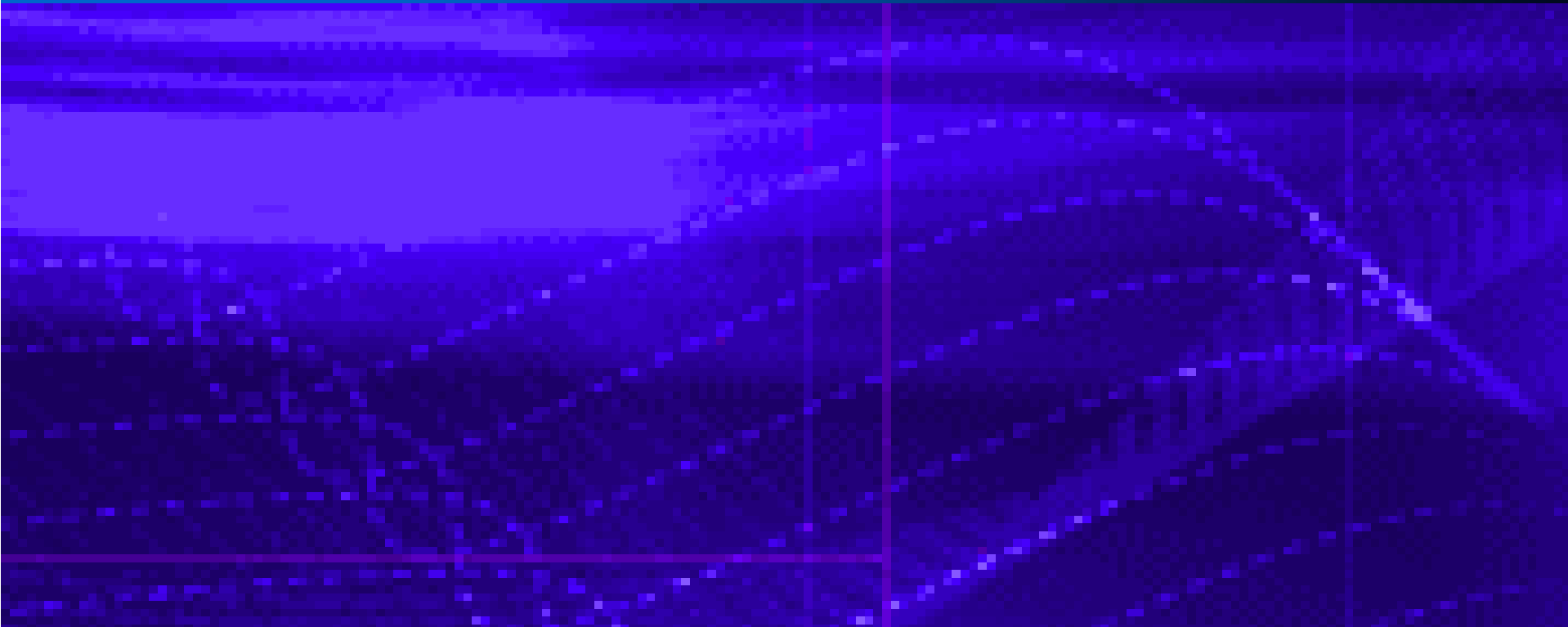




Music-On-Hold Solutions for PBX Systems

PRAF Microcomputer Technologies Ltd.





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Company Profile

PRAF Microcomputer Technologies Ltd. is a private company located in Holon - a satellite city of Tel-Aviv - the Israeli scientific and industrial center. Established in 2002, PRAF has taken a direction to provide a range of qualitative products and services targeted for the civilian, military and telecommunication industries. The basic philosophy of the company is the first priority to the high quality, reliability and professionalism, and the rest to the development, manufacturing or services time and cost.

PRAF Microcomputer Technologies is focused on development, manufacturing and marketing of the computerized automation and control systems, enterprise and home telephony accessory equipment as well as on providing the computer networks and voice communication systems integration and supporting services.

The company's marketing activities are targeted both to the local and international markets. Its product export makes the major contribution to incomes of the company with overseas sales, while the local market gives the unique testing area for new products and solutions.



