

# DCS 6000

## *User Manual*



### Digital Conference System



**JB 6002 Junction Box**



**JB 6004 Junction Box**



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## Document version

Printed: 19-11-2004

Version:

Name: JB6000.DOC

## 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 <sup>TM</sup>.
- 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 6032P	Interpreter Set
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

### JB 6002/04 Junction Box

#### General description

The JB 6002/04 Junction Boxes are part of the DCS 6000 system and enables the DCS-LAN to be split into 2 or 4 I/O buffered ports.

The JB 6002/04 is used to split the DCS-LAN for tap-out connection of a DCS 6000 conference unit.

#### Features

The main features of the JB 6002/04 are:

- Loop through of the DCS-LAN.
- 2 or 4 independent DCS-LAN tap-out ports.
- Redundancy enhancement as other tap-out ports are unaffected by potential network damage on one tap-out port.
- Enables single cable connection to each unit
- Designed in a small size easy-to-install cabinet.

#### Connectors JB 6002/04

The JB 6002/04 features the following connectors:

##### ❑ **Loop through chain**

RJ45 connector, 2 pieces

DCS-LAN connectors used for connection to the CU 6000/CU 6010 and for connection to other units with DCS-LAN connectors such as more JB 6002/04.

These connectors have auto termination.

##### ❑ **Unit connector**

RJ45 connector, 2 pieces (JB 6002), 4 pieces (JB 6004)

Each connector is for connection to one Delegate Unit or one Interpreter Unit or up to four Channel Selectors. This limitation is because the 'Unit' connectors have current limiting devices for the power line.

Maximum cable length on the 'Unit' connector: 10 m.

Note: The connected unit must be terminated (either by auto termination or terminating plug (CS 6032)).

Unused 'Unit' connectors of JB 6002/4 do not need termination.

#### LED Indications on JB 6004

In addition to the above-mentioned connectors, the JB 6004 features the following indications

##### ❑ **Power LED**

This LED lights up when Power is available on the connector next to the LED.

##### ❑ **Outgoing data**

This LED lights up, when the Junction Box receives data from the CU 6010 Central Unit (at the 'Loop Through Chain').

##### ❑ **Incoming Data**

This LED lights up, when the Junction Box received data from the connected Unit(s) (at the 'Unit' connector).

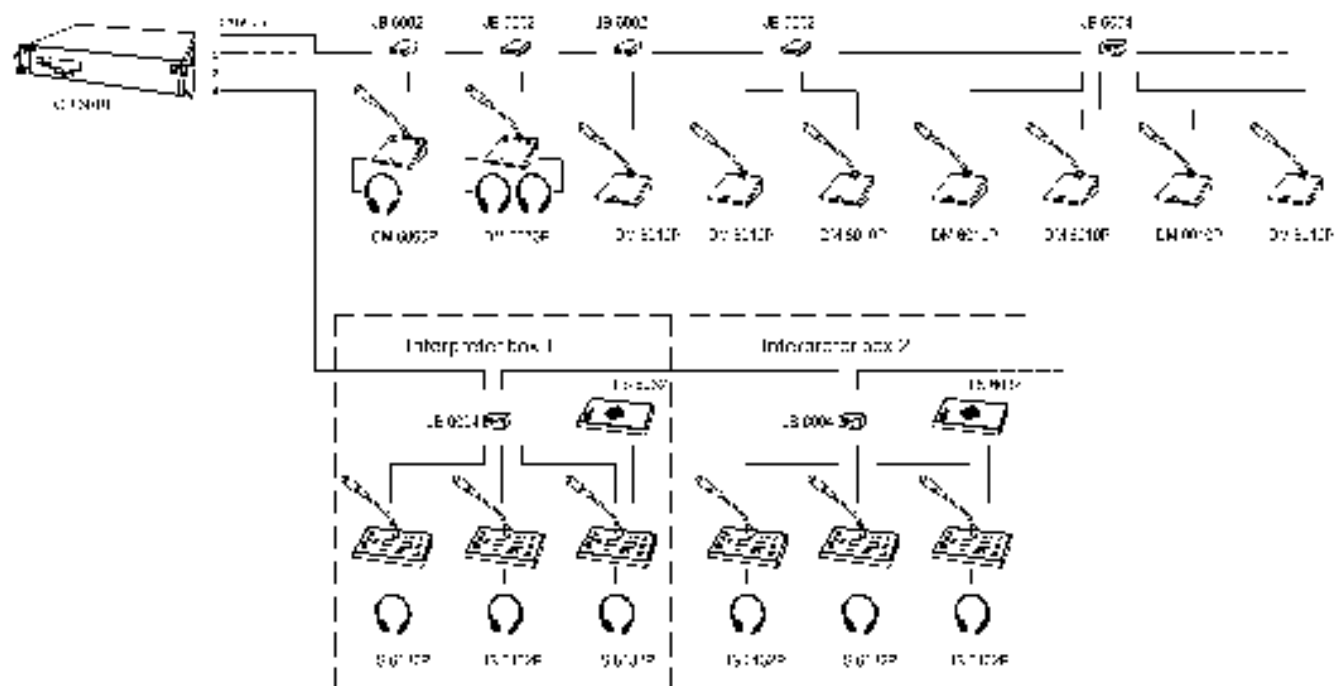
#### System design

There are no settings to be done on the JB 6004 Junction Box.

