

DCS 6000

User Manual



Digital Conference System



IS 6132P Interpreter Set with firmware 5.3.xx or later

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Important

Compliance

The equipment has been tested and found to comply with the limits of the following standards for digital devices:

- EN55103-1 (Emission)
- EN55103-2 (Immunity)
- FCC rules part 15, class A (Emission)

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial or light industrial environment. The equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the user manual it may cause harmful interference to radio communications.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Installation precautions

Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place

exposed to direct sunlight, excessive dust or humidity, mechanical vibration or shock.

To avoid moisture condensations do not install the unit where the temperature may rise rapidly.

Cleaning

To keep the cabinet in its original condition, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use organic solvents such as thinners or abrasive cleaners since these will damage the cabinet.

Repacking

Save the original shipping cardboard box and packing material; they will become handy if you ever have to ship the unit. For maximum protection, re-pack the unit as originally packed from the factory.

Warranty

The individual units in the DCS 6000 system are minimum covered by 12 months warranty against defects in materials or workmanship.

Description of the DCS 6000 system

Features

The DCS 6000 system has the following main features:

- Fully digital
- Excellent sound quality
- “State of the Art” fully digital integrated interpretation, discussion and voting system offering interpretation, language distribution, conference microphone and voting facilities with attendance check with Chip Card TM.
- New, unique digital DATA and AUDIO bus.
- 39 incoming channels (8 floor channels + 31 interpreted channels) and one Line input.
- 33 distributed channels (2 x floor + 31 interpreted channels)
- The Delegate and Interpreter units are powered and controlled by the CU 6010 Central Unit, which drives up to app. 200 units on 4 chains.
- EX 6010 Extension Units or PS 6000 Power Supplies available if more units are required
- A total of 4000 units (delegate and/or interpreter units) can be connected to the system.
- Using screened CAT5 or CAT5e cabling (FTP or STP) ensuring a very cost effective installation and easy set-up of portable systems
- Firmware in Delegate units, Interpreter Units, Central Units etc. upgradeable through serial PC-connection (RS232 or RS422)
- Can be operated with or without a PC.
- Added functionality and comprehensive features provided by SW 6000 software package running on PC

RS232/RS422 connection on CU 6010 for external operation of the system of a PC or control system such as AMX or Crestron

The SW 6000 is an optional software package, which expands the functionality of the DCS 6000 system. The software runs on standard computer technology (Standard PC with Windows 2000 or XP).

Main features of the SW 6000 are:

- Microphone management
- Mimic panel operation
- Interpretation management
- Voting management
- Message handling
- Agenda handling
- Data stored on SQL data base for easy export/import of data as well as easy links to external databases
- Multi language user interfaces
- Supports different User types with different priorities, user interfaces and control possibilities
- Variety of printing facilities such as speaker's log, voting results, delegates list etc.

System components

The CU 6010 Central Unit supports all available units in the DCS 6000 series:

Central equipment etc.

EX 6010	Extension Unit
PS 6000	Power Supply
AO 6008	Audio Output box
RP 6004	Repeater for four chains
JB 6002	Junction Box with 2 outputs
JB 6004	Junction Box with 4 outputs

Interpreter equipment

IS 6132P	Interpreter Set
LS 6032P	Interpreter Loudspeaker

Conference equipment and channel selectors

CS 6032FV/H	Channel Selector (flush mounted)
CM/DM 6010P	Conference Unit (portable)
CM/DM 6020P	Conference Unit (portable) with XLR microphone connector
CM/DM 6070P	Conference Unit (portable) with two built-in channel selectors
CM/DM 6090P	Conference Unit (portable) with two built-in channel selectors and XLR microphone connector
CM/DM 6060F	Conference Unit (flush mounted) with one built-in channel selectors
CM/DM 6510F	Conference Unit (flush mounted) with Chip-card and 3 voting buttons
CM/DM 6560F	Conference Unit (flush mounted) with one built-in channel selector, Chip-card and 3 voting buttons
MU 6040C/D	Microphone Unit for use with customised front plate with Loudspeaker, Microphone and Buttons. Available in Delegate (D) and Chairman (C) version
AM 6040	Ambient Noise Microphone

Operating instructions

IS 6132 P Interpreter Set

General description

The IS 6132 Interpreter Set is designed for use for one interpreter. It is a compact unit for table top use. The design of the units is easy understandable with a “listening part” at the left side of the unit and a “speaking part” at the right side of the unit.

