

— CORSYNTH — 

C-103

FREQUENCY DIVIDER / MULTIPLIER



USER MANUAL

C103 FREQUENCY DIVIDER / MULTIPLIER

The C103 Frequency Multiplier / Divider includes two frequency dividers and two frequency multipliers, that generates four new signals which frequencies are one / two octaves higher / lower than the original signal.

The module includes a built-in three channel mixer with two inputs per channel. The first channel makes possible to the user to select between the original signal from the divider and from the multiplier. In the second channel the user can choose between the signal divided or multiplied by two. In the third channel the options are, the signal divided or multiplied by four. With this set-up up to eight different mixer options are possible which creates a wide range of sonic possibilities.

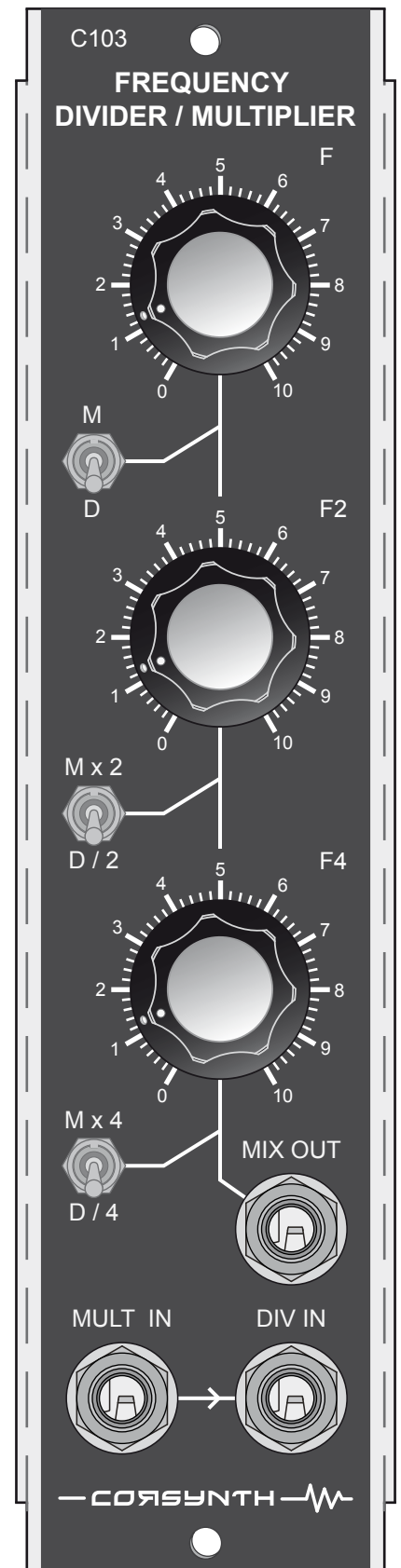
Frequency Divider

The frequency divider accepts as input any kind of basic waveform (square wave, triangle wave, saw wave, sine wave...) with 10Vpp amplitude (standard VCO amplitude). Inside the C103 there are two frequency dividers connected in series. The first one generates a square wave which frequency is half of the original signal (one octave below). The second one generates also a square wave with frequency is the original frequency divided by four (two octaves below)

