MACKENZIE®

Proudly serving the messaging industry for 60 years

Product Guide

2014 Q1

Digital Message Repeaters **- Mackenzie's line of Digital Message repeaters are the ideal audio announcement solutions for Public Address, Amusement, Entertainment, Museum and Exhibit applications. Self contained solid state systems offer unparalleled reliability. A variety of channel, connection, bandwidth and memory configurations are available.**



Message On Hold & Storecasting **- Mackenzie's line of digital Storecasting & Message-On-Hold systems turn your public address system and telephone into a powerful marketing tool. The DYNAVOX series offers maintenance free digital playback with Compact Disk (CD), USB, SD card, modem, satellite, or internet download. Several systems are available with advanced features such as Music-Thru, individual message enable/disable, message sequencing, local record, day-parting and more.**



Overhead Page Management **- Mackenzie's OPM series of Digital Page Stacker/Repeater and Feedback Eliminators offer advanced features for the most difficult paging and intercom applications. Our unique design makes feedback impossible by recording then repeating pages which opens the loop between the input microphone and speakers. Various models are available to support simple repetition, page-stacking and multiple input channels. Pre-recorded messaging is also available.**



Transit **- Mackenzie is making a difference in transit applications with innovative solutions for ADA compliance and Passenger Information Systems. These products address a variety of audio and text messaging requirements and support both in-vehicle and wayside installations.**



Controls and Peripherals – **Mackenzie can help with providing a complete package for your messaging application. These products focus on items developed, or sourced, for their compatibility, ease of use and value. Included in this category are; input/output controllers, speakers, amplifiers, motion sensors and pushbuttons.**



*Research and Design Services – **Mackenzie can also provide engineering services for your special/custom projects and applications. Please consult with us the next time you are having difficulty finding the "perfect product solution" to meet your needs.**



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What can we build for you in 2014?

Mackenzie Design Services

Mackenzie supports a full engineering staff to turn ideas into products. Capabilities include; system planning, hardware design, software design (application and firmware), component selection and system integration. Our fully integrated CAD/CAM system expedites printed circuit board design/production and 3D product simulation.

Mackenzie's manufacturing/purchasing organization is all about quality. We offer components acquisition, electronic assembly, mechanical assembly, system integration, in-house sheet metal fabrication, test and quality control.

For Mackenzie's sales and marketing team, knowledge is power. Our sales staff is comprised of seasoned veterans of the messaging and related electronics businesses. We can relate to your business, offer unique perspective based on industry experience and exceptional customer service.



DADS®

Digital Audio & Display System



Please note:
Mackenzie Transit systems and related equipment are detailed in a separate price list. Contact our sales department directly for more information or pricing request.

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STORECASTING & MESSAGE-ON-HOLD SYSTEMS

Mackenzie's full line of digital Storecasting & Message-On-Hold systems, turn your public address system and telephone into a powerful marketing tool. The DYNAVOX series offers maintenance free digital playback with Compact Disk (CD), USB, SD card, modem or satellite download. Several varieties are available with advanced features such as Music-Thru, individual message enable/disable, message sequencing and more.

DVCD-3000 - COMPACT DISC AUTOLOAD, MESSAGE-ON-HOLD SYSTEM

Features:

- Slot loading CD mechanism
- Supports Red Book Audio and MP3 Data CD formats
- All digital operation including initial message loading
- Up to 20 minutes Non-volatile FLASH memory standard
- 20kHz fidelity (uncompressed audio recording)
- Tone control and monitor speaker
- Adjustable Line level and Amplified audio outputs
- Industrial grade all metal construction
- 3-Position flexible mounting scheme
- Backed by 3 year warranty



- List prices starting at $530
- Power pack included

DVCD-3000 MTS/LR PRO - DIGITAL COMPACT DISC AUTOLOAD STORECASTER & MUSIC THRU SYSTEM WITH LOCAL RECORD

Features:

- Slot Loading CD mechanism.
- All digital operation including initial message loading
- Up to 20 minutes Non-volatile FLASH memory
- Up to 20 message capacity sequentially stored and played
- Frequency response up to 20kHz
- Tone control and monitor speaker.
- Local recording capability with optional handset
- BGM input with volume and mix control.
- Adjustable line level and amplified audio outputs
- Individual message skip feature
- All or individual message update
- Built in delay timer (00 - 99), with Seconds/Minutes selection switch.
- Audio output format switch for Music Only, Music & Message, Message only



