

ATTACHMENT 2

KC 225 Final Test Data Sheets

KC 225
FLIGHT COMPUTER
FINAL TEST DATA SHEET 2901

Serial Number: 2229

Flavor: 2229 A

Procedure No.	Test Description	Measured Data	Voltage/Limits
5.0	FINAL TEST		
5.1	POWER SUPPLY		(MPS REF 4.1)
5.1.4.1	Measured Current @ 12 Vdc	<u>✓</u> OK	< .100 Vdc
5.1.5.1	DG + 15 Vdc	<u>14.94</u> Vdc	+13.85 to +16.15 Vdc
5.1.5.2	DG + 15 Vdc AC ripple	<u>✓</u> OK	< 70 mVac
5.1.6.1	DG - 15 Vdc	<u>-14.95</u> Vdc	-13.85 to -16.15 Vdc
5.1.6.2	DG - 15 Vdc AC ripple	<u>✓</u> OK	< 70 mVac
5.1.7.1	Voltage @ P1-4 wrt P1-61	<u>5.04</u> Vdc	+4.75 to +5.25 Vdc
5.1.7.2	AC ripple @ P1-4 wrt P1-61	<u>✓</u> OK	< 70 mVac
5.1.8.1	Voltage @ P2-36 wrt P1-61	<u>5.10</u> Vdc	+4.83 to +5.33 Vdc
5.1.8.2	AC ripple @ P2-36 wrt P1-61	<u>✓</u> OK	< 50 mVac
5.1.10.1	Measured Current @ 32.5 Vdc	<u>✓</u> OK	< .100 Vdc
5.1.11.1	DG + 15 Vdc	<u>14.94</u> Vdc	+13.85 to +16.15 Vdc
5.1.11.2	DG + 15 Vdc AC ripple	<u>✓</u> OK	< 70 mVac
5.1.12.1	DG - 15 Vdc	<u>-14.93</u> Vdc	-13.85 to -16.15 Vdc
5.1.12.2	DG - 15 Vdc AC ripple	<u>✓</u> OK	< 70 mVac
5.1.13.1	Voltage @ P1-4 wrt P1-61	<u>5.03</u> Vdc	+4.75 to +5.25 Vdc
5.1.13.2	AC ripple @ P1-4 wrt P1-61	<u>✓</u> OK	< 70 mVac
5.1.14.1	Voltage @ P2-36 wrt P1-61	<u>5.09</u> Vdc	+4.83 to +5.33 Vdc
5.1.14.2	AC ripple @ P2-36 wrt P1-61	<u>✓</u> OK	< 50 mVac
5.2	DISCRETE INPUTS		(MPS REF 4.2)
5.2.1	Discrete Input Straps/Valid		
5.2.1.3.1	Value of 'Aircraft Strap' 01 ON	<u>✓</u> OK	01
5.2.1.4.1	Value of 'Aircraft Strap' 01 & 02 ON	<u>✓</u> OK	03
5.2.1.5.1	Value of 'Aircraft Strap' 01, 02 & 03 ON	<u>✓</u> OK	07
5.2.1.6.1	Value of 'Aircraft Strap' 01, 02, 03 & 04 ON	<u>✓</u> OK	0F
5.2.1.7.1	Value of 'Aircraft Strap' 01, 02, 03, 04 & 05 ON	<u>✓</u> OK	1F
5.2.1.8.1	Value of 'Aircraft Strap' 01, 02, 03, 04, 05 & 06 ON	<u>✓</u> OK	3F
5.2.1.10.1	Value of 'Roll Servo Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.11.1	Value of 'Roll Steering Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.12.1	Value of 'Rate Gyro Valid' cycle (-12 V)	<u>✓</u> OK	NO then YES
5.2.1.13.1	Value of 'Rate Gyro Valid' cycle (+12 V)	<u>✓</u> OK	NO then YES
5.2.1.14.1	Value of 'GPS Select' cycle	<u>✓</u> OK	YES then NO
5.2.1.15.1	Value of 'Middle Marker' cycle	<u>✓</u> OK	YES then NO
5.2.1.16.1	Value of 'Pitch Servo Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.17.1	Value of 'DG Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.18.1	Value of 'Yaw Servo Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.19.1	Value of 'Radar Alt Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.20.1	Value of 'VG Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.20.2	Value of 'Gyro Excitation Valid' cycle	<u>✓</u> OK	NO then YES
5.2.1.21.1	Software Strap for -01xx, 03xx & 05xx flavor	<u>N/A</u> OK	3
5.2.1.21.2	Software Strap for -25xx, 27xx & 29xx flavor	<u>✓</u> OK	2
5.2.1.21.3	Software Strap for -02xx, 04xx & 06xx flavor	<u>N/A</u> OK	1
5.2.1.21.4	Software Strap for -26xx, 28xx & 30xx flavor	<u>N/A</u> OK	0
5.2.1.22	Value of 'Analog Valid'	<u>✓</u> OK	YES

