

Signature

APOLLO ENGINEERING MEMORANDUM AP-M NO. 5896

26 February 1965

TO: Distribution
FROM: Mr. Paul Grant
SUBJECT: ERRATA SHEET FOR THE ELECTRONIC COUPLING DATA UNIT MEMOS

The following corrections should be made to the appropriate memos describing the Electronic Coupling Data Unit.

1. Paper II, The Coarse System, AP-M 4544 - replace the coarse switching diagram with the enclosed version.
2. Papers IV and V, The Fine System, AP-M's 4850 and 4927. The designation of S5 and S6 in the memos is reversed from the Class A drawings. Although the memos in themselves are correct, this reversal should be brought to the readers attention.
3. Paper VIII, The Digital System, AP-M 5792. Page 6, under COUNTERS, change sentence to read, 'Hence, each pulse sent to the error counter has a weight of .044 degrees.'

In the same memo on Page 7, the ERROR-COUNTER UP-DOWN LOGIC section should be replaced with the enclosed version. Cut the corrected version along the dotted line and scotch tape it in.

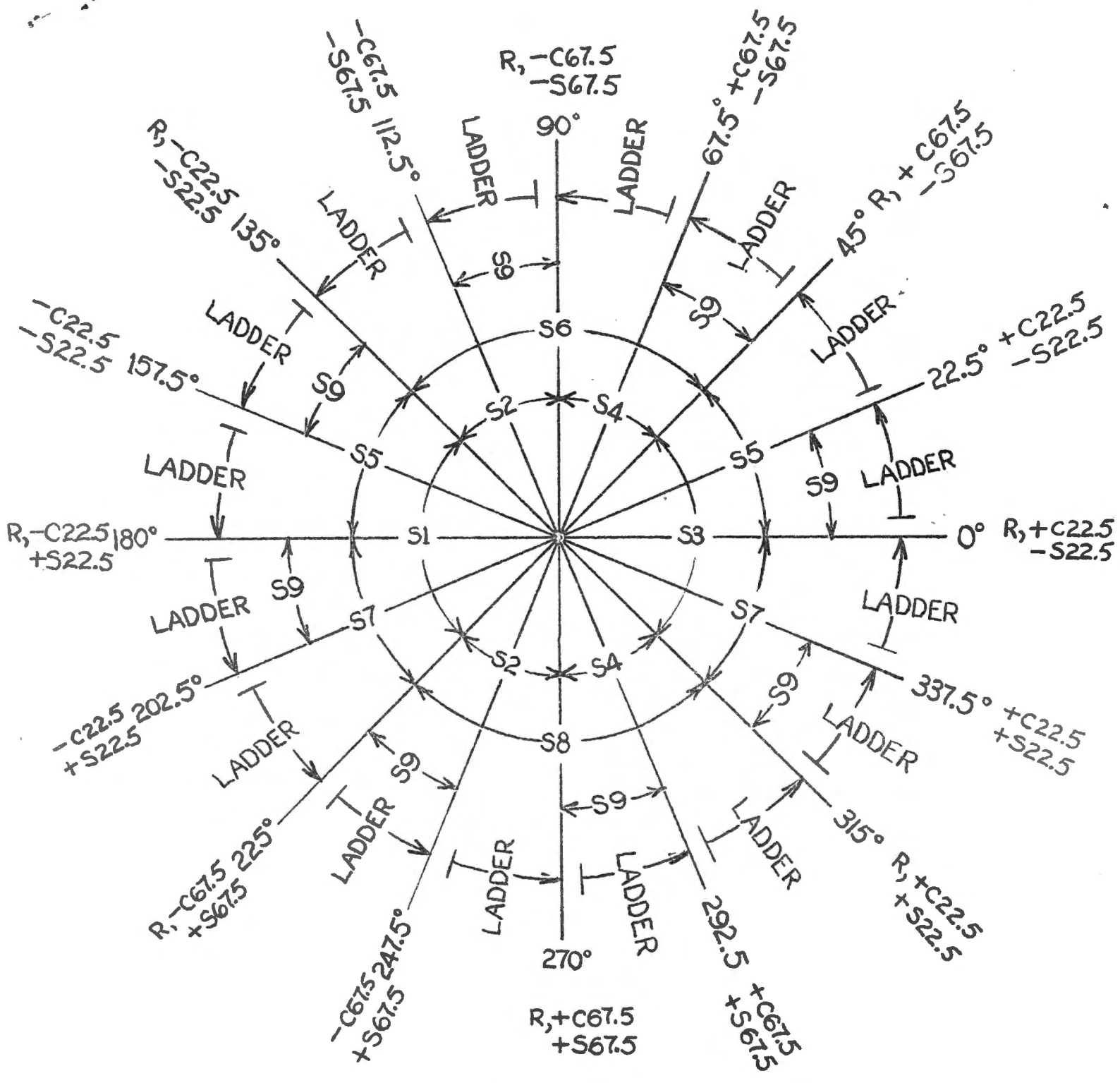
0.44°

$$\begin{array}{r}
 36'' \\
 \underline{4} \\
 144 \\
 \underline{14.4} \\
 158.4''
 \end{array}$$

$$\begin{array}{r}
 3.6 \\
 \underline{4} \\
 14.4
 \end{array}$$

Paul Grant
 Paul J. Grant
 Digital Systems Group
 Apollo Engineering

rc/



COARSE SWITCHING DIAGRAM

2-26-65
P.J.G.

ERROR COUNTER UP-DOWN LOGIC

This section as the name suggests, decides which direction the error counter will count in. It also determines the phase of the output of the DAC by the DAC polarity function. The DAC polarity function is determined on the basis of the next up or down pulse when the error counter is zero.

The decision to count the error counter up or down is accomplished in the following manner. The up direction is chosen when the DAC polarity function and the up-down pulses correspond. In other words, if when the error counter is zero and the next pulse is up the DAC polarity will be set to (+) and the up direction set, and if up pulses continue, the error counter will continue to count up. The instant the pulses change to down pulses, the counter begins to count down provided the error counter does not contain zero. The same operation is true with respect to the (-) polarity function and down pulses. (See the enclosed logic diagram.)

.....

DISTRIBUTION LIST

(ACSP)

Digital Systems Group
Don Gothard
Mark Mastandrea
Don Grasselli
Gordon Hinricks
Dick Streufert
Joe Calabretta
Ed Herbert
Don French
Jim Tenney
George Hoffman
Jim Whiteman
Jerry Wachholz
John France (30-03)
John Albert
Tony Paide

(MIT/LL)

*Glenn Cushman (7)
Mark Birnbaum
Bob Kowalski
Bob Lee
Mary Smith
John Barber
Ted Rogers

(NAA)

Jim Corrigan

*Steve Slatch (5)
Bob Erickson
John Weber
Ken Kidd
Marty Sack

*H. Bauman (8)
E. Lons
Dick McKern
Ron Gilbert
Jerry Gilmore
Bob Therrian
George Silver ✓
Harry McQuat