INSTRUCTION MANUAL FOR:

RELAY CIRCUIT DIAGNOSTIC TESTER

Your new tester is produced and manufactured to a high standard of dependability and will, if used according to these instructions and properly maintained, give you years of trouble free performance.

IMPORTANT: **READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THIS TESTER CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.**

1. SAFETY PRECAUTIONS

- **IF YOU ARE IN ANY DOUBT ABOUT ELECTRICAL SAFETY CONSULT A QUALIFIED ELECTRICIAN.**
- Only for use with 12V - 24V DC systems.
- **DO NOT** use with industrial 110V systems.
- **DO NOT** use for domestic 110V - 230V applications.
- **DO NOT** use on any circuit directly or indirectly connected to AC lines or any other AC power source.
- Always check the instructions and procedures indicated in the vehicle service manual before attempting to disconnect any part or sub-system of the electrical circuit.
- **DO NOT** use if leads are damaged or if any wires are bared in any way.
- **DO NOT** use the equipment when you are tired or under the influence of alcohol, drugs or intoxicating medicines.
- **DO NOT** use this tool for any purpose other than that for which it has been designed.
- Observe standard workshop safety procedures when using the tester.
- Ensure vehicle ignition is switched **OFF** before connecting or disconnecting the tester.
- Keep the work area clean, uncluttered and ensure there is adequate lighting. Keep tools and other items away from the engine, and ensure you can see the battery and working parts of engine clearly.
- Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.
- Remove ill fitting clothing. Remove ties, watches, rings and other loose jewellery. Contain or tie back long hair.
- Keep children and unauthorised persons away from the working area.
- **DO NOT** disassemble. The tester must be checked by qualified service personnel only.
- **DO NOT** get the tester wet or use in damp or wet locations or areas where there is condensation.
- **DO NOT** use the tester for any purpose other than that for which it is designed.
- **DO NOT** pull by the cables to free from the relay socket.
- When not in use, store carefully in a safe, dry, childproof location. Avoid extremes of temperature.

2. INTRODUCTION

2.1 Introduction

Fast, accurate and safe relay circuit tester that tests the supply, earth and trigger wires within the circuit. Simply remove the relay and install the corresponding dummy relay. Includes a universal fly lead for non-standard relay pin configurations. Earth, supply and trigger terminals will be displayed as a green or red LED. The tester can also be used to power components by simulating the relay in the on/off positions using the test button.

3. OPERATING INSTRUCTIONS

Note: Please refer to fig.1 overleaf for identification of the tester's components.

- **WARNING! Before use ensure that you have read, understood and apply Section 1 safety precautions.**
- **WARNING! All pin numbers on the dummy relays must correspond with the appropriate pin numbers on the vehicle or damage may result when using the test buttons. This is especially important when using the universal fly lead.**

3.1. Connection

3.1.1. Connect the red clip on the tester to the positive terminal (+) on the vehicle battery.

3.1.2. Connect the black clip on the tester to the negative terminal (-) on the vehicle battery.

3.1.3. All the LEDs on the tester will illuminate, indicating that there is no voltage or earth present at the test plug.

3.1.4. Remove the relay from the circuit to be tested and install the correct type of dummy relay into the relay socket (There are six different types of dummy relay supplied with the kit plus a universal fly lead for use with any type of vehicle relay socket).

3.1.5. Attach the test plug to the dummy relay.

3.2. Testing

3.2.1. Any circuits that have a voltage will be indicated by the red LED illuminating.

3.2.2. Any circuits going to earth will be indicated by the green LED illuminating.

Note: With any relay circuits, there should be a minimum of at least one red and one green LED illuminated when testing a circuit. Both LEDs should not be illuminated at the same time for an individual circuit as this will indicate a fault within that circuit. Typically circuits 86 and 30 will illuminate red whilst circuit 85 will illuminate green.

3.2.3. If the relay circuits are serviceable (as indicated by the LEDs), they can be energised by the setting 3-position switch to “I” for 87 and to “II” for 87A for testing a 5-pin relay. For example: if the horn relay circuit is under test, depressing the testbutton will sound the horn.

