

PRICE 15 CENTS*

RCA



STORAGE TUBES and CATHODE-RAY TUBES



RADIO CORPORATION OF AMERICA

® ELECTRONIC COMPONENTS AND DEVICES

HARRISON, N.J.

*Suggested Price

Booklet STC-900

RCA STORAGE TUBES and CATHODE-RAY TUBES

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RCA STORAGE TUBES and CATHODE -RAY TUBES

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Italicized types are not recommended for new equipment design.

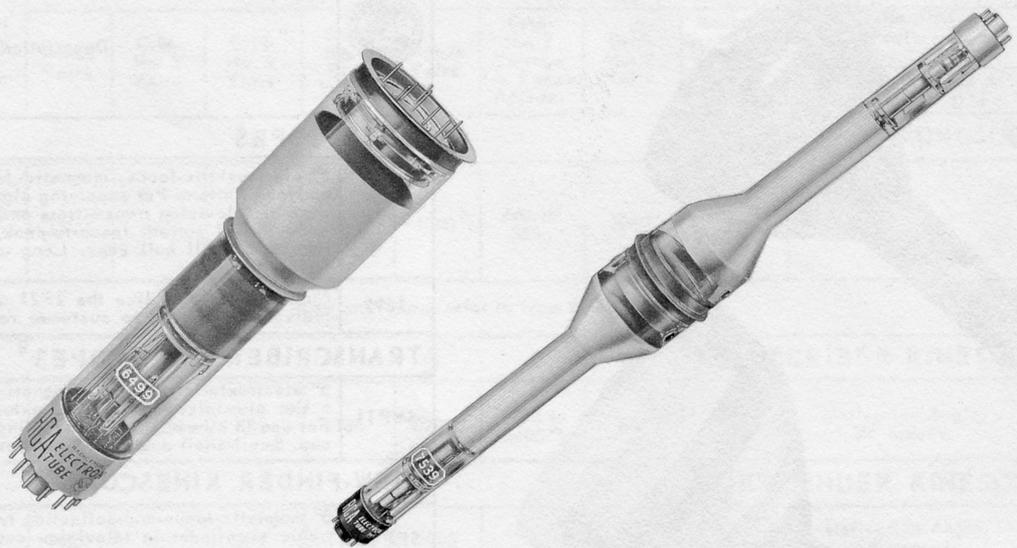
STORAGE TUBES



DISPLAY-STORAGE TUBES

| RCA Type | Nominal Diameter Inches | Maximum Overall Length Inches | Deflection Method | No. of Writing Guns | Remarks | Initial Applications |
|----------|-------------------------|-------------------------------|-------------------|---------------------|--|-----------------------------------|
| 4412 | 10 | 20.75 | E | 1 | Ruggedized type with rectangular useful display area. Has integral magnetic shield. | Airborne special-purpose displays |
| 2028 | 5 | 15½ | E | 1 | Similar to type 6866, except has higher maximum voltage ratings. For renewal use. For new equipment design, use type 7268. | Airborne fire control |
| 2053 | 5 | 13.64 | E | 1 | A ruggedized type having an integral magnetic shield. | Airborne terrain-clearance radar |
| 4454 | 5 | 11.62 | M | 1 | Similar but not interchangeable with type 7183. Has improved contrast and display uniformity. | Airborne weather radar |
| 6866 | 5 | 15½ | E | 1 | One of the first display-storage tubes built in mass production. For renewal use. For new equipment design, use type 7268. | Airborne fire control |
| 7183 | 5 | 11⅝ | M | 1 | First display-storage tube used extensively in weather radar systems. | Airborne weather radar |
| 7268 | 5 | 16 | E | 2 | Ruggedized type having an integral magnetic shield. | Airborne fire control |
| 7315 | 5 | 13.64 | E | 1 | Designed especially for slow-speed scanning applications. | Shipborne missile control |

Italicized types are not recommended for new equipment design.



RADECHONS

| RCA Type | Maximum Diameter Inches | Maximum Overall Length Inches | Remarks |
|----------|-------------------------|-------------------------------|--|
| 1858 | 3.35 | 12-7/32 | A variant of type 6499 but designed especially for binary memory systems in computers. |
| 6499 | 3.35 | 12-7/32 | Barrier-grid single-beam type designed for use in digital-data storage, signal-delay, fixed signal cancellation, and in time-base conversion applications. Can store information from microseconds to minutes. |

SCAN CONVERSION TUBES (GRAPHECHONS)

| RCA Type | Maximum Diameter Inches | Maximum Overall Length Inches | Remarks |
|----------|-------------------------|-------------------------------|---|
| 7539 | 3.40 | 26 | A charge storage tube designed for use in data processing applications where information is to be continuously transformed from one time base or scanning presentation to another. Has one electrostatic-focus, magnetic-deflection type writing gun and one magnetic-deflection, magnetic-focus reading gun. |

