MP1763B
Pulse Pattern Generator
Option 08
1/4 Differential Data Output
Operation Manual

First Edition

- **Read this manual before using the equipment.**
- **To ensure that the equipment is used safely, read the "For Safety" in the MP1763B Pulse Pattern Generator Operation Manual first.**
- **Keep this manual with the equipment.**
- **The MP1763B-08 does not conform to CE Marking.**

ANRITSU CORPORATION

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MP1763B
Pulse Pattern Generator　Option 08 1/4 Differential Data Output
Operation Manual

18　November 2005　(First Edition)

Addition of MP1763B-08

When using the MP1763B with the MP1763B-08 option installed, add the specifications shown in the table below to the specifications described in the MP1763B Pulse Pattern Generator Operation Manual (Function/Operation) (M-W1023AE).

The front panel and rear panel of the MP1763B have changed due to the addition of the MP1763B-08 option. See the figures on the following pages.

The operation method remains the same. Refer to the MP1763B Operation Manual.

Option 08 1/4 Differential Data Output Function

Operating frequency range		1/4 SPEED: 100 MHz to 3.125 GHz
1/4 CLOCK output		2, differential, non-independent settings
	Amplitude	0.5 to 2.0 Vp-p/Step 2 mV Setting error: Within ±15% (1.5 to 2.0 Vp-p) or Within ±25% (0.5 to 1.5 Vp-p)
	Offset voltage	–1.5 to +1.5 V (V_{OH})/Step 1 mV (Termination condition: 50 Ω/GND) –1.5 to +1.0 V (V_{OH})/Step 1 mV (Termination condition: 50 Ω/–2 V) Setting error: ±15%, ±15% of amplitude, or ±100 mV whichever is larger
	Rise/fall time	90 ps or less (20 to 80%), typ. 40 ps (typical value at 3.125 GHz)
	Waveform distortion	±15% or 150 mV, whichever is larger
	Load impedance/ termination	50 Ω (with back termination)/GND or –2 V
	Connector	SMA
1/4 DATA output		8, differential, non-independent settings
	Amplitude	0.5 to 2.0 Vp-p/Step 2 mV Setting error: Within ±15% (1.5 to 2.0 Vp-p) or Within ±25% (0.5 to 1.5 Vp-p)
	Offset voltage	–1.0 to +2.5 V (V_{OH})/Step 1 mV (Termination condition: 50 Ω/GND) –1.5 to +1.5 V (V_{OH})/Step 1 mV (Termination condition: 50 Ω/–2 V) Setting error: ±15%, ±15% of amplitude, or ±100 mV, whichever is larger
	Rise/fall time	90 ps or less (20 to 80%), typ. 45 ps (typical value at 3.125 GHz)
	Pattern jitter	50 ps or less (p-p), typ. 20 ps (typical value at 3.125 GHz)
	Waveform distortion	±15% or 150 mV, whichever is larger
	Impedance/termination	50 Ω (with back termination)/GND or –2 V
	Connector	SMA

* 1/8 output is disabled when the MP1763B-08 option is installed.

Refer to the following Figs. 1 to 4 for the details of output amplitude and offset settings:

Option 08 Accessories

Model No.	Name	Q'ty
J1137	Coaxial terminator	10
M-W2669AE	MP1763B Pulse Pattern Generator Option 08 1/4 Differential Data Output Operation Manual	1
M-W2670AE	MP1763B Pulse Pattern Generator (GPIB Programming) Option 08 1/4 Differential Data Output Operation manual	1

CAUTION ⚠

When using either output of the differential outputs (either output of CLOCK and $\overline{\text{CLOCK}}$, or DATA (1, 2, 3, 4) and $\overline{\text{DATA (1, 2, 3, 4)}}$), the other not-used output must be terminated with the same termination condition as that set at the front panel. Or it must be terminated with the 50-Ω terminator of an accessory supplied. If the other not-used output is not terminated properly with such as Open or Short termination, the used-output cannot output the correct signal.

When using both outputs of the differential output pair, they must be terminated with the same termination condition as that set at the front panel. If one is terminated with 50 Ω/GND, and the other is terminated with ECL condition, these setting is not allowed.

