

# FPM-300 SSB/CW 80-10M AMATEUR TRANSCEIVER.



*hallicrafters*



# You should be talking with a Hallicrafters.



**HALLICRAFTERS INTRODUCES THE  
FPM-300 SSB/CW 80-10M  
TRANSCIVER 250 WATTS P.E.P.**

The new Hallicrafters' FPM-300 SSB/CW transceiver is designed for Fixed, Portable and Mobile applications in the Amateur Radio Service. It comes equipped with a completely self-contained Universal AC and DC power supply system. It is very compact in size. The FPM-300 is Made in the U.S.A.

The new transceiver also provides the user with an extended VFO range (600 kHz) with full frequency coverage (80 through 10 meters) allowing the FPM-300 to be used in a wider range of applications for communications services adjacent to the Amateur Bands i.e. CAP, MARS, RACES and general utility HF Communications for off-shore or interior commercial users.

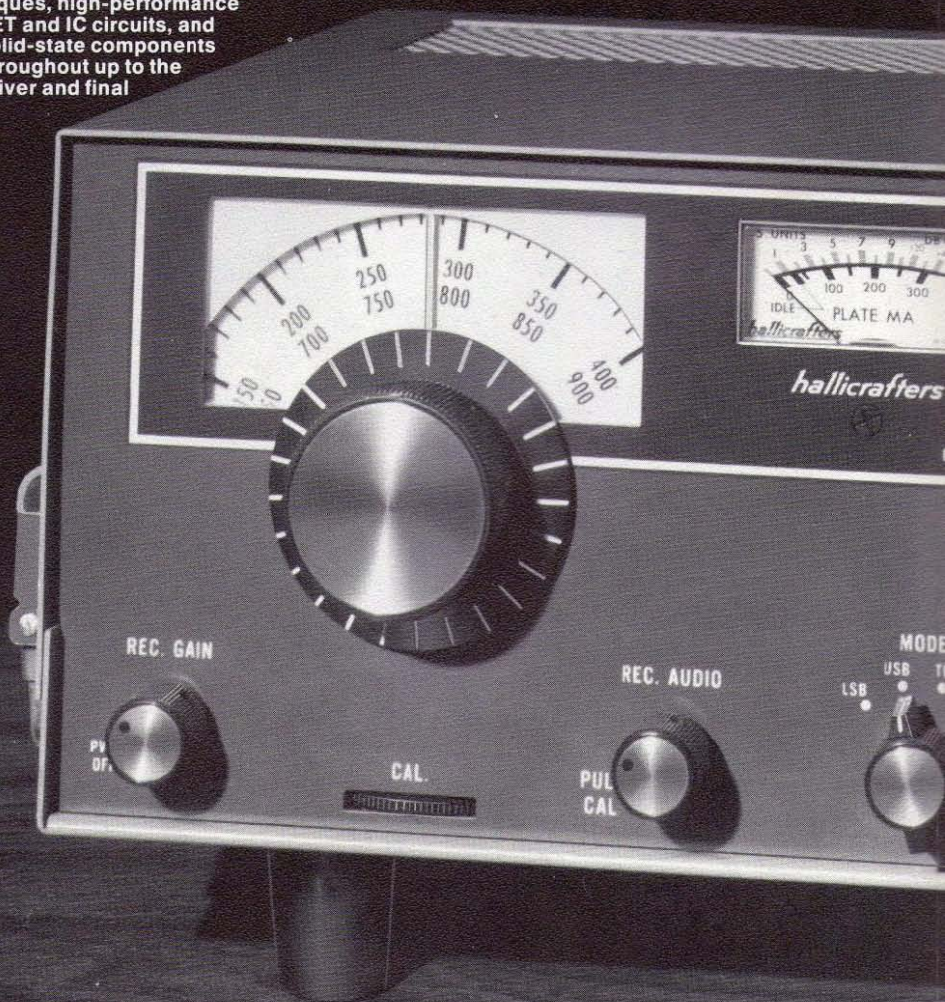
Over 38 years of quality radio engineering in the Amateur Radio field are reflected in the innovative FPM-300 SSB/CW transceiver. It utilizes reliable modular construction techniques, high-performance FET and IC circuits, and solid-state components throughout up to the driver and final

power output stages. The soundness and integrity of Hallicrafters' designs are evidenced by outstanding "on-the-air" performance and reliability through years of continual use.

Mechanical and electrical components selected for Hallicrafters' Amateur Radio Products are of the finest quality, providing Amateur Radio operators with the kind of performance and ease of operation which has typified a "Hallicrafters" for over three decades of service to the Amateur Radio industry.

The superb new FPM-300 SSB/CW transceiver is designed to exacting industrial-grade standards for increased reliability in continuous duty operation. The ruggedly built, compact transceiver covers five bands in both SSB and CW modes.

