

Installation preparation and Earthing

INSTALLATION INSTRUCTIONS



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1 INTRODUCTION

MX-ONE is a communication solution for enterprises. MX-ONE integrates voice communication in fixed and mobile networks for public as well as private service. MX-ONE can be integrated into an existing Local Area Network (LAN) infrastructure. MX-ONE supports both IP telephony and functions found in classic circuit-switched PBXes (Private Branch Exchanges).

1.1 SCOPE

This document describes the MX-ONE installation preparation and Earthing in a detailed way. It is aimed for customers doing new installation. For other parts of the Installation see:

- **Installation chassis in a Cabinet, 20/1531-ASP11301**
- **Installation boards and Cabling, 21/1531-ASP11301**

1.2 TARGET GROUP

The target group for this document is personnel involved in installing the MX-ONE.

1.3 PREREQUISITES

This section lists requirements that must be fulfilled before the installation starts.

1.3.1 ELECTRICAL CONNECTIONS

Installation procedures involving connection of power cables, batteries and earthing must be performed according to local regulations.

1.3.2 SAFETY

All personnel involved in installation must read and understand the safety instructions prior to installation, see the description document for *SAFETY*.

2

INSTALLATION PREPARATION

The site is prepared mostly during the site planning stage, as described in the environmental spec for MX-ONE SITE PLANNING. Should these preparations not be complete, perform the following steps before starting the installation:

1. Mark where to position the equipment and where to mount wall supports (if required).
2. Drill holes for anchoring the rack to the floor (use the rack and the tip protection as a template).
3. If necessary, make holes for the running of cables between rooms.
4. If required, set up cable chutes in the site.
5. Clean the room before unpacking the equipment.

2.1

TOOLS

The following tools are required for hardware installation in a BYB 501 cabinet:

Table 1 Tools

Tool	Product Number	Dimensions	Used for
Set of tools	LTT 999 08/1		
U-Ring wrench	LSB 116 24	W = 24 mm	Tip protection and cabinet feet
U-Ring wrench	LSB 116 13	W = 13 mm	Battery pole nuts
Torx T20 screwdriver	LSA 126 11/20		ESD-cover, air plates
Torx T8 screwdriver	LSA 126 11/8		Air plates, board fronts, and cable connectors
Extractor	LTD11702		Sliding out boards from chassis
ESD Wrist Strap	LYB 250 01/141	Included in BYB 501 Cabinet Frame	

Drilling machines, soldering irons and so on, must be of double-insulated type

2.2

ESD WRIST STRAP IN CONJUNCTION WITH SERVICE

It is recommended that the personnel uses Electrical Static Discharge (ESD) wrist straps connected to earth when carrying out installation and service. Two earth points are placed at the top of each BYB 501 cabinet see Figure 1:ESD-earth Points in BYB 501 on page 5. ESD wrist strap (LYB 250 01/141) is delivered with the BYB 501 cabinet.

For other cabinets use ESD wrist strap and connect to the a cable lug SNG 804 23 or similar point. see Figure 2:ESD-earth Point Cable Lug SNG 804 23 (G) on page 5.

