K-Chief 700
16.28 Operator Station

Ref:

Sub modules:
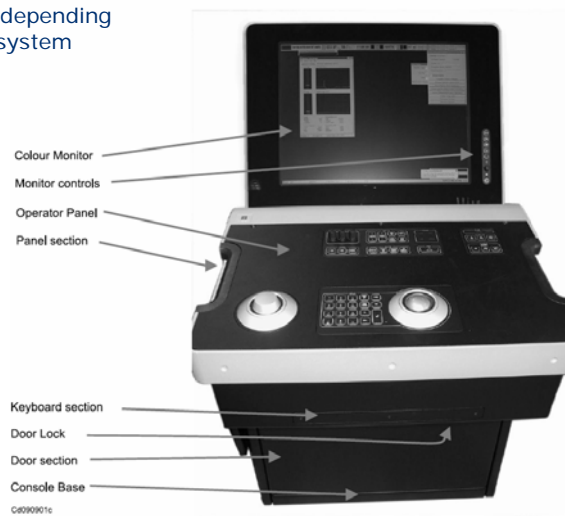|	
16.28.01	**Console**
16.28.03	**Panels**
16.28.xy	**MP7900**

DMS no: 1088858A

Typical Operator Station; OS-650-KM05 Deep Line

- Several versions depending on KONGSBERG system
  - K-Bridge
  - K-POS
  - K-Chief
  - K-Thrust
  - HiPAP-501

Colour Monitor
Monitor controls
Operator Panel
Panel section
Keyboard section
Door Lock
Door section
Console Base

Cd090901c

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16 K-Chief 700
16.28.01 Console

Ref:

Document name:	OS-650 KM05 Deep Line OS Maintenance Manual
Document nr:	314636B
Document name:	Power Supply MWS-60-24 Hardware Module Description
Document nr:	163803
Document name:	Phoenix Contact QUINT-PS-100-240AC/24DC/10 Hardware Module Description
Document nr:	318070A
Document name:	AT-FS700 Series Switches Hardware Module Description
Document nr:	310025
Document name:	Telesafe Mini Patch Boxes Hardware Module Description
Document nr:	177936
Document name:	Power and Wiring Diagram, K-Chief OS Deep Line/Built In KM05
Document nr:	313489B
Document name:	Power and Wiring Diagram, Canbus, Kit KM-05
Document nr:	303683B
Document name:	Power and wiring diagram OS-(SL) DL BI
Document nr:	313403

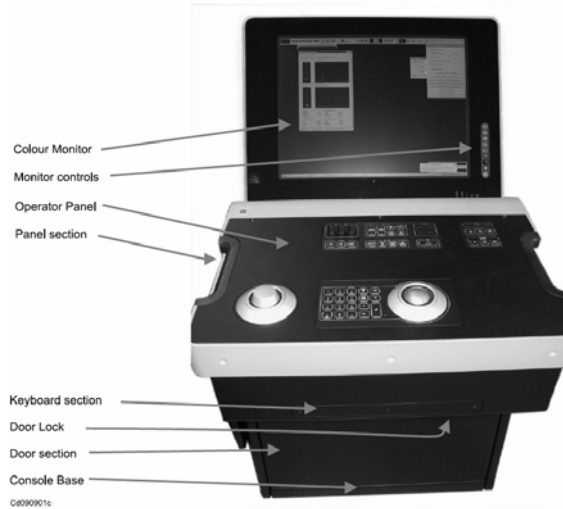**DMS no: 1088860A**

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5

Objectives

- To get familiar with the different parts of the console
- Be able to find faults, and maintain the console

