MIP 5000 VoIP Radio Console Quick Installation Guide
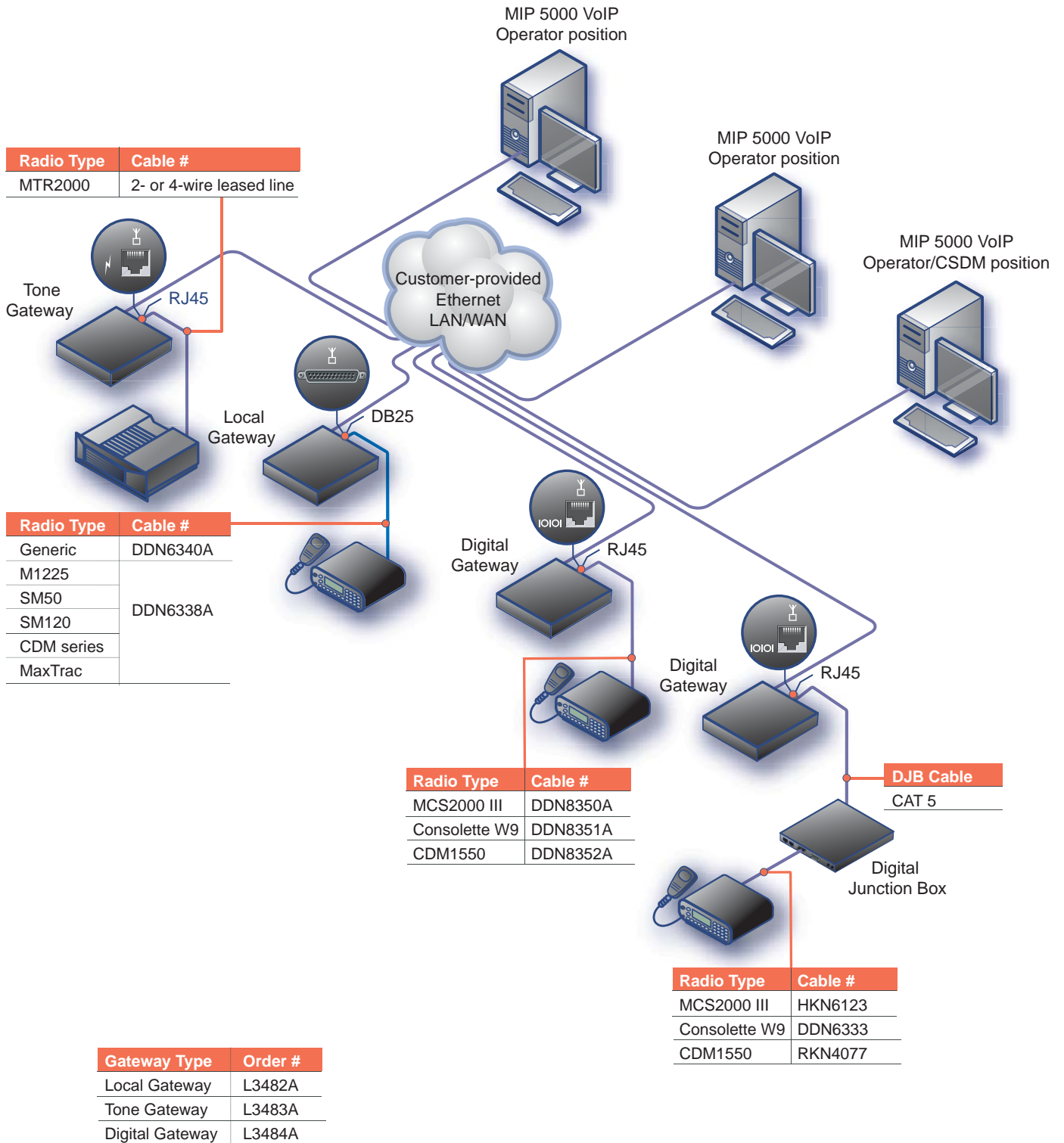
MOTOROLA

Documentation

MIP 5000 VoIP Radio Console Installation CD

MIP 5000 VoIP Radio Console Installation and Configuration Manual P/N: 6881013Y35

This guide offers a broad overview of the installation procedures. For more detailed information, consult the installation and configuration manual.

