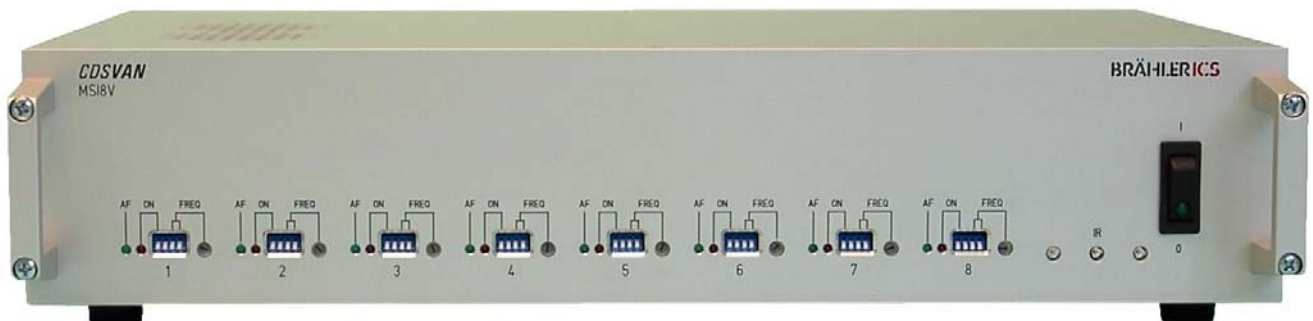


- **CDSVAN** *Digital Conference Management System*
- **MSI8V** Compact Transmitter



Operating instructions

Ver. 1.3

Printed in Germany

If you have questions about this manual please contact:

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You will find further information about our products on the internet at:

<http://www.braehler.com>

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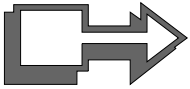
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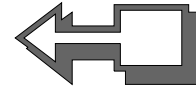
Operating instructions BGE-MSI8V.doc

Mar-07

**CAUTION****DANGER OF ELECTRIC SHOCK
DO NOT OPEN DEVICES**

Do not open housing with mains cable connected.

Maintenance operations may only be executed by
qualified personnel.



Our equipment and installations have been built and tested according to the latest state of the art. Under normal conditions, they do not require any special maintenance.

However, please be aware of the following:

secure and stable position of the installation

sufficient ventilation - never operate equipment near heat sources such as heating radiators etc.

power connection - install all power cables to avoid damaging

connecting cables - avoid trip-traps

liquids - avoid penetration of liquids into the housing

exclusively operate equipment via wall sockets that are connected to ground according to the relevant specifications and regulations

Warning: Never expose equipment to rain or humidity

Please be also aware of the fact that rough handling of the equipment, such as strong bumps or vibrations, may result in damages. Inappropriate handling and storage, i.e. handling and storage not in conformity with the operating instructions, may as well lead to equipment damages.


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About this manual

Symbols

The following symbols and fonts are used in this manual:

 Indicates an important note, which has to be followed to guarantee that the functions of the unit, the security of any data or your health are not put at risk

 Indicates additional information, remarks and tips

 Describes activities that must be performed in the shown order

Words in bold letters require your special attention.

Important remarks

For customers in the EU and in the USA

Our equipment has been tested and complies with the requirement of the CE test. This guarantees the protection against harmful interferences, when the equipment is operating in a commercial environment. If the unit is not properly installed to this user manual it may cause radio interferences. Any changes or modifications not explicitly approved in this manual could void your authority to operate this equipment.

For customers in the United Kingdom

The wires in the main lead are colored in accordance to the following codes:

Green-and-yellow:	Earth
Blue:	Neutral
Brown	Live

If the colours of the wires in the mains lead of this unit are not corresponding with the coloured markings of the terminals in your plug, so please proceed as follows:

The green-and-yellow wire must be connected to the plug terminal marked with the letter E, with the safety earth symbol or with green-and-yellow colour. The blue wire must be connected to the terminal marked with the letter N or with black colour. The brown wire must be connected to the terminal marked with the letter L or with red colour.

The equipment must be connected to earth!

Safety

Check that the operating voltage of the unit is identical with the voltage of your local mains power. If a voltage conversion is required, consult your BRÄHLER ICS dealer or qualified personnel.

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before it will be used again. Unplug the unit from the wall outlet or set the Main Power switch to OFF if it is not used for several days. To disconnect the cord, pull it out holding the plug. Never pull the cord itself.

Installation

Allow adequate air circulation to prevent internal heat accumulation. Do not place the unit on a surface (rugs, blankets, etc.) that may block the ventilation holes.

Do not install the unit in locations near heat sources such as radiators or air ducts, nor in places exposed to direct sunlight, excessive dust or humidity, mechanical vibration or shock.

To avoid condensation do not install the unit where the temperature may increase rapidly.

Cleaning

To keep the surface of the housing in a proper condition, periodically clean it with a soft cloth. Large staining may be removed with a cloth lightly dampened with a mild detergent. Never use organic solvents such as thinners or abrasive cleaners since these might damage the surface.

Repacking

Save the original shipping box and packing material. For maximum protection, re-pack the unit as originally packed from the factory.

If not supplied with the equipment, a complete transportation and storage box system is available from BRÄHLER ICS. We recommend using this system for long-term protection and care.

General

Please keep this manual together with the CDSVAN Compact Transmitter MSI8V. If you hand on the units to third parties, please include this manual.



Please read the manual carefully, taking special care when you see this symbol as it indicates important information!