- Get to know how the different panels look like and how they are connected
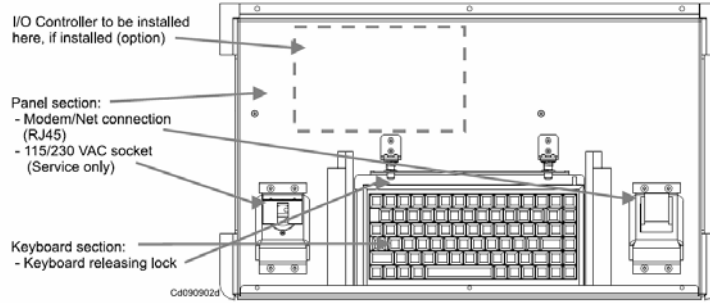
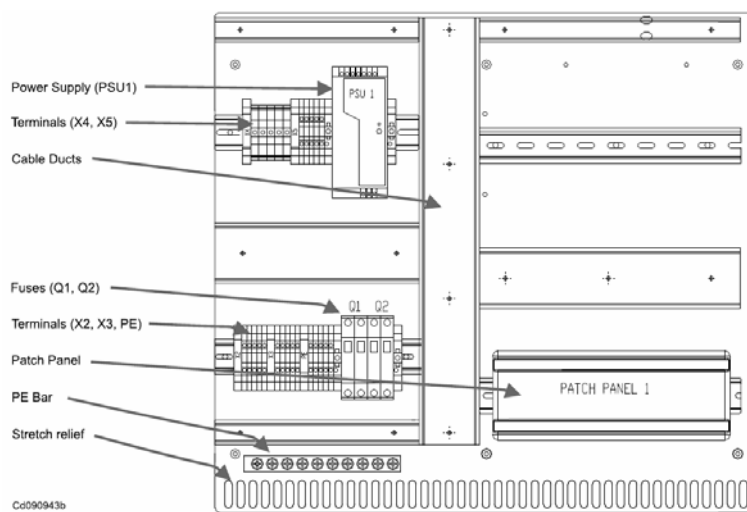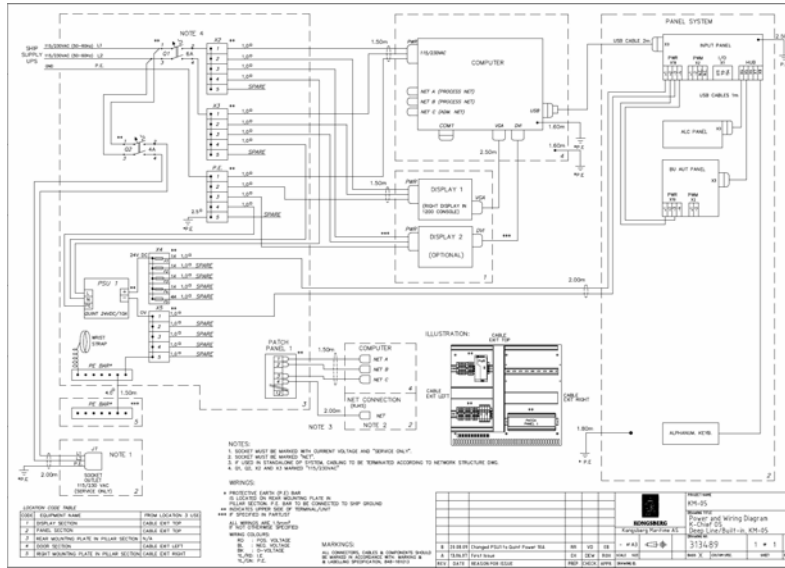© KONGSBERG

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OS-650-KM05 Deep Line

Colour Monitor
Monitor controls
Operator Panel
Panel section

Keyboard section
Door Lock
Door section
Console Base

Cd090901c

K-Chief OS

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Panel Section

I/O Controller to be installed here, if installed (option)

Panel section:
- Modem/Net connection (RJ45)
- 115/230 VAC socket (Service only)

Keyboard section:
- Keyboard releasing lock

Cd090902d

Rear Mounting Plate

Power Supply (PSU1)

Terminals (X4, X5)

Cable Ducts

PSU 1

Fuses (Q1, Q2)

Terminals (X2, X3, PE)

Patch Panel

PE Bar

Stretch relief

Q1 Q2

PATCH PANEL 1

Cd090943b

11/11

Power and Wiring Diagram

Side Plate Layout for CAN to Ethernet Kit

11/11

Power and Wiring diagram Canbus Kit

Layout for AUT, AUT CAN, AUT History Station, AUT Safety, TC and General configurations

Main mounting plate
Basic configuration:

Cable ducts

Patch Panel

Basic Terminals
(X1, X3 and PE)

Fuses (Q1 and Q2)

Alarm Sockets (option)

PE Earth Bar

Side Plate (empty for
Basic configuration)

Cd090903a

11/11
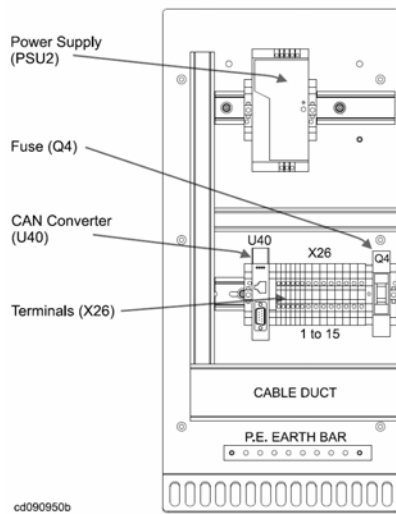
Layout for AUT CAN configuration

Main mounting plate
has Basic configuration

Side Plate for
AUT CAN configuration:

