

TANDBERG MPS J1 Release Document

TANDBERG

D50301, Rev 1.3

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1. Document Revision History

- Rev 1.3 - Included Release of J1.2 Minor Release
- Rev 1.2 - Supplemental notes and corrections to Rev 1.1
- Rev 1.1 - Included Release of J1.1 Minor Release
- Rev 1.0 - Included Release of J1.0, Initial Version

2. Release Notes for the TANDBERG MPS Software Version J1.2

2.1 Introduction

This release note is to describe the new features and capabilities included in the TANDBERG MPS software version J1.2 released on 11/18/2004.

2.2 New Feature Overview

J1.2 is a maintenance release only and does not include any new features or functionality when compared to J1.1.

2.3 Changes and Improvements since previous version

2.3.1 Improved Web Interface

- Improved Web page stability when monitoring conferences
- Added new Web Server certificates for HTTPS
- Fixed incorrect link status shown on “MediaBoard Information” status page

2.3.2 Improved H.243

- Improved stability of H.243 Site Naming

2.3.3 Improved Ethernet

- Fixed issue where Controller Card could not be forced to 100Mbit Full or Half duplex

3. Supplemental Notes for the TANDBERG MPS Software Version J1.1

3.1 Introduction

This release note is to supplement the MPS J1.1 release document Rev 1.1 and to describe new features that were included in the J1.1 software release.

3.2 New Feature Overview

J1.1 software adds the ability to allow for 16 and 32 port configurations.

3.3 Changes and Improvements since previous version

3.3.1 16 Port Configuration

It is now possible to configure the TANDBERG MPS with 1 Media Card which will allow 3 simultaneous conferences with up to 16 audio and 16 video sites.

3.3.2 32 Port Configuration

It is now possible to configure the TANDBERG MPS with 2 Media Cards which will allow 6 simultaneous conferences with up to 32 audio and 32 video sites.

4. Release Notes for the TANDBERG MPS Software Version J1.1

4.1 Introduction

This release note is to describe the new features and capabilities included in the TANDBERG MPS software version J1.1 released on 9/29/2004.

4.2 New Feature Overview

J1.1 is a maintenance release only and does not include any new features or functionality when compared to J1.0.

4.3 Changes and Improvements since previous version

4.3.1 Improved API

Improved XML and API interface for better integration with TMS 9.

4.3.2 Improved Web Interface

- Fixed “Page Cannot Be Displayed” when selecting “Misc.” under “System Configuration.
- Added “MediaBoard Information” status page under “System Status”.
- Added the ability to configure Ethernet 2 on the System Controller from the Web.
- Added the ability to configure MediaBoard Ethernet speeds from the Web.
- Added conference links to the top of the main “Overview” page.

4.3.3 Improved H.243

- Improved H.243 Site Naming
- Improved H.243 Floor Requests
- Improved H.243 Cascading

4.3.4 Gatekeeper RAS

- Fixed issue where MPS would not supply Endpoint Identifier when sending a LWRRQ message to a gatekeeper

4.3.5 Improved Video

- Improved video quality when in CP4 mode
- Improved SIF video scaling when in CP5+1 and CP7+1 modes

4.3.6 Duo Video / H.239

- Removed the ability to send Duo Video/H.239 to a 64k participant

5. Release Notes for the TANDBERG MPS Software Version J1.0

5.1 Introduction

This release note is to describe the new features and capabilities included in the TANDBERG MPS software version J1.0 released on 7/8/2004.

5.1.1 New Product Abstract

The TANDBERG MPS (Media Processing System) is the third addition to TANDBERG's Multipoint technology product line. The MPS is built upon TANDBERG reliability and is feature rich, providing support for the latest ITU standards. Built upon the latest technology, the MPS provides scalability through a modular design, growing with the organization's needs.

5.2 New Feature Overview

5.2.1 Video

5.2.1.1 H.264

The TANDBERG MPS supports the H.264 video algorithm, enabling participants to enjoy exceptional video quality at half the bandwidth compared to older video compression algorithms.

Availability: All MPS configurations

Restrictions: None

5.2.1.2 PC Resolutions

The TANDBERG MPS supports the presentation of PC images in XGA, SVGA or VGA format, giving users a crisp, clear image as if it were being presented locally.

