MILITARY SPECIFICATION

COMPUTER, AIR NAVIGATION, TRUE AIRSPEED, MACH NUMBER, WIND COMPONENTS, SUPERSONIC, TYPE MB-9

1. SCOPE

1.1 This specification covers one type of handheld dead-reckoning computer, designated Type MB-9.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids, form a part of this specification to the extent specified herein:

SPECIFICATIONS

Federal

L-P-535	Plastic Sheet (Sheeting) Plastic Strip; Vinyl Chloride - Vinyl Acetate Copolymer, Rigid
PPP-B-636	Box, Fiberboard

Military

MIL-P-116	Preservation, Methods of
MIL-P-51403	Plastic Sheet, Vinyl, Flexible

STANDARDS

Federal

FED-STD-595	Colors

Military

MIL-STD-129	Marking for Shipment and Storage
MIL-STD-130	Identification Marking of U.S. Military Property

FSC 6605

STANDARDS

Military (Continued)

MIL-STD-831	Test Reports, Preparation of
MIL-STD-143	Specifications and Standards Order of Precedence for the Selection of
MIL-STD-794	Parts and Equipment, Procedures for Packaging and packing of

(copies of documents required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

3.1 First Article - The computer furnished under this specification shall be a product which as been inspected and passed the first article inspection specified herein (see 4.4).

3.2 Selection of specifications and standards - Specifications and standards for necessary commodities and services not specified herein shall be selected in accordance with MIL-STD-143.

3.3 Materials - The Type MB-9 computer shall be constructed from vinyl plastic in accordance with L-P-535. The material shall be homogeneous, flat, and resistive to water and warpage. The computer case shall be constructed from flexible vinyl plastic sheet conforming to MIL-P-51403.

3.3.1 Protective treatment - When materials are used in the construction of the Type MB-9 computer that are subject to corrosion in salt air or other atmospheric conditions likely to occur during service usage, they shall be protected against such corrosion in a manner that will in no way prevent compliance with the performance requirements of this specification. Any protective coating that will crack, chip, or scale with age or extremes of atmospheric conditions shall not be used.

3.4 Design and construction - The Type MB-9 computer shall conform to Figures 1 through 7 on pages 4 to 10. The computer shall be a circular, mechanical device, 4-5/16 inches in diameter, composed of 3 plastic discs and 2 cursor arms. Two discs shall be mounted concentrically on opposite faces of a larger disc with cursor arms on both sides for reading the scales. The computer shall be assembled in a manner that will insure sufficient friction to prevent accidental shifting of the discs and cursor arms.

3.4.1 Plastic discs -

3.4.1.1 Outer discs - The two outer discs shall conform to Figure 1, page 4 and Figure 2, page 5 and shall be constructed from transparent plastic conforming to L-P-535.

3.4.1.2 Center disc - The center disc shall conform to Figure 3, page 6 and Figure 4, page 7 and shall be constructed from china-white vinyl plastic.

3.4.2 Cursor arms - The cursor arms shall be in accordance with Figure 5. To preclude parallax, the lines on the cursor arms shall be inscribed on the underside of the arm.

3.4.3 Eyelet - The computer shall include a nickel-plated brass eyelet having an outside diameter of 0.152 ± 0.005 inch and an inside diameter of 0.125 ± 0.005 inch.

3.4.4 Computer case - The computer case shall be in accordance with Figure 8. It shall contain two pockets and a fold-over flap. It shall be fabricated from flexible vinyl plastic conforming to MIL-P-51403. The color shall be as specified in FED-STD-595, Number 20252 (brown semigloss).

3.4.5 Scale data - The required scale data shall conform to Tables I through XXII.

3.5 Performance - The Type MB-9 computer shall serve as a navigational aid for pilots, navigators, and flight engineers. The computer shall provide accurate navigational information for high speed aircraft as follows:

a. True altitude
b. True airspeed
c. Time and distance
d. Density altitude
e. Mach number
f. Temperature rise
g. Course angles
h. Relative wind
i. Drift angle
j. Drift and cross wind
k. Pressure pattern drift velocity

3.5.1 Airspeed corrections - Airspeed corrections using actual and probable temperature and altitude conditions, shall be accurate to within 0.25 percent.

3.5.2 Logarithmic time and distance scales - The logarithmic time and distance scales shall be accurate to within 0.20 percent.

3.5.3 Compass rose - The compass roses of the computer shall accurately measure course angle and determine relative wind. The accuracy shall be ±10 minutes.