This product is conform to the rules of the following European directive:
89/336/EWG

Council directive to the alignment of the rules of rights of all member states about the electromagnetic compatibility, modified through RL 91/263/EWG, 92/31/EWG and 93/68/EWG of the council. Further information is available on request.



The warranty will expire, if you cause defectives through inappropriate use or handling of the unit.

Important information



The unit should not be used at the maximum volume setting. Adjust the volume to a more suitable level.

High sound pressure levels will damage your hearing!

Overview

The Compact Transmitter MSI8V is used within the CDSVAN Conference System for transmission of 8 audio channels by infrared light.

System function

The audio signals are converted into frequency modulated infrared light and then transmitted by means of INFRACOM Radiators HLN82, which are directly connected to the MSI8V. The original (OR) and up to 7 other languages can be simultaneously transmitted on different carrier frequencies by narrowband frequency modulation.

Infrared radiators transmit the information carried by the audio channels in the form of frequency-modulated infrared light. The transmitted signals are received by the INFRACOM Receiver IRX and can be monitored by headphones. Receivers can be moved at will anywhere within the area that is fully illuminated by the radiators. They can be switched to receive up to 32 channels.

With miniature-switches on the front panel the frequency band can be chosen and the channels can be switched ON or OFF. With a rotating switch it is possible to assign up to 32 transmission channels.

3 infrared transmitter diodes on the front panel allow monitoring for the technician without radiators.

LEDs on the front panel are indicating the operation mode: channel ON (red) and audio signal available (green).

Use

In combination with the digital microphone management system CDSVAN, the system can provide the best possible communication facilities for organized events that need to use several languages.

Each and every participant (a term often used is "delegate") can use the microphone system to speak, and what he or she says will be translated simultaneously so that other delegates will be able to listen to it in one of the several languages. This technique permits direct communication in several languages even at very large scale events.

It is a simple matter to set up the INFRACOM system in such a way that it is protected against eavesdropping from outside. Since all information is transmitted in the form of light waves, it is possible to use opaque material as necessary to limit the area to which it is to be transmitted. Dark curtains drawn across windows, for instance, are enough to shield a room reliably from the outside world.

Although the CDSVAN system is most commonly used in combination with an INFRACOM interpretation system and microphone-management system it is also possible to use it for other purposes.

During organized events, for instance, it is possible to use infrared light to transmit information to individual participants wearing receivers without disturbing anyone else present.

Another example might be museums applications. There it is possible to provide information on individual exhibits by means of infrared light radiated only to a limited area in front of the particular exhibit. Visitors listen to the information with receivers and headphones.

Compact transmitter MSI8V

Front View



The CDSVAN Compact Transmitter MSI8V is part of the Congress Data System systems VAN (Virtual Audio Network), which serves the cordless sound transmission by means of infrared light.

The sound signal is thereby converted into a frequency-modulated infrared light signal and emitted via transmitting diodes. With special INFRACOM® receivers the light signal is recorded and re-converted into a sound signal, which can then be heard on a set of headphones. Different frequencies of up to 32 channels can be transmitted simultaneously with an FM narrow band modulation.

The CDSVAN Compact Transmitter MSI8V is used for modulating the sound signals on the different carrier frequencies and for signal amplification.

The Compact Transmitter consists of a 19" housing (2HU).

Eight channels can be transmitted with one MSI8V (usually defined as Original + 7 languages).

On the front right-hand side of the Compact Transmitter MSI8V there is a POWER switch with a green ON LED which shows whether the transmitter is switched on. Next to this there are three infrared test diodes for monitoring the IR-signal even without IR-Radiator.

The operating elements of the eight infrared channels are also on the front side of the console.

Each infrared channel consists of a green AF LED for the original voice and interpreter voice, an ON LED, an ON / OFF switch, two frequency band switches and a rotary switch for channel setting. This can be used to set the channels independently of the frequency band switch.

Each channel can be set from OR - Ch31.

Rear View



The Compact Transmitter MSI8V contains the following sockets on the rear side:

VAN-IN (RJ45 socket) for connecting to the CDSVAN PC (Computer)

VAN-LINK (RJ45 socket) for cascading (Audio) with a second MSI8V

LINE-OUT: eight sockets for audio recording

RF-LINK: socket for cascading (RF) with further MSI8V

RADIATORS: 2 x BNC sockets for connecting INFRACOM® radiators HLN82A and HLN82B. Up to 10 radiators can be connected directly at each output.

Mains power connector.

Installation and starting up



The Compact Transmitter has an ex-works mains voltage setting of 90 - 250 Volts by 50 – 60 Hz. If there is another voltage range you must not connect this equipment. In connecting the system, special attention is to be paid to ensure that all cables are installed in cable ducts or that they are fixed by cable clamps or adhesive tape in such a way that there is no danger of somebody tripping over them.

Termination LINK

OFF ON



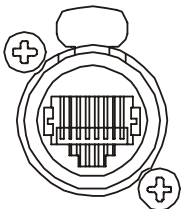
100R

Termination of the LINK socket via DIP switch:

ON: LINK socket not used (open)

OFF: LINK socket connected with another Compact Transmitter MSI8V

Connecting the VAN-IN socket

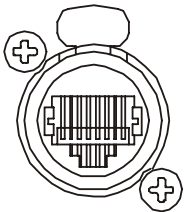


IN

RJ45 for the connection to the CDSVAN-PC (transmission of the channels)

The input is balanced via AF transformer.