Can Bus Kit:

- Converter CAN/Ethernet
  kit

- Terminal (X26),
  Fuse (Q4)

- Power Supply
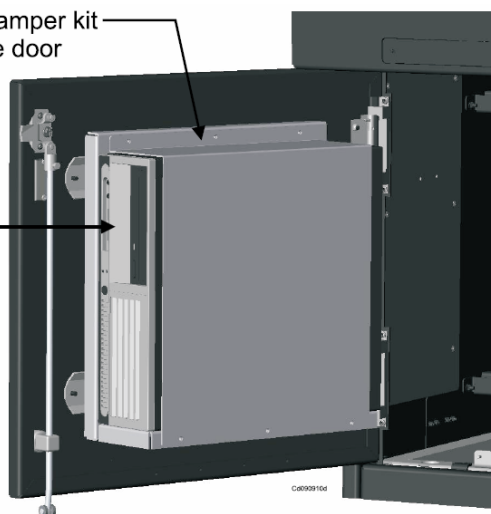
PE Earth Bar

Cable duct

Cd090904a
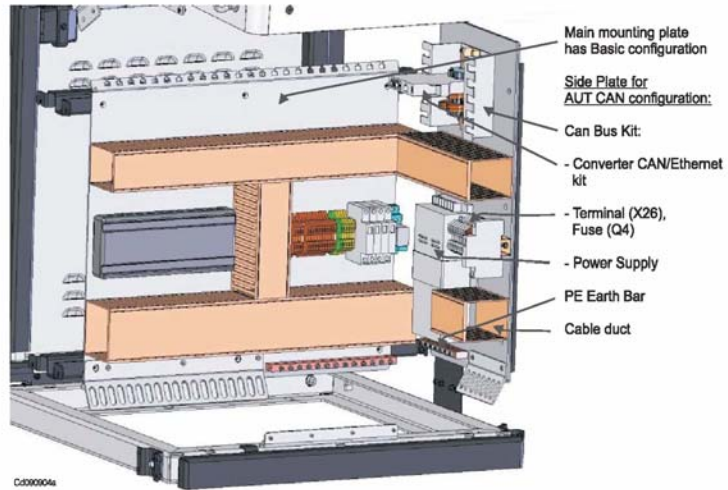
MP7900

Vertical mounted damper kit
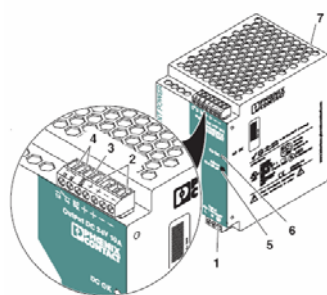attached to console door

MPxxxx
computer
(example)

Cd090910d

11/11

Phoenix Contact QUINT-PS-100-40AC/24DC/10

Structure

1 AC input
   85...264 V AC input voltage,
   45...65 Hz frequency
2 DC output
   24 V DC output voltage (default),
   can be set between 22.5 and 28.5 V DC
3 DC OK output active
4 DC OK output floating
5 Potentiometer (covered) 22.5...28.5 V DC
6 DC OK LED
7 Universal DIN rail adapter UTA 107
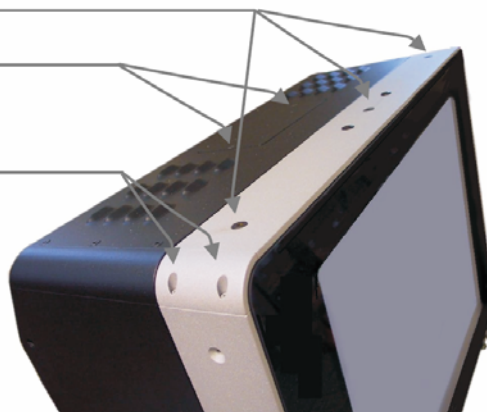
Telesafe Mini Patch Boxes

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Replacing the Colour Monitor

Three (4 mm) umbraco screws

Two screws for service hatch

If present, four (3 mm) umbraco screws (two at each end)

Cd090938b

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Replacing the Colour Monitor