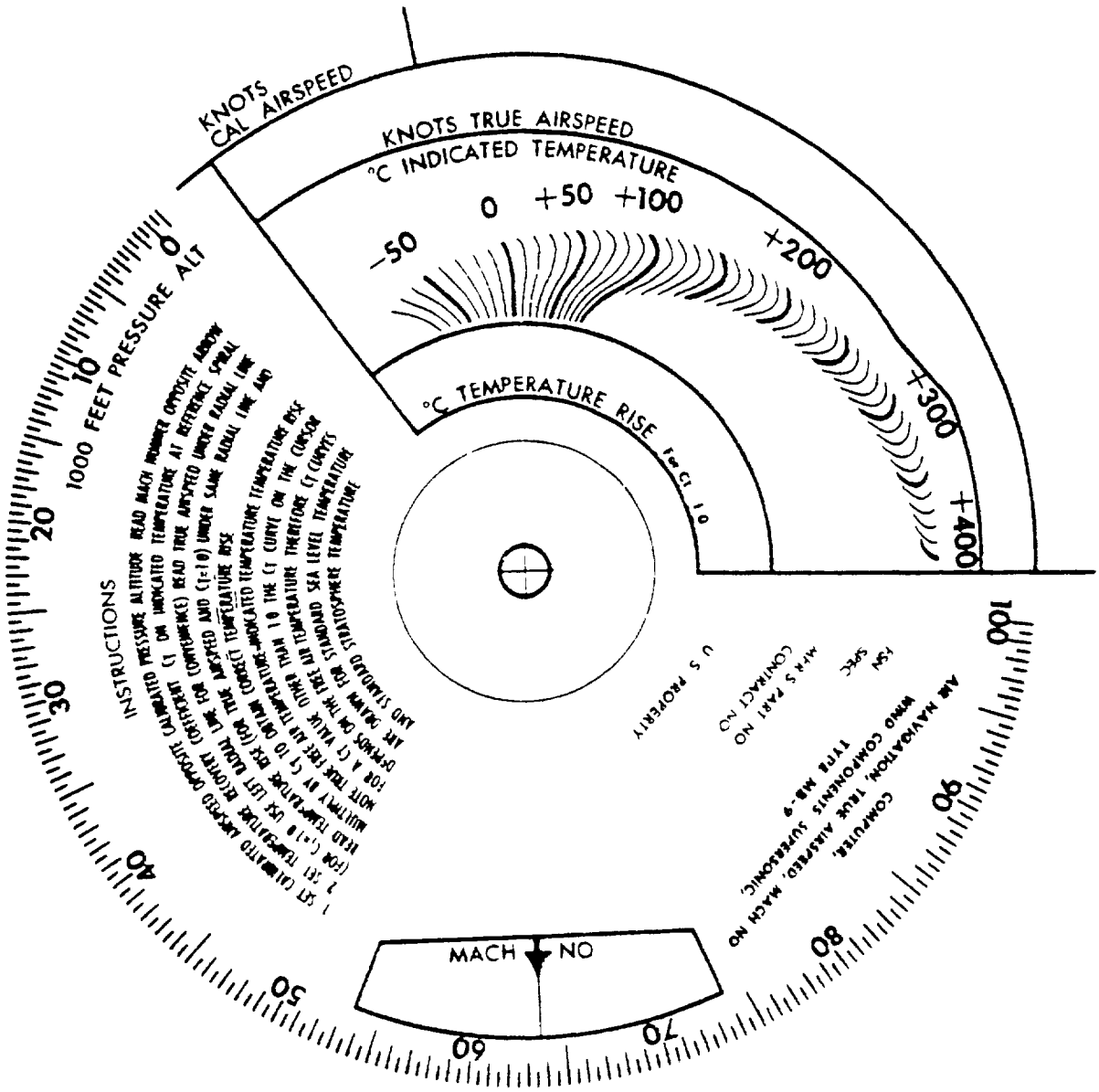


FIGURE 1. DISC-BACK, MOVABLE, COMPUTER, TYPE MB-9

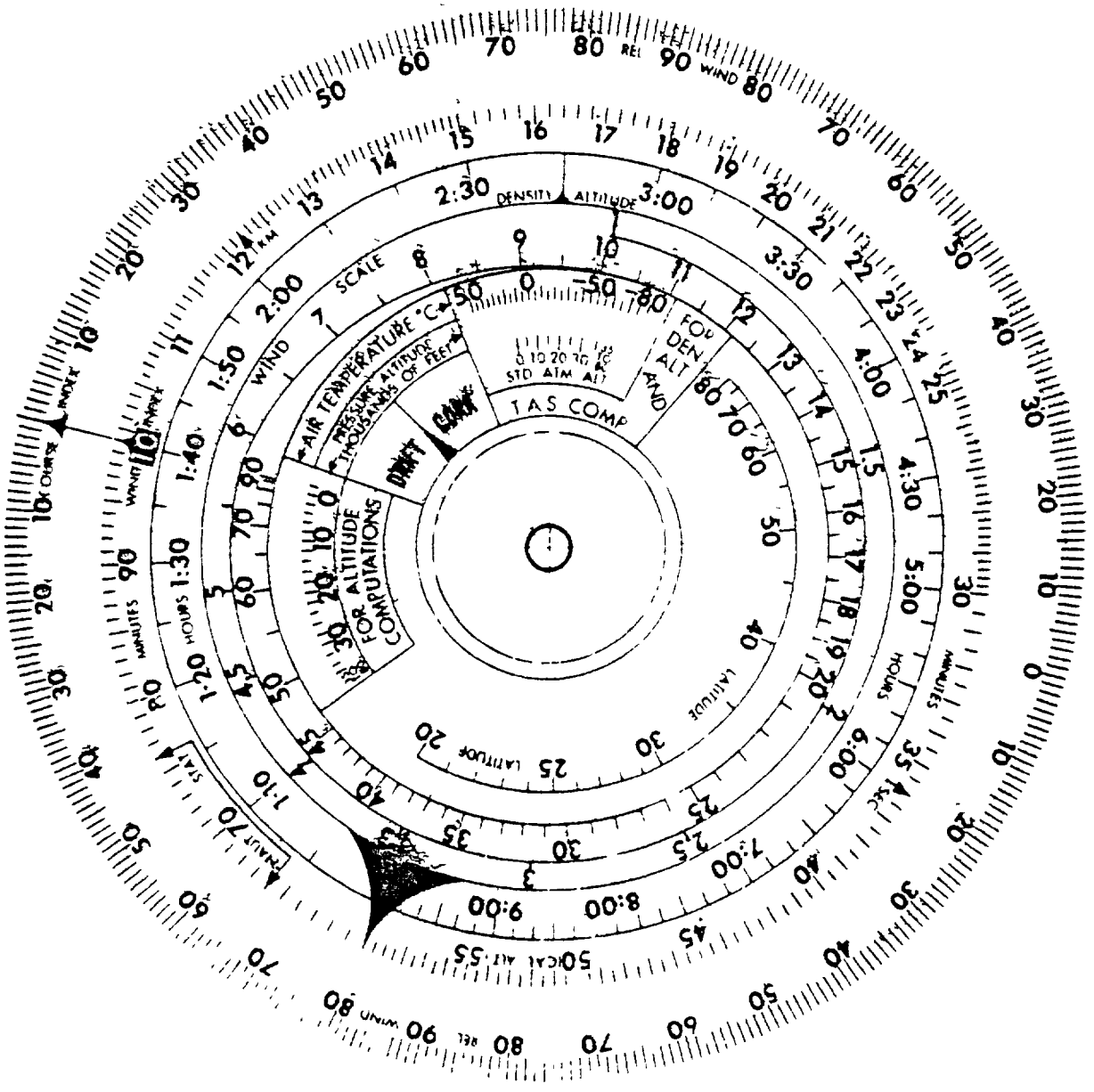


FIGURE 2. DISC-FRONT, MOVABLE, TYPE MB-9

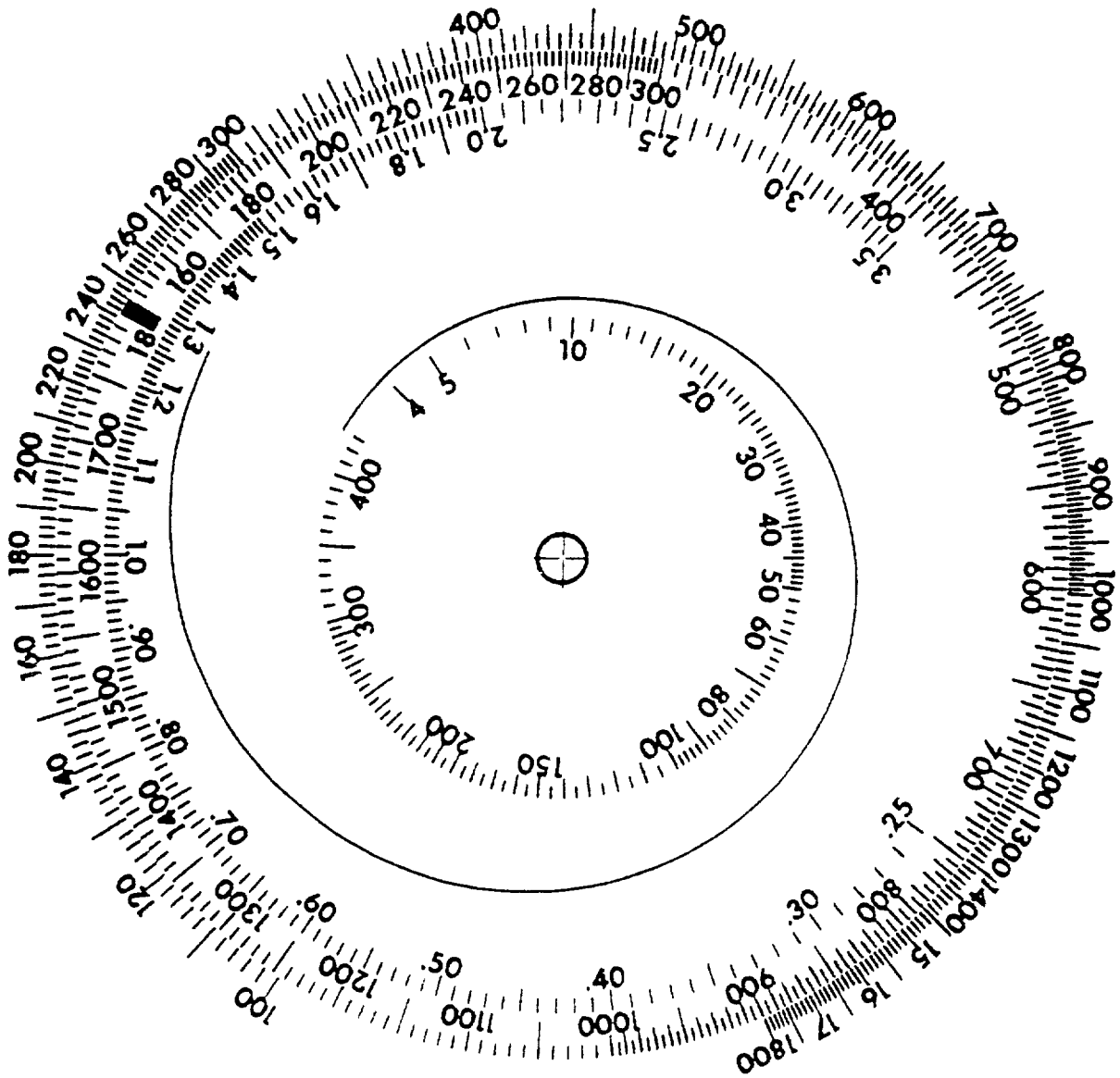


FIGURE 3 DISC-BACK, COMPUTER, TYPE MB-9

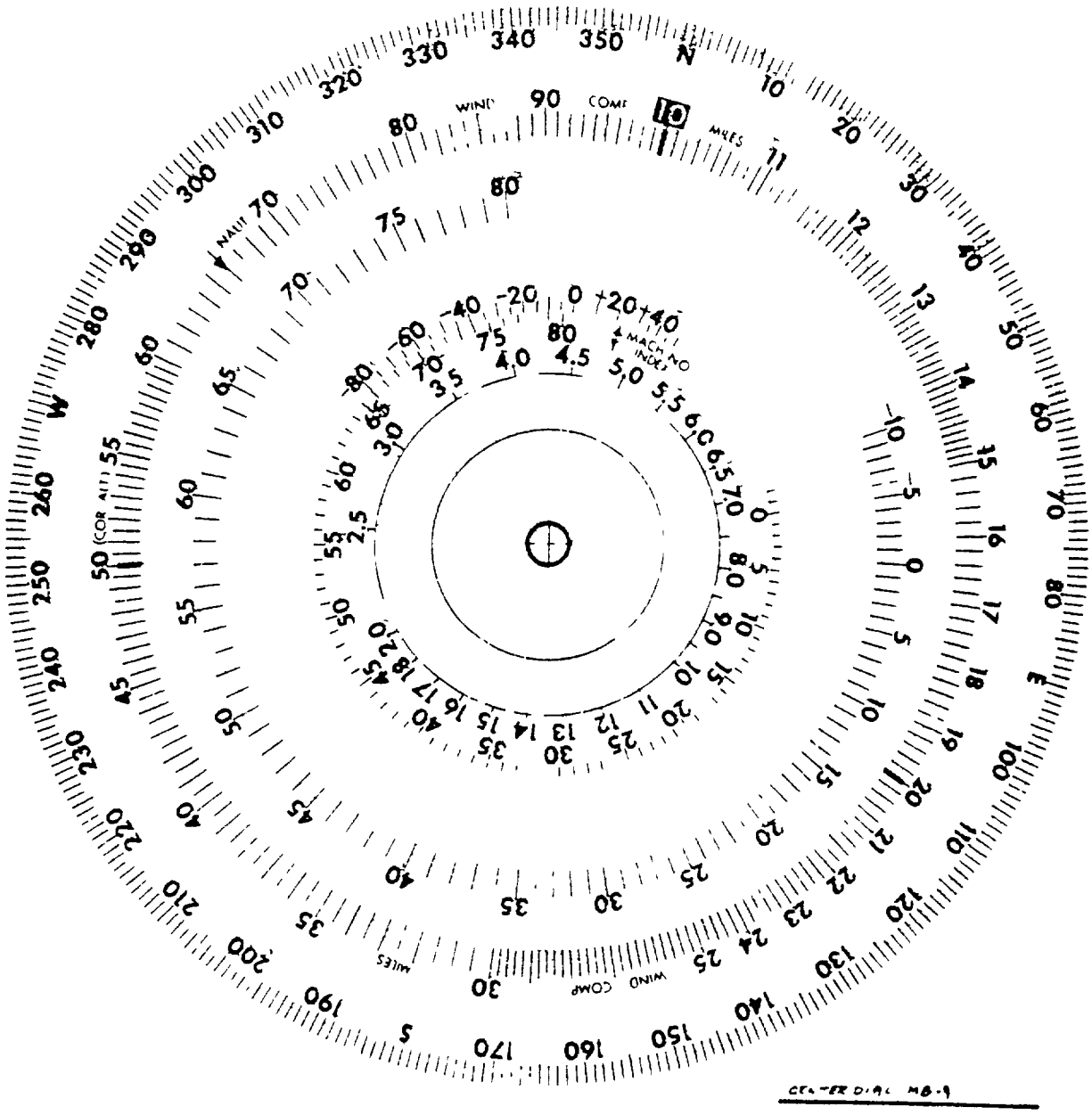


FIGURE 4. DISC-FRONT, COMPUTER, TYPE MB-9

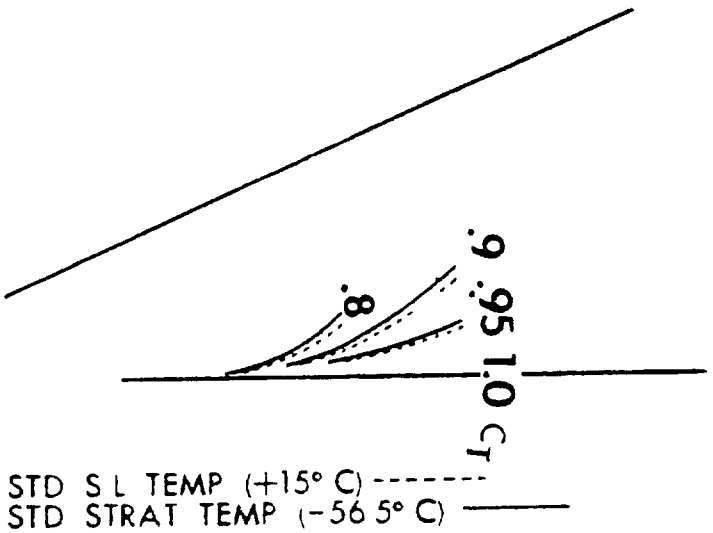
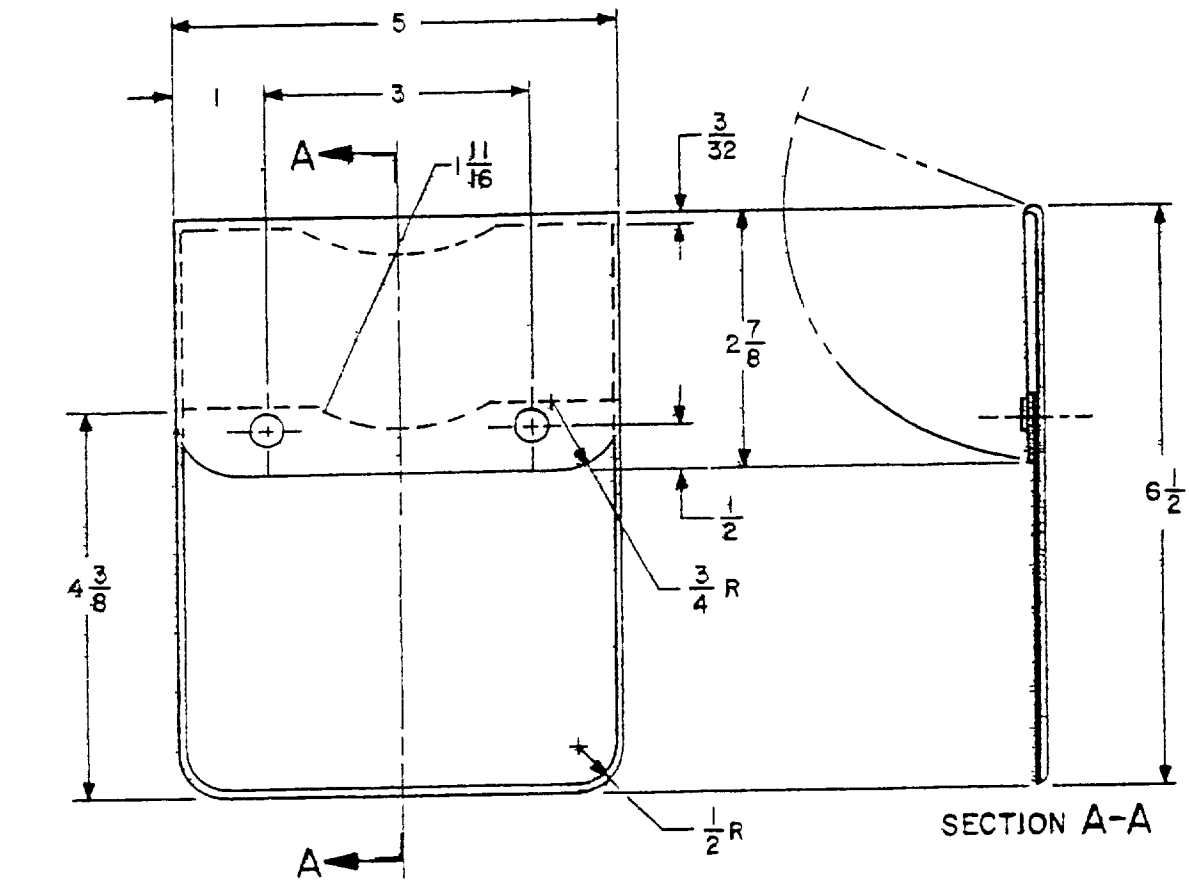