5.2.2	Discrete Inputs Status		
5.2.2.2.1	Value of 'AP Disconnect' cycle		OK YES then NO
5.2.2.3.1	Value of 'Trim Arm' cycle		OK YES then NO
5.2.2.4.1	Value of 'Trim Down' cycle		OK YES then NO
5.2.2.5.1	Value of 'Trim Up' cycle		OK YES then NO
5.2.2.6.1	Value of 'Stall Warning cycle		OK YES then NO
5.2.2.7.1	Value of 'ILS Engaged' cycle		OK YES then NO
5.2.2.9.1	Value of 'Flap 1'		OK YES
5.2.2.10.1	Value of 'Flap 1'		OK NO
5.2.2.10.2	Value of 'Flap 2'		OK YES
5.2.2.11.1	Value of 'Flap 2'		OK NO
5.2.2.12.1	Value of 'VNAV Handshake' cycle		OK YES then NO
5.2.3	Switch Inputs		
5.2.3.2.1	'CWS Switch Active' CWS switched on		OK YES
5.2.3.3.1	'CWS Switch Active' CWS switched off		OK NO
5.2.3.4.1	'AP Switch Active' AP pressed		OK YES
5.2.3.5.1	'AP Switch Active' AP released		OK NO
5.2.3.6.1	'FD Switch Active' FD pressed		OK YES
5.2.3.7.1	'FD Switch Active' FD released		OK NO
5.2.3.8.1	'HDG Switch Active' HDG pressed		OK YES
5.2.3.9.1	'HDG Switch Active' HDG released		OK NO
5.2.3.10.1	'NAV Switch Active' NAV pressed		OK YES
5.2.3.11.1	'NAV Switch Active' NAV released		OK NO
5.2.3.12.1	'APR Switch Active' APR pressed		OK YES
5.2.3.13.1	'APR Switch Active' APR released		OK NO
5.2.3.14.1	(For 01xx, 03xx, 05xx, 25xx, 27xx & 29xx)		
	'REV Switch Active' REV pressed		OK YES
5.2.3.15.1	(For 01xx, 03xx, 05xx, 25xx, 27xx & 29xx)		
	'REV Switch Active' REV released		OK NO
5.2.3.16.1	'ALT Switch Active' ALT pressed		OK YES
5.2.3.17.1	'ALT Switch Active' ALT released		OK NO
5.2.3.18.1	'DN Switch Active' DN pressed		OK YES
5.2.3.19.1	'DN Switch Active' DN released		OK NO
5.2.3.20.1	'UP Switch Active' UP pressed		OK YES
5.2.3.21.1	'UP Switch Active' UP released		OK NO
5.2.3.22.1	'ALT ARM Switch Active' ARM pressed		OK YES
5.2.3.23.1	'ALT ARM Switch Active' ARM released		OK NO
5.2.3.24.1	'VS Switch Active' VS pressed		OK YES
5.2.3.25.1	'VS Switch Active' VS released		OK NO
5.2.3.26.1	(For 25xx, 26xx, 27xx, 28xx, 29xx & 30xx)		
	'YD Switch Active' YD pressed		OK YES
5.2.3.27.1	(For 25xx, 26xx, 27xx, 28xx, 29xx & 30xx)		
	'YD Switch Active' YD released		OK NO
5.2.3.28.1	'GA Switch Active' GO AROUND switched on		OK YES
5.2.3.29.1	'GA Switch Active' GO AROUND switched off		OK NO
5.2.4	XPNDR Input Code		(MPS REF 4.2.6)
5.2.4.2	All XPNDR CODE switches OFF		OK 000
5.2.4.3.1	D4 to ON		OK 200
5.2.4.4.1	D4 & A1 to ON		OK 300
5.2.4.5.1	D4, A1 & A2 to ON		OK 380
5.2.4.6.1	D4, A1, A2 & A4 to ON		OK 3c0
5.2.4.7.1	D4, A1, A2, A4 & B1 to ON		OK 3e0
5.2.4.8.1	D4, A1, A2, A4, B1 & B2 to ON		OK 3f0

5.2.4.9.1	D4, A1, A2, A4, B1, B2 & B4 to ON		OK	3f8
5.2.4.10.1	D4, A1, A2, A4, B1, B2, B4 & C1 to ON		OK	3fc
5.2.4.11.1	D4, A1, A2, A4, B1, B2, B4, C1 & C2 to ON		OK	3fe
5.2.4.12.1	D4, A1, A2, A4, B1, B2, B4, C1, C2 & C4 to ON		OK	3ff
5.3	DISCRETE OUTPUTS			(MPS REF 4.3.1 & 2)
5.3.3.1	'TONE ALERT' LED on test panel		OK	Illuminated
5.3.5.1	'TONE ALERT' LED on test panel		OK	Extinguished
5.3.7.1	'VISUAL ALERT' LED on test panel		OK	Illuminated
5.3.9.1	'VISUAL ALERT' LED on test panel		OK	Extinguished
5.3.11.1	'ALT ALERT' LED on test panel		OK	Illuminated
5.3.13.1	'ALT ALERT' LED on test panel		OK	Extinguished
5.3.15.1	'R' LED on Bezel of UUT		OK	Illuminated
5.3.17.1	'R' LED on Bezel of UUT		OK	Extinguished
5.3.19.1	'P' LED on Bezel of UUT		OK	Illuminated
5.3.21.1	'P' LED on Bezel of UUT		OK	Extinguished
5.3.24.1	Voltage @ P2-48 wrt P1-62	<u>5.96</u>	Vdc	+5.50 to +6.50 Vdc
5.3.26.1	Voltage @ P2-48 wrt P1-62	<u>0.00</u>	Vdc	Less than +.050 Vdc
5.3.1	Audio Alert Discrete Output			(MPS REF 4.9.1)
5.3.1.6.1	Audio Output Waveform Amplitude	<u>7.52</u>	V _{peak}	5.05 to 7.57 V _{peak}
5.3.1.8.1	Audio Output Waveform Amplitude		OK	Decreases
5.3.1.10.1	Audio Output Waveform Amplitude		OK	Decreases
5.3.1.12.1	Audio Output Waveform Amplitude		OK	Decreases
5.3.1.14.1	Audio Output Waveform Amplitude		OK	Decreases
5.3.1.16.1	Audio Output Waveform Amplitude		OK	Decreases
5.3.1.18.1	Audio Output Waveform Amplitude		OK	Decreases
5.3.1.20.1	Audio Output Waveform Amplitude	<u>.506</u>	V _{peak}	.343 to .515 V _{peak}
5.4	ANALOG INPUTS			(MPS REF 4.4)
5.4.1	KI 256 Roll Attitude			(MPS REF 4.4.2.1)
5.4.1.7.1	Roll Att @ 14 Deg	<u>19.67</u>	deg	+18.20 to +22.20 deg
5.4.1.8.1	Roll Att @ 0 Deg	<u>0.00</u>	deg	-1.00 to +1.00 deg
5.4.1.9.1	Roll Att @ -14 Deg	<u>-19.40</u>	deg	-18.20 to -22.20 deg
5.4.2	KI 256 Pitch Attitude			(MPS REF 4.4.4.1)
5.4.2.1.1	Pitch Att @ 14 Deg	<u>16.83</u>	deg	+15.60 to +19.60 deg
5.4.2.2.1	Pitch Att @ 0 Deg	<u>0.00</u>	deg	-1.00 to +1.00 deg
5.4.2.3.1	Pitch Att @ -14 Deg	<u>-16.56</u>	deg	-15.60 to -19.60 deg
5.4.3	KVG 350 Roll Attitude			(MPS REF 4.4.2.2)
5.4.3.8.1	Roll Att @ 14 Deg	<u>13.55</u>	deg	+12.00 to +16.00 deg
5.4.3.9.1	Roll Att @ 0 Deg	<u>0.00</u>	deg	-1.00 to +1.00 deg
5.4.3.10.1	Roll Att @ -14 Deg	<u>-13.53</u>	deg	-12.00 to -16.00 deg
5.4.4	KVG 350 Pitch Attitude			(MPS REF 4.4.4.2)
5.4.4.2.1	Pitch Att @ 14 Deg	<u>13.39</u>	deg	+12.00 to +16.00 deg
5.4.4.3.1	Pitch Att @ 0 Deg	<u>0.00</u>	deg	-1.00 to +1.00 deg
5.4.4.4.1	Pitch Att @ -14 Deg	<u>-13.39</u>	deg	-12.00 to -16.00 deg
5.4.5	KVG 350 Roll Rate			(MPS REF 4.4.1)
5.4.5.9.1	Roll Rate @ .600 Vac/sec Up	<u>2.40</u>	deg/sec	+2.25 to +3.75 deg/sec
5.4.5.10.1	Roll Rate @ settled	<u>.08</u>	deg/sec	-0.50 to +0.50 deg/sec
5.4.5.12.1	Roll Rate @ .600 Vac/sec Down	<u>-2.23</u>	deg/sec	-2.25 to -3.75 deg/sec
5.4.6	KVG 350 Pitch Rate			(MPS REF 4.4.3)
5.4.6.8.1	Pitch Rate @ .600 Vac/sec Up	<u>2.36</u>	deg/sec	+2.25 to +3.75 deg/sec
5.4.6.9.1	Pitch Rate @ settled	<u>0.00</u>	deg/sec	-0.50 to +0.50 deg/sec
5.4.6.11.1	Pitch Rate @ .600 Vac/sec Down	<u>-2.64</u>	deg/sec	-2.25 to -3.75 deg/sec

