



## CONFIG SETTINGS (ISG.CFG)

A screenshot of a Notepad window titled 'isg.cfg - Notepad'. The window contains the following text:

```
LoadFuelOnFlightPlanLoad=1
SetDestLoadTowerViewDist=20
SetMCUToPageOnFPlanLoad=1
SetSpdOffWhenAPMasterSetOff=1
DispAppPtrnAlts=1
SetWptBaro=1
FlightPlansFolder=C:\Documents and Settings\Owner\My Documents\Flight Simulator Files
SetDepTowerViewOnFlightPlanLoad=1
SetDestLoadTowerViewDist=20
LNavNextWptDist=4
ADIHdgTape=0
ShowTodBodIndicators=0
```

The status bar at the bottom right of the window shows 'Ln 5, Col 1'.

The isg.cfg file is processed when the aircraft is initially loaded in FS.

The parameters below can be used, unless a non-numeric value is required, the values are '1' for on or set any other value or non-setting will be off or not set.

- ArmPauseAtTod=1** Arms the pause at TOD feature. when armed its status displays in the GNSXLS Nav page 4/4, and the Smiths FMS CRZ page. Can be toggled on and off by the adjacent LSK button in the FMS. When 'Pause at TOD' is set to (ON), ISG will pause the sim when the TOD point is reached.)
- DeclatLonDisp** Displays latitude/longitude in decimal form below the DD MM SS version on the FMS's Navigation page 4.
- DispAppPtrnAlts** Displays the pattern and approach intercept altitudes when the approach display is on. By default the approach altitude is 3000 ft AGL , and the pattern altitude is 1500 ft AGL.
- DispETALocaltime=1** On the GNSXLS, and Smiths FMS, if this setting is set to '1' the eta times will display in local sim time. By default this is UTC sim time waypoint
- DispPrevWpt** On the MFD and EHSI, , and ND will display the previous flight plan waypoint in yellow. Will also display a dotted yellow line representing the flight plan track between the previous and the current flight plan waypoints.
- DrawBodArcOnEFS50EHSI=1** Draws a green descent arc when autopilot is controlling descent in the EFS50 EHSI gauge.
- EadiDualCue** When set to '1' the Flight Director on the EADI displays as a dual cue (two bars).
- EADIHdgTape** When set to '1' the on the EADI the sliding heading tape and heading bug display.



- EhsiStaticHdgPointer** When set to '1' a digital version of the aircraft's current heading is displayed on top of the heading pointer (in this release '1' is the default setting).
- ExpandEADI** When set to '1' the on the EADI, the ADI expands to fit the display always.
- ExpandEADILnav** When set to '1' the on the EADI, the ADI expands to fit the display only when LNAV mode is on.
- FlightPlansFolder** Location to read Flight Plan files from when not using the default folder.
- FlyoverWptChgDist** The distance (Lnav) the autopilot switches to tracking the next waypoint when the current target flight plan waypoint is designated as a flyover waypoint (default is 1.5 nm).
- LoadFuelonFlightPlanLoad=1** Load Fuel automatically when Flight Plan is loaded into FMC or MCU
- Lnav1xatTod=1** Sets the sim rate to 1x on reaching the TOD point when Lnav mode is on.
- LnavOffAtLastWpt=1** Automatically turns off LNAV when last flight plan waypoint is reached.
- LnavSetEnRouteFreqs=1** Auto-tunes en route frequencies when LNAV mode is on.
- McuShowActiveRwys=1** Displays the active runways being used by AI traffic on the 'APT 2' page of the MCU gauge.
- MFDTextAntiAlias** Use anti-alias on the text in the MFD.
- ParkingFile** Parking locations file , holds the parking locations for designated airports.
- SetDestLoadTowerViewDist** The distance from the destination airport when the tower view is changed to the destination
- SetSpdOffwhenAPMasterSetOff** Turn off auto-throttle whenever AP master switch is turned off
- ShowTodBodIndicators** displays the Tod/Bod displays on the MFD and EHIS displays
- SetUTCTimeOnFPLoad** When set to 1 sets the sim time to the current UTC time based on the PC's clock when a flight plan is loaded from the MCU.
- ShowTodBodIndicators** When set to '1' displays the TOD and BOD indicators (in gold).
- SetWptBaro** Sets the local baro pressure when the flight plan reaches each waypoint. (This feature not available in FSX)
- TcasVertRange** Sets the vertical range of the TCAS display (default is 14000 ft)
- VnavOffAtLastWpt=1** Turns off VNAV automatically when last flight plan waypoint is reached.
- VnavOffOnManAltChg =1** Turns off VNAV if manual altitude change is detected.



