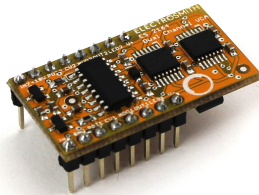


# Electrosmith 2164 Submodule



# Contents

<b>ES 2164</b>	<b>3</b>
<b>Voltage Controlled Amplifier</b>	<b>3</b>
<b>Electrical Characteristics</b>	<b>3</b>
<b>Pin Descriptions</b>	<b>3</b>
1. In 1 . . . . .	3
2. GND . . . . .	3
3. Pot 1 . . . . .	3
4. CV 1 . . . . .	3
5. Node 1 . . . . .	3
6. Out 1 . . . . .	4
7. LED 1 . . . . .	4
8. Vee . . . . .	4
9. Vcc . . . . .	4
10. LED 2 . . . . .	4
11. Out 2 . . . . .	4
12. Node 2 . . . . .	4
13. CV 2 . . . . .	4
14. Pot 2 . . . . .	5
15. +10V reference . . . . .	5
16. In 2 . . . . .	5
<b>Example Schematic</b>	<b>6</b>

## **ES 2164**

### **Voltage Controlled Amplifier**

#### **Electrical Characteristics**

The board is designed for:

$V+ = +12V$

$V- = -12V$

#### **Pin Descriptions**

##### **1. In 1**

Signal Input.

DC-Coupled.

##### **2. GND**

Ground Connection

##### **3. Pot 1**

Controls the amplitude of channel 1

Connect wiper of a potentiometer to this connection.

Wire pot between GND and +10V.

No Passives necessary.

##### **4. CV 1**

Controls the amplitude of channel 1

Adds to the current pot position.

Expects a range of -10V to +10V.

##### **5. Node 1**

Summing Node connection for additional control signals.

Input Impedance for equivalent Pot/CV input connection: 100K.

## **6. Out 1**

Signal Output.

Gain is between -infinity and x2.

## **7. LED 1**

Dedicated LED output.

Buffered separate from output.

## **8. Vee**

Negative Supply Input.

Designed for -12V.

## **9. Vcc**

Positive Supply Input.

Designed for +12V.

## **10. LED 2**

Dedicated LED output.

Buffered separate from output.

## **11. Out 2**

Signal Output.

Gain is between -infinity and x2.

## **12. Node 2**

Summing Node connection for additional control signals.

Input Impedance for equivalent Pot/CV input connection: 100K.

## **13. CV 2**

Controls the amplitude of channel 2

Adds to the current pot position.

Expects a range of -10V to +10V.

#### **14. Pot 2**

Controls the amplitude of channel 2

Connect wiper of a potentiometer to this connection.

Wire pot between GND and +10V.

No Passives necessary.

#### **15. +10V reference**

+10V Reference Voltage

maximum 15mA current consumption

#### **16. In 2**

Signal Input.

DC-Coupled.

# Example Schematic