RO-99-2124

MIP 5000 VoIP
Operator position

MIP 5000 VoIP
Operator position

MIP 5000 VoIP
Operator/CSDM position

Radio Type	Cable #
MTR2000	2- or 4-wire leased line

Tone Gateway

RJ45

Customer-provided
Ethernet
LAN/WAN

Local Gateway

DB25

Digital Gateway

RJ45

Digital Gateway

RJ45

Radio Type	Cable #
Generic	DDN6340A
M1225	
SM50	DDN6338A
SM120	
CDM series	
MaxTrac	

Radio Type	Cable #
MCS2000 III	DDN8350A
Consolette W9	DDN8351A
CDM1550	DDN8352A

DJB Cable	
CAT 5	

Digital Junction Box

Radio Type	Cable #
MCS2000 III	HKN6123
Consolette W9	DDN6333
CDM1550	RKN4077

Gateway Type	Order #
Local Gateway	L3482A
Tone Gateway	L3483A
Digital Gateway	L3484A

Step 1. Preparation

1. Prepare the site before beginning the installation. See Chapter 2, "Site Preparation" in the *MIP 5000 VoIP Radio Console Installation and Configuration Manual.*

   Important: Make sure there is a network access port in each location where a MIP 5000 Gateway is to be installed. An additional port is recommended for use by service personnel.

2. If required, install the electronics equipment shelves intended to hold the MIP 5000 Gateway units.

3. Consult with the network administrator to determine whether the network uses static or dynamic IP addressing.
   - If static, IP addresses are used to identify gateways and consoles.
   - If dynamic, Host Names are used to identify gateways and consoles.

4. Collect the MAC address of each MIP 5000 Gateway to be installed. Use a photocopy of the **Discovery Form** on the back of this guide to make a list that identifies which MIP 5000 Gateway is for which radio channel and what the MAC address is.
   - The MAC address (physical address) of each MIP 5000 Gateway appears on a label on the bottom of the unit.

5. Collect a Host Name (dynamic) or IP address (static) for each gateway.

   Note: Each gateway has a default Host Name set equal to its MAC address: 12 hexadecimal digits (without hyphens). You do not need to set gateway Host Names, unless you want to change their default values.
   - If static addressing is used, get IP addresses for the gateways from the system administrator.
   - Write the Host Name or IP address for each gateway on the **Discovery Form**.

6. On the **Discovery Form**, write the MAC address (Physical Address) and Host Name or IP address of each computer on which the MIP 5000 console program is to be installed.
   - Click **Start > Run**, type "command" and click **OK**.
   - In the Command Prompt window, type "ipconfig /all" and press ENTER.
   - Write the Physical Address (MAC address) and Host Name or IP address on the **Discovery Form**.
   - (If there is more than one Physical Address, use the one for the "Local Area Connection" or consult with the network administrator.)
   - The network administrator should be responsible for implementing the assigned IP address or Host Name on each console computer.

   Note: If the console computers are already in service on the network, they already have a Host Name or fixed IP address. In this case, no further action is required to implement the assignment of Host Names or IP addresses.

7. If your network uses dynamic addressing, have the network administrator reserve IP addresses in the DHCP server for all gateways and consoles using the MAC addresses on the **Discovery Form**.

Step 2. Administration Software Installation

1. Consult with the network administrator to get the user name and password for a network account with administrator rights for use while installing software on the CSDM and dispatcher computers.

2. Install the CSDM program on a computer in the network. This computer can also serve as a console, but must be able to run 24 hours a day, 7 days a week.
   - Insert the CD-ROM, select **Install CSDM.**
   - Depending on Windows security settings, security warnings may appear. Click **Yes** or **Run**, as appropriate to continue installation, then follow the installation wizard.
   - Record Host Name or IP address of CSDM computer to enter as **TFTP Server** address during console installation.

