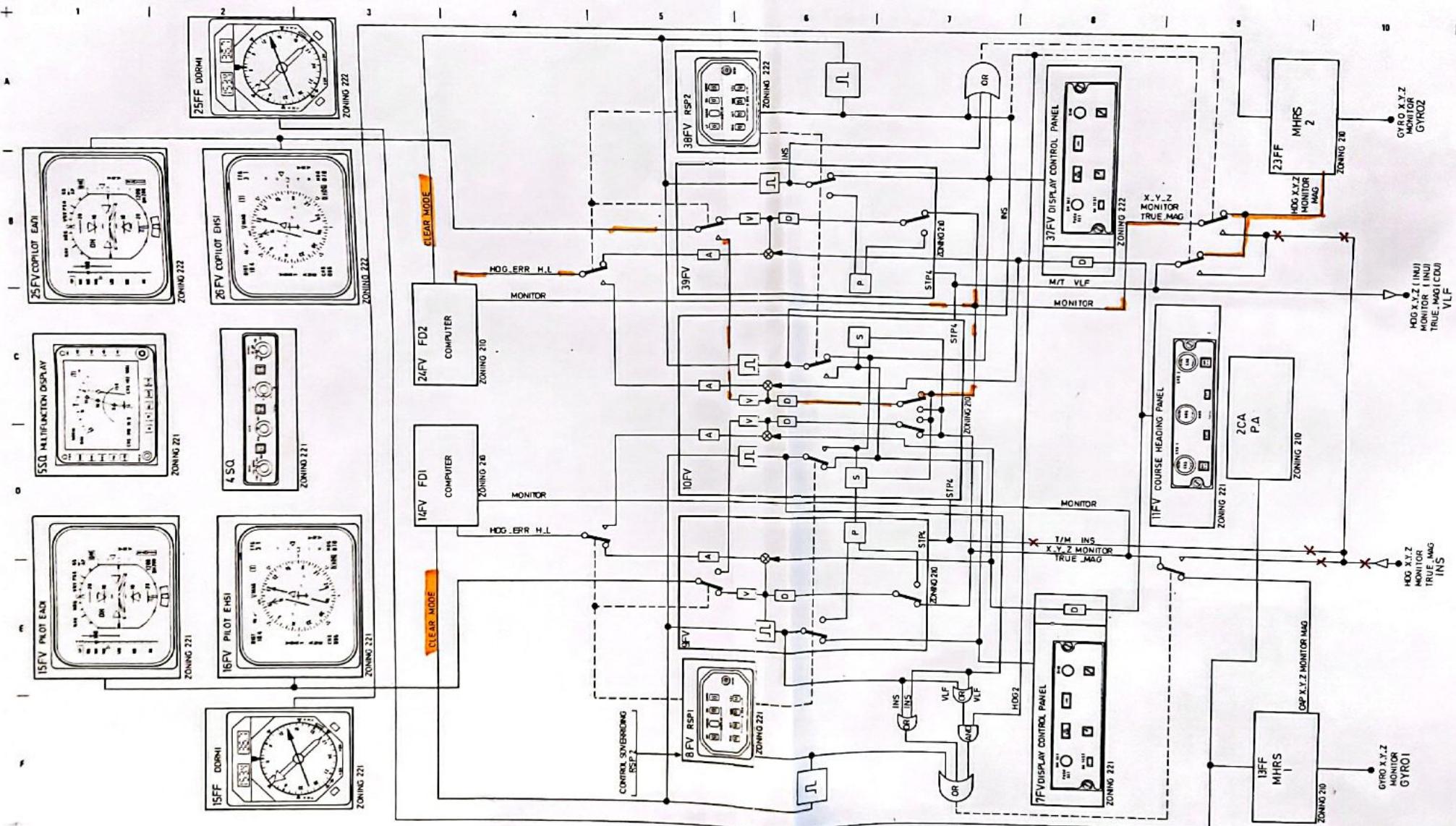




AVIONS MARCEL DASSAULT
BREGUET AVIATION

FALCON 50

WIRING DIAGRAM MANUAL



EFFECTIVITY
OPTIONAL

AP/FD SWITCHINGS-
HEADING DATA BLOCK DIAGRAM

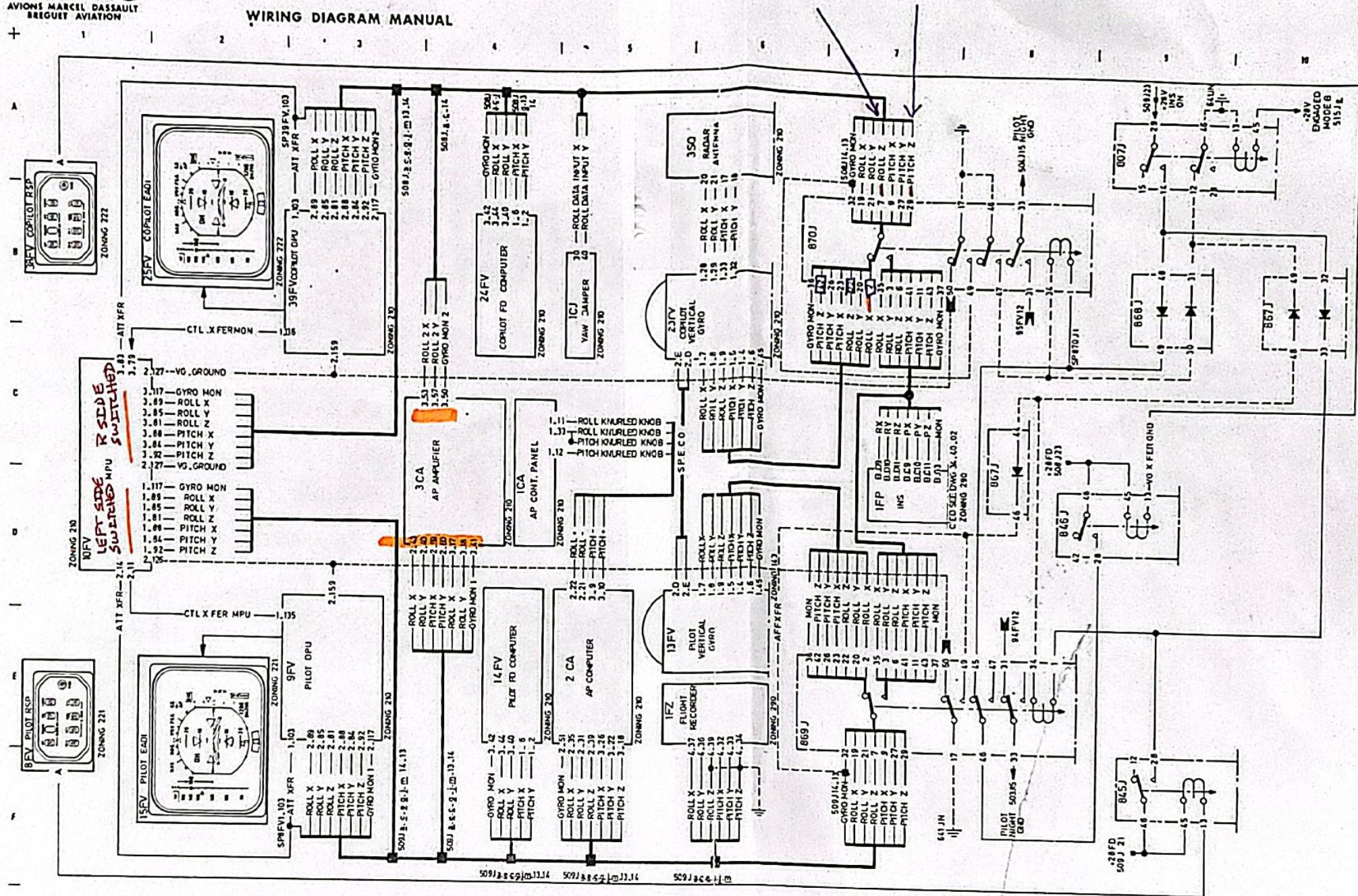
22-00-10



AVIONS MARCEL DASSAULT
BREGUET AVIATION

FALCON 50

WIRING DIAGRAM MANUAL



EFFECTIVITY:

OPTIONAL

**AP/FD SWITCHINGS -
VERTICAL GYRO PRINCIPLE**

22-00-06

4.4.1.6

DPU Monitor Operation In addition to the on-line monitors, it is possible to place the EFIS system in a self-test mode by the use of the RSP-85A Reversionary Select Panel or an airframe supplied test switch(es). When the test mode has been activated, the button and knobs on the DCP select various submodes. Test functions available include:

- a. Comparator and Master Warn (a) Confidence Test
When there are short power interruptions (a few seconds), there is no warmup time; the crt's show a blank state and turn on as soon as power is restored.

