

Unbranded ESS 688 ISA sound card

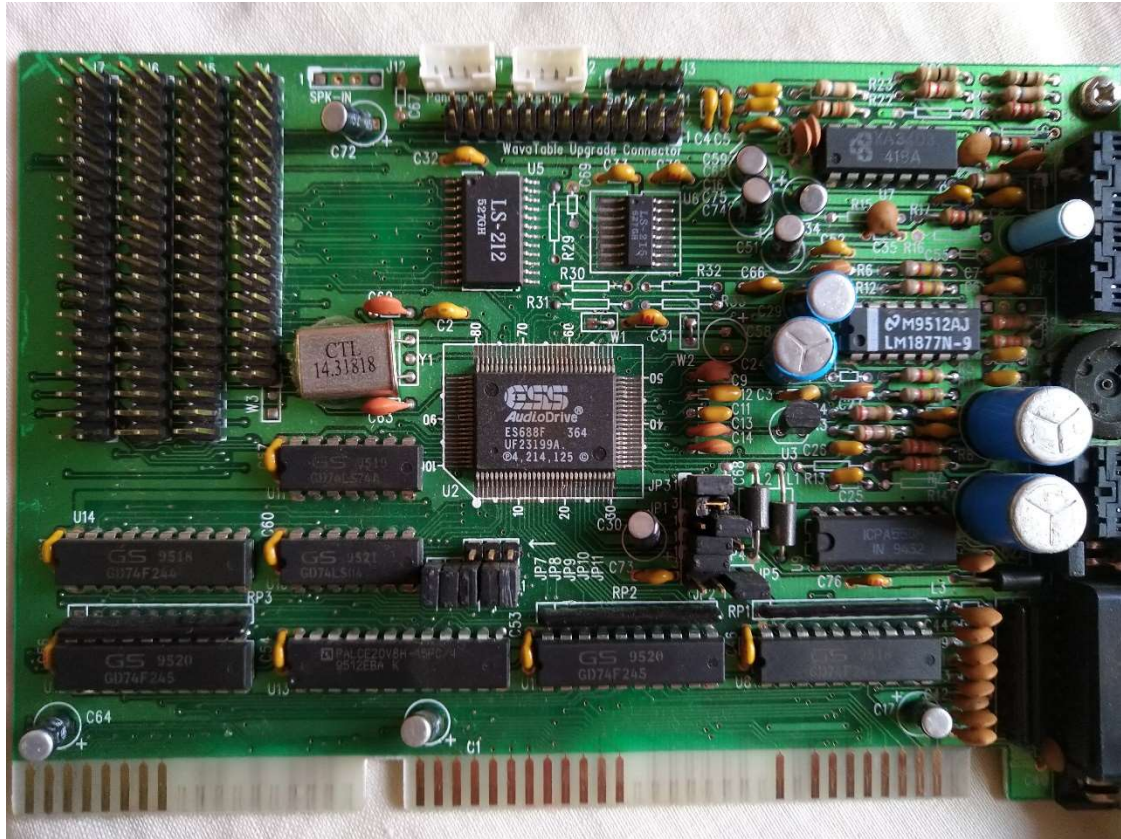
Chip detail:

ESS AudioDrive

ES688F 364

UF23199A

Front:



Rear:



Configuration:

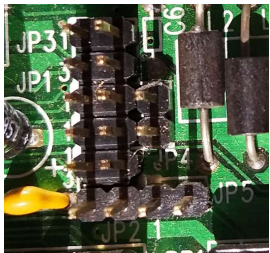
This information is incomplete. I have found no reference information for this card, nor have I managed to get the MPU-401 working. (The required TSR for this is linked below). None the less the card can be initialised as a basic SB clone using SET BLASTER parameters, for example:

```
SET BLASTER=A220 I7 D1 T4
```

Jumpers:

The screen printed labels on this card are a little ambiguous. I have interpreted these as best I could, and tweaked slightly to assist in describing the functions I've found.

Bank 1 (jumpers 1 to 5)



JP3	1	2		
JP1	1	2		
JP4	1	2	3	
	4	5	6	
JP2	1	2		
	3	4	1	2
JP5				

JP3
1+2 on = Enable PCM sound

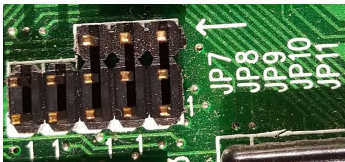
JP1
1+2 on = Disable sound (FM music unaffected)

JP4
2+3 and 5+6 on = Address 220
2+3 and 4+5 on = Address 230
1+2 and 5+6 on = Address 240
1+2 and 4+5 on = Address 250

JP2
3+4 on = IRQ5
1+2 on = IRQ7
Both off = IRQ9
Both on = IRQ10

JP5
1+2 on = Enable Gameport

Bank 2 (jumpers 7 to 11)



		3	3	3
2	2	2	2	2
1	1	1	1	1
JP7	JP8	JP9	JP10	JP11

JP7
1+2 on = ?

JP8
1+2 on = ?

JP9
1+2 on = ?
2+3 on = ?

JP10
1+2 on = ?
2+3 on = ?

JP11
1+2 on = ?
2+3 on = ?

This bank is likely related to the CD ROM headers.

Audio level jumpers



If you have powered speakers, configure as shown (each jumper one position in towards the centre) to bypass the onboard amp and volume control.

If you have passive speakers or headphones, place jumpers in outermost positions to enable amp.

Function of centre pin is undetermined.

More resources:

The Edison Gold 16 drivers recognise this card in DOS:

<http://www.vogonsdrivers.com/getfile.php?fileid=1461&menustate=0>

Relevant files:

ESSCONFIG.EXE = Use to read or modify address settings. Not mandatory; you only need jumpers and SET BLASTER.

ESSVOL.EXE = Mixer

ENMPU.EXE = The TSR required to enable MPU-401 (please post in thread below if you get this working on this card)

ESDETECT.EXE is another useful tool that will confirm the presence, and report the address of the sound card. I found it in 688os2.zip at the following link (it's an OS/2 driver package, but the EXE in question works in MS DOS):

<https://www.os2site.com/sw/drivers/sound/ess/index.html>

Datasheet for the ES688 chip: <https://www.datasheets360.com/part/detail/es688/-2567618899084452839/>

If you have more information, especially if you have managed to enable MIDI on this card, please visit this thread:

<https://www.vogons.org/viewtopic.php?f=62&t=70102>