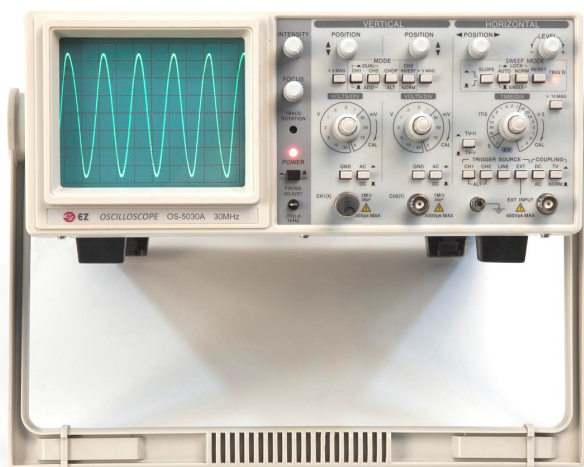


# OS-5020A, OS-5030A



## FEATURES

- **OS-5020A: 20MHz 2channel dual trace**
- **OS-5030A: 30MHz 2channel dual trace**
- 6" Rectangular CRT with internal graticule
- Sensitivity 1mV/div
- TV sync. separator circuit for stable TV signal observation
- Sweep magnification (x 10)
- ALT triggering function
- CH2 Polarity inversion switch
- 400V maximum input voltage
- High sensitivity X-Y mode

| SPEC                                |                                                                   | MODEL                                                                                                                                                 | OS-5020A                                  | OS-5030A     |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|-------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------|-----|------|-----|---------|-------------------------------------------------------------------------------------------------------------------------------|--|--------------|-----|------|-----|---------|
| CRT                                 | Configuration and Useful Screen                                   | 6-inch rectangular screen with internal graticule: 8 x 10Div (Div=cm)<br>Marking for measurement of rise time, 2mm subdivision along the central axis |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Accelerating potential                                            | +1.9KV approx (ref. cathode)                                                                                                                          |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Phosphor                                                          | P31                                                                                                                                                   |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Focusing                                                          | Possible                                                                                                                                              |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Trace Rotation                                                    | Provided                                                                                                                                              |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Intensity Control                                                 | Provided                                                                                                                                              |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Input Signal                                                      | TTL Level                                                                                                                                             |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Bandwidth                                                         | DC to 5MHz (-3dB)                                                                                                                                     |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Coupling                                                          | DC                                                                                                                                                    |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Input Impedance                                                   | 10KΩ typical                                                                                                                                          |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| Z-AXIS INPUT (INTENSITY MODULATION) | Max. Input Voltage                                                | 50V (DC + peak AC)                                                                                                                                    |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Bandwidth (-3dB)                                                  | DC ~ 20MHz (DC coupled)                                                                                                                               | DC ~ 30MHz (DC coupled)                   |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Bandwidth (-3dB)                                                  | 10Hz ~ 20MHz (AC coupled)                                                                                                                             | 10Hz ~ 30MHz (AC coupled)                 |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Mode                                                              | CH1, CH2, DUAL (ALT, CHOP), ADD, X-Y                                                                                                                  |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Deflection Factor                                                 | 5mV/div ~ 20V/div in 12 calibrated step of 1-2-5 sequence,<br>Continuously variable between steps.                                                    |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| VERTICAL DEFLECTION                 | Accuracy                                                          | Normal: ±3%, Magnified: ±3%                                                                                                                           |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Input Impedance                                                   | 1±5%MQ in parallel with ≤30pF (direct)                                                                                                                | 10±5%MQ in parallel with ≤23pF (by probe) |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Max Input Voltage                                                 | 400V (DC + AC peak)                                                                                                                                   |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Input Coupling                                                    | AC-GND-DC                                                                                                                                             |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Rise Time                                                         | 17.5ns or less (70ns or less: x 5 MAG)                                                                                                                | 12ns or less (35ns or less: x 5 MAG)      |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Polarity Inversion                                                | CH2 only                                                                                                                                              |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Display Mode                                                      | Normal, X-Y, x 10, Variable                                                                                                                           |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Time Base                                                         | 0.1μs/Div ~ 0.2s/Div in 20 calibrated steps of 1-2-5 sequence                                                                                         |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Accuracy                                                          | ≤ ±3%, additional error for magnification±5%                                                                                                          |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Sweep Magnification                                               | 10 times (Max sweep rate: 0.1μs/Div)                                                                                                                  |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| TRIGGER SYSTEM                      | Mode                                                              | AUTO, NORMAL, TV0V, TV-H                                                                                                                              |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Source                                                            | CH, CH2, ALT, LINE, EXT                                                                                                                               |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Coupling                                                          | AC, DC, EXT, Normal, TV-H, TV-V                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Slop                                                              | + or -                                                                                                                                                |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Sensitivity and Frequency AUTO, NORM                              | <table><tr><td></td><td>50Hz ~ 20MHz</td></tr><tr><td>INT</td><td>1Div</td></tr><tr><td>EXT</td><td>0.2Vp-p</td></tr></table>                         |                                           | 50Hz ~ 20MHz | INT | 1Div | EXT | 0.2Vp-p | <table><tr><td></td><td>50Hz ~ 30MMz</td></tr><tr><td>INT</td><td>1Div</td></tr><tr><td>EXT</td><td>0.2Vp-p</td></tr></table> |  | 50Hz ~ 30MMz | INT | 1Div | EXT | 0.2Vp-p |
|                                     |                                                                   | 50Hz ~ 20MHz                                                                                                                                          |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | INT                                                               | 1Div                                                                                                                                                  |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | EXT                                                               | 0.2Vp-p                                                                                                                                               |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     |                                                                   | 50Hz ~ 30MMz                                                                                                                                          |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | INT                                                               | 1Div                                                                                                                                                  |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| EXT                                 | 0.2Vp-p                                                           |                                                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| TV-V, TV-H                          | At least 2Div or 0.3Vp-p                                          |                                                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| External Trigger Input Impedance    | 1MΩ±5% in parallel with 30pF                                      |                                                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| Max. Input Voltage                  | 400V (DC+AC peak)                                                 |                                                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| Deflection Factor                   | Same as Vertical deflection for both, X-axis(CH1) and Y-axis(CH2) |                                                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| X-Y OPERATION                       | Bandwidth                                                         | DC: 0 ~ 1MHz (-3dB)<br>AC: 10Hz ~ 1MHz (-3dB)                                                                                                         |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | X-Y Phase Difference                                              | 3° or less (at DC to 50KHz)                                                                                                                           |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Waveform                                                          | Square waveform                                                                                                                                       |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| CALIBRATION                         | Amplitude                                                         | 0.5Vp-p±2%                                                                                                                                            |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Frequency                                                         | 1KHz±2%                                                                                                                                               |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Power                                                             | 110V±10%, 230V±10%                                                                                                                                    |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| POWER SUPPLY                        | Frequency                                                         | 50/60Hz                                                                                                                                               |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Power consumption                                                 | Approx.35W                                                                                                                                            |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Weight                                                            | Approx. 7.2Kg                                                                                                                                         |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
| PHYSICAL CHARACERISTICS             | Size                                                              | 320mm×130mm×400mm                                                                                                                                     |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |
|                                     | Accessory supplied                                                | Manual x 1, Power code x , Spare Fuse x 1                                                                                                             |                                           |              |     |      |     |         |                                                                                                                               |  |              |     |      |     |         |