Comparator monitoring may be done in the DPU as well as MPU. Data compared includes pitch, roll, and heading. On-side data is read, converted to digital form, and may be sent to each DPU. In 5-tube configurations, the MPU may send cross-side data to the DPU's. Test words are transmitted to ensure data path accuracy. Each of the processors compares the data, and a comparator warn message will be displayed on the EFD's. Additional outputs are supplied for use by external annunciators. A master warn discrete is also provided, as an output from each side of the DPU, which serves as an overall compare function annunciation. The master warn discrete can be reset independent of the individual comparator outputs by momentarily grounding strap 22. The comparator outputs are resettable using a separate input pin (strap 12). The comparator warn outputs are latching and have built-in hysteresis to avoid troublesome intermittent warnings. The comparator function may be inhibited by grounding straps 22 and 12 on the DPU.

MPU 622-7254-00Z
~~C~~
~~NOT IN BOO~~

DPU 622-7248-00Z
~~C~~
=S/B 16-

RESET
RESET

- INHIBIT

WHAT [INHIBITS] COMPARATOR?

1. 20° BANK ANGLE
2. GROUND STRAP 22 AND 12 DPU
3. VG BREAKERS ALL PULLED

WHAT MAKES COMPARATOR WORK??

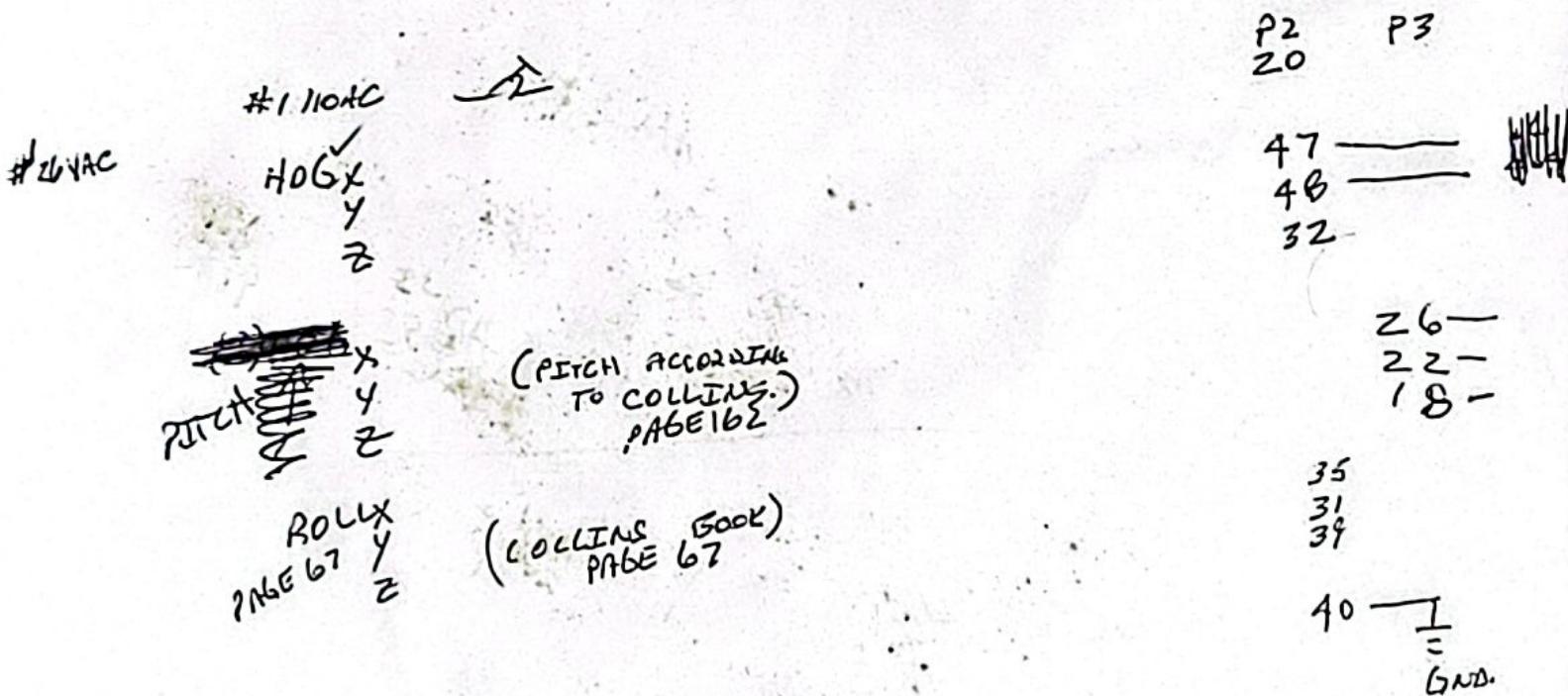
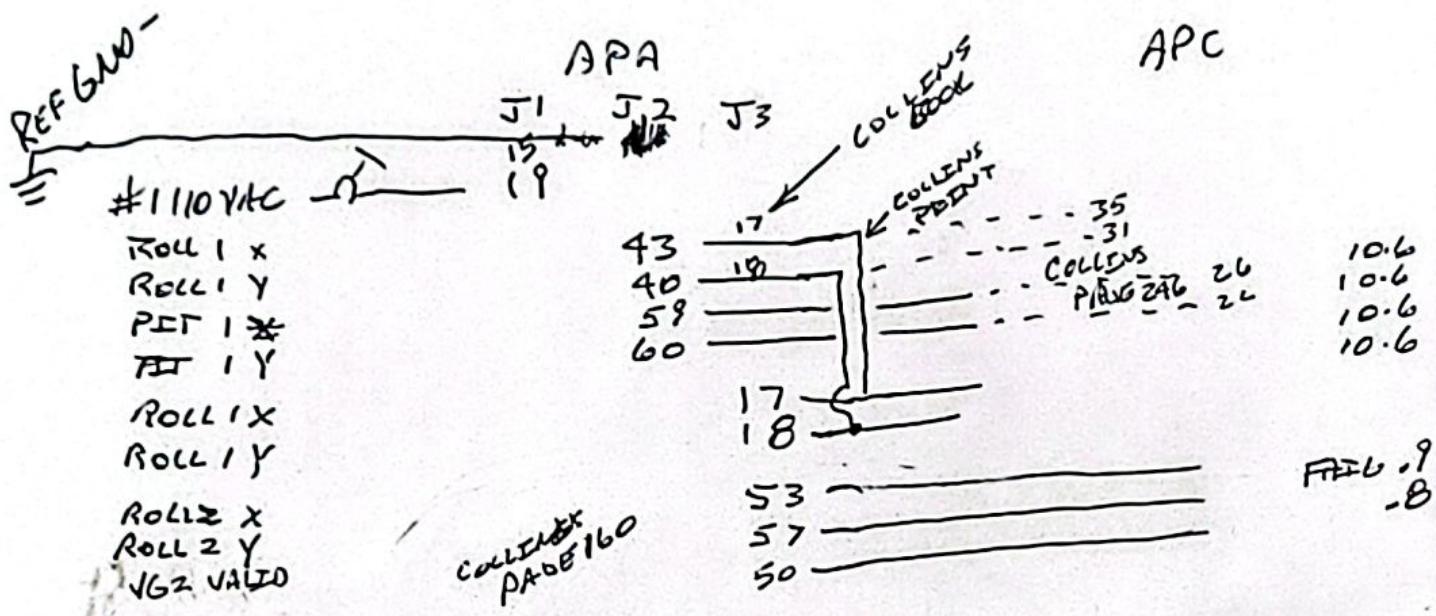
MUST HAVE ALL THESE

- {
1. Z UNITS POWERED
 2. LXFER CTL
 3. ONSIDE VG BREAKERS PUSHED

3.6.14 Comparator and Master Warning

