


REV	APPLICATION			REVISIONS		
	PRODUCT LINE	REV	DESCRIPTION	DATE	APPROVED	APPROVED
SH 1	IDU-III	A	Initial Release per DCA W6748	01/04/08	R.DuRall	L. Evans
		B	Add AS 350/355 and B-207/407 STCs per DCA W7042	04/07/08	R. DuRALL	L. Evans
		C	Added EC-120 STC per DCA W7366	7/21/08	R. DuRALL	L. Andujo
		D	Added Commuter STC per DCA W8006	3/11/09	R. DuRALL	L. Andujo
		E	Added Cessna 501 STC and Bell 204/205/210 SCT per DCA W9225	02/16/10	R. DuRALL	L. Andujo

DWG. NO. 150-045082

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 <b>Wulfsberg Electronics</b> <i>A Chelton Group Company</i>		<b>TITLE:</b> <b>SERVICE BULLETIN WSB IDU-III-21</b> <b>(SOFTWARE APPLICATION VERSION 6.0B)</b>	
<b>APPROVALS</b> DRAWN R. DuRall CHECKED Dean Boston PRODUCT MANAGER ---- ENGINEER R. DuRall ISSUED Leslie Evans	<b>DATE</b> 12/20/07 01/03/08 --- 01/03/08 01/04/08	<b>SIZE</b> <b>A</b>	<b>CAGE CODE</b> <b>1B7G3</b>
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		<b>SCALE:</b> NONE	<b>DO NOT SCALE DRAWING</b>



**Wulfsberg Electronics**  
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## SERVICE BULLETIN

**EQUIPMENT:** IDU-III

**DATE:** February 16, 2010

**BULLETIN NUMBER:** WSB IDU-III-21 Revision E

### EFFECTIVITY

This Service Bulletin is optional for the following equipment installed under STC SA02203AK (-D), SA02220AK, SA02254AK, SR02209AK, SR02230AK (-D), SR02238AK, and SR01673SE.

LRU P/N	HDWR Mod	SWID	Equipment
401-045500-[ ]	0101, 0202	5.0C or earlier	Mod 1

**NOTE:** *Equipment MOD1 must be installed in every IDU prior to performing this Service Bulletin.*

### REASON

#### **Features and Changes:**

1. Added Nearest ILS function.
2. Added photorealistic terrain depiction on the MFD.
3. Added panning function on the map page for datalink.
4. Backshaded Vertical deviation indicator for improved resolution.
5. Improved calculation of distance to destination.
6. Added Nav Log page.
7. Linked CDI to Nav source (GPS, NAV1, or NAV2).
8. Added labels to Heading and Navigation modes to improve recognition of lateral modes when coupled to an autopilot.
9. Added WSI Datalink functions.
10. Smoothed Radar Altimeter readings to 10 foot resolution above 100 feet AGL.
11. Added PFD Basic mode which displays a conventional ADI.
12. Improved bank scale, mini-map, mini-traffic, and skyway operations on PFD.
13. Added PFD auto-reversion capability to MFD.

14. Increased terrain map to greater than 400NM.
15. Vertical deviation indicator linked to GS1, GS2, and VNAV.
16. Changed heading to 2-digit values.
17. Improved FPM smoothing algorithm.
18. Added traffic alerts flashing.
19. Nearest 3 airports always displayed in automatic declutter mode.
20. Unslashed the "0" digit.
21. Enlarged bank scale diameter.
22. Increased speed trend from 5 seconds to 10 seconds.
23. Inhibit menus when in unusual attitude mode.
24. Added Decision Height and VSI bugs.
25. Added customizable obstructions option.
26. Eliminated manual climb speed bug.
27. Added interface to Jeppesen Flight Start flight planning software.
28. Eliminated Target Airspeed bug warning.
29. Added HTAWS FLTA inhibit below 50KIAS in both normal and low-altitude modes.
30. Disabled roll rate limiting in HDG and wing level mode.
31. Added speed desensitization to lateral autopilot gains.
32. Added sideslip factor to lateral autopilot HDG and roll steering outputs.
33. Eliminated disabling of Target Altitude level-off annunciation based upon being within an approach procedure or below 1500 feet AGL.
34. Eliminated overspeed warning deadband and 6KIAS buffer.
35. Eliminated Minimum Altitude debounce period.
36. Added 1-second debounce period to level-off annunciation and changed from 30% of VSI to 50% of VSI.
37. Improved border drawing on terrain.
38. Added digital NAV interface to Garmin SL-30 via COM09.
39. Improved GPS Course Datum output in ground mode.
40. Added heading smoothing to Crossbow AHRS.
41. Added acquisition of body rates from Crossbow AHRS to improve autopilot integration.
42. Improved ARINC 429 outputs for EFIS 40/50 emulation to the KFC-400 autopilot.

