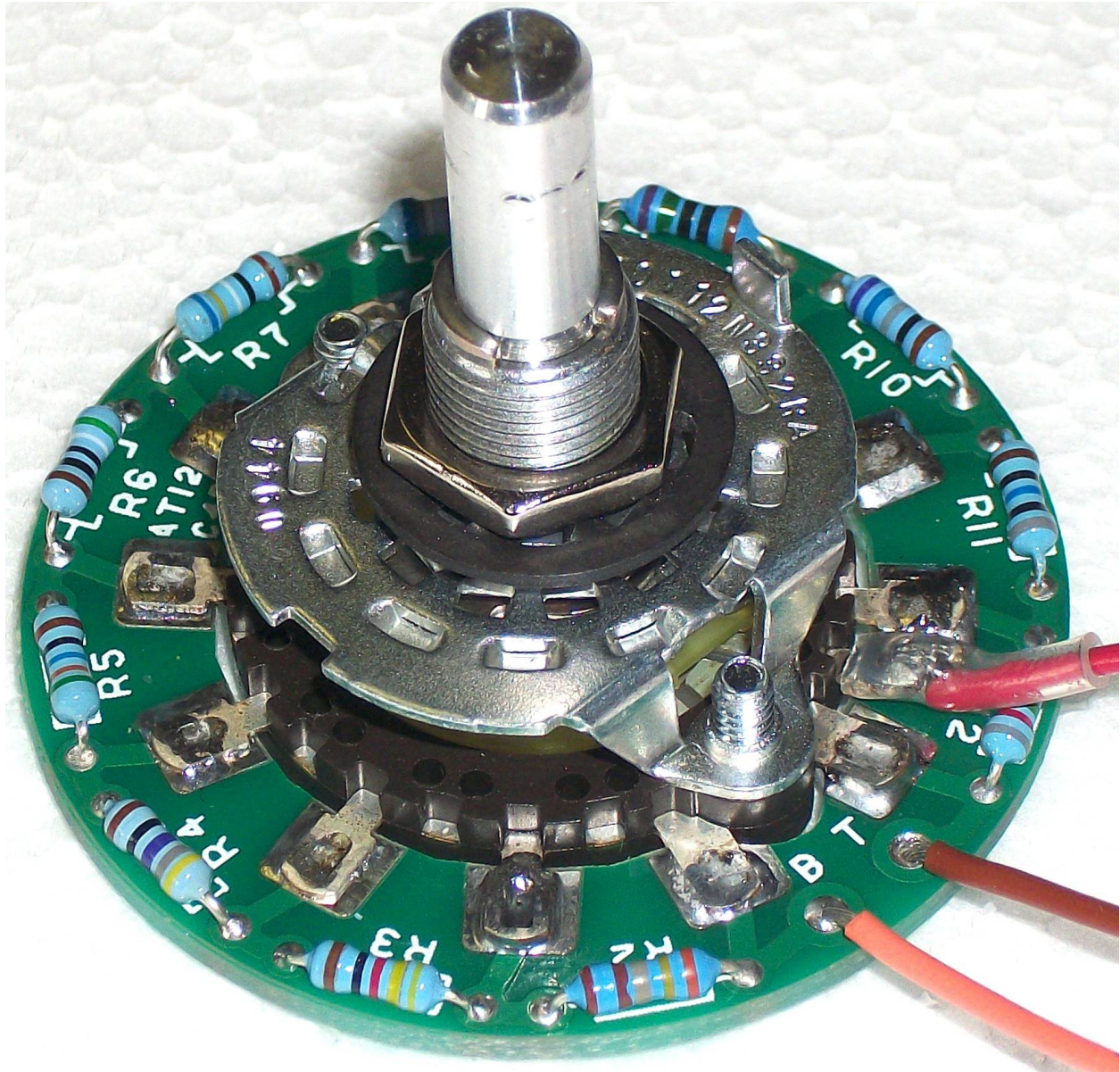




## Marchand Electronics Inc.

PO Box 18099, Rochester, NY 14618  
Tel:(585) 423 0462 Fax:(585) 423 9375  
info44@marchandelec.com www.marchandelec.com  
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**12 position stepped attenuator**

## Specifications

Number of steps: 12  
Resistance value: 100 Ohm ... 1MOhm  
Taper: Log, linear, custom  
Dimensions: 1.9" circle x 0.7" (l x w x d) (not including shaft)

## Assembly Instructions

- Step 1: Assemble circuit board by inserting resistors onto component side of circuit board.  
Solder on solder side. See tables or resistor values.
- Step 2: Check the circuit board with DMM. The resistance between I and B pads should be within 2% of nominal value (eg. 10K +/- 0.2K)
- Step 3: Check rotation stop on switch. Switch should have 12 steps.  
If not adjust stop washer under mounting nut.
- Step 4: Attach circuit board to switch.  
The switch is installed on the component side of the circuit board.  
Note location of wiper tab on switch; it is next to R12
- Step 5: Attach lead wires: I: brown, W: red, B: orange.

