

Turning On Shimadzu Gas Chromatograph after Extended Storage

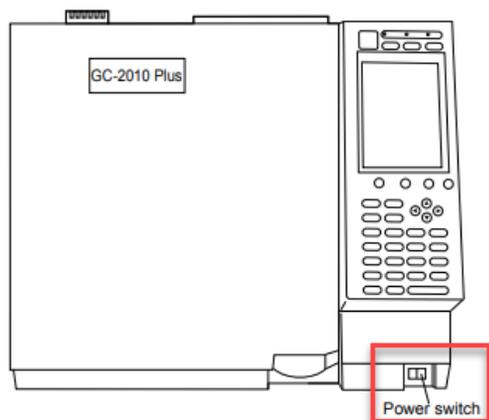
Step 1: Turn on gas supplies.

Make sure that all the gases are connected, the regulators are set correctly, and the cut-off valves are open. Consult the GC site-prep document for necessary gas purity and supply pressure.

Step 2: Power on GC system and the computer.

Plug in the power cable of the GC unit and switch on the power. If there are accessories such as headspace autosamplers or AOC-6000, turn on power to those units as well. The power for AOC-20i and AOC-20s are supplied by the GC main unit, so there is no need to turn on the power to those separately. The system will go through initialization steps. Please allow initialization to go to completion before proceeding. The lights on the autosamplers should turn green. The indicating lights on GC unit should be yellow or not lit up.

Power button for GC-2010 series – in front



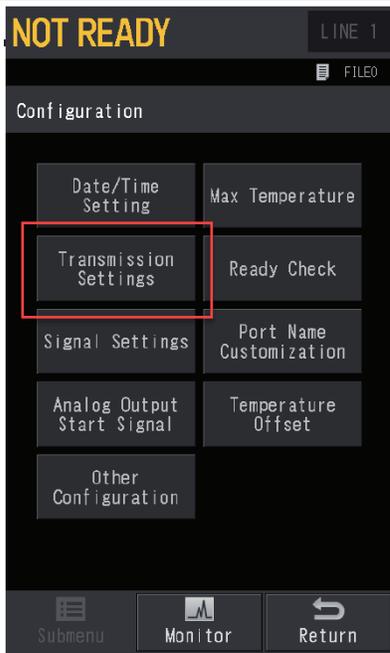
Power button for the GC-2030/GC-2014 – on right side



Next, power up the computer and start LabSolutions (or other GC control software you are using). You should hear a long beep from the GC to indicate successful connection. If there is an issue connecting your GC to software, check the transmission parameters using GC front panel.

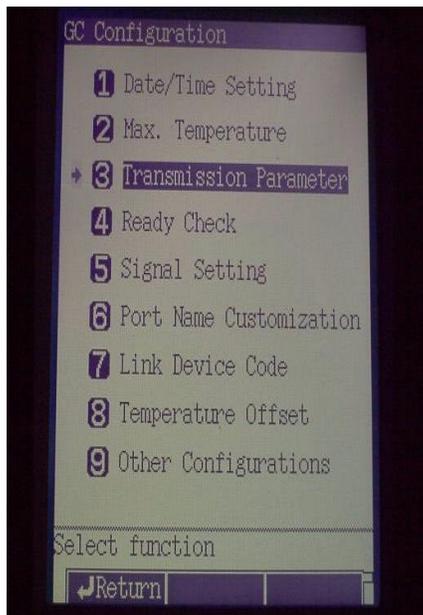
a) GC-2030

From [Home], select [Function], then [Configuration], then [Transmission settings]. Select USB or ethernet, depending on your connection type. If using ethernet, check IP address to make sure that it matches the IP address listed in the System Configuration in software. Press "Apply" after entering any changes.



b) GC-2014 or GC-2010

From GC front panel, press [FUNC] button, then (6) GC configuration, then (3) Transmission Parameters. It should read "level 3" for line 1 and "115200" for line 2 as shown below. Press "Apply" after entering any changes.



Step 3: Check GC column and enter method parameters.

Make sure that the GC column is connected and that the correct column information has been entered in the GC.