Connecting the VAN-LINK socket

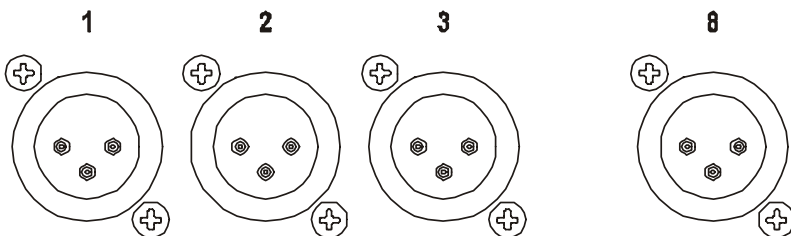


LINK

Within a 16 channel system (1+15) the LINK socket can be used to transmit the channels 8 – 15 to the next MSI8V.

In this case the RF-Link socket (next page) also should be connected between the 2 MSI8V.

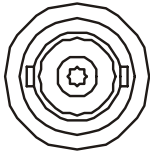
Connecting LINE-OUT sockets



8 XLR LINE-OUT connector (male):

All eight channels fed into the MSI8V from the CDSVAN system via CAT5 are available at these connectors, e.g. for audio distribution or recording purposes.

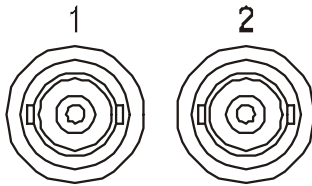
Connecting RF-LINK socket



BNC socket to cascade further Compact Transmitter MSI8V. To manage more Outputs you can extend the system to more outputs.

IR-LINK

Connecting radiator sockets

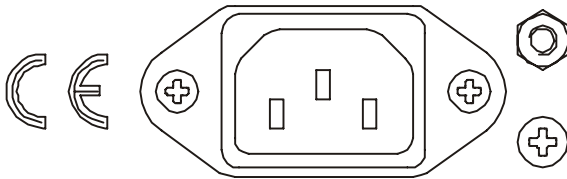


IR-LINE 1 and 2: BNC sockets for connecting INFRACOM® radiators HLN82A and HLN82B. Up to 10 radiators can be connected directly to each socket.

IR-LINE

Connecting mains power

90V-250V / 50Hz-60Hz



Connect the delivered cable with this socket to ensure the proper working of the Compact Transmitter.

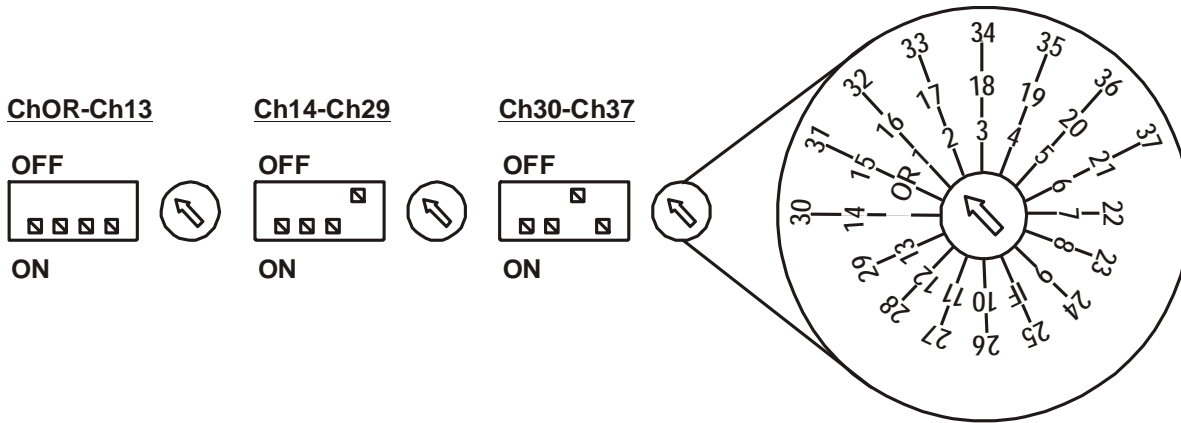
Starting Up

The power supply is turned on via the power switch on the front side of the Compact Transmitter MSI8V.



When you use the Compact Transmitter the first time it is necessary to adjust the provided channels. This procedure will allocate the transmitter frequencies to the respective channels.

For adjusting this allocation refer to the following figure. The scheme is enclosed with the Compact Transmitter as a separate sticker which may be adhering to the front panel.



The following allocation is shown on the figure above:

First figure: Channel 1; second figure: Channel 16; third figure: Channel 32

The left DIP-switch will activate the corresponding channel. DIP switch to ON means channel is active.

Tuning input/output levels

There are no controls necessary for a successful event.

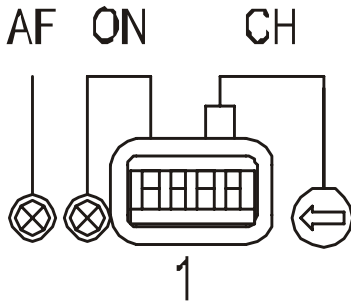
All levels are set and stored within the CDSVAN software environment.

OPERATION

Once the CDSVAN system has been properly started up and checked, there is usually no need for any further intervention from the operator.

Most of the work involved with audio distribution should have been completed during the preselection of channels and system start-up.

LED AF and ON on front side



AF: This LED indicates a signal on this output (for example line 1).

ON: This LED represents the ON-status of the corresponding output channel.

Remark: You should switch off not used channels to increase the IR power.

ON- and OFF-status is set with the left DIP-switch.

Infrared test diodes



Three transmitting test diodes allow testing the receivers at a maximum distance of 3 meters between the test-LEDs and the receiver.

