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COLOSSUS Memo #272

TO: Distribution
FROM: N. Brodeur, P. Rye
DATE: 3 June 1970
SUBJECT: Revisions 37 through 40 of Artemis

Revision 40 of Artemis is equivalent to revision 108 of Comanche (COLOSSUS 2E).
The following changes were incorporated into Revisions 37 through 40.

1. P24 erasable NO. PASS was redefined to be a pad load (PCR 869).
2. The flag KFLAG (Bit 1, Flag 0), formerly used in P17, was deleted. (PCR 916)
3. The flagword R57FLAG (bit 8 flag 6) is no longer used for P23 and references to it were deleted. (PCR's 868 + 993)
4. TRUNFLAG was deleted. The implementation of PCR 963 made this flag obsolete.
5. 115 lines of code were deleted in the IMU Calibration and Alignment section. A lead-in for the erasable PIPA check program was added. (PCR 857).
6. Extended verb 92 (System Test) was deleted. (PCR 857)
7. System test code which is now included in erasable programs was deleted from fixed memory. (PCR 857)
8. Alarm Code 407 was deleted from the list of alarms in the Assembly and Operation section. This should have been done in COLOSSUS 2D, since PCR 963 obsoletes this alarm code.
9. The program description of GOTPOOH was updated.
10. The single precision erasable ESTROKER was deleted (PCR 822).
11. P37RANGE and HORISLP were redefined to be compatible with the COMANCHE erasable configuration.
12. Unused alarms 124 and 215 were deleted from the table in the Assembly and Operation section.

13. P24 constants TRUNSF and SHAFTSF were redefined to be pad loaded erasables (PCR 869).
14. A bug generated by the implementation of PCR 289 was corrected by moving one line of code so that the entrance RHCMINP includes the masking of the low 6 bits.
15. The time delay for CDUZERO was changed from 10.24 secs. to 7.9 secs. (PCN 1046).
16. Coding was added to check for coarse align before attempting gyro torquing (ACB 116).
17. The "bad return" logic in IMU Pulse Torquing Routines was modified to zero LGYRO and wake any sleeping gyro torquing request before existing. (ACB 117)
18. A restart point in P23 was relocated to prevent a recalling of R52 if the restart occurred after the mark was taken but before the processing began. (PCR 868).
19. The symbolic tag ERASPIP was defined at location 2000 (E4,1400). It is used as a entrance to the erasable PIPA test programs. (PCR 857)
20. Corrections were made in P51 and R51 deleting the setting of MARKINDX, which is done in SXTMARK. The call to MKRELEAS after a PROCEED response to the V51FL display in SXTMARK was removed since the disabling of the optics error counters is not desirable at that point. Calls to MKRELEAS were inserted in R53 and in IMU Calibration Routine after the marking sequence is finished. (ACB 47).

Changes implemented for the ARTEMIS 2E equivalent:

ACB's: 100, 103, 104, 105, 106, 110, 111, 113, 116, 117, A4

PCR's: 288, ~~289~~, 290, 292, ~~295~~, ~~302.1~~, ~~315.1~~, 821.1, 822, 857, 859, 860, ~~867~~, ~~868~~, ~~869~~, 872.1, 874.1, 916, 917, ~~921~~, ~~970.1~~, ~~973~~, 978, ~~985~~, 986, ~~987~~, 991.1, ~~993~~, 1020.

Anomalies: COM32, COM33, COM34, COM35, COM36, COM37.

PCN's: 994, 995, 1046

Handwritten notes and scribbles:
981
1046
921
857
867
868
869
973
985

Some Differences between COMANCHE 108 and ARTEMIS 40.

It should be noted that the following ACB's which were implemented for COLOSSUS 2E were not applicable to ARTEMIS: 101, 102, 107, 112, 114.

Anomaly COM31 did not exist in ARTEMIS.

PCR's 956, 974, and 1034

Neither PCR 956 nor PCR 1034 were implemented in ARTEMIS (the first creating P29, the second deleting it.)

PCR 974, like anomaly COM31, did not apply to ARTEMIS.

PCR 984 and PCN 1041 have not been implemented in ARTEMIS, pending a final decision on the SATURN DAP.