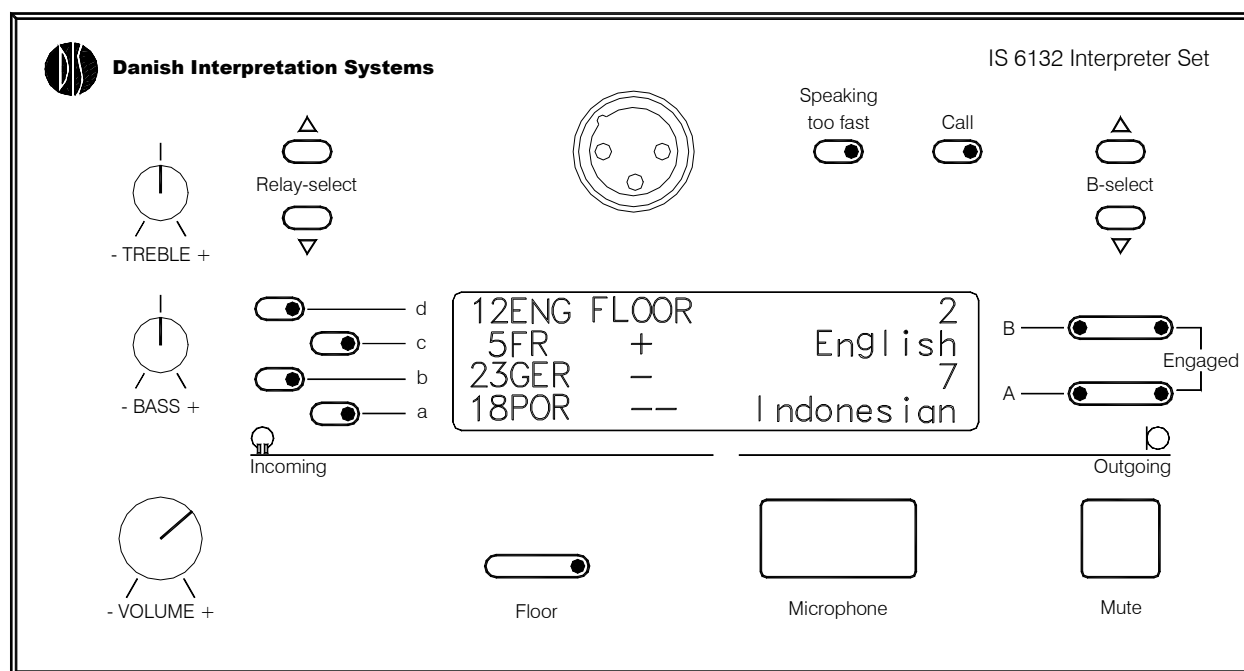
Features

The main features of the IS 6132 Interpreter Unit are:

- 4 pre-select listening channels
- Large LCD display with back light possibility
- Clear LED indication in buttons
- For use with either headset or gooseneck microphone

User Controls, indications & connectors

Front plate layout



Front plate controls

□ **Incoming Section**

- **Volume**

This control adjusts the listening level in the connected headphone

- **Bass**

This control adjust the Bass level in the connected headphone

- **Treble**

This control adjust the Treble level in the connected headphone

- **a-b-c-d**

These button selects between four pre-selection of relay channels

- **Relay-select**

These buttons are used for each of the four pre-selection to scroll through the available languages

- **Floor**

This button selects the floor language as the listening language

□ **Outgoing Section**

- **Microphone**

This button switches on the microphone. When switched ON, the button and the light ring on the gooseneck microphone will light red.