43. Improved GPS Roll-Steering output function for S-Tec 55X autopilot integration.
44. Added Remote Bugs Panel support.
45. Added "NO TAWS" function for aircraft that are equipped with a separate TAWS or EGPWS system.
46. Eliminated use of d-gain parameter.
47. Added EFIS Limits modification from the IDU.
48. Corrected dead reckoning algorithm in polar regions.
49. Improved integration with the Avidyne MFDs.
50. Improved airspace rendering.
51. Added 5-second debounce to Radar Altimeter warning.

### **DESCRIPTION**

This modification updates the application software to 6.0B.

### **COMPLIANCE**

Optional for all installations listed under the Effectivity section of this Service Bulletin.

### **WARRANTY INFORMATION**

EFIS Software Version 6.0B is not a warranty item.

Any IDUs still under the warranty period requiring MOD 1 may request this modification under the terms of the warranty agreement. Inquiries should be directed to "Product Support" at the address listed below:

S-TEC  
One S-Tec Way  
Mineral Wells, TX 76067  
Phone: (800) 872-8732  
Fax: (940) 328-0753

*NOTE: Chelton Flight System has merged with S-TEC, Corporation and combined Sales and Product Support functions. All correspondences will be coordinated through the S-TEC services at the above location.*

### **APPROVAL**

The engineering aspects of this Service Bulletin have been reviewed and approved by the FAA.

This modification does not affect the original approval.

## **MANPOWER**

1.0 Man-hours per aircraft.

## **REFERENCES**

System Installation Instructions, Doc. 150-045264 and 150-045057.

## **MATERIAL INFORMATION**

The parts required to modify an IDU-III in accordance with this Service Bulletin may be obtained by contacting S-TEC Sales Department at (800) 872-7832.

Item 1 may be purchased from any office supply or other store selling computer and digital camera accessories.

Items 2, 3, 4, and 5 are contained in the 6.0B Service Bulletin Kit, P/N 25-XXXXXXX-060B.

Kit 25-SA02203-060B is for STC SA02203AK (-D)

Kit 25-SR02230-060B is for STC SR02230AK (-D)

Kit 25-SA02254-060B is for STC SA02254AK

Kit 25-SR02209-060B is for STC SR02209AK

Kit 25-SR01673-060B is for STC SR01673SE

Kit 25-SA02220-060B is for STC SA02220AK

Kit 25-SR02238-060B is for STC SR02238AK

Items 2 and 3 will be available in electronic form on a CD-ROM. Item 3 will also be available as a printed handbook.

Items 4 and 5 may also be downloaded from the Chelton Flight Systems web site at [www.cheltonfs.com](http://www.cheltonfs.com) by selecting "DEALER LOGIN" menu item and logging into the Dealers web site. Ensure the correct ICA/RICA and FMS/RFMS is downloaded for the appropriate aircraft STC.

## **PARTS REQUIRED**

<b><u>ITEM</u></b>	<b><u>QTY</u></b>	<b><u>U/M</u></b>	<b><u>PART NUMBER</u></b>	<b><u>DESCRIPTION</u></b>
1	1	Ea	N/A	SmartMedia card
2	1	Ea	320-145239-060B	Software Load Module, Update Image 6.0B
3	1	Ea	150-045240 Rev N	Pilot's Operating Handbook, EFIS SW Ver 6.0B
4	1	Ea	VAR	Instructions for Continued Airworthiness
5	1	Ea	VAR	Aircraft Flight Manual Supplement

## **CAUTION**

ANY DISASSEMBLY/ASSEMBLY OF THIS UNIT MUST BE DONE AT A STATIC SAFE WORKSTATION. REMOVED MODULES SHOULD BE PLACED IN ANTISTATIC BAGS WHEN NOT INSTALLED IN THE UNIT.



12. Remove power from the IDU(s).
13. Remove the SmartMedia card from the PFD or single IDU.
14. Remove external power from the aircraft.
15. Insert the SmartMedia card into a SmartMedia card reader/writer attached to a computer.
16. Using the computers operating software, find and open the *limits.txt* file located on the SmartMedia card with a word processor.
17. Print this file for verification and reprogramming after the EFIS 6.0B upgrade.

### **EFIS LIMITS VERIFICATION (EFIS SOFTWARE 5.0B)**

1. Find the "Limits.txt" file for the aircraft or printed copy of the EFIS limits in the aircraft's log books.
2. Refer to these values when re-programming the EFIS Limits once the upgrade is completed (See EFIS Limits Verification and Programming section).

