Spec Sheet Model 735 Radio Teleconnect

FEATURES

- Radio to telephone interconnect for PBX or public subscriber line connection
- Direct access to telephone
- Installs on simplex or duplex base station and repeaters
- Compatible with simplex or duplex mobile or handportable radios
- Available in 2 versions - Open Channel and Selcall
- 2-Tone, (Quickcall II) 5-Tone (ZVEI, CCIR,EEA), and DTMF selective calling
- PC-programmable, direct/remotely with built-in modem
- User-definable access code
- Optional user-recordable voice prompts
- Optional dial click decoder for pulse telephone systems
- Optional digital voice delay for enhanced simplex operation
- Enhanced dial-out restrictions per user/system
- Optional call details logging for up to 400 records
- 99 autodial telephone numbers
- Conversation timers
- EMC Approved, CE conformity

INTRODUCTION

Telephone interconnects allow telephone and mobile radio users to talk to each other.

Telephone interconnects offer the most economical and reliable method of allowing a group of 2-way mobile radio users to place and receive telephone calls through the public telephone network or a private branch exchange (PBX). In business applications, office based personnel can speak directly to radio users such as security guards, warehouse staff and delivery drivers. Similarly, radio users can call their office, the emergency services or their customers. Calling privileges, conversation timers and system access are all under the control of the system operator, so capabilities can be tailored to individual requirements.

The Model 735 is available in two versions - Open Channel and Selcall. The Open Channel version is for the smaller or “all-informed” radio scheme where telephone calls are directed to all mobiles on the scheme. The selcall version allows telephone calls to be routed to an individual mobile or a group of mobiles. The telephone caller selects the mobile to speak with. Both versions allow mobiles to select and call a telephone number.

ZETRON®

THE ZETRON MODEL 735 RADIO TELECONNECT

The Zetron Model 735 Radio Teleconnect is a high quality, processor-based, open channel or selective calling radio-telephone interconnect designed for easy connection to simplex or duplex base stations, control stations and repeaters.

It is designed to be installed with new or existing radio systems, interfacing either to a PABX or public subscriber telephone line, allowing radio-to-telephone and telephone-to-radio calls.

MODEL 735 RADIO TELECONNECT FEATURES

Calls from Mobile Radio
Mobile to telephone using DTMF access code followed by dialling number.

Calls to Mobile Radio
Telephone to mobile over open radio channel (open channel version) or calling individual mobile radios (selcall version).

Mobile to Mobile
Repeater control for mobile to mobile calls when connected to a repeater.

PC Programming
Programming from PC connected locally to Model 735 or remotely using built in modem.

Rotary or DTMF Telephones
The Model 735 supports rotary, pulse or DTMF telephones using the optional dial click decoder.

Individual User Programming
Facilities and grade of service programmable to each individual mobile user.

Optional Voice Prompts
Locally recordable voice prompts guide users through system features.

Call Restrictions
Mobile radio users may be restricted on which telephone numbers may be called, e.g. external PABX line or long distance calls.

Time of Day Access
Services available are programmable according to time of day.

Call Timers
Call time limits may be programmed to limit system use. Warning beeps are sent when call time limit is reached and if necessary, the call may be automatically disconnected.

Optional Call Details Logging
Logs all calls in Model 735 for subsequent retrieval by PC.

Group Call
Group call addresses are supported.

Optional Digital Voice Delay
When connected to simplex radio, the digital voice delay improves the VOX switching.

Autodials
99 autodial or speed dial numbers from mobile to telephone. Or free form dialling may be used.

Unattended Autocall
If a telephone caller does not select an individual mobile, the Model 735 will automatically signal a predetermined radio or pager.

Emergency Use
Emergency access code over-rides programmed system control parameters.

Time Break Recall
When Model 735 is connected to PABX, mobile has access to PABX functions through time break recall hook flash.

Disconnect Methods
The Model 735 will disconnect either manually by the mobile or telephone user entering a digit, or automatically based on detecting telephone hang up or inactivity timers.

TYPICAL APPLICATION - MANUFACTURING COMPANY

Already connected to an existing radio system a manufacturing company has full radio coverage over their work site and the surrounding area. At present, a radio operator at the main office can only pass messages from the office staff to one of the radio users, keeping the operator busy most of the time.

With the addition of a Model 735 Radio Teleconnect, the radio users can now receive or make calls through the telephone network. All radio users may receive calls but by restricting DTMF equipped radios to higher management personnel, only these personnel can make outgoing calls.

A Model 735 Radio Teleconnect is added to the radio in the dispatch office. The Model 735 is connected to the company telephone system (PBX). Office staff can now call the radio users directly, improving the internal communications and efficiency. Selected radios can be permitted to make calls into the company telephone system and all calls to the public telephone network may be barred if required.

SYSTEM OPERATION

Calls from Telephone to Mobile Radio

A telephone user dials the Model 735 telephone number. The Model 735 answers the line and connects to the radio system (open channel version) or plays selcall a recorded message or beep asking the caller to enter the number of the mobile they wish to contact. The Model 735 then sends a selective call to alert the mobile user to the incoming call, and allows the mobile-to-telephone conversation to take place.