5.4.7	Yaw Rate		(MPS REF 4.4.5)
5.4.7.3.1	Yaw Rate @ +1.60 Vdc	<u>7.91</u> deg/sec	+7.00 to +9.00 deg/sec
5.4.7.4.1	Yaw Rate @ 0 Vdc	<u>0.05</u> deg/sec	-0.60 to +0.60 deg/sec
5.4.7.5.1	Yaw Rate @ -1.60 Vdc	<u>-8.01</u> deg/sec	-7.00 to -9.00 deg/sec
5.4.8	Roll Steering		(MPS REF 4.4.6)
5.4.8.3.1	Roll Steering @ +11.00 Vdc	<u>20.06</u> deg/sec	+18.80 to +21.20 deg/sec
5.4.8.4.1	Roll Steering @ 0 Vdc	<u>0.00</u> deg/sec	-0.20 to +0.20 deg/sec
5.4.8.5.1	Roll Steering @ -11.00 Vdc	<u>-20.15</u> deg/sec	-18.80 to -21.20 deg/sec
5.4.9	HDG Datum		(MPS REF 4.4.7)
5.4.9.3.1	HDG Datum @ +11.0 Vdc	<u>20.06</u> deg	+18.80 to +21.20 deg
5.4.9.4.1	HDG Datum @ 0 Vdc	<u>0.00</u> deg	-0.50 to +0.50 deg
5.4.9.5.1	HDG Datum @ -11.0 Vdc	<u>-19.98</u> deg	-18.80 to -21.20 deg
5.4.10	NAV Deviation		(MPS REF 4.4.10)
5.4.10.3.1	NAV Dev @ +.150 Vdc	<u>10.07</u> deg	+8.40 to +11.60 deg
5.4.10.4.1	NAV Dev @ 0 Vdc	<u>0.00</u> deg	-0.60 to +0.60 deg
5.4.10.5.1	NAV Dev @ -.150 Vdc	<u>-10.07</u> deg	-8.40 to -11.60 deg
5.4.11	GS Deviation		(MPS REF 4.4.11)
5.4.11.3.1	GS Dev @ +.214 Vdc	<u>0.96</u> deg	+0.83 to +1.17 deg
5.4.11.4.1	GS Dev @ 0 Vdc	<u>0.00</u> deg	-0.10 to +0.10 deg
5.4.11.5.1	GS Dev @ -.200 Vdc	<u>-0.93</u> deg	-0.83 to -1.17 deg
5.4.12	CRS Datum		(MPS REF 4.4.12)
5.4.12.3.1	CRS Datum @ +10.50 Vdc	<u>50.22</u> deg	+47.00 to +53.00 deg
5.4.12.4.1	CRS Datum @ 0 Vdc	<u>0.00</u> deg	-0.60 to +0.60 deg
5.4.12.5.1	CRS Datum @ -10.50 Vdc	<u>-50.00</u> deg	-47.00 to -53.00 deg
5.4.13	Trim Sense		(MPS REF 4.4.13)
5.4.13.4.1	Trim Sense 1 @ +.5 Vdc/ Trim Sense 2 @ -.5 Vdc	<u>10.09</u> in-lb.	+8.50 to +11.50 in-lb.
5.4.13.7.1	Trim Sense 1 @ -.5 Vdc/ Trim Sense 2 @ +.5 Vdc	<u>-10.15</u> in-lb.	-8.50 to -11.50 in-lb.
5.4.13.10.1	Trim Sense 1 @ 0 Vdc/ Trim Sense 2 @ 0 Vdc	<u>0.00</u> in-lb.	-1.50 to +1.50 in-lb.
5.4.14	VG Excitation Level		(MPS REF 4.4.8)
5.4.14.1	Value of 'VG Excitation Level'	<u>102</u> % full	90 to 110 % full.
5.4.15	Trim Voltage		(MPS REF 4.4.14)
5.4.15.4.1	Trim Voltage @ 0.00 Vdc	<u>0.00</u> volts	-.300 to +.300 volts
5.4.15.5.1	Trim Voltage @ +10.00 Vdc	<u>10.22</u> volts	+9.20 to +10.80 volts
5.4.15.6.1	Trim Voltage @ -10.00 Vdc	<u>-10.22</u> volts	-9.20 to -10.80 volts
5.4.16	Baro Set		(MPS REF 4.4.9)
5.4.16.2.1	BARO SET @ +3.90 Vdc	<u>3.88</u> volts	+3.51 to +4.29 volts
5.4.16.3.1	BARO SET @ +2.50 Vdc	<u>2.48</u> volts	+2.25 to +2.75 volts
5.4.16.4.1	BARO SET @ +1.00 Vdc	<u>0.98</u> volts	+0.90 to +1.10 volts
5.4.17	Dimbus		(MPS REF 4.4.15)
5.4.17.2.1	DIMBUS @ 0.00 Vdc	<u>0.00</u> volts	-1.00 to +1.00 volts
5.4.17.3.1	DIMBUS @ +27.5 Vdc	<u>27.76</u> volts	+25.10 to +29.90 volts
5.4.18	Adjust Potentiometer		(MPS REF 4.4.16)
5.4.18.1.1	Adj Pot. fully CCW	<u>0.00</u> volts	-0.20 to +0.20 volts
5.4.18.2.1	Adj Pot. fully CW	<u>4.58</u> volts	+4.50 to +5.50 volts
5.4.19	Aircraft Power		(MPS REF 4.4.19)
5.4.19.2.1	Input Voltage @ 28 Vdc	<u>27.93</u> volts	+25.60 to +30.40 volts
5.4.19.3.1	Input Voltage @ 14 Vdc	<u>13.54</u> volts	+12.30 to +15.70 volts
5.4.20	- 12 V Monitor		(MPS REF 4.4.21)
5.4.20.1	Value of '-12 VDC Supply'	<u>-11.98</u> volts	-10.80 to -13.20 volts

