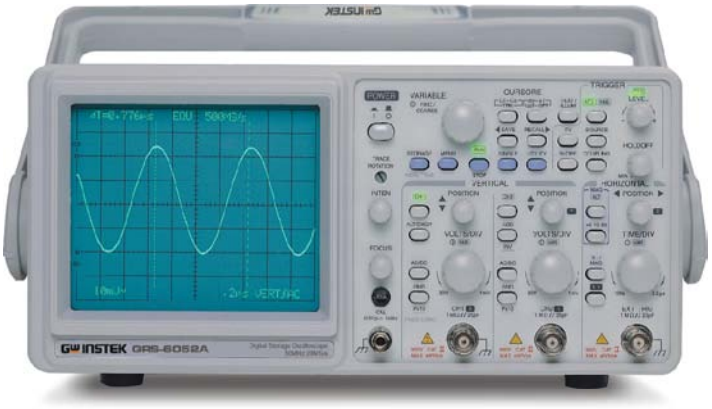


GRS-6052A/6032A

FEATURES

* GRS-6052A : DC~50MHz Bandwidth, 100MSa/s, 2kW/CH x 2
  GRS-6032A : DC~30MHz Bandwidth, 100MSa/s, 2kW/CH x 2
* Equivalent Time Sampling of 500MSa/s max.
* Acquire Mode : Peak Detect, Envelop, Persistence
* Pre-Trigger Function 0 ~ 10 div
* ROLL Mode to 100s/div
* Waveform SAVE/RECALL 10 sets (REF0~REF9)
* Averaging Function (2 ~ 256)
* Smoothing Function ON/OFF
* Max. Sweep Rate 10ns/div
* ALT-MAG Function (x5, x10, x20)
* Cursor Readout Function: △V, △T, 1/△T
* Panel Setting SAVE/RECALL 10 sets (M0~M9)
* VERT Mode Triggering
* RS-232C Interface