- Industrial grade all metal construction
- 3-Position flexible mounting scheme
- Backed by 3 year warranty
- List prices starting at $700
- Power pack included

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DVSD-3000 – SD Card/USB key load, MESSAGE-ON-HOLD SYSTEM

Features:

- **Removable SD card, non-volatile memory storage**
- **USB key (sold Separately) can play directly or transfer data to SD card**
- **Supports WAV and MP3 files**
- **High Speed USB 2.0 host port**
- **Adjustable dual audio output (8 Ohm/ 600 Ohm)**
- **Adjustable tone control**
- **Up to 20kHz audio bandwidth (uncompressed audio file)**
- **Integrated monitor speaker**
- **Industrial grade all metal construction**
- **3-Position flexible mounting scheme**
- **Backed by 3 year warranty**



- **List prices starting at $350**
- **Power pack included**

DVSD-3000 MTS/LR – SD Card/USB key load STORECASTER & MUSIC THRU SYSTEM with LOCAL RECORD

Features:

- **Removable SD card, non-volatile memory storage**
- **USB key (sold separately) can play directly or transfer data to SD card**
- **Supports WAV and MP3 files**
- **High Speed USB 2.0 host port**
- **Up to 20 message capacity sequentially stored and played**
- **Frequency response up to 20kHz**
- **Tone control and monitor speaker.**
- **Local recording capability with optional handset (LR-HSET)**
- **BGM input with volume and mix control.**
- **Adjustable line level and amplified audio outputs**
- **Individual message skip feature**
- **All or individual message update**
- **Built in delay timer (00 - 99), with Seconds/Minutes selection switch.**
- **Audio output format switch for Music Only, Music & Message, Message only**



- **List prices starting at $650**
- **Power pack included**

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DVTEL-3000 - TELEPHONE DOWNLOAD MESSAGE ON HOLD & IN STORE MARKETING SYSTEM

Features:

- **MPEG audio compression**
- **16MB/64 minutes FLASH memory(DVTEL-3164MT)**
- **Internal 33.6k modem**
- **Built-in fax sharing**
- **Background music input**
- **Level controls**
- **Monitor speaker**
- **Line level and amplified audio outputs**
- **DVTEL-3100MT and 3200MT models offer additional functions including multiple channels and on premise control (LCD).**
- **3-Position flexible mounting scheme**
- **Backed by 3 year warranty**



2 channel with LCD shown

- **List prices starting at $585**
- **Power pack included**

DVNET-3000 - NETWORK DOWNLOAD MESSAGE ON HOLD SYSTEM

Features:

- **Connect to unit over internet, via standard Ethernet interface**
- **Supports Standard MP3 files**
- **Non-volatile SD card memory (up to 2GB)**
- **Adjustable, dual audio output (8 ohm/600 ohm)**
- **15kHz audio bandwidth**
- **Adjustable tone control**
- **Audio message lengths completely dynamic**
- **Line level and amplified audio outputs**
- **Message downloads are achieved using CMAC software interface (sold separately).**
- **3-Position flexible mounting scheme**
- **Backed by 3 year warranty**



List prices starting at $685
Power pack included

OEM AND PRIVATE LABEL INQUIRES WELCOME

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DIGITAL MESSAGE REPEATERS

Mackenzie's line of Digital Message repeaters is the ideal audio announcement solution for Public Address, Amusement, Entertainment, Museum and Exhibit applications. Self contained solid state systems offer unparalleled reliability. A variety of channel, connection, bandwidth and memory configurations are available

MacFi-mp MPEG DIGITAL AUDIO RECORD/PLAY SYSTEM

Features:

- **MP3 record and playback**
- **Flash memory, no battery backup required**
- **DML - Dynamic Message Length**
- **40 minute capacity**
- **Frequency response up to 15kHz**
- **99 independent messages(01 - 99)**
- **Local recording through line and microphone inputs**
- **Line and speaker outputs**
- **User-friendly controls**
- **Instantaneous, random access of messages**
- **Several playback modes**
- **Playing relay**
- **Industrial grade all metal construction, shock and vibration resistant**