**NOTE:** *If the EFIS contains software version 5.0A or earlier, contact S-TEC Product Support for details on upgrading the IDU.*

### **AIRCRAFT VERIFICATION**

1. Refer to the aircrafts wiring diagrams and verify all external sensors are connected to the correct EFIS communication ports. Pay attention to all ARINC-429 transmitter and receiver port connections and all discrete inputs and outputs.
2. Document all sensor port and discrete connections as required and refer to these locations once the upgrade is completed (See EFIS Limits Verification and Programming section).

### **APPLICATION SOFTWARE UPDATE (PFD AND MFD)**

1. Insert CD-ROM with the Software Load Module (Item 2) into a computer with a SmartMedia card reader/writer attached.
2. Install a blank SmartMedia card (Item 1) into the reader/writer.

**NOTE:** *If the SmartMedia card is not blank, remove all files from the card before proceeding to Step 3.*

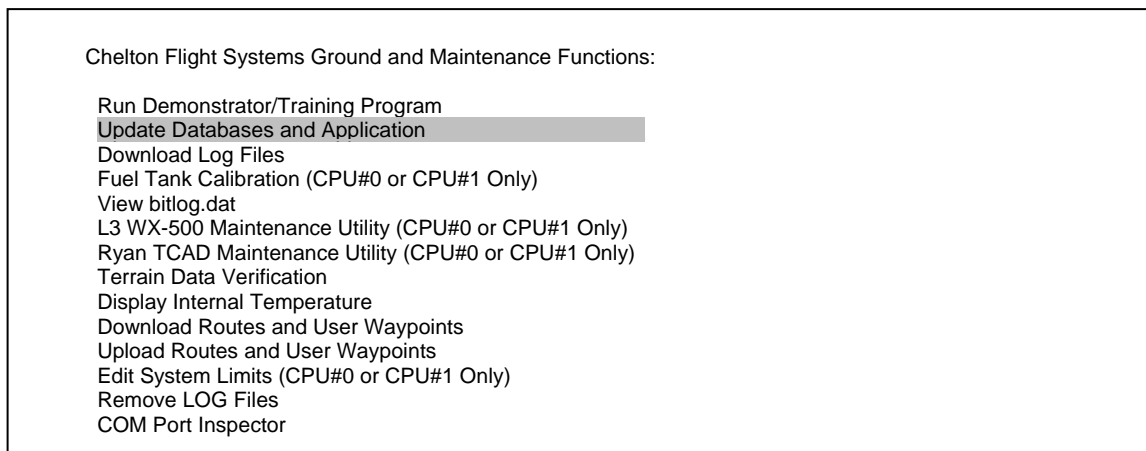
3. Using the computer's operating system, transfer the following files to the SmartMedia card:
  - a. Update.exe
  - b. Upgrade.exe
  - c. Absrun.com
  - d. Mbr.com

**NOTE:** The four files must be transferred to the root of the SmartMedia card drive.

4. Using the computer's operating system; verify all four files have been properly transferred to the SmartMedia card.

**NOTE:** The files must be named as shown in Step 3. Any deviation to the name of the files will cause the upgrade to fail.

5. Using the computer's operating system, extract or eject the SmartMedia card when transfer is complete.
6. Apply external power to the aircraft.
7. Ensure power is removed from the IDU(s).
8. Insert the SmartMedia card (Item 1) from the Service Bulletin Kit into the PFD or single IDU.
9. Apply power to the IDU(s).
10. Verify the PFD or single IDU displays the Ground Maintenance menu (see Figure 2).



**Figure 2 Ground Maintenance Menu**

11. Rotate the right-hand encoder until the "Update Databases and Application" is highlighted then press in the right-hand encoder.
12. Verify the application software has been downloaded (See Figure 3 for details). This should take approximately 15 seconds to download.

```
Inflating: d:/UTIL/257928.GM
Inflating: d:/UTIL/258184.GM
Inflating: d:/UTIL/258440.GM
Inflating: d:/UTIL/BAT_MENU.EXE
Inflating: d:/UTIL/DOS4GW.EXE
Inflating: d:/UTIL/FUELVIEW.EXE
Inflating: d:/UTIL/GMIDX.EXE
Inflating: d:/UTIL/IDU_FCAL.EXE
Inflating: d:/UTIL/LIM_DSPL.EXE
Inflating: d:/UTIL/PUTLIMIT.EXE
Inflating: d:/UTIL/RTE_CHK.EXE
Inflating: d:/UTIL/S100A030.LOG
Inflating: d:/UTIL/SIMULATE.EXE
Inflating: d:/UTIL/TCADTEST.EXE
Inflating: d:/UTIL/TEMP.EXE
Inflating: d:/UTIL/TERR_BIT.EXE
Inflating: d:/UTIL/TPI.TXT
Inflating: d:/UTIL/USNEXRAD.DAT
Inflating: d:/UTIL/WX_TEST.EXE
Inflating: d:/UTIL/XBOW_CAL.EXE
  1 file(s) copied
  1 file(s) copied
  1 file(s) copied
Press any key to continue . . .
```