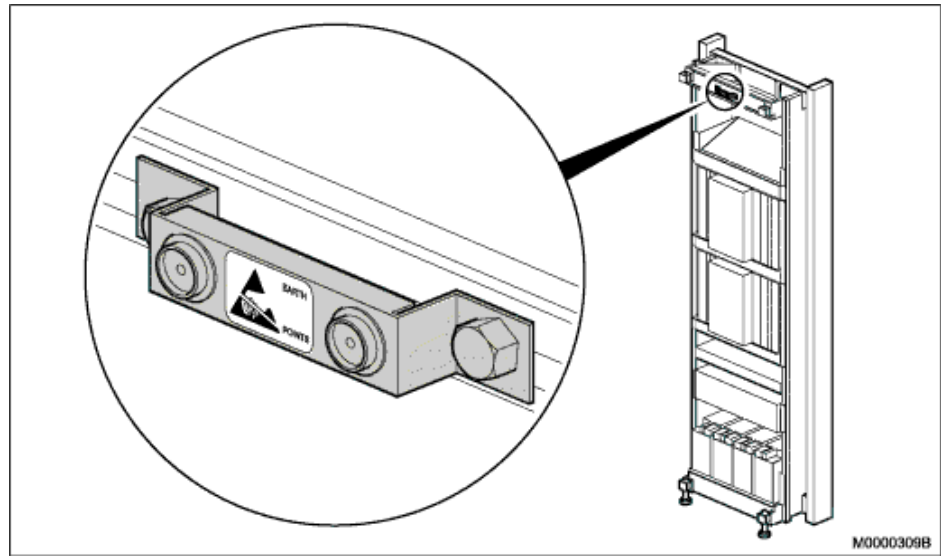


Figure 1: ESD-earth Points in BYB 501

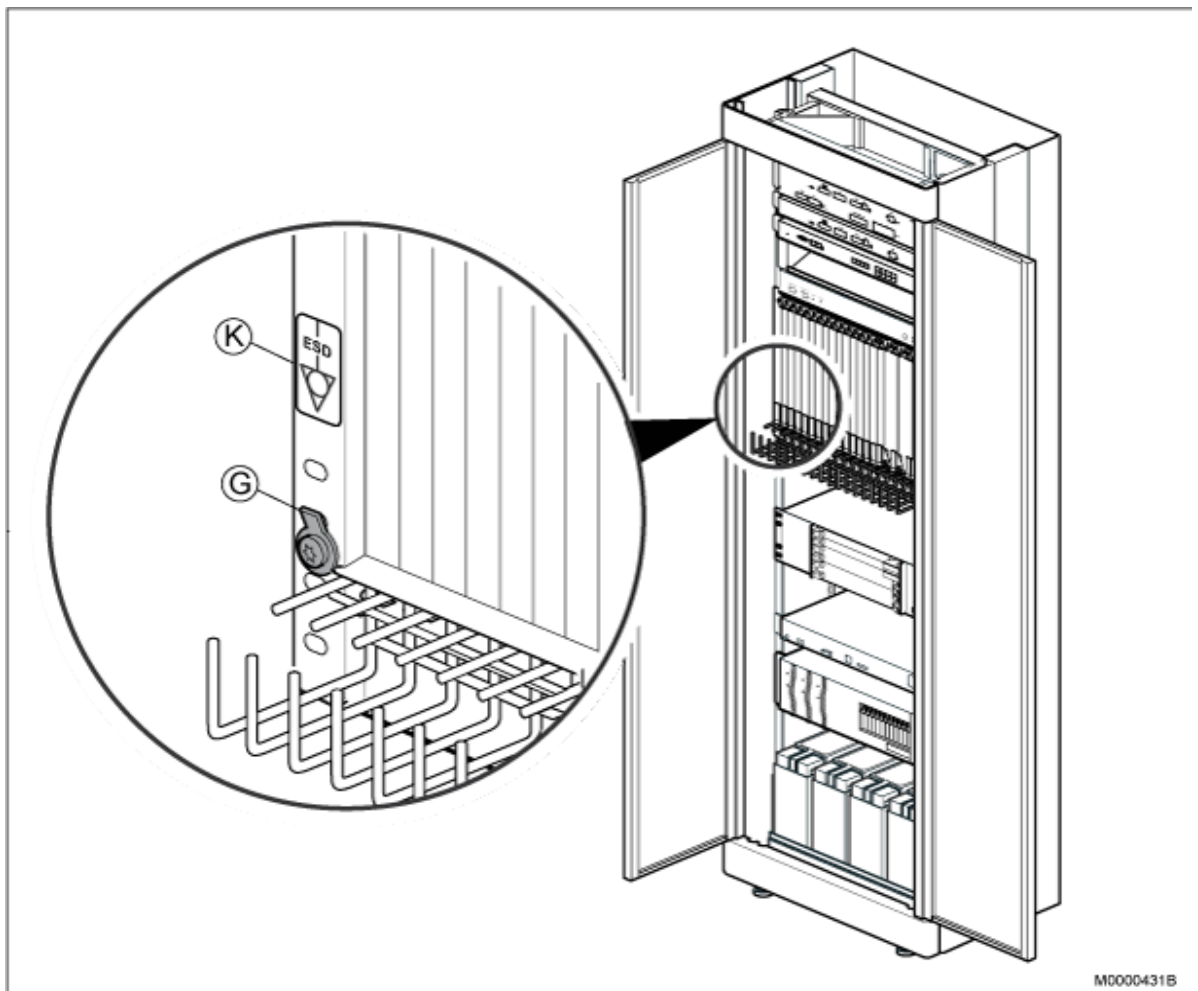


Figure 2: ESD-earth Point Cable Lug SNG 804 23 (G)