<b>VnavSetAlts=0</b>	Does not set altitudes when VNAV is on (default is 1)
<b>VnavSetSpd=0</b>	Does not set speed when VNAV is on (default is 1)
<b>VnavSetSpdOffOnManSpdChg=1</b>	Turns off VNAV speed setting if manual speed change is detected in Vnav mode.
<b>WeightUnit=kgs</b>	Displays weight values in the FMS in kilograms.
<b>WptChgDist</b>	The distance (in Lnav mode) the autopilot changes to tracking the next waypoint (default is 4.0 nm)
<b>WptChgSecs</b>	The time in seconds (in Lnav mode) the autopilot changes to tracking the next waypoint. (default is default WptChgDist value).
<b>WptProcChgDist</b>	The distance (in Lnav mode) the autopilot changes to tracking the next waypoint when the target waypoint is part of a procedure (Sid, Star or non precision approach) (default is 4.0 nm)
<b>WptProcChgSecs</b>	The time in seconds (in Lnav mode) the autopilot changes to tracking the next waypoint when the target waypoint is part of a procedure (Sid, Star or non precision approach) (default is WptProcChgDist value)

## AIRCRAFT CONFIG SETTINGS (Aircraft\_name.CFG)

```
LEAR45.cfg - Notepad
File Edit Format View Help
;Lear 45 config
ClimbTas=300
ClimbRate=2000
DescentTas=300
DescentRate=2000
FPA=3.0
MaxCruise=33000
MaxUnavDescRate=3500
MaxUnavClimbRate=3000
MinUnavIas=135
MinUNavRadioAlt=500
ParkingFile=Parking.txt
MFDTextAntiAlias=0
HoldLegMins=1.5
Ln 2, Co
```

This is a config file used by each individual aircraft (in the 'isg/aircraft' folder), allowing for config settings specific for that aircraft some of which is used by the FMS. Any setting in this file that are the same as in the isg.cfg file will be overwritten. This allows one master setting in the isg.cfg file for all aircraft and one local setting in this file specific for only one aircraft.



<b>ApprFlapsMin</b>	Min approach flaps setting (displayed as first flaps item on smiths fms approach page.
<b>ApprFlapsMid</b>	Mid approach flaps setting (displayed as second flaps item on smiths fms approach page.
<b>ApprFlapsMax</b>	Max approach flaps setting (displayed as third flaps item on smiths fms approach page.
<b>BestHoldIas</b>	Best Hold speed (Smiths FMS)
<b>ClbAltRest</b>	Default climb altitude restriction, combines with the 'ClbspdRest' parameter. The restriction is for altitudes below this value Example for a restriction of 250 kts below 10000. Set the ClbAltRestr to 10000 and the ClbSpdRest to 250.
<b>ClbSpdRest</b>	Climb speed restriction.
<b>ClimbIas</b>	Climb Indicated Airspeed (kts)
<b>ClimbIasMax</b>	Maximum climb speed (Ias) used in Smiths fms only.
<b>ClimbIasMin</b>	Minimum climb speed (Ias) used in Smiths fms only.
<b>ClimbRate</b>	Climb Rate (fpm)
<b>ClimbTas</b>	Climb true airspeed (kts)
<b>CostIndex</b>	Default Cost Index value for smiths fms , range is between 0 and 200.
<b>CruiseIas</b>	Cruise Indicated Airspeed (kts)
<b>CruiseIasMax</b>	Maximum cruise speed (Ias) used in Smiths fms only.
<b>CruiseIasMin</b>	Minimum cruise speed (Ias) used in Smiths fms only.
<b>CruiseTas</b>	Cruise True airspeed (kts)
<b>DescAltRest</b>	Default descent altitude restriction, combines with the 'DescspdRest' parameter. The restriction is for altitudes below this value Example for a restriction of 250 kts below 10000. Set the DescAltRestr to 10000 and the DescSpdRest to 250.
<b>DescentIas</b>	Descent Indicated Airspeed (kts)
<b>DescentIasMax</b>	Maximum descent speed (Ias) used in Smiths fms only.
<b>DescentIasMin</b>	Minimum descent speed (Ias) used in Smiths fms only.
<b>DescentRate</b>	Descent Rate (fpm)
<b>DescSpdRest</b>	Default descent speed restriction.
<b>DescentTas</b>	Descent True airspeed (kts)



