

Description of the embedded demo audio archive

General comments

Depending on the application, Microcontrol embedded audio archives can be based on either MPT2, MPT3 or MPT4 sound cards. In all three cases, the archive can be accessed via RS232 interface and/or by pressing keys on standard decimal passive keypads one mounted on the box and the other (extended, mouse-like) connected to the archive's box with a ribbon cable.

Additionally, the MPT2 and MPT3 feature interface to a standard corded or cordless telephone (not to the PSTN network!). With the cordless telephone, only the base is connected to the MPT2/MPT3 and the archive is controlled using the handset's keypad. With modern cordless phone range being several hundred meters, the handset acts like a remote control unit with the range of up to several hundred meters. The played audio can be heard through the handset. Some application may use the handset only as a remote control when the archive's audio output is connected to a hi-fi or public address system. It would be then possible to control the home hi-fi from the swimming pool or the BBQ area in the backyard. The public address system at sporting venues, lecture halls, shops and similar places could be controlled in a similar manner.

The MPT4 card features, instead of a telephone interface as in MPT2/MPT3, an interface to the PSTN network using an on-board socket modem. An archive based on the MPT4 card can be simply dialed up from any telephone that supports DTMF signaling. The audio files are then selected, listened to and navigated remotely using the phone's keypad in exactly the same way as directly through the keypad on the box.

Telephone demo audio archive based on the MPT4 card

This demo archive consists of the following:

- * MPT4 sound card in a standard box with a keypad
- * portable 320GB hard drive
- * 12V/1.5A regulated DC power supply
- * telephone cable to PSTN network

The 95 audiobooks plus some sample audio files occupy about 20GB of hard drive's memory.

Accessing demo audio archive:

This archive can be accessed by ringing Sydney, Australia, telephone number **99884662** or when ringing from overseas **+61-2-99884662**.

The telephone and connection must support DTMF signaling. Please note that some calls made through internet (VoIP) may distort DTMF signals giving unpredictable results. This audio archive answers the call by playing an audio file with simplified description of the archive. While listening to this description the user can test if at least the two most often used DTMF tones are recognized: press hash to pause playback and then press 9 to continue. To listen to the next audio file, which is an audiobook "In eighty days around the world", press 8.

The following sections describe in more details how to use the archive.

Please also read a disclaimer at the end of this page.



Telephone audio archive

The audiobooks in the demo audio archive

The audiobooks in this archive are in public domain and can be downloaded from www.librivox.org - see LibriVox advice/warning at the end of this page. The e-texts of the audiobooks can be downloaded, for example, from www.gutenberg.org or from www.librivox.org. To download e-text of "In eighty days around the world" by Verne from LibriVox, enter its website www.librivox.org, select LibriVox Catalog

and then search for this book by placing “eighty days” in the Title bar. Select option 2 of the book (read by Mark Smith) and then select “Gutenberg e-text”. Download the book, for example, in the html format. This procedure can be used to download e-texts of all other books in this archive. The listing of this archive’s audiobooks is at Listing of audiobooks in the audio archive.

Audio file organization in the demo audio archive

The audio files in this archive are organized as follows: there are seven sample audio files in the Root Directory the first one being a simplified description of the archive, the second one is a single file over 7 hours long audiobook "In eighty days around the world" by Julius Verne and the third, over two hours long, “Dr Jekyll and Mr Hyde” by Robert Louis Stevenson . Those two audiobooks are recommended to practice playback and navigation commands. Other files in the Root Directory can be listened to by pressing 8 and 7 (play next/previous track in current directory). Upon entry into the archive the first file in the Root Directory is played (the archive’s description) with the Root Directory selected as a current directory. To pause playback of this file press hash and to continue press nine. To listen to next file (next track), which is the audiobook “In eighty days”, press 8. To return to the beginning of previous audio file, press 7. To listen to the last audio file in the Root Directory (number 7), press *07#. The description of these commands follows.

There are 95 MP3 audiobooks in this collection with each book stored in a separate folder or directory. The audiobook in each folder is split into segments (chapters) which are separate audio files usually from 5 to 20 minutes long. The first folder and the first book is selected by pressing *701#. After selecting the book folder, press nine to listen to the first segment and then press 8 to select and play next segment. To pause press hash and to continue press nine. To return to the Root Directory, press *700#. Another way to select file and start playback is to press *0xx01# where xx is folder number (01-95) and 01 selects to play the first segment (chapter) in that folder.

Using the demo audio archive

The audio files are accessed and navigated by commands using DTMF tones. Two types of DTMF commands are used: single key commands and multiple key commands. The term “track” is sometimes used instead of the “audio file”.

Single key commands

- 2 - go back 5 sec
- 3 - go forward 5 sec
- 5 - place marker
- 6 - play from marker
- 7 - select and play previous track
- 8 - select and play next track
- 9 - play current track
- # - stop or pause

Keys 2, 3, 5 and # are acted upon only when playing. Keys 6, 7 and 8 are acted upon either when playing or when stopped.