Make sure to turn On or Off the power after removing the connections of the MP1763B input/output connectors to any DUTs or external equipment.

Setting range of Output amplitude and Offset

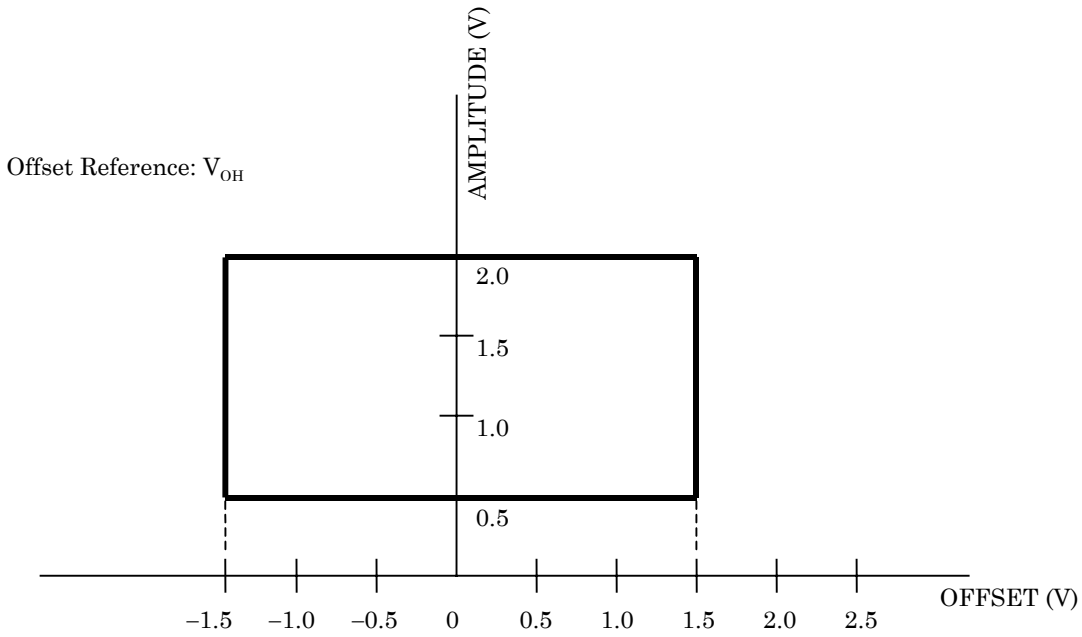


Fig. 1 Setting range of CLOCK Output amplitude and Offset (Termination condition: 50 Ω/GND)

