

# **CONFIG SETTINGS (ISG.CFG)**

📕 isg	.cfg - Note	pad								
File E	dit Format	View	Help							
SetDe SetMC SetSp DispA SetWp Fligh SetDe SetDe LNauM ADIHd	estLoadTi CUToPagel odOffwhei AppPtrnA otBaro=1 htPlansFi epTowerV	ower JNFP NAPM Lts= olden iewOn ower ist=/	′=C:\Docu \FlightPl JiewDist= ↓	20 FF=1 ments and 3 anLoad=1	Settings'	\Owner\My	Documen	ts\Fligh	t Simulato	r Files
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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 $3000 \text{ ft}$ AGL , and the pattern altitude is $1500 \text{ ft}$ 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.
DrawBodArcOnEFS5(	<b>DEHSI=1</b> 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.

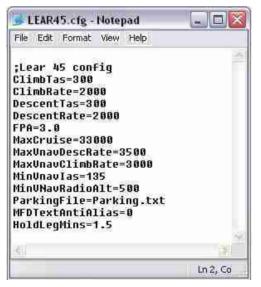


Integrate				
EhsiStaticHdgPointer	<b>EhsiStaticHdgPointer</b> When set to '1' a digital version of the aircraft's current heading is displayed on top of the heading pointer (in this release '1' is the default setting).			
<b>ExpandEADI</b> When set to '1' the on the EADI, the ADI expands to fit the 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).			
LoadFuelonFlightPlan	Load=1 Load Fuel automatically when Flight Plan is loaded into FMC or MCU			
Lnav1xatTod=1 Set	s 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.			
LnavSetEnRouteFreq	s=1 Auto-tunes en route frequencies when LNAV mode is on.			
McuShowActiveRwys=1 Displays the active runways being used by AI trafffic on the 'APT 2' page of the MCU gauge.				
<b>MFDTextAntiAlias</b> Use anti-alias on the text in the MFD.				
ParkingFile     Parking locations file , holds the parking locations for designated airports.				
SetDestLoadTowerVie	<b>wDist</b> The distance from the destination airport when the tower view is changed to the destination			
SetSpdOffwhenAPMa	sterSetOff Turn off auto-throttle whenever AP master switch is turned off			
ShowTodBodIndicator	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).				
SetWptBaroSets the local baro pressure when the flight plan reaches each waypoint. (This feature not available in FSX)				
<b>TcasVertRange</b> Sets the vertical range of the TCAS display (default is 14000 ft)				
<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.				



integra	3
VnavSetAlts=0	Does not set altitudes when VNAV is on (default is 1)
VnavSetSpd=0	Does not set speed when VNAV is on (default is 1)
VnavSetSpdOffOn	ManSpdChg=1, Turns off VNAV speed setting if manual speed change is detected in Vnav mode.
WeightUnit=kgs	Displays weight values in the FMS in kilograms.
WptChgDist	The distance (in Lnav mode) the autopilot changes to tracking the next waypoint (default is 4.0 nm)
WptChgSecs	The time in seconds (in Lnav mode) the autopilot changes to tracking the next waypoint. (default is default WptChgDist value).
WptProcChgDist	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)
WptProcChgSecs	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)



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.



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



DispAppPtrnAlts	Displays the pattern and approach intercept altitudes when the approach display is on. By default the approach altitude is $3000 \text{ ft AGL}$ , and the pattern altitude is $1500 \text{ ft AGL}$ .
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.
DrawBodArcOnP1000	MFD When set to '1' a green descent arc is displayed on the P1000 MFD while in descent when the autopilot is controlling descent.
DrawBodArcOnEFS5	<b>DEHSI</b> When set to '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.
<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.	
ExpandEADILnav	When set to '1' the on the EADI, the ADI expands to fit the display only when LNAV mode is on.
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).
FPA=3.7	Flight Path Angle in degrees (max 6.0) this value is also used for calculating the TOD/TOC positions.
HoldLegMins	Default Holding pattern leg mins (default 1.5)
LdgFlaps	Default Landing flaps value isplayed in the smiths fms approach page
LnavOffAtLastWpt=1	Automatically turns off LNAV when last flight plan waypoint is reached.
LnavSetEnRouteFreq	<b>s=1</b> Auto-tunes en route frequencies when LNAV mode is on.
MaxCruise	Max cruise altitude calculated by the FMS when Flight plan is loaded (ft)
MaxVnavClimbRate	Max climb rate set when VNAV mode is active (fpm)
MaxVnavDescRate	Max descent rate set when VNAV mode is active (fpm)