5.4.21	VDDS				(MPS REF 4.4.24)
5.4.21.1	Value of 'Baro Supply Voltage'	5.07	volts		+4.83 to 5.33 Volts
5.4.22	Photocell				(MPS REF 4.4.17)
5.4.22.1.1	Value of 'Photocell' (Photocell covered)	.01	volts		-0.50 to +0.50 volts
5.4.22.2.1	Value of 'Photocell' (Photocell illuminated)	4.98	volts		+3.50 to +5.50 volts
5.4.23	NAV Valid (Differential Inputs)				(MPS REF 4.4.22.1)
5.4.23.4.1	Value of 'NAV Dev' @ 0.090 Vdc	/	OK		0 (Invalid)
5.4.23.5.1	Value of 'NAV Dev' @ 0.200 Vdc	/	OK		1 (Valid)
5.4.24	NAV Valid (Single Ended Inputs)				(MPS REF 4.4.22.2)
5.4.24.1.1	Value of 'NAV Dev' @ GND1	/	OK		0 (Invalid)
5.4.24.2.1	Value of 'NAV Dev' @ 28 V	/	OK		1 (Valid)
5.4.25	GS Valid (Differential Inputs)				(MPS REF 4.4.23.1)
5.4.25.3.1	Value of 'GS Dev' @ 0.090 Vdc	/	OK		0 (Invalid)
5.4.25.4.1	Value of 'GS Dev' @ 0.200 Vdc	/	OK		1 (Valid)
5.4.26	GS Valid (Single Ended Inputs)				(MPS REF 4.4.23.2)
5.4.26.1.1	Value of 'GS Dev' @ GND1	/	OK		0 (Invalid)
5.4.26.2.1	Value of 'GS Dev' @ 28 V	/	OK		1 (Valid)
5.4.27	Radar Altitude				(MPS REF 4.4.25)
5.4.27.4.1	Value of 'Radar Altitude' @ +10.00 Vdc	2493	feet		2415 to 2585 feet
5.4.27.5.1	Value of 'Radar Altitude' @ 0.00 Vdc	0	feet		-35.00 to +35.00 feet
5.4.28	RS-232 Outputs				(MPS REF 4.6)
5.4.28.3	Waveform amplitude	/	OK		at least +5 to -5 Volts
5.5	ANALOG OUTPUTS				(MPS REF 4.5)
5.5.1	Roll Servo Command				(MPS REF 4.5.1)
5.5.1.5.1	Measured Roll Servo Cmd voltage w/-8 input	-728	Vdc		-6.60 to -8.20 Vdc
5.5.1.7.1	Measured Roll Servo Command voltage w/0.0 input	-.01	Vdc		-0.40 to +0.40 Vdc
5.5.1.9.1	Measured Roll Servo Cmd voltage w/+8 input	730	Vdc		+6.60 to +8.20 Vdc
5.5.2	Pitch Servo Command				(MPS REF 4.5.2)
5.5.2.3.1	Measured Pitch Servo Cmd voltage w/-8 input	-733	Vdc		-6.60 to -8.20 Vdc
5.5.2.5.1	Measured Pitch Servo Command voltage w/0.0 input	-.01	Vdc		-0.40 to +0.40 Vdc
5.5.2.7.1	Measured Pitch Servo Cmd voltage w/+8 input	733	Vdc		+6.60 to +8.20 Vdc
5.5.3	Trim Servo Command				(MPS REF 4.5.3)
5.5.3.10.1	Measured Trim Servo Cmd voltage w/-8 input	-7.03	Vdc		-6.60 to -8.20 Vdc
5.5.3.12.1	Measured Trim Servo Command voltage w/0.0 input	-.08	Vdc		-0.40 to +0.40 Vdc
5.5.3.14.1	Measured Trim Servo Cmd voltage w/+8 input	7.11	Vdc		+6.60 to +8.20 Vdc
5.5.4	Yaw Servo Command				(MPS REF 4.5.4)
5.5.4.1	Yaw Rate Input				(MPS REF 4.5.4.1)
5.5.4.1.4.1	Yaw Servo Cmd voltage	0.00	Vdc		-0.40 to +0.40 Vdc
5.5.4.1.6.1	Yaw Servo Cmd voltage.	8.30	Vdc		+5.10 to +8.50 Vdc
5.5.4.1.6.2	Discharge Time Constant	/	OK		0.5 to 1.0 seconds
5.5.4.1.9.1	Yaw Servo Cmd voltage	-8.30	Vdc		-5.10 to -8.50 Vdc
5.5.4.1.9.2	Discharge Time Constant	/	OK		0.5 to 1.0 seconds
5.5.4.2	Roll Crossfeed Input				(MPS REF 4.5.4.2)
5.5.4.2.3.1	Yaw Servo Cmd voltage	0.00	Vdc		-0.40 to +0.40 Vdc
5.5.4.2.4.1	Yaw Servo Cmd voltage	2.00	Vdc		+1.00 to +2.20 Vdc
5.5.5	Pitch Command Bar				(MPS REF 4.5.5)
5.5.5.3.1	Measured voltage @ P2-50 wrt P2-51 w/+7.5 input	-3.03	Vdc		-2.90 to -3.30 Vdc
5.5.5.5.1	Measured voltage @ P2-50 wrt P2-51 w/0.0 input	.05	Vdc		-0.20 to +0.20 Vdc
5.5.5.7.1	Measured voltage @ P2-50 wrt P2-51 w/-7.5 input	3.13	Vdc		+2.90 to +3.30 Vdc