SPECIAL-PURPOSE KINESCOPIES



|  Type | Description ^a |
|---|--|
| MONOSCOPES | |
| 2F21 | 5" electrostatic-focus, magnetic-deflection type with Indian Head Pattern. For supplying signal to test video performance of television transmitters and receivers. Pattern-electrode signal current (peak-to-peak), 0.3 to 0.7 uamp. Two recessed small ball caps. Long medium-shell small 6-pin base. |
| 1699 | Custom-built type like the 2F21 except that its pattern is individually styled to customer requirements. |
| TRANSCRIBER KINESCOPIES^k | |
| 5WP11 | 5" electrostatic-focus and magnetic-deflection type having a flat aluminized screen and external conductive coating. For use in kinescope film recording. Recessed small cavity cap. Small-shell duodecal 7-pin base. |
| VIEW-FINDER KINESCOPIES^k | |
| 5FP4A | 5" magnetic-focus-and-deflection type. For use as an electronic viewfinder in television cameras. Recessed small ball cap. Long medium-shell octal 8-pin base. |
| MONITOR KINESCOPIES^k | |
| 7CP4 | For renewal use. For new equipment design, use the 7TP4. |
| 7TP4 | 7" directly viewed, electrostatic-focus, magnetic-deflection type. Requires no ion-trap magnet. Has high resolution and an aluminized screen. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| 8HP4 | Small, compact, 8-inch, directly-viewed rectangular kinescope. Electrostatic-focus, magnetic-deflection. Requires no ion-trap magnet. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| 8NP4 | Small, compact, 8-inch, directly-viewed rectangular kinescope. Electrostatic-focus, magnetic-deflection. Requires no ion-trap magnet. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| 8QP4 | Similar to the 8NP4 but has integral protective window. |
| 10SP4 | 10" directly-viewed, electrostatic-focus, magnetic-deflection type. Requires no ion-trap magnet. Has high resolution, a Filterglass faceplate and an aluminized screen. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| 14BAP4 | 14" directly-viewed, electrostatic-focus, magnetic-deflection type. Requires no ion-trap magnet. Has a Filterglass faceplate and an aluminized screen. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| 17DWP4 | 17" directly-viewed, electrostatic-focus, magnetic-deflection type. Requires no ion-trap magnet. Has a Filterglass faceplate and an aluminized screen. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| 21EYP4 | 21" directly-viewed, electrostatic-focus, magnetic-deflection type. Requires no ion-trap magnet. Has a Filterglass faceplate and an aluminized screen. Recessed small cavity cap. Small-shell duodecal 6-pin base. |
| FLYING-SPOT CATHODE-RAY TUBES | |
| 3KP16 | 3" electrostatic-focus, electrostatic-deflection type. Features clear glass faceplate, very-short persistence. Medium-shell magnal 11-pin base. |
| 5AUP24 | 5" electrostatic-focus, magnetic-deflection type. Intended primarily for use as a scanner in a color video-signal generator. Features useable radiant energy output over the visible spectrum, extremely short persistence, high resolution, aluminized screen, and external conductive coating. Recessed small cavity cap. Small-shell duodecal 7-pin base. |

Italicized types are not recommended for new equipment design.

For footnotes, see pages 10 and 11.

