MEMORANDUM

Bendix Computer • DIVISION OF BENDIX AVIATION CORPORATION

TO: All Field Service Reps.

FROM: M. S. Thomson

SUBJECT: Errata

DATE: April 22, 1960

The purpose of this memo is to correct previous ones issued to you on the subject of G-15 ECO's. Please correct such memos and then discard this one.

Corrections to "G-15 ECO's -- Logical Explanation"
2/16/60, M.S. Thomson to J.R. Campbell

(1) Page 18 - top, Sec. E-3   Add: (j) TF, (k) T29

(2) Page 18, Sec. E-3, last paragraph   Add: ④ now qualifies the DS·S5·SW·T1·AR gate which sets CQ. This prevents AR sign interrogation when the 22 —→ 31 command is used to interrogate or control the CA-2; in these cases, C-codes of 1, 2, 3, 5, 6, and 7 are used. The regular AR sign test must be written with CH = 0.

Corrections to "Changes to the G-15 -- Effective Serial #309"
4/12/60, M. S. Thomson to All Field Service Reps.

(1) ECO 1096 will become effective in machines starting with Serial #311 -- not #309. Correct the references to #309 accordingly. Such references are found on the cover memo and on page 2.

(2) Page 4 -- half way down, left   The reference made to P16, D-13 should read P15, D-13.

M. S. THOMSON

mc

EXPLANATORY NOTES ON ECO #1096

To improve reliability and margins of the Alphanumeric input-output.

To insure reliable operation of the G-15 input-output system in the
standard mode, "READY" is now used to reset the AS (Automatic-Standard
reload) flip-flop. This means that if an automatic mode input is going
on, it is necessary to wait for "READY" (or give the "Set Ready" command)
before initiating a standard mode input or output. If the $\mathscr{A}$ neon is
on, $\textcircled{S}$ must be typed before Q or P to gate numeric type-in or photo
tape read, respectively. (See figure 1)

A modification was recently made to allow blank leader on the MTA-2
without causing a precession of M19. Since machines with serial numbers
less than 210 do not contain this change, it is not desirable to write
programs using this feature. Therefore, the modification was removed
and the diodes used to clean up other signals. (See figure 2)

Erroneous stop codes will no longer be encountered during acceleration
of magnetic tape when starting in the midst of data. Also, approximately
60 ms. of overshoot was added on searching magnetic tape in reverse for
stop codes. This was done since the MTA-2 stops so quickly in this
mode that the stop code is sometimes missed in a following forward
operation. (See figure 3)

It was logically possible for a simple type-out of AR to cause a four-
word precession of M19, although cases of this happening were few.
However, further qualification of $\textcircled{C}$ by $\overline{[STOP]}_{OB}$ eliminates this possibilty.
(See figure 4)

The slow out timing logic was revised to make it more reliable and to use

less components. The big changes were to remove the fake feedback loop involving the HC buffer-inverter and qualifying the setting of OH with AS so that OH would not be used during numeric type-out. (See figures 5, 6, 7, and 8)
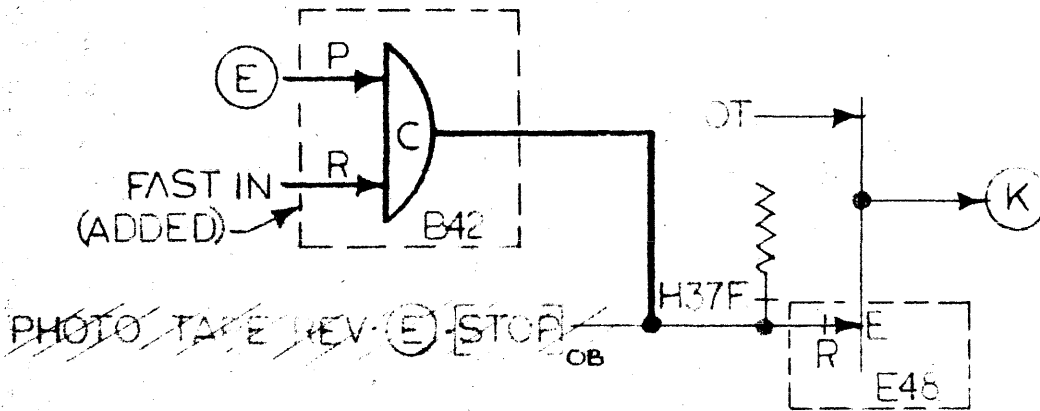
To simplify the logic and use less hardware, many redundant terms are removed. (See figures 9, 10, and 11)
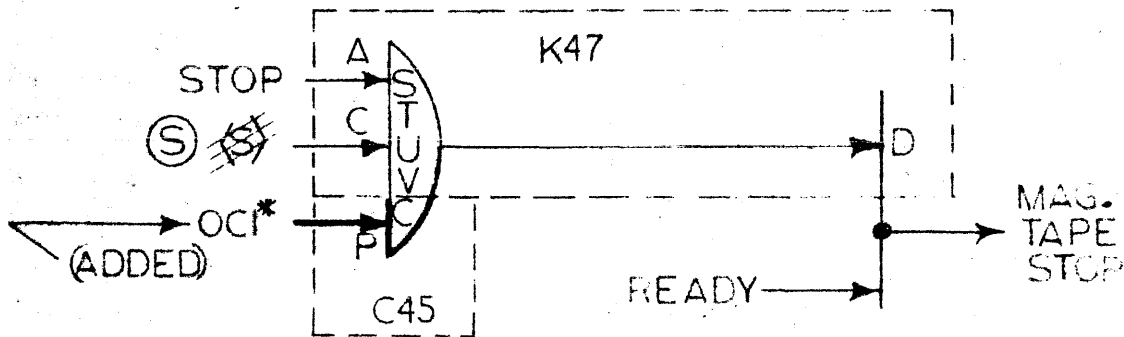
Ref. Schematic 3D592