- **Rack mount kits available as an option**
- **List pricing starting at $709**
- **Power pack sold separately(MacFi-PS)**

MacFi-mpe ENHANCED MPEG AUDIO RECORD/PLAY SYSTEM

Same basic features as the MacFi-mp, with the following enhancements:

- **Serial(RS-232) control**
- **MPEG 1, Layers 1, 2 & 3 playback capability**
- **Synchronization relay**
- **Front mount LED indicators and manual controls**
- **Add additional start contacts with use of an Input Control Module (ICM-25-MPE)**
- **List pricing starting at $903**
- **Power pack sold separately(MacFi-PS)**





MacFi-mp
with rack mount installed



MacFi-mpe
with rack mount installed

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Minimac 2

NEXT GENERATION COMPACT AUDIO MESSAGE REPEATER

Features:

- **Compact size, just 6.5" H x 4.5" L x 1.25" D**
- **Non-Volitile SD Card memory**
- **Crystal clear 16 bit MP3 audio quality**
- **Over 16 hours of audio storage capacity**
- **Up to 15kHz bandwidth**
- **Record via line level/microphone inputs**
- **Line level output**
- **Speaker output(4 watts, 10 watt option)**
- **Multi-message(4) sequencing capability**
- **Playing relay (Form C)**
- **Industrial grade all metal construction, shock and vibration resistant**



- **List pricing starting at $360**
- **Power pack sold separately (MMD-PS12/MMD-PS15)**
- **220V power supply available**

M3

HIGH FIDELITY MULTI-CHANNEL DIGITAL AUDIO PLAYER

Features:

- **MPEG 1, Layer 3 (MP3) audio for scaleable fidelity from voice(7kHz) to CD(20kHz) quality**
- **Balanced audio output(up to 2 stereo channels)**
- **Accepts USB2.0 Key for easy audio file updates**
- **Add additional start contacts with use of an Input Control Module (ICM-25-M3)**
- **Standard, Retrigger, Play Once and Play While Active modes**
- **Playing relay contact(Form C)**
- **Optically Coupled 10/20 Contact Closure and RS232 for control and status**
- **Composer software allows audio files to be created from .WAV files**
- **Industrial grade all metal construction, shock and vibration resistant**
- **Rack mount(optional)**
- **List price starting at $1,622**
- **Power pack sold separately(M3-PS)**



M3 Configurations:

- **M3.1 - Single Balanced Stereo audio channel, 10 message input selections, RS232, wall mount package**
- **M3.1+1- Dual Balanced Stereo audio channels,10 message input selections each, RS232, wall mount package**
- **M3.2 - Single Balanced Stereo audio channel, 20 message input selections, RS232, wall mount package**

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OVERHEAD PAGE MANAGEMENT

Mackenzie's OPM series of Digital Page Stacker/Repeater and Feedback Eliminators offer advanced features for the most difficult paging and intercom applications. A unique design makes feedback impossible by recording then repeating pages which opens the loop between the input microphone and speakers. Various models are available to support simple repetition, multiple page stacking and multiple input channels.

OPM-1S - Page Stacker & Feedback Eliminator

Features:

- **Stack and Play up to 16 pages**
- **4 minute total recording time**
- **Frequency response up to 6.8kHz**
- **Record new pages while previous pages are playing back**
- **Page input**
- **Priority bypass input**
- **Dry Loop/Loop start modes**
- **Line level and 8 ohm output modes**
- **Repeat page mode**
- **Delay between pages**
- **DTMF tone stripping**
- **DTMF inhibitor function**
- **Industrial grade all metal construction**
- **3-way, Wall mounted format**
- **Optional rack mount kit available**