- **Mute**

This button is used to temporarily switching off the microphone (when coughing etc). The channel is still “occupied” when pressing the button, but the microphone is disconnected as long as the button is depressed. Mute is indicated by switching off the light in the light ring of the microphone.

- **A**

Press this button to select the A-language as the outgoing channel. A Red LED is indicating, that A-language is selected. The Yellow engaged LED is indicating, that the A-channel is occupied i.e. a microphone on an interpreter set is switched on at this channel

- **B**

Press this button to select the B-language as the outgoing channel. A Red LED is indicating, that B-language is selected. The Yellow engaged LED is indicating, that the B-channel is occupied i.e. a microphone on an interpreter set is switched on at this channel.

- **B-Select**

After pressing the B-button, the B-language can be selected (if ALL is chosen at the B-mode selection in the B-language set-up menu.

- **Speaking too fast**

Pressing this button sends a signal to the Chairman, that the Speaker has to slow down his speech.

- **Call**

Not implemented

□ **Connectors**

- **XLR connector**

The XLR-connector on the front is used for connecting a microphone to the unit. Please note that only DIS series GM40xx and GM44xx can be used.

- **Headphone connector**

On each side of the interpreter set a mini jack is located for connecting a headphone for listening to the Floor language or one of the pre-selected relay languages (a-b-c-d). On the left side a standard jack connector is also located with the same functionality.

- **Headset Connector**

On the left side, a DIN connector is located for connecting a DIS headset instead of a microphone.

- **"Display" power connector**

The unit supports a dimmed backlight (on/off user selectable) in the LCD display with no external power supply connected. However special circumstances can require full light in the display. At the bottom a power connector is used for connecting a optional Power Adapter used for supplying power for full light in the display. Please note, that the interpreter set is functioning perfectly also without light in the display.

Please observe that only the Power adapter supplied with the interpreter set can be used. Other Power adapters might damage the interpreter set.

- **Loudspeaker Connector**

A D-Sub 9 pole connector for connecting the LS6032 Loudspeaker unit is located at the bottom of the unit. The LS6032 Loudspeaker has a separate Volume control. The loudspeaker will be disconnected automatically if a microphone is switched on at one of the interpreter sets in the same booth (same A-language). This connector is only on some versions of the Interpreter Set.

- **DCS LAN connector**

Two RJ45 sockets are located at the bottom of the unit for connecting to the previous unit (an Interpreter set or CU 6010 or an other DCS 6000 unit) and to the next unit.

Set up for each interpreters set

When an IS 6132 interpreter unit is connected to the CU 6010, the following start-up screen is shown

DANISH INTERPRETATION
SYSTEMS
IS6132
055.004.255

The 9 digit number at the bottom of the display is the units serial number. Each of the three positions separated by dots can hold a value of 0-255 giving a maximum serial number of 255.255.255.

After some seconds the following type of screen is shown:

11	SWE	FLOOR	2
1	ITA	FLOOR	ENGLISH
3	FR	FLOOR	11
4	DAN	FLOOR	SWEDISH

This screen will be different on the various Interpreter sets, depending on the individual set-up of the Interpreter Set. If the welcoming screen does not disappear, the interpreter set has not been set-up. For setting up the interpreter set, please see next section.

A black dot in the middle of the first line indicates that the Audio out from the interpreter unit is muted. The reason for this is communication problems. Cables etc. have to be checked.

11	SWE	FLOOR	■	2
1	ITA	FLOOR	ENGLISH	
3	FR	FLOOR	11	
4	DAN	FLOOR	SWEDISH	

Setup menu

Before using an Interpreter Set, a set-up of the A-language and B-language has to be done on all other interpreters' sets.