The FPM-300 is loaded with features normally found only on much higher priced communications equipment. It is built with the newest, most advanced electronic circuits and human engineered control designs developed by Hallicrafters for operation in all human environments...excellent receiver





design with low internal noise...strong, clean signals with exceptionally low, in-band spurious...easy-to-use frequency readout...accurate tuning across all bands with high stability and sensitivity...great mechanical integrity with quality workmanship...many built-in and optional features for added enjoyment...hinged cover for easy access to circuits...unusual single conversion circuitry with bi-directional mixers and amplifiers...low intermodulation distortion on both transmitter and receiver...no more damaged P.A. tubes on tune up with "Tune" position on function switch...adjustable PI networks for precise antenna loading...built-in 100/25 kHz crystal calibrator to help locate band edges on the new sub-bands...AALC and true audio compression amplifier circuits built-in...CW sidetone and semi-automatic break-in...all glass epoxy printed circuit boards used throughout...recognized world famous component brand name identification and complete service backup to amateurs.

Now, consider the specifications and ad-

ditional features of this all-new FPM-300 SSB/CW transceiver designed and manufactured in the States by Hallicrafters for the popular priced class of Amateur equipment.

# **FPM-300 SSB/CW 80-10 METER TRANSCEIVER QUALITY PERFORMANCE SPECIFICATIONS**

## **General:**

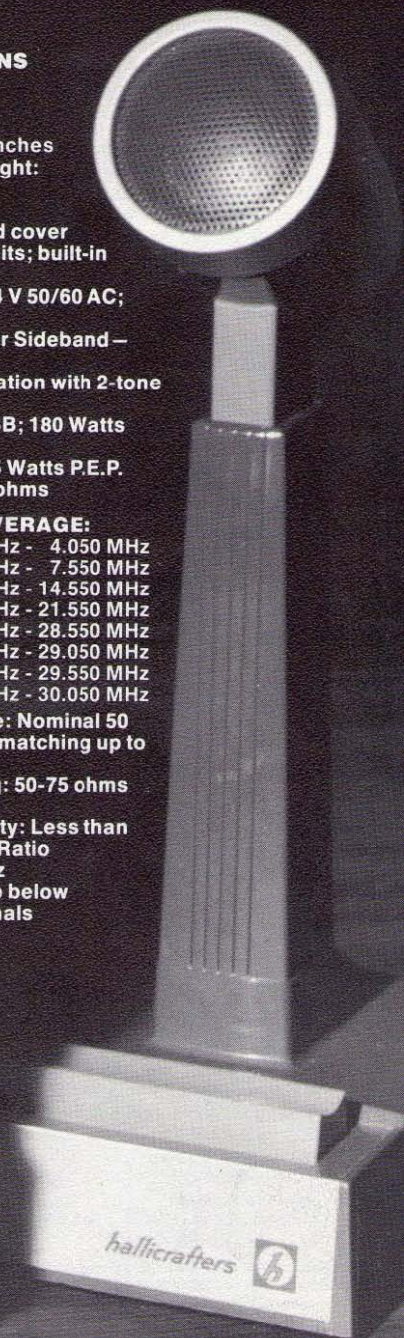
- Model Number: FPM-300
- Dimensions: (HWD) 5½ x 12 x 11 inches
- Weight: 25 pounds Shipping Weight: 27 pounds
- Tuning Ranges: 8-600 kHz Bands
- Cabinet: Painted steel with hinged cover assembly for easy access to circuits; built-in speaker
- Power Requirements: 117 V or 234 V 50/60 AC; 13.4 VDC Negative Ground
- Modes: Selectable Upper or Lower Sideband - CW or RTTY
- Type of Service: Continuous operation with 2-tone SSB-CW-RTTY (50% duty cycle)
- Plate Input: 250 Watts P.E.P. on SSB; 180 Watts on CW; 90 Watts RTTY\*

- Power Output: 125 Watts P.E.P. (Nominal) into 50 ohms

## **FREQUENCY COVERAGE:**

80 meters	3.450 MHz - 4.050 MHz
40 meters	6.950 MHz - 7.550 MHz
20 meters	13.950 MHz - 14.550 MHz
15 meters	20.950 MHz - 21.550 MHz
10 meters	27.950 MHz - 28.550 MHz
	28.450 MHz - 29.050 MHz
	28.950 MHz - 29.550 MHz
	29.450 MHz - 30.050 MHz

- Output Impedance: Nominal 50 ohms variable for matching up to 2:1 SWR
- Antenna Matching: 50-75 ohms adjustable
- Receiver Sensitivity: Less than 1 MV for 15 db SN Ratio
- Selectivity: 2.0 kHz
- Receiver IM: 60 db below 2 equal 10 MV signals