<b>DispAppPtrnAlts</b>	Displays the pattern and approach intercept altitudes when the approach display is on. By default the approach altitude is 3000 ft AGL , and the pattern altitude is 1500 ft AGL.
<b>DispPrevWpt</b>	On the MFD and EHSI, , and ND will display the previous flight plan waypoint in yellow. Will also display a dotted yellow line representing the flight plan track between the previous and the current flight plan waypoints.
<b>DrawBodArcOnP1000MFD</b>	When set to '1' a green descent arc is displayed on the P1000 MFD while in descent when the autopilot is controlling descent.
<b>DrawBodArcOnEFS50EHSI</b>	When set to '1' Draws a green descent arc when autopilot is controlling descent in the EFS50 EHSI gauge.
<b>EadiDualCue</b>	When set to '1' the Flight Director on the EADI displays as a dual cue (two bars).
<b>EADIHdgTape</b>	When set to '1' the on the EADI the sliding heading tape and heading bug display.
<b>EhsiStaticHdgPointer</b>	When set to '1' a digital version of the aircraft's current heading is displayed on top of the heading pointer.
<b>EngThrust</b>	Thrust value for each engine. Displays on the smiths fms Ident page.
<b>ExpandEADI</b>	When set to '1' the on the EADI, the ADI expands to fit the display always.
<b>ExpandEADILnav</b>	When set to '1' the on the EADI, the ADI expands to fit the display only when LNAV mode is on.
<b>FlyoverWptChgDist</b>	The distance (Lnav) the autopilot switches to tracking the next waypoint when the current target flight plan waypoint is designated as a flyover waypoint (default is 1.5 nm).
<b>FPA=3.7</b>	Flight Path Angle in degrees (max 6.0 ) this value is also used for calculating the TOD/TOC positions.
<b>HoldLegMins</b>	Default Holding pattern leg mins (default 1.5)
<b>LdgFlaps</b>	Default Landing flaps value isplayed in the smiths fms approach page
<b>LnavOffAtLastWpt=1</b>	Automatically turns off LNAV when last flight plan waypoint is reached.
<b>LnavSetEnRouteFreqs=1</b>	Auto-tunes en route frequencies when LNAV mode is on.
<b>MaxCruise</b>	Max cruise altitude calculated by the FMS when Flight plan is loaded (ft)
<b>MaxVnavClimbRate</b>	Max climb rate set when VNAV mode is active (fpm)
<b>MaxVnavDescRate</b>	Max descent rate set when VNAV mode is active (fpm)



<b>MFDTextAntiAlias</b>	Use anti-alias on the text in the MFD.
<b>MinVnavIas=135</b>	Minimum Vnav speed (ias) , when in Vnav mode if the aircraft's speed falls below this speed the autopilot when set the climb rate to zero it will remain there until the aircraft's speed exceed MinVnavIas + 20 then it will reset the climb rate again and resume the climb. This setting is used to prevent an unintentional stall while in Vnav mode. This speed should generally be several kts above the aircraft's actual stall speed.
<b>MinVNavRadioAlt</b>	Minimum altitude (radio/AGL) above which the Vnav mode will activate (ft).
<b>ModelId</b>	Model Name of Aircraft (ex Boeing 737-400). This value will display on the Smiths FMS Ident page.
<b>ParkingFile</b>	Parking locations file , holds the parking locations for designated airports.
<b>PerformanceData fms.</b>	The file containing the performance data for this aircraft. Used by the Smiths fms.
<b>ResetApHdg=1</b>	When set to '1' constantly resets the autopilots heading whe LNAV mode is on. This is an attempt to override some 3 <sup>rd</sup> party autopilots that do this, that prevent ISG's LNAV mode from working. (see more details in the 'Notes: section).
<b>SetSpdOffwhenAPMasterSetOff</b>	Turns off the speed hold anytime the autopilot master switch is turned off.
<b>SetWptBaro</b>	Sets the local baro pressure when the flight plan reaches each waypoint. (This feature not available in FSX)
<b>ShowTodBodIndicators</b>	When set to '1' displays the TOD and BOD indicators (in gold), not available in ND.
<b>TcasVertRange</b>	Sets the vertical range of the TCAS display (default is 14000 ft)
<b>TOFlaps</b>	Default Takeoff flaps value isplayed in the smiths fms takeoff page
<b>TOFlapsRange</b>	The range of selectable flaps values in the smiths fms takeoff page. Up to 5 settings allowed, must be separated by comma's. The default values are 1,5,10,15,25
<b>V1</b>	Default Takeoff V1 speed displayed in the smiths fms takeoff page
<b>VR</b>	Default Takeoff V1 speed displayed in the smiths fms takeoff page
<b>V2</b>	Default Takeoff V1 speed displayed in the smiths fms takeoff page
<b>VnavOffAtLastWpt=1</b>	Turns off VNAV automatically when last flight plan waypoint is reached.
<b>VnavOffOnManAltChg =1</b>	Turns off VNAV if manual altitude change is detected.
<b>VnavSetAlts=0</b>	Does not set altitudes when VNAV is on (default is 1)
<b>VnavSetMachCruiseSpd</b>	In Vnav mode Sets speed as mach value instead of Ias value when in cruise.



