

Proposed American National Standard
**for motion-picture and television equipment –
 camera mounting connections –
 1/4-inch-20 thread and 3/8-inch-16 thread
 tripod screws**

SMPTE 220

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1. Scope

1.1 This standard specifies the location of the head mounting sockets in the mounting plates of motion-picture and television cameras intended to mate with 1/4-inch-20 thread and 3/8-inch-16 thread locking screws.

1.2 The standard is not intended to prescribe design except for the dimensions affecting interchangeability; for this reason, the socket figures indicate two of many possible designs.

2. Reference Standards

The following American National Standards are intended to be used in conjunction with this standard:

- ANSI B1.1-1982, Unified Inch Screw Threads (UN and UNR Thread Form)
- ANSI PH3.101-1983, Photography (Cameras) — Tripod Connections for American Cameras (1/4-Inch-20 Thread)
- ANSI PH3.102-1983, Photography (Cameras) — Tripod Connections for Heavy-Duty or Imported Cameras (3/8-Inch-16 Thread with Adapter for 1/4-Inch-20 Tripod Screws)

3. Tripod Screws

3.1 One-quarter inch tripod screws shall be in accordance with ANSI PH3.101-1983.

3.2 Three-eighths inch screws shall be in accordance with ANSI PH3.102-1983.

3.3 The mounting area on the camera base shall have the following thickness:

	Recommended	Minimum
1/4-in screw	0.240 in	0.188 in
3/8-in screw	0.359 in	0.250 in

4. Mounting Plate

4.1 Socket. The head mounting socket shall be on nominally 1-in (25.4-mm) centers and be located in line as shown in Figs. 1, 2, and 3.

4.2 1/4-in Screw. The thread in the head mounting socket shall be 3/8-inch-16 UNC-2A, in accordance with ANSI B1.1-1982, with the following diameter specifications:

	Minor Dia (Inches)	Pitch Dia (Inches)	Major Dia (Inches)
Min	0.196	0.2175	0.2500
Max	0.207	0.2223	—

4.3 3/8-in Screw. The thread in the head mounting socket shall be 3/8-inch-16 UNC-2A, in accordance with ANSI B1.1-1982, with the following diameter specifications:

	Minor Dia (Inches)	Pitch Dia (Inches)	Major Dia (Inches)
Min	0.307	0.3344	0.3750
Max	0.321	0.3401	—

Center of Gravity of Camera with Lens

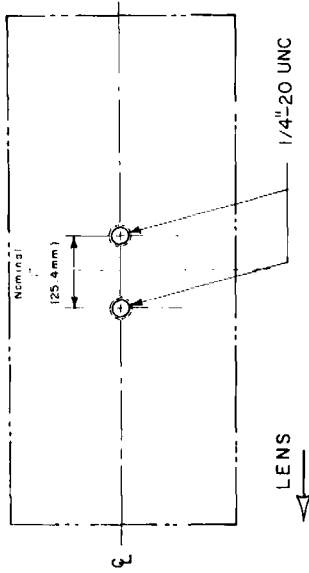


Fig. 1
1/4-Inch Head-Mounting Socket

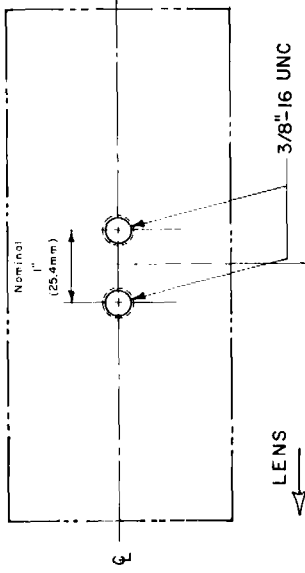


Fig. 2
3/8-Inch Head-Mounting Socket

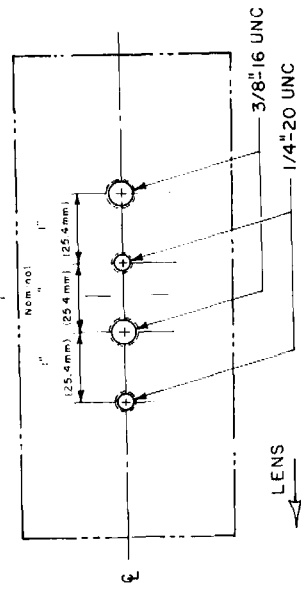


Fig. 3
Combined Head-Mounting Socket