Overview

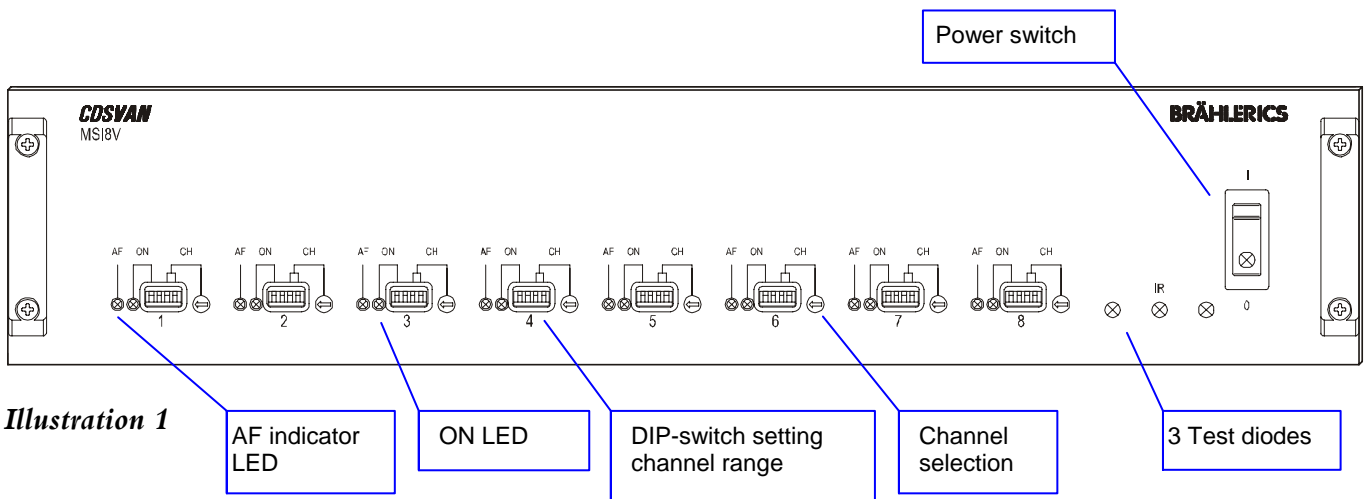


Illustration 1

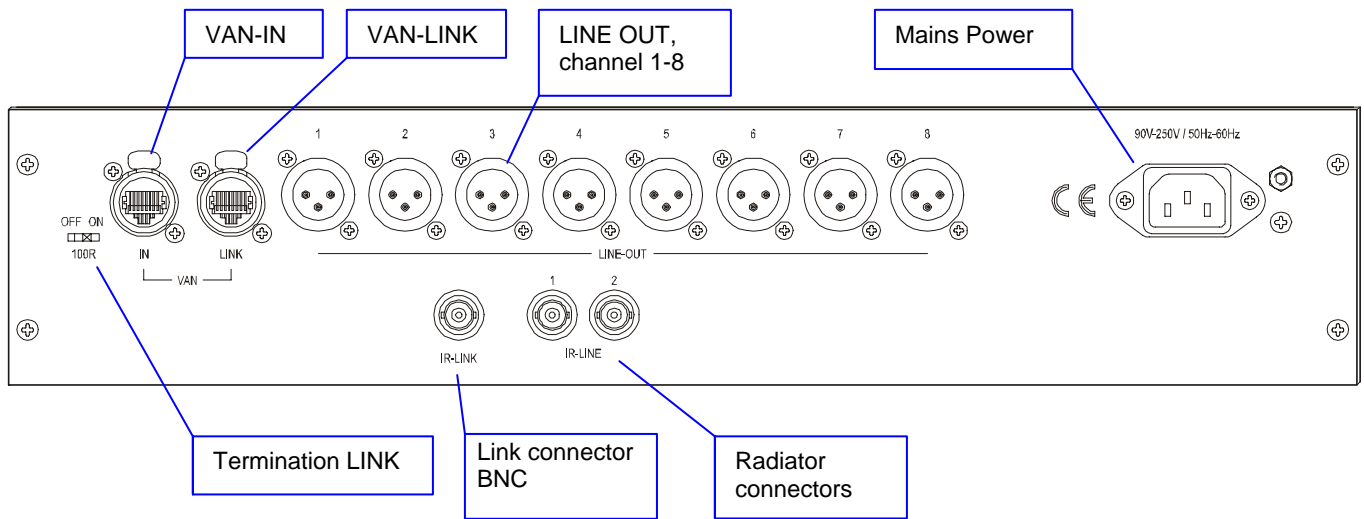
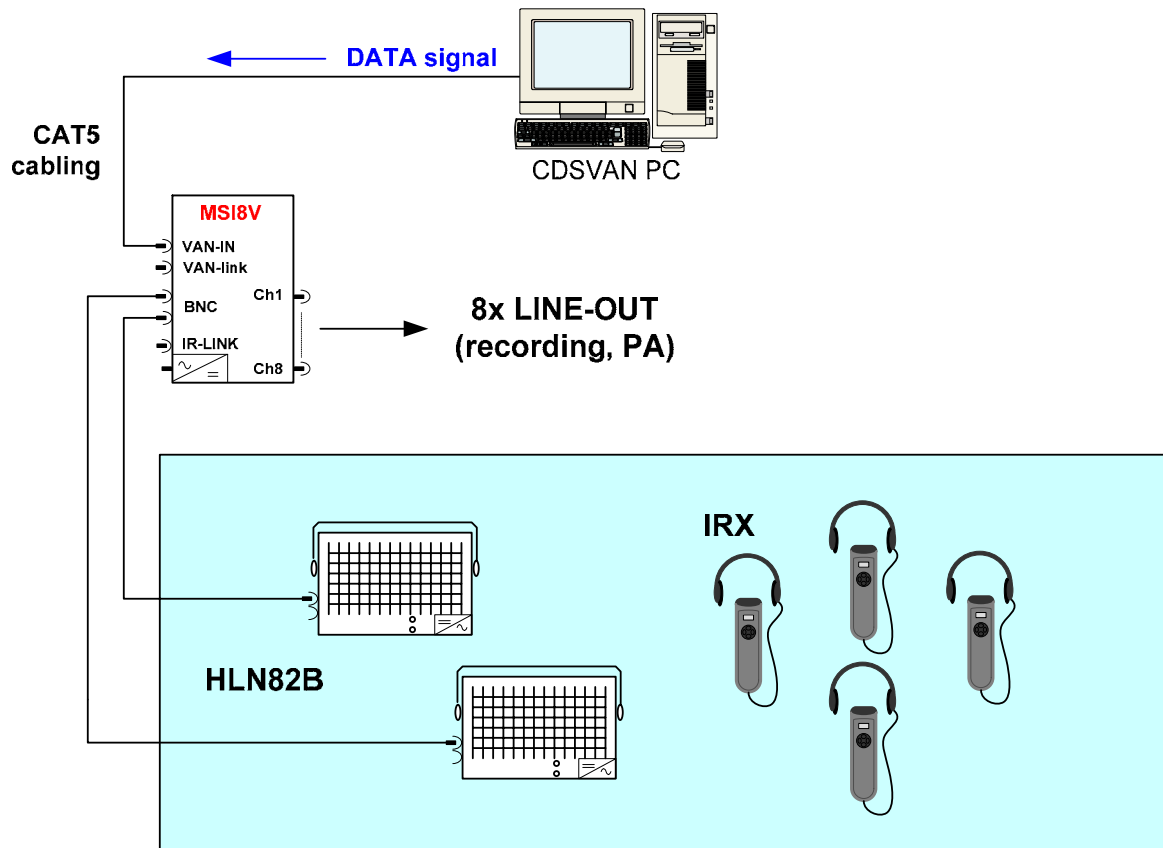