<b>VnavSetSpd=0</b>	Does not set speed when VNAV is on (default is 1)
<b>VnavSetSpdOffOnManSpdChg=1</b>	Turns off VNAV speed setting if manual speed change is detected in Vnav mode.
<b>VnavSetSpdRestDist</b>	Distance from speed restriction wpt the restriction speed is applied (default is 25 nm)
<b>Vref</b>	Min Default Vref speed value (displayed next to LSK R4 on smiths fms approach page).
<b>VrefMin</b>	Min Vref speed setting (displayed as first vref item on smiths fms approach page).
<b>VrefMid</b>	Mid Vref speed setting (displayed as second vref item on smiths fms approach page).
<b>VrefMax</b>	Max Vref speed setting (displayed as third vref item on smiths fms approach page).
<b>WeightUnit=kgs</b>	Displays weight values in the FMS in kilograms.
<b>WptChgDist</b>	The distance (in Lnav mode) the autopilot changes to tracking the next waypoint (default is 4.0 nm)
<b>WptChgSecs</b>	The time in seconds (in Lnav mode) the autopilot changes to tracking the next waypoint. (default is default WptChgDist value).
<b>WptProcChgDist</b>	The distance (in Lnav mode) the autopilot changes to tracking the next waypoint when the target waypoint is part of a procedure (Sid, Star or non precision approach) (default is 4.0 nm)
<b>WptProcChgSecs</b>	The time in seconds (in Lnav mode) the autopilot changes to tracking the next waypoint when the target waypoint is part of a procedure (Sid, Star or non precision approach) (default is WptProcChgDist value)



## Setting EHSI and Navigation Display Colors ((AircraftId).cfg).

In this release you can set the background colors of the EHSI and Navigation Displays, via the (AircraftId).cfg file. There are 3 color settings for each display representing red, green, and blue (RGB). Use these settings in the (AircraftId).cfg file for your aircraft and the color will be set when the aircraft is loaded.

### Example:

The settings below set the background color of the isg1!HW\_B737\_ND gauge to the same blue background color used on the EFIS displays in the default FSX 737-800.

```
HWB737NDBkgrdColorRed=16  
HWB737NDBkgrdColorGreen=17  
HWB737NDBkgrdColorBlue=48
```

### EFS50\_EHSI:

```
EFS50EHSIBkgrdColorRed=(RGB value)  
EFS50EHSIBkgrdColorGreen=(RGB value)  
EFS50EHSIBkgrdColorBlue=(RGB value)
```

### P1000\_MFD:

```
P1000MFDBkgrdColorRed=(RGB value)  
P1000MFDBkgrdColorGreen=(RGB value)  
P1000MFDBkgrdColorBlue=(RGB value)
```

### HW\_B737\_ND:

```
HWB737NDBkgrdColorRed=(RGB value)  
HWB737NDBkgrdColorGreen=(RGB value)  
HWB737NDBkgrdColorBlue=(RGB value)
```

### HW\_MD11\_ND:

```
HWMD11NDBkgrdColorRed=(RGB value)  
HWMD11NDBkgrdColorGreen=(RGB value)  
HWMD11NDBkgrdColorBlue=(RGB value)
```

### DU\_1000\_EHSI:

```
DU1000EHSIBkgrdColorRed=(RGB value)  
DU1000EHSIBkgrdColorGreen=(RGB value)  
DU1000EHSIBkgrdColorBlue=(RGB value)
```

### PROLINE4\_MFD:

```
PROLINE4MFDBkgrdColorRed=(RGB value)  
PROLINE4MFDBkgrdColorGreen=(RGB value)  
PROLINE4MFDBkgrdColorBlue=(RGB value)
```



**Notes:**

- The filename for this config file must be the exact name used as the 5th parameter in the panel.cfg file for the aircraft followed by the .cfg extension.  
Example: **gauge34=isg1!EFS50\_EADI, 72,74,182,125 , LEAR45 ←**
- Aircraft config Filename should be LEAR45.cfg for the 'LEAR45' 5th parameter.
- When FPA option is set this will override the 'ClimbRate' and 'DescentRate' values. The FMS will calculate the TOC/TOD positions based on the specified flight path angle.
- When there is no FPA param specified, the TOC/TOD positions are calculated used the Climb/DescentTas and Climb/DescentRate values.
  