Regarding the number of units, which can be connected to the CU 6010, please refer to the CU 6010 User Manual.

## Standard use of JB 6002/04

The following typical schematic shows the normal use of JB 6002/04 with delegate and interpreter units:

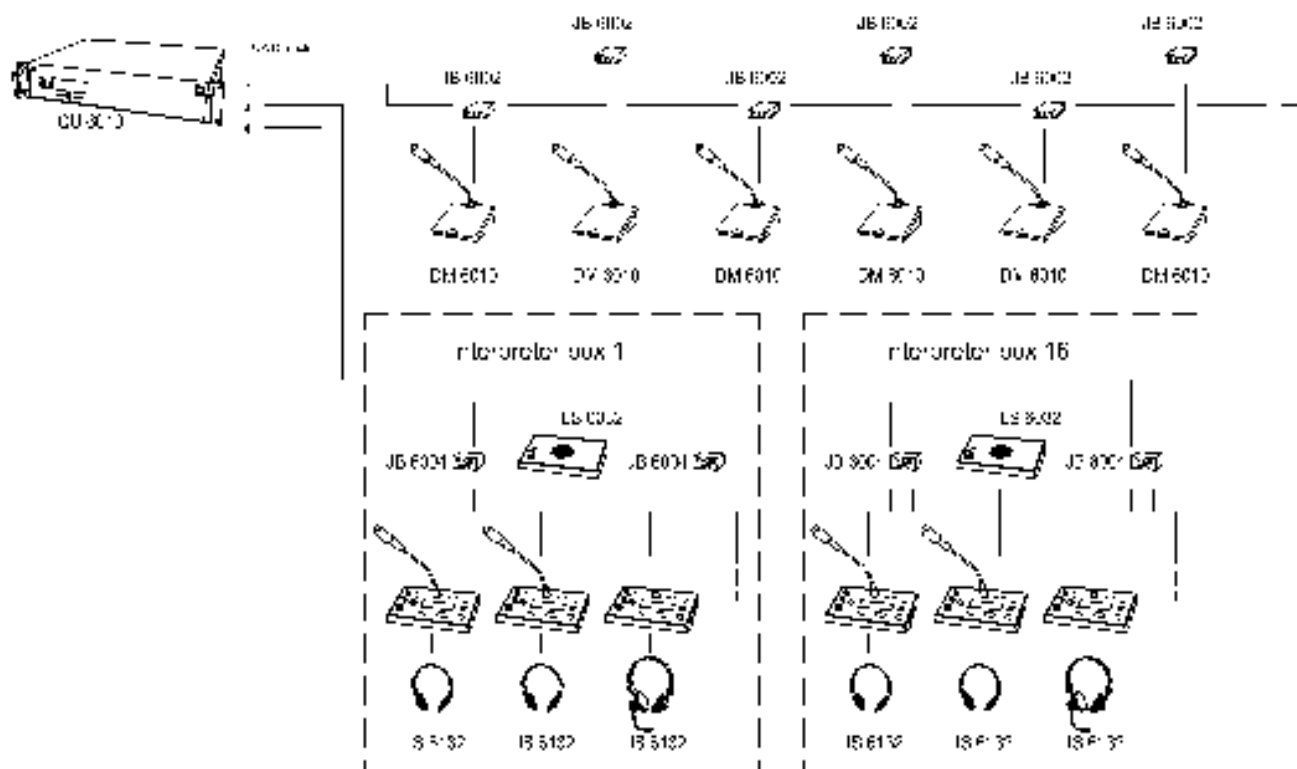




## Enhanced use of JB 6002/04

The following schematic shows how to use two parallel feeding cables to both the delegate units and the interpreter units. In case of cable failure,

there will always be units (in the same row or booth), which will work. This considerably enhances the redundancy of the system.



## Appendix

### Technical appendix

#### Cabling

##### CAT5

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

EIA 568-B wiring shall be used.

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

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 can thus only be used for longer cable draws terminating in wall outlets or jack patch panels.

#### Accessories (not supplied)

##### Cat 5e Connection Cables (AWG24)

EC 6000-..5 Connection Cable 0,5 m.....	10 03 12500
EC 6000-01 Connection Cable 1 m.....	10 03 13101
EC 6000-02 Connection Cable 2 m.....	10 03 13201
EC 6000-05 Connection Cable 5 m.....	10 03 13501
EC 6000-10 Connection Cable 10 m.....	10 03 14102
EC 6000-20 Connection Cable 20 m.....	10 03 14202
EC 6000-50 Connection Cable 50 m.....	10 03 14502

### Technical specifications

#### General

Power consumption .....	max. 0,5W
Supply voltage for unit's .....	48V
Temperature to guarantee specified performance .....	5 Deg C. to 40 Deg C. (35 to 80% humidity)
Storage temperature .....	-20 Deg C. to 60 Deg C. (10 to 80% humidity)
Weight JB 6002 .....	0,1 Kg

Weight JB 6004.....	0,2 Kg
Dimensions JB 6002 (W x H x D) .....	80 x 24 x 102 mm
Dimensions JB 6004 (W x H x D) .....	88 x 47 x 105 mm

#### Connectors

DCS-LAN loop through.....	2 pieces RJ45
DCS-LAN chain (JB 6002).....	2 pieces RJ45
DCS-LAN chain (JB 6004).....	4 pieces RJ45

**Specifications are subject to change without notice.**