**Figure 3 Typical IDU display when update is completed**

13. Press any button or right-hand encoder on the unit when the “Press any key to continue . . .” is displayed.
14. Ensure the Ground Maintenance menu is displayed after the unit performs a scan of both internal drives.
15. Repeat steps 6 thru 9 a second time to ensure the update procedure has been completed.
16. Remove power from the IDU(s).
17. Remove the SmartMedia card.
18. Repeat steps 1 thru 17 for all remaining IDU(s) in the aircraft.

## **EFIS LIMITS VERIFICATION AND PROGRAMMING**

### **CAUTION**

THE IDU WILL CONTINUALLY REBOOT UNTIL THE LIMITS HAVE BEEN VERIFIED USING THE STEPS IN THIS SECTION.

**NOTE:** *Figures 4 through 12 are example screen captures and do not reflect the aircraft's actual settings. Do not use the values in the figures to program the EFIS limits.*

1. Insert the SmartMedia card (Item 1) into the PFD or single IDU.
2. Pull all EFIS circuit breakers except the PFD or single IDU.
3. Apply power to the EFIS.
4. Verify the PFD or single MFD displays the Ground Maintenance menu.

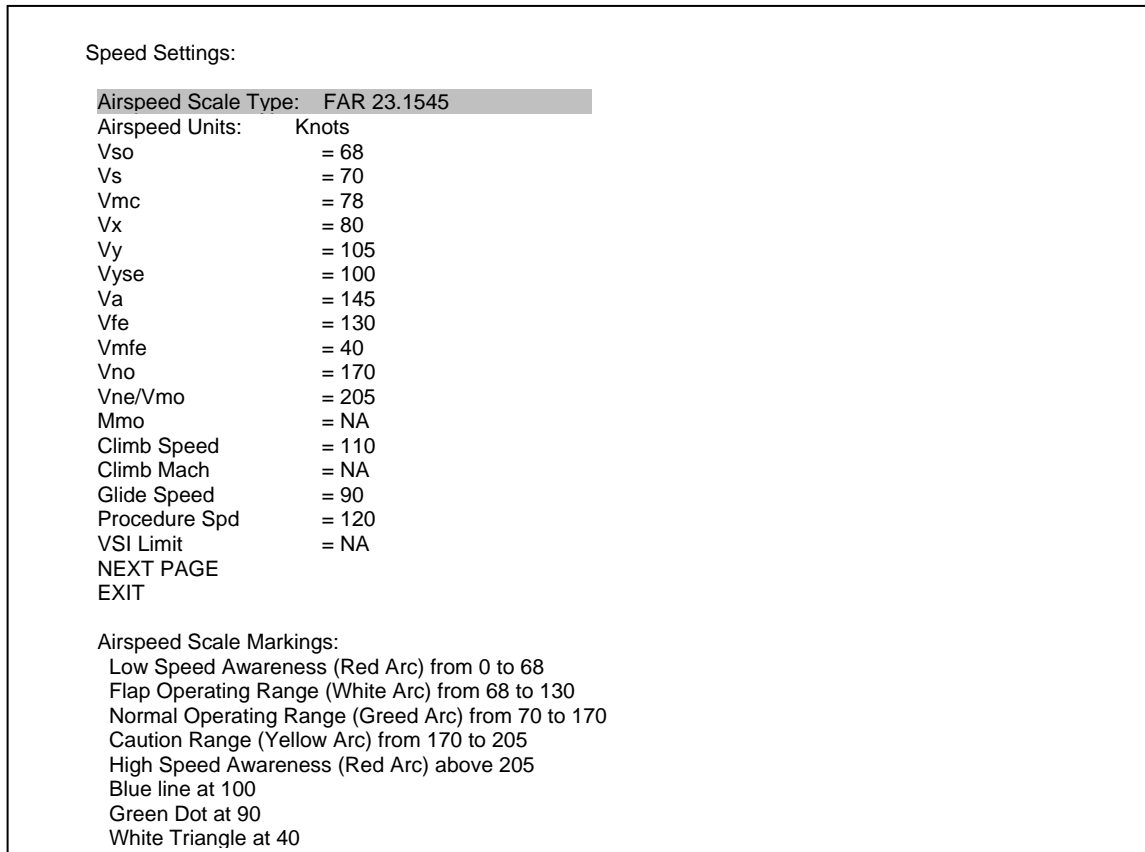
5. Rotate the right-hand encoder until “Edit System Limits (CPU#0 or CPU#1 Only)” is highlighted then press the right-hand encoder.
6. Using the right-hand encoder, select the “System Side” (Pilot or Co-Pilot). The “Display Number” (1=PFD, 2=MFD1, 3=MFD2, 4=MFD3) will automatically be assigned by the SCC located on the tray.
7. Select “Continue” (see Figure 4).



