The 500-IN-ONE ELECTRONIC PROJECT LAB teaches how to identify different electrical parts, how to read a schematic, how to make 500 projects without any soldering or tools, and how all 500 projects work (there are 100 projects teach the basic of programming). This complete electronics course covers the following subjects areas:

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Experiments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Surprise and Fun</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>Back to the Basics</td>
<td>17</td>
</tr>
<tr>
<td>3.</td>
<td>Electronic &quot;Building Blocks&quot;</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>Putting Electronics to Work</td>
<td>24</td>
</tr>
<tr>
<td>5.</td>
<td>Radio Circuit</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Sonic Zoo and Sound Factory</td>
<td>16</td>
</tr>
<tr>
<td>7.</td>
<td>Electronic Decision-Makers</td>
<td>13</td>
</tr>
<tr>
<td>8.</td>
<td>Operational Amplifier IC Can Do Many Things</td>
<td>26</td>
</tr>
<tr>
<td>9.</td>
<td>Introducing The Power Amplifier IC</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>A Trip to Digital Land</td>
<td>25</td>
</tr>
<tr>
<td>11.</td>
<td>More Adventures in Digital Land</td>
<td>30</td>
</tr>
<tr>
<td>12.</td>
<td>Circuits that Counts</td>
<td>26</td>
</tr>
<tr>
<td>13.</td>
<td>Amusement in Digital Land</td>
<td>19</td>
</tr>
<tr>
<td>14.</td>
<td>Surprise and Fun Revisited</td>
<td>20</td>
</tr>
<tr>
<td>15.</td>
<td>Testing and Measuring Circuits</td>
<td>9</td>
</tr>
<tr>
<td>16.</td>
<td>Learn Basics More</td>
<td>22</td>
</tr>
<tr>
<td>17.</td>
<td>Amusement on Sound</td>
<td>14</td>
</tr>
<tr>
<td>18.</td>
<td>More Radio Circuits</td>
<td>3</td>
</tr>
<tr>
<td>19.</td>
<td>To The Game World</td>
<td>12</td>
</tr>
<tr>
<td>20.</td>
<td>More Adventure in OP Amplifier Circuits</td>
<td>11</td>
</tr>
<tr>
<td>21.</td>
<td>More About Oscillator</td>
<td>14</td>
</tr>
<tr>
<td>22.</td>
<td>Shake-hands of Analog and Digital</td>
<td>9</td>
</tr>
<tr>
<td>23.</td>
<td>Getting Closer to Computer</td>
<td>7</td>
</tr>
<tr>
<td>24.</td>
<td>More Digital Circuits</td>
<td>14</td>
</tr>
<tr>
<td>25.</td>
<td>Amusement in Electronic Circuits</td>
<td>26</td>
</tr>
<tr>
<td>26.</td>
<td>Testing and Measuring Circuits</td>
<td>14</td>
</tr>
<tr>
<td>27.</td>
<td>Software Projects</td>
<td>100</td>
</tr>
</tbody>
</table>

The ultimate 500-IN-ONE Electronic Project Lab contains the following experiments in ADDITION to those listed for our 300-IN-ONE Electronic Project Lab.
Sonic Zoo and Sound Factory
Two-Tone Patrol Car Siren
Penicillin Lead Organ
Electronic Motorcycle
Machine Gun Pulse Detector
Electronic Siren
Electronic Cat
Electronic Organ

Electronic Decision-Makers
Majority Logic Gate
Electronic Coin Toss
Electronic Coin Toss II
Even or Odd
Quick Draw Game
Close-In

ESP Tester
The Light Fantastic
Shooting Game
Marching LEDs
Electronic Dice
Electronic Roulette

Operational Amplifier IC Can Do Many Things
Integrating Circuit
Pitch Doubling Circuit
Pitch Doubling Circuit II
Comparator
Schmitt Trigger Circuit
Delayed Timer
Pulse Frequency Doubler
Touch Switch Using OP Amplifier

Surprise and Fun Revisited
Experiment of Electromagnetic Induction
Winking LEDs
Voice Level Meter
Buzzin’ LED
Son of Buzzin’ LED

Testing and Measuring Circuits
Audio Signal Tracer
Metal Detector
Rain Detector
Burglar Alarm
Temperature-Sensitive Audio Amplifier

Learn Basics More
A Basic of Control Volume
Emitter Follower
Basic Operation of Zener Diode
Zener Voltage Checker
Zener Voltage Checker II
Basic Photo-Transistor Operation
Voltage Drop Circuit by Means of Diodes
Experimentation of Capacitor Temperature

Two-IC Electronic Organ
A Water Service Pipe Sound
Electronic Klaxon
Sound Machine III
Sound Wave Varying with Light Intensity
Player Organ
Sound of Passing Siren
Light Source Sensing Circuit by Sound
Electronic Piano Circuit
Whistle Generating Circuit
Space Gun
Car Horn

More Radio Circuits
Morse Code Transmitter
Broadcasting Organ
FM Transmitter (FM Wireless Microphone

To The Game World
Quiz Winner Detector
Reflex Nerve Test Game
Shooting Game II
Shot In The Dark II
Sound Quiz
Stop the Seven
High-Power Switch
"Lockout, Mr. Blackbeard!"
Game
Russian Roulette
Mole Hitting Game
"Janken" Game
Ping-Pong Game

More Adventures in OP
Amplifier Circuits
Voltage Controlled Amplifier
V-F Converter
F-V Converter
F-V Converter II
White Noise Generator
Sweep Generator
Multiple-Function IC Project
Sound Alarm
A Sound of Ripples
Photo Organ
Vibrato Organ