**MFDTextAntiAlias** Use anti-alias on the text in the MFD. MinVnavIas=135 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. **MinVNavRadioAlt** Minimum altitude (radio/AGL) above which the Vnav mode will activate (ft). ModelId Model Name of Aircraft (ex Boeing 737-400). This value will I display on the Smiths FMS Ident page. **ParkingFile** Parking locations file, holds the parking locations for designated airports. **PerformanceData** The file containing the performance data for this aircraft. Used by the Smiths fms. When set to '1' constantly resets the autopilots heading whe LNAV mode is on. ResetApHdg=1 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). SetSpdOffwhenAPMasterSetOff Turns off the speed hold anytime the autopilot master switch is turned off. Sets the local baro pressure when the flight plan reaches each waypoint. **SetWptBaro** (This feature not available in FSX) **ShowTodBodIndicators** When set to '1' displays the TOD and BOD indicators (in gold), not available in ND. **TcasVertRange** Sets the vertical range of the TCAS display (default is 14000 ft) **TOFlaps** Default Takeoff flaps value isplayed in the smiths fms takeoff page **TOFlapsRange** 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 V1 Default Takeoff V1 speed displayed in the smiths fms takeoff page VR Default Takeoff V1 speed displayed in the smiths fms takeoff page V2 Default Takeoff V1 speed displayed in the smiths fms takeoff page VnavOffAtLastWpt=1 Turns off VNAV automatically when last flight plan waypoint is reached. **VnavOffOnManAltChg =1** Turns off VNAV if manual altitude change is detected. VnavSetAlts=0 Does not set altitudes when VNAV is on (default is 1) VnavSetMachCruiseSpd In Vnav mode Sets speed as mach value instead of Ias value when in cruise.



VnavSetSpd=0	Does not set speed when VNAV is on (default is 1)			
VnavSetSpdOffOnManSpdChg=1, Turns off VNAV speed setting if manual speed change is detected in Vnav mode.				
VnavSetSpdRestDist 25 nm)	Distance from speed restriction wpt the restriction speed is applied (default is			
Vref	Min Default Vref speed value (displayed next to LSK R4 on smiths fms approach page).			
VrefMin	Min Vref speed setting (displayed as first vref item on smiths fms approach page.			
VrefMid	Mid Vref speed setting (displayed as second vref item on smiths fms approach page.			
VrefMax	Max Vref speed setting (displayed as third vref item on smiths fms approach page.			
WeightUnit=kgs Di	splays weight values in the FMS in kilograms.			
WptChgDist	The distance (in Lnav mode) the autopilot changes to tracking the next waypoint (default is 4.0 nm)			
WptChgSecs	The time in seconds (in Lnav mode) the autopilot changes to tracking the next waypoint. (default is default WptChgDist value).			
WptProcChgDist	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)			
WptProcChgSecs	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 overriden 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  $5^{th}$  parameter with the cfg file as the  $5^{th}$  parameter.

FS9/FSX PANEL.CFG settings ..

률 panel.cfg - Notepad	
File Edit Format View Help	
gauge27=SimIcons!Compass Icon, 625,290 gauge28=SimIcons!GPS Icon, 597,290,12, gauge29=SimIcons!Kneeboard Icon, 597,2 gauge30=SimIcons!ATC Icon, 611,276,12, gauge31=SimIcons!Map Icon, 625,276,12, gauge32=ISG1!VNAV, 265,37,21,20 gauge33=isg1!P1000_MFD, 254,75,188,227 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	12 76,12,12 12 12 ,LEAR45
gauge38=737-400!ADF, 536,110,104,32 qauqe39=737-400!Transponder, 442,110,9	3.33
3	>
	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.

📕 panel.cfg - Notepad File Edit Format View Help 11-----[Window07] Background color=0,0,0 size mm=160,215 position=0 visible=0 ident=30 gauge00=ISG1\*P1000 MFD, 8.8.168 ;;--[Vcockpit01] 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, 40 gauge15=isg1!P1000\_NFD, 0,-3,300,400,VC .30.30 ... [Vcockpit02] file=../../Lear45/panel/Panel Decal Lear 2.bmp Background color=0,0,0 size\_nm=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=isg11P1000 MFD, 0,-3,300,408,0C2 < 3 Ln 21, Col 4

**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\_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 ident4001 window\_size= 0.500, 0.500 window\_pos= 0.600, 0.000 gauge00=isg1!MCU, -2,0,312,240,WN 11---// [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 1 [Window11] Background color=0,0,0 size\_nm=315,310 window\_size\_ratio=1.000 position=0 visible ident 4008 window 512e= 0.500, 0.500 window\_pos= 0.000, 0.000 gauge00=isg1!EFS50\_EHSI, 0,0,312,301,WN 1 2 501 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:**

EFSS0_EADI	EFS50_EADI_NB
The EADI display.	Same functionality as the EADI display but without the background bitmap for users who prefer to use another background bitmap.
ident=4005	
GaugeXX= ISG1! EFS50_EADI size 384,371	ident=4005 GaugeXX= ISG1! EFS50_EADI_NB
	- – – –



