



DS 76A TELEPHONE INTERFACE FOR ANALOG TELEPHONE LINES



USER MANUAL

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This product is designed and manufactured by:

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1.0 GENERAL DESCRIPTION

1.1 Introduction

The DS 76A interface module provides the connection to a two-wire analog telephone line. The unit has an "Auto Answer" function which may be enabled in the configuration software.

The AC and DC termination for a telephone line may differ from country to country. The DS 76A includes DIP switches allowing to adjust the unit for a specific country (see section 11.0).

For operating this interface, software version V4.08 or higher has to be installed in your digital intercom system.

The DS 76A interface contains:

- Electronic 'On Line' and 'Off Line' switch ("HOOK SWITCH")
- 'Ring Detect' function, which detects the ring signal on the telephone line
- DTMF dialling' (Dual Tone Multi Frequency) to dial telephone numbers
- 'Automatic Echo Cancelling' for the typical telephone audio bandwidth (400Hz–4kHz), which splits the bi-directional signal of the telephone line in a 'to' and 'from' signal for the digital intercom system

1.2 Routing the interface to a group

The following rules have to be obeyed:

- Do not route the DS 76A to more than 1 group.
- The group should be a conference group which is programmed to be a so-called "telephone group" (see section 1.4)

- Do not route several Telephone Interfaces to the same group
- Do not route any other interface type to the group which has a DS 76A
- To the telephone group several DS Series speaker stations may be assigned
- Connect the DS 76A directly to an outside telephone line, so not to a line which is routed via an in-house PABX system

1.3 Operating the Telephone Interface

To operate the DS 76A interface one needs an ASL speaker station with keypad. The channel of such a station assigned to a telephone group is called "the telephone channel". A speaker station may have several "telephone channels" each assigned to a different telephone group.

1.4 Creating telephone groups

Before one or several channels on a speaker station can be assigned to one or several telephone groups, the system administrator has to first create these groups in the "Groups" screen of the configuration software. By entering "TEL" as the group name, the conference group is programmed to be a telephone group. After "TEL" a number may be added, e.g. TEL 1 or TEL 2.

The group name as it appears in the channel display of your speaker station can be determined as follows: Go to screen "Users", section "Local Display Name" and enter any telephone group name you like (e.g. "LINE 1")

2.0 UNPACKING & INSTALLATION

After unpacking the DS 76A please inspect for any physical damage to the unit and retain shipping carton and relevant packing materials for use should the unit need returning. If any damage has occurred, please notify your dealer so that a written claim can be initiated. Please also refer to the warranty section of this user manual.

The DS 76A may be installed in one of the interface slots at the rear of a DS 4000/4002 Matrix Unit or a DS 700 Interface box.

A just installed interface is "found" by the digital intercom system by ticking the SEARCH & REFRESH button in screen 'Interfaces' of the configuration software. The newly found interface appears in the List of Interfaces. To route and program interfaces, see the ASL User Manual.

WARNING: Before installing or removing an interface module, one first has to switch the intercom system off.

3.0 WARRANTY

This unit is warranted by ASL Intercom to the original end-user purchaser against defects in workmanship and materials in its manufacture for a period of 12 months from date of shipment to the end-user. Faults arising from misuse, unauthorized modifications or accidents are not

covered by this warranty. If the unit is faulty, it should be sent in its original packing to the supplier or local ASL dealer, with shipping prepaid. A note must be included stating the faults found and a copy of the original suppliers invoice.

4.0 INITIATING A TELEPHONE CONNECTION

- a. Push the TALK button of the telephone channel on your speaker station. The corresponding LISTEN button switches on automatically. Both the TALK and the LISTEN button are lit continuously blue. Also the MIC ON button switches on automatically (if case it was previously off). The master display shows: “ENTER NUMBER” and “PRESS TALK TO DIAL”.
- b. Enter the required telephone number using the keypad digits 0 – 9. The number appears in the master display. In case the entered telephone number is incorrect, one can backspace the number by using the F1 function button. By pushing the F2 function button the last dialled telephone number appears in the display (this number is stored in the speaker station).
- c. Push the TALK button of the telephone channel again. The Telephone Interface is now switched “On Line”, the entered telephone number is dialled (one does not

hear the DTMF tones) and the “telephone instructions” disappear from the master display.

If a second speaker station is routed to the same telephone group, the TALK and LISTEN buttons of the telephone channel on that station start blinking blue as soon as the dialling starts.

- d. If the dialled telephone number turns out to be engaged one hears an ‘engaged tone’ in the speaker and/or headset. The initiating procedure can now be stopped by pushing the TALK button.
- e. As soon as the “other side” picks up the phone”, a telephone connection is established.

If a second speaker station is routed to the same telephone group, that station may join the telephone conversation either by just listening (push the LISTEN button; goes from blinking to continuously blue) or by talking and listening (push the TALK button; the TALK and LISTEN buttons go from blinking to continuously lit blue).

