Technovision Inc.
MP3sa
Industrial MP3 Player

Quick Reference Guide

Technovision Inc.
1845 Sandstone Manor, Unit 2
Pickering, Ontario, L1W 3X9
Phone: (905) 420-5153
Fax: (905) 420-0753
www.technovision.com

Update: November 1, 2003

Operation

The Technovision MP3sa is an industrial MP3 playback device, capable of either continuous audio or interactive playback through user-selectable tracks. The MP3sa was primarily designed for use as a music sampling device, allowing for direct access to individual "discs" or "songs" as well as the sampling of "tracks" within a "disc".

MP3 file names, on the SmartMedia card, are designated by 4 characters – the first two are the "disc" and the second 2 are the "track". File 0103.MP3 is disc 1, track 3.

Users can access a "disc" directly by pressing a key that has been designated as a disc function in CONFIG.TXT. For example, if KEY34 is mapped as disc 4 (key 34 disc4), then pressing KEY34 will start playing the first "track" available on the 4th available disc – file 0401.MP3 (if discs 1 to 3 are also on the card). Subsequent presses of KEY34 will sequence through the available "tracks" on that "disc".

SmartMedia Card

SmartMedia cards are available from Technovision in 32 and 64 Meg sizes. A typical 64M card will hold over 60 minutes of MP3 audio (128k sampling rate).

Standard Features

The MP3sa comes standard with the following features:

- Θ Headphone output on a 1/8" (3.5 mm) jack
- Θ Stereo speaker output (2 x 2W) on a 4-pin header (.1" spacing).
- Θ Line level output on a 1/8" (3.5 mm) jack
- Θ 16-pin connector for optional 4x20 LCD display
- Θ 20-pin connector for external buttons or keypad.
- Θ SmartMedia card Connector.

Options available for MP3sa

- Θ 4 line x20 character LCD display and cable
- Θ RS232 /TTL control option
- Θ Speaker cables and other accessories

Storage of Audio Files

The SmartMedia cards provided by Technovision have been loaded with a sample CONFIG.TXT file and a MP3 folder containing sample MP3 files. The lines in the CONFIG.TXT file define the operating parameters of the MP3sa.

DO NOT RE-FORMAT THE CARD

CONFIG.TXT file

System Variables (values in CONFIG.TXT shown) are shown below with seconds represented by (s) and milliseconds as (ms).

Variable	Description
volume = 30	initial volume value (%)
minvol = 0	minimum system volume (%)
maxvol = 100	maximum system volume (%)
fadetime = 500	fade up from mute (ms)
	audio is muted on each search
repeat = 2	0=off, 1=all once, 2=all, 3=track, 4=disc ,5=track once & pause.
autostart = 1	0=no start up, 1=start playing
idle = 0	idle time (0-1000 seconds) before system stops (0=disable)
disclock = 0	1=stay within disc when pressing the NEXT key.
attract = 0000	filename for attract audio
mode = 0	0=normal, 1=browse mode
line**X** = " "	defines LCD lines (page 3)
keyhold = 500	hold time to repeat key (ms)
keyrepeat = 100	repeat speed of key (ms)
seeksize = 5	FF or REW jump (s)
volhold = 500	hold time to repeat volume (ms)
volrepeat = 100	repeat speed of volume (ms)
key *XY function*	key functions (page 5)
defaultkey = next	defines unmapped keys
lockout = 0	locks out song**XX** and disc**XX** buttons until current song is finished if value=1.

LCD Screen Layout for optional LCD screen

The optional 4 line by 20 character LCD allows you to view the current status of the MP3sa. The layout of this screen is determined by the definition of each line description in the CONFIG.TXT file. The $ character signifies that a special function code is to be displayed. Immediately after the $ a number can be used to specify the number of characters that the right-justified data will occupy. A negative number signifies that the data is left justified. Strings that are longer than 20 characters will be cut off.

List of special function codes:

Code	Description	Width	Sample Value
T	ID3 title	0-??	Thriller
A	ID3 artist	0-??	Michael Jackson
C	ID3 comment	0-??	From the 80s
G	ID3 Genre	0-??	Pop
S	song#	1-2	23
F	filename	8	0101.MP3
H	sample rate	7	44100Hz
B	bitrate	9-10	160kbits/s
K	keypressed	2	34
d	disc#	1-2	2
t	track#	1-2	12
s	song#	1-2	4
r	repeat	3	R-*,R->,R-D,R-T
R	repeat (text)	2	R4
p	transport	1	▶, ■, II
P	transport (text)	5	PLAY ,STOP, PAUSE
x	current time	5	01:15
v	volume – bar	6	[IIII]
V	volume – text	4	45%

Examples:

line1 = "$T $p $x
line2 = "$-12T $p $x"
line3 = "$12T $p $x
line4 = "D$2d T$t $x $P"

If the title of the MP3 file is "Samples" and the MP3 file that is playing is 0104.MP3, the 4x20 LCD display would show:

```
Samples > 00:12
Samples       > 00:12
     Samples > 00:12
D01 T04 00:12 PLAY
```

Browse Mode Display

If the **mode** variable is set to 1 in CONFIG.TXT, then the display will be put into browse mode. This will display the previous, current and next song to be played. Lines 3 and 4 will display in the same format as line 2.

Example:
line1 = "D$2d T$t $x $P"
line2 = $T

LCD Display would show:

```
D01 T04 00:12 PLAY
  Previous Song
->Current Song
  Music Sample 3
```

You would then use the browse up (brup), browse down (brdn) and select (brsel) to make your selection.

List of key functions

The key functions of the MP3sa is determined by the KEY XY definition in the CONFIG.TXT file, where X is the keypad column (COL) and Y is the row (ROW).

"KEY 34 play" will map out the play function to COL 3 (pin 3), ROW 4 (pin 14) on the keypad port of the MP3sa. The list of available functions are:

pause	stop	play
next (track)*	prev (song)	disc+
disc-	song **XX**	disc **XX**
replay (song)	track1	last (song)
ff	rew	vol+
vol-	max (vol)	min (vol)
mute	mute2 (toggle)	brup
brdn	brsel	brtoggle
repeat (cycle)	reset	

*text within brackets are for descriptive purpose only.

Keypad Port Connector on MP3sa

The keypad port is a 2x10 male header connector (.1" spacing). Pin 1 is the top right (looking at the connector) and pin 2 is the bottom right. Pin 19 is the top left and pin 20 is the bottom left.

Keypad connector on MP3sa

Pin#	Label	Pin#	Label
1	COL1	2	COL0
3	COL3	4	COL2
5	COL5	6	COL4
7	COL7	8	COL6
9	ROW1	10	ROW0
11	ROW3	12	ROW2
13	ROW5	14	ROW4
15	ROW7	16	ROW6
17	GROUND	18	GROUND
19	GROUND	20	GROUND