2.3

DELIVERY DOCUMENTS

Verify that required documents are accessible:

- Delivery documents (shipping specification)
- CPI documentation library for the MX-ONE
- Server hardware documentation delivered from the server manufacturer

2.4

UNPACKING

To keep a tidy work environment it is recommended to unpack one piece of hardware at a time. Start unpacking the equipment in the following order:

1. Inspect the cases for any external damage.
2. Open the cases and the protecting plastic wrapping, and remove all packing material.
3. Check that the equipment has not been damaged during transport. If equipment has been damaged and must be replaced or repaired at the service shop, report this immediately.
4. Make sure the required material sets are provided with the equipment.
5. Make sure no necessary parts are discarded together with the packing material.
6. Make sure the correct equipment has arrived by comparing the received items with the item list in the shipping specification.
7. Report any missing items to the sender.

3

EARTHING

It is vital that all MX-ONE hardware building blocks are properly connected to a common earth.

Make sure that the different units, the MX-ONE Service Node, the Standard Server, the MX-ONE 1U chassis, the MX-ONE Lite, the MX-ONE Classic, the AC/DC unit and the fan unit, are connected to the common earth when these units are screwed into a 19" rack.

Also make sure that MX-ONE equipment that is located outside of the racks, like, for example, voice recording equipment, are properly connected to the common earth.

At both ends of the grounding conductor the units shall be free from paint or other insulating material.

Note: The earth resistance shall not exceed 10 milli ohms.

3.1

EARTHING THE CABINETS

MX-ONE must be multi-point grounded.

Use the following material sets to ground the BYB 501 cabinets:

Table 2 Grounding Material, Basic

NTM 503 46/122 Earthing Material, Basic			
Pos.	Title/Function	Product Number	Quantity
A	Earth bar	SNV 103 04	1
B	Earth clip	105 4546/1	5
C	CABLE 50 mm ² , isolated	TFL 104 510/08	25 M

Table 3 Earthing Material, Extra

NTM 503 46/123 Earthing Material, Extra			
Pos.	Title/Function	Product Number	Quantity
B	Earth clip	105 4546/1	5
C	CABLE 50 mm ² , isolated	TFL 104 510/08	25 M

