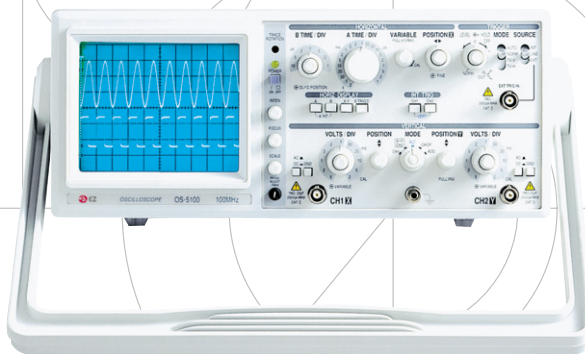


# OS-5100, OS-5060A, OS-5040A

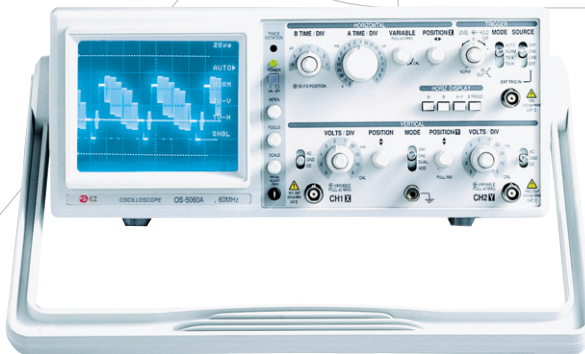
The OS-5000 series are well designed with frequency BandWidth from 40MHz to 100MHz to satisfy both higher quality and performance and lower cost requirements in the field of school, industry, service shop and experimental support of hobbyists.

All of the series are featuring with 6-inch rectangular CRT with internal graticule  $8 \times 10$  div(1div=1cm) and TV signal synchronization function, etc. Featuring with a delayed sweep enable improved observation of any desired, portions of the signal displayed with the main time base



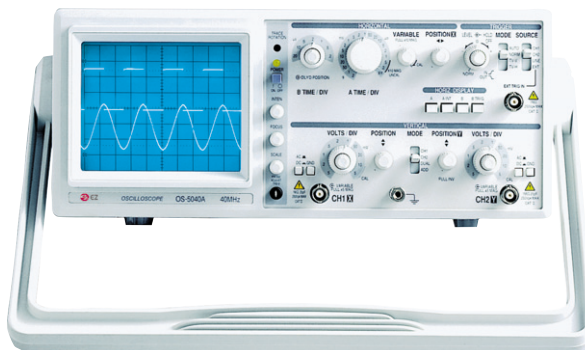
## OS-5100 100MHz 2CH dual trace

- 6" large size high luminance CRT
- Wider than specified frequency response
- Signal delay with delay line useful for observation of signal start point
- ALT. Triggering function(Vert Mode)
- Auto focusing according to the change of intensity
- Drift compensation circuit employed in vertical amplifier for low drift
- Jitterless and high trigger sensitivity
- TV sync. separation and hold-off circuit useful in video signal observation



## OS-5060A 60MHz 2CH dual trace

- 6" larger size, high luminance CRT
- Wide dynamic range even at high frequencies
- High deflection factor
- Max. sweep time of 10ns / div
- Variable hold - off function
- Delay sweep function
- Level control allows superior triggering
- TV synch. circuit
- X - Y operation
- Signal delay line
- Scale illumination



## OS-5040A 40MHz 2CH dual trace

- 6" large size high luminance CRT
- Wide dynamic range even at high frequencies
- High deflection factor
- Max. sweep time of 20ns / div
- Variable hold - off function
- Delay sweep function
- Level control allows superior triggering
- TV synch. circuit
- X - Y operation
- Signal delay line
- Scale Illumination