3. Install the Secure Shell (SSH) program included on the MIP 5000 installation CD-ROM.
   - Select **Install SSH**.
   - Depending on Windows security settings, security warnings may appear. Click **Yes** or **Run**, as appropriate to continue installation, then follow the installation wizard.

   Note: We recommend that you install the SSH program on the same computer as the CSDM program.

1. Use the CSDM to configure the system.
   - Select **Configuration > System > Parameters** and enter a **Console Configuration Password**
     Note: If your network spans two or more subnets, increase **Multicast Time-to-Live** (TTL).
   - Select **Configuration > Console > Parameters** to add a **Console** for each console in the system.
     - Enter **MAC Address** and **Host Name or IP Address** for each console, as recorded on the **Discovery Form** at Step 1, Task 5.
   - Select **Configuration > Radio Channel > Parameters** to add a **Radio Channel** for each MIP 5000 Gateway in the system.
     - Enter **MAC Address** and **Host Name or IP Address** for each gateway, as recorded on the **Discovery Form** at Step 1, Task 4.
     - Select **Radio Channel** features as required, especially features related to jumper settings for Local and Tone models. See the **I/O** area of the **Radio Channel > Parameters**, **General** tab.
2. Use the CSDM to generate the configuration files for the MIP 5000 system.
   - Select **Options > Generate Configuration Files** and click **Generate**.

⚠️ **Important:** The configuration files must be generated before you can start the MIP 5000 VoIP Radio Console program.

Step 4. Gateway Preparation

1. Open each Local or Tone MIP 5000 Gateway box that needs to have jumpers set to support a required feature. Set the jumpers as required using the following tables. Do not remove jumpers S1 or S18.
   - Tone defaults: S4, S12, S13, S14, S17, and S18 are IN; S15, S16 are OUT
   - Local defaults: S7, S8, S10, and S12 are IN.

Tone Control MIP 5000 Gateway

Features	Jumpers								Relay	Opto	Common
	S4	S12	S13	S14	S15	S16	S17	S18			
PTT Relay	--	IN*	--	IN	OUT	OUT	--	IN	(K3) Pin 7		Pin 1
Encryption†	--	IN*	IN	IN	OUT	OUT	IN	--	(K1) Pin 8	Pin 2	Pin 1
COR Detect‡	--	--	--	--	OUT	OUT	IN	--		Pin 2	
High Speed Mute‡	--	--	--	--	OUT	OUT	IN	--		Pin 2	
Takeover†	--	--	OUT	OUT	IN	IN	--	--	J5 Pin 1 = Parallel Audio+ J5 Pin 8 = Parallel Audio–		
LOBL	IN	--	--	--	OUT	OUT	--	IN		Pin 7	
Repeat	--	IN*	IN	IN	OUT	OUT	--	--	(K1) Pin 8		Pin 1
Leased Line**	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT			
Leased Line** with Takeover	OUT	OUT	OUT	OUT	IN	IN	OUT	OUT	J5 Pin 1 = Parallel Audio+ J5 Pin 8 = Parallel Audio–		

Local Control MIP 5000 Gateway

Features	Jumpers			
	S7	S8	S10	S12
16 Freq Encoded	IN	IN	--	--
4 Freq Decoded	OUT	OUT	--	--
2 Freq	OUT	OUT	--	--
4 Private Lines	OUT	OUT	--	--
PTT Relay	--	--	--	IN*
Monitor	--	--	IN*	--

* Puts the common pin to ground when IN.
† Encryption & Takeover are mutually exclusive with all options except PTT Relay (use S12 with internal ground) and LOBL.
‡ COR Detect & High Speed Mute are mutually exclusive.
** On a leased line, the Tone Control gateway does not support PTT Relay, Encryption, COR Detect, HSM, LOBL or Repeat.

