

GENERIC SPECIFICATION FOR MOTORCYCLE RESPONSE UNIT

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This specification contains 7 pages and no attachments

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SPECIFICATION FOR MOTORCYCLE RESPONSE UNIT

1 Overall Requirement

- 1.1 A heavy duty style motorcycle for the conveyance of a MRU rider and associated medical equipment in the London environment. The machine will cover approximately 13,000 miles per year and is expected to have a minimum life of five years. It will have arduous usage doing short journeys with at least 50% of the distance travelled under 'blue light' emergency conditions and often from cold starts. A heavy load will be placed on the electrical system by the use of the audible/visual warning and communication systems. The rider's position must be comfortable with the machine being capable of being safely manoeuvred at very low speeds in congested traffic and stable at high speed with a full compliment of equipment.

2 General Motorcycle Requirements

- 2.1 Robust heavy duty motorcycle with single seat.
- 2.2 High output alternator. Any higher rating units shall be offered as options.
- 2.3 High capacity battery. Any higher capacity units shall be offered as options.
- 2.4 Dual Compound or Touring tyres
- 2.5 Full fairing.
- 2.6 Lockable pannier boxes on both sides of machine each with a capacity of 30 litres and capable of carrying a load of 9 kg.
- 2.7 Top box or under seat storage with a load capacity of 6 kg with a minimum size of 40 litres.

- 2.8 Front crash protection bars
- 2.9 Easily accessed 1 kg AFFF fire extinguisher with pressure gauge in transport bracket.
- 2.10 Number plate and single road tax disk holder.
- 2.11 Anti lock braking system.
- 2.12 Traction and brake control system.
- 2.13 Clutch lever adjustment (auto or manual) to provide constant lever travel.
- 2.14 12v charging socket.
- 2.15 Ignition keys 3 off.
- 2.16 Top box keys 3 off.
- 2.17 Pannier keys 3 off, if different from ignition.
- 2.18 Suspension to be locked
- 2.19 Centre Stand
- 2.20 Heated Handlebars

3. Electrical

- 3.1 Panoramic front blue strobe lights.
- 3.2 Rear blue strobe light 360° visible.
- 3.3 Rear blue strobe lights independently switched and with warning light to alert rider if left on.
- 3.4 Flashing main beam headlamp device usable only with blue lights and not when normal headlamp operation is required. Switched automatically.
- 3.5 100W yelp/wail/piercer siren with on/off and alternating control switches operable without removing the hands from the handgrips. Additionally a "Bull Horn" facility is to be capable of activation via the standard road horn button when the emergency lights are activated and operable only whilst the road horn button is depressed.

4. Communications System Digital Radio System

- 4.1 The Constructor is to install a Cleartone MB7000 VHF radio system (not including the UHF option) to comprise of:-
- 4.2 One Tail Unit back box positioned in an enclosure behind the rider.
- 4.3 One Control Head mounted in the near side stowage pocket of the fairing (an example picture is provided in the supplementary information).
- 4.4 One Interface Lead connecting the two units above.
- 4.5 (The above equipment will be free issued to the Constructor. Dimensions are provided in the supplementary information. Additional information may be obtained from the manufacturer Cleartone Radio Communications Systems 01495 752 255.)
- 4.6 The Constructor is also to supply and install the following:-
One VHF High Band 166-171MHz ground plane less antenna (suggested model is the Sigma MC150) to be supplied and securely fitted to the rear of the motorcycle. This antenna must be terminated in the appropriate connector and connected to the Tail Unit with a VSWR of 1.7 or less for transmitting frequencies of 171.050 MHz to 171.400 MHz.
- 4.7 One Nexus "helmet head set" socket on a fly lead, positioned emerging from beneath the rider's seat. This lead must not inhibit the safety of the rider.
- 4.8 One 15W waterproof external loud speaker interfaced to the Control Head.
- 4.9 Whether of not the rider has unplugged the helmet from the motorcycle, the rider is to hear received audio over the external speaker by pressing the "speaker" button on the Cleartone Control Head.
- 4.10 One waterproof non-locking Press To Talk (PTT) switch mounted on the near side handlebar, sufficiently separated from the horn button to avoid inadvertent use, interfaced to the Control Head.
- 4.11 Any additional interface equipment provided (such as an amplifier relays or transistor switching) must be waterproof, securely fixed to

avoid damage due to vibration and be easily accessible for maintenance and replacement purposes.