FIGURE 5. ARM-CURSOR, COMPUTER, TYPE MB-9

FIGURE 6. FOR ILLUSTRATION PURPOSES ONLY

FIGURE 7. FOR ILLUSTRATION PURPOSES ONLY



DIMENSIONS IN INCHES
TOLERANCES ± 1/64

FIGURE 8. CASE, (TYPE MB-9 COMPUTER)

* Table I. The Miles and Minutes Scales

Miles and Minutes Scales	Degrees and Minutes	Miles and Minutes Scales	Degrees and Minutes	Miles and Minutes Scales	Degrees and Minutes
100	00 00	141	53 43	214	118 57
101	1 33	142	54 49	216	120 24
102	3 03	143	55 55	218	121 51
103	4 37	144	57 01	220	123 16
104	6 08	145	58 06	222	124 41
105	7 38	146	59 10	224	126 05
106	9 07	147	60 14	226	127 29
107	10 35	148	61 18	228	128 51
108	12 02	149	62 21	230	130 13
109	13 29	150	63 24	232	131 35
110	14 54	152	65 28	234	132 55
111	16 19	154	67 30	236	134 15
112	17 43	156	69 31	238	135 34
113	19 07	158	71 31	240	136 53
114	20 29	160	73 29	242	138 11
115	21 51	162	75 26	244	139 28
116	23 12	164	77 21	246	140 44
117	24 33	166	79 14	248	142 00
118	25 53	168	81 07	250	143 16
119	27 12	170	82 58	252	144 30
120	28 30	172	84 48	254	145 44
121	29 48	174	86 36	256	146 58
122	31 05	176	88 23	258	148 11
123	32 22	178	90 09	260	149 23
124	33 38	180	91 54	262	150 35
125	34 53	182	93 38	264	151 47
126	36 08	184	95 20	266	152 57
127	37 22	186	97 01	268	154 08
128	38 36	188	98 42	270	155 17
129	39 49	190	100 21	272	156 27
130	41 01	192	101 59	274	157 35
131	42 13	194	103 37	276	158 44
132	43 24	196	105 13	278	159 51
133	44 35	198	106 48	280	160 59
134	45 45	200	108 22	282	162 05
135	46 55	202	109 56	284	163 12
136	48 04	204	111 28	286	164 18
137	49 13	206	113 00	288	165 23
138	50 21	208	114 30	290	166 28
139	51 29	210	116 00	292	167 32
140	52 36	212	117 29	294	168 36

* All degrees and minutes referenced in Tables I through XXII are measured clockwise for a zero reference point.

Table I. The Miles and Minutes Scales (Cont'd)

Miles and Minutes Scales	Degrees and Minutes	Miles and Minutes Scales	Degrees and Minutes	Miles and Minutes Scales	Degrees and Minutes
296	169 40	460	238 36	660	295 02
298	170 43	465	240 17	670	297 23
300	171 46	470	241 57	680	299 42
305	174 21	475	243 37	690	301 59
310	176 53	480	245 15	700	304 14
315	179 24	485	246 52	710	306 27
320	181 51	490	248 28	720	308 38
325	184 17	495	250 04	730	310 46
330	186 40	500	251 38	740	312 55
335	189 01	505	253 11	750	315 01
340	191 20	510	254 44	760	317 06
345	193 37	515	256 15	770	319 08
350	195 52	520	257 46	780	321 09
355	198 05	525	259 25	790	323 09
360	200 16	530	260 45	800	325 07
365	202 25	535	262 12	810	327 03
370	204 33	540	263 40	820	328 58
375	206 39	545	265 06	830	330 52
380	208 43	550	266 32	840	332 45
385	210 46	555	267 57	850	334 36
390	212 47	560	269 21	860	336 25
395	214 47	565	270 44	870	338 14
400	216 45	570	272 07	880	340 07
405	218 41	575	273 29	890	341 47
410	220 36	580	274 50	900	343 32
415	222 30	585	276 11	910	345 15
420	224 22	590	277 30	920	346 58
425	226 13	595	278 50	930	348 39
430	228 03	600	280 08	940	350 20
435	229 57	610	282 43	950	351 59
440	231 39	620	285 16	960	353 37
445	233 25	630	287 46	970	355 14
450	235 09	640	290 14	980	356 51
455	236 53	650	292 39	990	358 26

Table II. Hour Scale

Hour Scale	Angle in Degrees-Minutes		Hour Scale	Angle in Degrees-Minutes	
1:05	292	39	5·10	176	53
1 10	304	14	5:20	181	51
1.15	315	01	5:30	186	40
1:20	325	07	5:40	191	20
1:25	334	36	5:50	195	52
1:30	343	32	6:00	200	16
1:35	351	59	6·10	204	33
1 40	0	0	6:20	208	43
1:45	7	38	6.30	212	47
1:50	14	54	6.40	216	45
1:55	21	51	6.50	220	36
2:00	28	30	7.00	224	22
2:10	41	01	7·10	228	03
2·20	52	36	7 20	231	39
2:30	63	24	7.30	235	09
2.40	73	29	7·40	238	36
2·50	82	58	7:50	241	57
3:00	91	54	8:00	245	15
3·10	100	21	8:10	248	28
3:20	108	22	8:20	251	38
3.30	116	00	8 30	254	44
3.40	123	16	8:40	257	46
3:50	130	13	8:50	260	45
4:00	136	53	9·00	263	40
4·10	143	16	9:10	266	32
4.20	149	23	9:20	269	21
4:30	155	17	9.30	272	07
4:40	160	59	9:40	274	50
4.50	166	28	9.50	277	30
5:00	171	46	10:00	280	08

Table III. Pressure Altitude Scale For True Airspeed and Density Altitude Computation

Altitude In 1000 Feet	Angle in Degrees-Minutes		Altitude In 1000 Feet	Angle in Degrees-Minutes	
-2	60	52	39	194	34
-1	63	40	40	198	19
0	66	29	41	202	04
1	69	19	42	205	47
2	72	11	43	209	30
3	75	03	44	213	14
4	77	57	45	217	01
5	80	52	46	220	41
6	83	48	47	224	29
7	86	46	48	228	10
8	89	44	49	231	55
9	92	45	50	235	37
10	95	46	51	239	23
11	98	49	52	243	07
12	101	53	53	246	50
13	104	59	54	250	34
14	108	05	55	254	18
15	111	14	56	258	03
16	114	24	57	261	47
17	117	35	58	265	31
18	120	48	59	269	15
19	124	02	60	272	59
20	127	18	61	276	43
21	130	35	62	280	27
22	133	54	63	284	12
23	137	15	64	287	55
24	140	37	65	291	39
25	144	01	66	295	23
26	147	27	67	299	07
27	150	54	68	302	50
28	154	24	69	306	36
29	157	55	70	310	18
30	161	27	71	313	58
31	165	02	72	317	47
32	168	38	73	321	32
33	172	17	74	325	15
34	175	57	75	329	00
35	179	40	76	332	43
36	183	24	77	336	28
37	187	07	78	340	11
38	190	52	79	343	56
			80	347	40

Table IV. Temperature Scale For True Airspeed and Density Altitude Computations

Temperature °C	Angle in Degrees-Minutes	
+50	57	31
+45	58	44
+40	59	59
+35	61	14
+30	62	31
+25	63	49
+20	65	08
+15	66	29
+10	67	51
+ 5	69	15
0	70	40
- 5	72	07
-10	73	35
-15	75	05
-20	76	37
-25	78	10
-30	79	46
-35	81	23
-40	83	03
-45	84	45
-50	86	29
-55	88	15
-60	90	04
-65	91	55
-70	93	49
-75	95	46
-80	97	47

Table V. Density Altitude Scale For Density Altitude Computations

Arrow and Cursor are placed at 77° 39'

Altitude in 1000 Feet	Angle in Degrees-Minutes		Altitude in 1000 Feet	Angle in Degrees-Minutes	
-10	55	31	36	172	47
- 9	57	40	37	176	31
- 8	59	50	38	180	15
- 7	62	00	39	184	00
- 6	64	12	40	187	44
- 5	66	24	41	191	28
- 4	68	37	42	195	12
- 3	70	51	43	198	56
- 2	73	06	44	202	40
- 1	75	22	45	206	24
.0	77	39	46	210	05
1	79	57	47	213	53
2	82	16	48	217	34
3	84	35	49	221	19
4	86	56	50	225	01
5	89	18	51	228	47
6	91	40	52	232	31
7	94	04	53	236	12
8	96	29	54	240	00
9	98	55	55	243	41
10	101	22	56	247	27
11	103	50	57	251	11
12	106	19	58	254	55
13	108	49	59	258	39
14	111	21	60	262	23
15	113	53	61	266	07
16	116	27	62	269	51
17	119	02	63	273	36
18	121	38	64	277	19
19	124	15	65	281	03
20	126	54	66	284	47
21	129	34	67	288	31
22	132	15	68	292	14
23	134	57	69	296	00
24	137	41	70	299	42
25	140	26	71	303	22
26	143	13	72	307	11
27	146	01	73	310	56
28	148	50	74	314	39
29	151	41	75	318	24
30	154	33	76	322	07
31	157	27	77	325	52
32	160	22	78	329	35
33	163	19	79	333	20
34	166	18	80	337	04
35	169	18			

Table VI. Pressure Altitude Scale For Altitude Computations

Altitude in 1000 Feet	Angle in Degrees-Minutes	
-2	0	25
0	358	17
2	356	07
4	353	55
6	351	42
8	349	26
10	347	08
12	344	49
14	342	27
16	340	03
18	337	37
20	335	09
22	332	38
24	330	04
26	327	28
28	324	50
30	322	09
32	319	25
34	316	38
35 to 80	314	44

Table VII. A Temperature Scale For Altitude Computations

Temperature °C	Angle in Degrees-Minutes	
+50	16	13
+45	13	47
+40	11	18
+35	8	47
+30	6	13
+25	3	37
+20	0	58
+15	358	17
+10	355	33
+ 5	352	45
0	349	55
- 5	347	02
-10	344	05
-15	341	05
-20	338	02
-25	334	54
-30	331	43
-35	328	28
-35	325	09
-40	321	46
-45	318	18
-50	314	45
-55	311	07
-60	307	32
-65	303	38
-70	299	44
-75	295	44
-80		

Table VIII. Standard Atmospheric Altitude Scale

Std Atm Alt in Thousands of Feet	Angle in Degrees-Minutes	
0	66	29
5	69	13
10	72	04
15	75	00
20	78	03
25	81	15
30	84	33
35 to 80	88	15

Table IX. Compass Rose Scale

The compass rose is a conventional clockwise reading scale graduated into 360 equal parts.

Table X. Relative Wind Scale

The relative wind scale shall be graduated into 360 equal increments similar to the compass rose.