**Figure 4 Screen Position Settings Page**

**NOTE:** Most installations will be “System Side = Pilot”.

8. Using the printout of the EFIS limits, verify the “Aircraft Speed Settings:” page has not changed. Using the right-hand encoder, modify any settings that have changed (see Figure 5).



**Figure 5 Speed Settings Page**

**NOTE:** The following changes to the Speed Settings page are:

Vyse changes to Vnepo when FAR 27.1545 or FAR 29.1545 are selected.

Vmfe changes to “Wht Triangle” when FAR 27.1545 or FAR 29.1545 are selected.

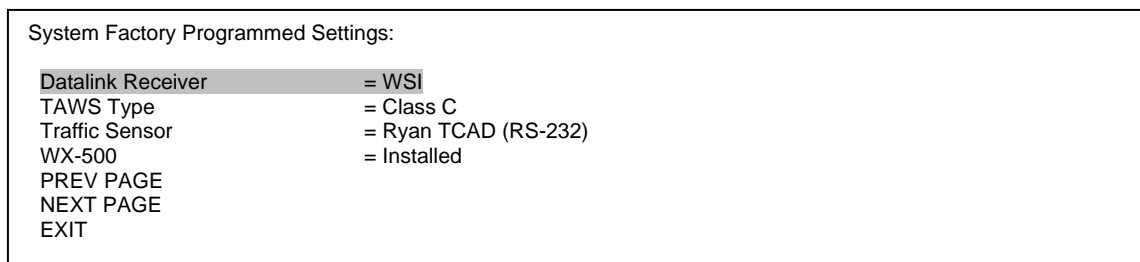
VSI Limit is added when FAR 27.1545 or FAR 29.1545 are selected.

“Blue line” is replaced with “Red/White Hashed Line” when FAR 27.1545 or FAR 29.1545 are selected and is set by Vyse or Vnepo.

**CAUTION:** VSI Limit for all B407 installations under STC SR02203AK must be set to “+2000”.

**NOTE:** Refer to the current Installation Manual for details on the Speed Settings page.

9. Select “NEXT PAGE” and verify the “Factory Programmed Settings:” page has not changed (see Figure 6).



**Figure 6 System Factory Programmed Settings Page**

**NOTE:** The following change has been made to the System Factory Programmed Settings page.

Datalink Receiver – selected as “Disabled” or “WSI”. This setting is programmed at the factory and cannot be modified in the field.

TAWS Type – will be selected as “Fixed Wing” for FAR 23 or FAR 25 or “Helicopter” for FAR 27 or FAR29 aircraft.

**NOTE:** Refer to the current Installation Manual for details on the System Factory Programmed Settings page.

**NOTE:** If an option in the System Factory Programmed Settings page is not correct, contact S-TEC Product Support for reprogramming or exchange of the SCC#0 or SCC#1.

10. Select “NEXT PAGE” and verify the “User Programmed Settings:” page has not changed. Using the right-hand encoder, modify any settings that have changed (see Figure 7).

System User Programmed Settings:

Autopilot Analog Gain	= 128 (0 - 255)
Autopilot Pitch Steering	= Disabled
Autopilot Roll PID Loop	= Disabled
Flight Director Enabled	= Disabled
VOR Symbology Enabled	= Disabled
Remote Tuning Enabled	= Disabled
COM9 Flt Plan Transmit	= Disabled
Mach Display Enabled	= Disabled
PLI Display Enable	= Enabled
Stall Warning Enable	= Disabled
Slip-Skid Display Enabled	= Enabled
Roll Indicator Type	= Roll Pointer
Temperature Units	= Degrees F
Analog Interface Unit	= Installed
Landing Gear Config	= Fixed
Glide Ratio	= 14
IAS Switch	= NA
IAS Switch Deadband	= NA
GPS Antenna Offset	= 0.00 feet
Temperature Recovery	= 1.00
Calculate Temperature Recovery	
Flight Path Quickening	= 1000
Audio Warning Volume	= 6 out of 15 (IDU-3 Only)
AHRS System	= Single
ADC System	= Single
GPS System	= Single
EFIS System	= Single (Pilot Only)
Radar Altimeter	= Not Installed
PREV PAGE	
NEXT PAGE	
EXIT	

**Figure 7 System User Settings Page**

**NOTE:** The following changes have been made to the System User Settings page:

Autopilot Pitch Steering – enables or disables the output of ARINC 429 GPS Pitch Steering label 122.