Integrated Simavionics	14
EFS50_EHSI	EFS50_EHSI_NB
OTK 31670 4 111111111111111111111111111111111111	
The EHSI display. ident=4008	Same functionality as the EHSI display but without the background bitmap for users who prefer to use another background bitmap.
GaugeXX= ISG1! EFS50_EHSI	ident=4008
size 384,371	GaugeXX= ISG1! EFS50_EHSI_NB
EFS50_EHSI_CNTR	EFS50_EHSI_CNTR_LM
PULL DH SET RALT = 1ST - SYS HSI ARC NAV RNG CBS A C ILNAV BDRY	HAL DI HAU - DI - DI - TO AN
The EHSI Control Unit. ident=4007	The EHSI Control Unit, with night lumination support.
GaugeXX= ISG1! EFS50_EHSI_CNTR size 500,169	ident=4007 GaugeXX= ISG1! EFS50_EHSI_CNTR_LM size 500 169

size 500,169

# EFS50\_TCAS



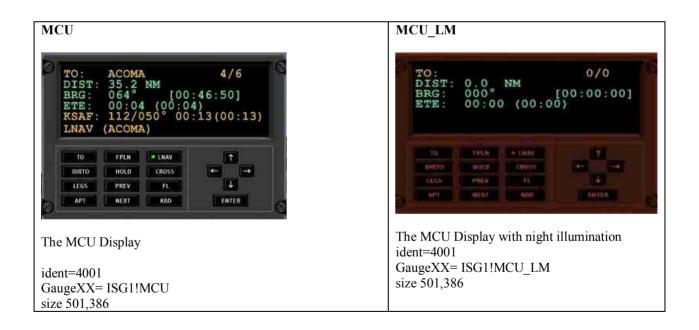
The TCAS Only display.

ident=4010 GaugeXX= ISG1! EFS50\_TCAS

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



GNSXLS	GNSXLS_LM
Image: Normal State Image: Normal State   Imag	AKE   VALUE   ATS   TH   OX   BIT   THE   RAAF   IDO   THE     FLIGHT   PLAN   LIST   1/4   HBD   1   2   3     CYVR   KPHX   1   2   3   4   5   4     CYVZ   KCMI   3   2   4   5   4     CVZT   CYVR   4   7   8   9     EDDF   EDDP   5   6   6   9     EGLC   EHAM   7   5   6   1   1     A   B   C   D   EATER   F   G   H     J   K   L   M   O   P   Q   R     S   T   J   V   W   X   Y   Z   SP
The FMS display.	The FMS display with night lumination support.
ident=4004 GaugeXX= ISG1!GNSXLS size 550,433	ident=4004 GaugeXX= ISG1!GNSXLS_LM size 550,433





TAS GSPD

ALT BDRY 0350



HD6





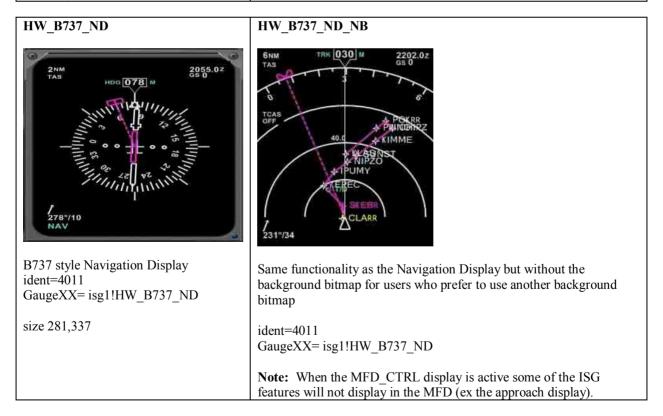
16

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

ident=4002 GaugeXX= ISG1!P1000 MFD size 326,433

APT NAV WPT TCAS ATC







## SMITHS\_FMS



Smiths style FMS unit.

ident=4012 GaugeXX= isg1!SMITHS FMS size 415,640

## SMITHS FMS BR



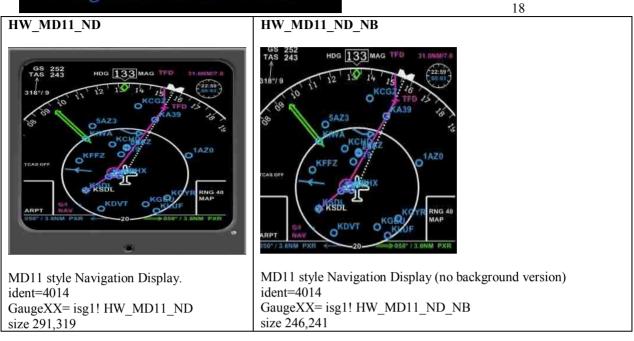
Brown version of the Smiths FMS unit.