Table XI. Drift Correction Scale

Drift Correction	Degrees	Minutes
-2.0	224	31
3.0	287	59
3.5	312	08
4.0	333	04
4.5	351	33
5.0	008	06
5.5	023	05
6.0	036	47
6.5	049	24
7.0	061	05
7.5	072	00
8.0	082	12
-8.5	091	-49
9.0	100	54
-9.5	109	-30
10.0	117	40
11.0	132	55
12.0	146	53
13.0	159	49
14.0	171	50
15.0	183	06
16.0	193	42
17.0	203	43
18.0	213	14

Table XII. Wind Solution Scale

Wind Solution	Degrees and Minutes	Wind Solution	Degrees and Minutes	Wind Solution	Degrees and Minutes
1.0	87 04	4.6	325 30	20	192 15
1.1	101 58	4.7	328 51	21	199 34
1.2	115 34	4.8	332 08	22	206 29
1.3	128 05	4.9	335 21	23	213 05
1 4	139 40	5 0	338 04	24	219 21
1 5	150 27	5.2	344 37	25	225 21
1.6	160 32	5.4	350 30	26	231 04
1.7	170 01	5.6	356 10	27	236 32
1.8	178 57	5.8	001 39	28	241 47
1 9	187 24	6.0	006 55	29	246 48
2.0	195 25	6.5	19 53	30	251 38
2.1	203 02	7.0	30 55	31	256 16
2.2	210 19	7.5	41 39	32	260 43
2.3	217 15	8.0	51 41	33	265 00
2.4	223 54	8.5	61 06	34	269 07
2.5	230 17	9.0	69 58	35	273 06
2.6	236 25	10.0	86 17	36	276 55
2.7	242 19	10.5	93 50	37	280 36
2.8	247 59	11.0	101 01	38	284 10
2 9	253 28	11.5	107 53	39	287 36
3.0	258 46	12.0	114 26	40	290 54
3.1	263 53	12.5	120 43	41	294 06
3.2	268 51	13.0	126 45	42	297 11
3.3	273 39	13 5	132 . 53	43	300 10
3.4	278 19	14.0	138 07	44	303 32
3.5	282 51	14.5	143 30	45	305 49
3.6	287 15	15.0	148 41	50	318 20
3 7	291 31	15.5	153 41	55	328 49
3.8	295 41	16.0	158 31	60	337 31
3.9	299 44	16.5	163 12	65	344 37
4.0	303 41	17.0	167 44	70	350 17
4.1	307 33	18.0	176 24	75	354 36
4.2	311 18	18.5	180 32	80	357 36
4.3	314 59	19.0	184 33	85	359 24
4.4	318 34	19.5	188 28	90	000 00
4 5	322 04				

Altitude Feet	Degrees	Altitude Feet	Degrees	Altitude Feet	Degrees	Altitude Feet	Degrees
-1000	-1.75	11,500	20.69	25,000	47.36	37,500	74.85
- 500	-0.86	12,000	21.64	25,500	48 40	38,000	76.00
0	0.00	12,500	22.56	26,000	49.45	38,500	77.14
500	0.86	13,000	23.51	26,500	50.50	39,000	78.29
1000	1.73	13,500	24.46	27,000	51.56	39,500	79.44
1500	2.60	14,000	25.41	27,500	52.62	40,000	80.52
2000	3.48	14,500	26.37	28,000	53.58	40,500	81.74
2500	4.35			28,500	54.76	41,000	82.89
3000	5.23	15,000	27.33	29,000	55.84	41,500	84.03
3500	6.12	15,500	28.29	29,500	56.92	42,000	85.18
4000	7.00	16,000	29.26			42,500	86.33
4500	7.89	16,500	30.23	30,000	58.00	43,000	87.48
		17,000	31.21	30,500	59.09	43,500	88.63
5000	8.78	17,500	32.19	31,000	60.19	44,000	89.77
5500	9.68	18,000	33.17	31,500	61.29	44,500	90.92
6000	10.58	18,500	34.16	32,000	62.39		
6500	11.48	19,000	35.15	32,500	63.50	45,000	92.07
7000	12.39	19,500	36.14	33,000	64.61	45,500	93.22
7500	13.29			33,500	65.73	46,000	94.37
8000	14.21	20,000	37.14	34,000	66.86	46,500	95.51
8500	15.12	20,500	38.15	34,500	67.99	47,000	96.66
9000	16.06	21,000	39.15			47,500	97.81
9500	16.96	21,500	40.16	35,000	69.12	48,000	98.91
10,000	17.86	22,000	41.18	35,500	70.26	48,500	100.11
10,500	18.81	22,500	42.20	36,000	71.40	49,000	101.25
11,000	19.75	23,000	43.22	36,500	72.55	49,500	102.40
		23,500	44.25	37,000	73.70		
		24,000	45.28				
		24,500	46.32				

Table XIII. Pressure Altitude Scale (Cont'd)

Altitude Feet	Degrees	Altitude Feet	Degrees	Altitude Feet	Degrees	Altitude Feet	Degrees
50,000	103.55	62,500	132.25	75,000	160.95	87,500	189.66
50,500	104.70	63,000	133.40	75,500	162.10	88,000	190.80
51,000	105.85	63,500	134.55	76,000	163.25	88,500	191.95
51,500	106.99	64,000	135.70	76,500	164.40	89,000	193.10
52,000	108.14	64,500	136.84	77,000	165.55	89,500	194.25
52,500	109.30			77,500	166.69		
53,000	110.44	65,000	137.99	78,000	167.84	90,000	195.39
53,500	111.59	65,500	139.14	78,500	168.99	90,500	196.54
54,000	112.73	66,000	140.29	79,000	170.14	91,000	197.69
54,500	113.88	66,500	141.44	79,500	171.28	91,500	198.84
		67,000	142.58			92,000	199.99
55,000	115.03	67,500	143.73	80,000	172.43	92,500	201.13
55,500	116.18	68,000	144.88	80,500	173.58	93,000	202.28
56,000	117.33	68,500	146.03	81,000	174.73	93,500	203.43
56,500	118.47	69,000	147.18	81,500	175.88	94,000	204.58
57,000	119.62	69,500	148.32	82,000	177.03	94,500	205.73
57,500	120.77			82,500	178.17		
58,000	121.92	70,000	149.47	83,000	179.32	95,000	206.88
58,500	123.07	70,500	150.62	83,500	180.47	95,500	208.02
59,000	124.21	71,000	151.77	84,000	181.62	96,000	209.17
59,500	125.36	71,500	152.92	84,500	182.77	96,500	210.32
		72,000	154.06			97,000	211.47
60,000	126.51	72,500	155.21	85,000	183.91	97,500	212.62
60,500	127.66	73,000	156.36	85,500	185.06	98,000	213.65
61,000	128.81	73,500	157.51	86,000	186.21	98,500	214.91
			158.66	86,500	187.36	99,000	216.06
62,000	131.10	74,500	159.80	87,000	188.51	99,500	217.20
						100,000	218.36

Table XIV. Calibrated Air Speed Scale

CAS Knots	β Degrees	CAS Knots	β Degrees	CAS Knots	β Degrees	CAS Knots	β Degrees
100	-191.87	150	-152.79	200	-124.83	250	-102.90
102	-189.97	152	-151.51	202	-123.85	252	-102.11
104	-188 10	154	-150.24	204	-122.89	254	-101.32
106	-186.27	156	-148.99	206	-121.94	256	-100.55
108	-184.47	158	-147.76	208	-120.99	258	- 99.78
110	-182.71	160	-146.54	210	-120.05	260	- 99.01
112	-180.97	162	-145.53	212	-119.13	262	- 98.25
114	-179.27	164	-144.14	214	-118.20	264	- 97.49
116	-177.60	166	-142.97	216	-117.29	266	- 96.75
118	-175.95	168	-141.81	218	-116.39	268	- 96,00
120	-174.33	170	-140.66	220	-115.49	270	- 95.26
122	-172.74	172	-139.52	222	-114.60	272	- 94.53
124	-171.17	174	-138.40	224	-113.72	274	- 93.80
126	-169.63	176	-137.29	226	-112.85	276	- 93.07
128	-168 11	178	-136.19	228	-111.98	278	- 92,35
130	-166.61	180	-135.10	230	-111.12	280	- 91.64
132	-165.14	182	-134.02	232	-110.27	282	- 90.93
134	-163.69	184	-132.96	234	-109.43	284	- 90,22
136	-162.26	186	-131.91	236	-108.59	286	- 89,52
138	-160.85	188	-130.87	238	-107,75	288	- 88.82
140	-159.46	190	-129.83	240	-106.93	290	- 88.13
142	-158.09	192	-128.81	242	-106.11	292	- 87.44
144	-156.74	194	-127.80	244	-105.30	294	- 86.76
146	-155.40	196	-126.80	246	-104.49	296	- 86.08
148	-154.09	198	-125.81	248	-103.69	298	- 85.40

Table XIV. Calibrated Air Speed Scale (Cont'd)

CAS Knots	β Degrees	CAS Knots	β Degrees	CAS Knots	β Degrees	CAS Knots	β Degrees
300	- 84.73	450	- 42.97	600	- 11.33	750	14.99
305	- 83.07	455	- 41.80	605	- 10.38	755	15.78
310	- 81.43	460	- 40.63	610	- 9.44	760	16.57
315	- 79.82	465	- 39.48	615	- 8.50	765	17.35
320	- 78.23	470	- 38.33	620	- 7.57	770	18.13
325	- 76.66	475	- 37.19	625	- 6.64	775	18.90
330	- 75 12	480	- 36.07	630	- 5.71	780	19.66
335	- 73.59	485	- 34.95	635	- 4.79	785	20.42
340	- 72.08	490	- 33.84	640	- 3.88	790	21.18
345	- 70.60	495	- 32.74	645	- 2.97	795	21.92
350	- 69.13	500	- 31.65	650	- 2.06	800	22.66
355	- 67.68	505	- 30.56	655	- 1.16	805	23.40
360	- 66.25	510	- 29.49	660	- 0.26	810	24.13
365	- 64.83	515	- 28 42	665	- 0.63	815	24.86
370	- 63.43	520	- 27.36	670	1 52	820	25.58
375	- 62.05	525	- 26.31	675	2 40	825	26.29
380	- 60.68	530	- 25.26	680	3.28	830	27.00
385	- 59.33	535	- 24.22	685	4.15	835	27.71
390	- 57.99	540	- 23.19	690	5.02	840	28.40
395	- 56 67	545	- 22.17	695	5.88	845	29.10
400	- 55.36	550	- 21.15	700	6.74	850	29.79
405	- 54 07	555	- 20.14	705	7.59	855	30.47
410	- 52.79	560	- 19.14	710	8.43	860	31.15
415	- 51.52	565	- 18.14	715	9.27	865	31 83
420	- 50.26	570	- 17.15	720	10.11	870	32 49
425	- 49.02	575	- 16.17	725	10.94	875	33.16
430	- 47.79	580	- 15.19	730	11.76	880	33.82
435	- 46.57	585	- 14 22	735	12.58	885	34.47
440	- 45.36	590	- 13.25	740	13.39	890	35.12
445	- 44.16	595	- 12.29	745	14.19	895	35.77

Table XIV. Calibrated Air Speed Scale (Cont'd)