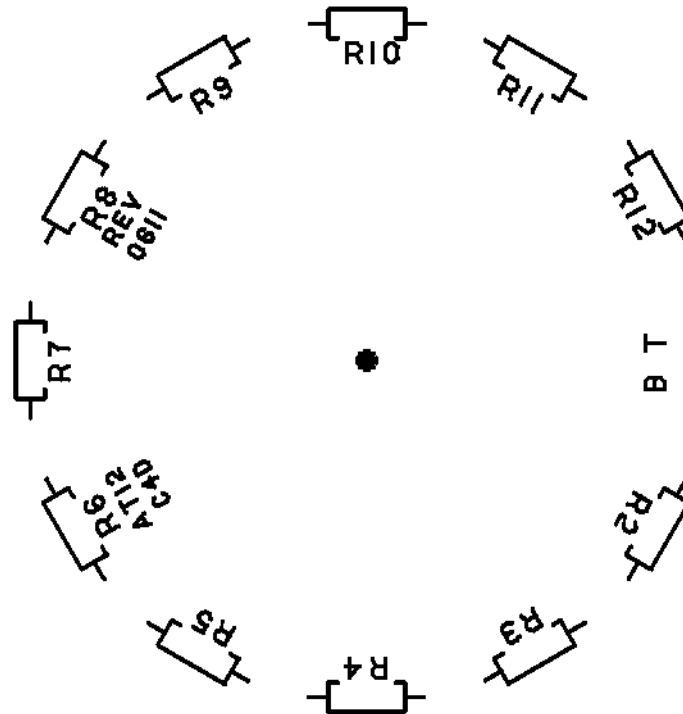


Figure 1 12 position attenuator resistor identification

**Table 1**  
**10K nominal, log taper, 1.0 dB steps**  
**Special taper for XM44 Nominal load 25K**

ID	Value	Description	Attenuation	
			CCW rotation steps	dB
R12	825 Ohm	1% ,1/4W, Metal Film		0.0
R11	806 Ohm	1% ,1/4W, Metal Film	1	1.0
R10	768 Ohm	1% ,1/4W, Metal Film	2	2.0
R9	750 Ohm	1% ,1/4W, Metal Film	3	3.0
R8	698 Ohm	1% ,1/4W, Metal Film	4	4.0
R7	649 Ohm	1% ,1/4W, Metal Film	5	5.0
R6	590 Ohm	1% ,1/4W, Metal Film	6	6.0
R5	536 Ohm	1% ,1/4W, Metal Film	7	7.0
R4	487 Ohm	1% ,1/4W, Metal Film	8	8.0
R3	442 Ohm	1% ,1/4W, Metal Film	9	9.0
R2	3.48K	1% ,1/4W, Metal Film	10	10.0
			11	off

**Table 2**  
**50K nominal, log taper, 1.0 dB steps**  
**Special taper for XM126 Nominal load: Hi**

ID	Value	Description	Attenuation	
			CCW rotation steps	dB
R12	4.53K	1% ,1/4W, Metal Film		0.0
R11	4.53K	1% ,1/4W, Metal Film	1	1.0
R10	3.92K	1% ,1/4W, Metal Film	2	2.0
R9	3.92K	1% ,1/4W, Metal Film	3	3.0
R8	3.24K	1% ,1/4W, Metal Film	4	4.0
R7	3.24K	1% ,1/4W, Metal Film	5	5.0
R6	2.61K	1% ,1/4W, Metal Film	6	6.0
R5	2.61K	1% ,1/4W, Metal Film	7	7.0
R4	2.21K	1% ,1/4W, Metal Film	8	8.0
R3	2.21K	1% ,1/4W, Metal Film	9	9.0
R2	16.5K	1% ,1/4W, Metal Film	10	10.0
			11	off