SPECIAL-PURPOSE KINESCOPIES

| Maximum Dimensions | | Min. Useful Screen Diam. Inches | Maximum Ratings ^b | | | | Operating Conditions | | | | | | RCA Type |
|--|-----------------------|---------------------------------|------------------------------|---|------------------|------------------------------------|----------------------|--------------------------------------|------------------|---|--|-----------|-------------|
| | | | Anode Volts | Grid-No. 3 Volts | Grid-No. 2 Volts | Grid-No. 1 Bias Volts ^c | Anode Volts | Grid-No. 3 Voltage for Focus Approx. | Grid-No. 2 Volts | Maximum Grid-No. 1 Volts for Visual Cutoff ^d | Deflection Factors Volts dc/in. | | |
| Overall Length Inches | Envelope Diam. Inches | | | | | | | | | | DJ1 & DJ2 ^e | DJ3 & DJ4 | |
| MONOSCOPES | | | | | | | | | | | | | |
| 12-11/16 | 5-1/16 | - | 1500 ^f | 600 | 1600 | -125 ^g | 1000 ^h | 240 to 360 | 1000 | -10 to -70 ^j | - | - | 2F21 |
| For additional data, refer to type 2F21. | | | | | | | | | | | | | 1699 |
| TRANSCRIBER KINESCOPIES^k | | | | | | | | | | | | | |
| 11-13/16 | 5-1/8 | 4-1/4 | 27000 | 6000 | 350 | -150 | 27000 | 4200 to 5400 ^m | 200 | -98 | Deflection Angle, 50° approx. | | 5WP11 |
| VIEW-FINDER KINESCOPIES^k | | | | | | | | | | | | | |
| 11-1/2 | 5-1/32 | 4-1/4 | 8000 | - | 410 | -125 | 6000 | - | 250 | -70 | Deflection Angle, 53° approx. | | 5FP4A |
| MONITOR KINESCOPIES^k | | | | | | | | | | | | | |
| 13-13/16 | 7-1/8 | 6-1/2 | 8000 | 2400 | 300 | -125 | 6000 | 912 to 1368 | 250 | -67.5 | Deflection Angle, 57° approx. | | 7CP4 |
| 13-1/2 | 7-5/16 | 6 | 12000 | 2000 | 410 | -125 | 10000 | 1170 to 1590 ⁿ | 200 | -48 ^p | Deflection Angle, 50° approx. | | 7TP4 |
| 10-1/4 | 8-1/2 ^q | 7-13/16 ^q | 14000 ^r | +1100 ^{rs} -550 ^{rs} | 550 ^r | -155 ^r | 11000 | 0 to 300 ^{rs} | 300 | -72 ^p | Deflection Angle, 90° approx. ^q | | 8HP4 |
| 9-15/16 | 8-1/2 ^q | 7-3/4 ^q | 22000 ^r | +1100 ^{rs} -550 ^{rs} | 550 ^r | -155 ^r | 16000 | 200 ^s | 300 | -72 ^p | Deflection Angle, 90° approx. ^q | | 8NP4 |
| 10-1/8 | 8-1/2 ^q | 7-3/4 ^q | 22000 ^r | +1100 ^{rs} -550 ^{rs} | 550 ^r | -155 ^r | 16000 | 0 to 400 ^s | 300 | -72 ^p | Deflection Angle, 90° approx. ^q | | 8QP4 |
| 17 | 10-9/16 | 9-1/8 | 20000 | 3000 | 410 | -125 | 14000 12000 | 1640 to 2225 1400 to 1900 | 200 200 | -48 -48 | Deflection Angle, 50° approx. | | 10SP4 |
| 17-5/32 | 13-13/16 ^q | 12-3/4 ^q | 22000 ^r | 800 ^{rs} | 700 ^r | -180 ^r | 18000 | 0 to 400 ^s | 300 | -72 ^p | Deflection Angle, 70° approx. ^q | | 14BAP4 |
| 19-9/16 | 16-3/4 ^q | 15-9/16 ^q | 22000 ^r | 800 ^{rs} | 700 ^r | -180 ^r | 18000 | 0 to 400 ^s | 300 | -72 ^p | Deflection Angle, 70° approx. ^q | | 17DWP4 |
| 23-13/32 | 21-1/2 ^q | 20-1/4 ^q | 22000 ^r | 800 ^{rs} | 700 ^r | -180 ^r | 18000 | 0 to 400 ^s | 300 | -72 ^p | Deflection Angle, 72° approx. ^q | | 21EYP4 |
| FLYING-SPOT CATHODE-RAY TUBES | | | | | | | | | | | | | |
| 11-3/4 | 3-1/16 | 2-3/4 | 2500 | 1000 | - | -200 | 2000 | 320 to 600 | - | -90 | - | | 3KP16 |
| 12-7/8 | 5-1/8 | 4-1/4 | 27000 | 6000 | 350 | -150 | 27000 | 4600 to 5800 | 200 | -100 | Deflection Angle, 40° approx. | | 5AUP24 |

Italicized types are not recommended for new equipment design

For footnotes, see pages 10 and 11.

SPECIAL-PURPOSE KINESCOPIES



|  Type | Description ^a |
|---|---|
| FLYING-SPOT CATHODE-RAY TUBES - (Cont'd) | |
| 5WP15 | 5" electrostatic-focus, magnetic-deflection type. Intended primarily for use as a scanner in a video-signal generator. Features aluminized screen, extremely short persistence, and external conductive coating. Recessed small cavity cap. Small-shell duodecal 7-pin base. |
| 5ZP16 | 5" electrostatic-focus, magnetic-deflection type. Intended primarily for use as a scanner in a video-signal generator. Features extremely short persistence, high resolution, aluminized screen, and external conductive coating. Recessed small cavity cap. Small-shell duodecal 7-pin base. |
| PROJECTION KINESCOPIES^k | |
| 5AZP4 | 5" electrostatic-focus, magnetic-deflection type. Provides an 8' by 6' picture. Integral flexible anode lead. Small-shell duodecal 7-pin base. |
| 7NP4 | Similar to 7WP4 except provides a 20' by 15' picture at a projection-throw distance of about 60'. ^t |
| 7WP4 | 7" electrostatic-focus, magnetic-deflection type. Intended for theater-television use. Provides a 20' by 15' picture at a projection-throw distance of about 80'. Medium cap. Small-shell diheptal 14-pin base. ^t |

CATHODE-RAY TUBES



|  Type | Description ^a |
|---|---|
| OSCILLOGRAPH TYPES | |
| 1EP1 | 1" electrostatic-focus-and-deflection type especially suited for general oscillographic applications and continuous monitoring. The 1EP1 features a medium-persistence screen, a flat face, and compact overall design. Small uni-dekar 11-pin base. |
| <i>1EP2</i> <i>1EP11</i> | 1" types same as 1EP1 except: 1EP2 is for medium-persistence images; the 1EP11 is for photographic use. |
| <i>2AP1A</i> | For renewal use. For new equipment design, use the 2BP1. |
| 2BP1 2BP11 | 2" types a little less than 8" long. The 2BP1 is for general oscillographic use; the 2BP11 is for photographic use. Small-shell duodecal 10-pin base. |
| <i>3AP1A</i> | For renewal use. For new equipment design, use the 3KP1 or 3R-type. |
| 3AQP1 | 3" type about 9-1/8" long. High deflection sensitivity. Spherical faceplate. Small-shell duodecal 12-pin base. |
| 3BP1A | 3" type about 10" long. Medium-shell diheptal 12-pin base for high-altitude operation. |
| 3JP1 3JP7 | 3" types about 10" long with post-deflection acceleration for high brightness. The 3JP1 is for general oscillographic use; the 3JP7 is for long-persistence images and for pulse-modulated applications, such as radar indicator service. Recessed small ball cap. Medium-shell diheptal 12-pin base. |
| 3KP1 | 3" type having high deflection sensitivity. For general oscillographic applications. Medium-shell magnal 11-pin base. |
| <i>3KP7</i> <i>3KP11</i> | 3" types same as 3KP1 except: 3KP7 is for long-persistence images and for pulse-modulated applications; the 3KP11 is for photographic use. |

Italicized types are not recommended for new equipment design.

