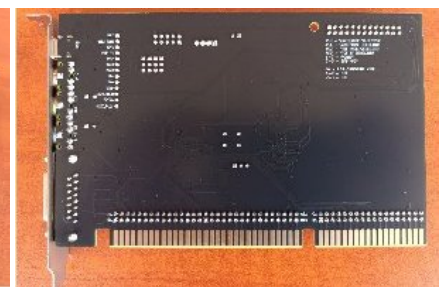
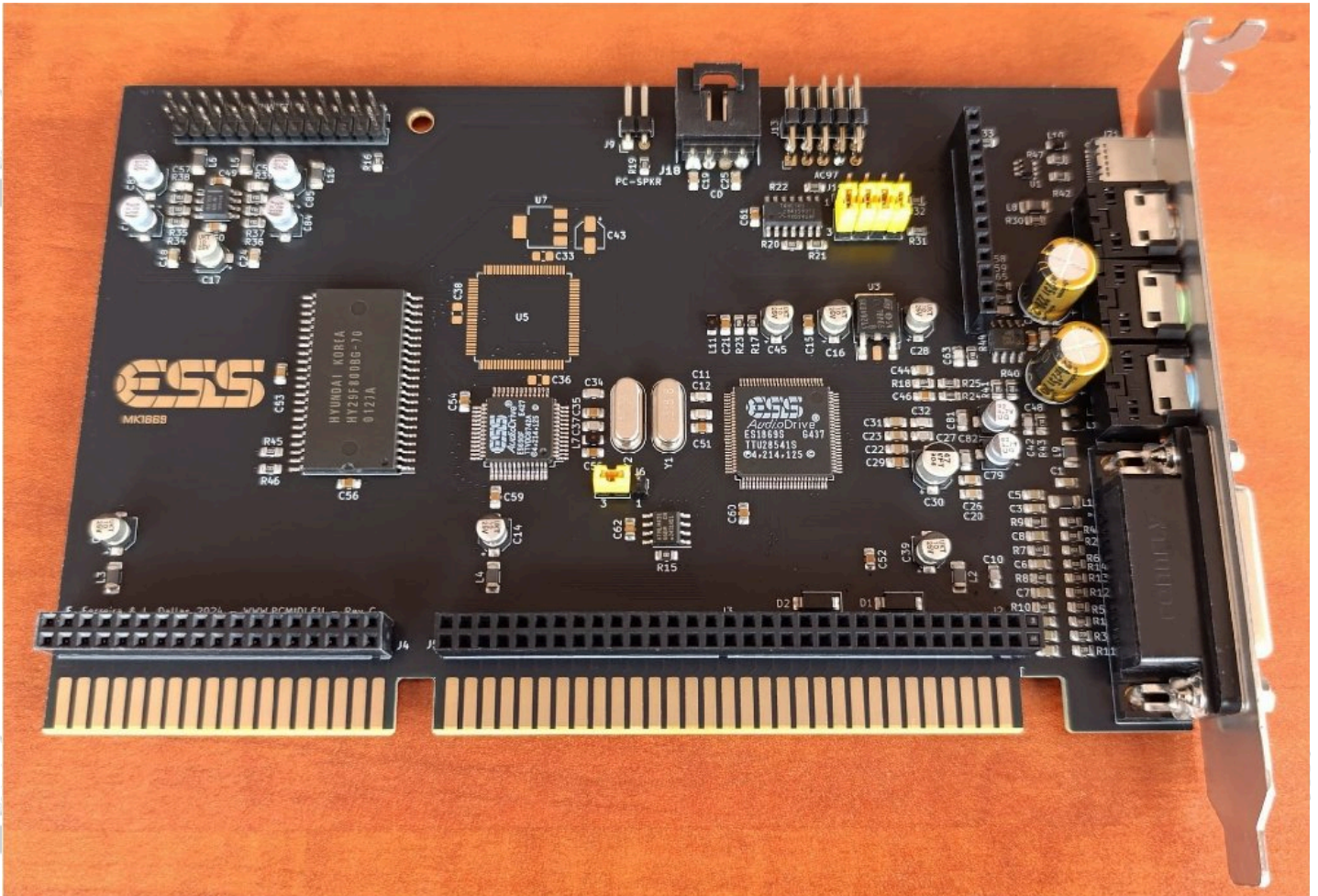


Welcome to the MK1869 Sound Card page!