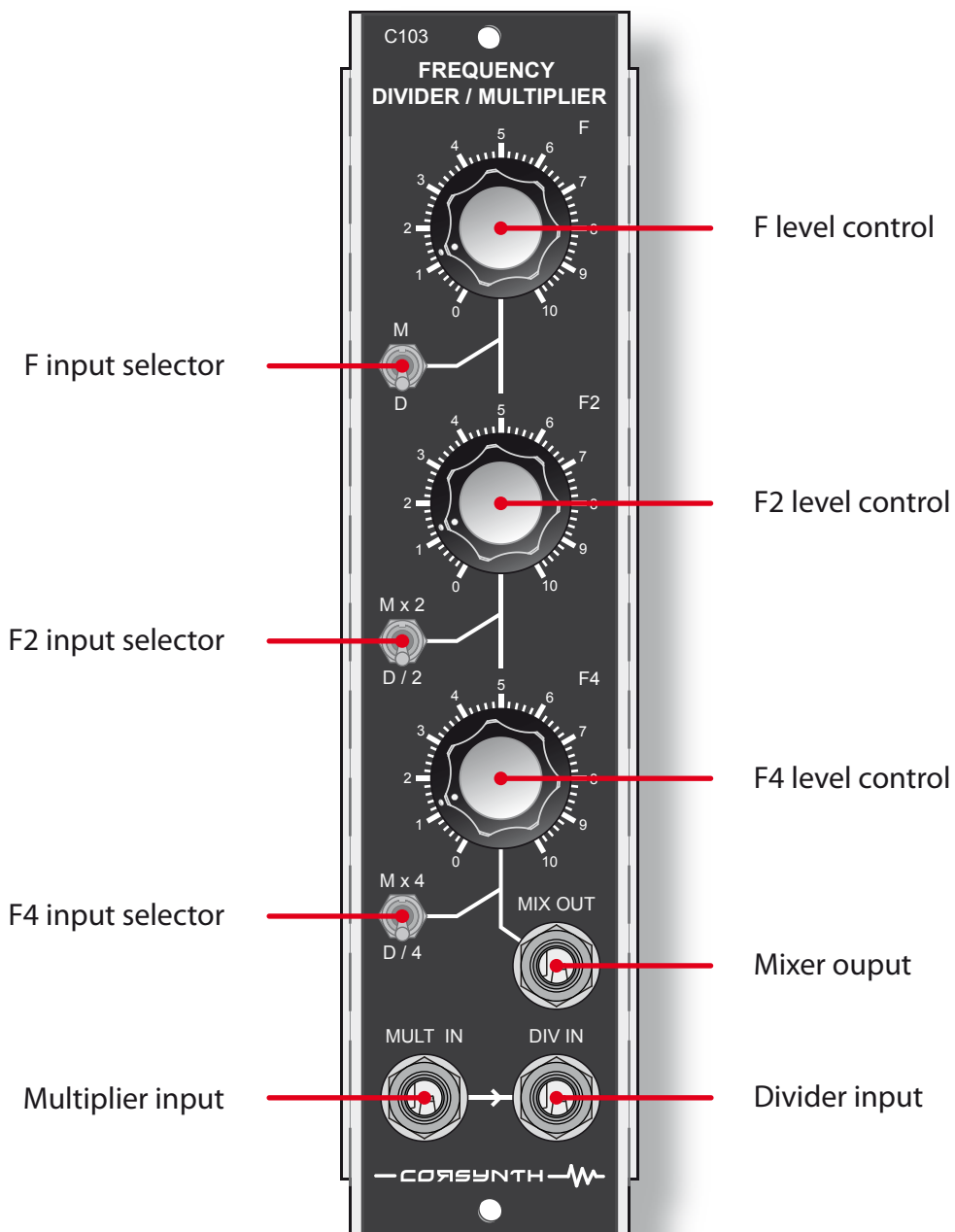
Frequency Multiplier (Doubler)

Sine waves and triangle waves with 10Vpp amplitude (standard VCO level) can be used as input for the frequency multiplier. The C103 contain two frequency multipliers connected in series. The first one generates a waveform which frequency is two times higher than frequency of the original signal (one octave higher) . The second one generates a waveform which frequency is four times higher than the frequency of the original signal (two octaves higher). The frequency multiplication is achieved using a full wave rectifier, that's why when the signal input is a sine wave, the output is not a sine wave , instead is a wave from with richer harmonic content.

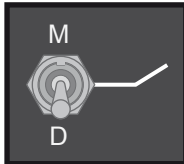
The frequency divider input is normalized to the multiplier input, so while nothing is connected to the divider input, it will take the signal connected to the multiplier input as its input signal.



