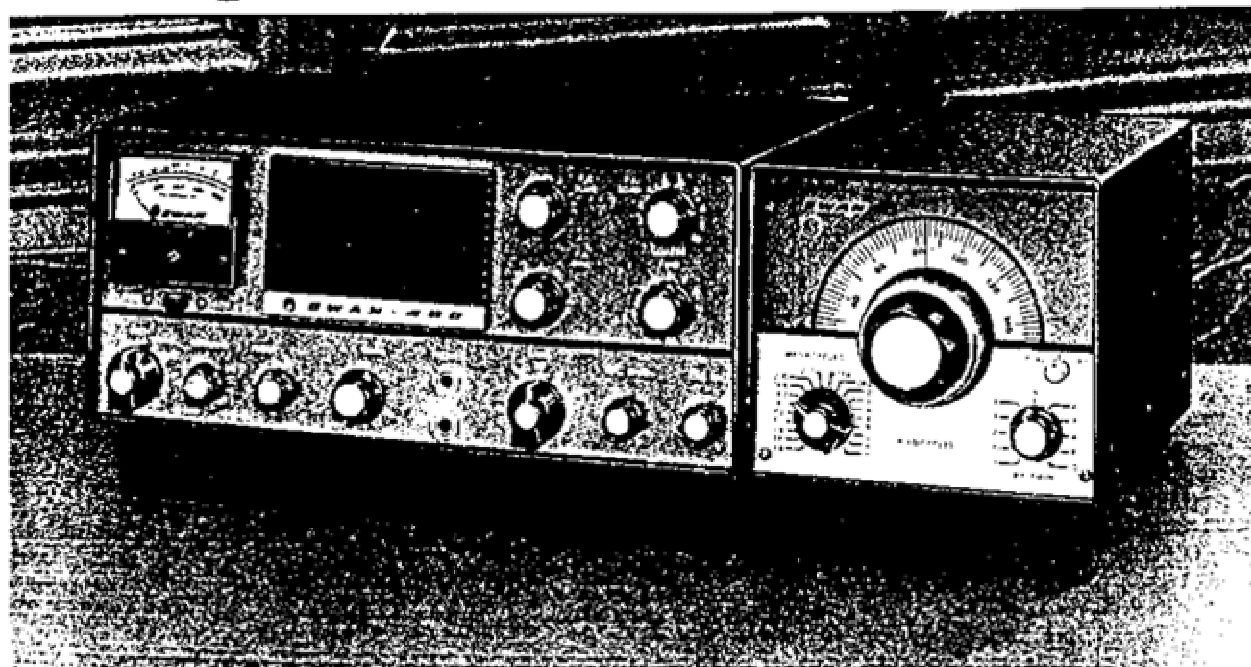


OPERATION and MAINTENANCE

MODEL 400 SERIES

Single Sideband Transceiver



INTRODUCTION

The Swan Model 400 Single Sideband Transceiver, together with its accessories and optional equipment, is designed to be used in either CW or SSB modes on all portions of the 80-, 40-, 20-, 15-, and 10-meter amateur radio bands. Operation on AM (Single Sideband with Carrier) is possible by zero-beating the received signal.

The Swan 400 generates the single sideband signal by means of a crystal lattice filter, and the transceive operation automatically tunes the transmitter to the received frequency. Provisions are included in the transceiver for operation on either upper or lower sideband, and provisions for complete band coverage are included within the basic transceiver.

Basic circuitry of the single conversion design has been proven in thousands of hours of operation of the very popular Swan 190 and 240 series of transceivers. Mechanical, electrical, and thermal stability are exceptionally high, and all oscillators are voltage regulated and temperature compensated. Push-to-talk operation is possible in all installations, and operation

with a two-contact microphone is possible by use of the Function Switch or the VOX accessory. The basic transceiver is designed for use with either the Model 420 Frequency Control Unit, which provides full coverage of all portions of the amateur bands, or with the Model 406 Frequency Control Unit which provides coverage of all phone portions of the 80 through 15 meter bands and two 200 kc portions of the 10-meter band. With a suitable power supply, operation may be fixed, portable, or mobile.

Power input on all bands exceeds 400 Watts, PEP, on single sideband, and 320 Watts DC input on CW. The basic transceiver includes automatic gain control, (AGC) automatic limiting control, (ALC), selectable sideband, grid-block keying, calibrator, and speaker.

Part I of this Manual covers the basic transceiver. Parts II and III cover the Models 406 and 420 Frequency Control Units, respectively. Part IV covers the recommended power supplies, Models SW-117B, for ac operation and Model 512 for 12 volt dc operation.

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