Two (5 mm)
umbraco bolts
inside the computer
compartment

Cd090013b

Replacing the Panels on the Operator Panel

Three (6/12 mm)
umbraco screws
(at the rear of the
Operator panel)

Operator panel

Three (6/15 mm)
umbraco screws
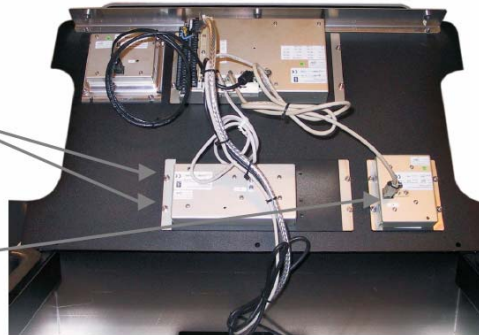(at the front of the
Operator panel)

Cd090911c

Replacing the Panels on the Operator Panel

Four nuts and screws
for each panel
(two sets at each side)

USB connector
connected to
each panel

Cd090914b

Preventive maintenance intervals for OS

Action	Interval recommended
Clean the colour monitor screen.	One week.
Clean the console housing.	One month.
Check the computer.	One month.
Clean the buttons and panels.	One month or as required.
Adjust the colour monitor settings.	Three months or as required.
Clean the Rollerball.	Three months or as required.
Tighten the termination block screws.	Six months.
Clean the Heading Wheel.	Six months or as required.
Clean the Joystick panel.	Six months or as required.
Check the connector locks.	Twelve months.

16 K-Chief 700
16.28.03 Panels

Ref:

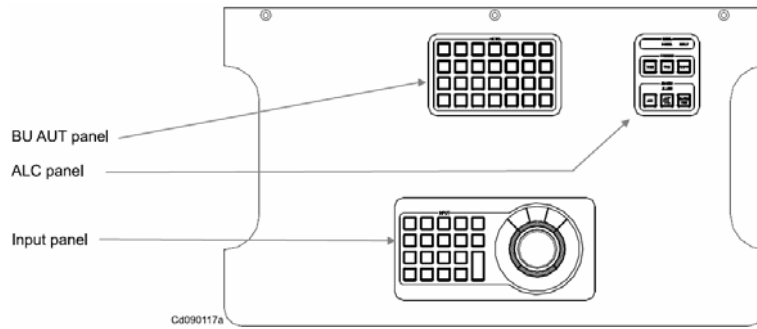|		
Document name:	COP-05 ALC Panel	Hardware Module Description
Document nr:	300977B	
Document name:	COP-05 Input Panel	Hardware Module Description
Document nr:	300984B	
Document name:	COP-05 BU-AUT Panel	Hardware Module Description
Document nr:	301028B	

DMS no: 1088898A

Objectives

- Get to know how the different panels look like and how they are connected

AUT Operator panel

BU AUT panel

ALC panel

Input panel

Cd090117a

COP-05 Input Panel - Configuration

Alphanumeric input buttons   Mouse buttons   Arrow buttons

INPUT

Toggle button   Light sensor   Trackball *(comprises mouse buttons, arrow buttons and rollerball)*   Rollerball

(Cd090103b)