For footnotes, see pages 10 and 11.

SPECIAL-PURPOSE KINESCOPES

| Maximum Dimensions | | Min. Useful Screen Diam. Inches | Maximum Ratings ^b | | | | Operating Conditions | | | | | | RCA Type |
|---|-----------------------|---------------------------------|------------------------------|--------------------|------------------|------------------------------------|----------------------|--------------------------------------|-------------------------|---|---------------------------------|-----------|-------------|
| Overall Length Inches | Envelope Diam. Inches | | Anode Volts | Grid-No. 3 Volts | Grid-No. 2 Volts | Grid-No. 1 Bias Volts ^c | Anode Volts | Grid-No. 3 Voltage for Focus Approx. | Grid-No. 2 Volts | Maximum Grid-No. 1 Volts for Visual Cutoff ^d | Deflection Factors Volts dc/in. | | |
| | | | | | | | | | | | DJ1 & DJ2 ^e | DJ3 & DJ4 | |
| FLYING-SPOT CATHODE-RAY TUBES - (Cont'd) | | | | | | | | | | | | | |
| 11-13/16 | 5-1/8 | 4-1/4 | 27000 | 6000 | 350 | -150 | 27000 20000 | 4000 to 5200 3000 to 3800 | 200 200 | -100 -100 | Deflection Angle, 50° approx. | | 5WP15 |
| 14-3/4 | 5-1/8 | 4-1/4 | 27000 | 7000 | 350 | -150 | 27000 20000 | 5500 to 7100 4100 to 5300 | 200 200 | -100 -100 | Deflection Angle, 40° approx. | | 5ZP16 |
| PROJECTION KINESCOPES^k | | | | | | | | | | | | | |
| 12-9/16 | 5-1/8 | 4-1/2 | 40000 ^r | 9000 ^r | 400 ^r | -150 ^r | 36000 | 6650 to 8100 | 200 | -93 ^p | Deflection Angle, 50° approx. | | 5AZP4 |
| 20-1/8 | 7-3/16 ^u | 5x3-3/4 ^v | 80000 ^r | 20000 ^r | 600 ^r | -250 ^r | 75000 | 15000 to 17000 | 400 to 600 ^p | -155 ^w | Deflection Angle, 35° approx. | | 7NP4 |
| 20-1/16 | 7-3/16 ^u | 5x3-3/4 ^v | 80000 ^r | 20000 ^r | 600 ^r | -250 ^r | 75000 | 15000 to 17000 | 400 to 600 ^p | -155 ^w | Deflection Angle, 35° approx. | | 7WP4 |

