

Selectone

User's Guide to
Installation and Operation

**Model ST-180 Digitone™
Shared Repeater Panel**



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DESCRIPTION

The ST-180 is a Shared Repeater Panel for up to eight users. It allows a 2-way FM radio, capable of full-duplex operation, to be modified into a repeater. The ST-180 has been designed as a low-cost high-performance unit. It offers the advanced features found in more expensive repeater panels, but without the added cost of lights and read-outs. After the original setup by a technician using standard radio shop equipment, no further adjustments or changes should be necessary.

Shared usage of the repeater is determined by one to eight tones, each assigned to a specific user. User tones (decode and encode) must be set up at the repeater. Each DECODE frequency is determined by placement of six wire jumpers associated with the respective decoder IC. Each ENCODE frequency is programmed in association with a decode frequency. Encode frequencies are programmed with six DIP switch positions, then written into an EEPROM memory.

The ST-180 is shipped from the factory with one decode circuit and six jumpers for one user tone. Up to seven additional decode circuits with jumpers may be ordered and field-installed for the number of users assigned to the repeater.

Under normal operation, the ST-180 transmits the same tone as it receives. However, it can be set up to transmit a different tone for specific applications. The unit also generates its own squelch signal, allowing the tone squelch and carrier squelch to be AND'ed together so that both must operate before gating can occur.

To prevent co-channel interference and to comply with the standards for maximum repeater keying times imposed by most governments worldwide, the ST-180 limits keying to user-selectable time periods ranging from 1.5 to 5 minutes.

User tones can be activated and deactivated locally, or by means of remote signaling to toggle user tones ON and OFF. The Selectone Model ST-800RPT Remote Control Decoder Module is available as an option to the ST-180 for remote ON/OFF toggling.

The ST-180 is contained in a metal chassis designed for mounting in a standard 19" equipment rack. The chassis requires one module (1-3/4") rack space. The front panel is removable for easy access to the circuit board. Interconnection to audio and power is from the rear of the chassis by a 36" external cable.

