Rockwell International

KWM-380

Amateur Radio Transceiver

FEATURES

- *Fully Synthesized in 10-Hz Steps*
- *General Coverage Receive - 0.5 to 30 MHz*
- *Split Frequency Operation*
- *Internal Microprocessor Control*
- *Completely Solid-State Modular Construction*
- *Complete Station in Single Unit*
- *Fully Protected 100-Watt-Output Power Amplifier*
- *Built-in AC and DC Power Supplies*

The Pro-Mark ™ KWM-380 HF Transceiver is professional equipment designed for the radio amateur. Complete solid-state design in a single, attractive desktop package eliminates the need for separate units such as power supply and speaker to provide a complete operational station. Fully synthesized design in 10-Hz steps with microprocessor control and frequency memory provides split-frequency operation without the need for an external vfo unit or separate receiver. Single-knob tuning at any one of four selective tuning rates covers the frequency range of 0.5 to 30 MHz in receive. Transmit operation provides 100 watts output in SSB, CW, and RTTY modes within the 160- to 10-metre amateur bands. Advanced receiver design with passband tuning minimizes the effect of adjacent signal interference. The KWM-380 operates directly from 115/230 volts, 50/60 Hz ac or +13.5 volts dc. Optional features include noise blanker, speech processor, accessory if filters, and control interface provisions.

OPTIONS

AC-3801 Noise blanker

AC-3802 Speech processor

AC-3803 Control interface

AC-3810 360-Hz CW filter

AC-3811 140-Hz CW filter

AC-3812 1.7-kHz RTTY filter

AC-3813 6.0-kHz AM filter

ACCESSORIES

A full line of station accessories, including rack mounts, microphones, headsets, etc, are available to complement the KWM-380 transceiver.

SPECIFICATIONS

Frequency range ..... Tunable in 10 Hz steps.

Receive mode ..... 2.0 - 30.0 MHz, 0.5 to 2.0 MHz at reduced sensitivity, SSB, RTTY, CW or AM.

Transmit mode ..... SSB or CW 160 through 10 meter amateur bands. SSB (selectable), RTTY and CW.

Frequency accuracy ..... Accurate to within ±5 Hz when the 455.0 kHz and 39.6 MHz oscillators are set within ±3 Hz. Warm-up time is 10 minutes.

Frequency stability ..... Stability is within ±150 Hz over the temperature range of 0 to 50 °C.

RECEIVER PERFORMANCE

Antenna impedance ..... 50 ohms.

Sensitivity ..... Not more than 0.5 μV for 10 dB S+N/N at antenna input for SSB and CW over the 2 to 30 MHz range. Broadcast band attenuation is a nominal 30 dB.

If and image rejection ..... Greater than 60 dB.

Selectivity ..... In operating modes USB, LSB, CW and AM:

BW at -3 dB (min)	BW at -60 dB (max)
2.1 kHz	4.4 kHz
*1.7 kHz	3.4 kHz
*360 Hz	1.25 kHz
*140 Hz	600 Hz
*6.0 kHz	25 kHz
8 kHz	50 kHz

*optional

Audio output ..... Not less than 3 watts into a 4-ohm load at 1 kHz, at not more than 10% total harmonic distortion.

Line audio output ..... -10 dBm nominal into 600 ohm load.

Audio freq response ..... Not more than 5 dB variation from 300 to 2400 Hz.

AGC ..... Audio output variance not more than 8 dB as the RF input varies from 4.0 μV to 200 mV open circuit.

IMD ..... Two signals spaced 20 kHz at a level of -10 dBm each will produce IMD down 50 dB minimum.

TRANSMITTER PERFORMANCE

Output impedance ..... 50 ohms, nominal.

Power output ..... 100 PEP nominal on any amateur band, 160 through 10 M.

In CW or RTTY, there is automatic reduction to 50 W after 10 seconds of continuous key down.

With optional blower kit, power is 100 W average, 50% duty cycle, key down 1 hour max at 25 °C, 1/2 hour at 50 °C for all modes.

Unwanted signal suppression ..... Minimum values below PEP output.

Carrier suppression ..... 50 dB.

Undesired sideband, 1 kHz ref .. 55 dB.

Harmonics (all) ..... 40 dB.

Mixer products ..... 50 dB.

Third order distortion ..... 25 dB below each tone of a two tone test.

Audio inputs ..... Microphone - low Z type, internal strap for high Z.
Line - 600 ohms, unbalanced. Level of 40 mV is sufficient to produce full output.

Audio freq response ..... Not more than 5 dB variation from 300 to 2400 Hz.

PHYSICAL CHARACTERISTICS

Size ..... W 39.4 cm (15.50 in), H 16.5 cm (6.5 in) (w/o feet), H 19.1 cm (7.5 in) (w/feet), D 45.7 cm (18.00 in).

Weight ..... 22.7 kg (50 lb).

POWER REQUIREMENTS

105, 115, 125, 210, 220, 230, 240, 250, ±5% V ac (Internal strapping option) 50-60 Hz, 12 V to 15 V dc (Connector strapping). 120 W input in receive max; 600 W input in transmit max.

Specifications subject to change without notice.

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