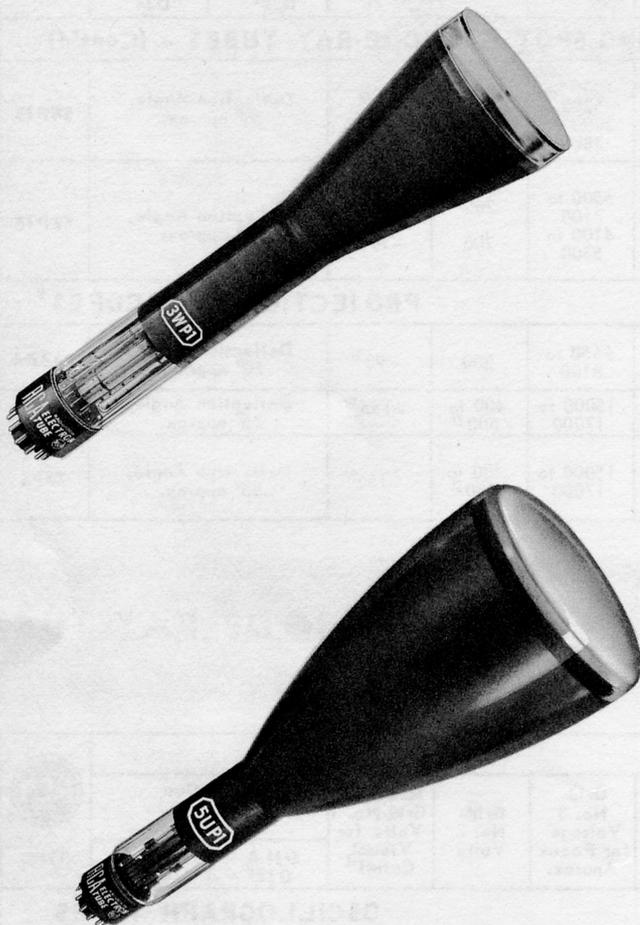
CATHODE-RAY TUBES

| Maximum Dimensions | | Min. Useful Screen Diam. Inches | Maximum Ratings ^b | | | | Operating Conditions | | | | | | RCA Type |
|---------------------------|-----------------------|---------------------------------|------------------------------|------------------|------------------|------------------------------------|-----------------------------------|--|-------------------------|---|--|---------------------------------------|----------------------|
| Overall Length Inches | Envelope Diam. Inches | | Anode Volts | Grid-No. 3 Volts | Grid-No. 2 Volts | Grid-No. 1 Bias Volts ^c | Anode Volts | Grid-No. 3 Voltage for Focus Approx. | Grid-No. 2 Volts | Maximum Grid-No. 1 Volts for Visual Cutoff ^d | Deflection Factors Volts dc/in. | | |
| | | | | | | | | | | | DJ1 & DJ2 ^e | DJ3 & DJ4 | |
| OSCILLOGRAPH TYPES | | | | | | | | | | | | | |
| 4-1/16 | 1-5/16 | 1-1/16 | 1500 | 1200 | 1500 | -200 | 1000 500 | 100 to 300 50 to 150 | 1000 500 | -42 -21 | 210 to 310 105 to 155 | 240 to 350 120 to 175 | 1EP1 |
| 4-1/16 | 1-5/16 | 1-1/16 | 1500 | 1200 | 1500 | -200 | 1000 750 | 100 to 300 75 to 225 | 1000 750 | -42 -39 | 210 to 310 157 to 233 | 240 to 350 180 to 263 | <i>1EP2</i> 1EP11 |
| 7-5/8 | 2-1/16 | 1-3/4 | 1000 | 500 | 1000 | -125 | 1000 | 140 to 300 | 1000 | -90 | 195 to 265 | 167 to 225 | <i>2AP1A</i> |
| 7-13/16 | 2-1/16 | 1-3/4 | 2500 | 1000 | 2500 | -200 | 2000 1000 | 300 to 560 150 to 280 | 2000 1000 | -135 -67.5 | 230 to 310 115 to 155 | 148 to 200 74 to 100 | 2BP1 2BP11 |
| 11-7/8 | 3-1/16 | 2-3/4 | 1500 | 1000 | 1500 | -125 | 1500 | 300 to 515 | 1500 | -75 | 91 to 137 | 87 to 131 | <i>3AP1A</i> |
| 9-3/8 | 3-1/16 | 2-3/4 | 2750 | 1100 | 2750 | -200 | 1000 | 165 to 310 | 1000 | -67.5 | 73 to 99 | 26 to 35 | 3AQP1 |
| 10-1/4 | 3-1/16 | 2-3/4 | 2000 | 1000 | 2000 | -200 | 2000 1500 | 400 to 690 300 to 515 | 2000 1500 | -90 -67.5 | 170 to 230 127 to 173 | 125 to 170 94 to 128 | 3BP1A |
| 10-1/4 | 3-1/16 | 2-3/4 | 4000 | 1000 | 2000* | -200 | 4000 3000 2000 ^z | 400 to 690 300 to 515 400 to 690 | 2000* 1500* 2000* | -90 -67.5 -90 | 170 to 230 127 to 173 136 to 184 | 125 to 170 94 to 128 100 to 136 | 3JP1 <i>3JP7</i> |
| 11-3/4 | 3-1/16 | 2-3/4 | 2500 | 1000 | 2500 | -200 | 2000 1000 | 320 to 600 160 to 300 | 2000 1000 | -90 -45 | 100 to 136 50 to 68 | 76 to 104 38 to 52 | 3KP1 |
| 11-3/4 | 3-1/16 | 2-3/4 | 2500 | 1000 | 2500 | -200 | 2000 | 320 to 600 | 2000 | -90 | 100 to 136 | 76 to 104 | <i>3KP7</i> 3KP11 |

Italicized types are not recommended for new equipment design.

For footnotes, see pages 10 and 11.