Comparison monitoring is done in both display processor units and in the multifunction processor unit. Data compared includes pitch, roll, heading, localizer, and glideslope radio altitude and IAS will also be compared if dual sensors are available. The comparator limits are the same as used by the Collins FCS-80 Flight Control System. Each of the three processors compares the data and a comparator warn message will be displayed on the PFD if a comparator warning condition is detected. A master warn output is also provided for possible use in an external annunciator (not supplied as part of the EFIS system). Comparator warnings are announced by using the corresponding boxed failure flags (ATT, IAS, and RA on the PFD only, HDG on the ND only, and LOC and GS on both the PFD and ND) except that the flag color is changed to yellow and no flashing occurs. Failure flags have priority over comparator warnings. The displayed information is not removed from the display. Localizer and glideslope comparators are active only after glideslope capture on the side to which the autopilot is coupled. Comparison limits are increased when a vertical gyro and an INS are being used as the attitude sources. Heading comparison will be inhibited if one source is true and the other source is magnetic or if the bank angle is greater than 20 degrees. IAS will be compared if two air data computers are available and IAS is greater than 90 knots on one of the two air data computers. Comparison threshold for IAS will be ± 10 knots. External switches (not supplied with the EFIS system) must be provided to reset the comparator warn annunciations on the display and the external master warning annunciator (if installed). If the comparator warning is still present when the comparator reset switch is actuated, the comparator warning message will continue to be displayed until the condition causing the warning has cleared.