When b and B are depressed simultaneously the set-up menu is shown:

-Booth/desk no.	▲
-B-language/B-mode	
-Ver. and serial no.	
-Communication status	▼

When the unit is un-configured (has not yet received an address) the first two menus will not be available. This is indicated by the missing "-"

Booth/desk no.	▲
B-language/B-mode	
-Ver. and serial no.	
-Communication status	▼

If the B-select buttons is pressed the last two menu items are shown:

```

-Backlight      ▲
-AB with mic on ▼

```

A menu is selected by pressing the button to the left of the menu (a-d). Then the display shows the next level of menus or selections.

Booth selection

Pressing the (d) button selects the Booth set-up menu:

```

Booth:
■ 7 - 7 Norwegian      OK
Desk number:          Cancel
1

```

Press c-button for selecting the Booth number for the Interpreter Set. A black dot is indicating the selection. Then use Relay-select up/down to scroll through the available languages. The Desk number will automatically change to the next available desk for the selected language. To save the selection, press OK (B-button).

If the desk number is set to an already occupied desk number the set will take over the configuration from the set on that desk and the other set will be loose the configuration.

“B” language selection

When B-language is selected by pressing the c-button, the following menu will appear.

```

B-language:
■ 7 Norwegian      OK
B-mode:           Cancel
One

```

Press button (c) for selecting the B-language for the Interpreter Set. A black dot is indicating the selection. Use Relay-select up/down to scroll through the available languages.

Press button (a) for selecting the B-mode for the Interpreter Set. The B-mode selection has the following choices:

All The interpreter can select any B-language himself.

One Only the B-language chosen at the B-language selection can be used during operation.

None During operation no B-language can be used (the B-button has no function except for b-B).

To save the selection, press OK (B-button).

Ver. and serial no.

This is an information menu showing the version, software serial number and the address assigned to the unit by the CU 6010 Central Unit.

```

IS6132 rev. D
SW ver.:      053.009 OK
Serial #: 055.004.255
Address:      215

```

Press OK to return to the Set-up menu

Communication status

This is an information menu showing the communication status of the unit.

```

Rx Errors:      0
Tx Retries:     0      OK
Tx dropped:     0      Reset

```

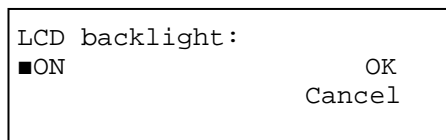
Press Reset to reset the number of Errors etc. counted. After start up, some errors can be seen, but if the numbers of errors are constantly increasing, the cabling or a unit is defective. The fault could also be a LAN connector, which is not properly inserted. Please note the “click” from the lock, when inserting the connector.

Press OK to return to the Set-up menu.

If the communication during start up is failing in a way, that the Interpreter Unit will not work, this screen will be shown instead of normal welcoming screen.

LCD backlight

This menu gives the user the possibility to control the dimmed LCD backlight:



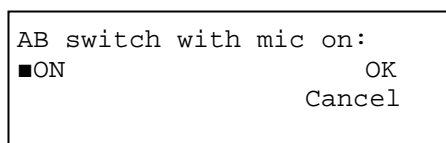
The user can toggle the backlight setting between ON and OFF by pressing the relay-select buttons.

Press OK to return to the Set-up menu

Only dimmed LCD backlight can be controlled using this menu – strong LCD backlight will be available if external Power Supply is connected

AB switch with mic on

AB switch with mic on means that the user can change the outgoing channel from A to B even when the microphone is active.



The feature is toggled between ON and OFF with relay-select.

This feature is typically used in two language scenarios where an interpreter is responsible for translating from language A to B and also the reverse from language B to A.

Press OK to return to the Set-up menu.

Normal operation

As mentioned in previous chapter the following type of screen is shown short time after the system is powered up:

11	SWE	FLOOR	2
1	ITA	FLOOR	ENGLISH
3	FR	FLOOR	11
4	DAN	FLOOR	SWEDISH

This screen will be different on the various Interpreter Sets, depending on the individual set-up of the Interpreter Set.

