Two-channel Function/ Arbitrary Waveform Generator

The two-channel function/arbitrary waveform generator is equipped with direct digital synthesis (DDS) technology which enables output signals to be stable and accurate.

Key Features

3.5-inch 480×320TFT LCD with clear graphic interface
Chinese / English menu available
Press key for help and information
File management supporting USB flash disk and local storage
Two-channel output with the highest output frequency is "15M type" Model is 15MHz, Victor 2003A is 25MHz, Victor 2004A is 40MHz, Victor 2006A is 60MHz.
Sampling rate: 200MSa/S, vertical resolution: 13 bit and storage depth: 8k
5 basic waveforms and 32 arbitrary waveforms in-built
Pulse wave output set in edge time
Internal/external AM, FM, PM, ASK, FSK and PSK modulation function
Output of linear/logarithmic frequency sweep and burst waveform
Frequency meter of high precision of 100MHz and 32-bit counter
With RS232 interface, USB Device, USB Host interface supporting USB flash disk storage (USB Host Optional)
Multi-functional arbitrary waveform editing software equipped

General Technical Specifications

Supply voltage: 220V±10%, 45~65Hz, Or 110V±10%, 45~65Hz
Power consumption: < 15W
Types: 3.5-inch TFT LCD screen，Resolution480×320，16M color
Environment: Operation 10 ℃ ~ +40 ℃、Non-operation -10℃~+60℃
Humidity range: Within the range of 0 ~ 40 ℃，≤90% relative humidity
Interface: RS232,USB Device;USB Host(optional)
Display：3.5 inch TFT LCD screen, 480 x 320 resolution
Size：265 * 105 * 305 mm (width x height x deep)
Weight：2.6 kg

Accessories

Standard accessories:
1 piece of 30A51 three-wire power line;
1 piece of 33A52 BNC coaxial cable;
1 CD-ROM
1User guide.

Optional accessories:
BNC alligator clip line (33P01);
Cabinet installation suit (32P02);
RS232 serial line (32P04);
USB data line (32P05).

Frequency Characteristics				
MODEL	15M type	Victor 2003A	Victor 2004A	Victor 2006A
Sine	1μHz ~ 15MHz	1μHz ~ 25MHz	1μHz ~ 40MHz	1μHz ~ 60MHz
Square	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
Triangle	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
Pulse	100μHz ~ 6MHz	100μHz ~ 6MHz	100μHz ~ 6MHz	100μHz ~ 6MHz
Arbitrary	1μHz ~ 6MHz	1μHz ~ 6MHz	1μHz ~ 6MHz	1μHz ~ 6MHz
Noise（-3dB）	7MHz Bandwidth			
Frequency Resolution	1μHz			
Frequency Accuracy	±5ppm			
Frequency Stability	±1ppm/3hour			
Frequency Characteristics				
Waveform Types	Sine, square, triangle, pulse, noise and arbitrary waves (including DC). There are 32 kinds of arbitrary waves and 50 kinds of user-defined waves.			
Waveform Length	8192 points			
Waveform Sampling Rate	200 MSa/s			
Waveform Vertical Resolution	13 bits			

Sine Wave Characteristics		
Sine Wave	Harmonic Distortion	≥45dBc(<1MHz); ≥40dBc(1MHz~20MHz)
	Total Harmonic Distortion	<0.8%(20Hz ~ 20kHz, 0dBm)

Square Wave Signal Characteristics		
Square Wave	Rise/Fall	<20ns
	Overshoot	<5%
	Duty Cycle	freq<100kHz: 1%~99%; 100kHz≤freq<5MHz: 20% ~ 80%; 5MHz≤freq: 40% ~ 60%(0.1% resolution)

Pulse Wave Characteristics		
Pulse Wave	Pulse Width	Min 20ns; 1ns resolution
	Edge Transition Time	Min 20ns;
	Overshoot	<5%
	Jitter	6ns+0.1% Period

