

~~SECRET-SPECIAL HANDLING~~

AW00331  
SERIES A  
Q-3

INSTRUMENTATION SCHEDULE

MISSION 7303

7303

SAFSS SA009J-64

~~SECRET-SPECIAL HANDLING~~

P-7650  
y3

~~SECRET-SPECIAL HANDLING~~

## INSTRUMENTATION SCHEDULE

MISSION 7303

| <u>Commutator<br/>Point</u> | <u>Description</u>                       | <u>Values</u>                                     |
|-----------------------------|------------------------------------------|---------------------------------------------------|
| 1                           | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 2                           | Temp Mode A                              | see Mode A temperature curve                      |
| 3                           | Temp Mode B                              | see Mode B temperature curve                      |
| 4                           | Recog. Mode A sweeping rcvr.             | no recog: 4.5 V, recog: .5 V (nominal)            |
| 5                           | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 6,16,26,36,46, 56           | Freq. Mode A sweeping rcvr.              | see Mode A tuning voltage table                   |
| 7                           | 66 mc rcvr recog                         | no recog: 4.5 V, recog: .5 V (nominal)            |
| 8                           | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 9                           | 71 mc rcvr recog                         | no recog: 4.5 V, recog: .5 V (nominal)            |
| 10                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 11                          | 76 mc rcvr recog                         | no recog: 4.5 V, recog: .5 V (nominal)            |
| 12                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 13                          | Noise level Mode A                       | scs note #1                                       |
| 14                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 15                          | 66 mc rcvr noise level                   | see note #1                                       |
| 17                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 18                          | 71 mc rcvr noise level                   | see note #1                                       |
| 19                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 20                          | 76 mc rcvr noise level                   | see note #1                                       |
| 21                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 22                          | Mode A input voltage (+28 V)             | see Mode A input voltage curve                    |
| 24                          | Mode B input voltage (+28 V)             | see Mode B input voltage curve                    |
| 25                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 27                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 28                          | Signal modifier input voltage (+10V reg) | 1.85 V                                            |
| 30                          | Cal +                                    | 5.0 V                                             |
| 32                          | Signal modifier temperature              | see signal modifier temperature curve             |
| 33                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 34                          | Converter A (+10 V reg)                  | 3.20                                              |
| 37                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 38                          | Converter B (+10 V reg)                  | 3.23                                              |
| 39                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 40                          | Video switch X monitor                   | present: 3.6 V absent: 0 V                        |
| 41                          | Video switch Y monitor                   | present: 3.6 V absent: 0 V                        |
| 42                          | Timer output #1                          | 4 steps of 8 seconds each                         |
| 43                          | +28 V bus monitor                        | see +28 V bus mon. Curve                          |
| 44                          | Timer output #2                          | 8 steps of 32 seconds each                        |
| 47                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 48                          | Command L monitor                        | 3.5 V when "L" is in; otherwise 0 V.              |
| 49                          | Cal $\frac{1}{2}$                        | 2.5 V                                             |
| 50                          | Wide band recorder voltage mon.          | 2.5 V when there is voltage on recorder input bus |
| 52                          | Wide band recorder operation mon.        | 2.5 V when recorder is running, otherwise 0 V     |
| 57                          | Cal Z                                    | 0 V                                               |
| 58,59,60                    | Syn                                      | 5.3 V                                             |

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SERIES A

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## INSTRUMENTATION SCHEDULE

## MISSION 7303

Continued..

## NOTE #1 - Receiver noise levels

The noise level indications for the mode A and mode B receivers are for the analysis of failure modes of the receivers. The normal value of 1.5 + .3 V indicates normal satisfactory receiver operation. There will be some slight variation (0.1 V) in the sweeping receivers as the band is tuned. If the I. F. section or a portion thereof fails, the noise level indication will drop to zero. If NLGC circuit fails, the noise level indication will also drop to zero, but the video output will still be present. If the R. F. head fails, the noise level indication will drop to a value between 1.0 V and the normal value, depending upon the location of the failure in the R. F. section. The normal noise level can be exceeded in the presence of a strong carrier.