CATHODE-RAY TUBES



|  Type | Description ^a |
|---|---|
| OSCILLOGRAPH TYPES - (Cont'd) | |
| 3RP1 3RP1A | 3" types with good brightness at relatively low voltage. For general oscillographic use. The 3RP1A features a flat faceplate. Small-shell duodecal 10-pin base. |
| 3WP1 <i>3WP11</i> | 3" types with flat face and extremely high deflection sensitivity. The 3WP1 is for general oscillographic applications; the 3WP11 is for photographic use. Small-shell duodecal 10-pin base. |
| 5ABP1 <i>5ABP7</i> <i>5ABP11</i> | 5" types with post-deflection acceleration, flat face, very high deflection sensitivity. Especially suitable for wide-band amplifiers. The 5ABP1 is for general oscillographic use; the 5ABP7 is for long-persistence images and for pulse-modulated applications, such as radar indicator service; the 5ABP11 is for photographic use. Recessed small ball cap. Medium-shell diheptal 12-pin base. |
| 5ADP1 | 5" type with post-deflection acceleration, flat face, and very high deflection sensitivity. Particularly suitable for wide-band amplifiers. Medium-shell diheptal 12-pin base. |
| <i>5BP1A</i> | For renewal use. For new equipment design, use the SUP1. |
| 5CP1A <i>5CP11A</i> <i>5CP12</i> | 5" types featuring post-deflection acceleration for high brightness. The 5CP1A is for general oscillographic use; the 5CP11A is for photographic use; the 5CP12 is for observing low and medium speed recurring phenomena. Recessed small ball cap. Medium-shell diheptal 12-pin base. |
| 5FP7A | 5" magnetic-focus-and-deflection type. For low-frequency pulse-modulated applications. Recessed small ball cap. Long medium-shell octal 8-pin base. |
| <i>5FP15A</i> | 5" magnetic-focus-and-deflection type capable of producing spot having diameter less than 0.009". The 5FP15A is for photographic use. Recessed small ball cap. Long medium-shell octal 8-pin base. |
| 5UP1 | 5" type having high deflection sensitivity and resolution. For general oscillographic applications. Small-shell duodecal 10-pin base. |
| <i>5UP7</i> <i>5UP11</i> | 5" types same as SUP1 except: the 5UP7 is for long persistence images; the 5UP11 is for photographic applications. |
| <i>7BP7A</i> | For renewal use. For new equipment design, use the 7MP7. |
| 7MP7 | 7" magnetic-focus-and-deflection type. For low-frequency pulse-modulated service. Recessed small cavity cap. Small-shell duodecal 5-pin base. |
| 7VP1 7VP31 | 7" types having short overall length and good deflection sensitivity. For general oscillographic applications. The 7VP1 has medium persistence and the 7VP31 has medium-short persistence. Medium-shell diheptal 12-pin base. |
| <i>902A</i> | For renewal use. For new equipment design, use the 2BP1. |

Italicized types are not recommended for new equipment design.

- ^a Unless otherwise specified all of these types have electrostatic focus and deflection and a heater rating of 6.3 volts and 0.6 amp.
- ^b Design-center values, except as noted.
- ^c Positive bias value = 0 volts, positive peak value = 2 volts, except as noted.
- ^d For visual cutoff of undeflected focused spot, except as noted.
- ^e DJ1 and DJ2 are deflecting electrodes nearer screen.
- ^f Pattern-electrode and grid-No. 4 (collector) voltage.
- ^g Positive-bias value = 0 volts.
- ^h Pattern electrode voltage.

CATHODE-RAY TUBES

| Maximum Dimensions | | Min. Useful Screen Diam. Inches | Maximum Ratings ^b | | | | Operating Conditions | | | | | | | Type |
|-------------------------------------|-----------------------|---------------------------------|------------------------------|------------------|------------------|------------------------------------|-----------------------------------|--|-------------------------|---|---|--|--|------|
| | | | Anode Volts | Grid-No. 3 Volts | Grid-No. 2 Volts | Grid-No. 1 Bias Volts ^c | Anode Volts | Grid-No. 3 Voltage for Focus Approx. | Grid-No. 2 Volts | Maximum Grid-No. 1 Volts for Visual Cutoff ^d | Deflection Factors Volts dc/in. | | | |
| Overall Length Inches | Envelope Diam. Inches | | | | | | | | | | DJ1 & DJ2 ^e | DJ3 & DJ4 | | |
| OSCILLOGRAPH TYPES - (Con'd) | | | | | | | | | | | | | | |
| 9-3/8 | 3-1/16 | 2-3/4 | 2500 | 1000 | 2500 | -200 | 2000 1000 | 330 to 620 165 to 310 | 2000 1000 | -135 -67.5 | 146 to 198 73 to 99 | 104 to 140 52 to 70 | 3RP1 3RP1A | |
| 11-5/8 | 3-1/16 | 2-3/4 | 2500 | 1000 | 2500 | -200 [†] | 2000 1500 1000 | 330 to 620 247 to 465 165 to 310 | 2000 1500 1000 | -100 -75 -50 | 83 to 101 62.3 to 75.8 41.5 to 50.5 | 57 to 70 42.8 to 52.5 28.5 to 35 | 3WP1 <i>3WP11</i> | |
| 17-1/8 | 5-11/32 | 4-9/16 | 6000 | 1000 | 2600* | -200 | 4000 3000 2000 ^z | 400 to 690 300 to 515 400 to 690 | 2000* 1500* 2000* | -87 -65 -87 | 53 to 72 40 to 54 43 to 58 | 36 to 48 27 to 36 29 to 39 | 5ABP1 <i>5ABP7</i> <i>5ABP11</i> | |
| 16-15/16 | 5-11/32 | 4-1/2 | 6000 | 1000 | 2600* | -200 | 4000 3000 2000 ^z | 400 to 690 300 to 515 400 to 690 | 2000* 1500* 2000* | -75 -56 -75 | 53.4 to 66.6 40 to 50 43 to 53 | 40.6 to 50 30.5 to 37.5 32 to 40 | 5ADP1 | |
| 17-1/8 | 5-5/16 | 4-1/2 | 2000 | 1000 | 2000 | -125 | 2000 1500 | 340 to 560 255 to 420 | 2000 1500 | -60 -45 | 70 to 96 53 to 72 | 64 to 88 48 to 66 | 5BP1A | |
| 17-1/8 | 5-11/32 | 4-1/2 | 4000 | 1000 | 2000* | -200 | 4000 3000 2000 ^z | 375 to 690 280 to 515 375 to 690 | 2000* 1500* 2000* | -90 -67.5 -90 | 78 to 106 59 to 80 62 to 84 | 66 to 90 50 to 68 54 to 74 | 5CP1A <i>5CP11A</i> <i>5CP12</i> | |
| 11-1/2 | 5-1/32 | 4-1/4 | 8000 | - | 700 | -180 | 7000 4000 [∅] | - | 250 250 | -70 -70 | Deflection Angle, 53° approx. | | 5FP7A | |
| 11-1/2 | 5-1/32 | 4-1/4 | 8000 | - | 700 | -180 | 5000 4000 | - | 250 250 | -70 -70 | Deflection Angle, 53° approx. | | 5FP15A | |
| 15-1/8 | 5-11/32 | 4-1/2 | 2500 | 1000 | 2500 | -200 | 2000 1000 | 340 to 640 170 to 320 | 2000 1000 | -90 -45 | 56 to 77 28 to 39 | 46 to 62 23 to 31 | 5UP1 | |
| 15-1/8 | 5-11/32 | 4-1/2 | 2500 | 1000 | 2500 | -200 | 2000 [∅] 1500 | 340 to 640 255 to 480 | 2000 1500 | -90 -67.5 | 56 to 77 42 to 58 | 46 to 62 35 to 47 | 5UP7 <i>5UP11</i> | |
| 13-5/8 | 7-1/8 | 6 | 8000 | - | 700 | -180 | 7000 4000 [∅] | - | 250 250 | -70 -70 | Deflection Angle, 53° approx. | | 7BP7A | |
| 13-1/8 | 7-5/16 | 6 | 8000 | - | +700 -180 | -180 | 7000 4000 [∅] | - | 250 250 | -63 -63 | Deflection Angle, 50° approx. | | 7MP7 | |
| 14-7/8 | 7-1/8 | 6 | 4000 | 2000 | 4000 | -200 | 3000 1500 | 800 to 1200 400 to 600 | 3000 1500 | -84 -42 | 93 to 123 47 to 62 | 75 to 102 38 to 51 | 7VP1 7VP31 | |
| 7-5/8 | 2-1/16 | 1-3/4 | 600 | 300 | 600 | -125 | 600 400 | 85 to 180 57 to 120 | 600 400 | -90 -60 | 110 to 166 73 to 111 | 96 to 141 64 to 94 | 902A | |