Problem Description

The most of people dislike being inside of silence, whenever they are placed on hold, while transferring a call, or initiating a telephone conference. It is a very typical situation when a caller cannot determine status of an inactive connection and terminates the call to get at least a dial tone instead of the silence. A receptionist handling multiple incoming calls had to deal with callers who, irritated with being placed on hold, hung up after a few moments, or hung up and then called back to express their irritation.

In fact,

- a high percentage of callers would prefer music or announcements to the depressing silence
- almost all callers with silence on the line hang up in less than a minute
- callers with music on hold stay on the line for a longer period of time
- callers with music on hold actually perceive the time spent on hold as shorter than callers who hear only silence

Research shows that a nice music indeed has the power to keep callers in a better frame of mind, lets them to know the call is still in process, while awaiting an answer.



Solutions

As it is known, the most PBX telephone systems have the options to enable Music-On-Hold and Background Music services by connecting an external MOH/BGM audio source. Some systems, like Hicom and Hipath families of Siemens, have a digital MOH interface.

To keep the reliability of a professionally integrated PBX system, the MOH/BGM source should have the following features in addition to the regular audio recording units like audio tape recorders and CD players.

- automatic playback of a Music-On-Hold audio clip in loop
- a facility to change the audio clips broadcasting on hold
- an universal 8/600ohm analogue interface with balanced output signal, or a special digital interface for some systems
- fully digital audio storage techniques to avoid using of any moving mechanical or optical parts
- stable functioning even while power line failures
- compact size for easy in-system integration

Since some organizations may prefer translations of the musical or news radio programs on hold, even a special FM receiver would be useful for usage in integration with the PBX telephone systems to enable Radio-On-Hold function.



Callina MT60/MT60H/M240/M480

This Music-On-Hold modules is intended for virtually any PBX telephone system. The MT60 modules can be Integrated with PBX via a MOH input terminal, or via a CO trunk that configured to be used as a MOH input port. With these miniature modules an audio clip can be easy recorded and played back in loop for callers being put "on-hold".

Features:

- 60/240/480 seconds of audio clip total capacity
- Easy recording procedure with auto-stop and LED indication of modes
- Occasional erasing protection
- Automatic Gain Control to compensate for the wide range of input levels
- Input and output signals monitoring with built-in speaker
- Balanced 8/600ohm output with signal level operative control
- Easy installation inside of any PBX telephone systems
- No additional power supply is required if a reserve battery of PBX is used with the wide range power supply voltage version (MT60H), so that the Music-On-Hold service will be protected of power net interrupts as well.
- Digital solutions with no moving mechanical parts, non-volatile memory allows 100,000 record cycles and 100-years message retention (typical)
- Miniature size and low cost



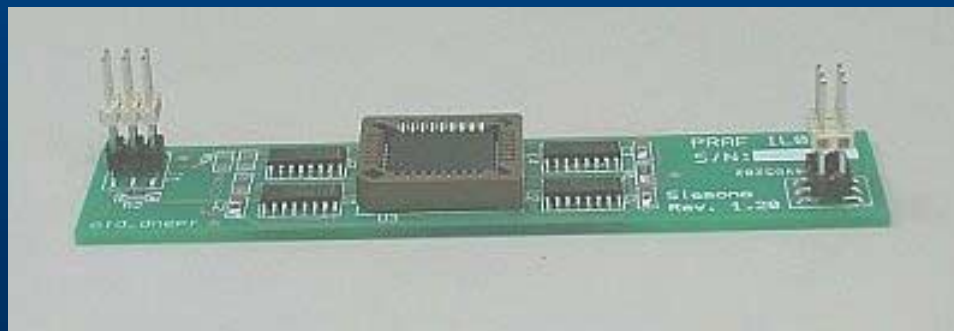


Siemona S32H/S65H/S130H

Siemona S32H/S65H Music-On-Hold (mppi) modules can be used in integration with Hicom 150E/H, Hicom 150E/H Office Start and HiPath 3xxx series of PBX telephone systems of Siemens. The modules have a replaceable memory chip to store an audio clip in.