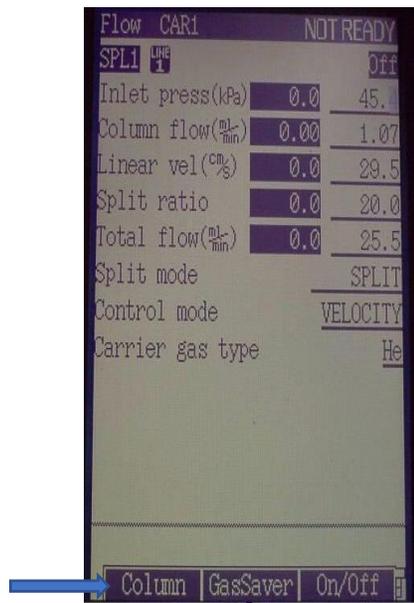
a) GC-2030

You can access column information from [column info.] on [column oven] screen.



b) GC-2014 or GC-2010

From GC front panel, press [FLOW] button, then (PF1) [Column]. If you have more than one injection port/carrier flow, make sure that you have selected the correct one. Press flow multiple times will cycle through all existing carrier flows if you have more than one installed on your GC.



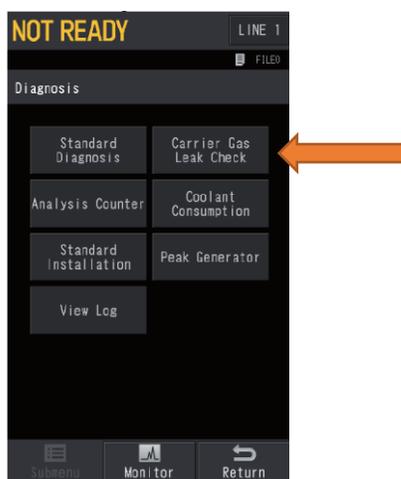
Since the GC system has gone through long periods of time without gas flow, it is necessary to purge out the system with carrier gas at room temperature before heating up. To do that, enter 25-30°C (depending on the temperature of your environment) in the GC temperature setting for ALL temperature zones (injector, column, detector, etc.). You can either do this in the GC front or using software. If you use the software for this step, make a new method, and be sure to download the method to apply to GC.

If you normally use splitless injection method, change that to “split mode” for purging GC. If you normally use high-pressure injection method or cryogenic cooling, change to “not use” for purging.

If you have capped off any vents in the back of the GC (such as ECD vents) for extended storage, please remove the G-plugs you used to cap the vents before proceeding.

Step 4: Perform automatic leak check (GC-2030 only).

If you are using a GC-2030, you may perform an automatic carrier gas leak check before starting the GC. Check that the column is connected and that correct column dimensions have been entered (step 3). *The leak check will not be accurate if the column dimension is incorrect.* From home screen, select [Function], then [Diagnosis], then [Carrier Gas Leak Check].