Availability: All MPS configurations

Restrictions: Requires AVO (Advanced Video Option)

5.2.1.3 CP Layouts

The TANDBERG MPS support multiple Continuous Presence layouts including CP4, CP9, CP16, CP5+1, and CP7+1 as well as Automatic layout adjustment. Below is a chart reflecting the available CP layouts on the MPS and how they function.



Voice Switched will show the current speaker in full screen to all the other participants, regardless of how many participants in the conference. Current speaker will see the previous speaker.



Enhanced CP will automatically select the most suitable picture layouts depending on the number of video participants in the conference. For up to two video participants, both sites will receive a full screen view of the far end. For three to six video participants, the Continuous Presence 5+1 mode is used. For seven and more participants, the Continuous Presence 7+1 mode is used.



Traditional CP will automatically select between Continuous Presence 4 mode, Continuous Presence 9 mode and Continuous Presence 16 mode. For up to two video participants, both sites will receive a full screen view of the far end. For up to four video participants, the Continuous Presence 4 mode is used. For five and up to nine, the Continuous Presence 9 mode is used. For ten and more participants, the Continuous Presence 16 mode is used.



Continuous Presence 4 will split the screen into four equal quadrants where each participant is shown in one quadrant. If there more than four video participants, the last four speakers will be shown. With less than four video participants, the 'empty' quadrants will be black.



Continuous Presence 5+1 will split the screen into one larger quadrant and five smaller quadrants where each participant is shown in one quadrant. The current speaker will be shown in the larger quadrant to all other participants. Current speaker will see the previous speaker in the larger quadrant. If there are more than six video participants, the last six speakers will be shown.



Continuous Presence 7+1 will split the screen into one larger quadrant and seven smaller quadrants where each participant is shown in one quadrant. The current speaker will be shown in the larger quadrant to all other participants. Current speaker will see the previous speaker in the larger quadrant. If there are more than eight video participants, the last eight speakers will be shown.



Continuous Presence 9 will split the screen into nine equal quadrants where each participant is shown in one quadrant. If there more than nine video participants, the last nine speakers will be shown.



Continuous Presence 16 will split the screen into sixteen equal quadrants where each participant is shown in one quadrant.

Availability: All MPS configurations

Restrictions: Requires AVO (Advanced Video Option)

5.2.1.4 CP Autoswitching

If more than 6 participants are connected when running CP5+1 the most passive sites will not be shown in the CP5+1 image unless they start to speak. The CP Autoswitching feature will make it possible to swap these sites with the least active sites in the CP5+1 image. Hence, you will be able to see all participants in a conference, even if they are not speaking. This functionality also works with the CP7+1 layout and there is more than 8 participants connected.

Availability: All MPS configurations

Restrictions: Requires AVO (Advanced Video Option)

5.2.1.5 H.239/Duo Video

The TANDBERG MPS is capable of receiving/transmitting two simultaneous video signals from/to all sites. The MPS has support for both H.239 capable systems as well as Duo Video capable systems. It is also possible to mix H.239 and Duo Video in the same conference. If a site is connected that does not support either, the MPS will transmit the first video signal to that site while still transmitting both signals to all capable sites.

Availability: All MPS configurations

Restrictions: Requires AVO (Advanced Video Option)



5.2.1.6 Customizable Welcome Screen

The TANDBERG MPS allows for a custom Welcome Screen as well as the Password Enquiry, Password Reject, and Encryption Required Screen. New images may be uploaded to the unit via the Web management page as well as deleted.

Availability: All MPS configurations

Restrictions: Images must be JPEG (.jpg) format, non-progressive, and a maximum size of 352x288

5.2.1.7 Video Mute

The TANDBERG MPS allows for video muting sites in ongoing conferences. This can be accessed during conference monitoring by pressing the Video Mute action button . When a participant has been muted the Video Mute action button will change to . Participants that have been Video Muted will not be seen by other participants until un-muted.

Availability: All MPS configurations

Restrictions: None

5.2.2 Audio

5.2.2.1 AAC-LD

The TANDBERG MPS supports the new audio protocol AAC-LD (Advanced Audio Coding-Low Delay) recently ratified by the ITU. This standard provides true CD quality audio, greatly enhancing the user experience.

Availability: All MPS configurations

Restrictions: None

5.2.2.2 Audio Levelling (AGC)

The TANDBERG MPS supports Automatic Gain Control. This ensures that all participants receive the same audio level from all other participants, regardless of the levels transmitted by attenuating strong audio signals and amplifying weak signals.