More About Oscillation
Phase Shift Oscillator
Wide Range Audio
Frequency Oscillator
Sawtooth Wave Oscillator II
Three Phase Oscillator
Wien-Bridge Oscillator
Ramp Wave Generator
Digital Sine Wave Generator
Frequency-VARIABLE Sine Wave Generator
Sine Wave Oscillator Using D-A Converter
RC Phase-Shift Oscillator
Two Sine Waves with Different Phases
One-Shot Multivibrator
Using IC 555
One-Shot Multivibrator

3-Bit Shift Register
BCD-To-Decimal Decoder
More Digital Circuits
4-Input Data Selector
AND/OR Circuit Using OP Amplifier
XOR Using OP Amplifier
Time Sharing Display of LEDs
LED Lighting-Duty Varying Circuit Using One-Shot Multivibrator
LED Blinking-Cycle Varying Circuit Using Astable Multivibrator
LED Static Drive Circuit
LCD Dynamic Drive Circuit
Testing LCD Display
Response
LED Drive by 4 Switches
Flash LED by Preset Number
Digital Timer (1 to 7 Minutes)
Sound Timer
Programmable Timer with Down Counter

Amusement in Electronic Circuits
Revolving Light
Photo Switch
Door Chime
Visitor Sensing Chime
Using Photo-Transistor
Touch VCO
Sound Tuning Circuit
Crossing-Bell Sound Generator
Turn Indicator
Staircase Light Switching Control Circuit
Pseudo Candle Circuit
Lie Detector
Light Sensing Circuit
Automatic Lighting LED
Sound Sensing LED
Illumination Lamp
Interrupt
PIP Sound Interphone
Electronic Volume
Pedestrian Signal
Time Counter
LED Delay Counting Up/Down Circuit
An Electronic Pendulum
Staircase Light Switching Control Circuit II
Lamp Brightness Control Circuit
Automatic Illumination Circuit with 4-LEDs
Simulated Car Winker

ROL/ROR Instructions (1)
Night Rider’s LEDs with ROL/ROR Instructions (2)
Binary Counter with INC Instruction
Binary Counter with DEC Instruction
Sound do as do, re, mi
Sound a series of Musical Scale
Let’s Input Data to Program Hidden Key Triggers Sound and Turns All LEDs On Stacked MOV Instructions
Changing Order of LEDs by Switch
A Musical Scale Sound by S1 Key
Arithmetic Addition of Two Binary Values
Arithmetic Subtraction of Two Binary Values
Arithmetic Multiplication of Two Binary Values
Arithmetic Division of Two Binary Values
Displays Number 0 to 9 on 7-Segment LED (2)
Change Order of Numbers Display on 7-Segment LED (2)
Switches S1-S4 Light Hex Number On 7-Seg LED
8-Key Organ
Lighting Spade, Diamond, Heart, and Club on the LCDs Display (Basic)
Lighting Spade/Heart and Diamond/Club on the LCDs Display
Lighting Spade, Diamond, Heart, and Club by Static Drive Circuit
Lighting Spade, Diamond, Heart, and Club by 1/2 Duty-1/2 Bias Circuit
Lighting Spade/Diamond and Heart/Club by 1/2 Duty-1/2 Bias Circuit
Lighting Spade/Diamond and Heart/Club Alternately by 1/2 Duty-1/2 Bias Circuit
Lighting Spade, Diamond, Heart, and Club by 1/2 Duty-1/2 Bias Circuit
Results of Logical Operations AND, NAND, OR, and NOR
Results of Logical Operations XOR and XNOR
Results of Logical Operations AND/NAND with 4-Switch Entry
Results of Logical Operations with OR/NOR 4-Switch Entry
Results of Logical Operations with XOR/XNOR 4-Switch Entry
Logical AND/NAND Gate for Driving External Circuit
Counts an External Clock
Counts an External Clock
Counts an External Clock
Counts an External Clock
Counts an External Clock

3-Minute Timer
Multi-Function Timer (1)
15-Minute Timer with 7-Segment Display
Multi-Function Timer (2)
Digital Organ with PHOTO-TRANSISTOR (1)
Digital Organ with PHOTO-TRANSISTOR (2)
Digital Volume Changer (1)
Digital Volume Changer (2)
Digital Volume Changer (3)
Digital Volume Changer (4)
Digital Volume Changer (5)
Illumination Controlled by PHOTO-TRANSISTOR (1)
Illumination Controlled by PHOTO-TRANSISTOR (2)
Illumination Controlled by PHOTO-TRANSISTOR (3)
Illumination Controlled by Oscillator and PHOTO-TRANSISTOR (1)
Illumination Controlled by Speed (1)
Illumination with Speed (2)
Sawtooth Waveform Generator
Triangular Pulse Generator
Digital Level Indicator
Digital Lux Meter (Display in Binary)
4-Bit A/D Converter (Display In Binary)
4-Bit A/D Converter (Display In Hexadecimal On 7-Segment LED)
Digital Lux Meter (Display In Hexadecimal)
Audio Level Meter
Audio Level Meter with Peak-Holding Capability
Lighting Sign Board
Digital Dice
Digital Roulette
Digital Slot Machine
Up/Down Counter
Digital Metronome
Frequency Counter
Dynamic Lighting of 7-Segment LED
Lighting LED with Pulse
Width Modulation
Majority Logic Gate (2)
Lighting LCD Segments by Static Drive
Digital Buzzzer
Rhythm Box (1)
Rhythm Box (2)
Rhythm Box (3)
Rhythm Box (4)

QUASAR ELECTRONICS LIMITED
PO Box 6935, Bishops Stortford, CM23 4WP, UK
Tel: 01279 467799 Fax: 01279 267799
URL: www.quasarelectronics.co.uk
E-mail: sales@quasarelectronics.co.uk