CHAPTER 11
6-Foot Jacob’s Ladder

These full-color high-resolution photos and schematics go with the book *Electronic Gadgets for the Evil Genius (Second Edition)*, and may provide clarity or details beyond what the book itself contains, if needed. This device, and its parts/components, may be available at www.amazing1.com

Figure 11-1: Large Jacob’s Ladder
Figure 11-2: Control Board, Timer, and Power Supply
Figure 11-3: Control Board Components

Figure 11-4: Control Board Wiring Connections
Figure 11-5: Transformer Base

Figure 11-6: Secondary Coil Winding
Figure 11-7: Notches in the Mylar

Figure 11-8: Top-Down (or Bottom-Up) View of Coil with Staggered Cuts in the Mylar
Figure 11-11: Pouring the 2-Part Silicon Elastomer “Goop”

Figure 11-12: Coils in a Vacuum
Figure 11-13: More Goop in the Partially-Filled Coils

Figure 11-14: Primary Coil Box

Figure 11-15: Transformer Coils on Ferrite Cores
Figure 11-16: Assembled Transformer
NOTE: ALL HEAVY LINES SHOWN DENOTE HIGH CURRENT AREAS. USE HEAVY COPPER BUSS.
RED IS POS (+) RAIL.
BLUE ARE #12 WIRES GOING TO OUTPUT TRANSFORMER

Figure 11-17: Full Bridge Rectifier Schematic
Figure 11-18: Full Bridge Rectifier

Figure 11-19: Gate Transformer Wiring
Figure 11-20: Bridge Rectifier Base and Strips

Figure 11-21: Bridge Rectifier
Figure 11-22: Plywood Bottom, Insulating Sheet, Top Plate

Figure 11-23: Venting Hole Locations in Top Sheet
Figure 11-24: Aluminum Base Sides

Figure 11-25: Front Panel
Figure 11-26: Drilling the Top Plate

Figure 11-27: Base with Sides and Components (Side Plate Removed)
Figure 11-28: Front Panel Wiring

Figure 11-29: Wiring of Dial R7
Figure 11-30: Aluminum Chimney Bracket

Figure 11-31: Chimney Assembly
Drill & Tap bottom first, to match bracket holes

**Figure 11-32: Match Chimney Bottom Holes to Bracket**

**Figure 11-33: Ladder Blocks Secured to Top Plate**
MOUNT CHIMNEY ON TOP OF BASE WITH NUTS & BOLTS

Figure 11-34: Chimney Mounting

Figure 11-35: Ladder Rods Bottom Shape
Figure 11-36: Top of Ladder Rods

Figure 11-37: Securing the Ladder Rods

SET GAP WITH "GAP GAUGE" (TIEWRAPPED TO BOTTOM OF RODS) -- SOME ADJUSTMENT OF THE RODS MAY BE NECESSARY

TIGHTEN DOWN RODS VERY TIGHT!
Figure 11-38: Chimney, Brackets, and Ladder Assembled

Figure 11-39: Base Front Panel with Remote Activation Switch

Figure 11-40: Control Board Schematic Modification for Remote Switch
Figure 11-41: Closed-Circuit Jack

Figure 11-42: Block Diagram