FIG. I
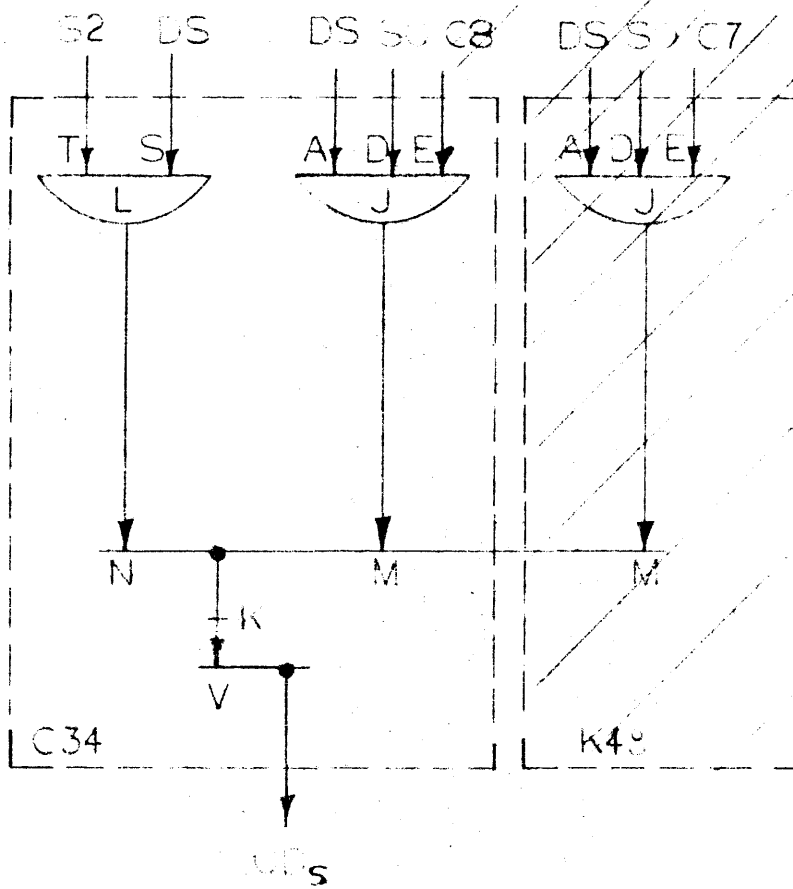
Ref. Schematic 3D588

FIG. 2

TO ELIMINATE ERRONEOUS STOP CODES DURING ACCELERATION
OF MAGNETIC TAPE.

