



MODELS 452 and 459

Trunking Controllers



FEATURES

- **Designed specifically for trunking on UHF channels**
- **Easy to order, configure and install**
- **Two versions - dispatch and interconnect**
- **Conventional tone/DPL repeater support**
- **Networkable with FASTNet™**

INTRODUCTION

Years of experience with LTR® systems went into the design of the Model 452 and 459 Trunking Controllers. These products are cost effective, full-featured LTR repeater controllers incorporating support for shared, conventional channel operation on the same repeater. Companion to the dispatch Model 452, the Model 459 is available for channels designed for telephone interconnect.

A complete LTR trunking system consists of multiple repeaters equipped with one Model 452 or 459 per channel. Mixed and matched as needed for telephone line capacity, up to 20 controllers can be used on a system.

- **Telephone Interconnection** — The Model 452 is a dispatch repeater controller. If telephone access to/from radio users on the system or networking with Zetron's FASTNet system is desired, one or more channels of the system is equipped with Model 459 controllers. Interconnect features include:
 - End-End (POTS), DID and 4-wire E&M trunk interfaces are available.
 - User recordable voice prompts

- Built-in modem for programming and downloading of billing and statistical usage information
- Dial click decoder is available for areas where rotary (pulse) phones are used instead of DTMF (TouchTone) phones
- Call Detail Records of all phone calls are stored in memory. Up to 6000 calls per Model 459 can be stored until downloaded by the management computer over the built-in modem or RS-232 port.
- Integrated audio compandor significantly improves audio fidelity when enabled in the radio and Controller.

- **Ghost Repeater IDs** double the number of LTR IDs available per channel to 500 on systems up to 10 channels. This helps small fill-in systems support all the users from larger systems without running out of assignable LTR IDs.
- **Airtime Logging** keeps track of prime and non-prime time used by each user. Up to 194 days of airtime is stored in nonvolatile memory until uploaded to the management computer.
- **Shared Channel Support** makes adding the Model 452 or 459 to an existing tone panel equipped repeater an easy task. A dedicated connector on the back of the Trunking Controller coupled with dedicated hardware and software support inside the controller accepts the repeater connections directly from the tone panel. Installation is as easy as disconnecting the tone panel from the repeater, plugging it into the Trunking Controller and interfacing the Controller to the repeater normally. Operation of the tone panel is left unaffected, requiring no reprogramming of users or resetting of levels.

- PC-based Programming simplifies system programming. Programming of all site specific and user profiles is performed off-line and subsequently downloaded to a controller at the site.
- Easy Installation is assured due to front panel access to all level controls and low-cost RJ-45 data-style cables between the Controllers.
- Highly Configurable software settings allow the Controllers to be customized for virtually any application.

SPECIFICATIONS

GENERAL

Trunking Protocol	EFJohnson® LTR
Capacity	250 IDs per channel, 500 per channel with Ghost Repeater setting, 5000 total per system
Front Panel Controls	12 position configuration dip-switch, 4 Wire E&M From and To Telco levels (M459 only), receiver audio, receiver data, squelch, transmitter audio, transmitter data
Front Panel Indicators	Power, Sync, Poll (control bus activity), Status, Transmit, Decode (valid LTR data), Carrier (receiver activity), DTMF and Telco (M459 only)
Power Requirements	+10 to 16 VDC, 450 mA (M452), 550 mA (M459)
Environmental	0 to 65 degrees Celsius, 0-90% humidity non-condensing
Physical	19 inch rack mount; 6.95" deep, 17.2" inch wide tray, 1.75" high (M452) 3.5" high (M459), 4 lbs (approx.)

BACK PANEL

Transmit Audio	Adjustable -30 to +6 dBm, 2 kohm impedance
Receive Audio	Discriminator or line level, adjustable -30 to +10 dBm, 50 kohm impedance
TX Data	Adjustable 50 mV to 2 V pk-pk, 1 kohm impedance
PTT Output	FET transistor pulls to ground, 18 Volt, 100 mA max.
COR input	Polarity selectable, 2.5 V nominal threshold
TX-Frequency Monitor	Polarity selectable, 2.5 V nominal threshold
Control Bus	2 RJ-45, proprietary connectors bussing to other Model 452 or 459 units
Aux Interface	Power, transmit, receive, PTT and carrier detect multiplexed inputs and outputs for external tone panel

MODEL 459 INTERCONNECT

Connector	RJ-11
4 wire E&M levels	Transmit: -24 to -9 dBm; Receive: -24 to +10 dBm
Modem	300 baud Bell 103 and 1200 baud Bell 212



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 See Zetron price list for option pricing. Specifications subject to change without notice. Literature number: 005-1224C June 2001