LAFAYETTE

6 METER AMATEUR BAND TRANSCEIVER

MODEL HE-45B

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OPERATING AND INSTALLATION INSTRUCTIONS

SPECIFICATIONS

RECEIVER

Superheterodyne receiver covering the entire 6 meter (50 to 54 Mc) amateur radio service. Built-in noise limiter control with improved full wave automatic and adjustable noise limiter and full AVC. Illuminated channel tuning dial with planetary vernier tuning. An "S" meter calibrated in S units allows measurements of incoming signal strength. The meter is wired with a switch to enable monitoring of final transmitter amplifier wattage.

SENSITIVITY: ..... 1 microvolt.

SELECTIVITY: ..... 3 KC at 6db down.

IMAGE REJECTION: ..... 45 db.

I.F. FREQUENCY: ..... 1650 KC.

NOISE GATE LIMITER: ..... Adjustable type.

AUDIO OUTPUT: ..... 3 Watt, 3½ Alnico V Speaker.

TRANSMITTER

POWER: ..... Power input of 15 watts to the final Straight-through class C 2E26 RF amplifier.

FREQUENCY: ..... 3 switch selected transmit positions. Supplied with crystal for one frequency. Widely tuned for full efficiency on the entire 6 meter band.

MICROPHONE: ..... Hand held ceramic microphone with push to talk switch; Position one —microphone in receive position; Position two—microphone in push to talk position. Spring release switch.

ANTENNA MATCHING: ..... 30 to 100 ohms.

CONTROLS

RF PEAKING CONTROL
VOLUME ON-OFF
PLANETARY TUNING
NOISE LIMITER CONTROL — Adjustable type including stand-by switch.

CRYSTAL SELECTOR: ..... 2 crystal controlled fixed transmitting frequencies plus a position for an external V.F.O.

RF METER INDICATOR: ..... 2 position switch controlled. Position "PRF" — reads antenna feed voltage. Position "S" indicates received signal strength. Zero adjustment provided.

SPOT SWITCH: ..... Crystal calibrator to check calibration of receivers frequency dial.

Operates on 117 VAC and 12 volts DC, with proper supplied cables. Battery operated cable internally fused.

INPUT RATING ..... 117 Volts AC 60 cycles
80 Watts Receive
100 Watts Transmit
12.6 Volts D.C.
6.5 Amps Transmit
.5 Amps Receive

SIZE: ..... 5½" H x 12½" W x 8" D.

TANK CONTROL: ..... Tank condenser to adjust the transmitter for maximum output.

ANTENNA TUNE CONTROL.. Used for loading the transmitter into the antenna.

The Lafayette Model HE-45B transceiver is a combination transmitter and receiver designed for use in the 6 meter (50.1 to 54 Mc) amateur radio service. Designed to meet the Federal Communications Commission (FCC) requirements, the unit will provide economical and reliable radio communication in its intended application if installed and operated in accordance with instructions contained herein.

The transmitter may be operated on any frequency in the 6 meter amateur phone band (50.1 to 54 Mc). Provision has been made for front panel insertion of 2 crystals into the unit, any one of which may be selected by means of a 3 position selector switch. Crystals covering any frequency within the 6 meter amateur band can very easily be inserted into the unit. A VFO may be inserted into a socket on the front panel, selected by the selector switch. Crystal controlled and plate modulated, the transmitter delivers a power input of 15 Watts to the final RF amplifier.

The receiver utilizes a sensitive superheterodyne circuit with 3 I.F. dual tuned transformers and incorporates a built-in noise limiter circuit with full wave automatic series noise limiting and full AVC. An adjustable tuned RF Bandpass stage precedes the detector for added sensitivity and selectivity, and to keep RF radiation to a minimum. The receiver tunes the entire 6 meter band. The receiver also incorporates an "S" meter for recording the signal strength of the desired signal. A spotting switch is incorporated which permits the operator to set the receivers tuning dial to the exact frequency upon which you are transmitting. A variable "Pi" network is incorporated that permits matching to any type of antenna.

POWER SUPPLIES

The HE-45B may be operated from a 117 volt 60 cycle AC source or from a 12 volt DC battery source.

117V 60 Cycle AC Source: An AC line cord, terminated at one end with a normal AC plug and at the other with an 8-pin socket, is supplied with the Transceiver. The 8-pin socket should be connected to the matching plug on the transceiver before inserting the AC plug into the wall outlet.

12V DC Source: The battery cable supplied is terminated at one end with a 8-pin socket and at the other end with an external inline fuse holder terminating into a cigarette lighter plug. The 8-pin socket should be connected to the matching plug on the transceiver. It does not matter which polarity of the battery is grounded since inserting the other end of the cable into the lighter receptacle automatically connects the cable to the "Hot" (Ungrounded) terminal of the battery.