

ELECTRIC BIKE MECHANICS COURSE – MANUAL

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<p>DAY 1:</p> <p>E-Bikes & The Law Components of an E-Bike</p> <ul style="list-style-type: none">- Motor options & suitability- Battery options & suitability <p>General Bike Maintenance & Servicing</p> <ul style="list-style-type: none">- Brakes- Gears- Other things to check	<p>DAY 2:</p> <p>Understanding Electrical Theory</p> <ul style="list-style-type: none">- Volts, Amps & Watts- Resistance- AC and DC- Using a Multi Meter- Soldering and Connectors <p>E-bike Motors</p> <ul style="list-style-type: none">- DC / AC- brushed / brushless- Copper Windings (coils / phases)- Hall Sensors / Sensorless- Hub / Mid-mount- Geared / Direct Drive- Regen Braking <p>Fitting Your Motor</p>
<p>DAY 3:</p> <p>E-Bike Batteries</p> <ul style="list-style-type: none">- A brief history of Batteries- Chemistries other than Lithium- Lithium Ion vs Lithium Polymer (LiPo)- Different chemistries of Lithium-based batteries- How a lithium battery cell works- Cells in series and parallel- Battery Management Systems- Charging- Best Practice battery care for prolonged lifespan- Fault-finding <p>Mounting Your Battery – including Rivnutting</p>	<p>DAY 4:</p> <p>E-Bike Controllers & Controls</p> <ul style="list-style-type: none">- What does a controller do?- Square wave / Sine wave- Programmable controllers- Standard controls (pedelec, throttle, brake cutouts, LCD)- Adapting controls to suit challenging bikes- Adding lights <p>Mounting Your Controls & Controller</p>
<p>DAY 5:</p> <p>Testing, Tuning & Tidying</p> <ul style="list-style-type: none">- Finishing off the bike neatly - creating a REV-worthy e-bike- Test Riding <p>General fault-finding & repairs (including other systems) What is VALUE in an e-bike system Assessing a bike & meeting customer's needs</p>	<p>DAY 6 (optional, by invitation):</p> <p>Being a Distributor for REV-Bikes Pricing and Profitability How REV will support you Processes and Procedures Handling Customers Your E-Bike Workshop, & Tools</p> <p>➤ Details TBC based on numbers</p>