

**2 METER  
FM  
TRANSCEIVER**

# TR-7600

The new TR-7600 is a high-performance 2-m FM transceiver with memory, designed to permit multichannel (800-channel) operation.

Featuring the ability of repeater operation, this transceiver brings you all the convenience and versatility in both mobile and fixed station operation.

The TR-7600 has provision for connection of the optional remote control unit (with built-in microcomputer) for added versatility.

**NEW**



## FEATURES

- ① Digital PLL synthesizer for selection of 800 channels in 5-kHz steps.
- ② Four-digit frequency display with large LEDs assures easy reading of any selected frequency.
- ③ Concentric-type dual channel selector knob for selection of frequencies in 100-kHz and 10-kHz steps.
- ④ Memory circuit to store any desired channel.
- ⑤ Memory circuit is also used to shift transmit frequency any desired amount besides  $\pm 600$  kHz, thus permitting operation with nonstandard repeater offset. Use of subtone is possible.
- ⑥ Equipped with a tone-pad terminal.
- ⑦ Small-sized RF power module capable of 20-dB power gain allows compact design. Final stage protective circuit occurs protects the module against abnormal SWR which may occur in antenna output.
- ⑧ In the front end are a microdisk-type MOSFET featuring excellent two-signal characteristic and a band-pass filter that eliminates out-of-band signals, to minimize cross-modulation effects.
- ⑨ Compact and light-weight design. Heavy-duty aluminum die-cast front panel assures satisfactory operation in adverse environments.



# RM-76 MICROPROCESSOR CONTROL UNIT



Remote control unit with built-in microcomputer for versatile use of TR-7600.

## FEATURES

- ① Selected frequencies are displayed by keying the last four digits (1000, 100, 10, or 1-kHz steps).
- ② Operating frequencies can be shifted up or down 5 kHz.
- ③ Ability of utilizing a maximum of six memory channels (one channel may be used for transmit frequency shift).
- ④ MARS channel (143.950 MHz) output is available.
- ⑤ Transmit frequency can be shifted by  $\pm 600$  kHz or  $\pm 1$  MHz by using Repeater Mode. Also, it can be shifted any desired amount by using Memory.
- ⑥ Ability of scanning both empty and operating channels plus six memory channels (M1-M6). Memory data remain stored even when Power Switch is OFF (power cord must be left connected).

## TR-7600 SPECIFICATIONS

### GENERAL

Semiconductors:	Transistors	49
	FETs	9
	ICs	17
	Diodes	84
Frequency Range:	144.00 to 147.995 MHz	
Frequency Synthesizer:	Digital control of phase locked VCO	
Synthesizer Stability:	Less than $\pm 750$ Hz at 25°C	
Mode:	FM	
No. of Channel:	800	
Operating Temperature:	-20 to +50°C	
Power Voltage:	11.5 VDC to 16.0 VDC (13.8 VDC standard)	
Grounding:	Negative grounding	
Antenna Impedance:	50 $\Omega$	
DC Current:	Less than 0.5 A in receive with no input signal	
	Less than 3 A in HI transmit	
	Less than 1.5 A in LOW transmit (at 13.8 VDC)	
Dimension:	161mm (6-5/16") wide	
	61mm (2-3/8") high	
	230mm (9-1/16") deep	
Weight:	1.75kg (3.85 lbs) Approx	

### TRANSMITTER SECTION

RF Output Power:	High	10 watts (min.)
	Low	1 watt approx. (adjustable to 10 watts)
Modulation	Variable reactance direct shift	
Max. Frequency		
Deviation	$\pm 5$ kHz	
Spurious Radiation	Less than -60 dB	
Touch Tone		
Input Impedance	600 $\Omega$	
Microphone	Dynamic microphone with PTT switch, 500 $\Omega$	

### RECEIVER SECTION

Circuitry:	Double superheterodyne		
Intermediate	1st IF	10.7 MHz	
Frequency:	2nd IF	455 kHz	
Sensitivity:	Less than 0.4 $\mu$ V for 20 dB quieting (Less than 1 $\mu$ V for 30 dB S/N)		
Squelch Sensitivity:	Less than 0.25 $\mu$ V		
Pass Band Width	More than 12 kHz at 6 dB down		
Selectivity (2 Signal)	More than 76 dB at 30 kHz of adjacent channel		
Image Rejection:	More than 70 dB		
Spurious Interference:	More than 60 dB		
Intermodulation:	More than 66 dB		
Audio Output:	More than 1.5 watts across 8 $\Omega$ load (10% distortion)		

Note: The circuit and ratings may change without notice due to developments in technology.

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