5.5.6	Roll Command Bar		(MPS REF 4.5.6)
5.5.6.3.1	Measured voltage @ P2-49 wrt P2-51 w/+7.5 input	<u>-1.33</u> Vdc	-1.20 to -1.60 Vdc
5.5.6.5.1	Measured voltage @ P2-49 wrt P2-51 w/0.0 input	<u>.03</u> Vdc	-0.20 to +0.20 Vdc
5.5.6.7.1	Measured voltage @ P2-49 wrt P2-51 w/-7.5 input	<u>-1.38</u> Vdc	+1.20 to +1.60 Vdc
5.6	CONFIGURATION MODULE SERIAL INTERFACE		(MPS REF 4.7)
5.6.2.1	Result of NVM Test	<u>✓</u> OK	Pass
5.6.4.1	Waveforms Max Amplitude @ P1-8	<u>5.2</u> Volts	2.0 to 6.0 Volts
5.6.4.2	Waveforms Min Amplitude @ P1-8	<u>0.0</u> Volts	-0.1 to 0.8 Volts
5.6.6.1	Waveforms Max Amplitude @ P1-13	<u>5.5</u> Volts	2.0 to 6.0 Volts
5.6.6.2	Waveforms Min Amplitude @ P1-13	<u>0.0</u> Volts	-0.1 to 0.8 Volts
5.6.8.1	Waveforms Max Amplitude @ P1-35	<u>5.4</u> Volts	2.0 to 6.0 Volts
5.6.8.2	Waveforms Min Amplitude @ P1-35	<u>0.0</u> Volts	-0.1 to 0.8 Volts
5.7	REMOTE ANNUNCIATOR SERIAL INTERFACE		(MPS REF 4.8)
5.7.3.1	Waveforms Max Amplitude @ P1-53	<u>5.4</u> Volts	2.0 to 6.0 Volts
5.7.3.2	Waveforms Min Amplitude @ P1-53	<u>0.0</u> Volts	-0.1 to 0.8 Volts
5.7.5.1	Waveforms Max Amplitude @ P1-54	<u>5.3</u> Volts	2.0 to 6.0 Volts
5.7.5.2	Waveforms Min Amplitude @ P1-54	<u>0.0</u> Volts	-0.1 to 0.8 Volts
5.7.7.1	Waveforms Max Amplitude @ P1-55	<u>5.4</u> Volts	2.0 to 6.0 Volts
5.7.7.2	Waveforms Min Amplitude @ P1-55	<u>0.0</u> Volts	-0.1 to 0.8 Volts
5.8	PRESSURE SENSOR		(MPS REF 4.11)
5.8.1	PRESSURE SENSOR ACCURACY		(MPS REF 4.11.1)
5.8.1.3.1	Value of 'Pressure Sensor' @ 1,000 Ft	<u>1,78840</u>	
5.8.1.4.1	Value of 'Pressure Sensor' @ 1,100 Ft	<u>1,78520</u>	
5.8.1.5	(Sensor Value _{1000 Ft}) - (Sensor Value _{1100 Ft})	<u>.00320</u>	0.0022 to 0.0038
5.8.2	PRESSURE SENSOR LEAK TEST		(MPS REF 4.11.2)
5.8.2.5	Recorded Altitude after 1 min delay	<u>17985</u>	
5.8.2.6	Recorded Altitude after 2 additional min	<u>17982</u>	
5.8.2.6.1	Cal'd leakage rate [(Alt _{step 5.8.2.5}) - (Alt _{step 5.8.2.6})] / 2	<u>1.5</u> Ft/min	less than 20 Ft/min
5.9	ROTARY INC/DEC SWITCH		(MPS REF 4.12)
5.9.3.1→6.1	INC/DEC inner knob CW count	<u>✓</u> OK	2→3→1→0
5.9.7.1	INC/DEC inner knob CW full rotation count	<u>✓</u> OK	Final Value 0
5.9.8.1→11.1	INC/DEC inner knob CCW count	<u>✓</u> OK	1→3→2→0
5.9.12.1	INC/DEC inner knob CCW full rotation count	<u>✓</u> OK	Final Value 0
5.9.14.1→17.1	INC/DEC outer knob CW count	<u>✓</u> OK	2→3→1→0
5.9.18.1	INC/DEC outer knob CW full rotation count	<u>✓</u> OK	Final Value 0
5.9.19.1→22.1	INC/DEC outer knob CCW count	<u>✓</u> OK	1→3→2→0
5.9.23.1	INC/DEC outer knob CCW full rotation count	<u>✓</u> OK	Final Value 0
5.10	FAIL MONITORS		(MPS REF 4.13)
5.10.1	Autotrim Opposition Monitor		(MPS REF 4.13.1.1 & 2)
5.10.1.1	{For 03xx, 04xx, 27xx & 28xx flavors}		
5.10.1.1.10.1	Trim Fail annunciator	<u>N/A</u> OK	Extinguished
5.10.1.1.12.1	Trim Fail annunciator	<u>✓</u> OK	Illuminated
5.10.1.1.17.1	Trim Fail annunciator	<u>✓</u> OK	Extinguished
5.10.1.1.18.1	Trim Fail annunciator	<u>✓</u> OK	Illuminated
5.10.1.1.23.1	Trim Fail annunciator	<u>✓</u> OK	Extinguished
5.10.1.1.25.1	Trim Fail annunciator	<u>✓</u> OK	Illuminated
5.10.1.1.30.1	Trim Fail annunciator	<u>✓</u> OK	Extinguished
5.10.1.1.31.1	Trim Fail annunciator	<u>✓</u> OK	Illuminated
5.10.1.1.40.2	Delay Time {P2-6 wrt P2-41}	<u>N/A</u> mSec	220 to 320 mSec
5.10.1.2	{For 05xx, 06xx, 29xx & 30xx flavors}		
5.10.1.2.10.1	Trim Fail annunciator	<u>✓</u> OK	Extinguished
5.10.1.2.12.1	Trim Fail annunciator	<u>✓</u> OK	Illuminated

