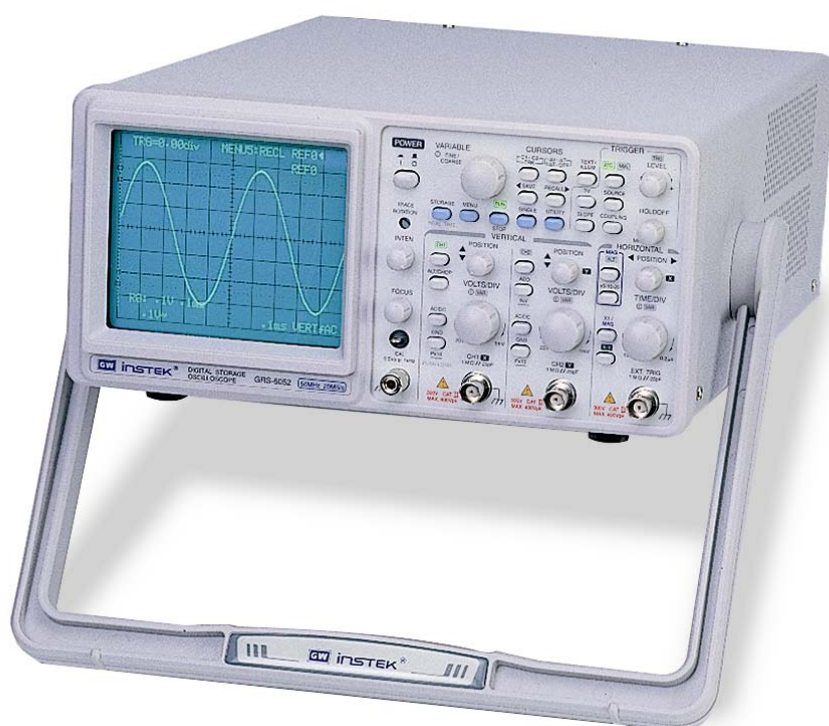


# GRS-6052A/6032A SERIES COMBINED ANALOGUE DIGITAL OSCILLOSCOPES



## FEATURES:-

GRS-6052A: DC~50MHz, 100MS/s, 2kpts/CH

GRS-6032A: DC~30MHz, 100MS/s, 2kpts/CH

2 Channels, 4 Traces

Equivalent Time Sampling of 500MSa/s max.

Waveform SAVE / RECALL

Pre-trigger Function 0 ~ 10 div.

ROLL Mode to 100s/div.

Max. Sweep Rate 10ns/div.

Cursor Readout Function: DV, DT, 1/DT

ALT-MAG Function (x5, x10, x20)

Panel Setting SAVE / RECALL 10 sets.

**SPECIFICATION****CRT:-**

Type	GRS-6052A: 6-inch CRT, 10kV GRS-6032A: 6-inch CRT, 2kV
Intensity & Focus	Front panel control
Illumination	Front panel control
Z-axis Output	Sensitivity: at least 5V (TTL) Polarity: positive going input decrease intensity Max input voltage 30V (DC+AC peak) GRS-6052A Input impedance: approx. 47k $\Omega$ GRS-6032A: Input impedance: approx. 33k $\Omega$

**VERTICAL SYSTEM:-**

Sensitivity & Accuracy	1mV ~ 2mV/DIV $\pm$ 5%, 5mV ~ 20V/DIV $\pm$ 3%, 14 calibrated steps in 1-2-5 sequence
Continuously Variable	2.5:1 ~ min. 50V/DIV
Bandwidth (-3dB) and Rise Time	

		Bandwidth (-3dB)	Rise Time
GRS-6052A	5mV ~ 20V/DIV 1mV ~ 2mV/DIV	DC ~ 50MHz DC ~ 7MHz	Approx. 7nS Approx. 50nS
GRS-6032A	5mV ~ 20V/DIV 1mV ~ 2mV/DIV	DC ~ 30MHz DC ~ 7MHz	Approx. 11.7nS Approx. 50nS
Vertical Mode	CH1, CH2, DUAL (ALT or CHOP)		
Chopper Frequency	Approx. 250kHz		
Sum or Difference	CH1+CH2, CH1-CH2		
Invert	CH2		
Input Impedance	Approx. 1M $\Omega$ $\pm$ 2% // approx. 25pF		
Input Coupling	AC, DC, GND		
Maximum Input Voltage	400V (DC + AC peak)		