**Parts list**

- | #  | Description        |
|----|--------------------|
| 1  | 12 position switch |
| 2' | brown hookup wire  |
| 2' | red hookup wire    |
| 2' | orange hookup wire |
| 1  | AT12 circuit board |
|    | resistors          |

**Table 3**  
**100K nominal, log taper, 1.0 dB steps**  
**Nominal load 250K**

ID	Value	Description	Attenuation	
			CCW rotation steps	dB
R12	8.66 K	1% ,1/4W, Metal Film		0.0
R11	8.06 K	1% ,1/4W, Metal Film	1	1.0
R10	7.68 K	1% ,1/4W, Metal Film	2	2.0
R9	7.50 K	1% ,1/4W, Metal Film	3	3.0
R8	6.98 K	1% ,1/4W, Metal Film	4	4.0
R7	6.49 K	1% ,1/4W, Metal Film	5	5.0
R6	5.90 K	1% ,1/4W, Metal Film	6	6.0
R5	5.23 K	1% ,1/4W, Metal Film	7	7.0
R4	4.99 K	1% ,1/4W, Metal Film	8	8.0
R3	4.22 K	1% ,1/4W, Metal Film	9	9.0
R2	34.8K	1% ,1/4W, Metal Film	10	10.0
			11	off

**Table 4**  
**100K nominal, log taper, 1.0 dB steps**  
**Nominal load: High**

ID	Value	Description	Attenuation	
			CCW rotation steps	dB
R12	11.0 K	1% ,1/4W, Metal Film		0.0
R11	9.53 K	1% ,1/4W, Metal Film	1	1.0
R10	8.66 K	1% ,1/4W, Metal Film	2	2.0
R9	7.68 K	1% ,1/4W, Metal Film	3	3.0
R8	6.81 K	1% ,1/4W, Metal Film	4	4.0
R7	6.04 K	1% ,1/4W, Metal Film	5	5.0
R6	5.23 K	1% ,1/4W, Metal Film	6	6.0
R5	4.99 K	1% ,1/4W, Metal Film	7	7.0
R4	4.22 K	1% ,1/4W, Metal Film	8	8.0
R3	3.92 K	1% ,1/4W, Metal Film	9	9.0
R2	31.6 K	1% ,1/4W, Metal Film	10	10.0
			11	off

**Table 5**  
**20K nominal, log taper, 2.5 dB steps**  
**Nominal load: 250K**

ID	Value	Description	Attenuation	
			CCW rotation steps	dB
R12	4.99 K	1% ,1/4W, Metal Film		0.0
R11	3.74 K	1% ,1/4W, Metal Film	1	2.5
R10	2.80 K	1% ,1/4W, Metal Film	2	5.0
R9	2.10 K	1% ,1/4W, Metal Film	3	7.5
R8	1.58 K	1% ,1/4W, Metal Film	4	10.0
R7	1.18 K	1% ,1/4W, Metal Film	5	12.5
R6	887 Ohm	1% ,1/4W, Metal Film	6	15.0
R5	665 Ohm	1% ,1/4W, Metal Film	7	17.5
R4	499 Ohm	1% ,1/4W, Metal Film	8	20.0
R3	374 Ohm	1% ,1/4W, Metal Film	9	22.5
R2	1.13 K	1% ,1/4W, Metal Film	10	25.0
			11	off

**Table 6**  
**10K nominal, log taper, 2.0 dB steps**  
**Nominal load: 250K**

ID	Value	Description	Attenuation	
			CCW rotation steps	dB
R12	2K00	1% ,1/4W, Metal Film		0.0
R11	1K65	1% ,1/4W, Metal Film	1	2.0
R10	1K27	1% ,1/4W, Metal Film	2	4.0
R9	1K02	1% ,1/4W, Metal Film	3	6.0
R8	825 Ohm	1% ,1/4W, Metal Film	4	8.0
R7	649 Ohm	1% ,1/4W, Metal Film	5	10.0
R6	536 Ohm	1% ,1/4W, Metal Film	6	12.0
R5	402 Ohm	1% ,1/4W, Metal Film	7	14.0
R4	332 Ohm	1% ,1/4W, Metal Film	8	16.0
R3	249 Ohm	1% ,1/4W, Metal Film	9	18.0
R2	1K02	1% ,1/4W, Metal Film	10	20.0
			11	off