NOTE #2 - Video Switching Logic "X" and "Y" indicates the mode "B" receiver inputs to the tracks "1" and "2" of the wide band video tape recorder as follows:

| <u>Logic</u>      | <u>Track #1</u> | <u>Track #2</u> |
|-------------------|-----------------|-----------------|
| X                 | 66 Mcs.         | 76 Mcs.         |
| Y                 | 71 Mcs.         | 66 Mcs.         |
| Both X & Y Absent | 71 Mcs.         | 76 Mcs.         |

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AWG 551  
SERIES 1

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MODE A TEMPERATURE  
(COMMUTATOR POINT NO. 2)

OLIVER HUNTER DIVISION OF KODAK  
CORPORATION  
CAMBRIDGE, MASSACHUSETTS

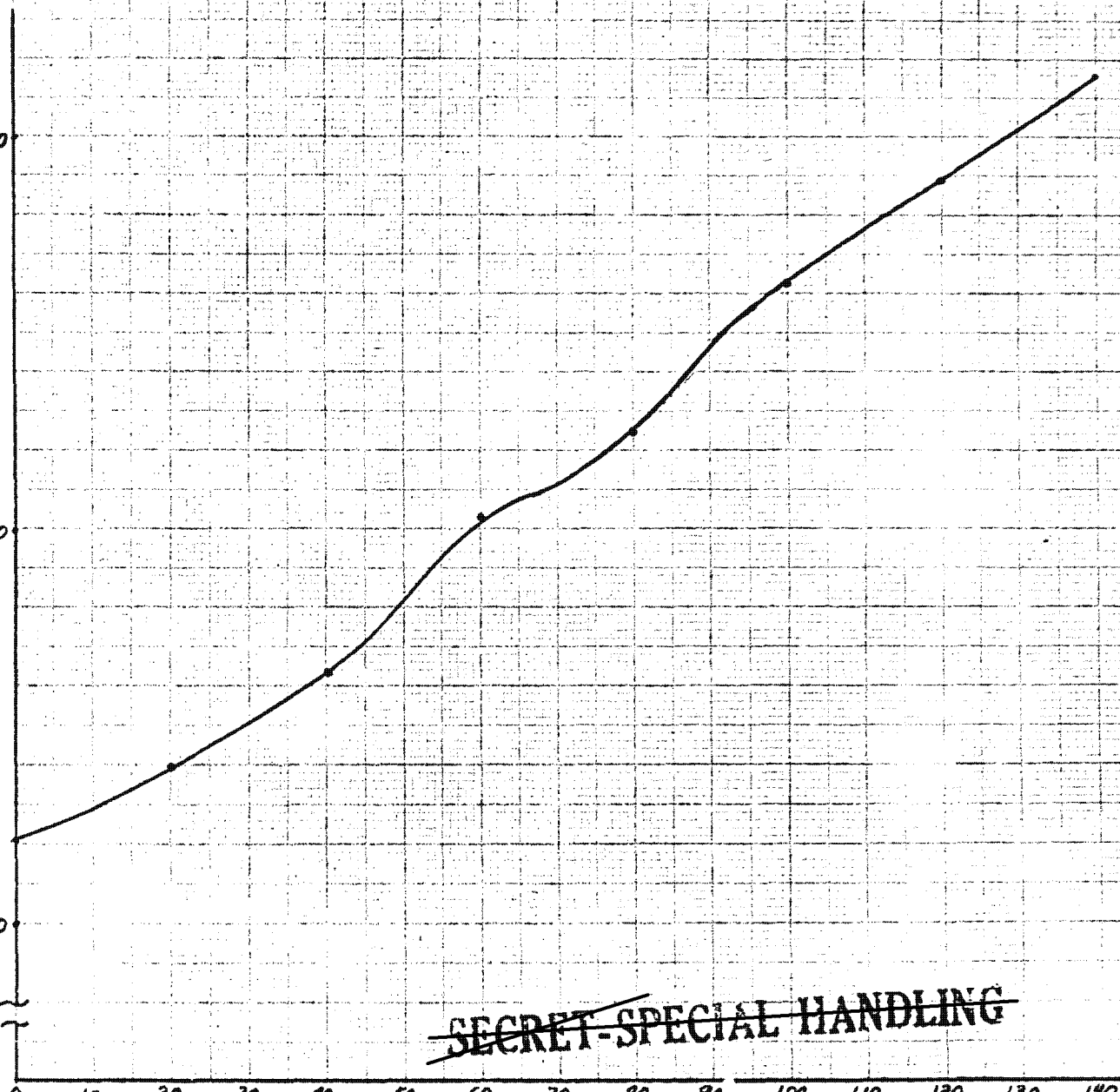
SENSOR VOLTAGE

4.0  
3.0  
2.0

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

TEMPERATURE (°F)