5.10.1.2.17.1	Trim Fail annunciator		OK	Extinguished
5.10.1.2.18.1	Trim Fail annunciator		OK	Illuminated
5.10.1.2.23.1	Trim Fail annunciator		OK	Extinguished
5.10.1.2.25.1	Trim Fail annunciator		OK	Illuminated
5.10.1.2.30.1	Trim Fail annunciator		OK	Extinguished
5.10.1.2.31.1	Trim Fail annunciator		OK	Illuminated
5.10.1.2.40.2	Delay Time {P2-6 wrt P2-41}	<u>536</u>	mSec	420 to 620 mSec

5.10.1.3	{For 01xx, 02xx, 25xx & 26xx flavors}			
5.10.1.3.10.1	Trim Fail annunciator	<u>N/A</u>	OK	Extinguished
5.10.1.3.12.1	Trim Fail annunciator		OK	Illuminated
5.10.1.3.17.1	Trim Fail annunciator		OK	Extinguished
5.10.1.3.18.1	Trim Fail annunciator		OK	Illuminated
5.10.1.3.23.1	Trim Fail annunciator		OK	Extinguished
5.10.1.3.25.1	Trim Fail annunciator		OK	Illuminated
5.10.1.3.30.1	Trim Fail annunciator		OK	Extinguished
5.10.1.3.31.1	Trim Fail annunciator		OK	Illuminated
5.10.1.3.40.2	Delay Time {P2-6 wrt P2-41}	<u>N/A</u>	mSec	820 to 1220 mSec

5.10.2	Autotrim Fail Monitor (Trim Voltage)			(MPS REF 4.13.1.3)
5.10.2.9.1	Trim Fail annunciator		OK	Extinguished
5.10.2.9.2	Value of 'Trim Runaway'		OK	NO
5.10.2.10.1	Trim Fail annunciator		OK	Illuminated
5.10.2.10.2	Value of 'Trim Runaway'		OK	YES
5.10.2.15.1	Delay Time {Pos}	<u>.51</u>	Sec	.35 to .65 Seconds
5.10.2.18.1	Delay Time {Neg}	<u>.50</u>	Sec	.35 to .65 Seconds
5.10.2.23.1	Trim Fail annunciator		OK	Extinguished
5.10.2.23.2	Value of 'Trim Runaway'		OK	NO
5.10.2.24.1	Trim Fail annunciator		OK	Illuminated
5.10.2.24.2	Value of 'Trim Runaway'		OK	YES

5.10.3	Autotrim Fail Monitor (Trim Sense)			(MPS REF 4.13.1.4 & 5)
5.10.3.1	{For -01xx, 02xx, 05xx, 06xx, 25xx, 26xx, 29xx & 30xx}			
5.10.3.1.9.1	Value of 'Trim Runaway'		OK	NO
5.10.3.1.10.1	Value of 'Trim Runaway'		OK	YES
5.10.3.1.16.1	Value of 'Trim Runaway'		OK	NO
5.10.3.1.20.1	Value of 'Trim Runaway'		OK	NO
5.10.3.1.22.1	Value of 'Trim Runaway' by -.460 Vdc		OK	YES
5.10.3.1.27.1	Value of 'Trim Runaway'		OK	NO
5.10.3.1.33.3	Delay time (P2-10 wrt P2-41)	<u>1460</u>	mSec	900 to 1900 mSec

5.10.3.2	{For -03xx, 04xx, 27xx & 28xx }			
5.10.3.2.9.1	Value of 'Trim Runaway'	<u>N/A</u>	OK	NO
5.10.3.2.10.1	Value of 'Trim Runaway'		OK	YES
5.10.3.2.16.1	Value of 'Trim Runaway'		OK	NO
5.10.3.2.20.1	Value of 'Trim Runaway'		OK	NO
5.10.3.2.22.1	Value of 'Trim Runaway' by -.380 Vdc		OK	YES
5.10.3.2.27.1	Value of 'Trim Runaway'		OK	NO
5.10.3.2.33.3	Delay time (P2-10 wrt P2-41)	<u>N/A</u>	mSec	900 to 1900 mSec

5.10.4	Autotrim Fail Monitor (Trim Sense Reference Check)			(MPS REF 4.13.1.6)
5.10.4.10.1	Value of 'Trim Runaway'		OK	NO
5.10.4.11.1	Value of 'Trim Runaway'		OK	YES

5.10.5	Clutch Engage Monitor			(MPS REF 4.13.3)
5.10.5.7.1	Value of 'Yaw Clutch Engaged'		OK	YES
5.10.5.8.1	Value of 'Yaw Clutch Engaged'		OK	NO
5.10.5.9.1	Value of 'Yaw Clutch Engaged'		OK	YES