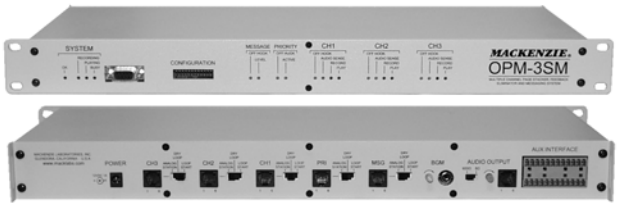


- **Pricing starting at $1,055**
- **Power pack included**

OPM-3SM - MULTIPLE CHANNEL PAGE STACKER, FEEDBACK ELIMNIATOR AND MESSAGING SYSTEM

Features:

- **3 channel page stacker & feedback eliminator**
- **Priority input**
- **Station or Dry Loop/Loop Start operation**
- **DTMF support for zoning**
- **99 pre-recorded messages in non-volatile FLASH memory**
- **Message triggering via start input or host telephone system workstation**
- **Industrial construction**
- **Background music support**
- **Rack mount chassis**



- **1 year warranty standard**
- **Pricing starting at $2045**
- **Power pack included**

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CONTROLS AND PERIPHERALS

Many applications require additional equipment to optimize the performance of Mackenzie products. This area focuses on items developed or sourced for their compatibility, ease of use and value. Included are, input/output controllers, speakers, amplifiers, motion sensors and pushbuttons among others.

- **ICM-25 - INPUT CONTROL MODULE for the MacFi-mpe(ICM-25-MPE) and the M3(ICM-25-M3)**

Features:

- **25 discrete message start contacts.**
- **Multiple modules can be linked to provide up to 50 discrete message start contacts for MacFi-mpe and up to 250 start contacts for the M3.**
- **All inputs are optically coupled**
- **Status indicators to show activation of each input.**
- **RS-232 communication to host unit and other ICM units**
- **Host unit mode (standard, once per closure, play while active, re-trigger) supported by ICM chain.**
- **List price starting at $319**
- **Power pack(ICM-PS) and control cable(ICM-CTLCBL) sold separately**



COMPACT SPEAKER(CS-4) - SMALL SPEAKER OFFERS POWER AND CLARITY

Features:

- **Small form factor, just 4.6" W x 2" H x 2.3" D**
- **8 Watt output**
- **8 ohm impedance**
- **100Hz - 10kHz Frequency Range**
- **Swivel Mounting**
- **Weather Resistant**
- **6' Cord**



TBG-115 - PUBLIC ADDRESS AMPLIFIER

Features:

- **15 watt RMS**
- **Microphone, Program and Auxiliary inputs**
- **4 ohm, 25V & 70V outputs**
- **Bass and treble tone control**
- **Rack mount kit available(optional)**



MICROWAVE SENSOR(MS-2) - SIMPLE, COMPACT CONCEALABLE MESSAGE TRIGGERING

Features:

- **Small form factor, just 3" W x 2.7" H x 0.5" D**
- **Minimal power requirement**
- **Microwave technology**
- **Does not require line of sight**
- **Adjustable sensitivity**
- **Contact closure output**



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QC10 - OVERHEAD PAGING & BACKGROUND MUSIC SPEAKER ASSEMBLY

Features:

- **8" dual cone loudspeaker**
- **25V or 70V transformer**
- **16 watt output**
- **One piece baffle**
- **1/4, 1/2, 1, 2, 4 watt taps**
- **Backboxes and volume control available(optional)**



PB-1 - DURABLE GAME STYLE PUSHBUTTON TRIGGER

Features:

- **Durable nylon construction**
- **High quality microswitch**
- **Available in a variety of colors including Red, Black, Yellow, White**
- **Mounts to surfaces up to 3/4" thick**
- **1" button diameter**



USB FLASH DRIVE FOR DVSD SYSTEMS (for use with DVSD systems)

Features:

- **NAND-type flash memory data storage**
- **Plug and Play**
- **Available up to 2GB**
- **Nylon Lanyard included**



LR-HSET - LOCAL RECORD HANDSET FOR THE MTS/LR UNITS

Features:

- **K style telephone handset**
- **6' coiled cable**
- **4 pin, 4 conductor RJ11 connectors**
- **Microphone element optimized for MTS/LR**
- **List prices starting at $60**



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CORPORATE PROFILE

Mackenzie occupies a 38,000 square-foot site, which serves as the corporate headquarters and manufacturing plant. It is located in Glendora, California, USA, just 30 miles east of downtown Los Angeles.

