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7 Lighting

REVIEW OF KEY TERMS

Match each term with its appropriate definition by filling in the corresponding bubble.

1. **barn doors**
2. **baselight**
3. **spotlight**
4. **reflected light**
5. **incident light**
6. **dimmer**
7. **foot-candle**
8. **floodlight**
9. **cucoloris**

A. Even, nondirectional (diffused) light necessary for the camera to operate optimally.

B. Metal flaps in front of lighting instruments that control the spread of the light beam.

C. A lighting instrument that produces directional, relatively undiffused light.

D. A lighting instrument that produces diffused light with a relatively undefined beam edge.

E. Light that is bounced off the illuminated object.

A ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

B ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

C ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

D ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

E ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

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1. barn doors	**4. reflected light**	**7. foot-candle**
2. baselight	**5. incident light**	**8. floodlight**
3. spotlight	**6. dimmer**	**9. cucoloris**

F. The American unit of measurement of illumination, or the amount of light that falls on an object.

G. Light that strikes the object directly from its source.

H. A metal cutout for a pattern projection.

I. A device that controls light intensity.

F ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

G ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

H ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

I ○ ○ ○ ○ ○ 1 2 3 4 5 ○ ○ ○ ○ 6 7 8 9

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REVIEW OF LIGHTING INSTRUMENTS AND CONTROLS

1. One foot-candle is approximately (10) *1* (11) *10* (12) *100* lux.

2. When measuring baselight, you need to read (13) *incident* (14) *reflected* (15) *directional* light.

3. When measuring incident light, you point the foot-candle or lux meter (16) *toward the set* (17) *toward the camera lens* (18) *close to the lighted object.*

4. When reading reflected light, you point the light meter (19) *close to the lighted object* (20) *into the lights* (21) *toward the camera lens.*

5. The beam of softlights (22) *cannot be adjusted* (23) *can be adjusted by a focus control* (24) *can be adjusted by moving the lamp assembly toward or away from the reflector.*

6. To flood (spread) the light beam of a Fresnel spotlight, you need to move the lamp-reflector unit (25) *toward* (26) *away from* the lens.

7. With the use of the patchboard (or computer patching), you can link (27) *only one instrument* (28) *several instruments* (29) *all available instruments simultaneously* to a specific dimmer.

1	○ 10	○ 11	○ 12
2	○ 13	○ 14	○ 15
3	○ 16	○ 17	○ 18
4	○ 19	○ 20	○ 21
5	○ 22	○ 23	○ 24
6	○ 25	○ 26	
7	○ 27	○ 28	○ 29

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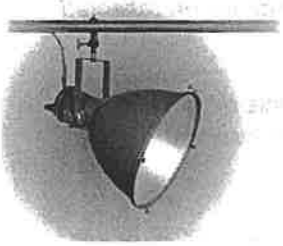
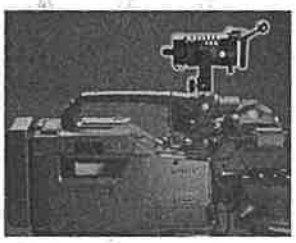
8. Fill in the bubbles whose numbers correspond with the appropriate lighting instruments shown below.

30

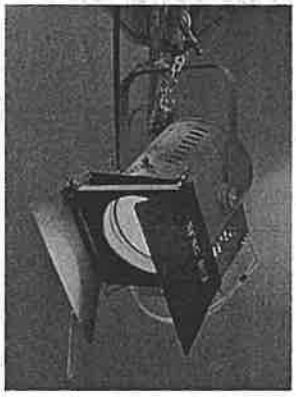


31

32

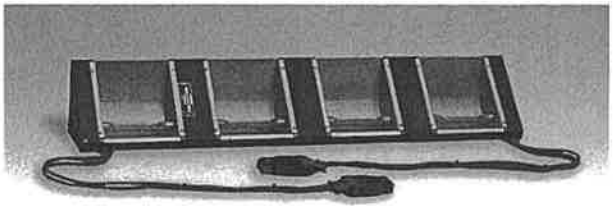


33



34

35



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a. V-light

b. strip, or cyc, light

c. fluorescent floodlight bank

d. Fresnel spotlight

e. scoop

f. ellipsoidal spotlight

g. softlight

h. camera light

i. broad

8a ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8b ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8c ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8d ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8e ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8f ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8g ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8h ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