- The anti alias option on the MFD allows for a sharper text display which may be needed if the gauge is sized small. The tradeoff is when the anti alias option is on the text will not display as bright as when the anti-alias is off.
  
- **ResetApHdg=1**  
This mode set in the (AircraftId).cfg file. constantly resets the autopilots heading whe LNAV mode is on. To use this the ISG!Server gauge must be installed, and generally should be the last gauge on the gauge list for that window, so the heading set by the 'Server' gauge is the last heading set and not overridden by the aircraft's autopilot.



## Manual Install:

The ISG gauges install just like any other gauge, you add its name to the panel.cfg file, and specify its location on the panel.

One addition to this is for the aircraft performance information used by the FMS, and the flight logging feature. For these features to work requires the entry of the 5<sup>th</sup> parameter in the panel.cfg setting.

This 5<sup>th</sup> parameter should be the same name as the cfg file for that aircraft.

Example: If the .cfg file is named 'Lear45.cfg', then the 5<sup>th</sup> parameter should read 'Lear45'.

When the aircraft is loaded into FS, this .cfg file will be read to obtain the settings. The Flightlog feature uses this setting to identify which aircraft the logging information is for. The FlightLog feature will not work if there is no 5<sup>th</sup> parameter with the cfg file as the 5<sup>th</sup> parameter.

FS9/FSX PANEL.CFG settings..

A screenshot of a Notepad window titled 'panel.cfg - Notepad'. The window contains a list of gauge settings in a text file format. The settings are as follows:  
gauge27=SimIcons!Compass Icon, 625,290,12,12  
gauge28=SimIcons!GPS Icon, 597,290,12,12  
gauge29=SimIcons!Kneeboard Icon, 597,276,12,12  
gauge30=SimIcons!ATC Icon, 611,276,12,12  
gauge31=SimIcons!Map Icon, 625,276,12,12  
gauge32=ISG1!VNAV, 265,37,21,20  
gauge33=isg1!P1000\_MFD, 254,75,188,257,LEAR45  
gauge34=ISG1\_TCAS!Logic, 1,1,1,1  
gauge35=Lear\_45!EICAS, 442,142,144,162  
gauge36=737-400!Comm 1, 442,74,96,35  
gauge37=737-400!Nav 1, 536,72,105,37  
gauge38=737-400!ADF, 536,110,104,32  
gauge39=737-400!Transponder, 442,110,93,33  
The text 'LEAR45' in the gauge33 line is circled in red. The status bar at the bottom right of the window shows 'Ln 67, Col 47'.



Additionally there are three identifiers that when used as a 5<sup>th</sup> parameter will help reduce the frame rate impact of the gauge.

A screenshot of a Notepad window titled 'panel.cfg - Notepad'. The window contains a configuration file with several sections separated by dashed lines. Three specific gauge definitions are circled in red: 'gauge00=ISG1!P1000\_MFD, 0,0,160,215,WN', 'gauge15=isg1!P1000\_MFD, 0,-3,300,400,VC', and 'gauge12=isg1!P1000\_MFD, 0,-3,300,400,VC2'. The status bar at the bottom of the window shows 'Ln 21, Col 4'.

```
//-----  
[Window07]  
Background_color=0,0,0  
size_mm=160,215  
position=0  
visible=0  
ident=30  
  
gauge00=ISG1!P1000_MFD, 0,0,160,215,WN  
...  
//-----  
[Ucockpit01]  
Background_color=0,0,0  
size_mm=512,512  
visible=1  
...  
gauge13=Lear_45!Fuel Right Standby, 97,405,30,30  
gauge14=Lear_45!Fuel Crossfeed, 65, 405,30,30  
gauge15=isg1!P1000_MFD, 0,-3,300,400,VC  
...  
//-----  
[Ucockpit02]  
File=../../Lear45/panel/Panel_Decal_Lear_2.bmp  
Background_color=0,0,0  
size_mm=512,512  
visible=1  
pixel_size=512,512  
texture=$Lear_45_2  
...  
gauge10=Lear_45!Nose Gear Light, 423,195,30,30  
gauge11=Lear_45!Master Caution, 427,291,71,50  
gauge12=isg1!P1000_MFD, 0,-3,300,400,VC2
```

**WN:** Identifies the gauge as being part of a popup window. The ‘WN’ parameter will prevent the gauge from being drawn when the window is not displayed. It is important that the ‘ident’ Parameter of the window match the identifier of the gauge (see the Gauge Identifiers section below section for more details).