SPECIFICATIONS

	GRS-6052A 50MHz, 100MSa/s, 500MSa/s (ETS)	GRS-6032A 30MHz, 100MSa/s, 500MSa/s (ETS)
CRT		
Type and Acceleration	6-inch CRT , 10kV	6-inch CRT , 2kV
ILLUM	Front panel control	Front panel control
Z-axis Input	Sensitivity : at least 5V Polarity : positive going input decrease intensity Max. input voltage:30V(DC+ACpeak) Input Impedance :approx. 33kΩ	Sensitivity : at least 5V Polarity : positive going input decrease intensity Max. input voltage:30V(DC+ACpeak) Input Impedance :approx. 47kΩ
VERTICAL SYSTEM		
Deflection Coefficient and Accuracy	1mV ~ 2mV/div ±5%, 5mV ~ 20V/div ±3%, 14 steps in 1-2-5 sequence	1mV ~ 2mV/div ±5%, 5mV ~ 20V/div ±3%, 14 steps in 1-2-5 sequence
Variable Continuous	2.5 : 1 ~ min. 50V/div	2.5 : 1 ~ min. 50V/div
Bandwidth (-3dB)	1mV ~ 2mV/div: DC~7MHz 5mV ~ 20V/div: DC~50MHz	1mV ~ 20mV/div: DC~7MHz 5mV ~ 20V/div: DC~30MHz
Vertical Mode	CH1, CH2, DUAL (ALT or CHOP)	CH1, CH2, DUAL (ALT or CHOP)
Chopper Frequency	Approx. 250kHz	Approx. 250kHz
Sum or Difference	CH1+CH2, CH1-CH2	CH1+CH2, CH1-CH2
Invert	CH2	CH2
Input Impedance	1MΩ ±2%//approx. 25pF	1MΩ ±2%//approx. 25pF
Input Coupling	AC, DC, GND	AC, DC, GND
Input Voltage	Max. 400V(DC+ACpeak)	Max. 400V(DC+ACpeak)
HORIZONTAL SYSTEM		
Sweep Time	0.2μs/div ~ 0.5s/div, 20 steps	0.2μs/div ~ 0.5s/div, 20 steps
Variable Continuously	2.5 : 1 up to 1.25s/div (uncal.)	2.5 : 1 up to 1.25s/DIV (uncal.)
Accuracy	±3%, ±5% at x5/ x10MAG. ±8% at x 20MAG	±3%,±5% at x5/ x10MAG. ±8% at x 20MAG
Sweep Magnification	x5, x10, x20	x5, x10, x20
Max. Sweep Time	20ns/div (10ns/div uncal)	50ns/div (10ns~40ns/div uncal)
ALT-MAG Function	Yes	Yes
HOLD-OFF Time	Variable	Variable
TRIGGER		
Trigger Mode	AUTO, NORM, TV	AUTO, NORM, TV
Trigger Source	VERT, CH1, CH2, LINE, EXT	VERT, CH1, CH2, LINE, EXT
Trigger Coupling	AC, HFR, LFR	AC, HFR, LFR
Trigger Slope	"+" or "-" polarity	"+" or "-" polarity
ALT Trigger	Yes	Yes
Indicator Trigger LED	Yes	Yes
TV Sync. Separator	TV-V(-), TV-H(-)	TV-V(-), TV-H(-)
Trigger Sensitivity	GRS-6052A: 20Hz ~ 5MHz; 5MHz ~ 40MHz; 40MHz ~ 50MHz GRS-6032A: 20Hz ~ 2MHz; 2MHz ~ 20MHz; 20MHz ~ 30MHz CH1, CH2: 0.5 div; 1.5 div; 2.0 div VERT-MODE: 2.0 div; 3.0 div; 3.5 div EXT: 200mV; 800mV; 1V	
External Trigger Input	TV sync. pulse more than 1 DIV or 200mV (EXT) Input impedance :Approx. 1MΩ//25pF (AC coupling) Max. input voltage :400V (DC + AC peak)	
X-Y OPERATION		
Input	X-axis : CH1 ; Y-axis : CH2	X-axis : CH1 ; Y-axis : CH2
Sensitivity	1mV/div ~ 20V/div	1mV/div ~ 20V/div
Bandwidth	X-axis : DC ~ 500kHz (-3dB)	X-axis : DC ~ 500kHz (-3dB)
X-Y Phase Shift	<3° from DC ~ 50kHz	<3° from DC ~ 50kHz
DIGITAL STORAGE		
Acquisition Digitizer	8 bit ADC x 2	8 bit ADC x 2
Max. Sampling Rate	500MSa/s for equivalent time sampling 100MSa/s for normal sampling	500MSa/s for equivalent time sampling 100MSa/s for normal sampling

