

# All-in-One Unit with Waveform Combine Function Outputs Wanted + Interference Signals

**MG3700A**  
Vector Signal Generator

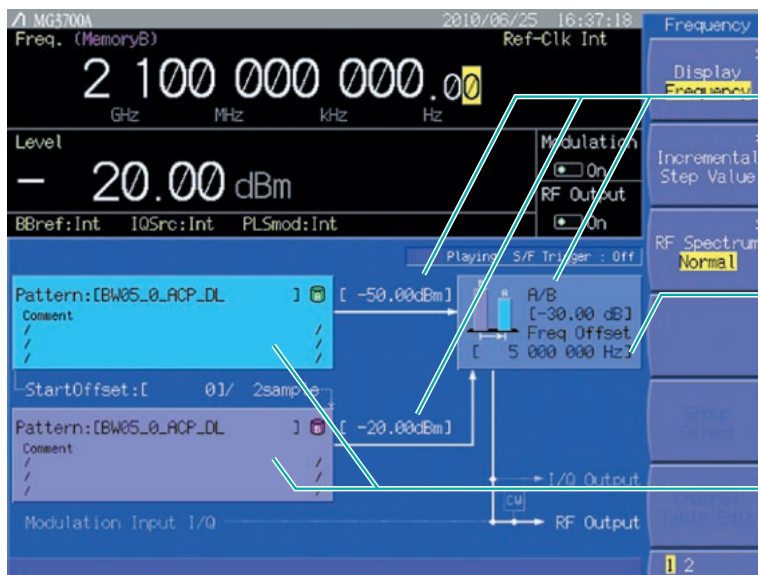


### Frequency Range

- ▣ Standard: 250 kHz to 3 GHz
- ▣ Option: 250 kHz to 6 GHz

## Waveform Combine Function

A separate waveform pattern can be saved in each of the MG3700A's two built-in arbitrary waveform memories. The MG3700A can output each signal alternately or as a combined signal using the Waveform Combine Function.

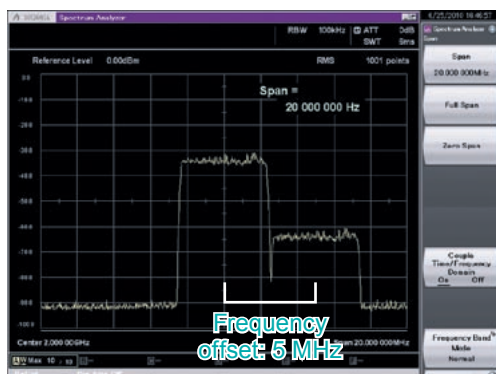


MG3700A Main Screen

- Easy Level Ratio Setting**
  - Each level setting
  - C/N Setting
- Frequency Offset**

A frequency offset can be set at the signals in memory A and memory B.
- Two Signal Patterns**
  - Wanted signal saved in memory A
  - Interference signal saved in memory B

## Output Wanted Signal and Interference Signal from One Unit



Each system has a different frequency offset.

## Tests Using Waveform Combine Function

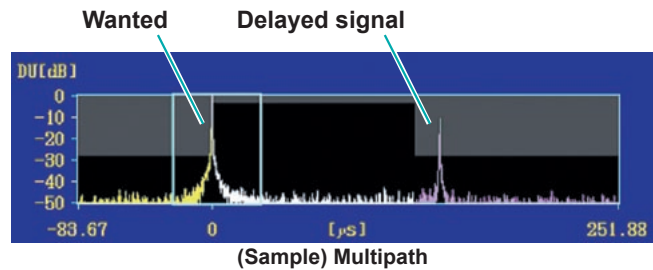
### Wanted Signal and Delayed Signal (Multipath Test)

The MG3700A Waveform Combine Function simulates evaluation of waveform delay (one waveform) by outputting the waveform patterns in memory A and B at different timings. The different timing is set using “Start Offset” shown below.



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Set timing offset

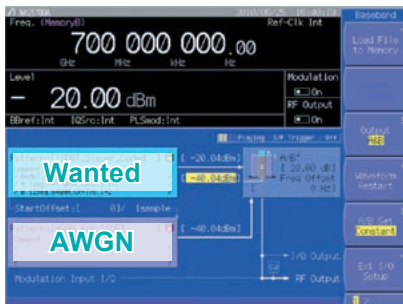


(Sample) Multipath

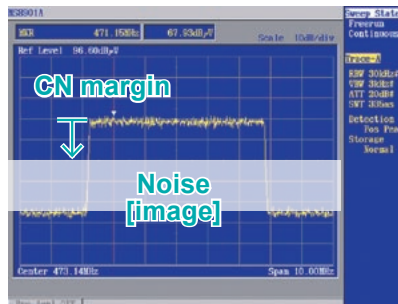
### Wanted Signal and AWGN Signal (CN Test)

The MG3700A Waveform Combine Function supports evaluation of CN margin by setting the wanted signal in memory A, AWGN in memory B, and combining the waveform patterns.

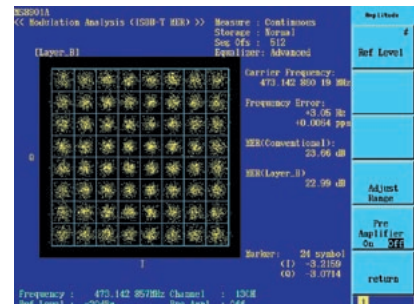
IQproducer supports AWGN generation as a standard function.



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(Sample) Spectrum



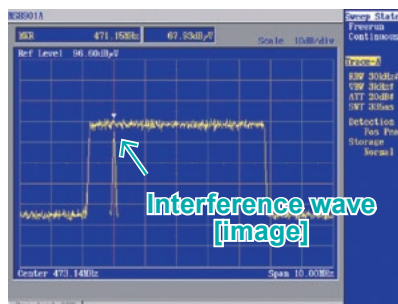
(Sample) Constellation

### Wanted Signal and CW Signal (Interference Test)

The MG3700A Waveform Combine Function supports simulated waveform interference tests by setting the wanted wave in memory A, the interference wave (CW) in memory B, and combining the waveforms.



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(Sample) Spectrum