Availability: All MPS configurations

Restrictions: None

5.2.2.3 Telephone Noise Suppression

The TANDBERG MPS will attenuate noise which normally is introduced when adding mobile phones to a conference. The background noise normally heard when the telephone participant is not speaking will be attenuated.

Availability: All MPS configurations

Restrictions: None

5.2.2.4 Customizable Welcome Sound

The TANDBERG MPS allows for a custom Welcome Sound as well as the Password Enquiry Sound. New sounds may be uploaded to the unit via the Web management page as well as deleted.

Availability: All MPS configurations

Restrictions: Sounds must be 16bit 8 kHz mono Wave (.wav) format

5.2.3 Network

5.2.3.1 Dual IP Networks

Within the MPS it is possible to configure support for 2 IP networks. This will allow video and audio bridging of IP networks with no routing between them. When defining multiple networks within the MPS, it is required to have at least 1 media card on each IP network. Network 1 shall use the RJ-45 Ethernet interface on the front of the system controller and Network 2 shall use the RJ-45 Ethernet interface (labeled Enet2) on the rear (backplane) of the system controller.

5.2.4 Security

5.2.4.1 H.235

The TANDBERG MPS supports H.235 AES and DES encryption for call security. H.235 version 2 and version 3 are supported for compatibility with existing install base.

Availability: All MPS configurations

Restrictions: None

5.2.4.2 Conference Password

The TANDBERG MPS allows for password protected conferences. When password protecting a conference, all dial in participants will be prompted to enter the conference password via DTMF tones before joining the conference. All dial out participants will automatically be joined to the conference.

Availability: All MPS configurations

Restrictions: Only numeric passwords are allowed

5.2.5 Local Management

5.2.5.1 RS-232

The MPS has an RJ-45 serial port on the front of the system controller card that may be used for configuration and administration. This connection will be a CLI (Command Line Interface) and should be used with an appropriate terminal program.

5.2.5.2 LCD Screen

The MPS has an LCD (Liquid Crystal Display) screen on the front of the unit for configuration and status monitoring. This is the preferred method for initial configuration of the MPS IP address.

5.2.6 Remote Management

5.2.6.1 Telnet

The MPS has an embedded telnet server for configuration and administration. The telnet server may be disabled if desired. The telnet service is enabled by default.

5.2.6.2 SSH

The MPS has an embedded SSH (Secure Shell) server for configuration and administration. SSH provides a CLI (Command Line Interface) similar to telnet but over a secure, AES encrypted connection. The SSH server may be disabled if desired. The SSH service is enabled by default.

5.2.6.3 HTTP

The MPS has an embedded web server for configuration and administration. Conference monitoring may also be performed via this interface. The server may be disabled if desired. The HTTP service is enabled by default.

5.2.6.4 HTTPS

The MPS has an embedded secure web server for configuration and administration. Conference monitoring may also be performed via this interface. The server may be disabled if desired. The HTTPS service is enabled by default.

5.2.6.5 SNMP

The MPS has an embedded SNMP manager for proactive reporting of problems and systems status. Programs such as TANDBERG Management Suite (TMS) and HP OpenView can make use of this feature. The SNMP manager can be disabled if desired. The SNMP service is enabled by default.

5.2.6.6 XML

The MPS can be accessed through XML and SOAP. This is designed for integration into 3rd party management applications.

5.2.7 Reliability

5.2.7.1 Transcoding

The MPS supports audio and video transcoding. This allows participants to connect at the highest possible algorithms. This feature is standard, inherent and ensures seamless connectivity by all participants including legacy systems.

Availability: All MPS configurations

Restrictions: None

5.2.7.2 Speed Matching

The MPS supports speed matching, allowing participants to connect at any speed up to the maximum allowed in the conference. This feature is standard, inherent and ensures seamless connectivity by all participants including legacy systems.

Availability: All MPS configurations

Restrictions: None

5.3 Supplemental Notes to Manuals

5.3.1 Software Versions

There are 2 versions of the TANDBERG MPS available

- 48+48** - Allows for 48 video and 48 telephone sites, total 96 ports
- 32+32** - Allows for 32 video and 32 telephone sites, total 64 ports
- AVO** - All configurations available with AVO option

5.3.2 References/Related Documents

TANDBERG Website – <http://www.tandberg.net>

See the following documents for more information on the TANDBERG MPS:

- D1337301 TANDBERG MPS User's Manual
- D1333701 TANDBERG MPS Installation Sheet

5.3.3 Network Support

The TANDBERG MPS software version J1.0 is an IP only release. Future versions of the MPS, available in Q4-2004, are to include ISDN PRI and Serial (V.35/RS449/RS530/RS366).