Mackenzie Laboratories, Inc. has a rich history of providing high-quality products and utilizing leading-edge technology to deliver, and enhance, methods of repetitive communication. Mackenzie was founded in 1954 to produce repetitive audio systems based on their patented endless-loop, power-drive tape magazine. Early successes in a wide variety of applications lead to the development of special products to fit specific industry needs. Mackenzie created the first totally electronic slide projector dissolve system, the first multi-channel A/V electronic synchronizer programmer, and an endless-loop 16mm film magazine. Mackenzie also pioneered the automatic flight announcement system used in airports, as well as the first practical Digital Feedback Eliminator and Overhead Page Management System.

Building on a foundation of “firsts”, Mackenzie later introduced the first affordable Message On Hold (MOH) digital player. Over the years Mackenzie has continued to listen to the Message On Hold industry and developed the DYNAVOX line of digital MOH and Storecasting systems to meet its needs. The DYNAVOX series offers maintenance free digital playback with Compact Disc, USB, SD-Card, modem, or Network download. Mackenzie Laboratories is committed to producing the highest quality products that meet or exceed your customer and industry standards.

MACKENZIE® LABORATORIES, INC.

Product Quick Reference

Model Number	Page #	Description	list Price
DVCD-3000	3	Compact Disc autoload, Message On Hold	$ 560.00
DVCD-3000 MTS/LR	3	Compact Disc autoload, Storecaster & Music Thru with local record	$ 735.00
DVSD-3000	4	SD-Card/USB Key load, Message On Hold	$ 375.00
DVSD-3000 MTS/LR	4	SD-Card/USB Key load, Storecaster & Music Thru with Local record	$ 580.00
DVTEL-3164MT	5	Telephone Remote download Message On Hold, single channel	$ 585.00
DVTEL-3164MT-L	5	Telephone Remote download Message On Hold, single channel, LCD	$ 745.00
DVTEL-3264MT	5	Telephone Remote download Message On Hold, dual channel	$ 705.00
DVTEL-3264MT-L	5	Telephone Remote download Message On Hold, dual channel, LCD	$ 865.00
DVNET-3000	5	Network Remote Download Message On Hold	$ 580.00
MacFi-mp	6	MPEG Digital Audio Record/Play System, Digital Message Repeater	$ 744.00
MacFi-mpe	6	Enhanced MPEG Digital Audio Record/Play System	$ 948.00
MMD-USB (minimac2)	7	Compact Audio Message Repeater, single start	$ 380.00
M3.1	7	High Fidelity Multi-Channel Digital Audio Player, Single Channel, 10 starts	$ 1,703.00
M3.1+1	7	High Fidelity Multi-Channel Digital Audio Player, Dual Channel, 10 starts	$ 1,866.00
M3.2	7	High Fidelity Multi-Channel Digital Audio Player, Single Channel, 20 starts	$ 1,866.00
OPM-1S	8	Page Stacker and Feedback Eliminator	$ 1,055.00
OPM-3SM	8	Multi-Channel Page Stacker, Feedback Eliminator, & Messaging System	$ 2,045.00

Controls & Peripherals

ICM-25-MPE	9	Input Control Module for Mac-Fi mpe, 25 discrete contacts	$ 335.00
ICM-25-M3	9	Input Control Module for M3, 25 discrete contacts	$ 335.00
CS-4	9	Compact Speaker, 8 ohm, Weather Resistant	$ 33.00
TBG-115	9	Public Address Amplifier; Microphone, Program, & Auxiliary inputs	$ 306.00
MS-2	9	Microwave Sensor, compact message trigger	$ 179.00
QC10	10	Overhead Paging, Background Music Speaker assembly	$ 175.00
PB-1	10	Pushbutton Trigger, available in Red, Black, Yellow, & White	$ 32.00
MUSB-256	10	USB Flash Thumb Drive, 256k memory capacity	$ 14.00
MUSB-512	10	USB Flash Thumb Drive, 512k memory capacity	$ 17.00
MUSB-1G	10	USB Flash Thumb Drive, 1GIG memory capacity	$ 25.00
LR-HSET	10	Local Record Handset for the MTS/LR systems	$ 65.00

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