- 4.12 The exact design, positioning and methods of fixing of all equipment are to be provided to the LAS for approval at least 4 weeks prior to the availability of the first motorcycle. The design, positioning and fixing methods will be acceptable only if approved by the LAS.
- 4.13 Brackets must be securely and solidly bolted to solid metalwork to minimise vibration. Brackets must be electrically bonded with a resistance of no greater than 0.1 Ohms to the chassis earth using an insulated copper braid.
- 4.14 A fused nominal 13.8V continuous power supply capable of supplying at least 15A must be provided to the position for the Tail Unit. The cable must be electrically connected to the motorcycle battery using at least 23/0.3 mm 2-core cable. The cores must be individually insulated and colour coded red for positive and black for negative. The two insulated cores are to be encased in an outer sheath.
- 4.15 Both positive and negative lines must be protected by 10A in line fuses close to the battery terminals. The fuses must be protected from corrosion, arranged so that they are not exposed to the elements and are not susceptible to moisture ingress due to the elements or cleaning of the motorcycle. The fuses must be arranged to avoid polarity reversal during fuse exchanges. Provision must be made for easy access to the fuses and holders.
- 4.16 Other than the fuses, the cable must be run uninterrupted by connections of any kind. The cable must not be run within or parallel to the vehicle loom. At the radio position, the cable must be terminated in the radio equipment manufacturer's connector with 300 mm of free slack.
- 4.17 It should be noted that radio communications equipment suffers more than most types of equipment from build-up of small resistance in supply leads. This is due to the nature of radio equipment requiring supply continuity at high frequency AC in addition to the DC supply. High frequencies are much more susceptible to poor continuity and ordinarily insignificant resistances at DC can prove to significantly degrade the performance of the radio communications equipment. Care must be taken with the provision of all supply leads in order to ensure that the resistance of the supply to its source is as low as possible and that the possibility of the resistance varying due to moisture ingress or loosening of connections is minimised.
- 4.18 In addition to the above Communications Systems specifications, all radio equipment installations are to comply with MPT1362 'Code of practice for installation of mobile radio on land based vehicles' available from the Radio Communications Agency on 020 1211 0211.

6 Motorcycle Colour, Livery and Signage

- 6.1 Gloss Euro Yellow (RAL 1016) durable non fade paint finish to motorcycle, fairings, panniers and top box.
- 6.2 Markings in 3M vinyl to be supplied and applied by LAS contractor and will include:-
- 6.3 NHS logo 2 off, applied to both sides of front fairing.



- 6.4 LAS Crown emblem 1 off, applied to lower part of windscreen fairing.



- 6.5 "LONDON AMBULANCE SERVICE" (reflective red) 3 off, applied either side behind rider seat and to rear of top box.
- 6.6 "LONDON AMBULANCE SERVICE" (red) 2 off, applied to top face of panniers.
- 6.7 "AMBULANCE" reflective white on fairing 1 off.
- 6.8 Compressed gas sign 1 off, applied to fixed portion of r/h pannier to rear.



- 6.9 Fleet no. 1 off, applied to top of front mudguard.

- 6.10 Front and rear tyre pressures 2 off.
- 6.11 Reflective yellow markings on fairing, panniers front mud guard and behind rider seat, 18 off.
- 6.12 Reflective red markings at rear 3 off.
- 6.13 This sub-section is for record purposes and not for tender quotation.

7 Proprietary Parts

Where proprietary parts are referred to functionally equivalent parts may be offered.

8 Warranty

A three year parts and labour warranty is required.

9 Training

Vehicle manufacturer in-house training must be provided for LAS workshop staff together with relevant literature and updates

10 Legal Standards

The vehicle supplied shall comply with all legal standards prevailing at the date of delivery and the supplier shall provide written confirmation of this.