# Specifications

REAL-TIME OSCILLOSCOPE

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SPEC		MODEL	OS-5100	OS-5060A	OS-5040A																										
CRT	Configuration and Useful Screen	6-inch rectangular with internal graticule : 8 × 10div(10Div=1cm), marking for measurement of rise time, 2mm subdivisions along the central axis.																													
	Accelerating Potential	+10.5kv approx.(ref. cathode)	+10kv approx.(ref. cathode)	+12kv approx.																											
	Phosphor	P31(standard)																													
	Focussing	Possible																													
	Trace Rotation	Provided																													
	Intensity Control	Provided																													
Z-Axis Input (Intensity Modulation)	Input Signal	Positive going signal decreases+5Vp-p or more signal cases noticeable modulation at normal intensity settings.																													
	Bandwidth	DC - 3.5MHz(-3dB)		DC to 2MHz(-3dB)																											
	Coupling	DC																													
	Input Impedance	25 Ω	20k Ω-30k Ω typical	20k Ω- 30k Ω																											
	Maximum Input Voltage	20V(DC+peak AC)	30V(DC+peak AC)	30V(DC+peak AC)																											
VERTICAL DEFLECTION	BandWidth(-3dB)	DC(10Hz) to 100MHz DC(10Hz) to 20MHz(2mV Range)	DC(10Hz) to 60MHz DC(10Hz) to 20MHz( ×5 Mag on)	DC(10Hz) to 40MHz DC(10Hz) to 7MHz( ×5 Mag on)																											
	Modes	CH1, CH2, ADD, ALT, CHOP	CH1, CH2, ADD(CHOP : Time / Div switch -0.2s to 5ms, ALT : Time/Div 2ms to 0.1, μs)	CH1, CH2, ADD, DUAL(CHOP : Time / Div 0.2s to 5ms, ALT : Time/Div 2ms to 0.2, μs)																											
	Deflection Factor	2mV/Div to 5V/Div to 11 calibrated steps of 1-2-5 sequence	5mV/Div to 5V/Div to 1mV/Div( ×5 Mag on) in 10 calibrated steps of 1-2-5 sequence																												
	Accuracy	±3%	±3%( ±5% × 5 mag on)																												
	Input Impedance	Approx. 1M Ω in parallel with 25pF																													
	Maximum input Voltage	Direct : 250V(DC+peak AC)																													
	Input Coupling	AC-GND-DC																													
	Rise Time	3.5ns or less(17.5ns or less : 2mV/div)	5.8ns or less(23ns or less : 5 MAG)	8.8ns or less(50ns or less : 5 MAG)																											
	CH1 OUT	20mV/Div into 50 Ω: 50Hz to 30MHz(-3dB)	20mV/Div into 50 Ω: DC to 10MHz(-3dB)																												
	Polarity Inversion	CH2 Only																													
HORIZONTAL DEFLECTION	Display Modes	A,A int B,B TRIG' D,X-Y																													
	Time Base A	0.1, μs/Div to 0.2s/Div in 20 calibrated steps of 1-2-5 sequence		0.2, μs/Div to 20s/Div in 19 calibrated steps of 1-2-5 sequence																											
	Hold-off Time	Variable with hold-off control																													
	Time Base B	0.1, μs/Div to 10, μs/Div in 7 calibrated steps of 1-2-5 sequence		0.2, μs/Div to 20, μs/Div in 7 calibrated steps of 1-2-5 sequence																											
	Delay Sweep Position	1Div or less - 10Div or more																													
	Delay Time Jitter	better than 1:20000																													
	Sweep Magnification	10 time(Max Sweep Rate : 10ns/Div)		10times(Max Sweep Rate : 20ns/Div)																											
	Accuracy	±3%(additional error for magnifier : 2%)																													
TRIGGER SYSTEM	Modes	Auto, Norm, TV-V, TV-H																													
	Source	CH1, CH2, LINE, EXT																													
	Coupling	AC																													
	Slope	+ or -																													
	Sensitivity and Frequency AUTO, NORM	<table border="1"> <tr> <td></td> <td>30Hz to 10MHz</td> <td>10Hz - 100MHz</td> </tr> <tr> <td>INT</td> <td>0.48Div</td> <td>1.5Div</td> </tr> <tr> <td>EXT</td> <td>0.2 Vp - p</td> <td>0.6 Vp - p</td> </tr> </table>		30Hz to 10MHz	10Hz - 100MHz	INT	0.48Div	1.5Div	EXT	0.2 Vp - p	0.6 Vp - p	<table border="1"> <tr> <td></td> <td>20Hz - 2MHz</td> <td>2MHz - 60MHz</td> </tr> <tr> <td>INT</td> <td>0.5Div</td> <td>1.5Div</td> </tr> <tr> <td>EXT</td> <td>0.15Vp - p</td> <td>0.3 Vp - p</td> </tr> </table>		20Hz - 2MHz	2MHz - 60MHz	INT	0.5Div	1.5Div	EXT	0.15Vp - p	0.3 Vp - p	<table border="1"> <tr> <td></td> <td>20Hz - 2MHz</td> <td>2MHz - 40MHz</td> </tr> <tr> <td>INT</td> <td>0.5Div</td> <td>1.5Div</td> </tr> <tr> <td>EXT</td> <td>0.2 Vp - p</td> <td>0.8 Vp - p</td> </tr> </table>		20Hz - 2MHz	2MHz - 40MHz	INT	0.5Div	1.5Div	EXT	0.2 Vp - p	0.8 Vp - p
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INT	0.5Div	1.5Div																													
EXT	0.2 Vp - p	0.8 Vp - p																													
TV-V, TV-H	at least 1Div or 1.0Vp-p																														
External Trigger Input impedance	1M Ω in parallel with approx. 22pF	1M Ω in parallel with approx 30pF																													
Maximum Input Voltage	250V(DC+AC peak)																														
X-Y OPERATION	Sensitivity	same as vertical deflection for both, X-axis(CH1)and Y-axis(CH2)																													
	X-axis Bandwidth	DC to 2MHz	DC to 500KHz(-3dB)																												
	X - Y Phase Difference	3° or less(at DC to 100kHz)	3° or less(at DC to 50kHz)																												
CALIBRATOR	Probe Adjustment	approx. 1kHz Square wave, 0.5Vp-p ± 3%, duty ratio : 50%																													
POWER SUPPLY	Line Voltage Range	<table border="1"> <tr> <td>Voltage Range</td> <td>Fuse(250V)</td> </tr> <tr> <td>100(90-110V)AC</td> <td>2A 250V</td> </tr> <tr> <td>120(108-132V)AC</td> <td>2A 250V</td> </tr> <tr> <td>220(198-242V)AC</td> <td>1A 250V</td> </tr> <tr> <td>230(207-250V)AC</td> <td>1A 250V</td> </tr> </table>				Voltage Range	Fuse(250V)	100(90-110V)AC	2A 250V	120(108-132V)AC	2A 250V	220(198-242V)AC	1A 250V	230(207-250V)AC	1A 250V																
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230(207-250V)AC	1A 250V																														
Line Frequency	50 / 60Hz																														
Power Consumption	approx. 55W	approx. 50W	approx. 40W																												
PHYSICAL CHARACTERISTICS	Weight	8.5kg	7.7kg	7.2kg																											
	Size	320mm(W) × 140mm(H) × 430mm(L)																													
OTHERS	Accessories	Operator's manual 1, Spare fuse 2 Power cord 1, probe(option)2																													