Please note, if the welcoming screen is not disappearing, the Booth number has not been set-up. For setting up the interpreter set, please see the section “Set up for each interpreters set”.

Selection of incoming language

When interpreting, the interpreter will listen to either the “Floor” language or will listen to one of the interpreted languages. The Floor button will select the Floor language and the buttons **a**, **b**, **c** and **d** select the pre-selected languages shown on the LCD-display to the headphone output. Each of the buttons can be pre-selected to any of the interpreter channels.

When one of the buttons **a**, **b**, **c** and **d** is pressed a LED is lighted in the button pressed indicating, that this pre-select is chosen.

The two first characters in the display show the channel number (e.g. 12 or 5) and the following three characters show the corresponding language in short (see language list).

When the **Floor** button is pressed the Floor channel is selected and the green Floor LED is lit. Also the indication in one of the buttons **a**, **b**, **c** and **d** is removed.

OBS If the functionality, that pressing the Floor button again shall switch the listening back to the previous selection of (a, b, c or d) is required, at setting in the CU 6010 can be changed. Please consult the DIS factory for this option.

When one of the a-d channels is selected the Floor LED goes out and the audio from the selected channel is switched on instead of Floor. It is then possible to change the listening channel with the **Relay select** up and down push buttons. When the highest number is reached when stepping up, the counting restarts from 1.

The reverse will happen when stepping down.

If one of the buttons is held down for more than one second the channels will scroll through the languages with a speed of 2-4 languages per second.

Only the number of channels set at the Channel Set-up menu at the CU 6010 can be selected and shown. The numbers will always be in succession from 1 and up. The same is the case for the CS 6032 channel selectors, with the exception, that the CS 6032 is also showing channel 0 (floor)

Showing quality of Incoming language

To the right of the four a-d language abbreviations of the quality of the source is shown.

If there is no interpretation at the channel (Floor audio is present) then "FLOOR" will be shown.

When there is an interpreters set switched on to the channel where the interpreter is listening to Floor, then a quality indication "+" is shown.

When an interpreter's set is switched on to the channel where the interpreter listens to another channel whose interpreter listens to Floor, a quality indication "-" is shown. This is indication one relay interpreting.

Brought one level further, a quality indication "- -" is shown. This is indication for double or more relay interpreting

When interpreting on the A-language and the A-language of the Interpreter Set is selected, then "FLOOR" will be shown, preventing that the interpreter hears himself. For testing purpose, the corresponding a, b, c or d button can be pressed for 3 seconds the listening audio will then switch to the interpreter himself and the quality indication change to "SELF". When releasing the button, the listening audio will switch back to Floor and the quality indication changes to "FLOOR" again.

If the A-language is not selected the quality indication "SELF" is shown

All a-d selections show the actual quality of the channels at all times.

Selection of Outgoing channel

The two push buttons **A** and **B** are used to select whether the interpreter will be routed to the A- or B-outgoing channel.

When **A** is pressed the red LED is lighted in the button. When **B** is pressed the light in the A-button will go out and the red LED in the B-button will light up.

The A-lines will always show the language of the one selected for the Interpreter Set. The upper line at the left shows the channel number and the lower line shows the languages in full name in accordance to the language list supported (max. 10 char.).

When the system is initialised and set up then the A-display will show the booth languages and A is automatically selected. B-display will show the B-language selected at the B-language Set-up

When **B** is pressed the light LED in the button is lit. It is now possible to change the selection of the B-language channel with the **B-select** push buttons up and down if the B-mode is set to "All" in the B-language setup menu.

The B-selection will only function when B is selected and the Microphone is not switched On.

Microphone on/off

When the push button is pressed the microphone audio is put on to the outgoing channel; the LED's in the button and the lamp of the microphone are lit up. If another interpreter already occupies the outgoing channel nothing will happen.

When the push button again is pressed the sound from the microphone, the button LED's and microphone lamp is switched off.

