COLOSSUS Memo # 301

TO: Distribution
FROM: N. Brodeur
DATE: November 30, 1970
SUBJECT: Revision 63 through 67 of ARTEMIS

Revision 67 was GOOD; Revisions 64 and 66 were cuss-correcting versions only.

Major changes incorporated into Revision 63:

1. The comments for R22CAFLG in the Erasable Assignment Log Section were updated.

2. Appropriate (+/-N) tags were appended to relative addresses to indicate that a branch is made to said location   (ACB A-22)

3. A P61 phase change error was corrected to use a proper phase change table entry (5.17SPOT).   (ADR ART-2E-13)

4. The count cards were updated and obsolete bank cards removed.

Major Changes Incorporated into Revision 65:

5. N26 was redefined in the Pinball Noun Tables to display the 2 newly defined unshared erasables, N26/PRI and N26/2CAD. Coding was added to PINBALL to test R1 (N26/PRI) and to lock out (Operator Error) V30 and V31 if zero. It is now necessary to pad load N26/PRI with zero. The Assembly and Operation Information Log section was updated to reflect this change.   (PCR 1097.1)

6. The following MINKEY constants were moved from fixed memory to erasable memory and thus require that they be pad-loaded: WRDTIME, MINBLKTM, TBEFCOMP, MAXWTIME, BRNBLKTM, FINCMPTM and HAMDELH.
    P31 was modified to use erasable HAMDELH instead of constant 15 N.M.
    (PCR 332 and PCR 1123)

7. The location of VGTLI was defined as equal to VMAGI + 2. P15 and N95 of the Pinball Noun tables were modified to use this erasable. Entries were made to the CHECK= list for VMAGI equal to VGTIG +2 and VGTLI equal to VMAGI + 2. Thus VMAGI and VGTLI will be in words 96 and 97 of the Powered Flight downlist during the operation of P15. (PCR 320)

8. A description of C31FLWRD channel fail register was added to the comments in the Erasable Assignment log section.

9. C3 FLWRD was relocated to be immediately preceding FAILREG to allow it to replace CADRFLSH + 2 on the down-list. The Downlink and Checkequals list were changed to reflect this modification. (PCR 1118)

10. P34/74, P35/75 were modified to make N59 an on-call display instead of an in-line display. (PCN 1099)

11. R31 was changed to use precision integration when initiated and then to use conics thereafter. (PCN 1125)

12. A phase change was added to P77 to restart protect the N81 display. (PCR 325)

13. The abort logic was modified to do a BAILOUT instead of a POODOO if there is an extended verb active when the POODOO occurs. If the abort condition was not caused by the extended verb and still exists, the POODOO will re-occur after the BAILOUT restart. (PCR 1117.1)

14. The following list of constant changes were made to the Entry Lexicon and Reentry Control log sections. (3 4 2)

Constant	Former Value	New Value
KB1	3.4	2.5
KB2	0.0034	0.0025
Q7MIN	40.0FPSS	805.0 FPSS
Q2	-1152 + 500 LAD	-1992 + 3500 LAD

15. An error in S40.9 was corrected by modifying a bad branch instruction. (ADR ART 2E-12)

16. Coding was added to R61 to incorporate PCR 859 logic into Universal Tracking. (PCR 1051)

17. Constant 328NM (used to determine if within range for VHF) was changed to be 327.67 n.m. as described in the MINKEY User's Guide. (PCR 1049)

18. A test was put into the auto W-matrix logic so that the W-matrix is re-initialized if TIG is in the past when a mark is being incorporated. (PCR 1049)

19. An error in the implementation of the MNKGOPOO logic in P40 was corrected. (PCR 1049)

20. SETGAMMA (8 words) was moved from bank 13 to bank 16.

Major Changes Incorporated into Revision 67:

21. Some additions and modifications were made to the DOWNLINK = List.

22. Some more count cards were added.

23. Comments were updated and deleted from the P40-P47, Pinball Noun Tables and P34 - P35, P74 - P75 log sections.

24. The P79 option of R31 was modified to clear the PCMANFLG upon termination. This was done to insure the proper termination (flashing V37) of the MINKEY sequence. (PCR 1049)

25. A bug in the implementation of W-matrix initialization was corrected. (see item #18)

26. A bug in the implementation of item #16 was corrected.

27. The resetting of PCFLAG was added to P20FLGON and deleted in P33. (PCR 1049)

28. A test was added to P36 to insure that the zero displayed in R2 of N81 (YDOT) is truly zero and not some small value that may appear as zero on the DSKY. (PCR 1049)

GSOP Impact

The following items should be examined for possible impact on the various GSOP sections:

Section 2: Items 5, 6, 7, 9, 24, 27
Section 4: Items 5, 6, 10, 11, 13
Section 5: Item 6, 14