Rear Panel

SPECIFICATIONS

Storage Bandwidth	Single shot: DC ~ 25MHz Repetitive: DC ~50MHz	Single shot: DC ~ 25MHz Repetitive: DC ~30MHz
Dynamic Range	±5div	±5div
Memory Length		
Acquisition Memory	2k words/CH x 2, 1k words/CH(equivalent)	2k words/CH x 2, 1k words/CH(equivalent)
Save REF Memory	1k words/CH x 10 with back-up memory (REF0~REF9)	1k words/CH x 10 with back-up memory (REF0~REF9)
Display Memory	1k words/CH x 4 waveform(max.)	1k words/CH x 4 waveform(max.)
Sweep Time	Equivalent: 0.2 µs/div ~ 0.5 µs/div Normal Sample: 1 µs/div ~ 0.1s/div Roll: 0.2s/div ~ 100s/div	Equivalent: 0.2 µs/div ~ 0.5 µs/div Normal Sample: 1 µs/div ~ 0.1s/div Roll: 0.2s/div ~ 100s/div
Sweep Magnification	x 5, x 10, x 20	x 5, x 10, x 20
Max.Sweep Time	10ns/div	10ns/div
MAG Interpolation	DOTS, LINEAR	DOTS, LINEAR
ALT-MAG Function	Yes	Yes
Acquire Mode	Sample, Peak detect(>25ns), Envelop. Persist, Average(2~256)	Sample, Peak detect(>25ns), Envelop. Persist, Average(2~256)
Operation Mode	Auto, Norm, Single, Single-roll, Roll, X-Y, Run/Stop	Auto, Norm, Single, Single-roll, Roll, X-Y, Run/Stop
Smoothing Function	Dot joint ON/OFF selectable	Dot joint ON/OFF selectable
Pre-Trigger	Pre-trigger 0 ~10div in 0.02div steps	Pre-trigger 0 ~10DIV in 0.02div steps
X-Y Operation	X-axis: CH1 Y-axis: CH2	X-axis: CH1 Y-axis: CH2
Storage Bandwidth	DC~50MHz(-3dB)	DC~30MHz(-3dB)
Display Resolution	H: 100points/div; V: 25points/div; X-Y: 25 x 25 points/div	H: 100points/DIV; V: 25points/div; X-Y: 25 x 25 points/div
Waveform SAVE/RECALL	10 sets(REF0~REF9)	10 sets(REF0~REF9)
Panel Setting SAVE/RECALL	10 sets(M0 ~M9)	10 sets(M0 ~M9)
READOUT & CURSOR		
Cursor Measurement	ΔV, ΔT,1/ ΔT	ΔV, ΔT,1/ ΔT
Readout Intensity	Adjustable	Adjustable
OUTPUT SIGNAL		
CH1 Signal Output	Voltage : approx. 20mV/div (with 50Ω terminated) ; Bandwidth : 50Hz ~ 5MHz	
Calibrator Output	Voltage : 0.5V±3% ; Frequency : approx. 1kHz, square wave	
INTERFACE		
RS-232C		
POWER SOURCE		
AC 100V/120V/230V±10%, 50/60Hz		
DIMENSIONS & WEIGHT		
275(W) x 130(H) x 370(D) mm; Approx. 8.5kg		

ORDERING INFORMATION

GRS-6052A 50MHz Digital Storage + Analog Oscilloscope
GRS-6032A 30MHz Digital Storage + Analog Oscilloscope

ACCESSORIES :
User manual x 1, Power cord x 1,
GTP-060A-4 : 60MHz (10 : 1/1 :1) Switchable Passive Probe (one per channel)

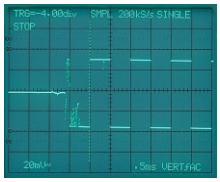
OPTIONAL ACCESSORIES

GTC-001 Instrument Cart, 450(W) x 430(D)mm (120V Input Socket)
GTC-002 Instrument Cart, 330(W) x 430(D)mm (120V Input Socket)
GTL-110 Test Lead, BNC-BNC Heads
GTL-232 RS232C Cable, 9-pin Female to 9-pin, Null Modem for Computer

FREE DOWNLOAD

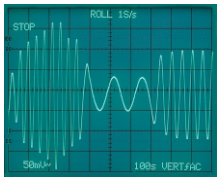
PC Software Remote Control Software

DIGITAL MODE FUNCTIONS



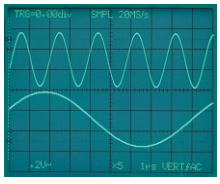
Pre-Trigger

GRS-6000A Series provide Pre-Trigger function, which allows user to observe Pre-Trigger waveform up to 10 divisions ahead of the trigger point.



ROLL Mode

The low-speed transient event of the input signal could be viewed easily under ROLL Mode. The waveform will roll on from right to the left to show the updated input signal all the time.



ALT-MAG

With ALT-MAG function, the user could expand the waveforms by 5, 10, or 20 times for a more detailed waveform observation. Both original waveforms and expanded waveforms could be shown on the screen at the same time.