Illustration 2

Applications

In the following you see some examples in form of a block diagram:



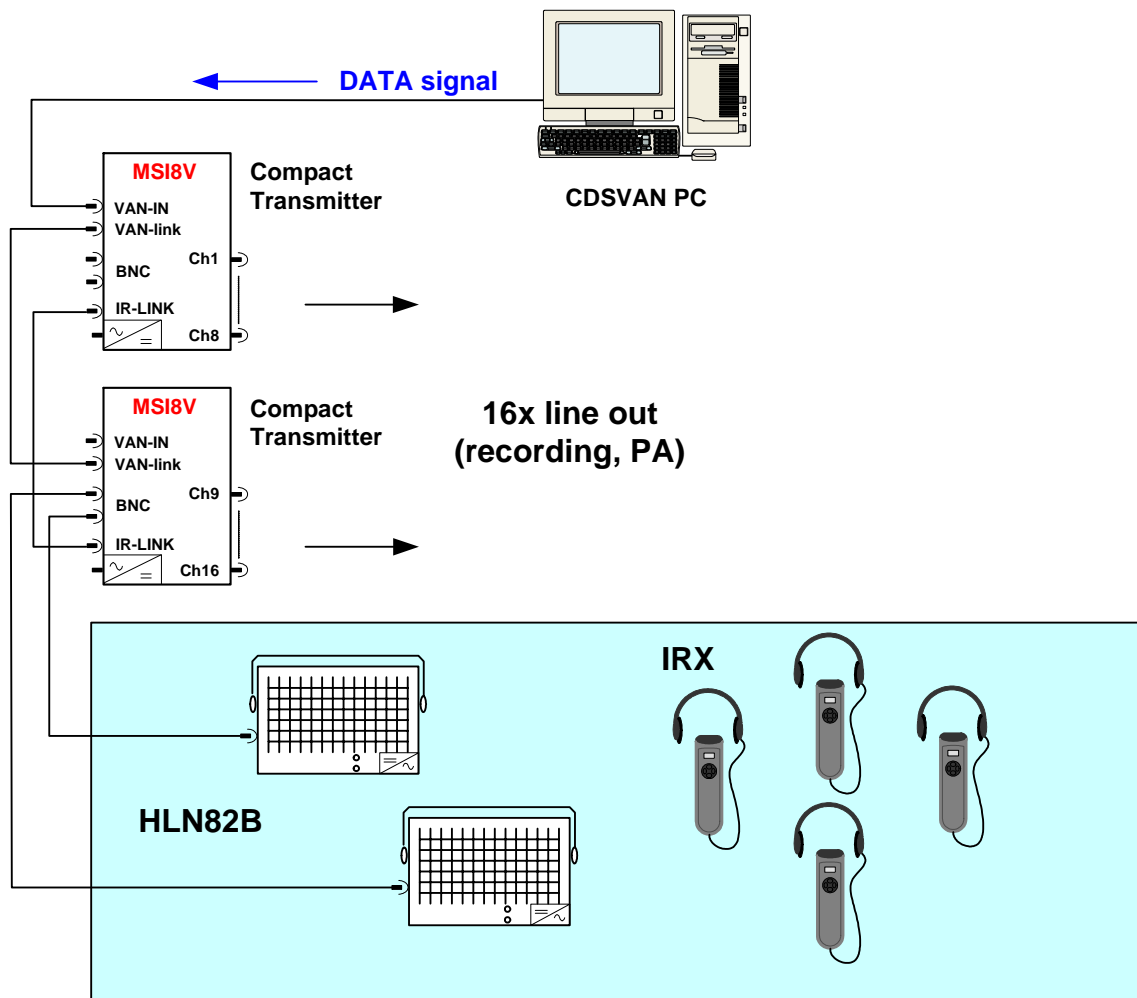
Application 1

This diagram shows a complete application for an eight channel (OR + 7) interpreter system. Monitoring part is the Receiver IRX together with the IR-Radiator HLN82B.