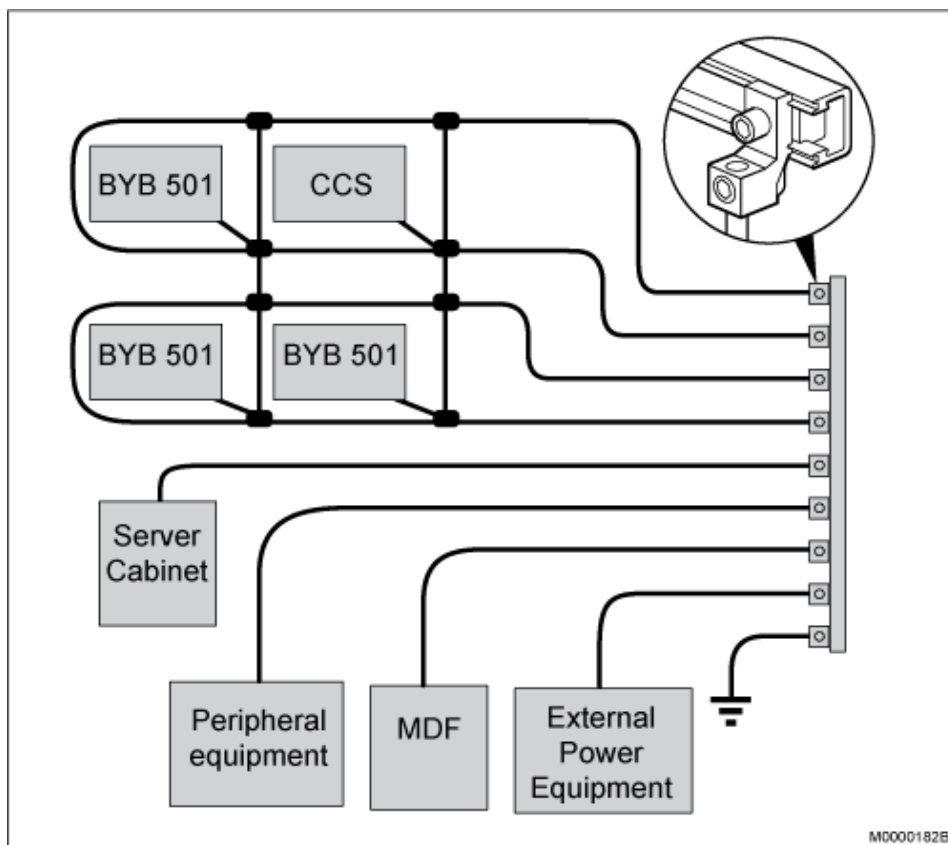


Figure 3: Grounding Overview

Table 4 Cabinet Earthing Set

16/BYB 501 Cabinet earthing set			
Pos.	Title/Function	Product Number	Quantity
A	EARTHING CABLE	SXK 118 0154/2	1
B	SCREW M 8X25	78/SBA 178 080/0250	2
C	CONTACT WASHER	SCL 100 165/84	2
D	CONNECTOR	NED 901 13/1	1

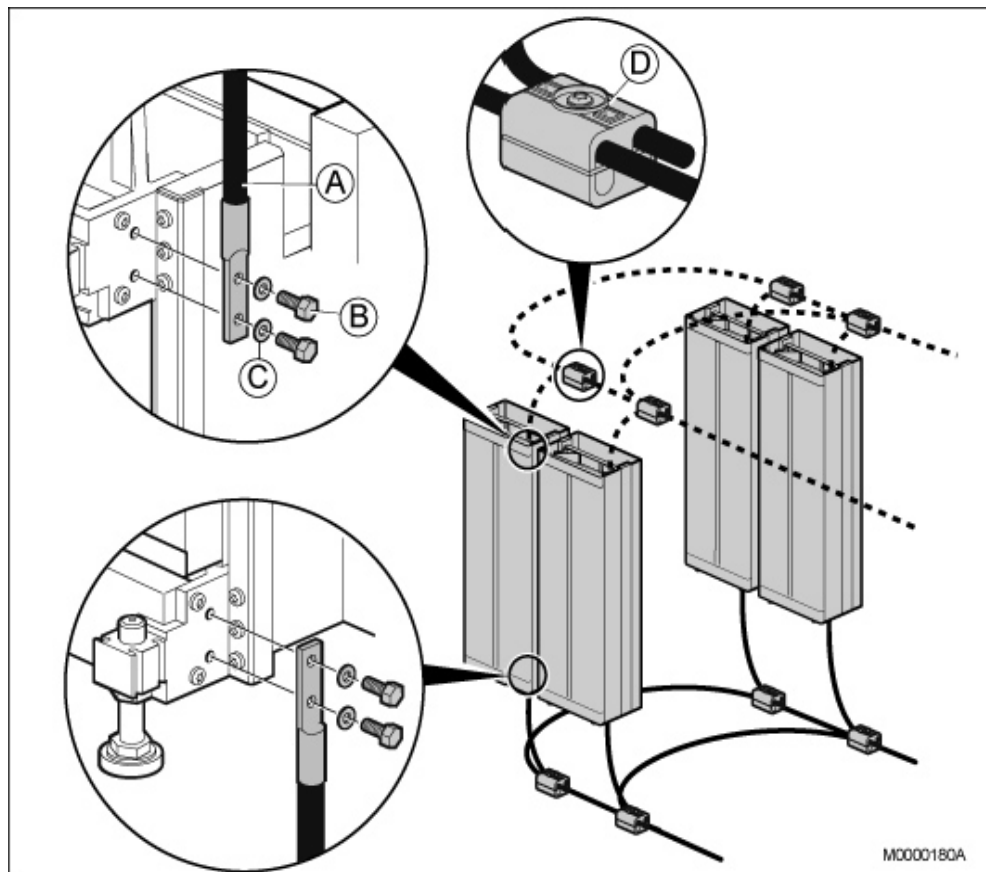


Figure 4: Grounding of BYB 501 Cabinet

Continue the grounding procedure by connecting adjacent cabinets with an earthing bar.