Ramp Wave Characteristics		
Ramp Wave	Linearity Degree	≥98%(0.01Hz~10kHz)
	Symmetry	0.0 ~ 100.0%(resolution 0.1%)

Output Characteristics			
Amplitude			
Amplitude Range	freq＜10MHz	10MHz≤freq＜30MHz	30MHz≤freq
	2mVpp ~ 20Vpp	2mVpp ~10Vpp	2mVpp ~5Vpp
Amplitude Resolution	1mV		
Amplitude Stability	±1% set value±1mVpp（1kHz Sine, 0 offset, >10mVpp）		
Amplitude Flatness (relative to 1K Sine, 1 Vpp)	±0.4dB ＜10MHz ; ±1.0dB ≥10MHz。		
Output Impedance	50Ω±10%（Typical）		

Protection	All the signal output terminal can be shorted within 60s	
DC Offset		
	Output Amplitude>0.1V	2mV<Output Amplitude≤0.1V
Offset Adjusting Range	±10Vpk, ac + dc	±0.250Vpk, ac + dc
Offset Resolution	1mV	
Phase characteristics		
Phase Adjusting Range	0~359.9°	
Phase Resolution	0.1°	
External Measurement Function		
Frequency Meter	Frequency measurement range	1Hz ~ 100MHz
	Measurement accuracy	Gate time continuously adjusted between0.01s~10s
Counter Function	Counting region	0 ~ 4294967295
	Control mode	Manual operation
Input Signal Voltage Range	2Vpp~20Vpp	
Coupled Mode	AC or DC	
Pulse Width Measurement	1ns (resolution), 20s (MAX measuring time)	
Period Measurement	1ns (resolution), 20s (MAX measuring time)	
SYNC Output		
Output Channel	CH1 or CH2, default CH1	
Level	TTL	
Impedance	50Ω	
Rise/Fall Time	< 25ns	
Maximum Frequency	25MHz	
AM Modulation		
Output Channel	CH1 or CH2, default CH1	
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	
Source	Internal/External	
Modulation Wave	Sine, square, triangle and ramp	
Modulation Frequency	2mHz~20kHz	
Modulation Depth	0%~120%	
FM Modulation		
Output Channel	CH1 or CH2, default CH1	
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	
Source	Internal/External	
Modulation Wave	Sine, square, triangle and ramp	
Modulation Frequency	2mHz~20kHz	
Frequency Offset	0~Maximum carrier frequency	
PM Modulation		
Output Channel	CH1 or CH2, default CH1	
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	
Source	Internal/External	

Modulation Wave	Sine, square, triangle and ramp
Modulation Frequency	2mHz~20kHz
Phase Offset	0°~ 360°

ASK Modulation	
Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External
Modulation Wave	Square wave of 50% duty ratio
Keying Frequency	2mHz~1MHz
Modulation Amplitude	0~Carrier Amplitude

FSK Modulation	
Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External
Modulation Wave	Square wave of 50% duty ratio
Keying Frequency	2mHz~1MHz
Hop Frequency	Carrier frequency range

PSK Modulation	
Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External
Modulation Wave	Square wave of 50% duty ratio
Keying Frequency	2mHz~1MHz
Modulation Phase	0°~ 360°

Frequency Sweep	
Output Channel	CH1 or CH2, default CH1
Types	Linearity/Logarithm
Sweep Frequency Time	1ms ~ 500.000s
Start/Stop Frequency	1μHz~Maximum carrier frequency
Sweep Direction	Forward, Backward
Trigger Source	Manual operating, internal, external

Burst Characteristics	
Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Pulse Count	1~65535 or infinite, gated
Start/Stop Phase	0~360°
Internal Period	1μs~500s
Gating Source	External
Trigger Source	Internal, external, manual operating

Trigger Input	
Signal Range	2Vpp~20Vpp
Coupling	AC or DC
Pulse Width	>100ns
Reaction Time	<500ns（Burst）
	<10μs（Sweep）

Modulation Input	
Impedance	1MΩ
Signal range	±2.5V ac+dc