) THIS WORKS ONLY IN LXFER [CTL]



BUSINESS AND REGIONAL SYSTEMS
COMPONENT MAINTENANCE MANUAL with IPL
DPU-85G, PART NO 622-7448-001

SERVICE BULLETIN LIST

SERVICE BULLETIN NO	SUBJECT	EDITION/REVISION NUMBER	ISSUE DATE
79	85G -012 status: Enable copilot waypoint string display.	3/0	Mar 1/96
89 (R3)	85G/85M/86G: Allow analog VNAV with analog or digital analog outputs (converts 85G/86G -002 to -003; 85G -012 to -013; 85M -001 to -002)	3/1	Jun 16/99
91 (R2)	86U: Extend capabilities of analog Inputs	3/1	Jun 16/99
92	85M -101 status: Replace obsolete ARINC UART and multiplexer	3/1	Jun 16/99

DRX

BUSINESS AND REGIONAL SYSTEMS
COMPONENT MAINTENANCE MANUAL with IPL
DPU-85G, PART NO 622-7448-001

SERVICE BULLETIN LIST

SERVICE BULLETIN NO	SUBJECT	EDITION/REVISION NUMBER	ISSUE DATE
14	86C: Software change for pitch scale and raster presentation.	1/0	Jun 1/88
15	85G/86C/86G: Prevent erroneous video blanking at power on.	1/0	Jun 1/88
16 (R2)	86C: Improve runway and trend vector alignments and eliminate jitter on racetrack cutout (converts -001 status to -002).	1/0	Jun 1/88
18	85G/86G: Improve selected heading numeric readout on copilot HSI display.	1/0	Jun 1/88
19	85G/86C/86G: Increase marker beacon sensitivity.	1/0	Jun 1/88
23	85G/85M/86C/86G: Inspect El-Fab connectors.	1/0	Jun 1/88
24	86C: Add TKE+DA capability in map mode presentations.	1/0	Jun 1/88
25 (R2)	85G/86G: Add comparability with TWR-850 and various display enhancements (converts -001 status to -002).	1/0	Jun 1/88
27 (R1)	85M: Enhances LRN control logic.	1/0	Jun 1/88
30	86C: Eliminate false waypoint entry in LRNs.	1/0	Jun 1/88
32 (R1)	85G/85M/86C/86G: Corrects possible radio altitude, glideslope, and localizer offsets.	1/0	Jun 1/88
34	85G/85M/86C/86G: Reduce marker beacon sensitivity.	1/0	Jun 1/88
35 (R1)	85G/86G: Verify proper installation of SB 25 and correct circuit card marking.	2/0	Mar 16/94
36	85G/85M/86C/86G: Ensure initial power-on at low temperature.	2/0	Mar 16/94
37	85G/85M/86C/86G: Prevent erratic operation at low voltages.	2/0	Mar 16/94
38 (R1)	85G/85M/86C/86G: Prevent possible jitter of characters and symbols on the display.	2/0	Mar 16/94
39	86C: Change heading error output to reduce autopilot overshoot (converts -002 status to -003).	2/0	Mar 16/94
45	All: Reduce random display noise.	2/0	Mar 16/94
46	85G/85U/86G/86U: Improve cold temperature turn-on.	2/0	Mar 16/94
50	86U: Superseded by SB55 (converts -001 to -002).	2/0	Mar 16/94
52	86U: Enhance synchro reference monitoring.	2/0	Mar 16/94
55	86U: General software update (converts -001 to -002) (updates existing -002).	2/0	Mar 16/94
66 (R1)	86U: Reduce power supply susceptibility to abnormal transients.	2/0	Mar 16/94
67 (R2)	85G/85M/86C/86G/86U: Improve reliability of power supply and prevent EFD failures.	2/0	Mar 16/94
75	85G: Special status originated for HSX program (converts -001/002 status to -012).	3/0	Mar 1/96