Features:

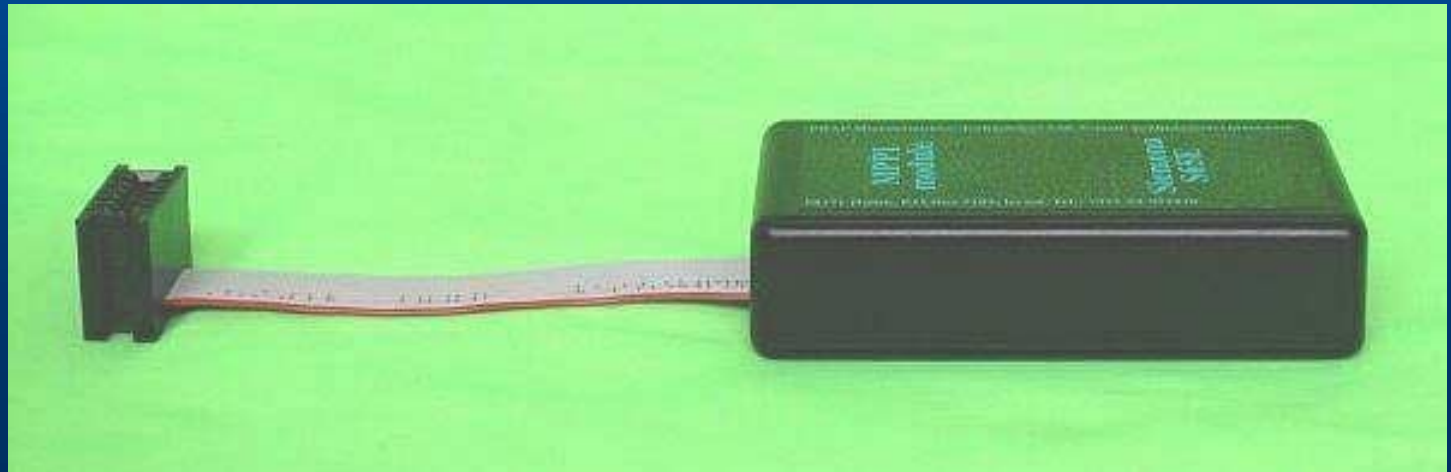
- 32/65/130 seconds of audio clip total capacity
- Replaceable memory chip allows changing a musical content of the modules
- A special unit SEM-100 is offered to enable playing the audio clip of the modules without PBX
- Easy installation on the existing MPPI port inside of the telephone systems
- No additional power supply or battery is required
- Fully digital solution with no moving mechanical parts
- Miniature size and low cost





Siemona S32E/S65E/S130E

Siemona S32E/S65E mppi modules have the same features as S32H/S65H. The difference is that these modules have another type of the mppi port connector in order to be integrated with Hicom 100E/150E Office Com/Office Point, Telecom Octopus E10/E20/E30 and DeTeWe PBX telephone systems.





Siemona S32ME/S65ME/S130ME



And the extra miniature mppi modules which have the same features as S32E/S65E modules of the Siemona family, which are also intended for use in integration with Hicom 100E/150E Office Com/Office Point, Telecom Octopus E10/E20/E30 and DeTeWe PBX telephone systems as well as S32E/S65E modules.

An attractive feature of this modules is the extra miniature execution avoiding use of flex ribbon cable.



Radian F65/F65H/F88/F88H

The Radian family includes Radio-On-Hold modules which can be Integrated with virtually any PBX telephone system via a MOH input terminal, or via a CO trunk that configured to be used as a MOH input port. With these miniature modules FM radio stations can be re-broadcasted for callers being put "on-hold".

Features:

- Covers FM64-74MHz or FM88-108 MHz bands
- Digital tuning facility with two buttons and LED indication, avoiding using of mechanical scales
- Output signals monitoring with built-in speaker
- Balanced 8/600ohm output with signal level operative control
- Easy installation inside of any PBX telephone systems
- No additional power supply is required if a reserve battery of PBX is used with the wide range power supply voltage versions (F65H, F88H), so that the Radio-On-Hold function will be protected of power net interrupts as well
- Miniature size and low cost





Production



SMT production under ISO9002, UL E103899 standards



Support

All the models of Music-On-Hold modules can be recorded by end users, distributors of the products themselves, as well as by audio operators at our professional studio. Recording instructions, technical documentation, as well as a sample set of the nice royalty free instrumental melodies are available on our homepage.

Specialists in the telephony equipment perform consulting for integration of the products with different PBX systems.

The product development team continuously works in order to improve the products and to develop new models reflecting the latest needs of market. Our engineers are always open for technical discussions regarding details and features of the product, and invites users and distributors to express their comments, suggestions, today's and tomorrow's needs.





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