Calls from Mobile to Mobile

When the Model 735 is installed on a repeater, a DTMF equipped mobile user may call another mobile on the system. The mobile user first keys up and enters a DTMF access code. He is presented with an acknowledgement tone or optionally, a voice prompt and is able to enter the number of the mobile to be called. The called mobile will be alerted.

Call Detail Logging

The Model 735 is capable of storing up to 4000 calls made through the system. These details can be accessed via the built-in modem and printed out for customer billing etc.

Calls from Mobile Radio to Telephone

A DTMF equipped mobile user may place calls to the telephone system. The mobile user first keys up and enters a DTMF access code. He is presented with a telephone dial tone, and is able to free dial a DTMF telephone number or call an autodial number. Normal call restrictions can be placed for limited call length and dialling restrictions.

Dealer Programming

All of the Model 735 features can be accessed from a locally connected PC, or remotely via the internal modem. No special software is required for programming, with just a standard terminal emulation program required to access the internal programming.

Voice Prompts

User-recordable voice prompts can be played out to the telephone and radio scheme prompting users through the system with greetings and instructions.

TYPICAL APPLICATION - TAXI COMPANY

During working hours, a taxi company has an operator to answer customer calls and handle dispatch operations over the company radio scheme. During the night, this is not cost effective because there are very few calls and only two or three taxis working. The solution is to install a Model 735 Radio Teleconnect on to the existing radio system. The Model 735 is connected to the incoming telephone line.

When the operator leaves for the day, the telephone line is switched over to the Model 735. When customers call, the Model 735 switches the call to the radio system and sends a ringing tone to the taxi radios. The taxi driver can then answer the call directly from his radio. No outgoing telephone calls from the taxis are permitted, except for access to police, fire or ambulance in the case of emergency.

SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Power:	10.5-16V DC,700mA or 9-12 VAC, 11 watts
Temperature:	0 to 65 degrees Celsius
Size:	470mm W x 181mm D x 44mm H, 470mm rackmount
Weight:	4 pounds/1.8 kg

INTERCONNECT CAPACITY

DTMF:	ANI codes Full random programming, all 16 tone pairs
ANI capacity:	99
ANI length:	1 to 10 digits per user
ANI speed:	1 to 14 digits per second
Accounting Interconnect:	Airtime record per ANI 99.59.59 maximum accumulate or pre-pay

SIGNALLING SPECIFICATIONS

Frequency range:	10 to 3500Hz
Frequency accuracy:	0.1%
Frequency stability:	0.005%
Distortion:	2% nominal
Two-Tone:	Motorola/GE all tone groups, code plans and capcodes
DTMF:	1 to 8 digits per subscriber
DTMF-t:	1 to 8 digits per subscriber
Five/Six-Tone:	EIA, EEA, ZVEI, CCIR, single or dual address
CTCSS:	50 tones
DCS:	104 codes
Alarm Monitoring:	3 specific system alarms plus 3 nonspecific
Alarm Inputs:	0-5volts. Active: ground, Inactive: open circuit
Alarm Outputs:	100mA - 10 Volts, Active: grounds control output, Inactive: control output open circuit.

TELEPHONE INTERFACE SPECIFICATION

Line Input:	3-wire connection to the PSTN
Connector:	RJ11-C modular jack.
Adaptor Cable:	RJ11 to BT 631A plug. 3 meter.
Progress Tones:	Dial tone, ringing, double ring, busy.

END-TO-END

Ringer equivalence:	3.
Incoming call:	Ring detection on 3-wire circuit. Programmable number of rings to answer.
Call answer:	Off-hook, tip-ring current draw.
Call disconnect:	Busy tone, 2nd dial tone, call limit timer, mobile activity timer, loss of loop current.

RADIO INTERFACE SPECIFICATIONS

PTT:	FET pull to ground.
COR:	Dual time constant noise detector or voltage change.
CTCSS/DCS Output:	-40 to +6dBM. Hi/Lo Selector. 600 ohm output.
TX audio:	-40 to +6dBM. Hi/Lo Selector. 1K ohm output.
RX audio:	-40 to +10dBM. Hi/Lo Selector. 25K ohm input.
Channel busy input	Closure input from secondary receiver COR.

ADDITIONAL SPECIFICATIONS

Modem:	Auto-detection and support of 1200 baud. Bell 212, CCITT V.22 and CCITT V.22bis.
Indicators Line:	1. VOX. DTMF. Carrier. Encode. Transmit. Aux. Power. Switch Connect.
Station ID:	Morse code, fixed 1200hz frequency and programmable call sign (1 - 8 characters).
Equipment types:	Tone-Only pager, tone-and-voice pager. Talkback pager. Mobile.
Prompt tones:	Progress tones, error tones and warning tones sent to phone or mobile.
Programming:	Programmable via RS232 with local terminal, or remotely over phone lines using internal modem. Installation and user enable/disable via DTMF.
Data retention:	Battery backed, typically 5 years with no power.
Real time clock:	Battery backed, typically 5 years with no power.
Secondary protection:	On End-to-End telephone line.
Auxiliary output:	Open drain FET pull-down to ground.

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See Zetron price list for option pricing. Specifications subject to change without notice.

005-1417A August 2012