CDSVAN System Components

- CDSVAN PC: Including CDSVAN Software and DSP Hardware
- MSI8V: Compact Transmitter
- HLN82B: Radiator (10W/20W)
- IRX: Receiver for up to 32 channels

The next diagram (Application 2) shows the extension to a 16 channel system:



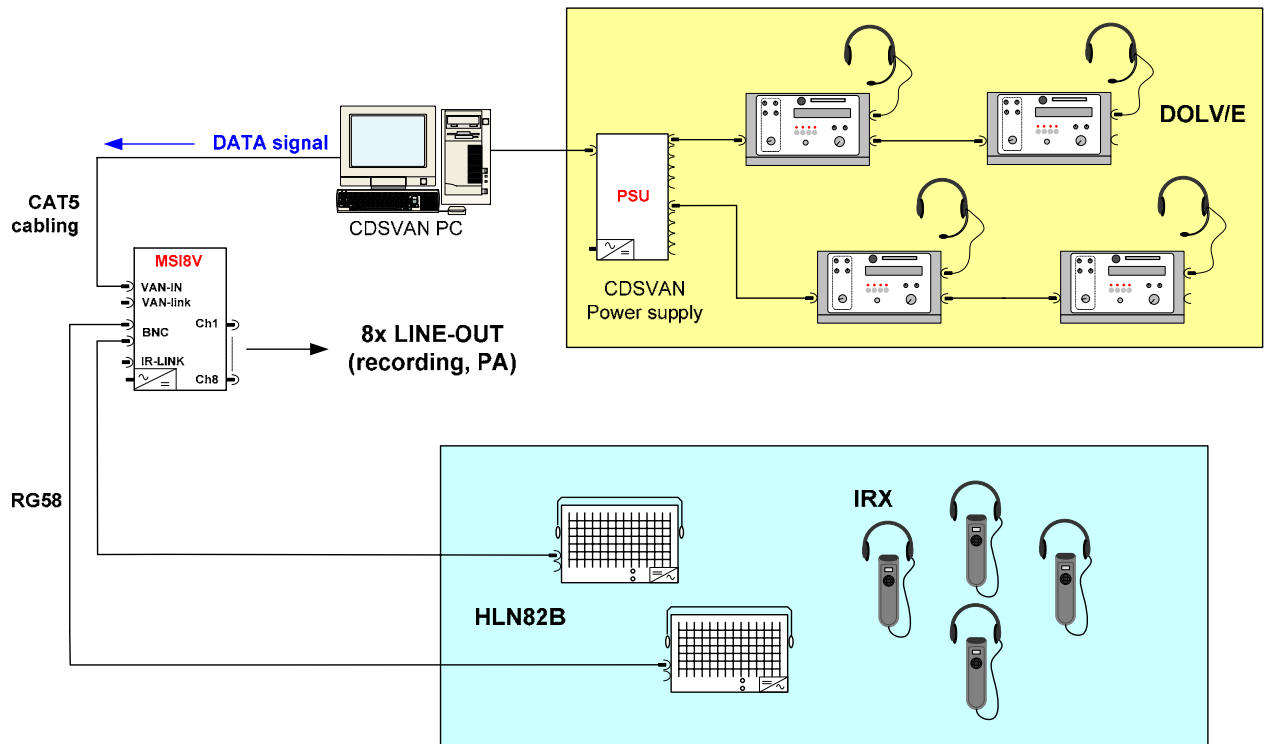
Application 2

Two Compact Transmitters MSI8V are linked to one system. The monitoring part consists of the Receiver IRX together with the IR-Radiator HLN82B.

CDSVAN System Components

- CDSVAN PC: including CDSVAN Software and DSP Hardware
- MSI8V: Compact Transmitter
- HLN82B: Radiator (10W/20W)
- IRX: Receiver for up to 32 channels

The next diagram (Application 3) shows a complete interpreter system:



Application 3

This diagram shows a complete application for a multi channel interpreter system. Monitoring part is the Receiver IRX together with the IR-Radiator HLN82B.

CDSVAN System Components

- CDSVAN PC: including CDSVAN Software and DSP Hardware
- MSI8V: Compact Transmitter
- PSU01/04: Power Supply
- DOLV/E: Interpreter console for one interpreter
- HLN82B: Radiator (10W/20W)
- IRX: Receiver for up to 32 channels

Appendix

Technical Data MSI8V

The unit is complying with the international standard IEC914.