Autopilot Roll PID Loop – enables or disables the Proportional, Integral, Derivative (PID) loop algorithm within the EFIS. This function is used to null any minor errors that may cause the EFIS to wander laterally within the HITS boxes.

Remote Tune Enabled – select between “Disabled”, “Garmin SL-30/40”, or “Honeywell KX155A/165A and Wulfsberg”.

COM9 Flt Plan Enable – enables or disables the continuous transmission of flight plan information on COM09.

Roll Indicator Type – selects between “Roll Pointer” and “Sky Pointer”.

IAS Switch – sets the speed at which the “IAS Switch” discrete output becomes valid. (IDU-3 only)

IAS Switch Deadband – selects the difference in speed when the “IAS Switch” discrete transitions from a valid to an invalid state. (IDU-3 only)

AHRS System – selects between a single and a dual AHRS installation.

ADC System – selects between a single and a dual ADC installation.

GPS System – selects between a single and a dual GPS installation.

EFIS System – selects between a single (Pilot only) and a dual (Pilot and Co-Pilot) EFIS installation.

Radar Altimeter – selects between a single, dual, or “Not Installed” Radar Altimeter installation.

**NOTE:** Refer to the current Installation Manual for detail on the System User Settings page.

11. Select “NEXT PAGE” and program the “ARINC429 Receive Port Settings:” page as required (see Figure 8).

ARINC429 Receive Port Settings:								
Port	Speed	ADC	AHRS	Flt Dir	FI Flw	NAV	Radalt	TCAS
COM21	LOW	ON	OFF	OFF	OFF	OFF	OFF	OFF
COM22	HI	OFF	ON	OFF	OFF	OFF	OFF	OFF
COM23	LOW	OFF	OFF	ON	OFF	OFF	OFF	OFF
COM24	HI	OFF	OFF	OFF	ON	OFF	OFF	OFF
COM25	LOW	OFF	OFF	OFF	OFF	ON	OFF	OFF
COM26	LOW	OFF	OFF	OFF	OFF	OFF	ON	OFF
COM27	HI	OFF	OFF	OFF	OFF	OFF	OFF	ON
COM28	LOW	ON	OFF	OFF	OFF	ON	OFF	OFF

PREV PAGE  
NEXT PAGE  
EXIT

**Figure 8 ARINC429 Receive Port Settings Page**

**NOTE:** The following items have been added to the ARINC429 Receive Port Settings page:

Speed – select either “HI” or “LOW” to set the speed of the port.

Sensors – turns on or off a series of sensors for a specific port. Multiple sensors can be programmed per port.

ADC = Air Data Computer

AHRS = Attitude and Heading Reference System

Flt Dir = Flight Director

FI Flw = Fuel Flow

NAV = Navigation Receiver (VOR/LOC/GS/MB/ADF/DME)

Radalt = Radar Altimeter

TCAS = Traffic Collision and Avoidance System (TAS/TCAS/TCAS-II)

**NOTE:** Refer to the current Installation Manual for detail on the ARINC 429 Receive Port Settings page.

12. Select “NEXT PAGE” and program the “Discrete Input Settings:” page as required (see Figure 9).

Discrete Input Settings:		
Input	Function	Polarity
GPI# 1	Nose Landing Gear Down	Ground Active
GPI# 2	Right Landing Gear Down	Ground Active
GPI# 3	Left Landing Gear Down	Ground Active
GPI# 4	TAWS Inhibit	Ground Active
GPI# 5	HTAWS Low Altitude	Ground Active
GPI# 6	HTAWS Low Altitude	Ground Active
GPI# 7	TAWS Landing Flaps	Open-Collector Active
GPI# 8	TAWS Glideslope Inhibit	Ground Active
GPI# 9	HTAWS Low Torque	Ground Active
GPI#10	GPS Offside Select	Ground Active
AIU# 3	AHRS Offside Select	Ground Active
AIU# 4	ADC Offside Select	Ground Active
AIU# 5	Crossfill Inhibit	Ground Active
AIU# 6	Low Rotor RPM	Open-Collector Active
AIU# 7	Flight Path Marker Disabled	Ground Active
AIU# 8	Radar Altimeter Offside Select	Ground Active
Note the following Permanent Assignments:		
GPI#11	Aural Warning Mute	Ground Active
GPI#12	Cooling Fan Failed	Ground Active
AIU# 1	ILS #1 Energize	Ground Active
AIU# 2	ILS #2 Energize	Ground Active
PREV PAGE		
NEXT PAGE		
EXIT		

**Figure 9 Discrete Input Settings Page**

**NOTE:** The following items have been added to the Discrete Input Settings page:

GPI – discrete inputs on the IDU(s). All IDUs connected in parallel will be programmed with the same function.