AudioDrive®

UNDER CONSTRUCTION

AudioDrive®



(click on images for larger version - FINAL version of card shown)

AudioDrive®

AudioDrive®



(click on image for larger version - PC MIDI add-on attached on card)

AudioDrive®

AudioDrive®

? What is it?



MK1869 is an ISA Sound Card based on the ESS ES1869 sound controller chip with onboard wavetable synth based on the ESS ES690 DSP.

Development info and discussions can be found at this [VOGONS thread](#).



13-MAY-2025: New batch of cards and PCMIDI addons are now available!

03-MAR-2025: *Preorder queue form added at the end of the page - currently in production at factory, thanks!*

25-FEB-2025 : Card development is **finished**, final pcb version shown in the above images 🎧🎧

The card's main features are:

- AdLib, Sound Blaster and Sound Blaster PRO compatible for DOS (with SB ADPCM support)
- Windows drivers with up to 48khz sampling rate
- High-quality, OPL3 superset ESFM music synthesizer
- MIDI port - compatible with MPU-401 UART mode
- Integrated Spatializer 3-D audio effects processor
- Integrated dual game port
- 16-bit stereo ADC and DAC
- Programmable independent sample rates from 4 kHz to 48.0 kHz for record and playback
- Full-Duplex operation for simultaneous record and playback
- ES690: Single chip, high performance wavetable synthesizer with 32-voice polyphony
- ES690: Chorus and reverb effects
- ES690: 16bit 44.1 khz playback
- ES690: 1 MByte General Midi instrument set - 128 melodic and 47 rythm instruments
- ISA expansion header for PCMIDI addon
- USB-C port for future expansion usage - specs for expansion creation will be freely available

REVIEW



[Brand New MK1869 ESS AudioDrive ISA Sound Card](#)

MK1869 review by **PhilsComputerLab**

REVIEW



[The MK1869 playing various DOS-Games music \(FM\)](#)

