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Synchrodyne Expand

Notable Information

Thank you for purchasing the WMD Synchrodyne Expand. This quick start guide will show you how to connect it to your Synchrodyne and the flow chart on the back diagrams the connections for simplicity.

We have decided not to include a full print manual for two reasons. One, to do so takes a lot of paper, we have an online manual at:

http://wmdevices.com/synchrodyneexpandmanual.pdf

Two, we want to encourage creativity by having you teach yourself what the controls and functions do.

Of course, you can always contact WMD with questions:

info@wmdevices.com

The Synchrodyne is 14HP, Expand is 22HP. Total is 36HP.

SYNCHRODYNE Current consumption is +60mA -50mA.

EXPAND Current consumption is +90mA -80mA.

SYNCHRODYNE + EXPAND Current consumption total is +150mA, -130mA.

The majority of the audio circuitry runs at +-5 volts and uses high-speed rail to rail opamps.

The depth from the back of the panel is roughly 45mm with connectors. The Expand is thinner than the Synchrodyne.

They Synchrodyne and Expand are reverse polarity protected.

The Synchrodyne and Expand are RoHS and CE compliant.

The Synchrodyne Expand is under warranty for 12 months after purchase. But please contact us if you ever have problems. We will take care of you.

Installation

The image to the right shows the expansion's proper installation. Typically the expansion will be installed on the right hand side of the Synchrodyne.

Steps:

1. Remove jumper sockets from the Synchrodyne's expansion headers.

2. Remove the jumper socket by the blue single-turn trim pot on the Synchrodyne. This allows the wave-folder level to be changed on the Expand module.

3. Attach cables as shown. Use the cable with pin 5 cut out on the lower header.

4. Attach power to both modules and install in rack.

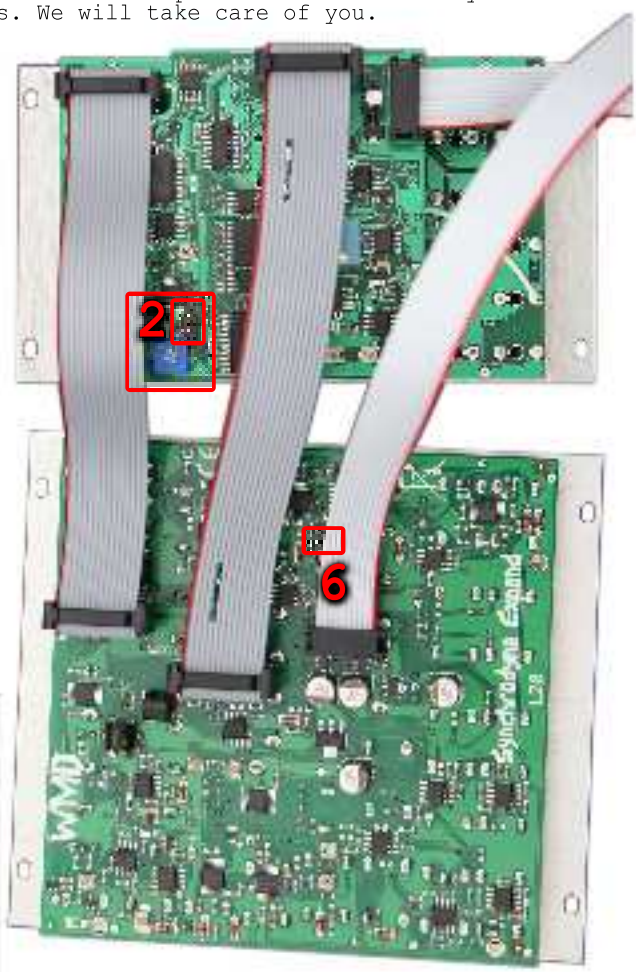
Jumper settings still apply:

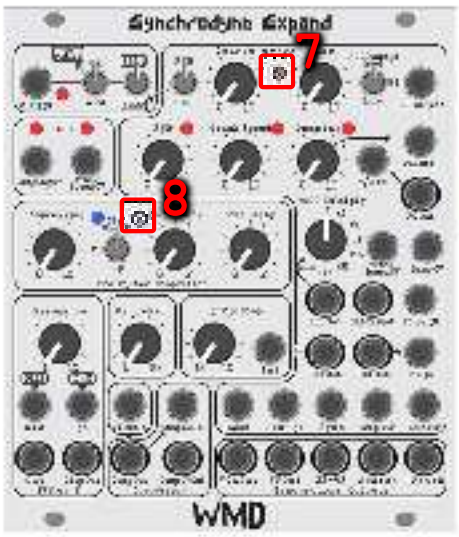
5. The Synchrodyne has the AC/DC linear FM coupling jumper.

