.
4. Plug the timer box's two-way connector into the matching connector on the I/O board.

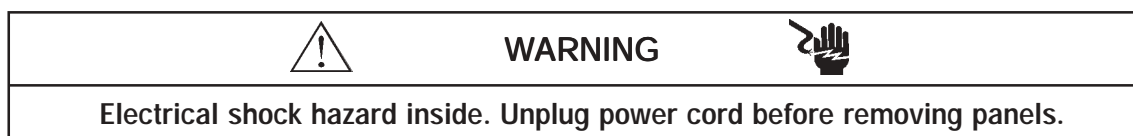
Connecting the Timer Box to the GC

1. Plug the Tekmar-to-GC interface cable into the two-way connector. (You should have already plugged the opposite end of this two-way connector into the Tekmar unit's I/O or interface board.)

Adjustments

For the timer box to work properly, the switches on the 2000/7000 input/output (I/O) board must be set correctly. Figure 1 at the top of the following page shows the correct switch settings. If you are not sure that your switches are set correctly, the following instructions tell you how to access and set the switches in your particular unit.

You do not have to set switches for the 3000 or 6000. However, you must choose an option in the software. See *Specifying the GC Port (3000 or 6000)* on the following page.



Accessing and Setting the Switches on the 2000

1. Locate the I/O Board. It has two connectors extending out of its bracket, which can be accessed at the rear of the 2000. (See the photograph in Section 12 of your Purge and Trap Concentrator User Manual.)
2. Loosen the two screws that hold the I/O board and slide it out until you see the switches labeled "U012" and "U013".
3. Set the switches according to the diagram at the top of the following page. (The switches are in the OPEN position when they are pressed **down** at the "OPEN" label.)
4. Return the I/O board to its original place, being careful to properly seat it into its connector.
5. Tighten the two screws.

Tekmar™ 2000/7000/3000/6000 to the GC by Way of the Timer Box (continued)

Switch Settings on the 2000 I/O Board		Switch Settings on the 7000 I/O Board		
U012	U013			
6---Closed	6---Open			
5---Closed	5---Open			
4---*	4---Open	Bias	Output	Input
3---*	3---Open	1---Open	1---Open	1---Open
2---Closed	2---Open	2---Open	2---Open	2---Open
1---Closed	1---Open	3---Open	3---Open	3---Open
		4---Open	4---Open	4---Open
<p>* 3 open and 4 closed gives Desorb closure at the beginning of Desorb. 3 closed and 4 open gives Desorb closure at the end of Desorb.</p>				
<p>Note: If you have the Hewlett-Packard 5710/30/90 GC, you should have the cable (Tekmar P/N 14-2976-000). The illustration on the installation instructions shipped with the cable show different switch settings than the ones shown above. If you are using the cable AND the timer box, set the switches as shown above.</p>				

Figure 1 Switch Settings on the 2000 and 7000 I/O Boards

Accessing and Setting the Switches on the 7000

1. Loosen the two 1/4-turn fasteners on the lower left side panel.
2. To remove the panel, pull it away from the unit to release the retaining clips from the posts in the chassis, then toward the front of the unit to release it from the locating pins (on the rear of the unit).
3. There are three sets of four DIP switches on the edge of the I/O board. They are labeled BIAS, OUTPUT and INPUT. Set the switches according to the diagram included with these instructions. (Flip the switches **up** to put them in the OPEN position.)
4. Reinstall the panel by pressing it back onto the locating pins and inserting the retaining clips into the posts in the chassis.
5. Secure the panel with the two 1/4-turn fasteners.

Specifying the GC Port (3000 or 6000 only)

1. At the System Error/System Reset Screen, press the ENTER key.
2. Allow the 3000 or 6000 to run through the automatic self-test.
3. At the Standby Screen, press the CONF key. The Configuration Screen appears on the display.
4. At the Configuration Screen, press **A** (GC I/O Port). The GC Port Screen appears on the display.
5. Choose the GC Port. You have two choices: Standard or User. Choose **Standard**. Press any numeric key to cause the display to toggle from one choice to another. Press ENTER to save your selection.

Using the Timer

The timer box simulates the GC READY signal at the time you specify. For example, if you set the timer for 30 minutes, then the GC READY signal will transfer to the Tekmar unit 30 minutes after the Tekmar unit signals the timer to start.

Tekmar™ 2000/7000/3000/6000 to the GC by Way of the Timer Box (continued)

Using the Timer, continued

To use the timer, refer to the illustration and instructions below.

1. Set the extreme left position on the front panel to "C".
2. Set the extreme right position on the front panel to the desired time unit (hours, minutes or seconds).
3. Set the time, using the three middle digits. The timer should "time-out" one or two minutes after the GC is supposed to complete its cycle. For example, if you know the GC cycle time is 60 minutes, set the timer for 61 or 62 minutes. This allows for any possible variation in the GC cycle time, ensuring smooth, coordinated operation.
4. To reset the timer, flip the switch on the timer box to the OFF position, wait about three seconds, then flip the switch to the ON position.
5. Make sure that the GC is ready to accept samples when you turn on the Tekmar unit, because the timer initially powers up on GC READY.

If the display on the timer box says "off", then the GC is ready and waiting to accept a sample. If it says "on", the GC is processing the sample.

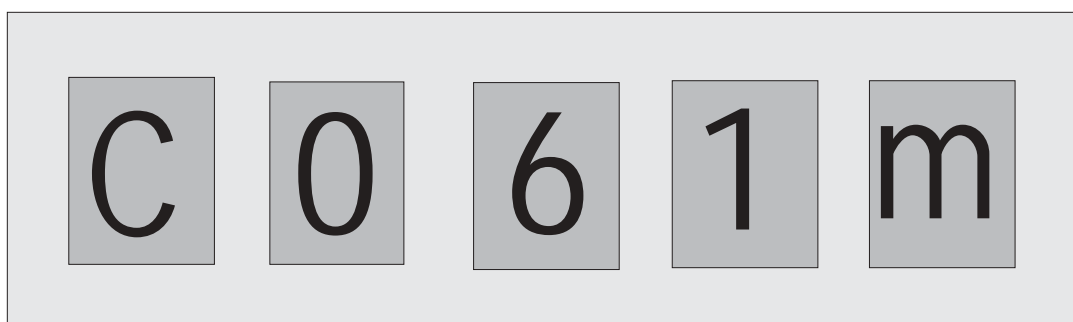


Figure 2 Timer Display Set for 61 Minutes



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