3.3. Additional Testing

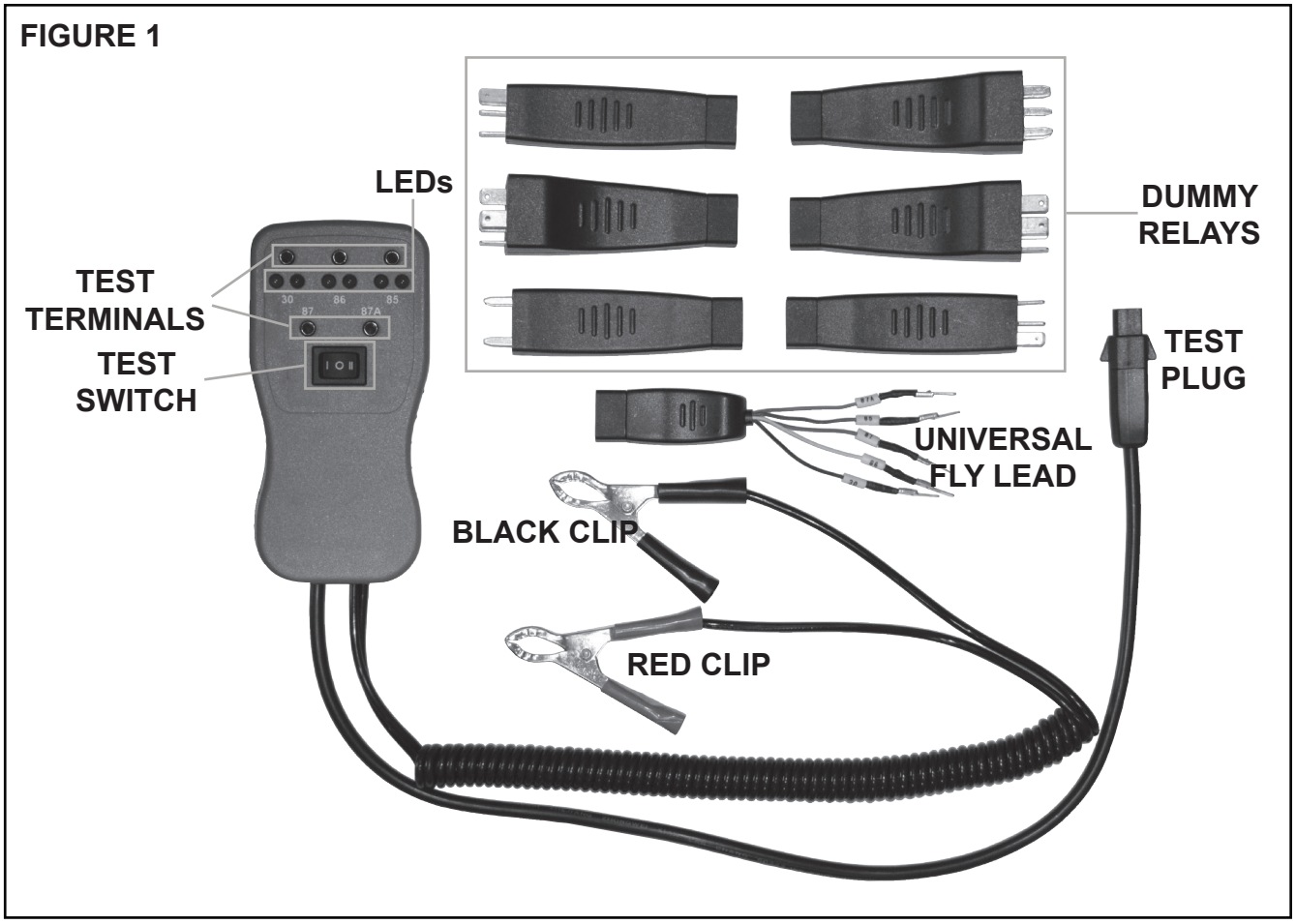
3.3.1. Additional diagnostic tests may be conducted using a Digital Automotive Analyser or test light in conjunction with the test terminals.

Note: There is no resistance in the tester between the test terminals and the vehicle circuit.

3.4. Universal Fly Lead

3.4.1. The coloured wires on the universal fly lead have numbered tags to identify which pin the coloured wires correspond to.

3.4.2. Should the numbered tags become lost or illegible, the guide overleaf indicates which coloured wire corresponds to which particular pin.



Universal Fly Lead Pin Identification Guide	
Wire Colour	**Pin Number**
Black	30
White	86
Blue	85
Green	87
Red	87A

Parts support is available for this product.

NOTE: *It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.*
IMPORTANT: No liability is accepted for incorrect use of this product.
WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.