## (SPECIFICATIONS CONT.)

- Receiver Image and IF Rejection: Greater than 60 db
- Internal Receiver Spurious: Less than equivalent 1 Microvolt Signal
- Transmitter IM: 30 db below P.E.P. (26 db below one of two equal tones)
- Transmitter Spurious: 50 db minimum except harmonics - 40 db
- Adjacent Channel Desensitizing: 3 db with greater than 10,000 MV
- Sideband Suppression: -50 db minimum @ 1 kHz
- IF Rejection: 60 db minimum
- Maximum AF Power Output: 2 watts minimum
- Ambient Temperature Range: -20°C + 50°C
- Ambient Humidity Range: 0% - 90%
- Frequency Stability: Within 100 Hz after warmup. Not more than 100 Hz change with 10% line voltage change.
- Frequency Readout: Within 1 kHz  $\pm$  100 kHz of Cal Point. Not more than 3 kHz across entire 500 KC Band.
- Keying: Keyed Tone
- Break-In CW: Semi-Automatic
- CW Sidetone Provided
- Audio Input: High Impedance
- VOX Sensitivity: 5 MV
- Audio Frequency Response: 500-2500 Hz Nominal at 6 db (Crystal Filter Passband)
- AALC: 12 db Compression
- AGC Figure of Merit: 60 db minimum

### SOLID-STATE DEVICES:

(10) FET's; (18) Bi-Polar transistors; (3) IC's; (8) Hot Carrier Diodes; (3) Bridge Rectifiers; (20) Junction Diodes; (6) Zener Regulators

### TUBES: (1) 12BY7 Driver

(1) 6KD6 Power Amplifier

### CRYSTAL CALIBRATOR:

Provides 25 kHz Calibration Signals

### FRONT PANEL CONTROLS:

Main tuning; Receiver Audio; Mode (LSB/USB/Tune/CW); Function (Receive/Standby/PTT/VOX); Mic/CW Level; Preselector; Bandswitch; Receiver Gain and Power Off Control; PA Load and PA Tune; large, easy-to-read frequency readout display which can be interpolated to 1 kHz; plus "S" tune panel meter for signal strength and plate current metering.

### OTHER TECHNICAL FEATURES

#### OF THE FPM-300 INCLUDE:

SSB-Selectable USB/LSB; CW Level Control-Single Sideband (SSB) Operation; MOX-Manual (Push-to-Talk); VOX-Voice Control, CW Operation; MOX-Manual; VOX-Automatic Break In; Dial Calibration on one kHz increments; 600 KC tuning range; Calibration Accuracy is less than 3 kHz

### FPM-300 OPTIONAL ACCESSORIES:

#### MR-300 Mobile Installation Kit

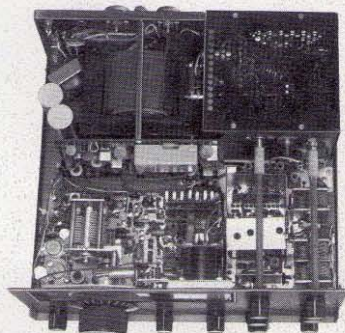
- Ruggedized design for Universal Mounting with heavy-duty cables
- Net Weight: 2 pounds
- Shipping Weight: 3 pounds
- HA-60 BLOWER FAN KIT
- Works on AC or 12 VDC, Fixed Station or Mobile Operation
- Quiet operation
- Complete Mounting and Interconnections provided by the transceiver
- Dimensions: (HWD) 3 1/8 x 3 1/8 x 1 5/8 inches
- Weight: 1 pound

Schematic and Block Diagram provided upon request. Specifications subject to change without notice. Copyright 1972 The Hallicrafters Co.

\*Not recommended unless equipped with optional HA-60 Fan Kit.



The FPM-300 offers unusual flexibility for mobile installation and removal because of its flip-up hinged cover and chassis. Hinged design permits quick and easy access to internal adjustments without disassembly.



Top view of FPM-300 with cover removed showing modular construction, completely self-contained 117/234, 50/60 Hz AC and 12VDC power supply and solid state circuitry of transmitter and receiver sections.



Control Panel of FPM-300, done in handsome grey and black, consists of Main Tuning Control; Receiver Audio, Mode (LSB/USB/CW/Tune), Receiver Audio, Calibrator Adjust, PA Load, PA Tune, Mic/CW Level, Preselector, Function (Receive/Standby/PTT/VOX) plus Plate MA panel meter and large frequency readout display.



Rear panel input/output connections for accessories, antenna, key, ground, blower socket, fuseholder with fuse, power supply source.

*the hallicrafters co.*

A Subsidiary of Northrop Corporation



600 Hicks Road  
Rolling Meadows, Illinois 60008 U.S.A.  
312/259-9600 TELEX 25-3707 TWX 910-687-3785

PRINTED IN U.S.A.

156-018856