5.0 RECEIVING A TELEPHONE CALL

- a. At an incoming telephone call, the TALK and LISTEN buttons of the referring telephone channel are blinking blue. You also hear the buzzer of your speaker station (provided the buzzer is not muted by having pushed the “buzzer on/off” function button or by having received a Remote Buzzer Mute signal).

In case a second speaker station is routed to the same telephone group, the TALK and LISTEN buttons of the telephone channel on that station are blinking blue.

- b. If “**Auto Answer**” is **enabled** (see section 8), the Telephone Interface switches automatically “On Line” and the TALK and LISTEN button switch on, being lit continuously blue. Also the MIC ON button switches automatically on (in case it was previously off). You now have a telephone connection.

In case a second speaker station is routed to the same telephone group, the TALK and LISTEN

buttons of the telephone channel on that station switch on as well, being lit continuously blue. The user of the second speaker station may participate in the telephone conversation.

- c. If “**Auto Answer**” is **disabled** (see section 8) the Telephone Interface is switched “on Line” by pushing the TALK button of the referring telephone channel. The MIC ON button switches automatically on (in case it was previously off). You now have a telephone connection.

In case a second speaker station is routed to the same telephone group, the user of that station may participate in the telephone conversation by either only listening (push the LISTEN button; goes from blinking to continuously blue) or by talking and listening (push the TALK button; the TALK and LISTEN buttons go from blinking to continuously lit blue).

If the incoming call is not “taken” by pushing the blue blinking TALK button, after a while that button stops blinking and extinguishes.

6.0 TERMINATING A TELEPHONE CONNECTION

- a. Push the TALK button of the referring telephone channel. The telephone interface switches “Off Line” and the TALK and LISTEN buttons extinguish.

The MIC ON button goes back to its original status (on or off). The telephone connection is cut.

- b. If the other party (on the other side of the telephone line) cuts the telephone connection first, an engaged tone is heard in the speaker and/or headset. Then proceed according to section 6.a.

If several speaker stations were routed to the same telephone group and the users of those stations were participating in the telephone conversation by talking and listening, the telephone connection is only cut after the TALK buttons of the telephone channels on all these stations have been pushed.

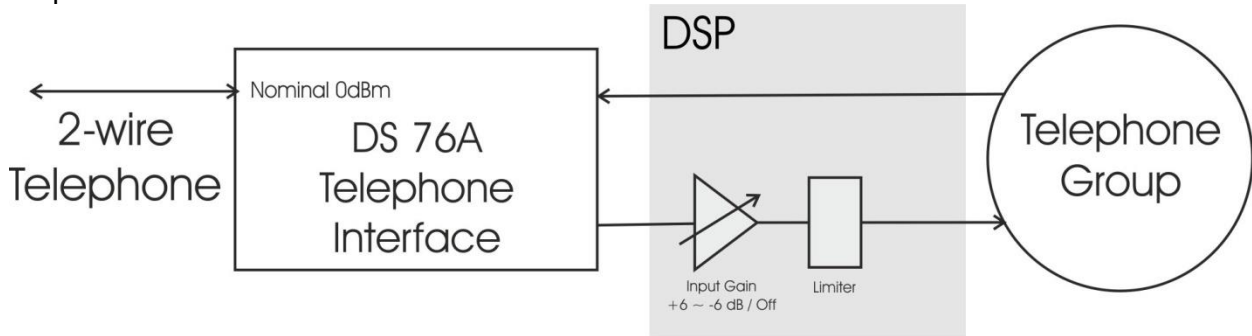
7.0 INTERCOM COMMUNICATION DURING A TELEPHONE CONNECTION

Whilst having a telephone connection via a telephone channel at ones speaker station, the intercom channels (not being telephone channels) remain active.

8.0 DS 76A ADJUSTMENTS IN THE CONFIGURATION SOFTWARE

In the configuration software, screen "Interfaces", the following may be adjusted:

- Group routing (to max. 1 group)
- Input Gain: -6 dB to +6 dB
- Auto Answer (enable/disable)