FIG. 3A

TO CAUSE OVERSHOOT ON MAG. TAPE REVERSE.
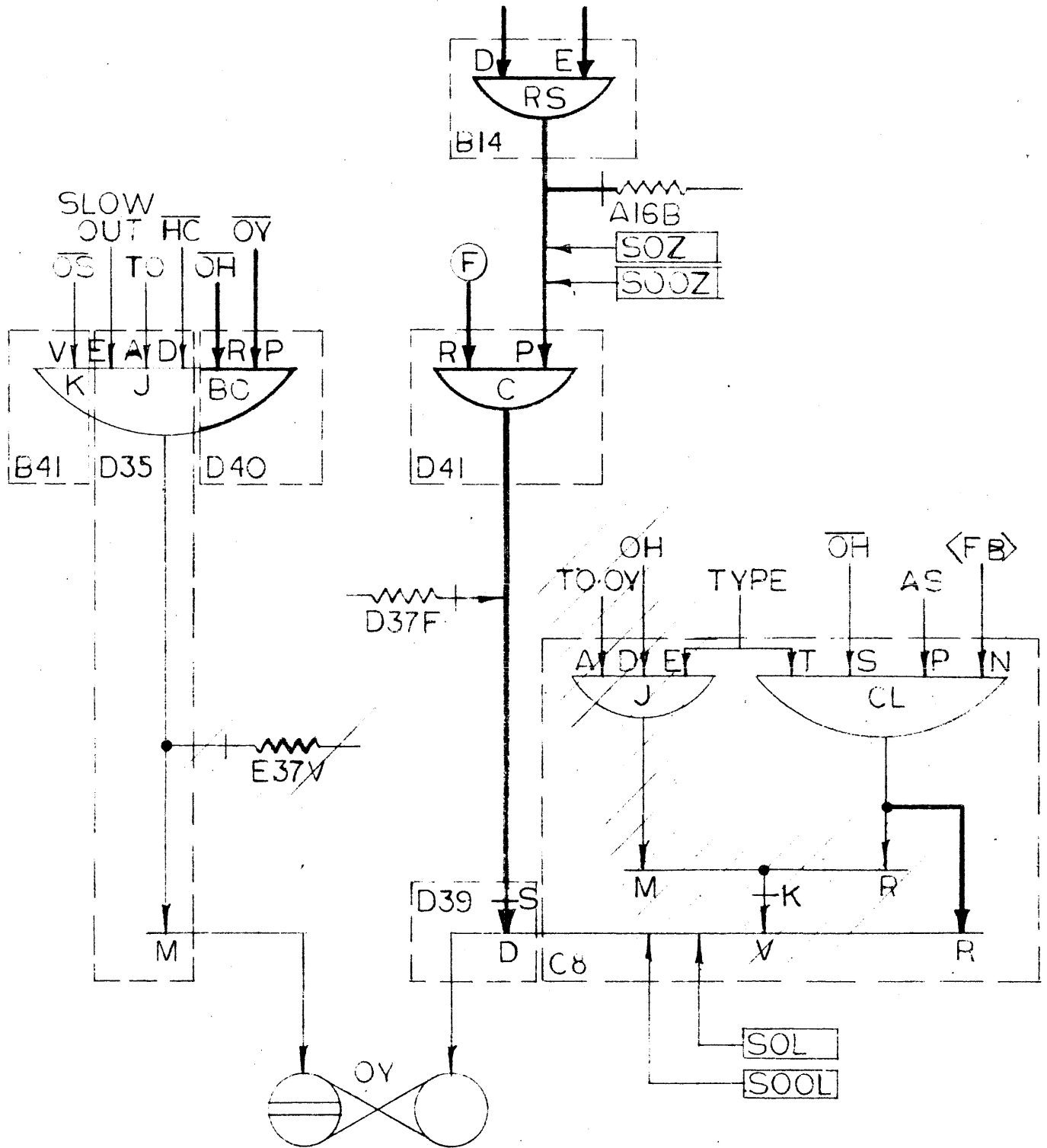NOTE: THE CHANGE OF (S) TO (S) IS NOT A LOGIC
CHANGE BUT THE CORRECTION OF A DRAFTING
ERROR.