11/11

COP-05 Input Panel - Configuration

X3 - USB B   X4/X5/X6/X7/X8 - USB A

X1 - Signal

X10 - 24 Vdc
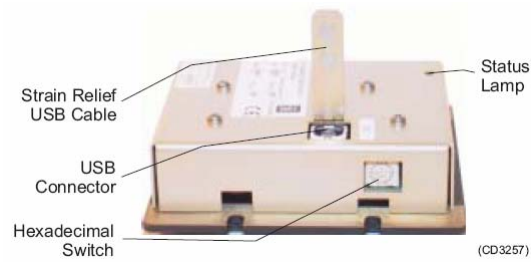
X2 - PWM

COM LED
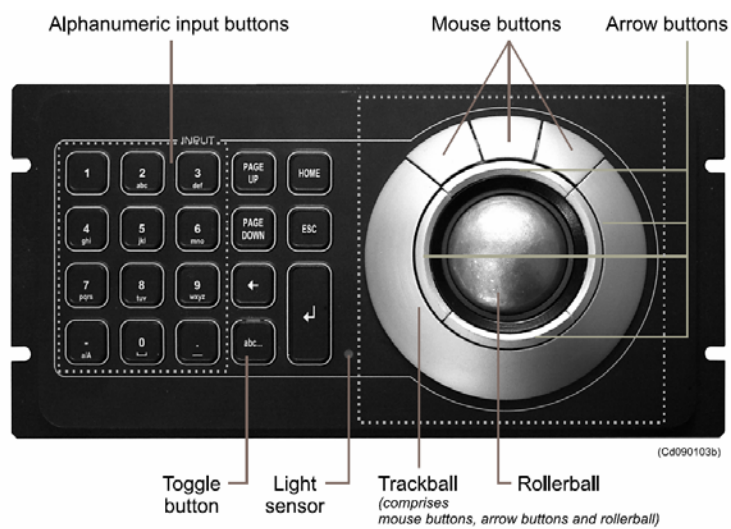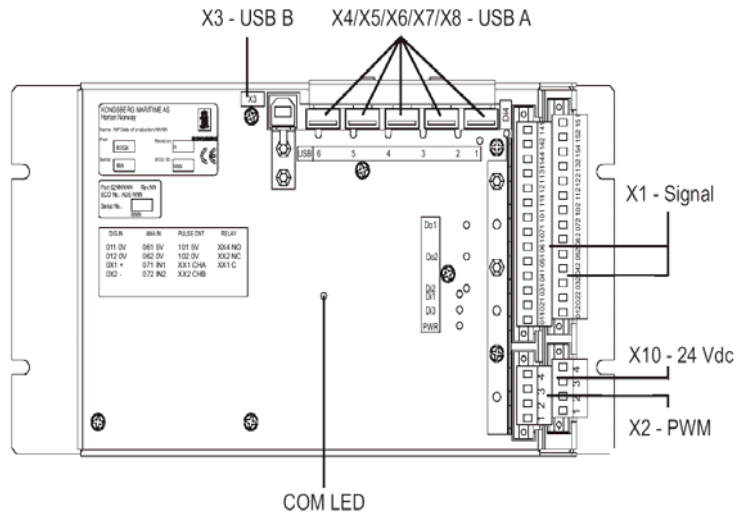
COP-05 ALC Panel

- Status lamps
  - Power, Fault, Alarm
- Command buttons
  - Take, Give, Status
- Alarm buttons
  - Ack, Silence, Alarm view

The ALC panel is powered and communicates through a single USB cable

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COP-05 ALC Panel – Rear Layout

Strain Relief
USB Cable

Status
Lamp

USB
Connector

Hexadecimal
Switch

(CD3257)

COP-05 BU-AUT Panel

•28 buttons and lamps

•All buttons are provided with status lamps
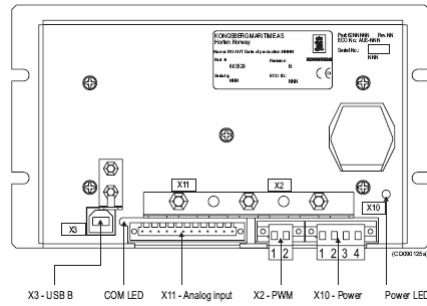
Lamp test:

View>Panel>Lamp Test

Start Lamp Test

 •All button status lamps should be lit

 •Press a button and it should extinguish

11/11

COP-05 BU-AUT Panel – Rear Layout

X3 - USB B   COM LED   X11 - Analog input   X2 - PWM   X10 - Power   Power LED

Keyboard

11/11

K-Training
16.28.02 MP7900

Ref:
Document name: **MP7900 Maintenance Manual**
Document nr: **328925D**
and
Document name: **MP7900 Backup/Restore, and XP Installation Procedures**
Document nr: **330249A**

DMS no: 1088895A

Objectives

- Be aware of the different models of MP7900
- Be familiar with the applicable models, layout and connections
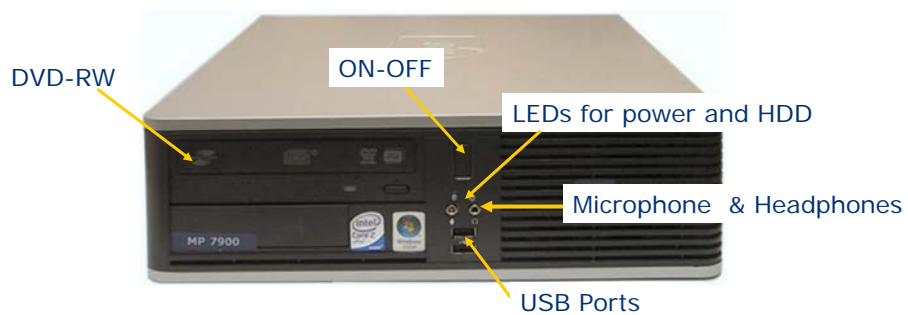- Know how to do a backup and restore of the computer