ESFM playback showcase by **pc-sound-legacy**

REVIEW

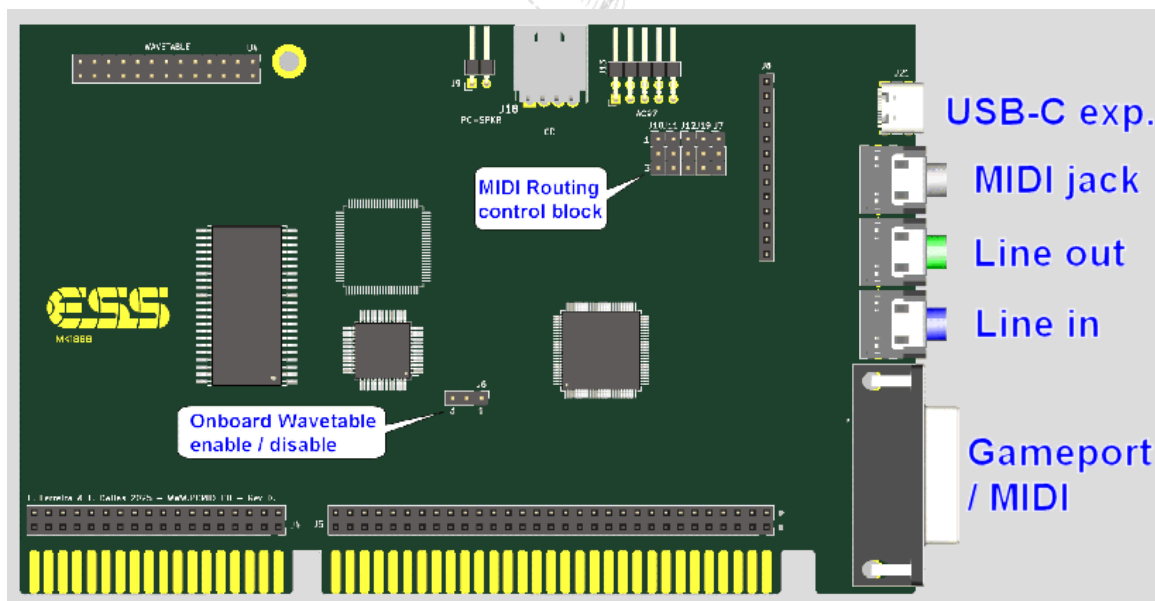


[Internal Wavetable of the MK1869: ESS ES690F playing DOS-Games music \(General Midi\)](#)

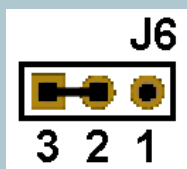
wavetable playback showcase by **pc-sound-legacy**



➔ MK1869 Jumper Settings



[\(click on image for full size version\)](#)



J6 - Onboard ESS Wavetable MIDI control

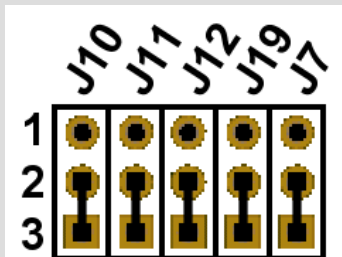
- Jumper installed in positions 1+2 : onboard wavetable disabled
- Jumper installed in positions 2+3 : onboard wavetable enabled



default setting shown: onboard wavetable enabled

MIDI Routing control block

Allows the configuration of which MPU device controls which MIDI port. When PCMIDI add-on is installed a dual MPU setup can be created.



- J10 = Wavetable Header selector
- J11 = Gameport MIDI-OUT selector
- J12 = MIDI OUT jack selector
- J19 = Onboard ESS Wavetable MIDI selector
- J7 = Gameport MIDI-IN selector

- Jumper installed in positions 1+2 : port controlled by PCMIDI MPU
- Jumper installed in positions 2+3 : port controlled by ESS MPU



All 4 MIDI connections (wavetable header/jack/gameport/onboard-wt) can be used at the same time with every possible combo of ESS/PCMIDI MPU for them.















default setting shown: all ports controlled by ESS MPU

J4 , J5 , J8	optional PCMIDI addon and future expansion connections
U4	Wavetable header connector (not compatible with NEC XR385 and similar out-of-spec loud wt boards , check the FAQ section for conversion options)
J9	PC Speaker connector (polarized, if you do not hear boot beep codes then put the wires the other way around)
J18	CD-ROM audio connector
J13	AC'97 header connector (MIC is only accessible via this connector)
J21	USB-C connector - activated by a future expansion board(s)

➔ MK1869 Driver Downloads

ESS1869 Released Drivers

Chip Model	Driver Type	Version	Download	Release Notes
	DOS	5.2		Note #1 below
	Unisound homepage	0.82a		Note #2 below
	Windows 3.1x	4.17.07		Installation Manual Note #3 below
	AudioRack for Windows 3.1x (also acts as the mixer application for win3x)	1.09		Manual
	Windows 9x (VXD drivers)	4.04.00.1317		-
	Windows 9x modded (VXD drivers)	4.04.00.1317		Note #4 below
	AudioRack for Windows 9.x	3.00		Manual
	Windows NT 4.0	2.01.18		Installation Manual
	OS/2	2.10		-
	Updated ES1869 Miles Sound System drivers	3.6B		Note #5 below
	NEW Sierra audio drivers patch for ESS186x chips by Nemesis/DivByZero	1.00		Note #6 below

ESS DOS Driver notes:



#1

If the system BIOS is a PnP one there is a good chance that ESSCFG will completely ignore user settings for IRQ/DMA/MPU and will display a message about adjusting them via the BIOS - something that most of the times is not even possible.

