

Thank you for your interest in our Best DIY Tesla Coil Kit 12.0. This document will list everything that is included in this amazing Tesla coil kit.

So firstly, you may be asking yourself why we are calling these kits the best Tesla coil kits and why 12.0? Those are great questions. Here are the answers:

**12.0?** That's easy. This Tesla coil can produce arcs up to and exceeding 12 feet in length!

**Best Schematics** – These kits offer the best schematics to be offered by any electronics kit company anywhere in the world. So why are they the best?

- Our schematics are more detailed than any other electronics kit schematics
- All assemblies, components, and part numbers are shown
- Each and every wire is called out with both the recommend color and wire gauge
- Every wire termination is called out. If a termination requires a #10 ring lug, it will be specified and called out on the schematic

**Best Mechanical Drawings** – Critical components such as the primary coil supports, primary support layout, secondary coil, and toroid are all specified using easy to read mechanical drawings showing all dimensions as well as construction notes.

**Best Wiring Layouts** – As well as offering schematics, full color wiring layout diagrams are included. These diagrams show all subassemblies in the Tesla coil and how they are interconnected – every wire is shown point-to-point. As you may have guessed, we feel these wiring layouts are truly the best available in the world from any electronics kit retailer, especially when it comes to high power Tesla coil systems.

**Best Technical Support** – With regards to technical and follow-up support, we pride ourselves on offering the best support anywhere. Unless we are sleeping or taking a 20 mile hike with the kids, we will respond to all your technical support inquires within an hour or two, seven days per week! We will help guide you through your build to achieve 100% success in building and operating your Tesla coil! Since 2010, our customers have had a 100% success rate in building our high power Tesla coil kits. I wonder why that is?

**Best Components** – And finally, we offer the absolutely best in components. And why is that?

- New components – The majority of all components are new stock
- Components are purchased \*only\* through authorized US distributors
- We don't use any components purchased overseas through EBAY or Amazon. These components are typically counterfeit and are inferior!
- No surplus components – We only purchased through authorized US distributors

The following table lists all the assemblies, components, cables, and documentation that is including with the Best DIY Tesla Coil Kit 12.0.

Item	QTY	Additional Notes
DRSSTC Controller 2000A	1	Fully assembled and tested
Tuning Inductor	1	
Universal MIDI 1.0 Interrupter	1	Includes PCB, components, and instructions
<b>PLC Sequencer Computer</b>	1	Programmable logic controller (PLC) – preprogrammed for sequencing control. Key switch and annunciators provide safety interlock and real-time status.
- Key switch	1	
- LED Warning Buzzer	1	
- LED Indicator, Amber	1	
- LED Indicator, Blue	1	
Power Supply, 24VDC	1	Power supply for PLC and DRSSTC controller
IGBT Heatsink Assembly	1	Machined heatsink with hardware
IGBT Heatsink L-Brackets	2	Used for mounting heatsink
IGBT Module, Half-Bridge	2	2400V, 300A IGBT modules for full-bridge configuration
IGBT Busbar Assembly	1	0.124" thick FR-4 8oz. copper laminated busbar
IGBT Snubber Capacitor, 2uF	2	
IGBT Filter Capacitor, 0.1uF	1	
IGBT Gate Drive Board Assembly	2	Includes PCB, terminals, components
IGBT Gate Drive Transformer Kit	1	Includes 5000-1 ferrite core and wire
DC Bus Capacitor, 6800uF, 350V	2	
Primary Capacitor Assembly	1	Includes PCB, terminals, components, and hardware
Capacitor, 0.47uF, 2kV	20	Capacitors for the above primary capacitor assembly
Bridge Rectifier Module	1	
Relay Contactor, 30A	2	
Circuit Breaker, 30A, 2-Pole	1	
Circuit Breaker, 5A, 2-Pole	1	
Resistor, 20k, 50W	1	Safety bleeder resistor for DC bus capacitors
Resistor, 25 ohm, 100W	1	Current limiting inrush resistor
1024:1:1 Current Transformer Kit	1	
Fans	2	
Fan Guards	2	
Polycarbonate Pri Supports	8	Machined with 10-32 inserts for mounting
Polycarbonate DC Cap Bracket	1	Machined with 10-32 inserts for mounting and hardware
Polycarbonate CT Bracket	1	For mounting 1024:1:1 current transformer heatsink
Polycarbonate Pri Cap Bracket	2	Machined with 10-32 inserts for mounting and hardware
Diode, 1N4002	2	
<b>Power Distribution Assembly</b>		Din rail mounted terminal blocks for power distribution
- Din Rail	1 FT	
- Terminal End Stops	3	
- Terminal Block, Black T8	3	
- Terminal Block, Red T8	3	
- Terminal Block, Green T8	3	
- Terminal Block, Blue T12	5	
- Terminal Block, Black T12	5	
- Jumper, 3-Pos, T8	3	

- Jumper, 5-Pos, T12	2	
- Terminal End Cover	1	
- Terminal Divider	4	
Lug, Aluminum, 2 AWG	4	Terminals for connecting wires to various components and subassemblies within the Tesla coil.
Terminal, Tab, Red	4	
Terminal, #10 Lug, Yellow	11	
Terminal, #10 Faston, Yellow	6	
Terminal, #10 Lug, Red	3	
Terminal, Tab, Clear	4	
Fiber Optic Cable, 15M	1	Connects DRSSTC controller with Universal MIDI interrupter
Documentation – Schematic	1	11x17 prints
Documentation – Wiring Diagram	1	11x17 prints (full color)
Documentation – Mech Drawings	1	11x17 prints (full color)

Note: Please note that Eastern Voltage Research reserves the right to change this list at any time without notice or substitute alternate components so long as overall functionality is not changed.



What is not included in the Best DIY Tesla Coil Kit 12.0

As a DIY kit, we are providing the complete electrical “guts” of the Tesla coil. The customer is responsible for providing the rest of the components as specified in the table below.

Note, that some of the below components are available as add-ons if desired, however, most customers enjoy building the mechanical assemblies as described below.

<b>Not Included</b>	<b>QTY</b>	<b>Additional Notes</b>
Base	1	Mechanical base. Most customers enjoy designing and constructing their own base using materials available from their local big name hardware store.
Primary Coil	1	3/8" OD x 50 FT copper tubing is available from your local big name hardware store
Strike Rail	1	1/2" OD x 10 FT copper tubing is available from your local big name hardware store
Secondary Coil	1	Detailed mechanical drawings provide all dimensions and specifications
Toroid	1	We offer toroids for customers that don't wish to build their own.
Power cable	1	Power connector and cable can be purchased from your local big name hardware store
Wiring kit	1	Wiring kit is available as an add-on and includes all wires necessary to connect all subassemblies and components.