CAS Knots	β Degrees	CAS Knots	β Degrees	CAS Knots	β Degrees	CAS Knots	β Degrees
900	36.41	1100	58.93	1400	84.67	1600	98.46
905	37.05	1110	59.91	1410	85.41	1610	99.10
910	37.68	1120	60.89	1420	86.15	1620	99.73
915	38.31	1130	61.86	1430	86.88		
920	38.93	1140	62.82	1440	87.60	1640	100.99
925	39.55	1150	63.77	1450	88.32	1650	101.61
930	40.17	1160	64.70	1460	89.03	1660	102.22
935	40.78	1170	65.63	1470	89.74	1670	102.83
940	41.39	1180	66.55	1480	90.44	1680	103.44
945	41.99	1190	67.46	1490	91.14	1690	104.04
				1500	91.83	1700	104.64
950	42.59	1200	68.36	1510	92.51	1710	105.24
955	43.19	1210	69.25	1520	93.20	1720	105.83
960	43.78	1220	70.13	1530	93.87	1730	106.42
965	44 36	1230	71.00	1540	94.54	1740	107.00
970	44.95	1240	71.87	1550	95.21	1750	107.58
975	45.63	1250	72.72	1560	95.87	1760	108.16
980	46.10	1260	73.57	1570	96.52	1770	108.73
985	46.68	1270	74.41	1580	97.17	1780	109.30
990	47.25	1280	75.24	1590	97.82	1790	109.87
995	47.81	1290	76.07			1800	110.43
		1300	76.88				
1000	48.37	1310	77.69				
1010	49.49	1320	78.50				
1020	50.59	1330	79.29				
1030	51 67	1340	80.08				
1040	52.75	1350	80.86				
1050	53.81	1360	81.64				
1060	54 85	1370	82.40				
1070	55.89	1380	83.16				
1080	56.91	1390	83.92				
1090	57.92						

Table XV. True Airspeed Scale

TAS Knots	δ Degrees	TAS Knots	δ Degrees	TAS Knots	δ Degrees	TAS Knots	δ Degrees
150	-149.67	200	-121.26	250	- 98.73	300	- 79.81
152	-148.38	202	-120.27	252	- 97.92	305	- 78.06
154	-147.09	204	-119.28	254	- 97.11	310	- 76.34
156	-145.83	206	-118.31	256	- 96 30	315	- 74.64
158	-144 58	208	-117.34	258	- 95.50	320	- 72.96
						325	- 71.29
160	-143.34	210	-116.38	260	- 94.71	330	- 69.65
162	-142.12	212	-115.43	262	- 93.92	335	- 68.03
164	-140.92	214	-114.49	264	- 93.14	340	- 66.42
166	-139 72	216	-113.55	266	- 92.36	345	- 64.84
168	-138.54	218	-112 62	268	- 91.58		
				270	- 90.81	350	- 63.27
170	-137.38	220	-111.70	272	- 90.05	355	- 61.71
172	-136 22	222	-110.79	274	- 89.29	360	- 60.17
174	-135.08	224	-109.89	276	- 88.53	365	- 58.65
176	-133.95	226	-108.99	278	- 87.78	370	- 57.14
178	-132.84	228	-108.10			375	- 55.64
		230	-107.22	280	- 87.04	380	- 54.16
180	-131.73	232	-106.34	282	- 86.30	385	- 52.69
182	-130 64	234	-105.47	284	- 85.56	390	- 51.24
184	-129 55	236	-104.61	286	- 84.83	395	- 49.79
186	-128 48	238	-103.75	288	- 84.10		
188	-127.42					400	- 48.36
190	-126 37	[illegible]	-102.90	290	- 83.37	405	- 46.94
192	-125.33	[illegible]	-102.05	292	- 82.65	410	- 45.53
194	-124 30	[illegible]	-101.21	294	- 81.94	415	- 44.13
196	-123.27	[illegible]	-100.38	296	- 81.22	420	- 42.74
198	-122.26	248	- 99 55	298	- 80.51	425	- 41.36
						430	- 39.99
						435	- 38.63
						440	- 37.28
						445	- 35.94

Table XV True Airspeed Scale (Cont'd)

TAS Knots	δ Degrees	TAS Knots	δ Degrees	TAS Knots	δ Degrees	TAS Knots	δ Degrees
450	- 34.60	600	2.90	750	36.27	900	65.60
455	- 33.27	605	4.08	755	37.31	905	66.52
460	- 31.95	610	5.27	760	38.34	910	67.44
465	- 30.64	615	6.44	765	39.37	915	68.35
470	- 29.34	620	7.62	770	40.39	920	69.26
475	- 28.04	625	8.78	775	41.41	925	70.17
480	- 26.75	630	9.94	780	42.43	930	71.07
485	- 25.46	635	11.10	785	43.44	935	71.97
490	- 24.18	640	12.25	790	44.45	940	72.87
495	- 22.91	645	13.39	795	45.45	945	73.76
500	- 21.64	650	14.53	800	46.45	950	74.65
505	- 20.38	655	15.67	805	47.44	955	75.54
510	- 19.12	660	16.79	810	48.43	960	76.43
515	- 17.86	665	17.92	815	49.42	965	77.31
520	- 16.62	670	19.04	820	50.40	970	78.19
525	- 15.37	675	20.15	825	51.38	975	79.07
530	- 14.13	680	21.26	830	52.35	980	79.94
535	- 12.89	685	22.36	835	53.32	985	80.81
540	- 11.66	690	23.46	840	54.29	990	81.68
545	- 10.43	695	24.56	845	55.25	995	82.54
550	- 9.21						
555	- 7.98	700	25.64	850	56.21	1000	83.41
560	- 6.76	705	26.73	855	57.17	1010	85.12
565	- 5.55	710	27.81	860	58.12	1020	86.83
570	- 4.33	715	28.88	865	59.07	1030	88.53
575	- 3.12	720	29.95	870	60.01	1040	90.22
580	- 1.91	725	31.02	875	60.95	1050	91.90
585	- .70	730	32.08	880	61.89	1060	93.57
590	- .50	735	33.13	885	62.82	1070	95.23
595	- 1.70	740	34.18	890	63.75	1080	96.88
		745	35.23	895	64.68	1090	98.53

Table XV. True Airspeed Scale (Cont'd)

TAS Knots	δ Degrees	TAS Knots	δ Degrees	TAS Knots	δ Degrees	TAS Knots	δ Degrees
1100	100 16	1400	147.12	1700	193.29		
1110	101.79	1410	148.66	1710	194.83		
1120	103 41	1420	150.20	1720	196.37		
1130	105.03	1430	151.74	1730	197.91		
1140	106.64	1440	153.28	1740	199.44		
1150	108 24	1450	154 81	1750	200.98		
1160	109.84	1460	156.35	1760	202.52		
1170	111.43	1470	157.89	1770	204.06		
1180	113.01	1480	159.43	1780	205.60		
1190	114.59	1490	160.97	1790	207.14		
				1800	208.68		
1200	116 17	1500	162.51				
1210	117 74	1510	164.05				
1220	119.31	1520	165.59				
1230	120.87	1530	167.13				
1240	122.43	1540	168.66				
1250	123.98	1550	170.20				
1260	125.54	1560	171.74				
1270	127.09	1570	173.28				
1280	128.63	1580	174.82				
1290	130 18	1590	176.36				
1300	131.72	1600	177.90				
1310	133.27	1610	179.44				
1320	134.81	1620	180.98				
1330	136.35	1630	182.52				
1340	137.89	1640	184.05				
1350	139.42	1650	185 59				
1360	140.96	1660	187.13				
1370	142 50	1670	188 67				
1380	144.04	1680	190.21				
1390	145.58	1690	191.75				

Table XVI. Mach Number Scale

Mach No.	Degrees	Mach No.	Degrees	Mach No.	Degrees
0.25	-143.34	0.60	- 56.18	0.95	- 6.01
0.26	-139.53	0.61	- 54.45	0.96	- 4.79
0.27	-135.86	0.62	- 52.76	0.97	- 3.58
0.28	-132.32	0.63	- 51.08	0.98	- 2.38
0.29	-128.90	0.64	- 49.43	0.99	- 1.19
		0.65	- 47.80		
0.30	-125.59	0.66	- 46.19	1.00	0.00
0.31	-122.39	0.67	- 44.59	1.01	1.18
0.32	-119.28	0.68	- 43.02	1.02	2.35
0.33	-116.26	0.69	- 41.47	1.03	3.51
0.34	-113.22			1.04	4.67
0.35	-110.48	0.70	- 39.93	1.05	5.80
0.36	-107.70	0.71	- 38 41	1.06	6.94
0.37	-105.00	0.72	- 36.91	1.07	8.06
0.38	-102.36	0.73	- 35.42	1.08	9.17
0.39	- 99.79	0.74	- 33.95		
		0.75	- 32 50	1.09	10.28
0.40	- 97.27	0.76	- 31.06	1.10	11.37
0.41	- 94.82	0 77	- 29.63	1.11	12.45
0.42	- 92.42	0.78	- 28.22	1.12	13.53
0.43	- 90.07	0.79	- 26.82	1.13	14.59
0.44	- 87.77			1.14	15.64
0.45	- 85.52	0.80	- 25.43	1.15	16.68
0.46	- 83.31	0.81	- 24.06	1.16	17 71
0.47	- 81.14	0.82	- 22.70	1.17	18.73
0.48	- 79.02	0.83	- 21.35	1.18	19.75
0.49	- 76.94	0.84	- 20.02		
		0.85	- 18.6°	1.19	20.75
0.50	- 74.89	0.86	- 17.38	1.20	21.74
0.51	- 72.88	0.87	- 16.07	1.21	22.72
0.52	- 70.90	0.88	- 14.78	1.22	23.69
0.53	- 68.96	0.89	- 13.50	1.23	24.66
0.54	- 67.05			1.24	25.61
0.55	- 65.17	0.90	- 12.22	1.25	26.55
0.56	- 63.31	0.91	- 10 97	1 26	27.49
0.57	- 61 49	0 92	- 9.71	1.27	28.42
0.58	- 59.69	0.93	- 8 47	1.28	29.33
0.59	- 57.92	0.94	- 7.24		

Table XVI. Mach Number Scale (Cont'd)

Mach No.	Degrees	Mach No.	Degrees	Mach No.	Degrees
1.29	30.24	1.70	61.33	2.50	101.83
1.30	31.14	1.72	62.60	2.55	103.85
1.31	32.03	1.74	63.86	2.60	105.82
1.32	32.91	1.76	65.10	2.65	107.75
1.33	33.79	1.78	66.32	2.70	109.64
1.34	34.54			2.75	111.49
1.35	35.51	1.80	67.52	2.80	113.31
1.36	36.36	1.82	68.70	2.85	115.09
1.37	37.20	1.84	69.88	2.90	116.83
1.38	38.04	1.86	71.03	2.95	118.55
		1.88	72.17		
1.39	38.87			3.00	120.23
1.40	39.69	1.90	73.30	3.05	121.88
1 41	40.50	1.92	74.41	3.10	123.50
1 42	41.30	1.94	75 51	3 15	125.10
1.43	42 10	1.96	76 60	3 20	126.67
1.44	42.89	1.98	77.67	3.25	128.20
1.45	43.68			3.30	129.72
1 46	44.45	2.00	78.73	3.35	131.21
1.47	45.22	2.05	81.33	3.40	132.68
1.48	45.99	2.10	83.85	3.45	134.12
		2.15	86.31	3.50	135.55
1.49	46.75	2.20	88.70		
1.50	47.50	2.25	91.02		
1.52	48.98	2.30	93.29		
1.54	50.01	2.35	95.50		
1.56	51.88	2.40	97.66		
1 58	53.29	2.45	99.77		
1.60	54.68				
1.62	56.05				
1.64	57.41				
1.66	58.74				
1.68	60.04				

Table XVII. Reference Spiral Scale

β Degree	$A/_r$ Degree	γ Degree	$A/_r$ Degree
-150	- .1355	50	.0770
-145	- .1345	55	.0845
-140	- .1333	60	.0921
-135	- .1319	65	.0999
-130	- .1304	70	.1079
-125	- .1287	75	.1161
-120	- .1269	80	.1245
-115	- .1248	85	.1330
-110	- .1225	90	.1417
-105	- .1200	95	.1506
-100	- .1173	100	.1597
- 95	- .1143	105	.1690
- 90	- .1111	110	.1784
- 85	- .1077	115	.1880
- 80	- .1039	120	1978
- 75	- .0999	125	.2078
- 70	- 0956	130	.2180
- 65	- .0910	135	.2283
- 60	- .0861	140	.2388
- 55	- .0809	145	.2495
- 50	- .0754	150	.2604
- 45	- .0695	155	.2715
- 40	- .0633	160	.2827
- 35	- .0568	165	.2941
- 30	- .0498	170	.3054
- 25	- .0425	175	.3167
- 20	- .0348	180	.3281
- 15	- 0267	185	.3394
- 10	- .0182	190	.3507
- 5	- .0093	195	.3621
0	.0000	200	.3734
5	.0093	205	.3847
10	.0181	210	3961
15	.0264		
20	.0343		
25	.0417		
30	.0489		
35	.0557		
40	.0626		
45	.0697		