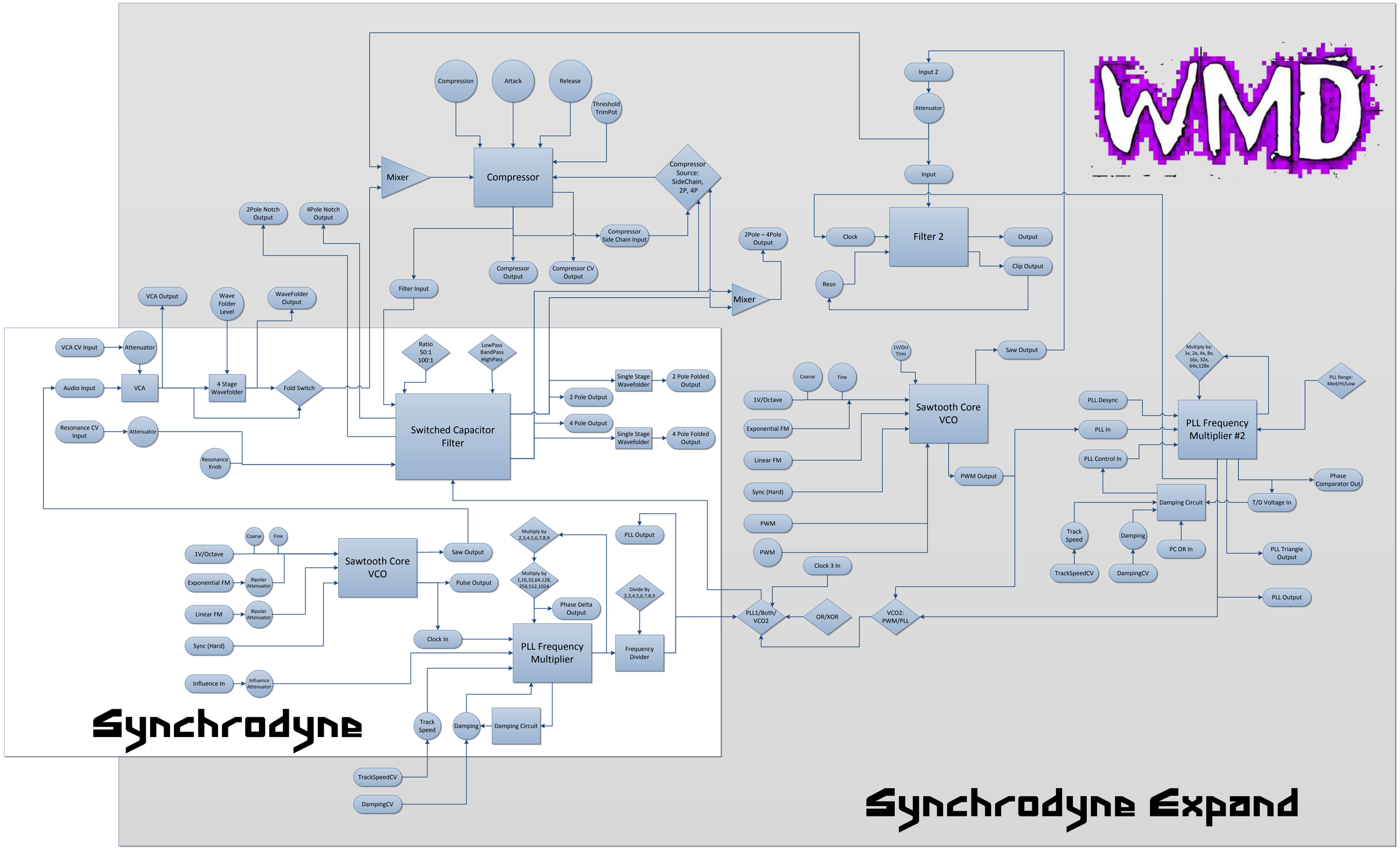
6. The Expand has a jumper for AC/DC coupling of the Compressor circuitry. Jump for DC.

7. This trim pot sets the 1V/Octave calibration for the Expand's VCO. Adjust if need be. Clockwise increases the range produced by 1V.

8. This trim pot sets the Compressor's Threshold, adjust clockwise for lower threshold or earlier onset of compression.






WMD
Compression
Attack
Release
Threshold TrimPot
Mixer
Compressor
Compressor Source: SideChain, 2P, 4P
2Pole Notch Output
4Pole Notch Output
Compressor Side Chain Input
Compressor Output
Compressor CV Output
Filter Input
2Pole – 4Pole Output
Mixer
Input 2
Attenuator
Input
Clock
Filter 2
Output
Clip Output
Resn
VCA Output
Wave Folder Level
WaveFolder Output
VCA CV Input
Attenuator
Audio Input
VCA
4 Stage Wavefolder
Fold Switch
Resonance CV Input
Attenuator
Resonance Knob
Ratio 50:1 100:1
LowPass BandPass HighPass
Switched Capacitor Filter
Single Stage Wavefolder
2 Pole Folded Output
2 Pole Output
4 Pole Output
Single Stage Wavefolder
4 Pole Folded Output
1V/Oct Trim
Saw Output
Coarse
Fine
1V/Octave
Exponential FM
Linear FM
Sync (Hard)
PWM
PWM
Sawtooth Core VCO
PWM Output
Clock 3 In
PLL1/Both/ VCO2
OR/XOR
VCO2: PWM/PLL
Multiply by: 1x, 2x, 4x, 8x, 16x, 32x, 64x,128x
PLL Desync
PLL In
PLL Control In
PLL Frequency Multiplier #2
PLL Range: Med/Hi/Low
Phase Comparator Out
T/D Voltage In
Damping Circuit
Track Speed
Damping
PC OR In
TrackSpeedCV
DampingCV
PLL Triangle Output
PLL Output
Coarse
Fine
1V/Octave
Exponential FM
Bipolar Attenuator
Linear FM
Bipolar Attenuator
Sync (Hard)
Influence In
Influence Attenuator
Sawtooth Core VCO
Saw Output
Pulse Output
Multiply by 2,3,4,5,6,7,8,9
Multiply by 1,16,32,64,128, 256,512,1024
Phase Delta Output
Clock In
PLL Frequency Multiplier
Divide By 2,3,4,5,6,7,8,9
Frequency Divider
PLL Output
Track Speed
Damping
Damping Circuit
TrackSpeedCV
DampingCV
Synchrodyne
Synchrodyne Expand