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~~SECRET - SPECIAL HANDLING~~

MODE B TEMPERATURE  
(COMMUTATOR POINT NO. 3)

40

30

20

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## STM-5 TEMPERATURE CALIBRATION DATA

## MODE A - TUNING VOLTAGE

| Frequency<br>(Mc) | 0°F   | 20°F  | 40°F  | 60°F  | 80°F  | 100°F | 120°F | 140°F |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 60                | 0.681 | 0.682 | 0.697 | 0.744 | 0.780 | 0.856 | 0.949 | 1.060 |
| 62                | 1.024 | 0.955 | 1.031 | 1.016 | 1.020 | 1.190 | 1.246 | 1.316 |
| 64                | 1.395 | 1.365 | 1.410 | 1.425 | 1.461 | 1.567 | 1.690 | 1.793 |
| 66                | 1.846 | 1.814 | 1.860 | 1.875 | 1.911 | 2.017 | 2.141 | 2.277 |
| 68                | 2.133 | 2.135 | 2.181 | 2.229 | 2.296 | 2.373 | 2.497 | 2.604 |
| 70                | 2.455 | 2.455 | 2.470 | 2.517 | 2.554 | 2.663 | 2.790 | 2.899 |
| 72                | 2.811 | 2.812 | 2.860 | 2.846 | 2.914 | 3.054 | 3.176 | 3.382 |
| 74                | 3.283 | 3.293 | 3.311 | 3.363 | 3.399 | 3.507 | 3.662 | 3.867 |
| 76                | 3.677 | 3.679 | 3.729 | 3.715 | 3.815 | 3.929 | 4.052 | 4.223 |
| 78                | 4.059 | 4.001 | 4.115 | 4.100 | 4.136 | 4.313 | 4.439 | 4.638 |
| 80                | 4.409 | 4.383 | 4.461 | 4.480 | 4.542 | 4.651 | 4.977 | 5.090 |

HW 0033.  
SERIES A

## STM-5 TEMPERATURE CALIBRATION DATA

MODE A FREQUENCY VERSUS SWEEP TIME (MILLISECONDS)  $\times 2$  (See Note)