**VC:** Identifies the gauge as being part of a virtual cockpit. The ‘VC’ parameter will prevent the gauge from being drawn when the Virtual Cockpit is not open.

**VC2:** Identifies the gauge as being an additional gauge in the virtual cockpit. IOW if this gauge is installed on both the pilot and the copilot’s sides of the virtual cockpit. When two instances of the gauge is installed it results in a double frame rate hit to display both gauges at the same time. The ‘VC2’ setting inhibits the bigger frame impact items (the ATC boundary, and the Airports display) from displaying on this secondary gauge. The rest of the lesser impact items will still display maintaining the realism of the gauge.

It is recommended these settings be used in the panel.cfg file whenever multiple versions of the same gauge is used on a panel; as it will in most cases result in significant frame rate savings in particular for the EHSI,MFD,and EADI gauges.



## Gauge Identifiers

4001 MCU  
4002 P1000\_MFD  
4003 P1000\_MFD\_CNTR  
4004 GNSXLS  
4005 EFS50\_EADI  
4007 EFS50\_EHSI\_CNTR  
4008 EFS50\_EHSI  
4010 EFS50\_TCAS  
4011 HW\_B737\_ND  
4012 SMITHS\_FMS  
4013 HW\_B737\_EFIS\_CNTR  
4014 HW\_MD11\_ND  
4016 MD11\_EFIS\_CNTR  
4017 DU\_1000\_EHSI  
4018 PROLINE4\_MFD

```
panel.cfg - Notepad
File Edit Format View Help
//-----
[Window08]
Background_color=0,0,0
size_mm=320
window_size_ratio=1.000
position=0
visible=0
ident=4001
window_size= 0.500, 0.500
window_pos= 0.000, 0.000

gauge00=isg1!MCU, -2,0,312,240,WN

//-----
[Window10]
Background_color=0,0,0
size_mm=320
window_size_ratio=1.000
position=0
visible=0
ident=4004
window_size= 0.500, 0.500
window_pos= 0.000, 0.000

gauge00=isg1!GNSXLS, 2,1,312,245

/-----
[Window11]
Background_color=0,0,0
size_mm=315,310
window_size_ratio=1.000
position=0
visible=0
ident=4008
window_size= 0.500, 0.500
window_pos= 0.000, 0.000

gauge00=isg1!EFS50_EHSI, 0,0,312,301,WN

Ln 192, Col :
```



These identifiers should be used when a gauge is used as a [window] in the panel.cfg file of the installed aircraft. This will allow the panel icons below to open these gauge windows when the icon buttons are pressed. Also this allow popup version of the EADI,EHSI, and MFD to open by the user pressing the hot area in the center of these gauges.

## Gauge Descriptions:

### EFS50\_EADI



The EADI display.

ident=4005

GaugeXX= ISG!! EFS50\_EADI

size 384,371

### EFS50\_EADI\_NB



Same functionality as the EADI display but without the background bitmap for users who prefer to use another background bitmap.

ident=4005

GaugeXX= ISG!! EFS50\_EADI\_NB

**EFS50\_EHSI**



The EHSI display.

ident=4008  
 GaugeXX= ISG!! EFS50\_EHSI  
 size 384,371

**EFS50\_EHSI\_NB**



Same functionality as the EHSI display but without the background bitmap for users who prefer to use another background bitmap.

ident=4008  
 GaugeXX= ISG!! EFS50\_EHSI\_NB

**EFS50\_EHSI\_CNTR**



The EHSI Control Unit.  
 ident=4007

GaugeXX= ISG!! EFS50\_EHSI\_CNTR  
 size 500,169

**EFS50\_EHSI\_CNTR\_LM**



The EHSI Control Unit, with night lumination support.

ident=4007  
 GaugeXX= ISG!! EFS50\_EHSI\_CNTR\_LM  
 size 500,169

**EFS50\_TCAS**



The TCAS Only display.

