Red Box Contents

[NOTE: The Red Box contents were provided to MIT students. They are not available to OCW users. All necessary materials can be acquired from an online electronics supply source.]

**Top Tray:**

2 MM (magnetic multi meters) with leads
2 cells, 1.5V AA
4 fuses, for MMM
1 CLK (clip lead kit)
1 roll tape, black vinyl
1 piece emery cloth
2 magnets
1 ft resistance wire, MWS type 800
1 socket, for 1157 lamp

**Bottom Compartment:**

1 transformer 120V ac to 12V ac
1 pack. aluminum foil for expts. MF & MW

**12 Kits in Packages:**

1 MM (multi meter)
2 LVPS (low voltage power supply)
1 LVPSST (low voltage power supply test)
1 VI (voltage & current)
1 HVPS (high voltage power supply)
1 EF (electrostatic force)
1 EB (electrical breakdown)
1 AMP (amplifier)
1 MF (magnetic force)
1 MW (microwaves)
Kits Parts List

CLK

12 alligator clips
12 insulating sleeves, black*
10 alligator clips
10 insulating sleeves, red
4 ft wire, #22 black, stranded
4 ft wire, #22 red, stranded

*use 2 black for transformer

MM

1 cell, 1.5V AA
1 battery holder
2 resistors, 20Ω 1/2W

LVPS

1 perfboard
4 rubber feet
1 full wave bridge rectifier
1 electrolytic capacitor, 1000µF
1 socket for LM317T regulator
1 potentiometer, 5kΩ
1 electrolytic capacitor, 1µF
1 resistor, 390Ω 1/2W
1 ft wire, #22 bare solid
1 voltage regulator LM317T

LVPST

1 resistor, 2.4Ω 2W
1 lamp #1157 automotive
1 heat sink for LM317 regulator

VI

3 lamps, #47 6.3V 0.15 A
3 lamp holders
3 resistors, 43Ω 1/2W
1 electrolytic capacitor, 1000µF
1 ft wire, #22 insulated stranded
HVPS
1 transistor, 2N3055T
1 socket, transistor
1 heat sink, clip on
2 diodes, 1N5062
1 ferrite core inductor, 5mH
1 capacitor, ceramic disc, 100 pF
2 capacitors, ceramic disc, 470 pF
1 capacitor, ceramic disc, 1000 pF
1 resistor, 8.2 kΩ 1/2W
2 resistor, 1 MΩ 1/2W
1 ft wire, #26 insulated solid
1 ft wire, #22 red insulated solid
1 ft wire, #22 bare solid

EF
1 strip perfboard
2 washers, 1 in. plated steel
4 ft wire, #30 bare solid
1 piece Al foil, 2 in square 0.0003 in thick
1 piece sand paper 80 grit

EB
1 clothespin, wooden drilled
1–3/4 in rod, tungsten 0.040 in dia.
2 screws, brass 4-40x1/2
3 nuts, steel 4-40
2 solder lugs
1 corner brace, 2 in
1 screw, 4-40x11/2" steel
3 washers, #4 flat
1 wing nut, 4-40 nylon
2 resistors, 1 MΩ 1/2W
3 ft wire, #22 speaker

MF
40 ft wire, #26 enameled copper
1 piece foam core, 2 in by 10 in
2 pins, T-head
2 corner braces, 1 in
1 piece tape, double sided
1 ft wire, #22 red insulated stranded
1 ft wire, #22 black insulated stranded
### AMP

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<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>op amp, LF411</td>
</tr>
<tr>
<td>1</td>
<td>socket, IC 8 pin dual inline</td>
</tr>
<tr>
<td>1</td>
<td>potentiometer, 100 kΩ</td>
</tr>
<tr>
<td>1</td>
<td>potentiometer, 5 kΩ</td>
</tr>
<tr>
<td>3</td>
<td>resistors, 100 kΩ 1/2W</td>
</tr>
<tr>
<td>2</td>
<td>resistors, 9.1 kΩ 1/2W</td>
</tr>
<tr>
<td>1</td>
<td>resistor, 91 kΩ 1/2W</td>
</tr>
<tr>
<td>1</td>
<td>resistor, 1.3 kΩ 1/2W</td>
</tr>
<tr>
<td>1</td>
<td>resistor, 150 kΩ 1/2W</td>
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<tr>
<td>1</td>
<td>capacitor, 0.05 µF</td>
</tr>
<tr>
<td>1 ft</td>
<td>wire, #22 red insulated solid</td>
</tr>
<tr>
<td>1 ft</td>
<td>wire, #22 bare solid</td>
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</table>

### MW

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>diode, Schottky 1N5711</td>
</tr>
<tr>
<td>1</td>
<td>capacitor, 33 pF ceramic disc</td>
</tr>
<tr>
<td>4.5 in</td>
<td>wire, household 14x2 w/ground(NM)</td>
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<tr>
<td>4 ft</td>
<td>wire, 2 conductor shielded</td>
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<tr>
<td>3 ft</td>
<td>wire, #22 speaker (from EB and MI)</td>
</tr>
</tbody>
</table>