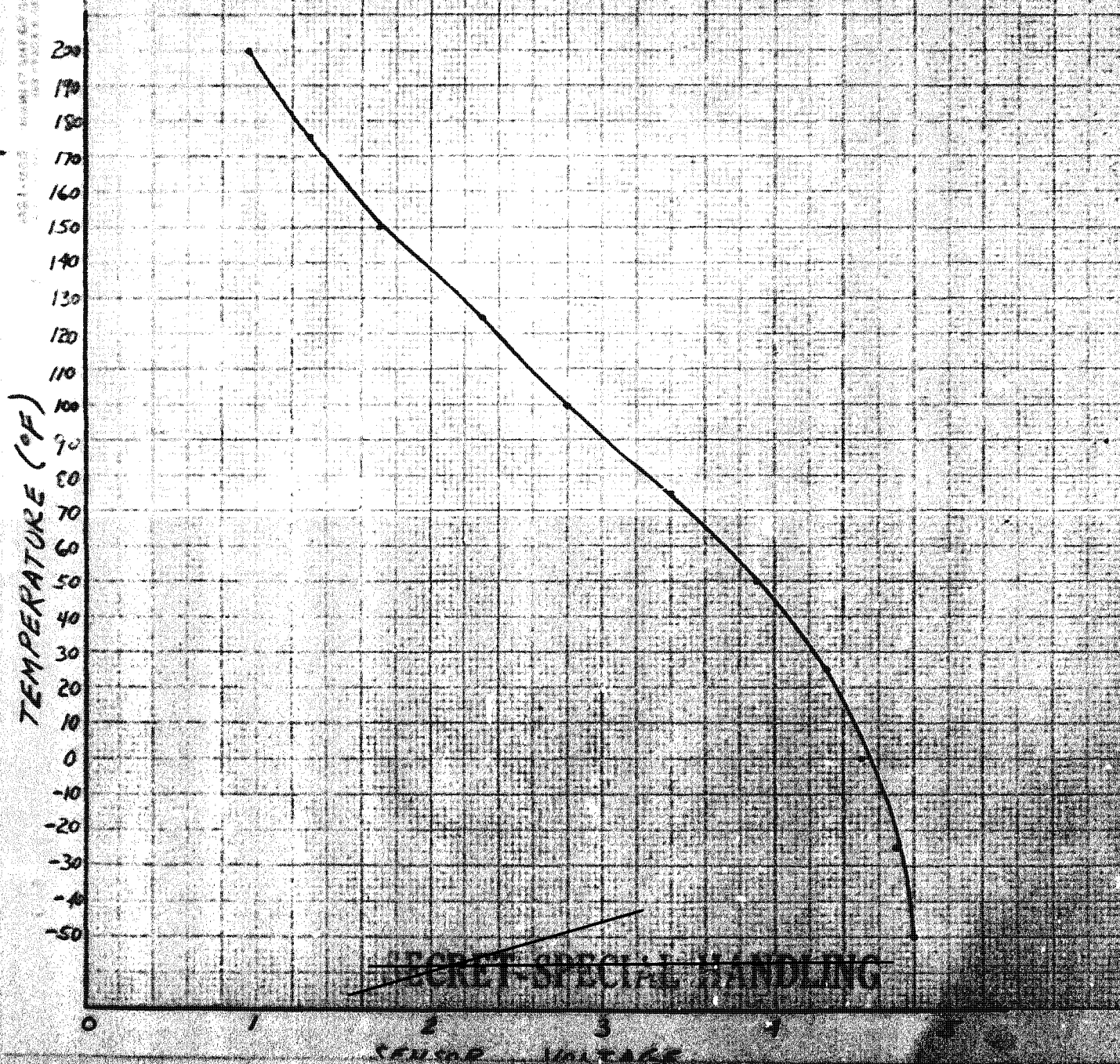
| Frequency<br>(Mc) | 0°F  | 20°F | 40°F | 60°F | 80°F | 100°F | 120°F | 140°F |
|-------------------|------|------|------|------|------|-------|-------|-------|
| 80                | 251  | 262  | 273  | 229  | 208  | 224   | 153   | 27    |
| 78                | 568  | 552  | 552  | 509  | 480  | 517   | 433   | 365   |
| 76                | 846  | 823  | 825  | 820  | 788  | 788   | 722   | 696   |
| 74                | 1147 | 1120 | 1122 | 1097 | 1078 | 1053  | 1010  | 1018  |
| 72                | 1489 | 1473 | 1470 | 1468 | 1452 | 1417  | 1397  | 1387  |
| 70                | 1784 | 1770 | 1768 | 1766 | 1745 | 1724  | 1695  | 1681  |
| 68                | 2014 | 1995 | 1991 | 1971 | 1972 | 1964  | 1942  | 1925  |
| 66                | 2249 | 2255 | 2337 | 2218 | 2220 | 2212  | 2189  | 2195  |
| 64                | 2585 | 2582 | 2582 | 2588 | 2561 | 2540  | 2546  | 2568  |
| 62                | 2905 | 2735 | 2863 | 2890 | 2875 | 2867  | 2885  | 2873  |
| 60                | 3109 | 2990 | 3171 | 3163 | 3172 | 3158  | 3151  | 3170  |

NOTE: Multiply sweep time by 2



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SIGNAL MODIFIER TEMPERATURE  
(COMMUTATOR POINT NO. 32)