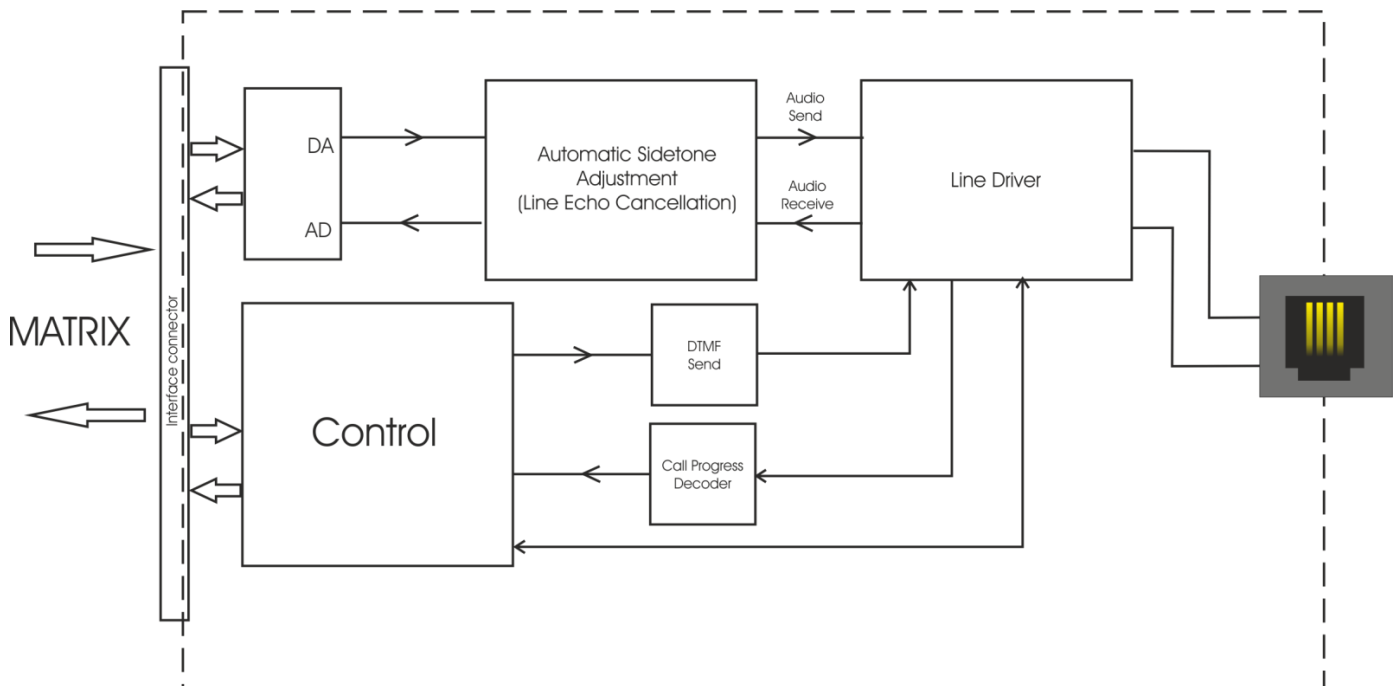


9.0 PROPERTIES OF A TELEPHONE CHANNEL

A telephone channel has the following properties:

- The TALK button of a telephone channel is LATCHING only
- A telephone channel is not sensitive to Remote Talk Mute signals
- A Remote Buzzer Mute signal sent to a telephone channel has no effect on the buzzer of your speaker station.
- A Call signal sent to a telephone channel has no effect on its CALL button, nor does it trigger your buzzer

10.0 DS 76A BLOCK DIAGRAM

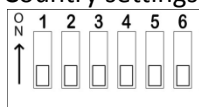


11.0 AC & DC TERMINATION

The AC and DC termination for a telephone line may differ from country to country.

The DS 76A includes a block of DIP switches (mounted on the PCB) allowing to adjust the unit for the requirements of any country.

Country settings:



0=OFF & 1=ON

Country	D6	D5	D4	D3	D2	D1
Argentina	0	0	0	0	0	0
Australia	0	0	0	0	0	1
Belarus	0	0	0	0	1	0
Brazil	0	0	0	0	1	1
Brunei	0	0	0	1	0	0
Canada	0	0	0	1	0	1
Chile	0	0	0	1	1	0
China	0	0	0	1	1	1
Europe (TBR21 Group)	0	0	1	0	0	0
Egypt	0	0	1	0	0	1
Germany	0	0	1	0	1	0
Greece	0	0	1	0	1	1
Hong Kong	0	0	1	1	0	0
Hungary	0	0	1	1	0	1
India	0	0	1	1	1	0
Indonesia	0	0	1	1	1	1
Ireland	0	1	0	0	0	0
Israel	0	1	0	0	0	1
Japan	0	1	0	0	1	0
Jordan	0	1	0	0	1	1
Kazakhstan	0	1	0	1	0	0
Malaysia	0	1	0	1	0	1
Mexico	0	1	0	1	1	0
New Zealand	0	1	0	1	1	1
Norway	0	1	1	0	0	0
Pakistan	0	1	1	0	0	1
Poland	0	1	1	0	1	0
Portugal	0	1	1	0	1	1
Qatar	0	1	1	1	0	0
Romania	0	1	1	1	0	1
Russia	0	1	1	1	1	0
Singapore	0	1	1	1	1	1
Slovakia	1	0	0	0	0	0
South Africa	1	0	0	0	0	1
Spain	1	0	0	0	1	0
Syria	1	0	0	0	1	1
Taiwan	1	0	0	1	0	0
Thailand	1	0	0	1	0	1
Ukraine	1	0	0	1	1	0
United States FCC (Federal Communications Commission)	1	0	0	1	1	1

For countries not listed, please ask ASL Intercom (info@asl-inter.com)

Each DS 76A interface will already have the appropriate setting for the country it is shipped to.