Table XVIII. Indicated Temperature Scales

Indicated Temp °C	Mach No.=0.15		Mach No.=0.30		Mach No.=0.40		Mach No.=0.50	
	Ø°*	$A_{1/r}$*	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$
- 80	-16.69	- .1470	-17.12	- .1339	-17.57	- .1247	-18 14	- .1131
- 70	-14.26	- .1465	-14.64	- .1333	-15.03	- .1236	-15.54	- .1114
- 60	-11.95	- .1460	-12.27	- .1327	-12.61	- .1224	-13 04	- .1097
- 50	-9.74	- .1456	-10.01	- .1321	-10.29	- .1213	-10.65	- .1080
- 40	-7.63	- .1452	-7.85	- .1315	-8.07	- .1202	-8.36	- .1064
- 30	-5.61	- .1448	-5.77	- .1308	-5.94	- .1191	-6.16	- .1047
- 20	-3.07	- .1444	-3.77	- .1302	-3.89	- .1179	-4.03	- .1031
- 10	-1.80	- .1441	-1.85	- .1296	-1.91	- .1168	-1.98	- .1014
0	.00	- .1437	.00	- .1289	.00	- .1157	.00	- .0998
10	1.74	- .1434	1.79	- .1283	1.85	- .1146	1.92	- .0982
20	3.41	- 1431	3.52	- .1277	3 63	- .1135	3.78	- .0966
30	5.03	- 1428	5.19	- .1270	5.36	- .1124	5.58	- .0950
40	6.60	- .1425	6.81	- .1264	7.04	- .1113	7.34	- .0934
50	8.12	- 1422	8.39	- .1257	8.67	- .1102	9.04	- .0918
60	9.59	- .1419	9.92	- .1251	10.26	- .1091	10.70	- .0903
70	11.02	- .1416	11.40	- .1244	11.80	- .1080	12 32	- .0887
80	12.41	- 1413	12.84	- .1238	13.30	- .1069	13.89	- .0871
90	13.77	- 1411	14.25	- .1231	14.76	- .1058	15.43	- .0856
100	15.08	- .1408	15.62	- .1225	16.19	- 1048	16.94	- .0841
120								
130								

* These columns shall be for reference purposes only.

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=0 60 Ø°	$\Lambda_{1/r}$	Mach No =0.70 Ø°	$\Lambda_{1/r}$	Mach No.=0 80 Ø°	$\Lambda_{1/r}$	Mach No.=0.90 Ø°	$\Lambda_{1/r}$
- 80	-18.85	- 0999	-19.70	- .0858	-20.68	- .0709	-21.80	- .0554
- 70	-16 16	- .0977	-16.90	- .0829	-17.76	- .0673	-18.75	- .0512
- 60	-13 19	- .0954	-14 22	- 0800	-14.96	- .0638	-15.82	- .0470
- 50	-11.10	- .0932	-11.64	- 0772	-12.26	- .0603	-12.98	- .0428
- 40	-8.72	- .0909	-9.15	- .0743	-9.65	- .0569	-10.23	- .0386
- 30	-6.43	- .0887	-6.75	- .0715	-7.13	- .0534	-7.57	- .0345
- 20	-4.21	- 0865	-4.43	- .0688	-4.68	- .0500	-4.98	- .0303
- 10	-2.07	- .0844	-2.18	- .0660	-2.31	- .0466	-2.46	- .0262
0	00	- .0822	00	- .0632	.00	- .0432	.00	- .0221
10	2.01	- .0800	2.12	- .0605	2.25	- .0398	2.40	- .0179
20	3 96	- .0779	4.18	- .0578	4.44	- .0364	4.74	- .0138
30	5.86	- .0758	6.19	- .0550	6.58	- .0330	7.03	- .0097
40	7.70	- .0736	8 15	- .0523	8.67	- .0296	9.28	- .0055
50	9.50	- .0715	10.06	- .0496	10.72	- .0263	11 49	- .0014
60	11.25	- .0694	11.93	- .0469	12.72	- .0229	13.65	.0027
70	12.97	- .0674	13.75	- .0443	14.69	- .0195	15.76	.0066
80	14 64	- .0653	15.54	- .0416	16.62	- .0162	17.82	.0104
90	16.27	- .0632	17.29	- 0389	18 51	- .0128	19.84	.0139
100	17.87	- .0611	19.01	- .0363	20.37	- .0094	21.81	.0174
110							23.74	.0206

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=1.0 Ø°	$A_{1/r}$	Mach No.=1.1 Ø°	$A_{1/r}$	Mach No.=1.2 Ø°	$A_{1/r}$	Mach No.=1.3 Ø°	$A_{1/r}$
- 80	-23.06	- .0396	-24.37	- .0234				
- 70	-19.87	- .0346	-21 01	- .0176	-21.89	.0003		
- 60	-16.78	- 0296	-17.76	- .0118	-18.47	.0061	-19.03	.0216
- 50	-13.79	- .0247	-14 60	- .0061	-15.18	.0121	-15.65	.0272
- 40	-10.88	- .0198	-11.52	- .0003	-12.00	.0176	-12.39	.0323
- 30	-8.06	- 0148	-8.53	.0053	-8.92	.0228	-9.24	.0371
- 20	-5.31	- 0099	-5.64	.0106	-5.94	.0277	-6.19	.0417
- 10	-2.62	- 0049	-2.84	.0155	-3.06	.0322	-3.24	.0459
0	.00	0000	-0.12	.0202	-0.26	.0365	-0.38	.0499
10	2.56	0048	2.53	.0246	2.45	.0406	2.40	.0537
20	5 04	.0094	5.10	.0287	5.09	.0444	5.10	.0574
30	7.47	.0137	7,60	.0327	7.65	.0480	7.72	.0610
40	9.82	.0178	10.03	.0364	10.15	.0515	10.27	.0646
50	12.12	.0217	12.40	.0399	12.58	.0548	12.76	.0681
60	14 37	.0254	14.72	.0433	14.96	.0580	15.18	.0716
70	16.56	.0289	16.97	.0465	17.27	.0612	17.54	.0751
80	18.70	.0322	19,18	.0496	19.53	.0644	19.85	.0785
90	20.79	.0355	21.33	.0526	21.74	.0675	22.10	.0818
100	22.84	.0385	23.44	.0554	23.89	.0706	24.30	.0851
110	24.84	.0415	25.50	.0583	26.00	.0737	26.45	.0884
120	26.80	.0443	27,51	.0610	28 06	.0767	28.56	.0916
130			29.49	.0638	30.08	.0797	30.62	.0948
140					32.06	.0826	32.64	.0980
150							34.62	.1011

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=1.4		Mach No.=1.5		Mach No.=1.6		Mach No.=1.7	
	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$
-50	-16.06	.0397						
-40	-12 73	.0446	13.07	.0549				
-30	-9.52	.0491	9.97	0594	-10.11	.0691		
-20	-6.41	.0534	6.63	.0638	-6.89	.0738		
-10	-3.40	.0575	3.57	.0682	-3.79	.0783	-4.08	.0879
0	-0.48	.0615	0.60	.0725	-0.78	.0828	-1.03	.0926
10	2.35	.0655	2.28	.0767	2.14	.0872	1.93	.0972
20	5.10	.0694	5.07	0808	4 98	.0916	4.81	.1017
30	7.77	.0733	7.79	.0849	7.73	.0959	7.60	.1062
40	10.37	.0771	10.43	.0889	10.42	.1001	10.32	.1106
50	12.90	.0808	13.00	.0929	13.03	.1042	12.96	.1149
60	15.37	.0845	15.51	0968	15.57	.1083	15.54	.1192
70	17.78	.0882	17 95	.1006	18.05	.1124	18.06	.1234
80	20.12	.0918	20.34	.1044	20.48	1164	20.52	.1276
90	22.42	.0954	22.67	.1082	22.85	.1203	22.93	.1317
100	24.66	.0989	24.95	.1119	25.16	.1242	25.28	.1358
110	26.85	.1024	27.18	.1156	27.43	.1281	27.58	.1398
120	29.00	.1058	29.37	.1192	29.65	.1319	29.83	.1438
130	31.10	.1092	31.50	.1228	31.82	.1356	32.04	.1477
140	33.16	.1126	33.60	.1263	33.95	.1393	34.21	.1516
150	35.18	.1159	35.65	.1298	36.04	.1430	36.34	.1555
160	37.15	.1192	37.67	.1331	38.10	.1467	38.43	.1593
170			39.65	.1367	40.11	.1503	40.48	.1630
180					42.09	.1538	42.50	.1668
190							44.49	.1705

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=1.8		Mach No.=1.9		Mach No =2.0		Mach No.=2.1	
	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$	Ø°	$A_{1/r}$
10								
0	-1.36	.1018						
10	1.64	.1066	1.25	.1154				
20	4.54	.1113	4.19	1202				
30	7.37	.1159	7.05	.1251	6.63	.1336		
40	10.12	.1205	9.83	.1298	9.45	.1385	8.98	.1467
50	12.81	.1250	12.55	.1345	12.20	.1434	11.76	.1517
60	15 42	.1295	15.20	1391	14.88	.1481	14.47	.1566
70	17.97	.1339	17.78	.1436	17.50	.1529	17.12	.1615
80	20.47	.1382	20.31	1481	20.06	.1575	19.72	.1663
90	22.91	.1425	22.79	.1526	22 57	.1621	22.26	.1711
100	25.29	.1467	25 21	.1570	25.03	.1667	24.75	.1758
110	27.63	1509	27.58	.1613	27.43	.1712	27 20	.1804
120	29.92	.1550	29.91	.1656	29.80	.1756	29.60	.1850
130	32.16	.1591	32.19	.1699	32.12	.1800	31.95	.1896
140	34.37	.1632	34.43	.1741	34.40	.1844	34.27	.1941
150	36.53	.1672	36.63	.1783	36.64	.1888	36.55	.1986
160	38.66	.1712	38.80	.1824	38.85	.1931	38 80	.2031
170	40.75	.1751	40.93	.1866	41.02	.1973	41.02	.2076
180	42 81	1790	43.03	1906	43.16	.2016	43 20	.2120
190	44.84	.1829	45.10	.1947	45 27	.2058	45.36	.2164
200	46.84	.1868	47.14	.1987	47.36	.2100	47.49	.2207
210	48.81	.1906	49.15	.2027	49.41	.2142	49.59	.2251
220			51.14	.2067	51.45	.2183	51.67	.2294
230			53.10	.2106	53.45	.2225	53.73	2337
240					55.44	.2266	55.76	.2380
250					57.41	.2307	57.78	.2423
260					59.35	.2348	59.78	.2466
270							61.76	.2509
280							63.72	.2551