3.1.1

MOUNTING EARTHING BAR

Table 5 Material Set for Earthing Bar

15/BYB 501 Material set for earthing			
Pos.	Title/Function	Product Number	Quantity
B	EARTHING BAR	SXA 210 033/1	2
A	BAR NUT (only for old cabinet)	SXA 123 0687/2	4
C	SCREW M8X16 (only for old cabinet)	03/SBA 178 080/0160	8
C	SCREW M8X25	78/SBA 178 080/0250	8
	CONTACT WASHER (to be placed between earthing bar and cabinet)	SCL 100 165/84	8

To mount the set of 15/BYB 501 in a side-by-side cabinet setup, perform the following steps:

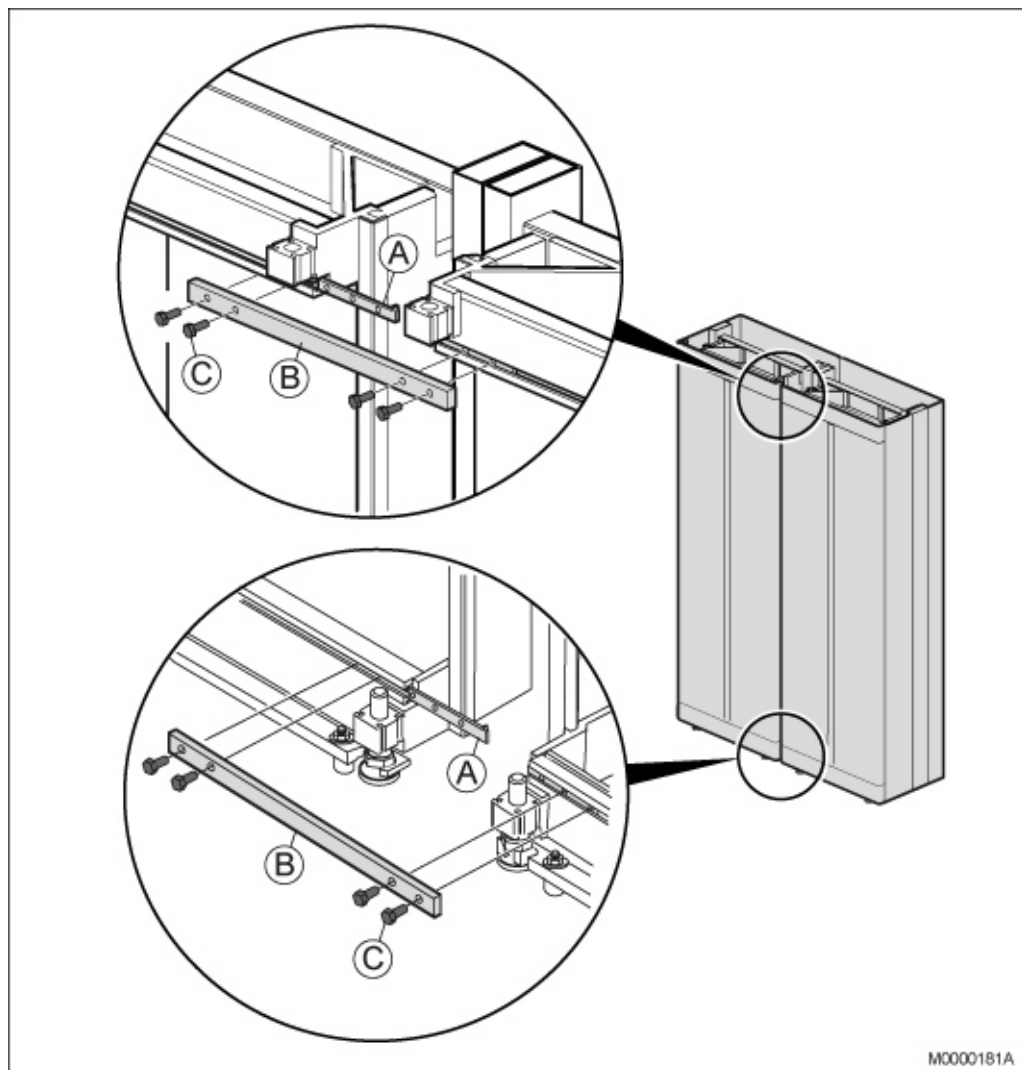


Figure 5: Mounting the Earth Bar

1. Install the earthing bars (B) with screws (C) and, a washer between the earth bar and the cabinet, see Figure 5:Mounting the Earth Bar on page 10. (Bar nut (A) is not used in some cabinet)
2. Install the earth bars between each cabinet at the top and bottom.
3. Verify that the torque of all mounting screws is set to 20 ± 1 Nm.