FRONT PANEL



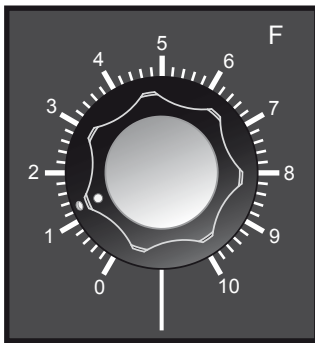
CONTROLS DESCRIPTION



F INPUT SELECTOR

This switch selects the input signal for the “F” mixer channel. The available signals are :

- M : Original signal from the Multiplier input.
- D : Original signal from the Divider input.



F

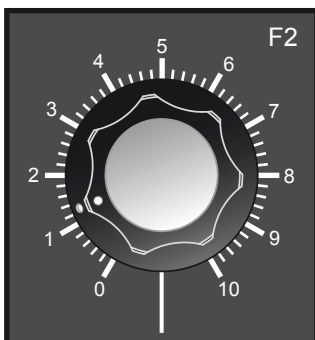
This control sets the signal level for the “F” mixer channel. The input signal is selected using the **F input selector switch**.



F2 INPUT SELECTOR

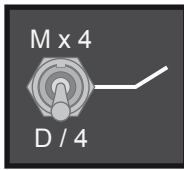
This switch selects the input signal for the “F2” mixer channel. The available signals are :

- M x 2 : Original signal multiplied by two.
- D / 2 : Original signal divided by two.



F2

This control sets the signal level for the “F2” mixer channel. The input signal is selected using the **F2 input selector switch**.



F4 INPUT SELECTOR

This switch selects the input signal for the “F4” mixer channel. The available signals are :

- M x 4 : Original signal multiplied by four.
- D / 4 : Original signal divided by four.



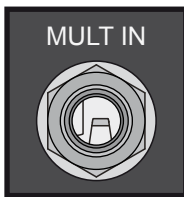
F4

This control sets the signal level for the “F4” mixer channel. The input signal is selected using the **F4 input selector switch**.



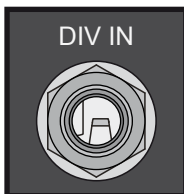
MIX OUT

Mixer output.



MULTIPLIER INPUT

Frequency multiplier input. Sine waves and triangle waves with 10Vpp amplitude (standard VCO level) can be used as input for the frequency multiplier.



DIVIDER INPUT

Frequency divider input. The frequency divider accepts as input any kind of basic waveform (square wave, triangle wave, saw wave, sine wave...) with 10Vpp amplitude (standard VCO amplitude). This input is normalized to the multiplier input, so while nothing is connected to the divider input, it will take the signal connected to the multiplier input as its input signal.

POWER CONNECTORS



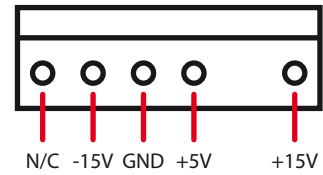
IMPORTANT !!!!

This module has two power connectors (Synthesizers.com and MOTM). Only one is needed to power the module. (Synthesizers.com or MOTM).
Never connect both at the same time.

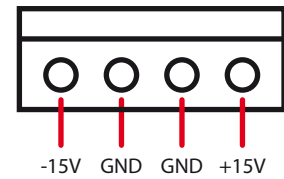


POWER CONNECTOR POLARITY

Synthesizers.com



MOTM



Synthesizers.com
power connector

MOTM
power connector

TECHNICAL DATA

- Module Format :** 5U, (Synthesizers.com, Moog)
- Module Width :** 1 MU (Moog unit)
- Power :** +15V@19,4mA, -15V@19,2mA
- Power connectors :** Synthesizers.com , MOTM (4 pin)
- Expected input signal level :** 10Vpp (+/- 5V)