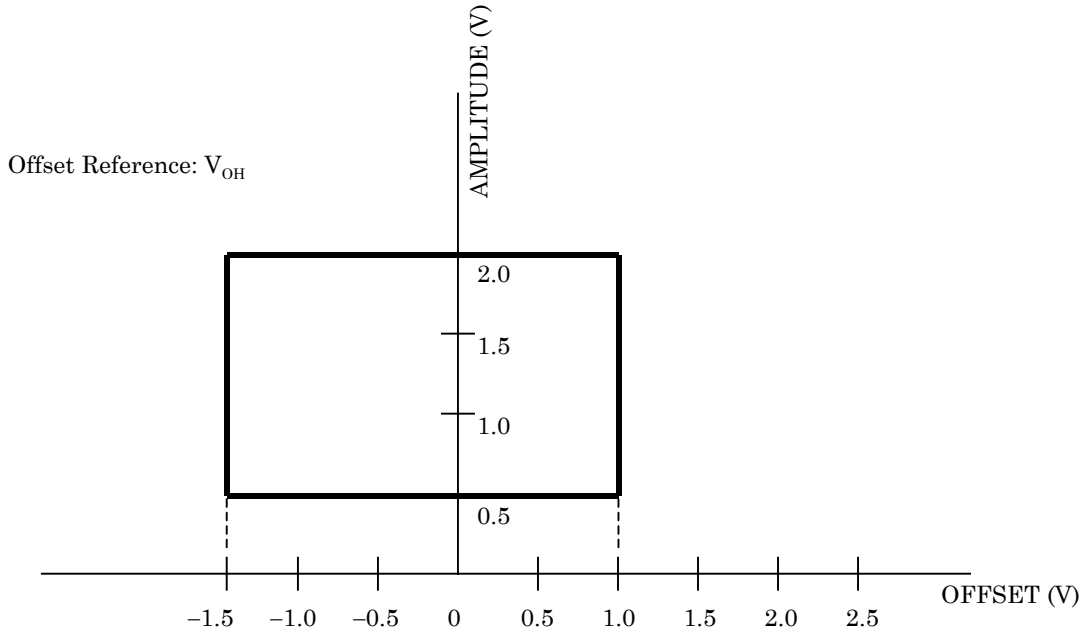


Fig. 2 Setting range of CLOCK Output amplitude and Offset (Termination condition: 50 Ω/–2 V)

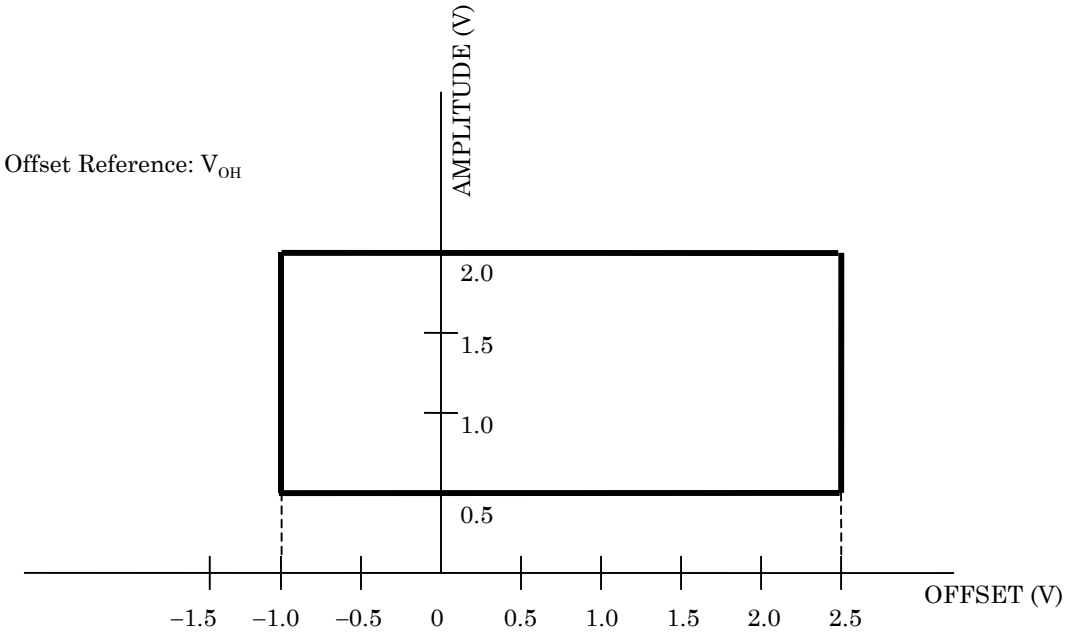


Fig. 3 Setting range of DATA Output amplitude and Offset (Termination condition: 50 Ω/GND)