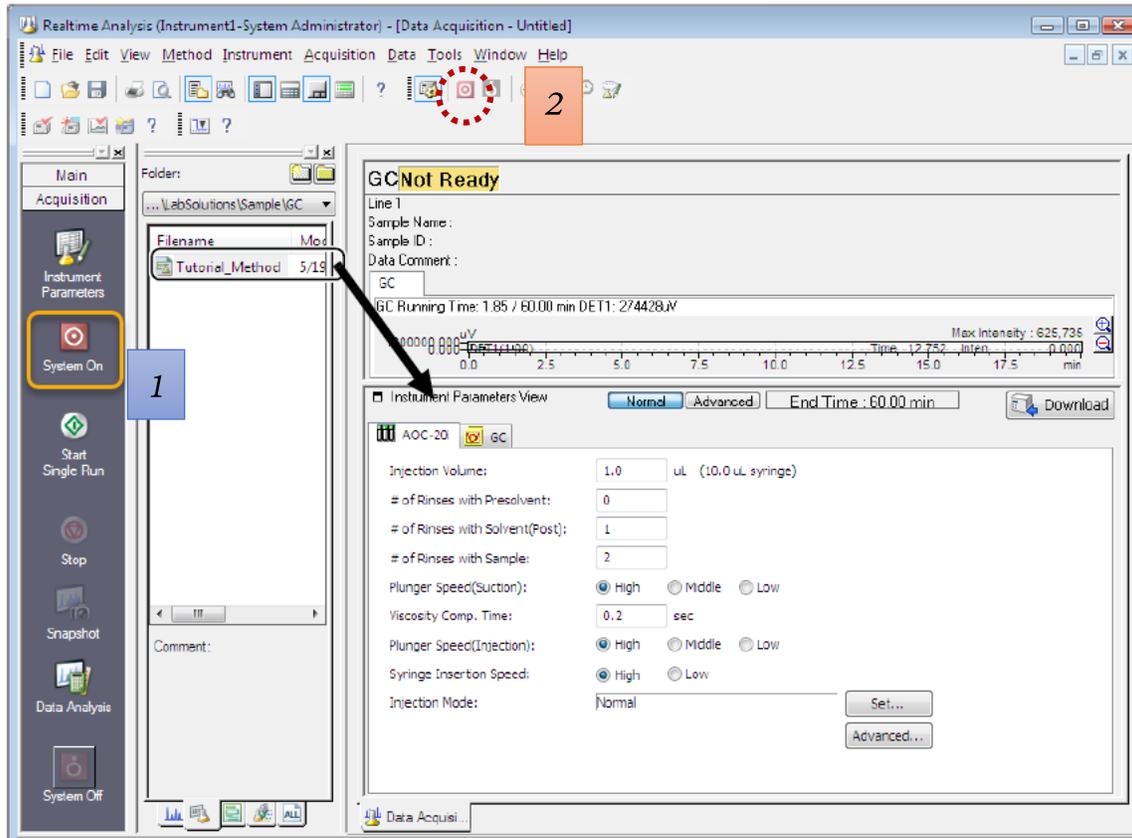
This function is not available on GC-2010 or GC-2014.

If the leak check fails, please check your gas plumbing, inlet top and column connections. You must resolve the leak issue before proceeding.

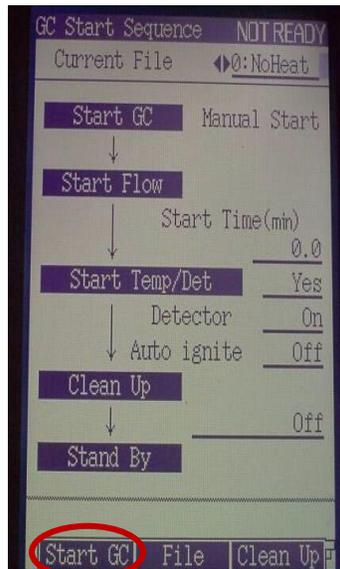
Step 5: Turn GC system on (Start the GC).

Make sure that all temperature zones are set to room temperature. You can now start controlling the temperature and flow of your GC unit. You may do so either from GC front panel or using software.

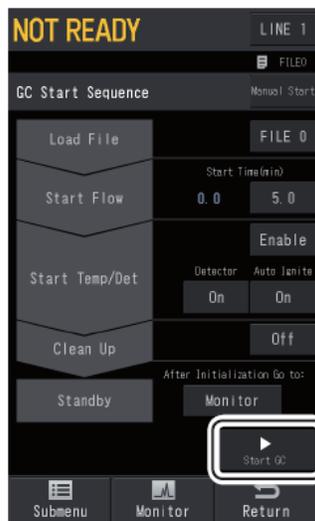
- a) From LabSolutions software, you can either press “System on” from Acquisition menu at the left (1) or press “System on” from tool bar on top (2).



b) From GC-2010/2014 front panel: Press SYSTEM (above the screen), then PF1 (below the screen) to start.



- c) From GC-2030 front panel: press the home button  then press [GC start sequence] then [start GC].



If you experience any leak errors or primary pressure errors, please check all gas supplies and plumbing to make sure that all valves are open and that all fittings are tight.

Step 6: Get GC ready for analysis

Once the GC system has been purged out successfully for 20 to 30 minutes at room temperature, you can download analysis method using software. You can ignite FID once it reaches above 100°C. Wait for system stabilization before running samples. Often times the first 1-2 runs may not look good and that's normal. The GC will take some time to reach good analytical condition.