5.10.5.14.1	Value of 'Yaw Clutch Engaged'		OK	YES
5.10.5.15.1	Value of 'Yaw Clutch Engaged'		OK	NO
5.10.5.16.1	Value of 'Yaw Clutch Engaged'		OK	YES
5.10.5.17.1	Value of 'Yaw Clutch Engaged'		OK	NO
5.10.5.21.1	Value of 'Yaw Clutch Engaged'		OK	NO
5.10.5.21.2	Value of 'Yaw Rate Monitor Fail'		OK	YES
5.10.5.22.1	Value of 'Yaw Clutch Engaged'		OK	YES
5.10.5.22.2	Value of 'Yaw Rate Monitor Fail'		OK	NO
5.10.6	Roll Attitude Fail Monitor			(MPS REF 4.13.4.1 & .3)
5.10.6.6.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.6.11.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.6.11.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.6.14.1	Value of 'Roll Clutch Engaged'		OK	NO
5.10.6.14.2	Value of 'Roll Monitor Fail'		OK	YES
5.10.6.14.3	Delay time between P1-51 and P1-1	.59	Sec	0.35 to .65 seconds
5.10.6.18.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.6.18.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.6.21.1	Value of 'Roll Clutch Engaged'		OK	NO
5.10.6.21.2	Value of 'Roll Monitor Fail'		OK	YES
5.10.6.21.3	Delay time between P1-51 and P1-1	.59	Sec	0.35 to .65 seconds
5.10.6.25.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.6.25.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.7	Roll Rate Fail Monitor			(MPS REF 4.13.4.2)
5.10.7.7.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.7.7.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.7.8.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.7.8.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.7.9.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.7.9.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.7.14.1	Value of 'Roll Clutch Engaged'		OK	NO
5.10.7.14.2	Value of 'Roll Monitor Fail'		OK	YES
5.10.7.17.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.7.17.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.7.18.1	Value of 'Roll Clutch Engaged'		OK	NO
5.10.7.18.2	Value of 'Roll Monitor Fail'		OK	YES
5.10.7.21.1	Value of 'Roll Clutch Engaged'		OK	YES
5.10.7.21.2	Value of 'Roll Monitor Fail'		OK	NO
5.10.8	Pitch Attitude Fail Monitor			(MPS REF 4.13.5.1 & .3)
5.10.8.6.1	Value of 'Pitch Clutch Engaged'		OK	YES
5.10.8.11.1	Value of 'Pitch Clutch Engaged'		OK	YES
5.10.8.11.2	Value of 'Pitch Monitor Fail'		OK	NO
5.10.8.14.1	Value of 'Pitch Clutch Engaged'		OK	NO
5.10.8.14.2	Value of 'Pitch Monitor Fail'		OK	YES
5.10.8.14.3	Delay time between P1-50 and P2-8	.59	Sec	0.35 to .65 seconds
5.10.8.18.1	Value of 'Pitch Clutch Engaged'		OK	YES
5.10.8.18.2	Value of 'Pitch Monitor Fail'		OK	NO
5.10.8.21.1	Value of 'Pitch Clutch Engaged'		OK	NO
5.10.8.21.2	Value of 'Pitch Monitor Fail'		OK	YES
5.10.8.21.3	Delay time between P1-50 and P2-8	.59	Sec	0.35 to .65 seconds
5.10.8.25.1	Value of 'Pitch Clutch Engaged'		OK	YES
5.10.8.25.2	Value of 'Pitch Monitor Fail'		OK	NO
5.10.9	Pitch Rate Fail Monitor			(MPS REF 4.13.5.2)
5.10.9.7.1	Value of 'Pitch Clutch Engaged'		OK	YES