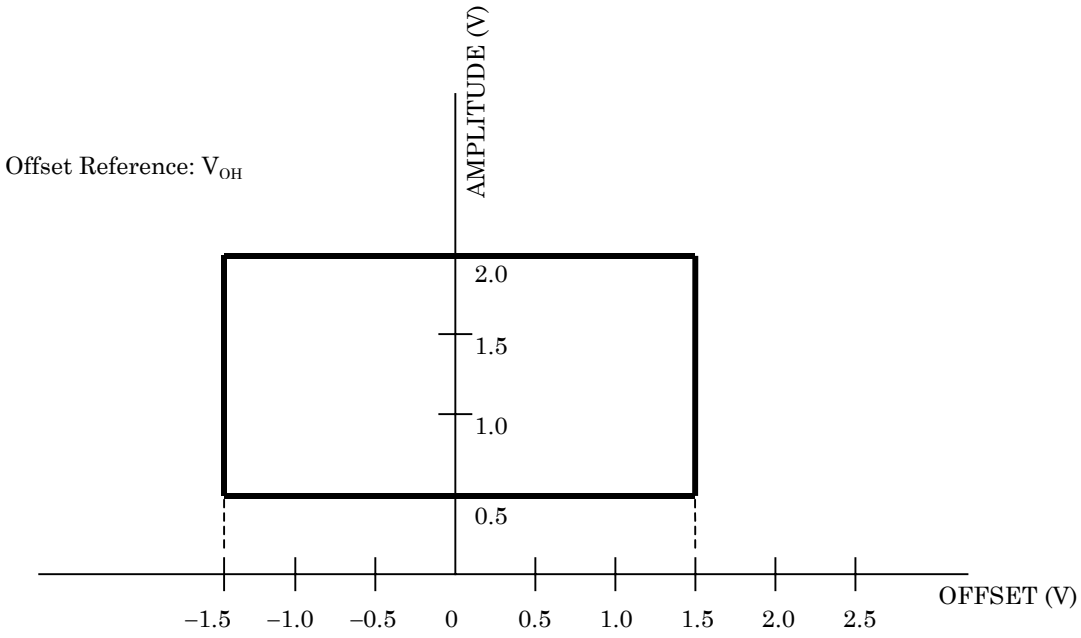
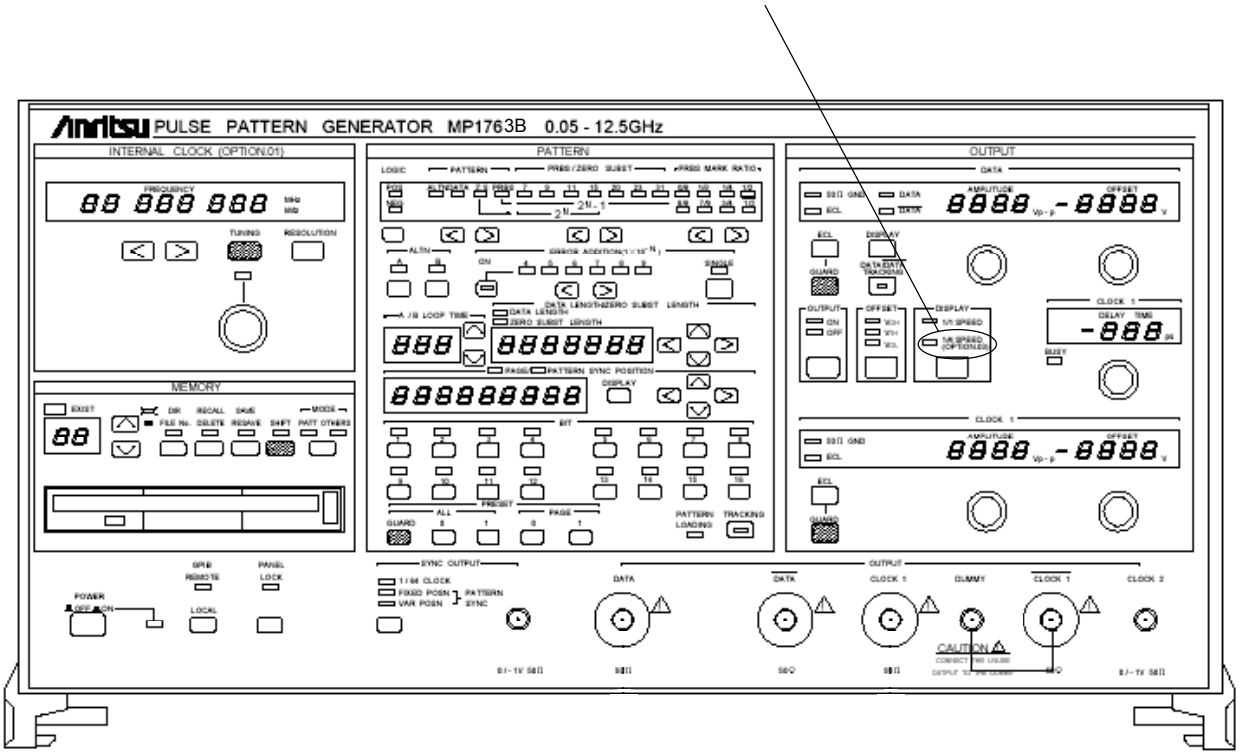


