

GOLDING AUDIO LTD

DSU 300 V1 iss2 Specification

ADPCM Digital Audio Playback Card

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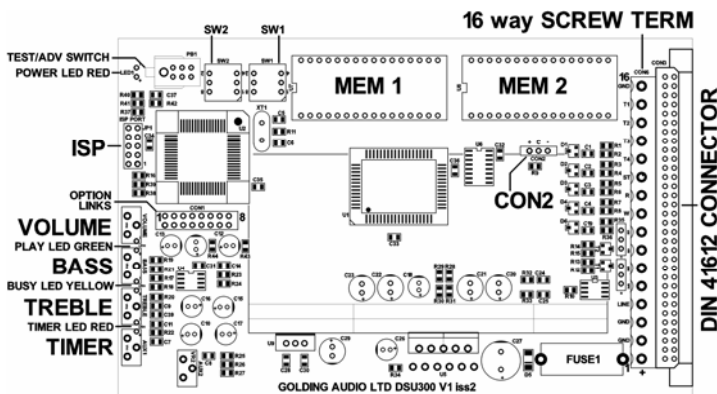
Specification

Board Size	100x160x25mm
Supply	+12v to +15v D.C. Regulated Compression
Trip Input Lines	Active Low or Hi via CON2 link
Stop Input	5v active LOW
Run Output	Open Collector (Max 30v 150mA)
Treble Control	+/- 10dB
Bass Control	+/- 10dB
Line Output	0db Nominal (600 ohms)
Amplifier	20 Watts into 4R (Bridge)

Max Audio Storage / Audio Bandwidth

64 secs / High Res 15khz

128 secs / Low Res 7Khz



ISP Port

In Circuit Programming port used to update the DSU300 operating system. NO USER FUNCTION.

SW1 SW2 rotary hex switches

These switches are used to set a board address for the sound store card when using RS485 control. SW1 = MSB SW2 = LSB (not fitted when RS 485 in not required)

Control and I/O connections of the DSU 300 Playback card appear on either a 64 way DIN41612 edge connector or 16 way R/A screw terminal strip.

16 way Right angle screw terminal strip Details

1	GND	9	RS485 +
2	TRIP INPUT 1	10	RS485 -
3	TRIP INPUT 2	11	Speaker Output +
4	TRIP INPUT 3	12	Speaker Output -
5	TRIP INPUT 4	13	Line level output
6	STOP INPUT	14	GND
7	RUN OUTPUT	15	GND
8	WATCHDOG OUTPUT	16	+12V to +15V input

Din 41612 connection Details 64 way rows A+B

Pin	ROW B	ROW A
1	Speaker output +	Speaker output +
2	Speaker output -	Speaker output -
3	N/C	N/C
4	N/C	N/C
5	N/C	N/C
6	N/C	N/C
7	N/C	N/C
8	N/C	N/C
9	N/C	N/C
10	Trip input 2	Trip input 1
11	Trip input 4	Trip input 3
12	N/C	N/C
13	N/C	N/C
14	N/C	STOP INPUT
15	N/C	N/C
16	WATCHDOG OUTPUT	N/C
17	N/C	N/C
18	RUN OUTPUT	N/C
19	N/C	RS 485 +
20	+12V to +15V D.C. Input	RS 485 -
21	GND	+12V to +15V D.C. Input
22	GND	N/C
23	N/C	N/C
24	N/C	N/C
25	N/C	N/C
26	N/C	N/C
27	N/C	N/C
28	N/C	N/C
29	N/C	N/C
30	N/C	N/C
31	GND	GND
32	+12V to +15V D.C. Input	+12V to +15V D.C. Input

Trip Inputs 1 to 4

Initiate playback of a stored message. Various trip modes are available on the DSU300 see Option Block details later

Stop Input

A LOW pulse on this line will stop and reset playback of any running message. If the stop input is held low it will prevent playback of any message. (Stop input line 5v active low standard TTL levels)

Run OUT

The RUN Output will provide a negative going signal for the duration of any sound track that is playing.

Watchdog Output

TBC

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RS485 Protocol

Data Format.

RS485, 9600baud, 8 data bits, no parity and one stop bit. The DSU300 can be controlled from a PC with the correct software or a AV show controller using RS485 protocol. You can control up to 32 DSU300's on one RS485 bus by assigning individual address's to each DSU300. It is recommended that a 100 Ohm resistor be fitted across the A/B lines on the last DSU300 of the bus chain for termination.