5.10.9.7.2	Value of 'Pitch Monitor Fail'	/	OK	NO
5.10.9.8.1	Value of 'Pitch Clutch Engaged'	/	OK	YES
5.10.9.8.2	Value of 'Pitch Monitor Fail'	/	OK	NO
5.10.9.9.1	Value of 'Pitch Clutch Engaged'	/	OK	YES
5.10.9.9.2	Value of 'Pitch Monitor Fail'	/	OK	NO
5.10.9.14.1	Value of 'Pitch Clutch Engaged'	/	OK	NO
5.10.9.14.2	Value of 'Pitch Monitor Fail'	/	OK	YES
5.10.9.17.1	Value of 'Pitch Clutch Engaged'	/	OK	YES
5.10.9.17.2	Value of 'Pitch Monitor Fail'	/	OK	NO
5.10.9.19.1	Value of 'Pitch Clutch Engaged'	/	OK	NO
5.10.9.19.2	Value of 'Pitch Monitor Fail'	/	OK	YES
5.10.10	Yaw Rate Fail Monitor			(MPS REF 4.13.6)
5.10.10.8.1	Value of 'Yaw Clutch Engaged'	/	OK	YES
5.10.10.9.1	Value of 'Yaw Clutch Engaged'	/	OK	YES
5.10.10.9.2	Value of 'Yaw Rate Monitor Fail'	/	OK	NO
5.10.10.13.1	Value of 'Yaw Clutch Engaged'	/	OK	NO
5.10.10.13.2	Value of 'Yaw Rate Monitor Fail'	/	OK	YES
5.10.10.13.3	Delay time between P1-22 and P2-13	<u>1.53</u>	Sec	.35 to .65 Seconds
5.10.10.14.1	Value of 'Yaw Clutch Engaged'	/	OK	YES
5.10.10.14.2	Value of 'Yaw Rate Monitor Fail'	/	OK	NO
5.10.10.17.1	Value of 'Yaw Clutch Engaged'	/	OK	NO
5.10.10.17.2	Value of 'Yaw Rate Monitor Fail'	/	OK	YES
5.10.10.19.3	Delay time between P1-22 and P2-13	<u>1.52</u>	Sec	.35 to .65 Seconds
5.10.11	Vertical Acceleration Monitor			(MPS REF 4.13.7)
5.10.11.7.1	Value of 'Vertical Accel Fail'	/	OK	NO
5.10.11.13.1	Value of 'Vertical Accel Fail'	/	OK	NO
5.10.11.20.1	Delay time between P2-6 and P2-1	<u>.41</u>	Sec	.25 to .55 Seconds
5.10.11.22.1	Value of 'Vertical Accel Fail'	/	OK	YES
5.10.11.27.1	Value of 'Vertical Accel Fail'	/	OK	NO
5.10.11.34.1	Delay time between P2-6 and P2-1	<u>.41</u>	Sec	.25 to .55 Seconds
5.10.11.36.1	Value of 'Vertical Accel Fail'	/	OK	YES
5.11	DISPLAY			(MPS REF 4.14)
5.11.2.1	All segments illuminated	/	OK	
5.11.5.1	Display intensity decreases	/	OK	evenly
5.11.5.2	Display is uniform	/	OK	No flicker/bright spots
5.11.7.1	Display intensity increases	/	OK	evenly
5.11.11.1	Backlighting intensity decreases	/	OK	evenly
5.11.13.1	Backlighting intensity increases	/	OK	evenly
5.11.13.2	Backlighting is uniform	/	OK	
5.11.17.1	Displays "RUN OUT FOR ALE 12345"	/	OK	
5.12	NORMAL ACCELEROMETER			(MPS REF 4.15)
5.12.1	ACCELEROMETER BIAS CHECK			(MPS REF 4.15.1)
5.12.1.3	Value of 'Accel Normal	<u>-9</u>	fps2	-64 to +64 fps2
5.13	ARINC 429 LOOPBACK			(MPS REF 4.16)
5.13.2.1	Positive Peak	<u>5.2</u>	V _{peak}	4.5 to 5.5 V _{peak}
5.13.2.2	Negative Peak	<u>-5.2</u>	V _{peak}	-4.5 to -5.5 V _{peak}
5.13.2.3	Transmitter ground	<u>0.0</u>	Vdc	-0.5 to +0.5 Vdc
5.13.2.4	Waveform frequency	<u>12.2</u>	Khz	12.0 to 13.0 Khz
5.13.3.1	Positive Peak	<u>5.2</u>	V _{peak}	4.5 to 5.5 V _{peak}
5.13.3.2	Negative Peak	<u>-5.2</u>	V _{peak}	-4.5 to -5.5 V _{peak}
5.13.3.3	Transmitter ground	<u>0.0</u>	Vdc	-0.5 to +0.5 Vdc
5.13.3.4	Waveform frequency	<u>12.2</u>	Khz	12.0 to 13.0 Khz
5.13.4.1	Value of 'Magnetic Heading' & 'Selected Heading'	/	OK	Valid = 1

5.13.4.2	Value of 'Selected Course' & 'Selected Sensor'	<u>✓</u> OK	Valid = 0
5.13.5.1	Value of 'Magnetic Heading', 'Selected Heading', 'Selected Course' & 'Selected Sensor'	<u>✓</u> OK	Valid = 0
5.13.7.1	Value of 'Magnetic Heading', 'Selected Heading', 'Selected Course' & 'Selected Sensor'	<u>✓</u> OK	Valid = 0
5.13.9.1	Value of 'Crosstrack Distance' & 'Roll Steering'	<u>✓</u> OK	Valid = 1
5.13.9.2	Value of 'GPS Scale'	<u>✓</u> OK	Valid = 0
5.13.10.1	Value of 'Crosstrack Distance, Roll Steering, & GPS Scale'	<u>✓</u> OK	Valid = 0
5.13.12.1	Value of 'Crosstrack Distance, Roll Steering & GPS Scale'	<u>✓</u> OK	Valid = 0
5.14	VERTICAL GYRO EXCITATION OUTPUT		(MPS REF 4.17)
5.14.1.1	Positive Peak	<u>10.05</u> V _{peak}	9.75 to 10.25 V _{peak}
5.14.1.2	Negative Peak	<u>- 10.05</u> V _{peak}	-9.75 to -10.25 V _{peak}
5.14.1.3	Wave shape	<u>✓</u> OK	Squarewave
5.14.1.4	Waveform frequency	<u>400</u> Hz	360 to 440 Hz
5.14.4.1	Positive Peak	<u>10.05</u> V _{peak}	9.75 to 10.25 V _{peak}
5.14.4.2	Negative Peak	<u>- 10.05</u> V _{peak}	-9.75 to -10.25 V _{peak}
5.14.4.3	Wave shape	<u>✓</u> OK	Squarewave
5.14.4.4	Waveform frequency	<u>503</u> Hz	492 to 532 Hz
5.15	AUDIO ALERT OUTPUT		(MPS REF 4.8)
5.15.4.1	Audio Alert	<u>✓</u> OK	momentarily active
5.15.10.1	Audio Alert Waveform Amplitude	<u>✓</u> OK	0.343 to 0.515 V _{peak}
5.15.15.1	Audio Alert Active	<u>✓</u> OK	1.5 to 2.5 Sec
5.15.15.2	Audio Alert Waveform Amplitude	<u>1.325</u> V _{peak}	.912 to 1.368 V _{peak}
5.16	PREFLIGHT TEST		(MPS REF 4.9)
5.16.5.1	Logged Errors	<u>✓</u> OK	None
5.16.7.1	Value of all Discrete Input fields, except Gillham code and Altitude Valid	<u>✓</u> OK	NO
5.17	SOFTWARE VERIFICATION		
5.17.3	Record Boot ID part number	<u>722-20011-0000</u>	
5.17.4	Record Application ID part number	<u>722-20012-0006</u>	
5.18	TRIM CLUTCH ENGAGEMENT		(MPS REF 4.2.5)
5.18.6.1	Delay time between P1-1 wrt P2-1 w/o Flaps	<u>3.68</u> Sec	2.65 to 4.15 Seconds
5.18.10.1	Delay time between P1-1 wrt P2-1 w/ Flaps	<u>264</u> mSec	< 500 mSec
5.19	TRANSPONDER GROUND REFERENCE		(MPS REF 4.18)
5.19.3.1	Resistance between P2-29 wrt to GND	<u>✓</u> OK	< 4 Ω

FINAL TEST

Tested By: _____

Date: 5/22/18