Mute

The button will switch off the audio from the microphone to the outgoing channel while it is depressed (the channel is muted). Also the light ring in the microphone is switched off while depressed.

When the button is released the microphone audio is switched on again and the light ring in the microphone is switched on.

Speaking too fast)

When pushing this button the LED in the *Speaking too fast* button lights in 10 sek. in all IS 6132 units.

And at the same time the Speaking too fast indication will be indicated in units supporting this function (as some CM6xxx units or PC with SW 6000 software)

Call

Not implemented.

A-Engaged

The yellow LED is lit if the channel is occupied either by another interpreter or the interpreters set itself occupies the channel.

B-Engaged

The yellow LED is lit if the channel is occupied either by another interpreter or the interpreters set itself occupies the channel.

Error indication

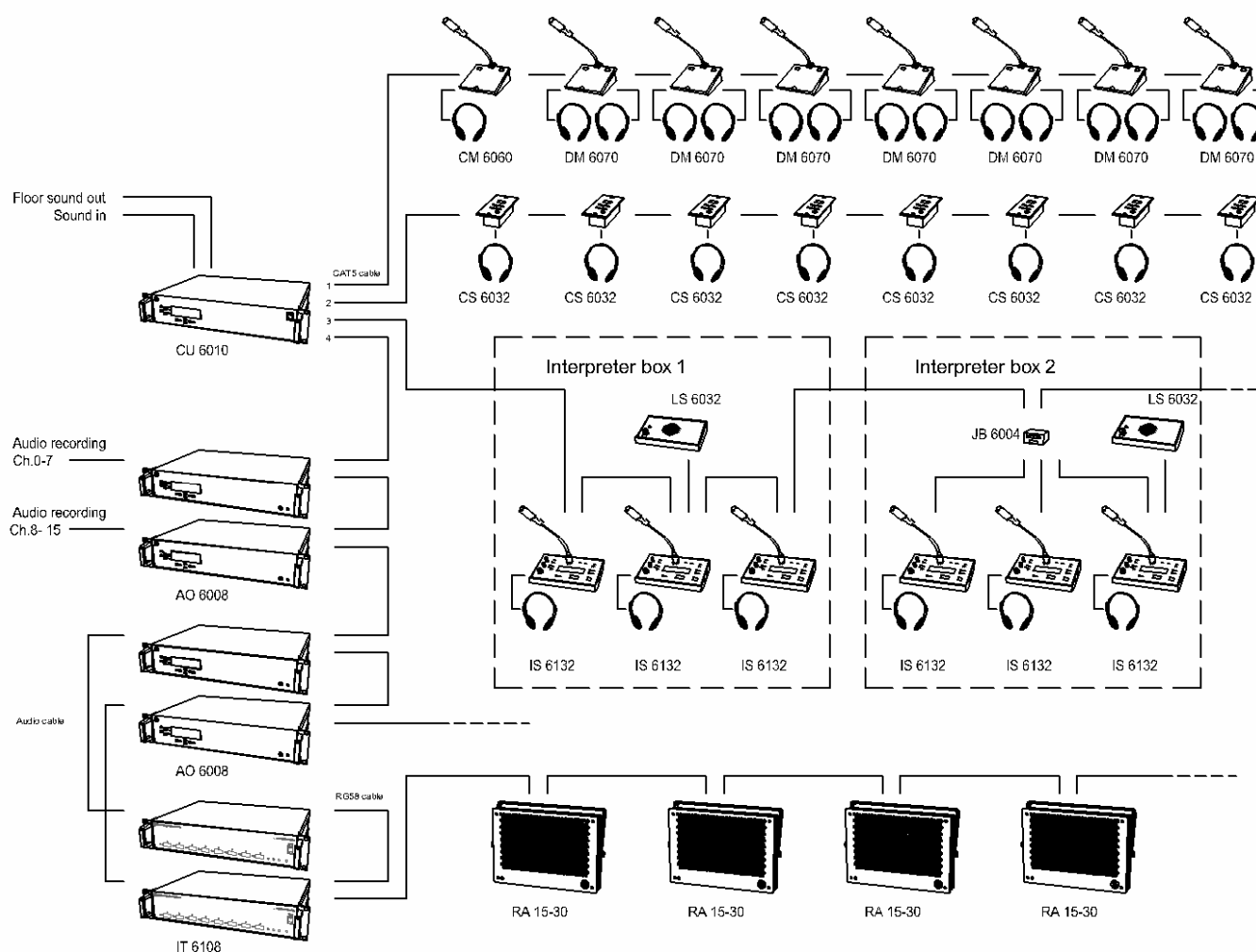
If errors occur in the communication with the CU it will be indicated by the interpreters set. The set has two error thresholds. The first threshold is reached when audio-data from the CU contains too many errors for the sound to be reproduced correctly. This is indicated by a black matrix in the normal operation display and by the communication display when the set is un-initialised. The second threshold is reached when the frame error rate reaches a higher predefined value. When this happens the set will enter the communication status display regardless of the state the set was in before errors occurred.