Multiple key command format

In the multiple key commands the first key is always the star key and the last key must be hash. The keys between the star and hash must be decimal digits. The second key, which comes after the star key, selects the function of the command. The

decimal digits between the second key and hash are command parameters. A command parameter may have up to ten decimal digits. For example, in command *015#, zero selects the function of the command with parameter 15. After pressing the star, the single key commands are no longer recognized. They become recognized again only after the multiple key command is completed with the hash. If a mistake is made during multiple key command entry, simply press the star key and start keying again. To exit from the multiple key command entry without execution, press the star and hash keys only. The pair star and hash can be also pressed to make sure that subsequent single or multiple key commands will be recognized.

Multiple key command functions

The second key is 0 in the multiple key command - play file or track number defined by the command parameter. In this command the parameter can be either one, two or four decimal digits long. With one or two-digit parameter the file is played from the current folder which can be either the Root Directory or one of the audiobook folders. This command is acted upon when either playing or when stopped.

Example: *04# - play file number 4 in current folder. With four-digit parameter, the first two digits select folder number and the remaining two select the file in that folder. Example: *06512# - select folder 65 and play segment 12 in that folder. To play segment 16 from this folder (after it is selected), press *016#.

The second key is 1 in the multiple key command - start playback of already selected file at the time specified by the parameter. Operation of this command depends on the number of decimal digits in the parameter:

no digits - play from the beginning,

one or two digits define playback starting time in minutes, range 0-9 min or 00-59 min

three digits define playback starting time in hours and minutes, range 0-9 hours, 00-59 min

four digits are invalid,

five digits define playback starting time in hours, minutes and seconds, range 0-9 hours, 00-59 min, 00-59 sec

This command is acted upon either when playing or when stopped.

Examples: *126# - start playback at 26 minutes, *1205# - start playback at 2 hours and 5 minutes, *120540# - start playback at 2 hours, 5 minutes and 40 seconds.

The second key is 2 in the multiple key command - jump back in playback time as defined by the parameter.

Operation of this command depends on the number of decimal digits in the parameter:

no digits - jump back 1 minute

one or two digits define the back jump in minutes, range 0-9 min or 00-59 min

three digits define the back jump in hours and minutes, range 0-9 hours, 00-59 min

This command is acted upon only when playing.

Examples: *2# - jump back 1 minute, *245# - jump back 45 minutes, *2112# - jump back 1 hour and 12 minutes.

The second key is 3 in the multiple key command - jump forward in playback time as defined by the parameter. Operation of this command depends on the number of decimal digits in the parameter:

no digits - jump forward 1 minute

one or two digits define the forward jump in minutes, range 0-9 min or 00-59 min

three digits define the forward jump in hours and minutes, range 0-9 hours, 00-59 min

This command is acted upon only when playing.

Examples: *3# - jump forward 1 minute, *35# - jump forward 5 minutes, *3112# - jump forward 1 hour and 12 minutes.

Second key is 7 in the multiple key command - select folder number defined by the parameter. Valid parameters are 00 to 99. Parameter 00 selects the Root Directory while parameters 01 to 99 select one of the audiobook folders. This command is acted upon when either playing or when stopped.

Example: *700# - select Root Directory, *753# - select folder number 53. To select and play segment 16 in the selected folder, press *016#.

Segments within current folder can be single-stepped with single key commands 7 and 8.

Examples of using navigational commands

Select Root Directory by pressing *700#. Press *02# to select and play audio file number 02 which is the audiobook “In eighty days around the world”. This 7hrs 23 min long audiobook is stored as a single file in the Root Directory. In contrast, the same book, stored in folder 03, is split into 37 files corresponding to book chapters.

In the “eighty days” stored in the Root Directory the following chapters start at:

Chapter 2 – 11m09sec, Chapter 13 – 2h08m14s, Chapter 37 – 7h15m46s.

After pressing *02#, this book is selected and played from the beginning. While playing, enter *120814# to start playback at the beginning of Chapter 13. Press # to stop/pause playback. Enter *171546 to start playback at the beginning of Chapter 37.

While playing, enter *2714#. The playback should return to the first few minutes of the first chapter. While playing, press 5 (place marker). Jump forward 2 hrs by pressing *3200#. Press 6 to return to the playback point where marker 5 was pressed. Please note that the single key command 6 and the multiple key command *1... are acted upon either when playing or when stopped.

Press 8 to start playback of the next book in the Root Directory. Press 7 to return to the beginning of “eighty days”. Press 6 to start playback from the marker. Pressing 5 again will override the current marker. Multiple markers can be implemented by saving the current marker for later recall, however, these command are not described here. Press *00337#. Chapter 37 of “80 days” should start playing then from folder 03. The current directory is no longer the Root Directory but folder 03. Press 7 to listen to Chapter 36 and press *01# to start playback at the beginning of the book in the same folder. Press *037# to go to the beginning of Chapter 37. Press *06501# to listen to the first chapter of “Robinson Crusoe” which is stored in folder 65. Folder number 65 becomes now the current folder. To return to the Root Directory, press *700#.

Disclaimer

The audiobooks in this demo archive are presented only as examples of audio recordings for the purpose of demonstrating various playback and navigational commands. Microcontrol does not supply any of the audio files used in the archive.

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