Table XVIII Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=2.2		Mach No.=2.3		Mach No.=2.4		Mach No.=2.5	
	Ø°	$\Lambda_{1/r}$	Ø°	$\Lambda_{1/r}$	Ø°	$\Lambda_{1/r}$	Ø°	$\Lambda_{1/r}$
60	13.97	.1646						
70	16.66	.1696	16.12	.1773				
80	19.29	1746	18.78	1824				
90	21.87	1795	21.39	.1874	20.84	.1949		
100	24 39	1843	23.95	.1924	23.44	2000		
110	26.87	1891	26.47	1974	25.99	.2051	25.45	.2124
120	29.31	.1939	28.94	.2023	28.51	.2102	28.00	.2176
130	31.71	1986	31.38	.2072	30.98	.2152	30.51	.2228
140	34.06	.2033	33.78	.2120	33.42	.2202	32.99	.2280
150	36.39	.2080	36.14	.2168	35.82	.2252	35.43	.2331
160	38.68	2126	38.47	.2216	38.19	.2301	37.85	.2382
170	40.93	.2172	40.77	.2264	40.54	.2350	40.23	.2433
180	43.16	.2218	43.04	.2311	42.85	.2399	42.60	.2483
190	45.36	.2264	45.29	.2358	45.15	.2448	44.93	.2534
200	47.54	.2309	47.51	.2406	47.41	2497	47.24	2584
210	49.69	.2354	49.71	.2452	49.66	2546	49.53	.2634
220	51.82	.2399	51.89	.2499	51.88	.2594	51.79	.2684
230	53.92	2444	54.04	.2546	54.08	2643	54.03	.2734
240	56.01	2489	56.17	.2593	56.25	2691	56.24	.2785
250	58.07	.2534	58.29	2639	58.41	2739	58.44	.2834
260	60.12	2578	60.38	.2685	60.54	.2787	60 61	.2883
270	62.15	2623	62.45	.2731	62.66	2835	62 77	.2932
280	64.16	2667	64.50	.2777	64.75	.2882	64.90	.2980
290	66.15	.2711	66.54	.2823	66.83	.2929	67.02	.3028
300	68.12	.2756	68.55	.2869	68.89	2976	69.11	.3075
310	70.08	2800	70.55	.2914	70.93	.3022	71.19	.3123
320			72.54	.2959	72.95	.3068	73.25	.3169
330			74.50	.3004	74 95	.3113	75 30	.3216
340					76.94	.3158	77.32	.3261
350					78.92	3203	79.33	.3307
360					80.87	.3247	81.33	.3352
370							83.30	.3397
380							85.27	.3442
390							87.22	.3486

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=2.6 ∅°	$A_{1/r}$	Mach No.=2.7 ∅°	$A_{1/r}$	Mach No.=2.8 ∅°	$A_{1/r}$	Mach No.=2.9 ∅°	$A_{1/r}$
120	27 43	.2247						
130	29 98	.2300						
140	32.49	.2353	31.94	2422				
150	34.98	.2406	34.47	.2476				
160	37.44	.2458	36.97	.2530	36.43	2599		
170	39.87	.2510	39.43	2584	38 94	2654		
180	42 27	2562	41.87	.2638	41.41	.2709	40.89	.2776
190	44 64	.2614	44.28	2691	43.86	.2763	43 37	.2832
200	46 99	.2666	46.67	2744	46.28	.2818	45.82	.2888
210	49 32	2718	49.03	.2797	48.68	.2872	48 25	.2943
220	51 62	.2770	51 37	2850	51.05	.2926	50.66	2997
230	53.89	.2821	53.68	.2903	53.42	.2980	53 03	.3051
240	56.15	.2872	55.97	.2955	55.72	.3032	55.39	.3104
250	58.38	.2923	58.24	.3006	58.03	.3084	57.72	.3157
260	60 59	.2973	60.49	.3057	60.30	.3136	60.03	.3210
270	62.79	.3022	62.71	.3107	62.56	3187	62.32	.3261
280	64.96	.3072	64.92	.3157	64.80	3238	64 59	3313
290	67.11	.3120	67.11	.3207	67.02	.3288	66.84	.3364
300	69.24	.3169	69.27	.3256	69.21	.3338	69.06	3414
310	71.36	.3217	71.42	.3305	71.39	.3387	71.27	.3464
320	73.45	3264	73.55	.3353	73.55	.3436	73.46	.3514
330	75.53	.3311	75.66	.3401	75.69	.3485	75 63	3563
340	77.59	3358	77.75	.3448	77.82	.3533	77.79	.3612
350	79.64	.3404	79.83	.3495	79.93	.3581	79.92	.3660
360	81.66	.3450	81.89	.3542	82.02	.3628	82 04	3708
370	83.68	.3496	83.94	3588	84.09	.3675	84 14	3756
380	85.67	.3541	85.96	.3634	86.15	.3722	86.23	.3803
390	87.65	.3586	87.98	.3680	88 19	.3768	88.30	.3850
400	89.62	.3631	89.97	.3725	90.22	.3814	90.35	.3897

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No.=3.0		Mach No.=3.1		Mach No.=3.2		Mach No.=3.3	
	ø°	$A_{1/r}$	ø°	$A_{1/r}$	ø°	$A_{1/r}$	ø°	$A_{1/r}$
200	45.30	.2953						
210	47.76	.3008						
220	50 20	.3064	49.68	.3126				
230	52 59	.3118	52 11	.3181				
240	54.99	.3172	54.52	.3236	53.99	.3296		
250	57 35	.3226	56.91	.3290	56.40	.3350		
260	59.69	.3279	59.28	.3344	58.80	.3405	58.27	.3462
270	62.01	.3331	61.62	.3397	61.16	.3458	60.66	.3516
280	64.30	.3383	63.95	.3449	63.51	.3511	63.03	.3570
290	66.58	.3435	66.25	.3502	65.84	.3564	65.38	.3623
300	68.83	.3486	68.53	.3553	68.14	.3616	67.71	.3676
310	71.07	.3537	70.79	.3605	70.43	.3668	70.02	.3728
320	73.29	.3587	73.03	.3655	72.70	.3720	72.31	.3730
330	75.48	.3637	75.26	.3706	74.94	.3770	74.58	.3831
340	77.66	.3686	77.46	.3756	77.17	.3821	76.83	.3882
350	79.83	.3735	79.65	.3805	79.38	.3871	79.06	.3933
360	81.97	.3784	81.82	.3854	81.57	.3921	81.28	.3983
370	84.10	.3832	83.97	.3903	83.75	.3970		
380	86.21	.3880	86.11	.3952				
390	88.31	.3927	88.23	.4000				
400	90.39	.3974						

Table XVIII. Indicated Temperature Scales (Cont'd)

Indicated Temp °C	Mach No. =3.4 Ø°	$A_{l/r}$	Mach No. = 3.5 Ø°	$A_{l/r}$
290	64.86	.3678		
300	67.21	.3731		
310	69.54	.3784		
320	71.85	.3836	71.33	.3890
330	74.14	.3888	73.64	.3942
340	76.41	.3940		
350	78.66	.3991		
360				
370				
380				
390				
400				

Table XIX. Outer Boundaries of Transparent Area For Indicated Temperature Scales

℄°	$A_{1/r}$
-25	.03
-20	.05
-15	.07
-10	.09
- 5	.11
0	.13
5	.15
10	.17
15	.19
20	.21
25	.23
30	.25
35	.27
40	.29
45	.31
50	.33
55	.35
60	.37
65	.39
70	.41
75	.41
80	.41
85	.41
90	.41
92	.41

Table XX. Index For Thermometer Coefficients (C_{TH}) Scale

$A_{2/r}$	C_T=0.8 θ°	C_T=0.9 θ°	C_T=0.95 θ°	C_T=0.8 θ°	C_T=0.9 θ°	C_T=0.95 θ°
- .1281	.184	.091	045	236	.119	.059
- .1037	.417	.207	.104	.547	.278	.142
- .0734	.780	.391	.190	1 013	.504	.271
- .0373	1.318	650	.326	1.689	.836	.414
.0056	2.050	1.011	.499	2.617	1.299	.644
.0428	2.860	1.412	703	3.568	1.756	.870
.0720	3 715	1.830	.903	4 600	2.264	1.108
.1011	4.632	2.277	1.131	5.678	2.786	1.381
.1305	5.710	2 764	1.368	6.804	3 318	1.638
.1602		3.276	1 620		3.902	1.924
.1906		3.844	1 895		4.541	2.237
.2218		4 512	2.223		5 266	2.583
.2545		5.287	2.596		6.094	2.981
.2888		6.095	2.989		6 959	3 401
.3237		6.916	3.392		7.867	3.827
.3586		7 783	3 804		8.747	4 264
.3935		8.667	4.232		9.656	4.706

To avoid crowding of C_T lines, do not plot boxed in ([ ]) values on 4-1/4 inch computer.

Table XXI. Temperature Rise Scale

Temp Rise °C	$\mathcal{E}$ Degree	Temp Rise °C	$\mathcal{E}$ Degree	Temp Rise °C	$\mathcal{E}$ Degree
4	-134.93	45	- 0.82	150	94.76
5	-123.87	46	- 0.73	155	97.67
6	-114.75	47	2.26	160	100.51
7	-106.98	48	3.77	165	103.29
8	-100.19	49	5.25	170	106.01
9	- 94.15			175	108.67
		50	6.71	180	111.27
10	- 88.71	52	9.55	185	113.82
11	- 83.74	54	12.31	190	116.33
12	- 79.16	56	15.00	195	118.80
13	- 74.92	58	17.60		
14	- 70.96			200	121.22
15	- 67.24	60	20.14	205	123.60
16	- 63.73	62	22.60	210	125.95
17	- 60.40	64	25 01	215	128.27
18	- 57.24	66	27.35	220	130.55
19	- 54.22	68	29.63	225	132.80
				230	135.03
20	- 51.33	70	31.87	235	137.23
21	- 48.56	72	34.04	240	139.40
22	- 45.90	74	36.18	245	141.55
23	- 43.33	76	38.26		
24	- 40.85	78	40.30	250	143.69
25	- 38.45			255	145.80
26	- 36.13	80	42.29	260	147.88
27	- 33.87	82	44.25	265	149.95
28	- 31.67	84	46.16	270	152.00
29	- 29.54	86	48.04	275	154.03
		88	49.89	280	156.05
30	- 27.46			285	158.04
31	- 25.43	90	51.69	290	160.02
32	- 23.44	92	53.47	295	161.98
33	- 21.50	94	55.21		
34	- 19.60	96	56.92	300	163.92
35	- 17.74	98	58.61	310	167.76
36	- 15.92			320	171.54
37	- 14.13	100	60.26	330	175.26
38	- 12.37	105	64.28	340	178.92
39	- 10.64	110	68.14	350	182.53
		115	71.86	360	186.09
40	- 8.94	120	75.45	370	189.60
41	- 7.27	125	78.92	380	193.06
42	- 5.62	130	82.28	390	196.48
43	- 4.00	135	85.53	400	199.85
44	- 2.40	140	88.69	410	203.18
		145	91.77	420	206.48
				430	209.73

Table XXII. Latitude Scale

Degrees Latitude	Angle in Degrees	Minutes
20	287	25
21	280	07
22	273	11
23	266	36
24	260	20
25	254	20
26	248	37
27	243	08
28	237	54
29	232	52
30	228	03
35	206	35
40	188	46
45	173	52
50	161	21
55	150	52
60	142	10
65	135	03
70	129	24
75	125	06
80	122	04

3.6 Interchangeability - All parts having the same manufacturer's part number shall be functionally and dimensionally interchangeable. The item identification and part number requirements of MIL-STD-130 shall govern the manufacturer's part numbers and changes thereto.

3.7 Finish - All surfaces of the computer shall have a highly polished finish and all edges shall be free from burrs.

3.8 Operation markings -

3.8.1 Scale markings - All computer copy and markings shall be in durable dull black.

3.8.2 Background - The background of outer disc marking and copy shall not be visible through the opaque areas of the outer dials.

3.8.3 Disc marking - All markings on the three discs and cursors shall be covered with a transparent thin lamination of vinyl copolymer plastic in accordance with L-P-535, or other suitable material approximately 0.003 inch thick.

3.8.4 Letter numbers and lines - Letter numbers and lines shall be clear and sharp with no voids or breaks. All marking shall be solid so that the background is not visible through the markings. Markings of adjacent scales, with the exception of the compass scales, shall touch.

3.8.5 Operating instructions - The following instructions shall be on the TAS side of the computer in the space provided:

a Set calibrated airspeed opposide calibrated pressure altitude. Read mach number opposite arrow.

b. Set temperature recover coefficient, C_T, on indicated temperature at reference spiral. (For C_T = 1.0, use left radial line for convenience.) Read true airspeed under radial line. Read temperature rise (for true airspeed and C_T = 1.0) under same radial line and multiply by C_T to obtain correct temperature rise.