Connections

- VAN-IN (1 x RJ45-socket) for connection to the CDSVAN-PC
- VAN-LINK (1 x RJ45-socket) for cascading (Audio) with a second MSI8V
- LINE-OUT (8 x XLR-plug) AF outputs for audio recording
- IR-LINE (2 x BNC-socket)
1: Connection for up to 10 INFRACOM radiators HLN82
2: Connection for up to 10 INFRACOM radiators HLN82
- IR-LINK (1 x BNC-socket) for cascading (RF) with further MSI8V

Features

- Green lighted mains switch for power ON indication
- Red LEDs for channel switched ON
- Green LEDs for Audio available (AF)

Transmission frequency

- 55kHz - 1335kHz (channel 31) in 40kHz steps

Intermediate frequency

- 455 kHz

Measurements

- Distortion: < 0.2%
- Signal-to-noise ratio: > 70dB
- Channel separation: > 60dB

Power Supply

- Mains power: (90 ... 250)VAC, (50 ... 60)Hz
- Power consumption: 40VA max

Housing

- 19", 2 HE, Aluminum, "silver" anodized
- W x H x D: (433 x 88 x 305)mm

Weight

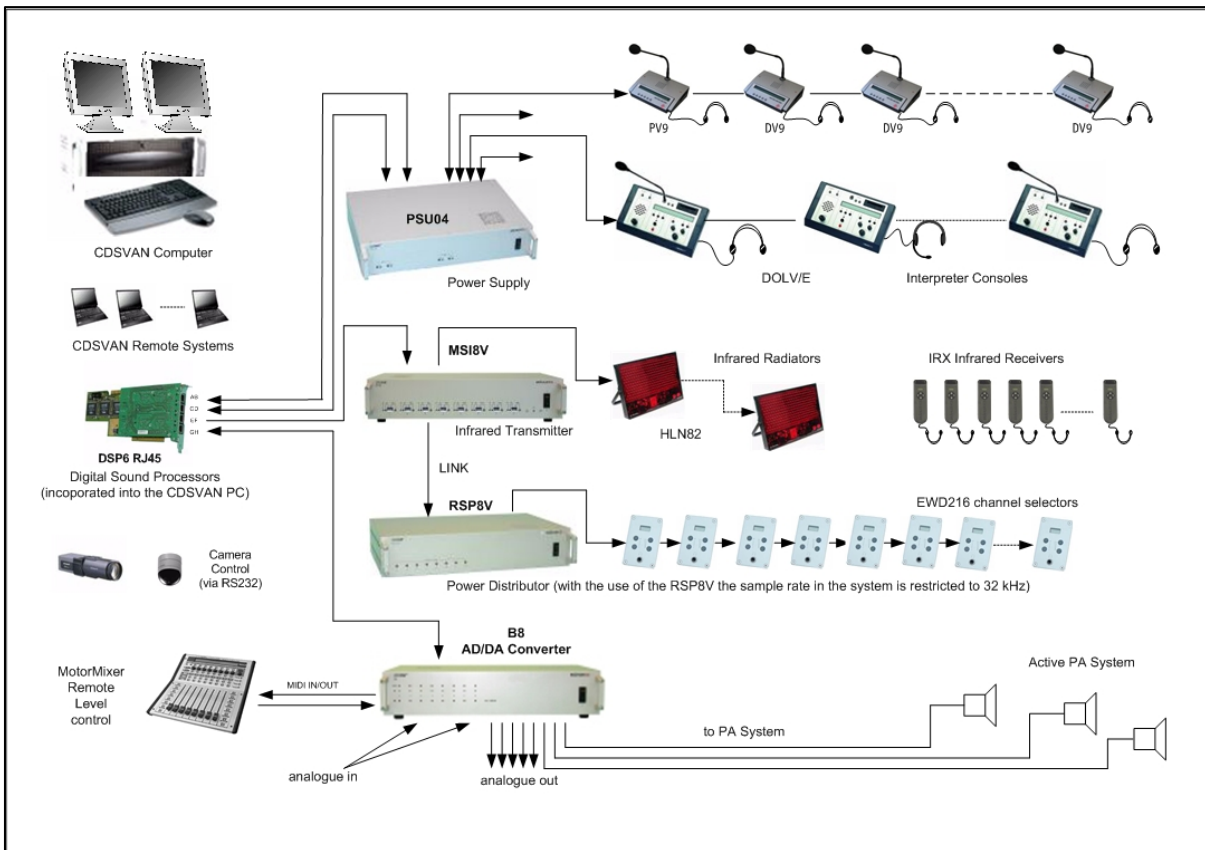
- 4.6kg

Optional accessories

(not included in delivery)

- INFRACOM Radiator HLN82
- INFRACOM Receiver IRX
- CAT5 cable (Standard), shielded, different length available
- BNC cable (50 Ohm) different length available
- Mounting brackets for rack assembly

Block diagram



General overview of CDSVAN devices

System Components

CDSVAN prof.	Audio processing software
DSP6/15 RJ45	DSP Card with 6 or 15 digital sound processors and EDAT I/O plate
DOL8/16V	Interpreter Console for 8 or 16 channels
DCVW8/16	Delegates' Unit for 8 or 16 channels
DV9	Delegates' Unit
DDV9	Delegates' Unit for two delegates
PSU04	Power Supply Unit, up to 4 branches for interpreter consoles/ delegate units
PSU01MA/SL	Additional Power Supply for interpreter consoles/ delegate units
B8	AD/DA Interface 8 channels
MotorMixer	Remote Mixer with 8 motorised faders
RSP8V	Digital Distribution Amplifier
MSI8V	INFRACOM [®] Infrared Transmitter
HLN82B	INFRACOM [®] Infrared Radiator
IRX	INFRACOM [®] Infrared Receiver
Cables	CAT5 / EIA / TIA-568B / AWG 24 (-26)