5.3.4 Layer 4 Ports used by the system

Function	Port	Type	Direction
Gatekeeper RAS	1719	UDP	↔
Gatekeeper Discovery	224.0.1.41:1718	UDP	↔
Q.931 Call Setup	1720	TCP*	↔
H.245 / Q.931	Range 5555 – 6555	TCP	↔
Video	Range 2326 – 2837	UDP	↔
Audio	Range 2326 – 2837	UDP	↔
Data / FECC	Range 2326 – 2837	UDP	↔
FTP (control)	21	TCP*	↔
SSH	22	TCP*	↔
Telnet	23	TCP*	↔
Telnet Challenge	57	TCP	↔
HTTP	80	TCP*	↔
HTTPS	443	TCP	↔
SNMP (Queries)	161	UDP	↔
SNMP (Traps)	962	TCP	=> (outgoing from MCU)
FTP (Data)	1026	TCP	↔

(*) Listening sockets

Outgoing H.323 call:

First call uses 5555 for outgoing Q.931 and 5556 for H.245, next uses 5557 for Q.931 and 5558 for H.245, etc.

Incoming H.323 call:

First call uses 5555 for H.245, second 5556 etc. Disconnecting a site in a meeting will not free up available 55XX ports until the whole conference is down.

5.4 Changes and Improvements since previous version

- Version J1.0 is the initial release of the TANDBERG MPS

5.5 Interoperability

The following systems have been tested and verified compatible with this software release

5.5.1 MCU Interoperability

Equipment	Software Revision
Accord MGC 100	6.00.65
Ezenia! MCS 2000	6.3.0.1
TANDBERG MCU	D3.2, D3.3
Radvision MCU-30	3.2.113
Radvision OnLan MCU	2.2.1.0
Cisco IPVC 3540	3.2.113

5.5.2 Gateway Interoperability

Equipment	Software Revision
TANDBERG Gateway	G2.0
Radvision GW -P20	2.0.1.8
Radvision L2W GW	2.2.3.2.5

5.5.3 Gatekeeper Interoperability

Equipment	Software Revision
CISCO MCM	12.2(13)T5
TANDBERG Gatekeeper	N1.0
RADVision ECS 100/400	3.5.1.2
Ezenia Encounter 3000	2.0.0.1

5.5.4 Firewall Interoperability

Equipment	Software Revision
CISCO PIX	6.3 (2)

5.5.5 H.320 Endpoint Interoperability

Equipment	Software Revision
TANDBERG 500-6000/8000	B1.1, B2.3, B3.4, B4.3, B5.1, B5.11, B6.1, B7.0, B8.4, B9.0, E1.1, E2.0, E3.4, E4.0
TANDBERG MXP	F1.0
Polycom iPower 9000	6.0.0.315
Polycom iPower 970	6.0.0.315
Polycom iPower 680	5.3.0.1202
Polycom ViewStation FX	6.0.1
Polycom VS	6.0.1
Polycom MP 512	7.5.2
Polycom SP 384	7.5.2

Polycom Via Video	5.1.1.1009
Polycom VSX7000	5.1, 5.1.1
Polycom ViewStation EX	6.0.1
Sony 1600	3.33
Sony 6000	5.02
Sony PCS-1	2.20
VTEL Galaxy	2.2.0.070

5.6 Known Limitations

- AAC-LD is not compatible with the 14 KHz AAC implementation from Sony. Sony's implementation is not based on the ITU MPEG-4 AAC-LD standard
- H.239 between TANDBERG systems and Sony PCS-1 units does not currently function due to Sony's implementation of the H.239 standard. The R&D departments of both companies are currently working together to resolve the issue.
- H.239 between TANDBERG systems and Polycom VSX7000 does not work correctly. The TANDBERG MPS has to send the PC presentation to the Polycom VSX7000 twice to get H.239 to function. Polycom VSX7000 is displaying a PC presentation on the 1st monitor and not on the 2nd monitor. The R&D departments of both companies are currently working together to resolve the issue.
- H.239 between TANDBERG systems and Aethra Vega Star Gold does not currently function due to Aethra's implementation of the H.239 standard. The R&D departments of both companies are currently working together to resolve the issue.