17

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

HW_B737_EFIS_CNTR	HW_B737_EFIS_CNTR
ADI DH REF INV VOR NAV VOR NAV VOR NAV VOR NAV VOR NAV NA	ADI   Image: Constraint of the second seco
Boeing 737 style EFIS control panel.	Brown version of the 737 EFIS control panel.
ident=4013 GaugeXX= isg1!HW_B737_EFIS_CNTR size 313,212	ident=4013 GaugeXX= isg1!HW_B737_EFIS_CNTR_BR size 313,212











#### PROLINE4\_MFD

# WX 20:28 TAS 24 GS 221 SAT8 TAT8 WX 20:28 TAS 110NM 9:30 20:58 ----L8 WY 400 WY 400 WY 400 WY 400 -----L8 WX 20:20 WX 20:58 WY 400 SA23 ------L8 WX 20:20 WX 20:50 WX 20:50 WX 20:50 WX 20:50 WX 20:20 WX 20:50 WX 20:50 WX 20:50 WX 20:50 WX 20:20 WX 20:50 WX 20:50 WX 20:50 WX 20:50 WX 20:20 WX 20:50 WX 20:50 WX 20:50 WX 20:50 WX 20:20 WX 20:50 WX 20:50 WX 20:50 WX 20:50 WX 20:20 WX 20:50 WX 20:50 WX 20:50 WX 20:50 WX 20:20 WX 20:50 WX 20:50

Collins Proline 4 style multi-function display.

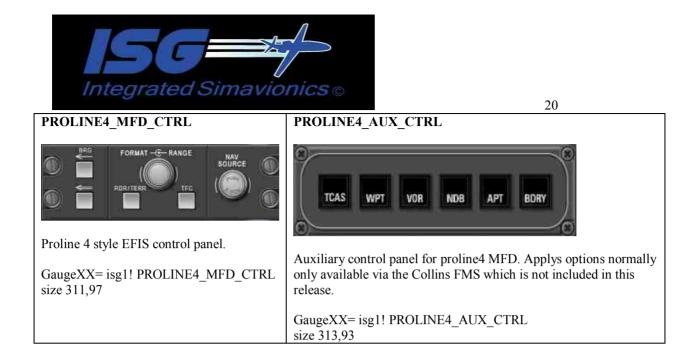
ident=4018 GaugeXX= isg1!PROLINE4\_MFD size 322,368

## PROLINE4\_MFD\_NB



No background version of the Proline 4 style MFD

ident=4018 GaugeXX= isg1PROLINE4\_MFD\_NB size 247,285



# **Panel Icons**

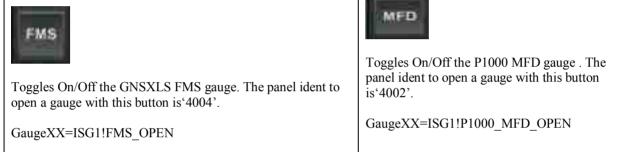
These Panel Icons toggle on/off the various ISG gauges that are placed in sub-windows on the panel. This allows for opening and closing these gauges without the full size gauge being permanently displayed on the panel.

EHSI_CNTR_OPEN	EHSI_TCAS_OPEN
Toggles on/off the Enhanced HSI gauge. The panel ident to open a gauge with this button is 4008'.	Toggles on/off the EHSI TCAS only gauge. The panel ident to open a gauge with this button is'4010'.
GaugeXX=ISG1! EHSI_CNTR_OPEN size 50,49	GaugeXX=ISG1!EHSI_TCAS_OPEN



	21
VNAV Toggles On/Off the VNAV mode. When VNAV mode is active, the button text changes color to yellow. GaugeXX=ISG1!VNAV	MCU_OPEN Toggles on/off the MCU gauge. The panel ident to open a gauge with this button is'4001'. GaugeXX=ISG1!MCU_OPEN
FMS_OPEN	P1000_MFD_OPEN

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P1000_MFD_CNTR_OPEN	
Toggles On/Off the P1000 MFD Control panel gauge. The panel ident to open a gauge with this button is '4003'.	Toggles On/Off LNAV mode.
GaugeXX=ISG1!P1000_MFD_CNTR_OPEN	GaugeXX=ISG1!LNAV

FMS2_OPEN	EFIS CTRL
Toggles On/Off the SMITHS FMS. The panel ident to open a gauge with this button is 4012'. GaugeXX=ISG1!FMS2_OPEN	Toggles On/Off EFIS Control Panel. The panel ident to open a gauge with this button is '4013'. GaugeXX=ISG1! EFIS_CTRL_OPEN



# **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:

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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