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MED-125

June 15, 1957

New Motorcycle RadioMotorola Equipment Data No. 125

Another outstanding forward step in electronic and mechanical design has been taken by Motorola in the introduction of the all new "Dispatcher" motorcycle radio line.

These two-way radio units are the first specifically designed for motorcycles, departing from the practice of adaptation of vehicular mobile units to the motorcycle application. Featured are transistors, lowest power consumption, boosted receiver output, smallest size, and new economical mounting.

ELECTRONIC

The most significant performance feature of these new units is the extremely low power consumption. Less than one ampere, actually about the same as that required by the motorcycle tail light is utilized while the radio is receiving. Even while transmitting, the power consumption is only 15 amperes, just slightly more than the "receive" power consumption of a conventional automotive mobile unit.

In spite of low power consumption, eliminating the need for heavy duty batteries and generators, output power is up. Now, three watts of receiver output are available to override noise--and the output is up on the handlebar where the operator can hear it. Transmit power in the 25-54 mc. band is 12 watts. In the 144-174 mc. band power output is 7-8 watts.

These new features are due, in part, to effective use of transistors where they can serve efficiently and economically. An all-transistorized power supply eliminates the vibrator and its replacement problems, adding new reliability to two-way radio. Transistorized audio and IF stages cut power consumption, conserve space, and reduce maintenance. The weatherized transistorized dynamic microphone adds new high audio quality to each transmission.

To these new features are added the well known Motorola features of permanent selectivity of the sealed-in-plastic Permaky Filter, adjustable noise compensated squelch, adjustable Instantaneous Deviation Control and other Motorola exclusive features which have set the standards for the communications industry.

MECHANICAL

The basic unit is a two section ruggedized and reinforced aluminum housing. The lower section contains the transistorized power supply, the upper, the

transmitter and receiver chassis. These sections measure only about 12-1/2" x 3-5/8" x approximately 8" high.

With a 4" control panel on the top, the unit is completely self-contained, except for microphone and antenna. A second version, with a 2" high termination panel and cover on the top, a separate handlebar mounted speaker-control unit, plus microphone and antenna complete the unit for a "trunk mount" style motorcycle installation.

The self-contained unit mounts in a shock mount rack on the handlebar of any Harley-Davidson "Hydra-Glide" fork 2-wheel motorcycle. It is held in the rack by two key lock fasteners. The "trunk-mount" style unit mounts in the same shock mount rack when located in the trunk compartment of 3-wheel motorcycles. Total weight of these new models, all weatherproof including accessories, is less than 20 lbs.

The antenna mounts on the license bracket of both types of motorcycles. The 25-54 mc. models include a loading coil for the operating frequency, keeping the antenna length reasonable.

These units are especially designed for and have been thoroughly tested in the rigors of motorcycle operation. High speed and low speed road tests plus extensive actual "on-the-job" field testing have proved the merits of the new design.

Bulky and costly mounting racks and major motorcycle electrical system and mechanical modifications necessary to accommodate conventional models have been completely eliminated. No special generator-regulator battery system is required. Servicing, too, is simplified by using "PLA-cir" printed-circuits in modular construction with "fold-out" chassis, similar to the design first introduced as part of the "HANDIE-TALKIE" portable two-way radio equipment more than a year ago.