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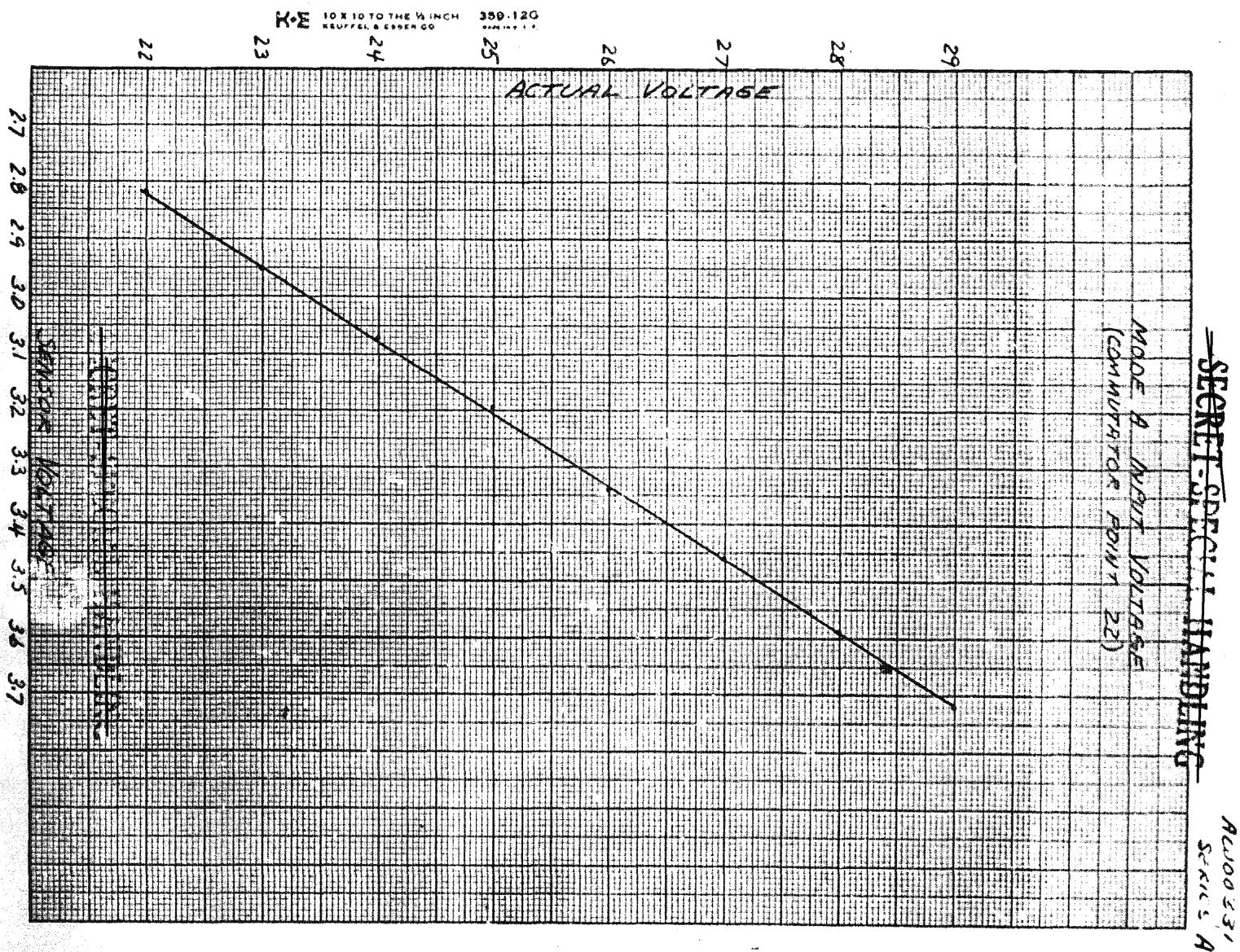
~~SECRET-SPECIAL HANDLING~~+28 VOLT BUS MONITOR  
(COMMUTATOR POINT 43)K&E 10X10 TO THE 1/2 INCH 359-12G  
KEUFFEL & ESSER CO. MIDLAND, U.S.A.29  
28  
27  
26  
25  
24  
23  
22

