



## Sound Demo

This example explains the mapping of device outputs. For illustration purposes it uses a sound card as a device and a program that allows the user to play some music.

### Product description

When executing the MainVisu, the user will see a piano with the range of two octaves. A note will be played, as long as the user presses the mouse button on a key. If the mouse is released the sound will immediately stop. With a click on "Jukebox", it is possible to switch to the Jukebox mode. Three songs can be played there. The Jukebox mode comes with a play, pause and stop function. The user will also be able to change back to the piano mode.

Main\_PRG: This contains the main logic of this example. It constantly changes between seven different states.

STATE.MUTE: All output bits will be set to FALSE and no sound will be played if the program changes to this mode. The animation of the jukebox will be stopped as well.

STATE.FUER\_ELISE: In this state the song "Für Elise" ( English: For Elise) will be played on the jukebox. It consists of 150 song components.

STATE.HAENSCHEN\_KLEIN: In this state the song "Hänschen klein" ( English: Little Johnny) will be played on the jukebox. It consists of 32 song components.

STATE.MERRY\_XMAS: In this state the song "We wish you a merry Christmas" will be played on the jukebox. It consists of 37 song components.

STATE.PIANO: The Piano Mode gets activated in this mode. The MainVisu will present a piano to the user.

STATE.JUKE: The Jukebox Mode gets activated in this mode. The MainVisu will present a jukebox to the user.

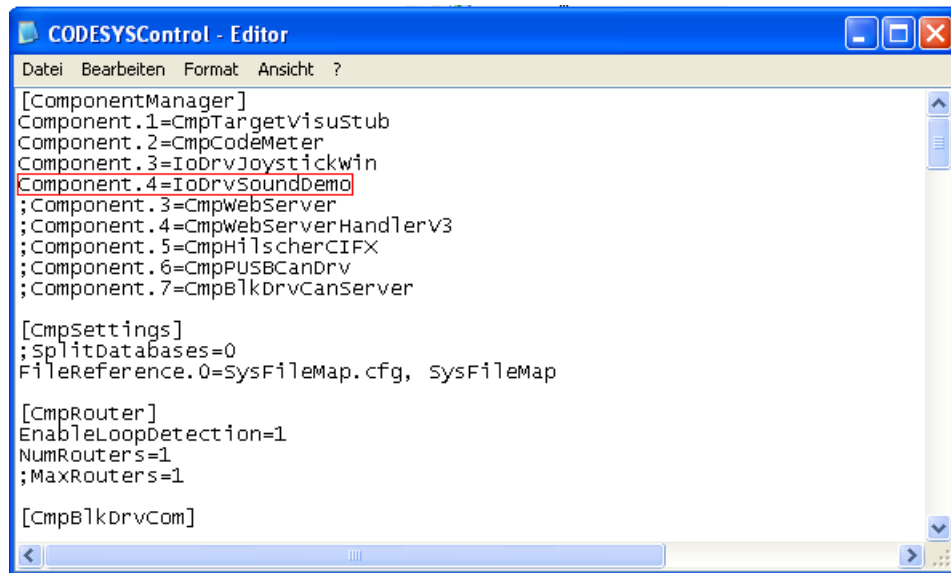
STATE.WAITING: In this state nothing happens. The program simply cycles through ` this state until a state change gets triggered.

JUKEBOX (FB): The JukeBox FB controls the blinking animation of the JukeBox in the MainVisu. The Jukebox will change its appearance every 600ms. One cycle goes through 13 different Jukebox picture changes.

SoundCard: The path to the sound files can be changed in the "Internal Configuration" tab. Also additional songs can be added here.

### Important Information

In order to make this example work, the CODESYS Control CFG file has to be extended. Change in your CODESYS installation folder to 'GatewayPLC/'. Open the file 'CODESYSControl.cfg' and add new component as 'IODrvSoundDemo'. See the screenshot below.

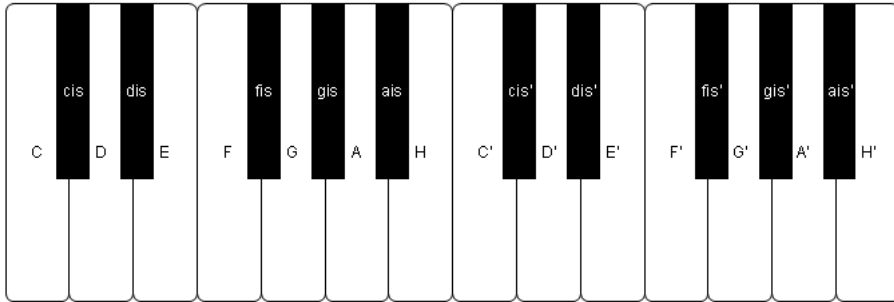


Insert the line 'Component.X=IoDrvSoundDemo' to '~3SCoDeSysGatewayPLCCoDeSysControl.cfg'.

### Mapping Table

Variable	Bit	Channel
ding	Bit0	Byte0
cord	Bit1	Byte0
chimes	Bit2	Byte0
notify	Bit3	Byte0
ringout	Bit4	Byte0
tada	Bit5	Byte0
_type	Bit6	Byte0
newmail	Bit7	Byte0
C	Bit0	Byte1
Cis	Bit1	Byte1
D	Bit2	Byte1
Dis	Bit3	Byte1
E	Bit4	Byte1
F	Bit5	Byte1
Fis	Bit6	Byte1
G	Bit7	Byte1
Gis	Bit0	Byte2
A	Bit1	Byte2
Ais	Bit2	Byte2
H	Bit3	Byte2
C_	Bit4	Byte2
Cis_	Bit5	Byte2
D_	Bit6	Byte2
Dis_	Bit7	Byte2
E_	Bit0	Byte3
F_	Bit1	Byte3
Fis_	Bit2	Byte3
G_	Bit3	Byte3
Gis_	Bit4	Byte3
A_	Bit5	Byte3
Ais_	Bit6	Byte3
H_	Bit7	Byte3

# Play the Piano



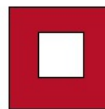
## Jukebox



Für Elise

Merry X-MAS

Hänschen klein



Piano

## General information

### Manufacturer:

3S-Smart Software Solutions GmbH  
 Memminger Strasse 151  
 87439 Kempten  
 Germany

### Support:

<https://support.codesys.com>

### Item:

Sound Demo

### Item number:

000027

### Sales:

CODESYS Store

<https://store.codesys.com>

### Included in delivery:

- CODESYS software and / or license key with billing information
- For training courses and events: Booking confirmation

## System requirements and restrictions

<b>Programming System</b>	CODESYS Development System Version 3.5.6.0 or higher
<b>Runtime System</b>	CODESYS Control Version 3.5.6.0
	According to the availability of the CODESYS Runtime.
<b>Supported Platforms/ Devices</b>	Note: Use the project "Device Reader" to find out the supported features of your device. "Device Reader" is available for free in the CODESYS Store.
<b>Additional Requirements</b>	Adding the "IODrvSoundDemo.dll" as component to ~/GatewayPLC/CODESYSControl1.cfg
<b>Restrictions</b>	Windows Vista or higher requires the Sound Demo to run on "CoDeSys Control Win V3" instead of "CoDeSys Control Win V3 SysTray". Control WinV3 can be found in the Windows Start Menu.  64 Bit controls are not supported.

*Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact [sales@codesys.com](mailto:sales@codesys.com).*

*Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.*