Italicized types are not recommended for new equipment design.

^j For monitor raster cutoff.

^k For information on picture tubes used in television broadcast receivers, see RCA booklet 1275K (RCA Receiving Tubes and Picture Tubes).

^m For anode current of 20 uamp.

ⁿ For anode current of 100 uamp.

^p For raster-cutoff.

^q Diagonal.

^r Absolute value.

^s Grid-No. 4 volts.

^t Heater rating: 6.6 volts, 0.62 amp.

^u Excluding side cap.

^v Quality rectangle. Max. faceplate temperature = 100° C. Tube requires 40 cfm air flow to faceplate.

^w Recommended operating value.

^x Heater rating: 2.5 volts, 2.1 amp.

^z It is recommended that the anode voltage be not less than 3000 volts for high-speed scanning.

[†] Positive-bias and positive-peak value = 0 volts.

* And Grid-No. 4 volts.

[∅] Recommended minimum voltage.

FLUORESCENT SCREENS

Phosphor P1 produces a brilliant spot having yellowish-green fluorescence and medium persistence. Types having this phosphor are particularly useful for general oscillographic applications in which recurrent wave phenomena are to be observed visually.

Phosphor P2 is a medium-short persistence screen which exhibits yellowish-green fluorescence and phosphorescence. The phosphorescence may have useful persistence for over a minute under conditions of adequate excitation and low-ambient illumination. Types utilizing this phosphor are particularly useful for observing either low- or medium-speed non-recurring phenomena.

Phosphor P4 - Sulfide Type is a highly efficient screen having white fluorescence and medium-short persistence. Types having this phosphor are of particular interest for television picture tubes.

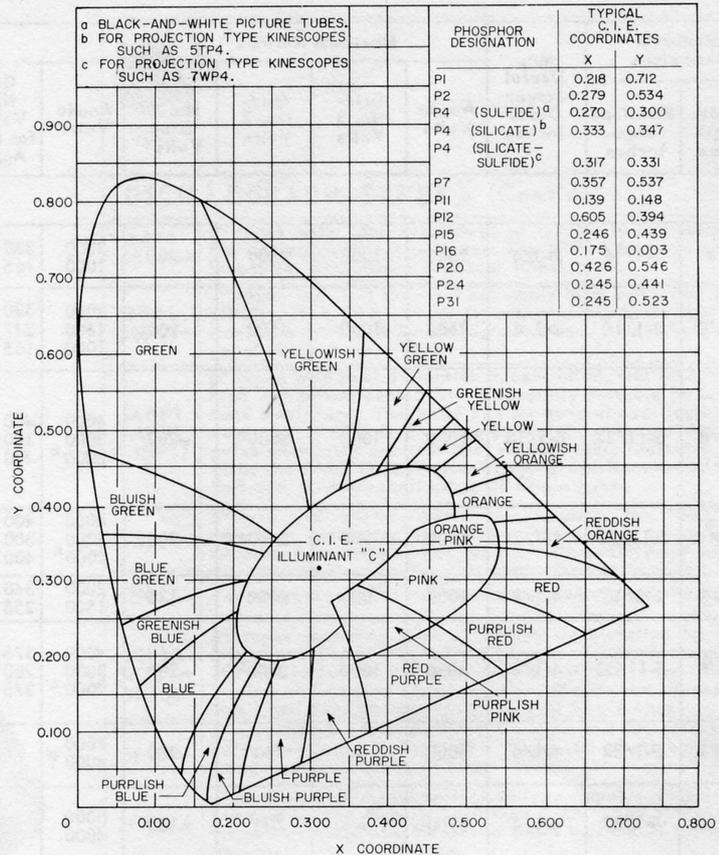
Phosphor P4 - Silicate Type exhibits white fluorescence and has medium to medium-short persistence. Types having this phosphor are of particular interest for projection-type kinescopes.

