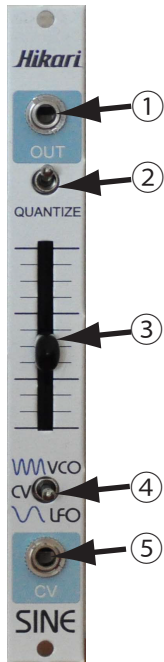


# HIKARI SINE MANUAL



- ① OUTジャック:モードに伴った信号を出力します。  
 VCOモード:サイン波出力10Vpp  
 CVモード:CV出力(0V~7V)  
 LFOモード:VCOモードの1/100周波数でサイン波出力10Vpp
- ② QUANTIZEスイッチ:スイッチを上げると出力が調整されます。  
 VCOモード:出力周波数がクロマチックスケールに調整され出力します。(基準周波数A=440Hz)  
 CVモード:CVがクロマチックスケールに調整され出力します。(1/12V単位の変化になります)  
 LFOモード:変化しません。
- ③ スライダー:OUTジャックの出力が変化します。  
 VCOモード:7オクターブ・レンジ50hz-6khz  
 CVモード:0V~7V CV  
 LFOモード:0.5hz-60hz(VCOモードの1/100)
- ④ モードスイッチ:上→VCOモード 中→CVモード 下→LFOモード
- ⑤ CVジャック:V/OCT CV入力  
 \*入力プラスの電圧のみ反応します。マイナスの電圧は無視されます。  
 \*CVモードでは反応しません。

電源ケーブル:ケーブルの青いラインが電源の-12Vにくるように接続してください。間違って接続するとモジュールが故障することがあります。電源を入れる前に、ケーブルの向きを確認してください。

Power connector: the SINE module ships with the power ribbon cable connected with the blue stripe (at the TOP of the module) aligned to -12V. If you remove or change this cable, please ensure that the side of the ribbon cable at the TOP of the module is connected to the negative rail of your power bus, irrespective of the location of the blue stripe. Failure to check this may result in damage to your SINE module upon power-up.

- ① OUT jack: the module's final signal is sent out here.  
 The type/range of signal varies according to the mode selected (see ④) as follows:  
 VCO mode: sine wave output 10Vpp (pp = peak-to-peak)  
 CV mode: CV output (0-7V), also known as DC offset  
 LFO mode: sine wave output 10Vpp (1/100 frequency of the VCO mode)
- ② QUANTIZE switch: when in the 'up' position, this switch will affect the output signal according to the mode selected (see ④) as follows:  
 VCO mode: the output frequency will be quantized to the chromatic scale (calibrated from A=440Hz)  
 CV mode: the CV output is quantized to the chromatic scale (i.e. the output voltage changes in increments of 1/12V)  
 LFO mode: the quantize switch has no effect when in this mode
- ③ slider: adjusts the voltage sent to the OUT jack according to the mode selected (see ④) as follows:  
 VCO mode: the frequency of the sine wave ranges from 50Hz (with slider in bottom position) to 6kHz (slider in top position), which is a range of 7 octaves  
 CV mode: outputs a fixed voltage in the range 0-7V, so can be used as a DC offset  
 LFO mode: the frequency of the sine wave ranges from 0.5Hz (with slider in bottom position) to 60Hz (slider in top position), i.e. 1/100 of VCO mode
- ④ mode switch:  
 up position → VCO mode center position → CV mode down position → LFO mode

- ⑤ CV Jack: V/OCT CV input  
 \* This input accepts positive voltages only. Negative voltages are ignored but will not damage your module. Depending on the type of signal you send in here, and what your goal is, you may wish to use some combination of offset/inversion/rectification to turn your incoming signal into a unipolar signal (i.e. positive voltage only).  
 \* This input has no effect when the mode switch (see ④) is set to CV mode (center position)  
 \* Note that that higher the amplitude of your incoming CV signal, the more drastically it will modulate the internal sinewave, e.g. a 5V signal will increase the sinewave's frequency by 5 octaves. If you want to restrict the range of this modulation, you can attenuate your incoming CV signal before bringing it into the SINE module.  
 \* As this is a digital module, please note that unexpected results may occur when high-frequency audio-rate signals are sent to the V/OCT input. There is no danger to the module when this happens, it is simply a consequence of the inherent limitations of digital signal processing within the modular environment.

HIKARI  
 SINE  
 3 HP  
 15mA: +12V  
 15mA: -12V  
 15mA: 5V  
 40mm Depth