Several Models

Make sure to order the correct model

- Base Model
- With LAN/CAN
- With LAN/CAN and COM2
- NAV Model
- 4 Screen Model
- 8 channel BlueStorm (Hipap)
- HS/DP Recorder 500 Model
- Matrox Extio Interface Model

MP7900 Front Layout

DVD-RW

ON-OFF

LEDs for power and HDD

Microphone & Headphones

MP 7900

USB Ports

11/11

MP7900 rear layout – external connections

- The rear panel will vary depending on model

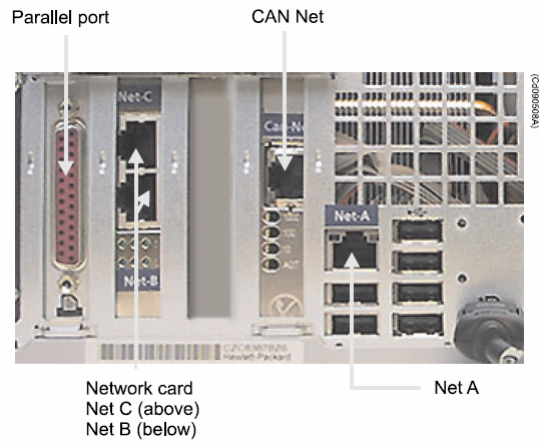## MP7900 Rear Layout –Base Model

The standard OS for K-Chief 700

Parallel port   Network card   Serial port
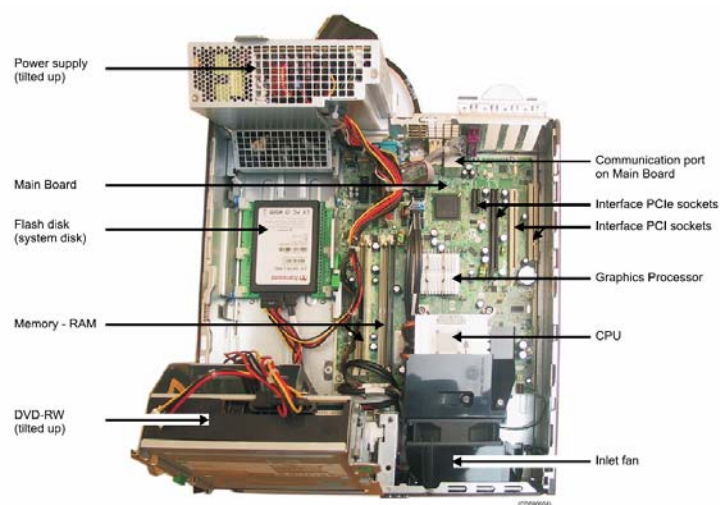   NET C (above)   (COM2)
                NET B (below)

11/11

MP7900 Rear Layout –LAN/CAN

Used as OS in ECR
connected to Watch Call

Parallel port   CAN Net

Network card   Net A
Net C (above)
Net B (below)

© KONGSBERG   43

MP7900 Computer Inside

Power supply
(tilted up)

Communication port
on Main Board

Main Board
Interface PCIe sockets
Interface PCI sockets

Flash disk
(system disk)

Graphics Processor

Memory - RAM
CPU

DVD-RW
(tilted up)

Inlet fan

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Backup/Restore of MP7900

- An OS can be restored with a previous backup.
- There will be unique software backup of all OSs on board.
- Backups normally performed by KONGSBERG on delivery and on each service visit
- Norton Ghost is used to store an exact clone to an external USB hard drive.

- Reboot OS with the USB HD connected and follow on screen instructions

```
Microsoft Windows Startup Menu

1. Create Backup Image File (USB 2.0 HDD)
2. Restore OS from Backup Image File (USB 2.0 HDD)
3. Start DOS (USB 2.0 & CD-ROM)

Enter a choice:        Time remaining: 69
```

Exercise K-Chief 700

- OS-Maintenance
- BU-AUT panel, Input panel and ALC panel
- MP7900

11/11

Summary MP7900

Front layout
- On/Off switch
- USB ports
- DVD RW

Rear layout

Connections:
- Power
- A, B and C net
- Monitor (DVI and VGA)
- Serial port

Summary

Panels
- Input Panel
- ALC Panel
- Business unit AUT panel

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