ident=4010  
 GaugeXX= ISG!! EFS50\_TCAS

Requires TCAS Logic gauge be installed to display TCAS info.  
 size 384,371

**GNSXLS**



The FMS display.

ident=4004  
GaugeXX= ISG1!GNSXLS  
size 550,433

**GNSXLS\_LM**



The FMS display with night lumination support.

ident=4004  
GaugeXX= ISG1!GNSXLS\_LM  
size 550,433

**MCU**



The MCU Display

ident=4001  
GaugeXX= ISG1!MCU  
size 501,386

**MCU\_LM**



The MCU Display with night illumination

ident=4001  
GaugeXX= ISG1!MCU\_LM  
size 501,386

P1000\_MFD



ident=4002  
 GaugeXX= ISG1!P1000\_MFD  
 size 326,433

P1000\_MFD\_CNTR



ident=4003  
 GaugeXX= ISG1!P1000\_MFD\_CNTR

**Note:** When the MFD\_CTRL display is active some of the ISG features will not display in the MFD (ex the approach display).

size 605,234

HW\_B737\_ND



B737 style Navigation Display  
 ident=4011  
 GaugeXX= isg1!HW\_B737\_ND  
 size 281,337

HW\_B737\_ND\_NB



Same functionality as the Navigation Display but without the background bitmap for users who prefer to use another background bitmap

ident=4011  
 GaugeXX= isg1!HW\_B737\_ND

**Note:** When the MFD\_CTRL display is active some of the ISG features will not display in the MFD (ex the approach display).



**SMITHS\_FMS**



Smiths style FMS unit.

ident=4012  
 GaugeXX= isg1!SMITHS\_FMS  
 size 415,640

**SMITHS\_FMS\_BR**



Brown version of the Smiths FMS unit.

ident=4012  
 GaugeXX= isg1!SMITHS\_FMS\_BR  
 size 415,640

**HW\_B737\_EFIS\_CNTR**



Boeing 737 style EFIS control panel.

ident=4013  
 GaugeXX= isg1!HW\_B737\_EFIS\_CNTR  
 size 313,212

**HW\_B737\_EFIS\_CNTR\_BR**



Brown version of the 737 EFIS control panel.

ident=4013  
 GaugeXX= isg1!HW\_B737\_EFIS\_CNTR\_BR  
 size 313,212

**HW\_MD11\_ND**



MD11 style Navigation Display.  
ident=4014  
GaugeXX= isg!! HW\_MD11\_ND  
size 291,319

**HW\_MD11\_ND\_NB**



MD11 style Navigation Display (no background version)  
ident=4014  
GaugeXX= isg!! HW\_MD11\_ND\_NB  
size 246,241

**MD11\_EFIS\_CTRL**



MD11 style EFIS control panel.  
GaugeXX= isg!!MD11\_EFIS\_CTRL  
size 311,182

**A300\_EFIS\_CTRL**



A300 style EFIS control panel.  
GaugeXX= isg!!A300\_EFIS\_CTRL  
size 373,212

**DU\_1000\_EHSI**



DU1000 EHSI (A300/A310 style).

ident=4017

GaugeXX= isg1!DU\_1000\_EHSI  
size 411,394

**DU\_1000\_EHSI\_NB**



No background version of DU1000 EHSI.

ident=4017

GaugeXX= isg1!DU\_1000\_EHSI  
size 318,311

**PROLINE4\_MFD**



Collins Proline 4 style multi-function display.

ident=4018

GaugeXX= isg1!PROLINE4\_MFD  
size 322,368



**PROLINE4\_MFD\_NB**



No background version of the Proline 4 style MFD



ident=4018









GaugeXX= isg1!PROLINE4\_MFD\_NB  
size 247,285

<p><b>PROLINE4_MFD_CTRL</b></p>  <p>Proline 4 style EFIS control panel.</p> <p>GaugeXX= isg1! PROLINE4_MFD_CTRL size 311,97</p>	<p><b>PROLINE4_AUX_CTRL</b></p>  <p>Auxiliary control panel for proline4 MFD. Applies options normally only available via the Collins FMS which is not included in this release.</p> <p>GaugeXX= isg1! PROLINE4_AUX_CTRL size 313,93</p>
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## Panel Icons

These Panel Icons toggle on/off the various ISG gauges that are placed in sub-windows on the panel. This allows for opening and closing these gauges without the full size gauge being permanently displayed on the panel.