**HORIZONTAL SYSTEM:-**

Sweep Time	0.2 $\mu$ S/DIV ~ 0.5S/DIV, 20 steps selectable in 1-2-5 sequence
Continuously Variable	2.5:1 UP TO 1.25s/DIV (uncalibrated.)
Accuracy	$\pm$ 3%, $\pm$ 5% at x5, x10 MAG. $\pm$ 8% at x20 MAG
Sweep Magnification	x5, x10, x20
Max. Sweep Time	GRS-6052A: 20nS/DIV (10nS/DIV are uncalibrated) GRS-6032A: 50nS/DIV (10nS/DIV ~ 40nS/DIV are uncalibrated)
ALT-MAG Function	YES
HOLD-OFF Time	Variable

**TRIGGER SYSTEM:-**

Trigger Modes	AUTO, NORM, TV
Trigger Source	VERT, CH1, CH2, LINE, EXT
Trigger Coupling	AC, HFR, LFR, TV-V (-), TV-H (-)
Trigger Slope	"+" or "-" polarity
ALT Trigger	YES
External Trigger Input	Input Impedance: Approx. 1M $\Omega$ // 25pF (AC coupling) Max input voltage: 400V (DC+AC peak) at 1kHz

Trigger Sensitivity	GRS-6052A	CH1, 2	Vert -Mode	Ext
	20Hz ~ 5MHz	0.5 DIV	2.0 DIV	200mV
	5MHz ~ 40MHz	1.5 DIV	3.0 DIV	800mV
	40MHz ~ 50MHz	2.0 DIV	3.5 DIV	1V
	GRS-6032A	CH1, 2	Vert -Mode	Ext
	20Hz ~ 5MHz	0.5 DIV	2.0 DIV	200mV
	5MHz ~ 40MHz	1.5 DIV	3.0 DIV	800mV
	TV sync pulse more than 1 DIV (CH1, CH2, VERT-MODE) or 200mV(EXT)			

**X-Y OPERATION:-**

Input	X-axis: CH1; Y-axis: CH2
Sensitivity	1mV/DIV ~ 20V/DIV
Bandwidth	X-axis: DC ~ 500kHz (-3dB)
Phase Difference	3° or less from DC to 50kHz

**DIGITAL STORAGE:-**

Acquisition Memory	8 bit ADC x 2
Maximum Sampling rate	500MS/s for Equivalent time sampling, 100MS/s for normal sampling
Dynamic Range	±5DIV
Memory Length	Acquisition Memory: 2kpts/Ch x2 Save REF Memory: 1kpts/Ch x10 with back-up memory Display memory: 1kpts/CH x4 waveform (max.)
Sweep Time	Equivalent: 0.2µs/DIV; 0.5µs/DIV Normal: 1µs/DIV~0.1s/DIV ROLL: 0.2s/DIV~100s/DIV
Sweep Magnification	x5, x10, x20
Max. Sweep Time	10ns/DIV
MAG Interpolation	DOT, Linear
ALT-MAG Function	YES
Acquire Mode	Sample, Peak Detect (>25ns), Envelop, Persist, Average (2~256)
Operation Mode	Auto, Norm, Single, Single-Roll, Roll, X-Y, Average (2~256), Run/Stop
Smoothing Function	Dot joint ON/OFF selectable
Pre-Trigger	0~10DIV in 0.02DIV steps
X-Y Operation	X-axis: CH1, Y-axis: CH2 Storage Bandwidth: GOS-6052A: DC~50MHz (-3dB) GOS-6032A: DC~30MHz(-3dB)
Display Resolution	H: 100 points/DIV; V: 25 points/DIV X-Y: 25*25 points/DIV
Waveform Save/Recall	10 sets

**CURSOR READOUT:-**

Cursor Measurement	ΔV, ΔT, 1/ΔT
Readout Intensity	Adjustable

**OUTPUT SIGNAL:-**

CH1 Signal Output	Voltage: approx. 20mV/DIV (with 50Ω terminated); Bandwidth: 50Hz~5MHz
Calibrator Output	Voltage: 0.5V ±3%; Frequency: 1kHz, Square wave

**INTERFACE:-** RS-232C Interface

**POWER SOURCE:-** AC 100V/120V/ 230V ± 10%, 50/60Hz

**ACCESSORIES:-** Power cord x 1, Instruction manual x 1, Probes (10:1/1:1) x 2

**DIMENSIONS/WEIGHT:-** 275(W) x 130(H) x 370(D) mm, 7.2kg

**ORDERING INFO:-** GRS-6052A: 50MHz, Combined Analogue/Digital Oscilloscope  
GRS-6032A: 30MHz, Combined Analogue/Digital Oscilloscope