In this case download UNISOUND and edit ESS.BAT to disable ESSCFG and enable it. You will still need to use ESSVOL in order to enable AuxB output - this is used by the WaveTable header on the board.



#2

Unisound notes:

A great replacement driver by JazeFox. Please read the included unisound.txt for more info.

/x3D0 switch makes sure that the ESS 1869 "3D sound enhancements" are OFF

NEW Since Unisound v0.82a, AuxB volume control is supported as a separated option.
This is important because AuxB is used by the WT header on the MK1869.

The AuxB control in Unisound is the /VBxx option and it works like this:
if /VBxx is not used /VFxx option will control FM, onboard WT and WT header.
if /VBxx is specified, /VFxx will control FM and onboard WT volume and /VBxx will control WT header volume separately.

Example uses with MK1869:

- /VF00 /VB90 will mute onboard WT and will put external WT board to 90% volume.
- /VF80 /VB00 will mute external WT and will put onboard WT to 80% volume.

Windows 3.1x driver notes:



#3

Please note that the Windows 3.1x installation program will add ESSCFG and ESSVOL lines at the top of your AUTOEXEC.BAT, manually remove them or change them according to your own preferences. Windows 3.1x driver needs the card to be initialized in DOS prior to usage.

Windows 9x modded (VXD drivers) notes:



#4

In most systems we tested the native ESS1869 VXD drivers have buggy DOS support under Windows98/SE (at least) which result in many games not being able to detect Adlib/FM capabilities. Use these modded drivers to revert the main driver file to the ESS1868 version which does not exhibit this bug.

There is no downside other than "3D sound enhancement" functions also getting disabled. Both VXD driver versions use a SETUP program to easily install them and will remove any existing drivers prior to installation making changing between versions easy.

Updated ESS ES1869 Miles Sound System DOS game drivers notes:

For games that use the MILES SOUND SYSTEM it is possible to use updated ESS drivers that support the ES1869 and offer better sample playback quality than the SB/SBPRO drivers.

AUDIODRV.DIG is the updated driver for Digital sound playback
ESFM.MDI is the updated driver for native ESFM/MIDI playback

(please notice that it depends on the game if it uses the ESFM driver or it actually has tracks that can take advantage of it)



#5

Simply copy the files from ESS_M36B.zip in the directory where the game stores its *.DIG and *.MDI files. Newer Miles Sound System versions will automatically pick them up and you will get the extra options for [Digital Audio](#) and [MIDI driver](#) screens.

For older Miles Sound System versions that do not automatically add drivers in selection screens you will need to replace a driver file with AUDIODRV.DIG renamed to the same name as the driver you are replacing.

For example let's assume that you want to replace a game's old ES688 driver named ADRV688.DIG with the new ES1869 driver, simply rename AUDIODRV.DIG to ADRV688.DIG, replace the old driver file and in the Digital Sound selection screen choose the AudioDrive ES688 driver. (the same method applies to ESFM.MDI driver replacements)

☺☺ Special thanks to [Joseph_Joestar @VOGONS](#) for the MSS info and research!

NEW Rincewind42's list of DOS games that offer native ESFM support: [HERE](#)



#6

NEW Sierra audio driver patch - Fix mixer volumes on ESS1868/1869 devices

A new game audio driver patch for Sierra games made by Nemesis/DivByZero, it fixes the mixer settings being altered by the Sierra audio drivers. Please visit the [VOGONS release](#)

[thread](#) for more information about it.

The package offered here contains the original Python script patch and a portable/compiled version of it for people that do not want to install the Python environment just for this.

Please read the README.TXT in the archive for usage instructions.

Games tested so far are:

Gabriel Knight 1
Police Quest 4
Quest for Glory 4
Space Quest 4
Space Quest 5
Space Quest 6
Space Quest 6 Demo
The Incredible Machine 2


More Sierra titles are supported (like Leisure Suite Larry 6, Freddy Pharkas and so on) but they are currently untested. Once more feedback is received they will be added to the list.