2. For each MIP 5000 Gateway:
   - Connect gateway serial port (IOIOI) to the COM1 port on a computer using a null modem cable
   - Establish a HyperTerminal session on COM1 with 57,600 bps, 8 data bits, no parity, 1 stop bit. and no flow control.
   - Use the Gateway Startup Menu to set the initial configuration parameters:
     - TFTP server address (Host Name or IP address of CSDM computer)
     - Gateway addressing type (if your network uses static IP addressing)
     - Gateway IP address (if your network uses static IP addressing)
3. If required, fasten each MIP 5000 Gateway unit into its position in the rack unit using mounting clips.
4. Connect the MIP 5000 Gateway units to the network using the Ethernet port (⊟).
5. Interrupt the power to the gateway after connection to the network to force a database upload.
6. Connect the radio equipment to the MIP 5000 Gateway units using the Radio port (⊻).

Step 5. Console Preparation and Software Installation

Note: Repeat each task in this section for each console.

1. Install any required audio devices at each dispatch position (console), such as headsets, speakers, and footswitches.

2. Install the MIP 5000 VoIP Radio Console program on the networked computers identified for this purpose.

    • Insert the CD-ROM, select **Install Console**.
    • Depending on Windows security settings, security warnings may appear. Click **Yes** or **Run**, as appropriate to continue installation, then follow the installation wizard.
    • When prompted to enter the **TFTP Server** address during installation, type the Host Name or IP address of the CSDM computer, as recorded in Step 2, Task 2.

    Repeat for each console.

3. Use the MIP 5000 Control Panel applet to configure each console computer, if required.

    • Specify audio devices (speakers and microphones) and input devices (PTT).
    • Enable or disable options like Caller ID and log files, change file locations.

4. Use Control Panel to set Windows Firewall exceptions at each dispatch computer. Exceptions are:

    • Console program (MIP5000.exe)
    • DCPM program (DCPM.exe)

5. Use Control Panel to set Windows Firewall exceptions at the CSDM computer. Exceptions are:

    • TFTP Server program (TFTP Server.exe)
    • Secure Shell program (PuTTY.exe)

6. The first time you start the MIP 5000 VoIP Radio Console program on each console it prompts you for an activation code to activate the product license.

    • To activate by Internet, enter the **Activation Code** included with the CD-ROM for each console position and follow directions to completion.
    • To activate by phone, call the number displayed, read the **Challenge Code** aloud, enter the *Response Code* and **License Data** provided by the support center and follow directions to completion.

7. Make radio channels available to each console.

    • Log in to the console program and select **Edit > User Preferences.**
    • Check **Allow layout reconfiguration and temporary supervisor** and enter the **Console Configuration Password**
    • Select **Edit > Resources** and drag channel resource to one of the available windows.

    Important: Make sure that the configuration files have been generated and that the CSDM computer is running when you start the console program. You can complete activation before this, but you cannot log in for the first time.

8. At each console, place calls to test TX and RX audio and issue commands to test radio controls on each radio channel to verify the installation.

For troubleshooting guidelines, consult the *MIP 5000 VoIP Radio Console Installation and Configuration Manual* (6881013Y35).

Discovery Form

	MAC Address	Host Name or IP Address	OPR Name/ID
CSDM/TFTP Computer			
MIP 5000 Consoles			
Computer 1			
Computer 2			
Computer 3			
Computer 4			
Computer 5			
Computer 6			
Computer 7			
Computer 8			
MIP 5000 Gateways			**Channel Name/ID**
Gateway 1			
Gateway 2			
Gateway 3			
Gateway 4			
Gateway 5			
Gateway 6			
Gateway 7			
Gateway 8			

⚠️ **Important:** *Your network must support multicast addressing.*   (Photocopy this form as required.)

How to get MAC address and IP info for **console computers**

1. Under the **Start** menu select **Run**
2. Type "command" and press ENTER
3. Type "ipconfig /all" and press ENTER
4. Write down MAC address (Physical Address) and Host Name or IP address

5. Repeat these steps for each console computer

How to get MAC address and IP info for **gateways**

1. The MAC address appears on a label on the bottom of the MIP Gateway
2. For dynamic addressing, use the default Host Name (same as MAC address)
3. The IP address, if required, should be supplied by your IT department

4. Repeat these steps for each MIP Gateway

? Contact 1-800-221-7144

MOTOROLA