Phosphor P4 - Silicate - Sulfide Type exhibits white fluorescence and has medium to medium-short persistence. Types having this phosphor are of particular interest for projection-type kinescopes.

Phosphor P7 is a long-persistence, cascade (two-layer) screen. During excitation by the electron beam, this phosphor produces a white fluorescence. After excitation, the screen exhibits a yellowish-green phosphorescence which persists for several minutes. Types having this phosphor are particularly useful where either extremely low-speed recurrent phenomena or medium-speed non-recurrent phenomena are to be observed.

Phosphor P11 emits high intensity actinic blue fluorescence and has medium-short persistence to permit its use in all photographic applications except those in which film moves at high speed. P11 screens, because of their unusually high brightness characteristic, may also be used for visual observation of phenomena.

Description of Persistence and Time to Decay to 10% of Initial Brightness - Very long, 1 second and over; long, 100 millisecc to 1 sec; Medium, 1 millisecc to 100 milli-



According to JEDEC Publication No. 16 "Optical Characteristics of Cathode-Ray Tube Screens".

Phosphor P12 is a long persistence phosphor which exhibits both orange fluorescence and phosphorescence. Types utilizing this phosphor are particularly useful for observing low- and medium-speed recurring phenomena.

Phosphor P15 emits radiation in the visible green region and in the invisible near-ultraviolet region. The ultraviolet radiation has very-short-persistence which is appreciably shorter than that of the visible radiation. This phosphor finds application in flying-spot cathode-ray tubes.

Phosphor P16 has bluish-purple as well as near ultraviolet fluorescence and phosphorescence with very-short persistence. This phosphor has a stable, exponential decay characteristic and is particularly useful for the high-speed scanning requirements of a flying-spot video-signal generator.

Phosphor P20 has high luminous efficiency, yellow-green fluorescence and medium to medium-short persistence. The screen may be used in applications requiring relatively short persistence and good visual efficiency.

Phosphor P24 is a short-persistence phosphor with green fluorescence and phosphorescence. Its spectral-energy emission characteristic has sufficient range to provide usable energy over the visible spectrum required for generating color signals from color transparencies.

Phosphor P31 is a medium-short persistence screen which exhibits green fluorescence and phosphorescence. Types utilizing this phosphor are particularly useful for observing either low- or medium-speed non-recurring phenomena.

sec; Medium Short, 10 microsec to 1 millisecc; Short, 1 microsec to 10 microsec; Very Short, less than 1 microsec.

RCA STORAGE TUBES and CATHODE-RAY TUBES

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Italicized types are not recommended for new equipment design.

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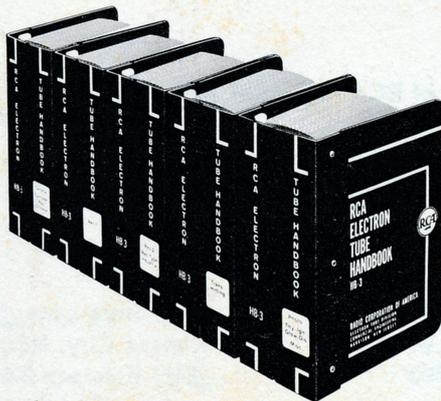
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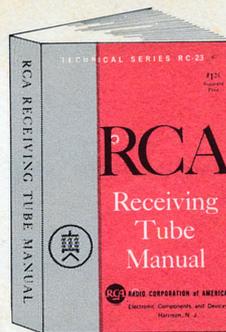
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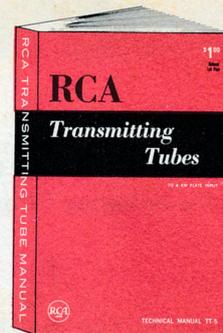
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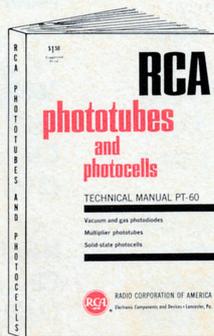
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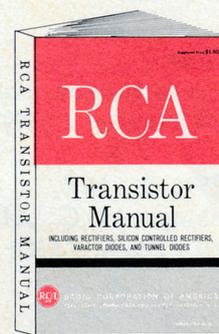
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