

# MSG-2060 GNSS Signal Generator

BeiDou  
new release



Equipped with GPS, GLONASS, QZSS and IMES as standard,  
BeiDou is newly released as option.

## General

The MSG-2060 can deliver pseudo signals of GPS(USA), GLONASS (Russia), QZSS(Japan) as well as IMES(Japan) as standard and BeiDou (China) as optional. It can deliver two (2) types of signals simultaneously among those five (5) types.

## Features

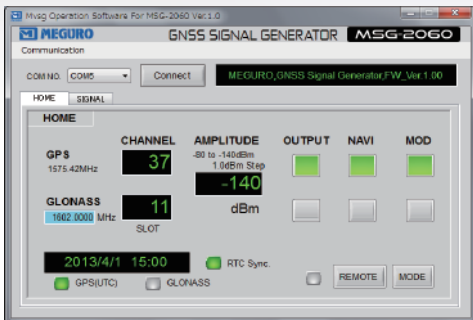
- Utilizing color touch panel for ease of operation and setting on the panel.
- Possible to number each satellite
- Output level setting (swift switching possible from -80 to -140dBm)
- Output of CW (Carrier waveform)
- Setting of real time clock
- Operation and setting possible through USB using the PC application software

# Application screen

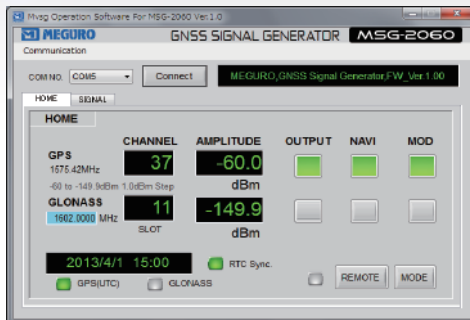
Featuring the following functions

- Most demanded operations are combined in one screen
- Each signal can be set either ON or OFF
- Two output level can also be set independently (-90.0 to -149.9dBm)(Optional)
- The clock can be switched between GPS(UTC) and GLONASS

- Message type, latitude and longitude can be rewritten on IMES
- One simple click to switch five signals
- The display can be switched between Channel and Slot of the satellite number on GLONASS



↑ Standard Main screen



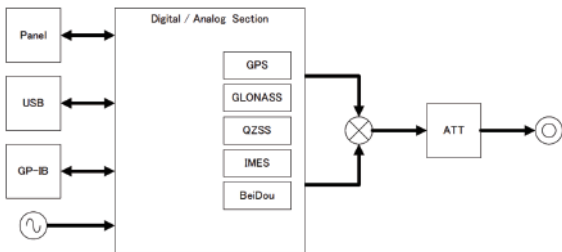
↑ Option Main screen



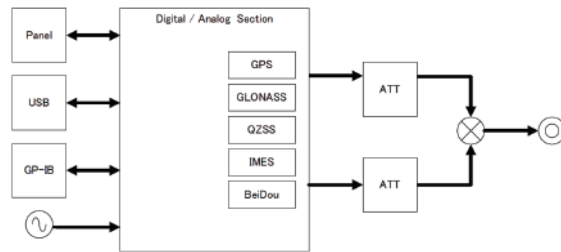
↑ Signal selection screen

## Block diagram

Standard Block Diagram



Option Block Diagram



## Specifications

	Standard	ATT Option	Interface				
Level range	-80 to -140dBm	-90.0 to -149.9dBm	Serial interface		USB TYPE B		
Accuracy	+/- 1.0dB	+/- 1.0dB	Parallel interface		GP-IB		
Level step	1.0dB	0.1dB	Power requirement				
Spurious output	-50dB or less for the secondary harmonics	-50dB or less for the secondary harmonics	Voltage		DC 7.5V(AC adaptor: AC90 ~ 264V 50/60Hz)		
			Dimensions		210(W) x 88(H) x 300(D) mm		
			(Excluding projected portion)		Approx.2.4kg (when in standard)		
			Weight		0 to +40C		
			Operating temperature		+10 to +35C		
			Operation guaranteed temperature		Setting and stored data		
			Battery back up		Windows XP/Windows 7		
			OS				
			GLONASS	GPS	QZSS	IMES	BeiDou
Freq.	1.5980625GHz to 1.605375GHz (L1)		1.57542GHz		1.5754282GHz or 1.5754118GHz		1.561098GHz
Freq. accuracy	Less than $5 \times 10^{-8}$		Less than $5 \times 10^{-8}$				
Freq. step	562.5kHz		—				
PRN code	PR ranging code (511 bit series GOLD coding)		37 C/A code	5 C/A code	10 C/A code		B1I Ranging code
Channel	F-ch 7 to 6		SV1 ~ SV37	SV193 ~ SV197	SV173 ~ SV182		1 ~ 37
Mod Freq.	511kHz clock		1.023MHz clock				2.046MHz clock
Data mod	PR ranging code synch divide, 50bps BPSK		C/A code synch divide, 50bps, BPSK		QPSK		QPSK
NAVI data	50bps test pattern		250bps/50bps		D1: 50bps D2: 500bps		D1: 50bps D2: 500bps

\*IMES bit rate of 250bps or 5-bps can be switched.

● Specifications are subject to change without notice for product improvement.



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