GFM 4.0 Graphical User Interface Menus

The tables below list and specify the purpose of the three highest levels in the GFM menu system. A "(C)" following a menu item indicates that the item is only present when the user is in the combustion space domain. Likewise, an "(M)" following a menu item indicates that the item is only present when the user is in the melt space domain.

Main Menu

Menu Item	Sub-Item	Purpose
Pre-Processor		Prepare the inputs required by the GFM CFD application code.
	Combustion Space	Select the combustion space domain.
	Glass Melter	Select the melt domain.
Simulation		Run and monitor the simulation.
Post-Processor		Examine the simulation output.
	Combustion Space	Select the combustion space domain.
	Glass Melter	Select the melt domain.
Screen Print		Create a bitmap file of the screen display.
Exit		Shut down the GFM program and leave the GUI.
Help		View the GFM documentation.

Initial Preprocessor Menu

Menu Item	Sub Item	Purpose
File		
	New Case	Create a new case using default settings and display its figure view.
	Open Case	Open an existing case and display its figure view.
	Save Case	Disabled.
	Save Case As (Setup Only)	Disabled.
	Save Case As (Full Case)	Disabled.
	Update Case Description	Disabled.
	Delete Case	Delete the files for a given case.
	Delete Case Results	Delete only the output files for a given case.
Screen Print		Create a bitmap file of the screen display.
Done		Return to main menu.
Help		View the GFM documentation.

Preprocessor Menu When a Case is Open

Menu Item	Sub Item	Purpose
File		
	New Case	Disabled.
	Open Case	Disabled.
	Save Case	Save the new or modified setup files for the current case, constructing the grid if it was modified or did not exist before.
	Save Case As (Setup Only)	Make a copy of the setup portion of the current case using a new case number.
	Save Case As (Full Case)	Make a copy of the current case using a new case number.
	Update Case Description	Change or add to the case notes.
	Delete Case	Disabled.
	Delete Case Results	Disabled.
View		Change between the figure and grid views (only present after a grid exists).
Construct		
	Geometry	Set interior dimensions for furnace.
	Burner (C)	Define inlets for fuel and oxygen.
	Charger (M)	Define inlets for batch and/or cullet.
	Exhaust (C)	Define exits for combustion products.
	Outlet (M)	Define exits for melted glass.
	Components (C)	Define doghouses (side wells).
	Components (M)	Define electric boosters and/or gas bubblers.
	Grid	Construct the simulation grid.
Properties		
	Emissivities (C)	Specify emissivity for side walls, ceiling, and /or melt surface.
	Glass Exit Temperature (M)	Set the temperature of melted glass at the exit.
	Glass Properties (M)	Provide linear function points for the glass melt physical properties.
	Wall Properties	Set the wall physical properties.
	Simulation Parameters	Set the simulation run parameters.
	Soot Kinetics (C)	Indicate whether the simulation run will be for doing a soot kinetic calibration and specify soot kinetic parameters.
	Radiation Controls (C)	Indicate how view factors are kept and modify radiation solver loop limits.
Options		
	Simulation Display Updates	Turn on or off the refresh of the plot view during simulation.

	Collect Run Data	Identify the types of data that will be collected during the simulation run.
	Units	Change between SI and British unit representation on the display.
	Feed Units (C)	Indicate whether volume or mass based feed units are being used on the display.
	Zoom	Adjust the size of the diagram displayed on the screen.
	Diagram Position	Adjust the lower left corner position of the diagram displayed on the screen.
	Protect Grid Edits	See the status of the "protect grid edits" mode and change if desired.
Screen Print		Create a bitmap file of the screen display.
Done		Return to main menu.
Help		View the GFM documentation.

Grid Construction Menu

Menu Item	Sub Item	Purpose
File		
	New Case	Disabled.
	Open Case	Disabled.
	Save Case	Save the new or modified setup files for the current case, constructing the grid if it was modified or did not exist before.
	Save Case As (Setup Only)	Make a copy of the setup portion of the current case using a new case number.
	Save Case As (Full Case)	Make a copy of the current case using a new case number.
	Update Case Description	Change or add to the case notes.
	Delete Case	Disabled.
	Delete Case Results	Disabled.
View		Change between the figure and grid views (only present after a grid has been constructed).
Options		
	Simulation Display Updates	Turn on or off the refresh of the plot view during simulation.
	Collect Run Data	Identify the types of data that will be collected during the simulation run.
	Units	Change between SI and British unit representation on the display.

	Zoom	Adjust the size of the diagram displayed on the screen.
	Diagram Position	Adjust the lower left corner position of the diagram displayed on the screen.
	Protect Grid Edits	See the status of the "protect grid edits" mode and change if desired.
Screen Print		Create a bitmap file of the screen display.
Done		Return to main menu.
Help		View the GFM documentation.

Simulation Menu

Menu Item	Purpose
Combustion Space	Start a combustion simulation run.
Glass Melter	Start a melt simulation run.
Cycle Domains (Comb First)	Start a combustion simulation run and automatically cycle runs between the two domains.
Cycle Domains (Melt First)	Start a melt simulation run and automatically cycle runs between the two domains.
Cycle Regenerative (Comb First)	Start a combustion simulation run, automatically simulate the alternate furnace configuration to get an average heat flux for input to the melt simulation, and cycle runs between the two domains.
Cycle Regenerative (Melt First)	Start a melt simulation run and automatically cycle runs between the two domains, using the average heat flux from simulation of the two furnace configurations.

Running Simulation Menu

Menu Item	Sub Item	Purpose
File		
	New Case	Disabled.
	Open Case	Disabled.
	Save Case	Disabled.
	Save Case As (Setup Only)	Disabled.
	Save Case As (Full Case)	Disabled.
	Update Case Description	Change or add to the case notes.
	Delete Case	Disabled.
	Delete Case Results	Disabled.
Options		
	Simulation Display Updates	Turn on or off the refresh of the plot view during simulation.
	Activate RunPlot	Start up the RunPlot program to display a line graph for particular data collected.
	Units	Change between SI and British unit representation on the display.
	Zoom	Adjust the size of the diagram displayed on the screen.
	Diagram Position	Adjust the lower left corner position of the diagram displayed on the screen.
Screen Print		Create a bitmap file of the screen display.
Stop Run		Stop the simulation run.
Help		View the GFM documentation.

Post Processor Menu

Menu Item	Sub Item	Purpose
File		
	New Case	Disabled.
	Open Case	Select case and display first output property. (Disabled after use.)
	Save Case	Disabled.
	Save Case As (Setup Only)	Disabled.
	Save Case As (Full Case)	Disabled.
	Update Case Description	Change or add to the case notes.
	Delete Case	Disabled.
	Delete Case Results	Disabled.
Options		
	Activate RunPlot	Start up the RunPlot program to display a

		line graph for particular data collected.
	Units	Change between SI and British unit representation on the display.
	Zoom	Adjust the size of the diagram displayed on the screen.
	Diagram Position	Adjust the lower left corner position of the diagram displayed on the screen.
	Plot	Modify the output plot view.
Screen Print		Create a bitmap file of the screen display.
Done		Return to the main menu.
Help		View the GFM documentation.