

DATE **8-3-63**  
SHEET **1** OF **3**

**TMC SPECIFICATION NO. S-569**

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COMPILED

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TITLE: **SCALE OF DRAWINGS**

*JFH*  
6.10.63  
APPROVED

### SCALE OF DRAWINGS

**SCOPE: THE FOLLOWING SPECIFICATION DEALS WITH THE METHODS OF SCALES AS APPLIED TO ELECTRO-MECHANICAL DRAWINGS.**

**REFERENCED DOCUMENTS: MIL-STD-1A GENERAL DRAWING PRACTICE**

- 1.1 SCALE.** "Scale" as used to indicate the ratio of the size of the view or views as drawn to the true dimensions of the object or assembly shall be as described herein.
- 1.1.1 GENERAL.** All drawings of details, assemblies and installations, shall be drawn in accordance with Paragraph 1.1. Schematics and similar drawings are excepted.
- 1.1.2 SELECTION OF SCALE.** When practicable, drawings shall be drawn to show an object or assembly to full size. When full size views are not practicable, drawings shall be made to either reduced or enlarged scales. Enlarged scales may be used when the actual size of the object is so small that full size representation would not clearly present the features of the object. A reduced scale may be employed to facilitate the presentation of an object or an arrangement of such size that it exceeds the drawing space available, but only when the required clarity can be maintained at the reduced scale. It may also be necessary in selecting reduced scales to give consideration to the degree of reduction contemplated in making the reproduction. It is desirable wherever practicable to prepare detail drawings to the same scale as the pertinent sub-assembly and assembly drawings, but this is not mandatory.
- 1.1.3 INDICATION OF SCALE.** The scale or scales to which drawings are made shall be indicated thereon by the following methods as required: The Fractional Method, The Equation Method, or by specifying the scale by a note, "Scale Two Times Size," "Scale 2 X Size," and "Scale Quarter Size," etc. Drawings which have been drawn full size should be so indicated as "1/1" or "Full Scale" in the scale block or elsewhere on the drawing.
- 1.1.3.1 FRACTIONAL METHOD.** The Fractional Method expresses, in the form of a common fraction, the ratio of the size of the object as drawn to its true size.

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1.1.3.1 **FRACTIONAL METHOD** (Continued). This method is used on drawings for which the Equation Method is not appropriate.

1.1.3.1.1 **COMMON SCALES.** The scales commonly used are:

Full Size --- 1/1

Enlarged --- 10/1, 4/1, 2/1

Reduced --- 1/2, 1/4, 1/10, 1/20,  
1/30, 1/40, 1/50,  
1/60, 1/100

1.1.3.1.2 **WHERE INDICATED.** The scale to which the majority of views and sections are drawn shall be entered as a fraction, such as, 1/1, 1/4, 2/1, etc., after "Scale" in the space provided on the drawing. The scale of each view or section drawn to other than the predominant scale shall be entered directly below the title of the view or section as "Scale 2/1," etc.

1.1.3.2 **EQUATION METHOD.** The Equation Method expresses, in the form of an equation, the relationship of the size of the object as drawn to its true dimensions.

1.1.3.2.1 **USE.** This method is generally used on drawings on which the dimensions are expressed in feet and inches.

1.1.3.2.2 **COMMON SCALES.** The scales most commonly used are:

Full Size --- 12" = 1' 0"

Enlarged --- 24" = 1' 0"  
48" = 1' 0"

Reduced --- 1/8" = 1' 0"  
1/4" = 1' 0"  
3/8" = 1' 0"  
1/2" = 1' 0"  
3/4" = 1' 0"

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## 1.1.3.2.2 COMMON SCALES (Continued).

Reduced	---	1"	=	1' 0"
		1½"	=	1' 0"
		3"	=	1' 0"
		6"	=	1' 0"
		1"	=	10' 0"
		1"	=	20' 0"
		1"	=	30' 0"

1.1.3.2.3 WHERE INDICATED. The scale to which the majority of views and sections are drawn shall be entered as an equation, such as, 12" = 1' 0," 3" = 1' 0," 24" = 1' 0," etc., after "Scale" in space provided on the drawing. The scale of each view or section drawn to other than the predominating scale shall be entered directly below the title of the view or section as "Scale 24" = 1' 0," etc.

1.1.4 DRAWINGS NOT TO SCALE. In the case of drawings which are not to scale, the word "None" shall be entered after "Scale" in the space provided on the drawing.

1.1.5 DIMENSIONS NOT TO SCALE. When practicable, not-to-scale dimensions shall be corrected.