

APOLLO SPACECRAFT SOFTWARE CONFIGURATION CONTROL BOARD
- PROGRAM CHANGE REQUEST -

No. 470
(Completed by FSB)

1.0 COMPLETED BY ORIGINATOR	1.1 ORIGINATOR: <u>Eyles/Cherry</u> DATE: <u>6/19/68</u>	1.2 ORGANIZATION: <u>MIT</u> APPROVAL: <u>J. W. G.</u> DATE: <u>6/19/68</u>
1.3 EFFECTIVITY: <u>LUMINARY</u>	1.4 TITLE OF CHANGE: <u>P68</u>	

1.5 REASON(S) FOR CHANGE:
See Data Amplification Sheet

1.6 DESCRIPTION OF CHANGE: Let the work now initiated by the PROCEED on the Flashing V06N60 of P65, P66, P67 ("please confirm landing") be done by a new program: P68; called Landing Confirmation. Let the Flashing V06N60 become static.

2.0 SOFTWARE CONTROL BOARD OR FLIGHT SOFTWARE BRANCH DECISION FOR VISIBILITY IMPACT ESTIMATE BY MIT	2.1 <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED
2.2 REMARKS:	2.3 SOFTWARE CONTROL BOARD OR FLIGHT SOFTWARE BRANCH SIGN OFF: _____ DATE: _____

3.0 MIT VISIBILITY IMPACT EVALUATION:	3.1 SCHEDULE IMPACT: <u>2 Days</u>
3.2 IMPACT OF PROVIDING DETAILED EVALUATION:	3.3 STORAGE IMPACT: <u>saves 20 words</u>
3.4 REMARKS:	3.5 MIT COORDINATOR: <u>George W. Cherry</u> DATE: <u>6/19/68</u>

4.0 SOFTWARE CONTROL BOARD ACTION	4.1 <input checked="" type="checkbox"/> IMPLEMENT AND PROVIDE DETAILED CHANGE EVAL. <input type="checkbox"/> PROVIDE DETAILED CHANGE EVALUATION <input type="checkbox"/> DISAPPROVED
4.2 REMARKS:	4.3 SOFTWARE CONTROL BOARD SIGN OFF: <u>K. W. J. SCRIBNER</u> DATE: <u>6/25/68</u>

5.0 MIT DETAILED PROGRAM CHANGE EVALUATION	5.1 MIT COORDINATOR: _____ DATE: _____
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5.2 MIT EVALUATION:

APPROVED FOR IMPLEMENTATION

6.0 SOFTWARE CONTROL BOARD DECISION ON MIT DETAILED PROGRAM CHANGE EVALUATION	6.1 START OR CONTINUE <input type="checkbox"/> IMPLEMENTATION <input type="checkbox"/> DISAPPROVED OR STOP IMPLEMENTATION
6.2 REMARKS:	6.3 SOFTWARE CONTROL BOARD SIGN OFF: _____ DATE: _____

APOLLO SPACECRAFT SOFTWARE CONFIGURATION CONTROL BOARD

-DATA AMPLIFICATION SHEET -

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PROGRAM CHANGE REQUEST NO. <u>270</u>	PREPARED BY: <u>Eyles</u> DATE: <u>6/19/68</u>	ORGANIZATION: MIT
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CONTINUATION SECTION (REFER TO BLOCK NUMBER AND TITLE
ON PROGRAM CHANGE REQUEST FORM)

1.5 REASONS FOR CHANGE:

- (1) If landing confirmation is by means of a response to a display flashed by the AGC only when it thinks the LM is below a certain altitude (the V06N60 of P65, P66, P67), then altitude errors in the AGC could prevent the display being flashed and thus make it impossible for the Astronaut to confirm touchdown.
- (2) Safety: a premature PROCEED would cause an immediate engine - off, and crash.
- (3) Memory savings: many things now done on the PROCEED would be taken care of by the V37 coding.

Remarks

(2). Concerning (2) above, the GAEC engine stop button is guarded and the PROCEED button on the DSKY is not. Furthermore the PROCEED button rarely turns off the engine. The human factors of an ~~PROCEED~~ unguarded PROCEED button turning off the engine seem to be an important crew safety subject. *J.W.*

REMARKS

(1) Concerning item (1) above this problem can be circumvented by having the display in P65, P66, P67 flash at all times, however it seems rather poor human factors for the LGC to be requesting a response all through the terminal phase of landing. Incidentally, if the altitude errors are big enough P65 will never be selected.

LUMINARY
Colossus Preliminary Program Change Approval

- MIT Approved PCN
- NASA Approved PCR

A. Coding

- Begin coding immediately

ACTION:

D. EYLES

- Do not code until new GSOP material has been approved by the MIT Mission Design Review Board (MDRB) and distributed.

B. GSOP Preparation

- Prepare GSOP revisions for MDRB consideration

ACTION:

F. LITTLE

- Technical Committee Meeting Was Not Required
- Technical Committee Meeting(s) held on _____
Attendees: _____

Special Instructions

George W. Cherry
7/8/68