



# MODEL TP-163

## SHARED REPEATER TONE PANEL

The **TP-163** contains everything necessary to convert any receiver and transmitter into a powerful Shared Repeater system. It brings you many features and advancements which are simply unavailable in competing panels costing hundreds of dollars more.



- **Supports 163 Subscribers**

51 CTCSS and 112 DCS codes.

- **Programming with TP163MGR™**

TP163MGR™ programming software is included with the TP-163 and gives you enormous programming power such as viewing or editing site programming either offline or online, instant cloning of a replacement panel, up/downloading data such as time/hits, repeater loading graphs and many additional features are included. **Normal repeater operation is not affected while in programming mode.**

Note: Competing panels programmed with terminal emulation software (usually not supplied) cannot offer the advanced offline programming features which are standard with TP-163.

- **Two DB-9 RS-232 Ports**

Plug your computer into the front port, or your modem into the rear port!

- **Over the air DTMF Programming**

If your site lacks a phone line, you can program the TP-163 over the air using DTMF. A transpond follows each valid command sequence providing audible feedback indicating the command has been accepted. The transpond is a DTMF data packet which can be viewed on a CSI CD-2 Communications Decoder which allows you to verify all programming. The CD-2 includes a serial port which can export all programming data, time, hits etc. to your computer.

- **Separate DCS and CTCSS Deviation Adjustments**

No other panel gives you independent deviation settings for CTCSS and DCS.

- **CTCSS Trak™**

A proprietary DSP engine which gives CSI tone panels unbeatable sensitivity and talk off rejection.

- **Squelch Tail Elimination**

Using CTCSS Reverse Burst and DCS Turn off code.

- **163 User Time and Hit Storage**

Simply download Time and/or Hit data with TP163MGR™. The time and hit accumulators can be reset if desired.

- **PrePaid Airtime**

TP163MGR™ allows you to sell airtime in prepaid blocks of up to 182 hours per user. Remaining airtime is automatically reduced with usage. Occasional beeps warn when remaining talk time is low and make the subscriber aware that it is time to purchase more airtime.

- **LTR® Cross Busy or Alarm Input**

The cross busy input allows the TP-163 and a LT-4200 to share the same UHF repeater without mutual interference. Or, the input can be set to operate as an alarm initiating DTMF or beep alerts repeated as often as desired and accompanied with any desired CTCSS/DCS.

- **Busts Stuck Mic Users**

The TP-163 lets you determine who caused intentional or accidental interference by maintaining a stuck mic record. This data can be easily downloaded using TP163MGR™.

- **Temporary Cross Tone**

Using DTMF, a mobile can cross his tone/code to any other tone/code for unusual communications possibilities.

- **Rear Panel Adjustments**

All level adjustments are available through access holes in the rear panel.



## ADDITIONAL TP-163 STANDARD FEATURES

- Built-in test modes for setup
- Non volatile memory
- Positive Remote CPU Reset using DTMF
- Permanent cross tone and/or code
- DTMF-DTMF Regeneration
- Front Panel Status LED's
- Low Power Mode for battery powered sites
- COS input with polarity select jumper
- COS threshold control

## TP-163 PROGRAMMABLE FEATURES

### Per User Programmable Features

- Individual user enable/disable
- Time and hit counters
- Prepaid Airtime blocks
- Hangtime
- Cross Tone and Code
- CW ID per user
- Courtesy tone
- Courtesy tone delay
- Barge-in (keeps other users from cutting in)
- Reserve Tone
- HOG Penalty (enable/disable)
- DCS/CTCSS or quiet carrier during hang time

### System Programmable Features

- EIA 38 or 51 CTCSS Tone operation
- Repeater enable/disable
- Hangtime
- Anti-kerchunk Timer
- Stuck Mic. Activity Timer
- HOG Timer, HOG Idle and HOG Monitor Timers
- DCS Input Polarity select
- DCS Output Polarity select
- System CW ID
- CW ID Speed
- CW ID Interval
- Selectable CW ID modes.
- CTCSS/DCS during hangtime
- COR or DCS/CTCSS Operate
- Access Code for DTMF programming
- Carrier drop delay

## OPTION

- Two controllers in one panel. Order TP-163x2



Made in U.S.A.

## TP163MGR PROGRAMMING FEATURES

- Repeater functional during programming
- **TP163MGR™** manages all your **TP-163** panels
- DOS based. Will run in a DOS Window
- Allows online or offline programming
- Maintains backup site files on disk
- Contains 163 user, gang and global programming screens
- Allows cloning for a replacement repeater
- Direct CTCSS Frequency or DCS code entry during programming
- Prepaid airtime programming
- Fast online data downloading of all data including programming parameters, time/hits etc.
- Time and Hits graphical loading analysis
- Built-in Help screens
- Real Time Display. Allows the **TP-163** to function as a CTCSS, DCS, DTMF service tool. Also maintains time/hit data per input tone/code.

## SPECIFICATIONS

### AUDIO IN

Subtone Input level	20 mV pp - 2.0 V pp
Input impedance	220K AC coupled

### AUDIO OUT

Output level	0-5 V P-P
Output impedance	1K AC coupled
Distortion	< .5% THD
Freq. response	300 - 3000 HZ

### DCS/CTCSS OUT

Output level	0-5 V P-P
Output impedance	5K AC coupled
No. of CTCSS tones	51
No. of DCS codes	112
Decode Time	< 200 mS Typ.

### MISCELLANEOUS

DTMF Prog access code	6 digits
PTT keying	NPN pull to gnd. 150 mA. max. Protected by 15V zener clamp
Repeat audio filtering	6 pole high pass
Temperature range	-30 C to +80 C
Power	12-15 VDC @ 75 mA. typ.

### BILLING (per user)

PrePaid Airtime	10,922 minutes maximum
Usage time	10,922 minutes maximum
Hits	65,536 maximum

### MECHANICAL

Size	1.75 x 19 x 7.5 in. (H x W x D)
Weight TP-163	3.5 lbs.
TP-163x2	6.5 lbs

WARRANTY • One Year Labor • Five Year Parts



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