Ref. Schematic 3D590

FIG 3B
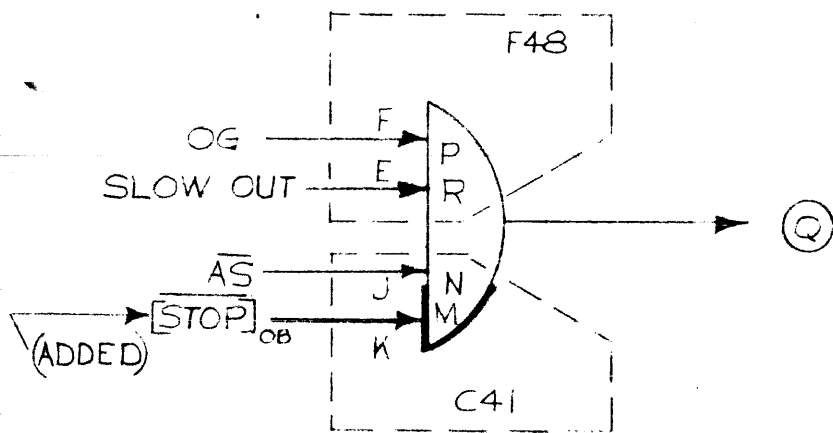
Ref. Schematic 3D590

FIG. 4
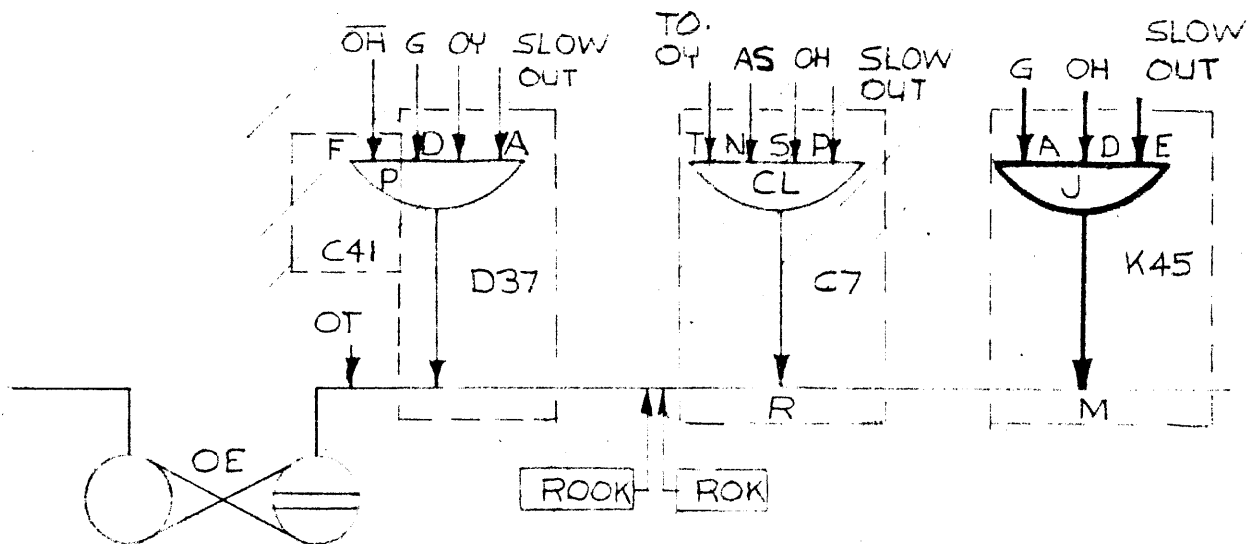
Ref. Schematic 3D588

FIG. 5

Ref. Schematic 3D588

FIG. 6