 **Special thanks to Nemesis/DivByZero for creating this patch!**

PC Speaker connection notes:

When PC Speaker passthrough is connected it has the potential to introduce noise in the sound output of the card - precautions have been taken to minimize any noise pollution but it ultimately depends on the age/state/design of the host system. Therefore it is recommended to mute the speaker input (for ESSVOL the /P0 argument will mute the input).

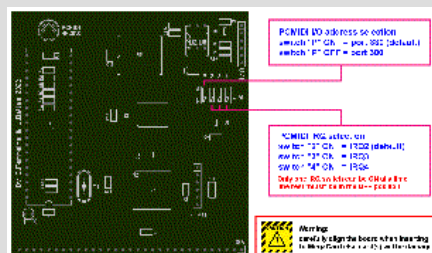
During boot time the PC Speaker input is automatically activated and audible - so no boot codes are missed.

 The PC Speaker connector is polarized, if you get no boot code beeps then put the speaker cable the other way around.


PCMIDI add-on downloads

Please visit the [PCMIDI Website](#) for downloads and info as the PCMIDI add-on shares the same chipset/firmware with the standalone ISA PCMIDI card.

Any patches/drivers/info also applies to the add-on - with the exception of the form factor and hardware configuration jumpers which are explained in the diagram below:



DIP switch settings, [click on image for full version](#).

 Please keep in mind that PCMIDI is **not** a PnP device, if it is not detected then it needs to be manually installed via the "Add New Hardware Wizard" and then selecting the "Roland MPU-401 device. Make sure the jumper settings match the port/irq of the driver options.

Expansion headers information:

On MK1869 there are provisions for upgradeability in the form of ISA bus passthrough headers and a MIDI/SOUND/USB I/O header. The USB-C port at the back of the card is currently unused and can be activated if needed with some upcoming expansion. Currently PCMIDI add-on uses the 8bit ISA passthrough + MIDI I/O to achieve integration with the main soundcard. We have some thoughts about future expansions as well but it will be possible for anyone to create any expansion they want - ISA and I/O header info and specs will

➔ FAQ

1. My NEC XR-385 wavetable daughterboard is too loud and I cannot create good mixer settings for use with it.

The NEC XR-385 wavetable daughterboard is created for use with a Japanese line of computers from NEC and as such it uses different specifications for its output - it is almost 3x louder than what a normal PC soundcard expects.

MK1869 is finetuned to be used with proper PC wavetable boards and as such adjusting the XR-385 volume to be balanced with the rest of audio sources is not possible.

Simply put because of its volume output the XR-385 is not supported for use with the MK1869.

■ Tiido over at [VOGONS forum offers a service](#) to convert a XR-385 to a proper PC wavetable board - the converted board works perfectly with MK1869 or any other soundcard out there.

■ Alternatively you can use a [CHiLL interface from Serdashop](#) to convert the XR385 to an external midi device, the interface has hardware volume attenuation jumpers for loud wavetable boards.

➔ Order information



You can order a MK1869 soundcard by [filling the form HERE](#)



06-SEP-2025: a new MK1869 batch is currently available!



First come - first served! Cards will be shipped by order of payment made.

➤ Price for each card shipped via registered airmail is 130eur when paid as "friends & family" with PayPal/IBAN - or - 137eur when paid with PayPal "goods & services".

➤ Each card comes complete with a stainless steel bracket and a 3.5mm-to-midi cable ready to use.

➤ Packages are sent via registered airmail service provided by Greek/Portugal Postal Services.

➔ Contact information

Need to contact us? Need help to setup/troubleshoot things or extra info?
Please use our contact form!



[Contact Form](#)

Or you can join our Facebook group [MPU-401 PC-MIDI Card Group](#) and make a post, we will answer ASAP!

Thanks for visiting!!!

 **BACK**

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