The error status is checked every 5 seconds and when no errors has occurred since the last check the set enters the operation mode it was in before errors was detected.

System Setup

For general guidelines etc. please consult the CU 6000 User Manual.

Typical schematics



Appendix

Language list

The following languages are supported by the DCS 6000 system:

Language	ISO 639-2/B abbreviation
Floor language	FLO
Afrikaans	AFR
Albanian	ALB
Arabic	ARA
Armenian	ARM
Azerbaijani	AZE
Basque	BAQ
Belarusian	BEL
Bengali	BEN
Bulgarian	BUL
Burmese	BUR
Cantonese	CAN
Catalan	CAT
Chinese	CHI
Corsican	COR
Croatian	SCR
Czech	CZE
Danish	DAN
Dutch	DUT
English	ENG
Estonian	EST
Finnish	FIN
French	FRE
Gallegan	GLG
Georgian	GEO
German	GER
Greek	GRE
Hausa	HAU
Hebrew	HEB
Hindi	HIN
Hungarian	HUN

Language	ISO 639-2/B abbreviation
Icelandic	ICE
Indonesian	IND
Irish	GLE
Italian	ITA
Japanese	JAP
Javanese	JAV
Kazakh	KAZ
Khmer	KHA
Kirghiz	KIR
Korean	KOR
Kurdish	KUR
Lao	LAO
Latvian	LAV
Lithuanian	LIT
Macedonian	MAC
Malay	MAY
Maltese	MAL
Marathi	MAR
Mongolian	MON
Nepali	NEP
Norwegian	NOR
Panjabi	PAN
Persian	PER
Polish	POL
Portuguese	POR
Raetoroman	ROH
Romanian	RUM
Russian	RUS
Serbian	SCC
Sinhalese	SIN
Slovak	SLO

Language	ISO 639-2/B abbreviation
Slovenian	SLV
Spanish	SPA
Swahili	SWA
Swedish	SWE
Tagalog	TGL
Tajik	TGK
Tamil	TAM
Telugu	TEL
Thai	THA
Tibetan	TIB
Turkish	TUR
Turkmen	TUK
Ukrainian	UKR
Urdu	URD
Uzbek	UZB
Vietnamese	VIE
Welsh	WEL
Yoruba	YOR
Other no 1	N 1
Other no 2	N 2
Other no 3	N 3
Other no 4	N 4
Other no 5	N 5
Other no 6	N 6
Other no 7	N 7
Other no 8	N 8
Other no 9	N 9
Other no 10	N10
Other no 11	N11
Other no 12	N12

Technical appendix

Cabling

CAT5

The DCS 6000 system uses CAT5, CAT5e or CAT6 FTP or STP cables with screened RJ45 connectors.