AIU – discrete inputs on the AIU.

Function – each discrete input can be programmed for one of 26 different functions. Refer to the aircrafts wiring diagrams for discrete pin assignments.

**NOTE:** If a discrete is not wired, select the function to “No Function” and set the polarity to “Ground Active”.

Polarity – select between “Ground Active” and “Open-Collector Active” for the discrete function.

GPI#11, GPI#12, AIU#1, and AIU#2 cannot be altered.

**NOTE:** Refer to the current Installation Manual for detail on the Discrete Input Settings page.

13. Select “NEXT PAGE” and program the PFD or Single IDU using “Screen 1 ARINC429 Transmit Port/Discrete Output Settings:” page (see Figure 10).

Screen 1 ARINC 429 Transmit Port / Discrete Output Settings:									
Port	Speed	ADC	AHRS	AP	EFIS	GPS	NAV	Radalt	Load
COM21	LOW	ON	OFF	OFF	OFF	OFF	OFF	OFF	22.5%
COM22	HI	OFF	ON	OFF	OFF	OFF	OFF	OFF	13.6%
COM23	LOW	OFF	OFF	ON	OFF	ON	ON	OFF	55.3%
COM24	HI	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0.0%
Output	Function					Polarity			
DO1	No Function					Ground Active			
DO2	Autopilot EFIS Valid Flag					Open-Collector Active			
PREV PAGE									
NEXT PAGE									
EXIT									

**Figure 10 Screen 1 ARINC429 Transmit Port/Discrete Output Settings Page**

**NOTE:** The following items have been added to the Screen 1 ARINC429 Transmit Port/Discrete Output Settings page.

Speed – sets the speed of the transmitter

Sensor – multiple sensors (ADC, AHRS, etc.) can be programmed as outputs.

Load – displays the amount of data transmitted on a port in percent. This value cannot be greater than 100.0%.

Output – selection of the discrete outputs on the IDU.

Function – selects the operation of the output. Select “No Function” if not used.

Polarity – selects between “Ground Active” or “Open-Collector Active”.

**NOTE:** Refer to the current Installation Manual for details on the ARINC 429 Transmit Port/Discrete Output Settings page.

**NOTE:** Each IDU outputs separate ARINC 429 transmitters and discrete functions. Steps 13 through 15 are used to program additional IDUs.

14. Select “NEXT PAGE” and program the #1MFD using “Screen 2 ARINC429 Transmit Port/Discrete Output Settings:” page as required (see Figure 10).

15. Select “NEXT PAGE” and program the #2MFD using “Screen 3 ARINC429 Transmit Port/Discrete Output Settings:” page as required (see Figure 10).

16. Select “NEXT PAGE” and program the #3MFD using “Screen 4 ARINC429 Transmit Port/Discrete Output Settings:” page as required (see Figure 10).

17. Select “NEXT PAGE” and verify the “Fuel Settings:” page has not changed. Using the right-hand encoder, modify any settings that have changed (see Figure 11).

System Fuel Settings:

Fuel Totalizer Enabled	= Enabled
Fuel Quantity Sensor	= Not Installed
Volume Units	= Gallons
Max Fuel Quantity	= 18500 (total)
Main Fuel Quantity	= 5000 (total)
Low Fuel Caution	= 300 (total)
Low Fuel Alarm	= 100 (total)
Totalizer Qty Warn	= NA
Fuel Tank Split Warn	= NA

Fuel Calibration Map

Left Tank		Right Tank	
Volume	Sensor Value	Volume	Sensor Value
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

PREV PAGE  
NEXT PAGE  
EXIT

**Figure 11 System Fuel Settings Page**

**NOTE:** Refer to the current Installation Manual for detail on the System Fuel Settings page.

18. Select “NEXT PAGE” and verify the “Engine Settings:” page has not changed. Using the right-hand encoder, modify any settings that have changed (see Figure 12).

System Engine Settings:

Type = No Engine Monitoring
-----------------------------

PREV PAGE  
EXIT

**Figure 12 System Engine Settings Page**

19. Select “EXIT” to store the changes.

20. Remove power from the EFIS.

21. Remove the SmartMedia card from the PFD or single IDU.

**NOTE:** Steps 22 through 30 must be performed on all IDUs in the aircraft.

22. Insert the SmartMedia card in the next IDU as required.
23. Reset the circuit breaker for the IDU.
24. Apply power to the IDU.
25. Verify the IDU displays the Ground Maintenance menu.
26. Using the right-hand encoder, select “Edit System Limits (CPU#0 or CPU#1 Only)” is highlighted then press the right-hand encoder.
27. Verify the “System Side” and “Display Number” is correct for the IDU position. Modify as required.