TYPE OH AS

TYPE CY

P R R

E D

D40

D41

R S

B14

AIGB

OT

S

K

D39

B11

HC

500%

50%
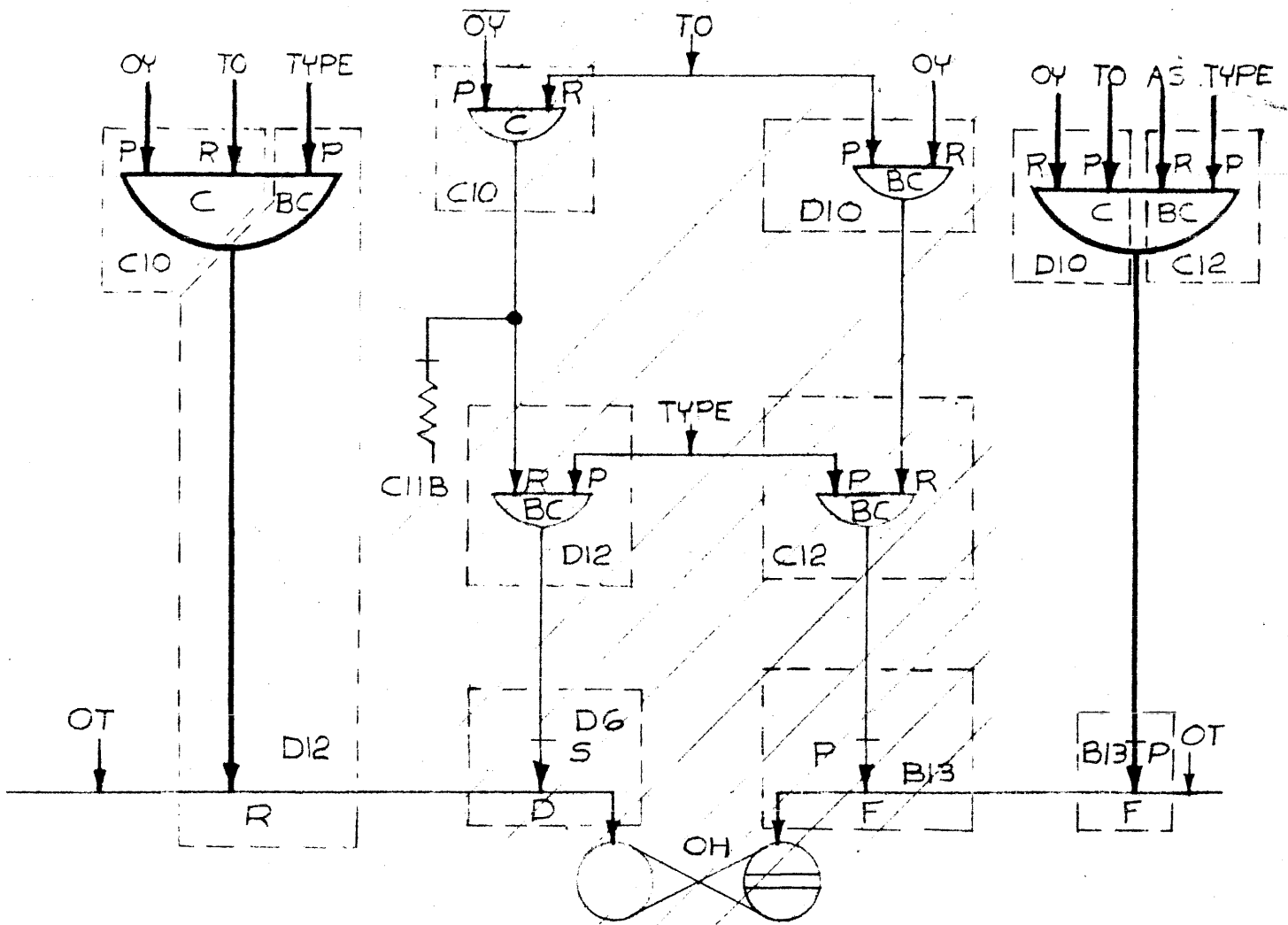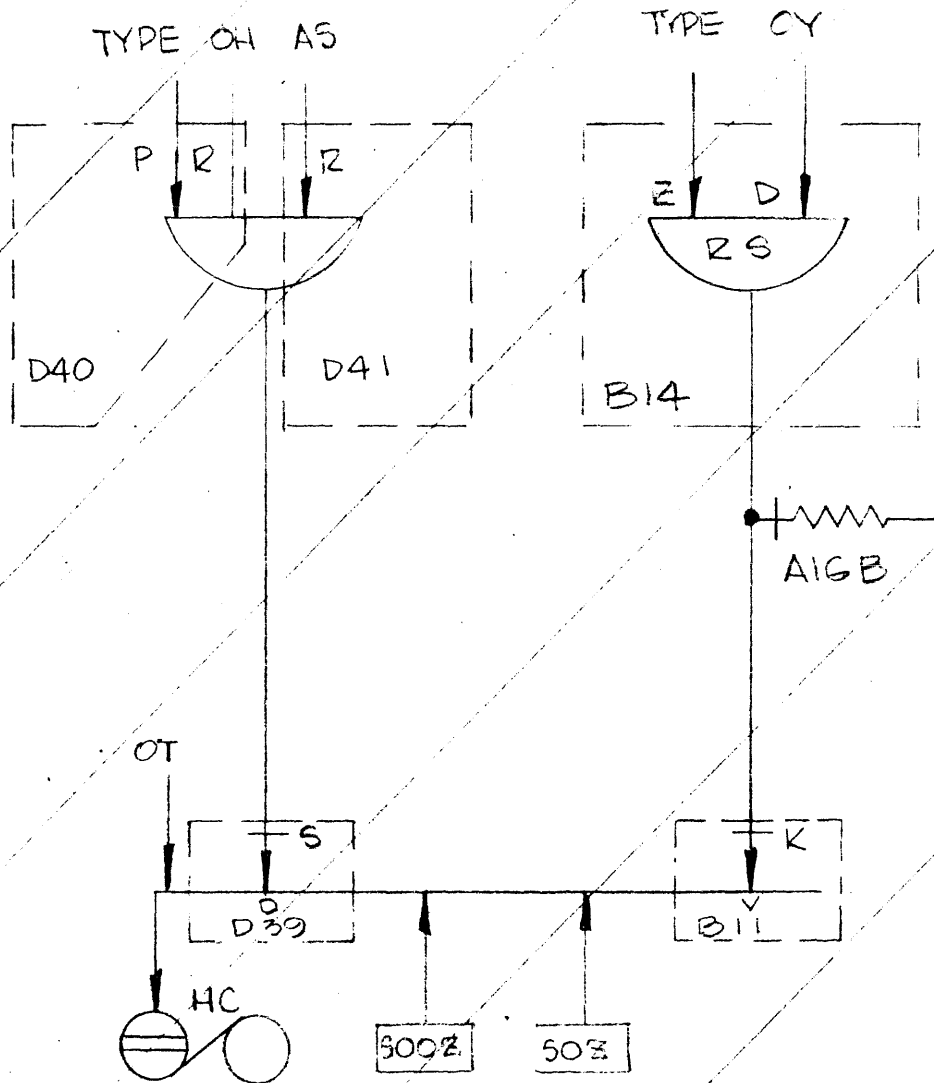
Ref. Schematic 3D589