8i ○ ○ ○ ○ ○ 30 31 32 33 34 ○ ○ ○ ○ 35 36 37 38

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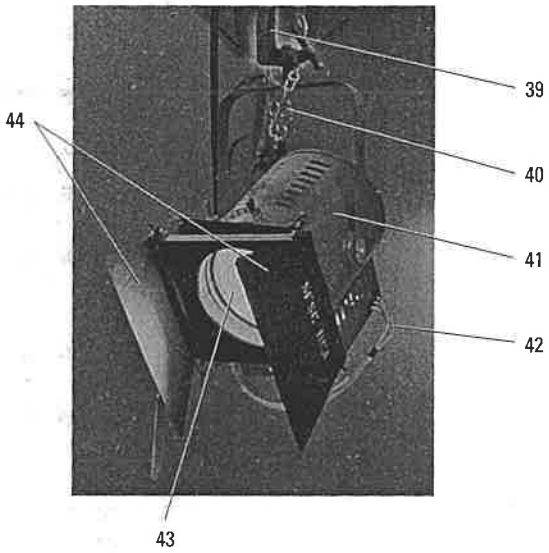
9. Fill in the bubbles whose numbers correspond with the numbers identifying the various parts of the spotlight shown below.



a. C-clamp

b. Fresnel lens

c. two-way barn doors

d. safety chain

e. power cord

f. lamp housing

10. A dimmer controls (45) *the wattage of the lamp* (46) *the flow of voltage to the lamp* (47) *the amperes flowing to the lamp.*

9a	○ 39	○ 40	○ 41
	○ 42	○ 43	○ 44
9b	○ 39	○ 40	○ 41
	○ 42	○ 43	○ 44
9c	○ 39	○ 40	○ 41
	○ 42	○ 43	○ 44
9d	○ 39	○ 40	○ 41
	○ 42	○ 43	○ 44
9e	○ 39	○ 40	○ 41
	○ 42	○ 43	○ 44
9f	○ 39	○ 40	○ 41
	○ 42	○ 43	○ 44
10	○ 45	○ 46	○ 47

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REVIEW QUIZ

Mark the following statements as true or false by filling in the bubbles in the ***T*** *(for true) or* ***F*** *(for false) column.*

		T	F
1. The optimal contrast ratio for most standard television cameras is 40:1 to 50:1.	**1**	○ 48	○ 49
2. To illuminate a large area with even light, we use a variety of Fresnel spots.	**2**	○ 50	○ 51
3. Barn doors are primarily used for intensity control.	**3**	○ 52	○ 53
4. Focusing a light results in sharper shadows.	**4**	○ 54	○ 55
5. Portable fluorescent banks are used to illuminate areas with even light.	**5**	○ 56	○ 57
6. When necessary, the beam of softlights can be focused.	**6**	○ 58	○ 59
7. The shutters on an ellipsoidal spot can shape its beam.	**7**	○ 60	○ 61
8. A flag has a similar function to barn doors.	**8**	○ 62	○ 63
9. Incident light can be measured by pointing the light meter into the lights or toward the camera lens.	**9**	○ 64	○ 65
10. Regardless of the type of dimmer control, all patching must be done with patch cords for each instrument.	**10**	○ 66	○ 67

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PROBLEM-SOLVING APPLICATIONS

1. You are asked to raise the baselight level in a classroom for optimal camera performance. Even though the small portable spotlights are in the maximum flood position, the additional illumination is not even. What other methods do you have available to achieve further diffusion?

2. You are asked to produce extremely sharp beams that reflect as precise pools of light on the studio floor. What type of lighting instruments would you use?

3. When checking the general baselight level and the amount of foot-candles (or lux) falling on the subject, the lighting assistant first stands next to the lighted subject and points the light meter toward the principal camera position and then at the various lighting instruments illuminating the subject. Will the assistant's action produce the desired results? If so, why? If not, why not?

4. You are asked to assemble a lighting kit that will be useful for lighting indoor interviews in small rooms, such as hotel rooms or offices. What instruments and other necessary equipment would you recommend?

5. You are asked to dim all spotlights simultaneously and then do the same thing immediately thereafter with all floodlights. How can you best accomplish this task?