**NOTE:** The “Display Number” will automatically be assigned by the SCC installed in the tray.

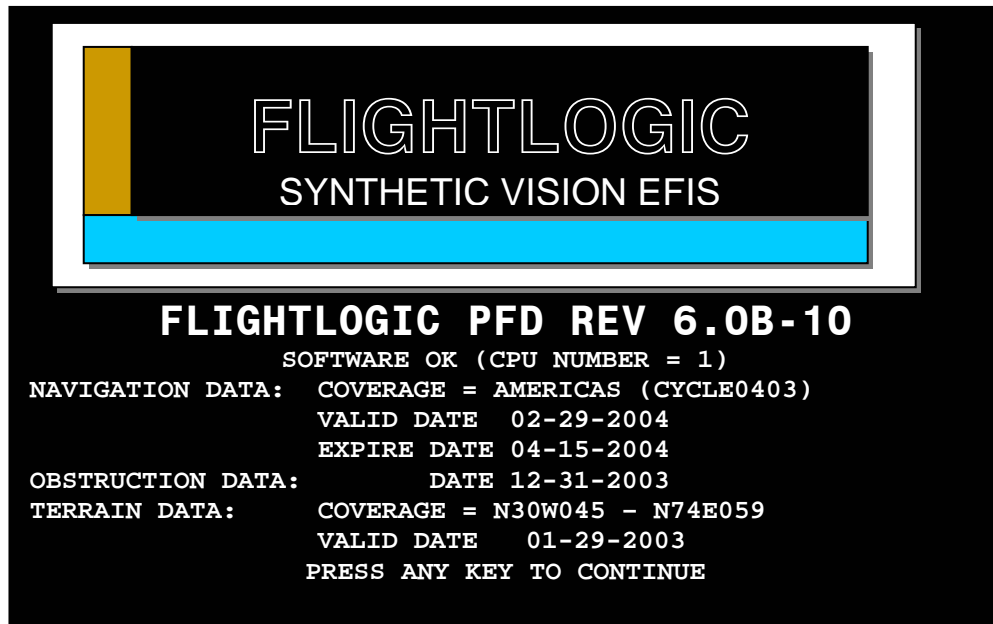
**NOTE:** The “System Side” may not reflect the physical location of the IDU. Example: A four-screen EFIS with one SCC#1 (Pilot’s PFD) will have “System Side = Pilot” selected for all IDUs even if two of the IDUs are located on the Co-Pilot’s Instrument Panel. The only time the “System Side” is set to “Co-Pilot” is in a dual PFD installation with crossfill functions as described in Chapter 4 of the Commuter and Large Aircraft Installation Manual, Doc. 150-045079, Rev G or higher as a 4-6 Screen EFIS.

28. Select “Continue” to program. The Edit System Limits option will program the SCC and return to the Ground Maintenance menu.
29. Remove power from the IDU.
30. Remove the SmartMedia card from the IDU.
31. Repeat steps 22 through 30 for all remaining IDUs in the aircraft.
32. Once all IDUs are updated, remove power from the EFIS system.
33. Remove the SmartMedia card from the IDU.

## **TESTING PROCEDURES**

**NOTE:** Before proceeding with this section, ensure all IDU(s) in the aircraft have been updated per the Application Software Update (PFD and MFD) section.

1. Apply power to the EFIS system and verify each IDU completes initialization and testing.
2. Verify the information listed below is displayed on each modified IDU status page (See Figure 13):
  - a. “Rev 6.0B-10”
  - b. “SOFTWARE OK”



**Figure 13 Typical EFIS Status Page**

**NOTE:** PFD/MFD and CPU Number will depend on the position of the IDU.

3. Press any button or the right-hand encoder on each IDU and verify the EFIS system starts normal operation.

**NOTE:** If any IDU does not complete initialization and/or self-test, it may be necessary to repeat the modification process to reload the EFIS software. If the IDU does not operate properly after two load processes, contact S-TEC Technical Support at (800) 872-7832.

### **DOCUMENT PROCEDURES**

1. Remove and replace Instructions for Continued Airworthiness (Item 4) in the aircraft log books.
2. Remove and replace the Pilots Guide (Item 3) in the aircraft.
3. Remove and replace the Aircraft Flight Manual Supplement (Item 5) in the aircraft.
4. Document 6.0B update in Aircraft Logbook.
5. Submit a copy of the Aircraft Logbook with sign-off and IDU serial numbers from "IDU Modification Procedure" Step 4 to S-TEC.
6. Install the SmartMedia card from the EFIS Limits Verification and Programming section into a computer with a SmartMedia card reader/writer attached.
7. Using the computer's operating system, open the "Limits.txt" file on the SmartMedia card.
8. Print a copy of the limits and place it in the Aircraft Logbook.