ACTUAL VOLTAGE

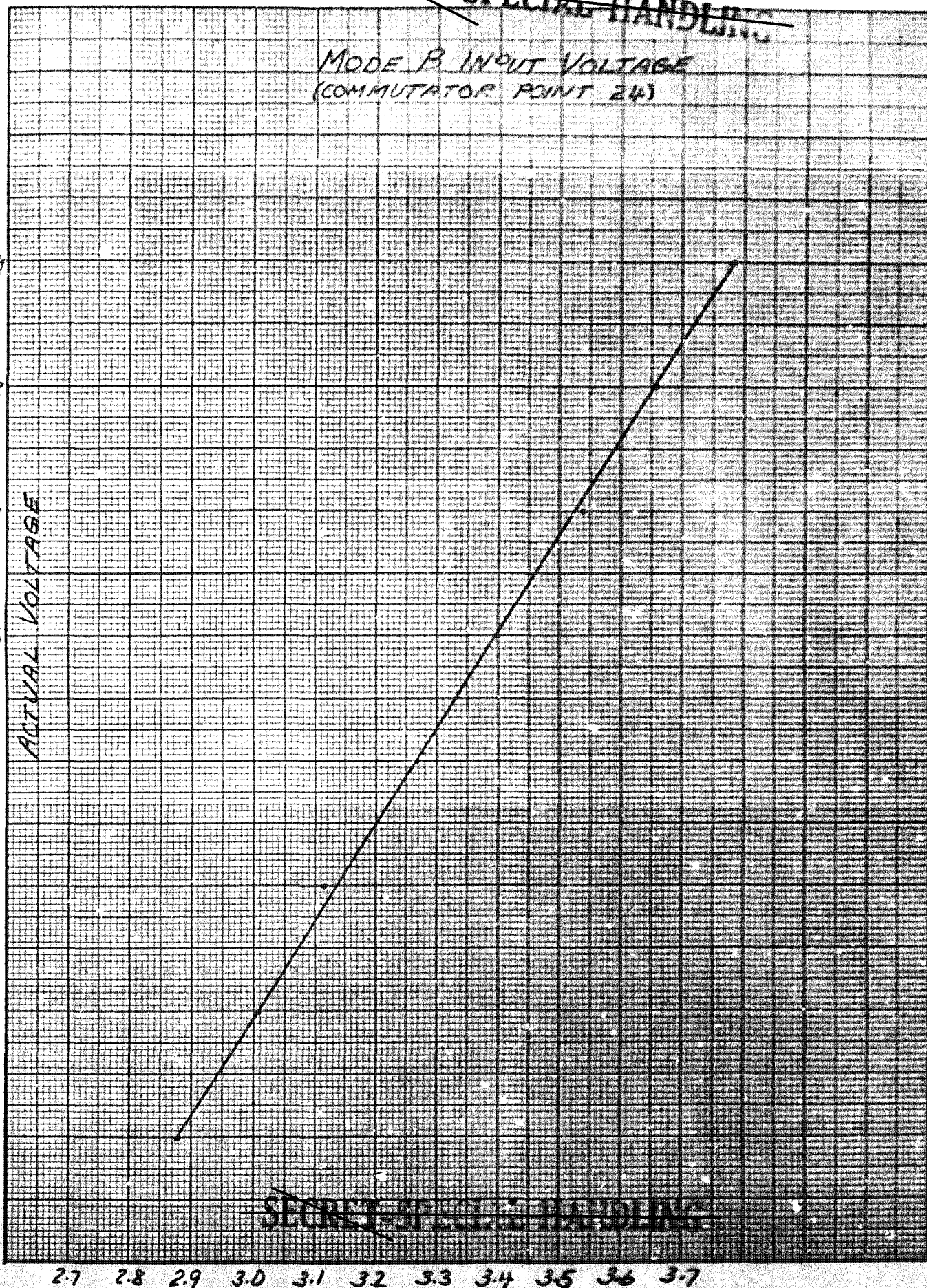
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SENSOR VOLTAGE

1 2 3 4 5





~~SECRET-SPECIAL HANDLING~~MODE B INPUT VOLTAGE  
(COMMUTATOR POINT 24)359-12G  
10X10 TO THE 1/2 INCH  
KEUFFEL & ESSER CO.  
K.W.22  
23  
24  
25  
26  
27  
28  
29  
ACTUAL VOLTAGE~~SECRET-SPECIAL HANDLING~~