FIG. 7

Ref. Schematic 3D588

FIG. 8

FIG. 9

Ref. Schematic 3D590

Ref. Schematic 3D589

FIG. 10

BEFORE
AFTER
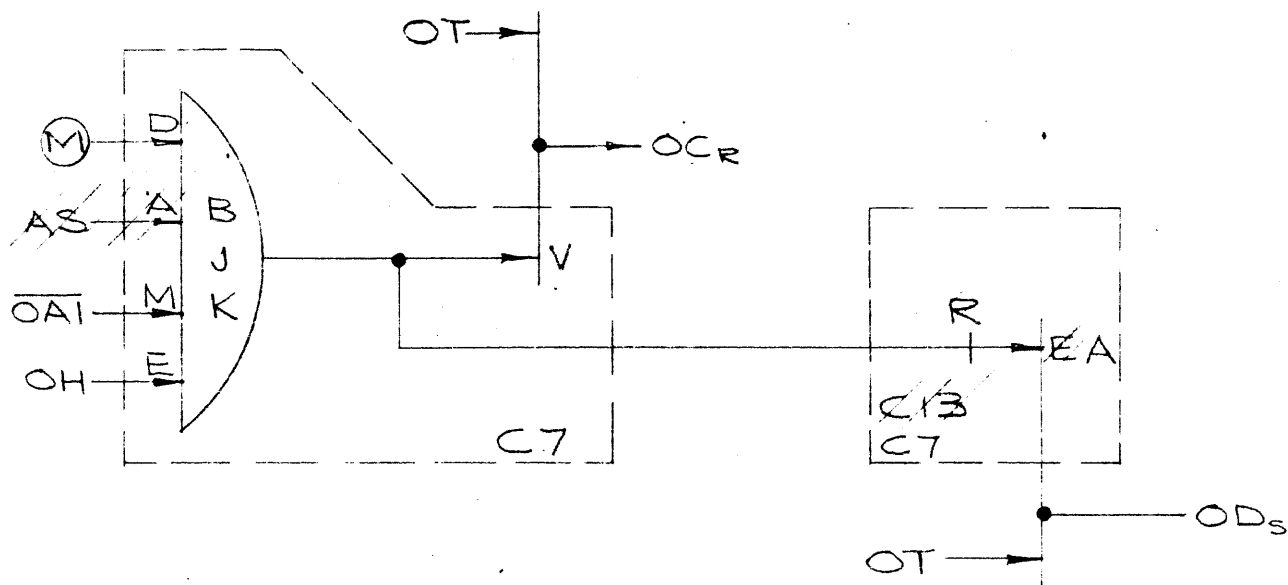