Troubleshooting

Error description	Error cause	Error solution
Switching on the system produces no POWER ON condition (green LAMP does not light up).	<p>The main cable connector is not properly connected to the corresponding socket of the unit.</p> <p>Connection cable possibly defective.</p> <p>The power switch is not in the correct position.</p>	<p>Check if there is no connection to the mains power.</p> <p>Replace a new mains cable.</p> <p>Turn on the POWER ON switch.</p>
No clear IR signal at the IRX receiver	2 or more channels switched to the same frequency	Check frequency setting on front panel and control signal using the test diodes
No audio: green "AF" LED does not light up	No INT (Interpreter) signal from the interpreter console	Check the DOLV setting

Table of language signs (ISO639)

AB Abkhazien	HI Hindi	RM RhaetoRoma, Rhaeto-Romance
AA Afar	HU Hungarian	RO Romanian
AF Afrikaans	IS Icelandic	RU Russian
SQ Albanian	IN Indonesian	SM Samoan
AM Amharic	IA Interlinga, Interlingua	SG Sangho
AR Arabic	IE Interlinge, Interlingue	SA Sanskrit
HY Armenian	IK Inupiak	TN Satswana
AS Assamese	GA Irish	GD ScotGaelic, Scots Gaelic
AY Aymara	IT Italian	SR Serbian
AZ Azerbaijan, Azerbaijani	JA Japanese	ST Sesotho
BA Bashkir	JW Javanese	SN Shona
EU Basque	KN Kanadian	SD Sindhi
BN Bengali, Bengali, Bangla	KS Kashmiri	SI Singhalese
DZ Bhutani	KK Kazakh	SS Siswati
BH Bihari	RW Kinyarwand, Kinyarwanda	SK Slovak
BI Bislama	KY Kirghiz	SL Slovenian
BR Breton	RN Kirundi	SO Somali
BG Bulgarian	KO Korean	ES Spanish
MY Burmese	KU Kurdish	SU Sundanese
BE Byeloruss, Byelorussian	LO Laothian	SW Swahili
KM Cambodian	LA Latin	SV Swedish
CT Cantonese	LV Latvian, Latvian, Lettish	TL Tagaiog
CA Catalan	LN Lingela	TG Tajik
ZH Chinese	LT Lithuanian	TA Tamil
CO Corsican	MK Macedonian	TT Tater
HR Croatian	MG Malagasy	TE Telugu
CS Czech	MS Malay	TH Thai
DA Danish	ML Malaysiam	BO Tibetan
NL Dutch	MT Maltese	TI Tigrinya
EN English	MA Mandarin	TO Tonga
EO Esperanto	MI Maori	TS Tsonga
ET Estonian	MR Marathi	TR Turkish
FO Faroese	MO Moldavian	TK Turkmen
FJ Fiji	MN Mongolian	TW Twi
FI Finnish	NA Nauru	UK Ukrainian
FR French	NE Nepali	UR Urdu
FY Frisian	NO Norwegian	ZU Uzbek
GL Galician	OC Occitan	VI Vietnamese
KA Georgian	OR Oriya	VO Volapök
DE German	OM Oromo	CY Welsh
EL Greek	PS Pashto, Pashto, Pushto	WO Wolof
KL Greenland, Greenlandic	FA Persian	XH Xhosa
GN Guarani	PL Polish	JI Yiddish
GU Gujarati	PT Portuguese	YO Yoruba
HA Hause	PA Punjabi	ZU Zulu
IW Hebrew	QU Quechua	

Service form

Material return shipments for repair-, service-, or guaranty purposes please send to:
BRÄHLER ICS Konferenztechnik AG, Auf der Alten Burg 6, D-53639 Königswinter, Germany
Phone +49 (0)2244 930-100, Fax +49 (0)2244 930-450

Dear customer,
Please ask our sales staff for the **RMA number** (*Return of Material Authorization*).

Without RMA number a treatment is not possible!

Please always include this service form, fully completed, with any complaint or repair wish you may have. Please note that only returns with the proper and complete paperwork can be dealt within time.

A detailed fault description will reduce costs and period of repair.

Please contact us before you return equipment in order to find the most efficient way of sending.

RMA number: _____

Article description: _____ Serial no.: _____ Code: _____

Delivery note no.: _____ Invoice no.: _____

Reason for return/Fault description:

Company: _____

Contact person: _____

Phone: _____ Fax: _____

Notes/Comments:

Transport damages have to be reported immediately to the responsible forwarding agent.

Remarks for Non-EU customers:

Please add to each return a delivery note or a proforma invoice, addressed to Brähler ICS AG, Königswinter, with following statements:

- Reason for return (repair or credit note)
- Exact declaration of the goods, exact no. of pieces, article no. / model, serial no.
- Price which was invoiced by us, better our invoice no. with date

Return shipments from Non-EU countries have to be sent **either by air freight** to Cologne airport, to the attention of:

Calenberg Oversea Logistics, Mrs. Taxacher, Welser Str. 8, 51449 Köln, Tel: +49 2203 3592-838

or by the following courier services:

DHL Express, Federal Express, TNT Worldwide Express, UPS Express

Please do not use any other courier service, because only the four companies mentioned above perform return shipments.

To enable quick and cost efficient customs clearance, kindly take care that the airway bill mentions

a) 'return for repair' as well as

b) the customs tariff code number of the goods (which will be advised by us together with the return of material authorization number)

Any expenses (duties and taxes) incurred by deviant handling will be charged to the sender.

Addresses

Head office

Germany

Brähler ICS Konferenztechnik
International Congress Service AG

Auf der Alten Burg 6
D-53639 Königswinter

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D-53627 Königswinter
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http:// www.braehler.com

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Phone +49 2244 930-0

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