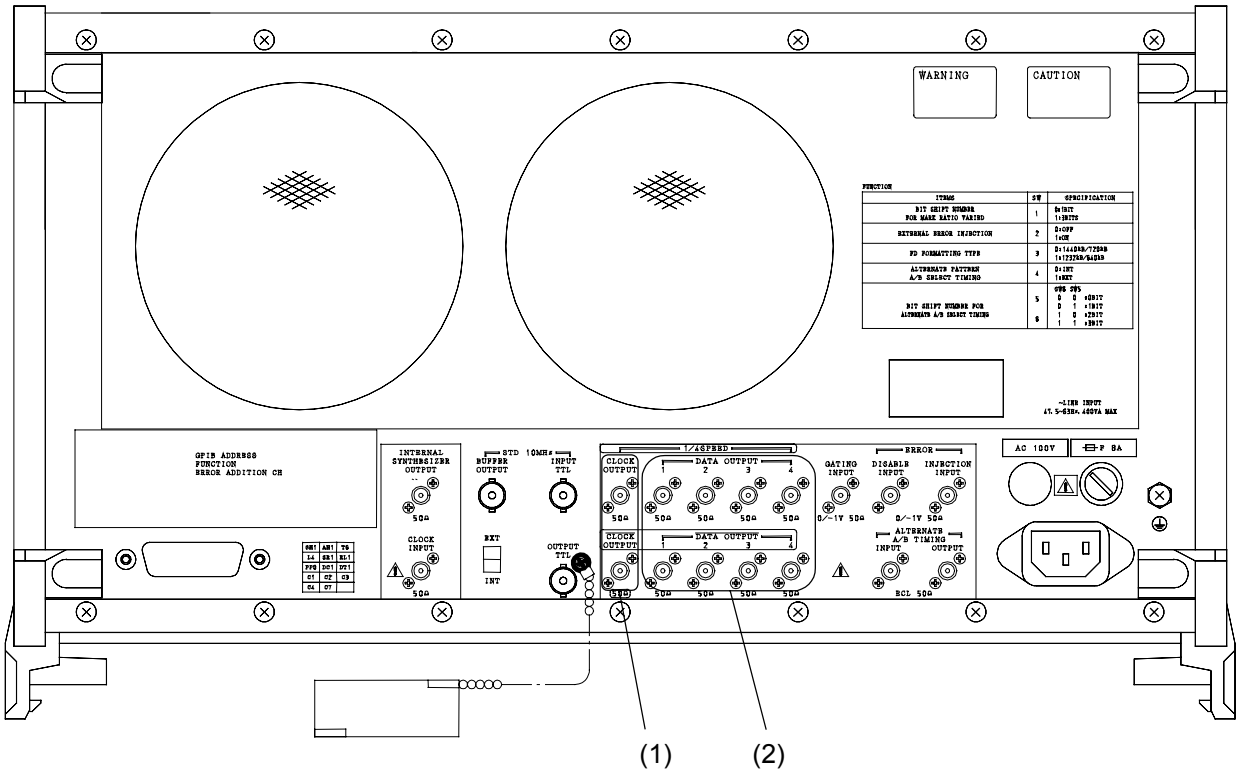
Fig. 4 Setting range of DATA Output amplitude and Offset (Termination condition: 50 Ω/–2 V)

Front Panel

1/4 SPEED (OPTION.03) → 1/4 SPEED (OPTION.08)



Rear Panel



(1)	1/4 CLOCK output	1/4 CLOCK / $\overline{\text{CLOCK}}$ output connector
(2)	1/4 DATA output	1/4 DATA / $\overline{\text{DATA}}$ (1, 2, 3, 4) output connector