<p><b>EHSI_CNTR_OPEN</b></p>  <p>Toggles on/off the Enhanced HSI gauge. The panel ident to open a gauge with this button is '4008'.</p> <p>GaugeXX=ISG1! EHSI_CNTR_OPEN size 50,49</p>	<p><b>EHSI_TCAS_OPEN</b></p>  <p>Toggles on/off the EHSI TCAS only gauge. The panel ident to open a gauge with this button is '4010'.</p> <p>GaugeXX=ISG1!EHSI_TCAS_OPEN</p>
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<p><b>VNAV</b></p>  <p>Toggles On/Off the VNAV mode. When VNAV mode is active, the button text changes color to yellow.</p> <p>GaugeXX=ISG1!VNAV</p>	<p><b>MCU_OPEN</b></p>  <p>Toggles on/off the MCU gauge. The panel ident to open a gauge with this button is '4001'.</p> <p>GaugeXX=ISG1!MCU_OPEN</p>
<p><b>FMS_OPEN</b></p>  <p>Toggles On/Off the GNSXLS FMS gauge. The panel ident to open a gauge with this button is '4004'.</p> <p>GaugeXX=ISG1!FMS_OPEN</p>	<p><b>P1000 MFD_OPEN</b></p>  <p>Toggles On/Off the P1000 MFD gauge . The panel ident to open a gauge with this button is '4002'.</p> <p>GaugeXX=ISG1!P1000_MFD_OPEN</p>
<p><b>P1000 MFD_CNTR_OPEN</b></p>  <p>Toggles On/Off the P1000 MFD Control panel gauge. The panel ident to open a gauge with this button is '4003'.</p> <p>GaugeXX=ISG1!P1000_MFD_CNTR_OPEN</p>	<p><b>LNAV</b></p>  <p>Toggles On/Off LNAV mode.</p> <p>GaugeXX=ISG1!LNAV</p>
<p><b>FMS2_OPEN</b></p>  <p>Toggles On/Off the SMITHS FMS. The panel ident to open a gauge with this button is '4012'.</p> <p>GaugeXX=ISG1!FMS2_OPEN</p>	<p><b>EFIS_CTRL_OPEN</b></p>  <p>Toggles On/Off EFIS Control Panel. The panel ident to open a gauge with this button is '4013'.</p> <p>GaugeXX=ISG1! EFIS_CTRL_OPEN</p>



## TCAS Logic:

The TCAS displays on the MFD, EHSI, and EHSI TCAS Only displays are driven by a version of Lee Hetherington's TCAS gauge made for use with ISG1. The panel.cfg entries are as follows

...  
**GaugeXX=ISG1\_TCAS!Logic, 1,1,1,1**

This TCAS gauge will not be seen on the panel, the information from the TCAS gauge will be displayed in the TCAS view on the , EHSI, P1000\_MFD, and B737\_ND gauges. (TA) and Radar Alerts (RA) are included. An audible alert will sound noting either 'Traffic' (for TA) or an Instruction to 'Climb', 'Descend', 'increase climb' for collision avoidance.

## Server:

The server gauge allows 3<sup>rd</sup> party 'client' gauges to read some of the values held by the ISG FMS. The panel.cfg entries are as follows

**GaugeXX=ISG1!Server, 1,1,1,1**

Below are the shared variables 3<sup>rd</sup> party 'client' gauges can access.

### C++ gauge shared variables.

isg_active	PUINT32	Flag indicating ISG1 server gauge is active and hosting the FMC data (1 - active)
isg_act_wpt_id	PVOID	Identifier the current active flight waypoint (text)
isg_act_wpt_pos	PUINT32	Flight Plan position of current active flight plan waypoint (ex 4 out of 10)
isg_act_wpt_dist	PFLOAT64	Distance from Aircraft's current position to current active waypoint.
isg_act_wpt_trk	PFLOAT64	Course/track between previous waypoint and current active waypoint.
isg_act_wpt_brg	PFLOAT64	Heading/Bearing from Aircraft's current position to current active waypoint
isg_fpln_wpt_cnt	PUINT32	Total number of flight plan waypoints (including destination)
isg_xtk_err_dir	PUINT32	cross track error direction (1 left, 2 right)
isg_xtk_err_dist	PFLOAT64	cross track error distance (NM).
isg_lnav_mode	PUINT32	Lnav mode , 0 - off , 1 on
isg_vnav_mode	PUINT32	Vnav mode , 0 - off , 1 on

**XML gauge shared variables.**

isg_lnav	enum	Toggle On/Off Lnav mode
isg_vnav	enum	Toggle On/Off Vnav mode.
isg_nd_tcas	enum	Tiggle On/Off TCAS display