NOTE

True free-air temperature equals indicated temperature minus temperature rise. For a C_T value other than 1.0, the C_T curve on the cursor depends on the free air temperature. Therfore, C_T curves are drawn for standard sea level temperature and standard stratosphere temperature.

3.8.6 Handbook - A handbook of operating instructions shall be supplied with each computer. The handbook shall contain clear concise instructions for operating the computer. The handbook shall be approximately 6" x 4" on good quality white paper to fit in the computer case (see 3.4.4).

3.9 Weight - The weight of the Type MB-9 computer, with case and instructions, shall not exceed 6 ounces.

3.10 Identification of product - Equipment, assemblies and parts shall be marked for identification in accordance with MIL-STD-130.

3.11 Workmanship - The computer, including all parts and accessories, shall be fabricated and finished in a thoroughly workmanlike manner. Particular attention shall be given to freedom from blemishes and defects, accuracy of dimensions, marking of parts and assemblies, printing, and alignment of parts.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection - Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any inspections deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Classification of inspections - The inspection requirements of computers shall be classified as follows:

a. First article inspection - First article consists of examinations and tests performed on samples (which are representative of the production item) after the award of a contract. The examinations and tests are conducted to determine that the computers meet the requirements of this specification (see 4.4).

b. Quality conformance inspection - Quality conformance inspection consists of examinations and tests performed on the production items to determine that they meet the requirements of this specification (see 4.5).

4.3 Inspection conditions - Unless otherwise specified, the inspections shall be conducted under ambient atmospheric conditions.

4.4 First article inspection - First article samples shall consist of all the inspections of this specification.

4.4.1 First article samples - The first article samples shall consist of two computers of each manufacturer's model. The samples shall be identified with the manufacturer's part number and such other information as required by the procuring activity.

4.4.2 Inspection report and sample for the activity - When the inspections are conducted at a location other than the laboratory of the activity, the following shall be furnished to that activity:

a. Inspection report - Three copies of an inspection report in accordance with MIL-STD-831

b. Inspection sample - The first article samples that were inspected.

4.5 Quality conformance inspection - Quality conformance inspection shall consist of:

a. Individual inspection (see 4.6.1).

b. Sampling plan and tests.

4.5.1 Individual inspection - Each computer shall be subjected to the following tests:

a. Examination of computer in accordance with 4.6.1.

b. Scale accuracy tests in accordance with 4.6.3 through 4.6.3.8.

c. Centering accuracy test in accordance with 4.6.2.

4.5.2 Sampling plan and tests -

4.5.2.1 Sampling plan A - The contractor shall forward the first five units to the office designated by the procuring activity. The computers shall be tested for centering accuracy in accordance with accuracy 4.6.2 and tested for scale accuracy in accordance with 4.6.3 through 4.6.3.8.

4.5.2.2 Sampling plan B - Three computers shall be selected at random from the first production run of 100, or fraction thereof, as follows:

a. One from the first 30.

b. One from the second 30.

c. One from the next 40.

4.5.2.3 Sampling plan C - Five computers shall be selected at random from every 500 or fraction thereof.

4.5.2.4 Sampling tests -

4.5.2.4.1 Tests for sampling plan B - The computers selected shall be tested for centering accuracy in accordance with 4.6.2 and tested for scale accuracy in accordance with 4.6.3 through 4.6.3.8.

4.5.2.4.2 Tests for sampling plan C - The computers selected for testing in accordance with plan C shall be tested for centering accuracy in accordance with 4.6.2 and for scale accuracy in accordance with 4.6.3 through 4.6.3.8.

4.6 Inspection methods -

4.6.1 Visual examination of computer - The computer shall be visually inspected to verify that materials, design and construction, necessary mechanical measurements, marking, and workmanship comply with the requirements of this specification.

4.6.2 Centering accuracy test - The centering accuracy tests of the computer shall be performed in accordance with Table XXIII.

TABLE XXIII Centering Accuracy Test

Settings	Readings	Maximum	Minimum
Set 10 min opposite 10 miles; opposite	20 min, read 20 miles	20.04	19.96
	40 min, read 40 miles	40.08	39.92
	60 min, read 60 miles	60.12	59.88
Set 10 min opposite 20 miles; opposite	20 min, read 40 miles	40.08	39.92
	40 min, read 80 miles	80.16	79.84
	60 min, read 120 miles	120.24	119.76

TABLE XXIII. Centering Accuracy Test (Continued)

Settings	Readings	Maximum	Minimum
Set 10 min opposite 30 miles; opposite	20 min, read 60 miles	60.12	59.88
	40 min, read 120 miles	120.24	119.76
	60 min, read 180 miles	180.36	179.64
Set 10 min opposite 50 miles; opposite	20 min, read 100 miles	100.20	99.80
	40 min, read 200 miles	200.40	199.60
	60 min, read 300 miles	300.60	299.40

4.6 3 Scale accuracy tests -

4.6 3.1 Wind index scale - Accuracy of the wind index scale shall be tested as follows:

a Set the course index at N on the compass rose.

b. Opposite E, S, and W, of the compass rose, read $90^{\circ} \pm 0.25$, $0^{\circ} \pm 0.25$, and $90^{\circ} \pm 0.25$, respectively, on the wind index.

4.6.3.2 Altitude correction scale - Accuracy of the altitude correction scales shall be tested by the solution of a number of problems selected as representative of typical atmospheric conditions. Representative problems shall be as follows

a Set 0 feet pressure altitude opposite +40°C. opposite 3500 feet calibrated altitude, read 3820 ±10 feet true altitude.

b Set 4000 feet pressure altitude opposite 0°C, opposite 16,400 feet calibrated altitude, read 16,000 ±50 feet true altitude

4.6.3.3 Density altitude scale - Accuracy of the density altitude scale shall be tested as follows:

a. Set 5000 feet calibrated pressure altitude opposite $+5^{\circ}$C on the temperature scale. Opposite density altitude arrow, read 5000 ± 100 feet.

b. Set 36,000 feet calibrated pressure altitude opposite -55°C. Opposite density altitude arrow, read 36,000 ±200 feet.

4.6.3.4 Wind scale - Accuracy of the wind scales shall be tested as follows:

	Align cursor on winds scale	Read under cursor on miles scale
a. With the wind index set to 10, perform the following problems:	90	10 ±0.05
	10.5	182 ±0.5
	19	325 ±1.0
	35	574 ±1.0
b. With wind index set to 17, perform the following problems.	11	324 ±1.0
	19	554 ±1.0
	35	976 ±1.0
c. With the wind index set to 32, perform the following problems.	12	666 ±1.0
	19	104 ±0.5
	30	160 ±0.5
d. With wind index set to 60, perform the following problems:	10	104 ±0.5
	18	185 ±1.0
	35	344 ±1.0

4.6.3.5 Standard atmospheric altitude scale - Accuracy of the standard atmospheric altitude scale shall be checked by the following problems.

a. Align the lower end of the mach number index with 0 on the standard atmospheric altitude scale and read +15°C on the upper end of the mach number index (±0.5°C).

b. Align the lower end of the mach number index with the 35 to 80 graduation on the standard atmospheric altitude scale and read -55°C at the upper arrow of the mach number index (±1°C).

4.6.3.6 Drift scales - Accuracy of the drift scales shall be checked as follows.

a. Set 10 on the miles scale opposite 10 on the minutes scale. Read a drift angle of 5.7° ±0.1° under the drift correction cursor.

b. Set 10 on the miles scale opposite 55 on the minutes scale. Read a drift angle of 10.3° ±0.1° under the drift correction cursor.

c. Set 10 on the miles scale opposite 28.6 on the minutes scale. Read a drift angle of 2.0° ±0.1° under the drift correction cursor.

d. Set 10 on the miles scale opposite 19 on the minutes scale. Read a drift angle of 3.0° ±0.05° under the drift correction cursor.

4.6.3.7 True air speed, mach number and temperature rise scale - Accuracy of the true airspeed, mach number, and temperature rise scales shall be tested as follows, using the C_T - 1.0 curve for all problems:

a. Perform the following problems:

(1)

Set Mach No. at:	Read CAS Opposite 0 Ft Press Alt. as:
0.30	198.0 ±0.5
0.60	396.5 ±1.0
1.0	661.0 ±1.8
1.5	991.0 ±2.5

(2)

Set Temp Rise at:	Read TAS as:
5.0°C	195.0 ±1.0
15.0°C	338.0 ±1.0
40.0°C	551.0 ±1.0
100.0°C	870.0 ±1.0
300.0°C	1510.0 ±1.0

(3)

Set Mach No. at:	Read TAS at an Indicated Temperature of 0°C as.
0.25	160.0 ±2.0
0.40	254.0 ±2.0
0.60	375.0 ±2.0
0.80	485.0 ±2.0
1.00	587.0 ±2.0
1.25	703.0 ±2.0
1.50	802.0 ±2.0

		At a Pressure Altitude of:	Read CAS as:
b.	Set Mach No. Index to 1.0 and perform the following problems:	0	661 ±1.8
		20	475 ±1.8
		40	313 ±1.8
		60	197 ±1.8
		80	122 ±1.8
		Align cursor with spiral at:	**Read TAS:**
c.	Set Mach No. Index at 0.5 and perform the following problems	-60°C (indicated)	278 ±2.0
		0°C (indicated)	315 ±2.0
		+100°C (indicated)	366 ±2.0
d.	Set Mach No. Index at 1.40 and perform the following problems:	-60°C (indicated)	674 ±2.0
		0°C (indicated)	764 ±2.0
		+100°C (indicated)	895 ±2.0

4.6.3.8 Latitude scale test -

Align cursor on latitude	Read on wind scale
20°	72.5° ±.5°
40°	9.0° ±.5°
80°	58.0° ±.5°

5. PREPARATION FOR DELIVERY

5.1 Packaging -

5.1.1 Level A - Type MB-9 air navigation computers shall be packaged in accordance with MIL-STD-794. Preservation shall be in accordance with method III of MIL-P-116. Type and style of container shall be at the option of the contractor.

5.1.2 Level C - Computers shall be packaged in accordance with the requirements of MIL-STD-794 for level C.

5.2 Packing -

5.2.1 Level A - Computers, packaged as specified, shall be packed in accordance with the requirements for level A specified in MIL-STD-794. Containers conforming to PPP-B-636 are authorized.

5.2.2 Level B - Computers, packaged as specified, shall be packed in accordance with the requirements for level B specified in MIL-STD-794 containers conforming to PPP-B-636 are authorized.

5.2.3 Level C - Computers shall be packed as specified in MIL-STD-794.

5.3 Marking - In addition to any special marking required by the contract or order, interior packages and exterior shipping containers shall be marked in accordance with MIL-STD-129.

5.4 Shipment marking - The shipment marking nomenclature shall be: Computer, Air Navigation, True Airspeed, Mach Number, Wind Components, Supersonic, Type MB-9.

6. NOTES

6.1 Intended use - The computer covered by this specification is intended for use by pilots, navigators, and flight engineers for preflight and inflight computations.

6.2 Ordering data - Procurement documents should specify the following:

a. Title, number, and date of this specification.

b Point of testing for sampling plan A.

c. Selection of applicable levels of preservation and packaging, and packing.

Preparing Activity
Navy - AS

Project No 6605-N275

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

OMB Approval
No. 22-R255

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DOCUMENT IDENTIFIER AND TITLE
MIL-C-85019(AS) Computer, Air Navigation, Tru Airspeed Mach Number Wind Components, Supersonic, Type MB-9

NAME OF ORGANIZATION AND ADDRESS

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1 HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A GIVE PARAGRAPH NUMBER AND WORDING

B RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2 COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID

3 IS THE DOCUMENT RESTRICTIVE?

☐ YES ☐ NO *(If "Yes", in what way?)*

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