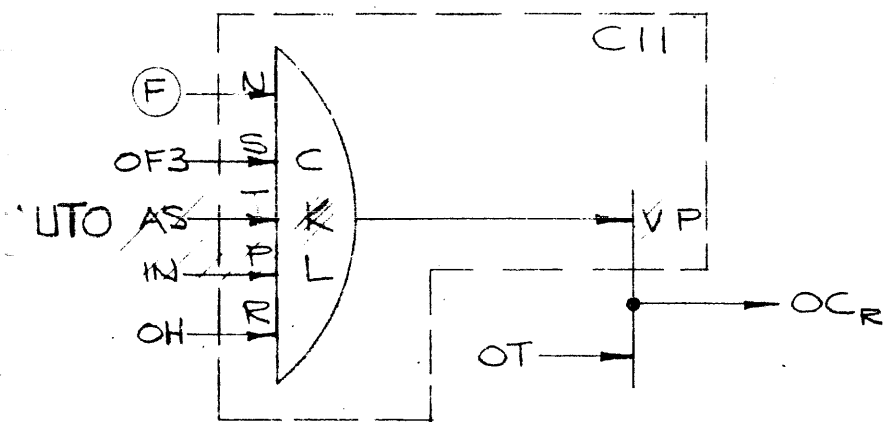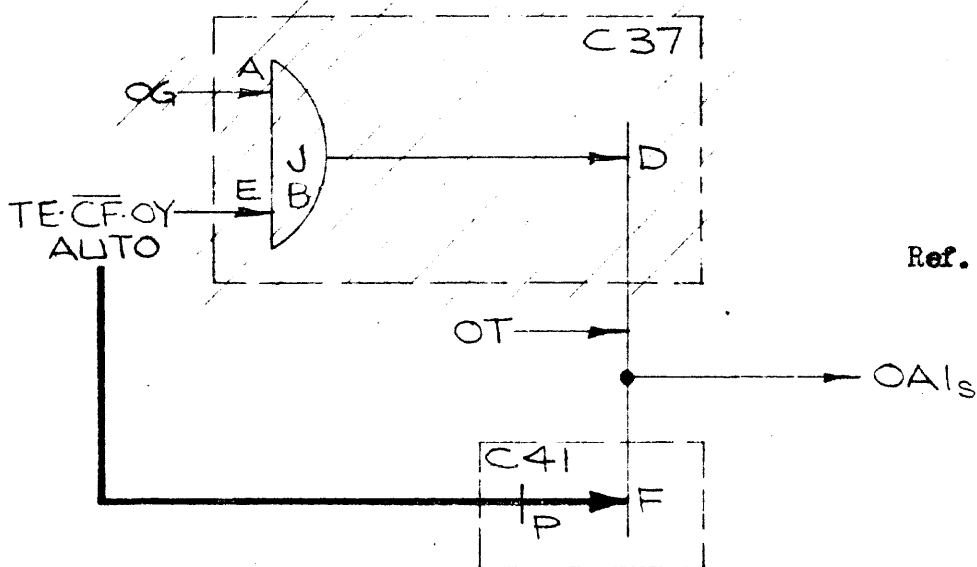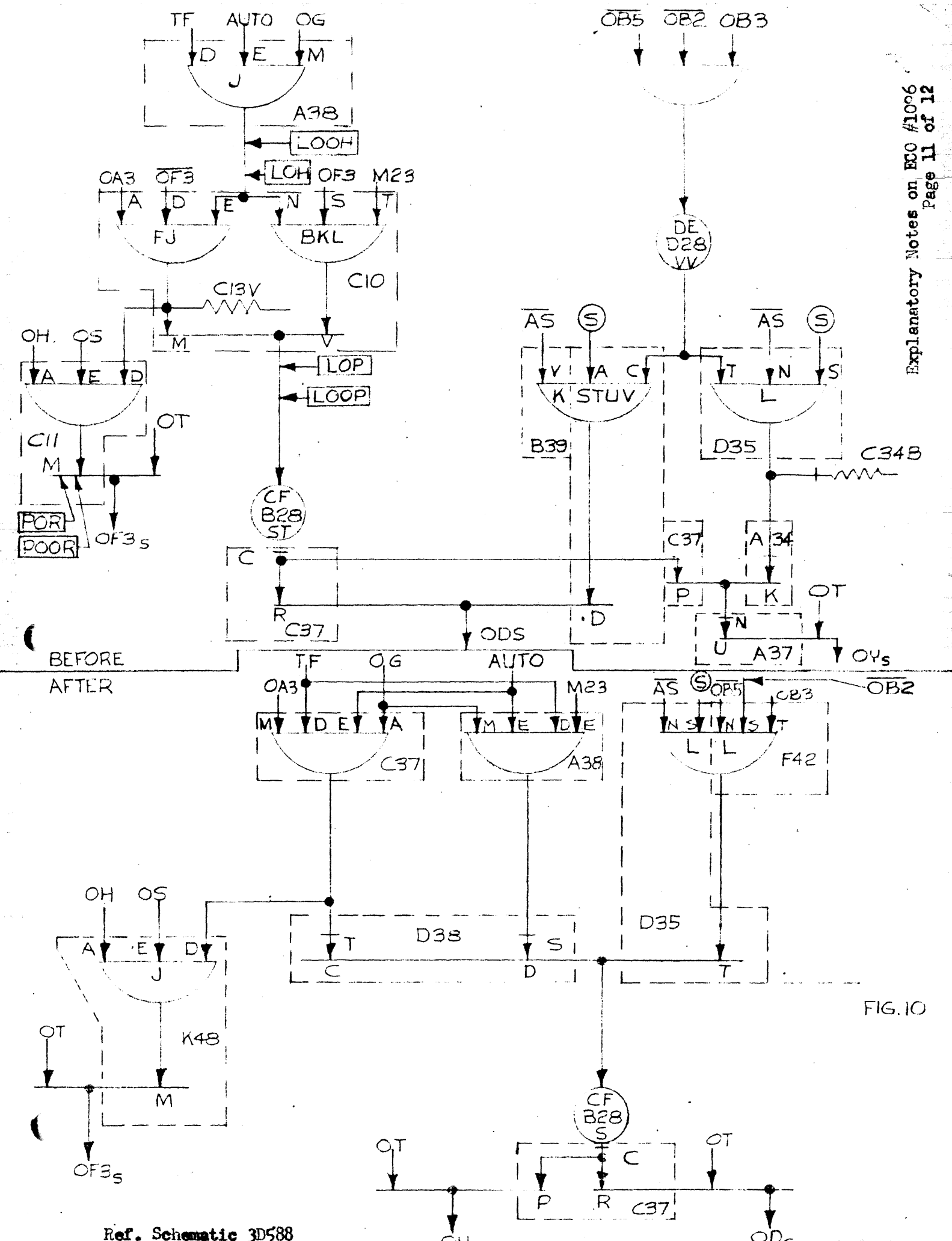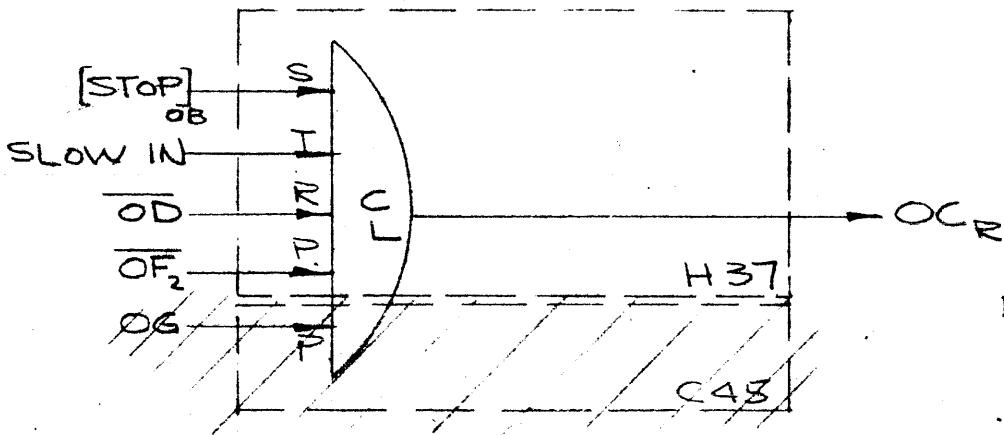