It is important to use only FTP or STP (screened) cables and screened RJ45 connectors and not UTP cable, which is unscreened.

EIA 568-B wiring shall be used. How to wire a CAT5 (EIA 568-B) Cable:

Pin	Function	Connector #1	Connector #2
1	In-going +	ORG/WHT	ORG/WHT
2	In-going -	ORG	ORG
3	+48V	GRN/WHT	GRN/WHT
4	0V	BLU	BLU
5	0V	BLU/WHT	BLU/WHT
6	+48V	GRN	GRN
7	Outgoing -	BRN/WHT	BRN/WHT
8	Outgoing +	BRN	BRN

Note. If other colour codes are used then the four pairs are connected as follows:

- Pair 1: Pin 1 & 2
- Pair 2: Pin 3 & 6
- Pair 3: Pin 4 & 5
- Pair 4: Pin 7 & 8

The phase of the pairs must be correct and the wiring spec. as stated in CAT5 (EIA 568-B) have to be followed.

Note: CAT6 cables can normally only be terminated in sockets (female) and not in cable plugs. CAT6 should thus only be used for long cable draws terminating in wall outlets or patch panels.

Loudspeaker

Pin	Connector D9S
1	Power (+48VDC)
2	Not connected
3	+Signal
4	Not connected
5	Power Ground.
6	Mute
7	Not connected
8	-Signal
9	Signal Ground

Interpreter Headset

Pin	Connector Din 8 pole female
1	+ Headphones
2	0 V Ground
3	+ Mic signal
4	- Headphones
5	- Mic signal 0 V Ground
6	0 V Ground
7	0 V Ground
8	0 V Ground

Accessories (not supplied)

GM 4422 Gooseneck microphone	18 12 05661	EC 6000-01 Connection Cable 1 m.....	10 03 13101
DH 6001 Headphone	14 11 03054	EC 6000-02 Connection Cable 2 m.....	10 03 13201
IH 6000 Headset	11 14 04951	EC 6000-05 Connection Cable 5 m.....	10 03 13501
LS 6132P Loudspeaker.....	15 09 10382	EC 6000-10 Connection Cable 10 m.....	10 03 14102
Power adapter (for full light in display)	S1 01 99870	EC 6000-20 Connection Cable 20 m.....	10 03 14202
EC 6000-..5 Connection Cable 0,5 m.....	10 03 12500	EC 6000-50 Connection Cable 50 m.....	10 03 14502

Technical specifications

Digital Section

Sound quality 20 bit audio @ 32 kHz sampling frequency
 Number of incoming channels.....32 (31 + floor)
 Number of outgoing channels (interpreted)..... 31

Analog Section

Microphone input type.....DIS GM 4xxx series only
 Headphone output level: 1,5 V
 Min. headphone impedance: 4 ohm – 1 kohm
 External loudspeaker output level (balanced):max. 2,8 V
 Min. loudspeaker amp. input impedance: 2 kohm
 Frequency response 50-15kHz
 Signal to noise ratio: >85 dBA
 Total harmonic distortion: < 0.1%

General

Power requirement.....24-48 V DC
 Power consumption (excl. LS6032P) 2,5W maximum
 Power supplied from CU 6000 / CU 6010 / EX 6010 / PS 6000

Temperature to guarantee specified performance

..... 5 Deg C. to 40 Deg C. (10 to 80% humidity)

Storage temperature

..... -20 Deg C. to 60 Deg C. (10 to 80% humidity)

Weight 1,0 kg

Dimensions (W x H x D) 235 x 73 x 115 mm

without knobs and microphone

Connectors

DCS LAN network 2 pieces RJ45

Microphone input..... XLR3 female socket

Headphone connectors 2 pieces mini jack 3.5 mm

..... 1 piece standard jack 1/4"

Headset connector..... 8 pin DIN socket

LS 6032P Loudspeaker Unit socket..... D9S

Standards

The IS 6132 conforms to all relevant standards.

Specifications are subject to change without notice.