The address of the card is set on SW1 and SW2 on the pcb.

SW1 is used to set the Tens of the address or MSB and SW2 the units or LSB.

Each switch is numbered 0 to F which is hexadecimal. In the hexadecimal number system, the characters are as follows.

0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F.

Up to 254 cards can be addressed with these two switches.

Address FF is a global address, which all cards will respond to whatever the switch setting.

Always use upper case for letters.

The start character (STX) can be created by pressing 'ctrl B' on the keyboard of a PC.

Examples.

Play message 1 on store 1

<u>ascii chr</u>	<u>description</u>	<u>Hex</u>
STX	Start chr	0x02
0	Address MSB	0x30
1	Address LSB	0x31
P	Play command	0x50
1	Message 1	0x31
CR	Carriage Return	0x0d

Play message 2 on store 100

<u>ascii chr</u>	<u>description</u>	<u>Hex</u>
STX	Start chr	0x02
6	Address MSB	0x36
4	Address LSB	0x34
P	Play command	0x50
2	Message 1	0x32
CR	Carriage Return	0x0d

Stop playback on all stores

<u>ascii chr</u>	<u>description</u>	<u>Hex</u>
STX	Start chr	0x02
F	Adress MSB	0x46
F	Address LSB	0x46
S	Stop command	0x53
CR	Carriage Return	0x0d

Stop playback on store 16

<u>ascii chr</u>	<u>description</u>	<u>Hex</u>
STX	Start chr	0x02
1	Adress MSB	0x31
0	Address LSB	0x30
S	Stop command	0x53
CR	Carriage Return	0x0d

Option Link block details (CON1)

By fitting or removing links from the Option block the following modes of operation are available.

<u>LK</u>	<u>NOT FITTED</u>	<u>FITTED</u>	
<u>1</u>	One Shot OFF	One Shot inputs	
<u>2</u>	All trips N/O	Trip 1 N/C only	
<u>3</u>	TRIP EXTRAS	Timer Enable	FITTED
<u>4</u>	Pre msg Timer	Post msg Timer	Self Interrupt
<u>5</u>	Normal	Random msg Play	Any msg Interrupt
<u>6</u>	Normal	Sequence msg Play	Priority Interrupt msg 1=HI / 8=LO
<u>7</u>	Timer = Seconds	Timer = Minutes	
<u>8</u>	Single Play	Continuous Play	

Examples.

Lockout timer.

Fit links 3,4,8

delay mesg

Fit links 3, 8

timed message play back

links 3,4,8

Links.

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The DSU300 can be supplied in a stand alone compact case.

Compact case details.

Overall Dimensions - 114mm (W) 193mm (D) 55mm (H)
Power Supply Requirement: - 12V to 15v D.C. Regulated
Power Supply input: 2.5mm Power Jack
Power Consumption: 2 Amps max
Audio Out connector - 6.3mm Jack 2 pole
DSU I/O control connector - 25-way D-Type Female

Audio Output 6.3mm 2 pole Jack

Unit with Amplifier fitted

Tip = Speaker +
Base = Speaker Common -

Line Level Output unit

Tip = Line +
Base = Gnd -

Power supply Input 2.5mm Power Jack.

Inner Post = +12V to +15V D.C. regulated
Outer body = 0V

DMS300 SOUND STORE CONNECTIONS.

25 Way D-Type Trips / Control

Pin 1 - Trip Input 2	Pin 14 - Trip Input 1
Pin 2 - Trip Input 4	Pin 15 - Trip Input 3
Pin 3 - N/C	Pin 16 - N/C
Pin 4 - N/C	Pin 17 - N/C
Pin 5 - N/C	Pin 18 - STOP Input
Pin 6 - N/C	Pin 19 - N/C
Pin 7 - Watchdog Out	Pin 20 - N/C
Pin 8 - N/C	Pin 21 - N/C
Pin 9 - RUN Output	Pin 22 - N/C
Pin 10 - N/C	Pin 23 - RS485+
Pin 11 - N/C	Pin 24 - RS485-
Pin 12 - GND	Pin 25 - +12v to +15v Input
Pin 13 - GND	