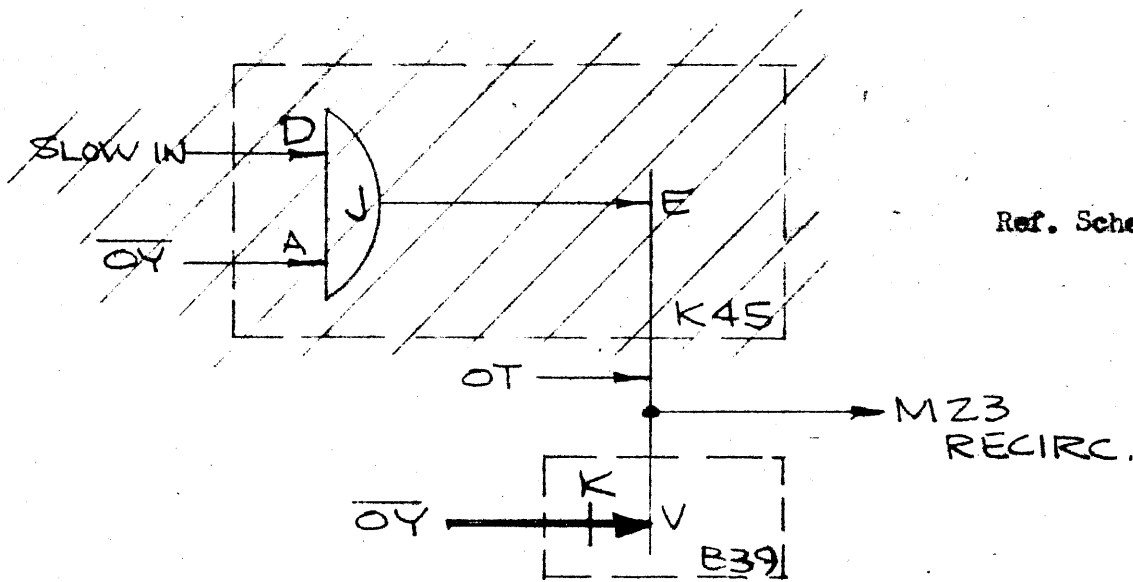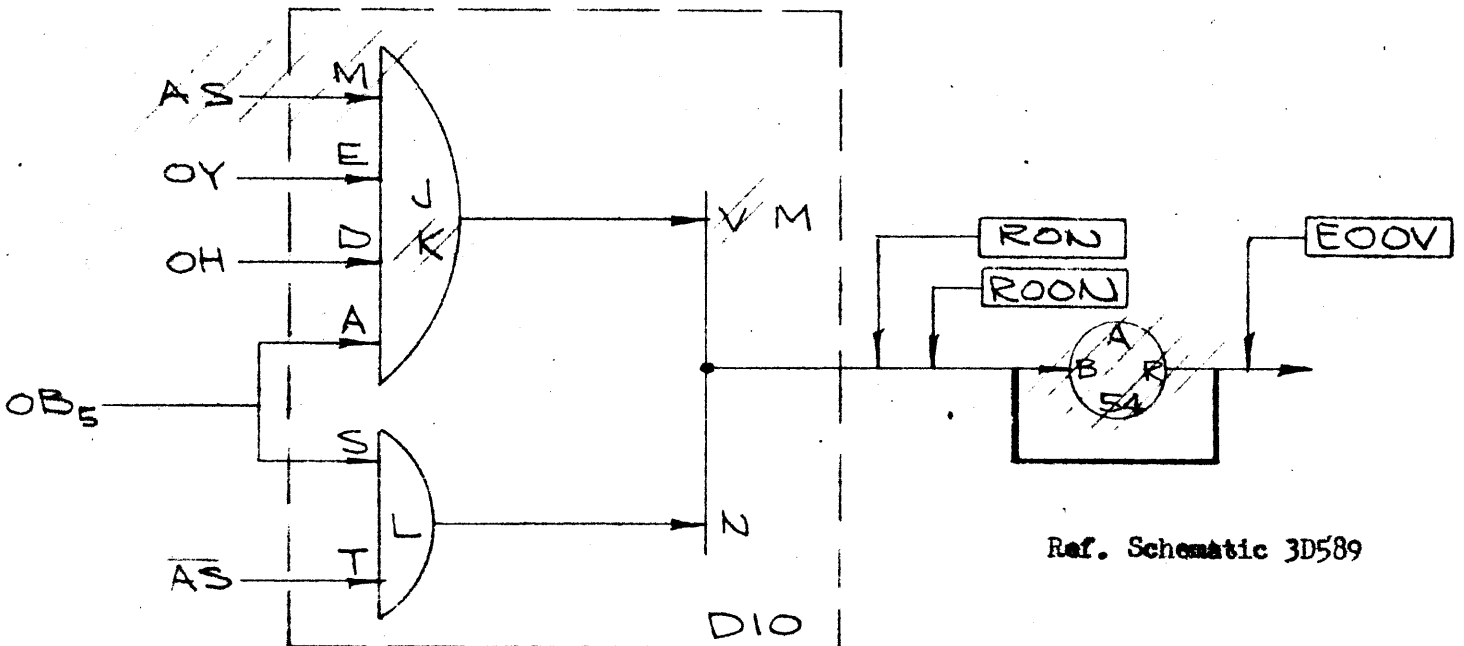
Ref. Schematic 3D590

Ref. Schematic 3D592

Ref. Schematic 3D589

FIG 11