

Test of: Polycom Inc RealPresence Trio 8500

To: FCC CFR 47 Part 15B; ICES-003 Issue 6:
2016

Test Report Serial No.: POLY35-U8 Rev A



TEST REPORT
FROM



Test of Polycom Inc RealPresence Trio 8500

To FCC CFR 47 Part 15B & IC ICES-003

Test Report Serial No.: POLY35-U8 Rev A

This report supersedes NONE

Manufacturer: Polycom Inc.
6001 America Center Dr.
San Jose, California 95002
USA

Product Function: Conference Phone/Video Conference

Copy No: pdf Issue Date: 20th July 2017

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.

575 Boulder Court,
Pleasanton, CA 94566 USA
Phone: +1 (925) 462-0304
Fax: +1 (925) 462-0306
www.micomlabs.com



TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory



Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 3 of 42

This page has been left intentionally blank

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



TABLE OF CONTENTS

1.	ACCREDITATION, LISTINGS & RECOGNITION	5
1.1.	Test Accreditation.....	5
1.2.	Recognition	6
1.3.	Product Certification	7
2.	DOCUMENT HISTORY	8
3.	TEST RESULT CERTIFICATE	9
4.	REFERENCES AND MEASUREMENT UNCERTAINTY	10
4.1.	Normative References.....	10
4.2.	Test and Uncertainty Procedures	11
5.	TEST SUMMARY	12
6.	PRODUCT DETAILS AND TEST CONFIGURATIONS	13
6.1.	Test Program Scope	13
6.2.	EUT Details	19
6.3.	External A.C/D.C. Power Adaptor.....	20
6.4.	Cabling and I/O Ports	20
6.5.	Antenna Details.....	20
6.6.	Equipment Details	21
6.7.	Equipment Modifications	21
6.8.	Deviations from the Test Standard	21
6.9.	EUT Configurations.....	22
6.9.1.	<i>EUT Configuration - Radiated Emissions:</i>	22
7.	TEST RESULTS	24
7.1.	EMC EMISSIONS TEST RESULTS	24
7.1.1.	<i>Radiated Emissions</i>	24
7.1.2.	<i>AC Mains Power Input/Output Ports</i>	32
8.	PHOTOGRAPHS	38
8.1.	Radio Emissions < 1 GHz.....	38
8.1.	Radiated Emissions 1 - 6 GHz.....	39
8.2.	AC Wireline Emissions	40

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. Test Accreditation

MiCOM Labs, Inc. an accredited laboratory complies with the international standard EN ISO/IEC 17025. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; <http://www.a2la.org/scopepdf/2381-01.pdf>



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



1.2. Recognition

MiCOM Labs, Inc has widely recognized Electrical testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA** countries. Our test reports are widely accepted for global type approvals.

Country	Recognition Body	Status	Phase	Identification No.
model	Federal Communications Commission (FCC)	TCB	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2 4143A-3
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	APEC MRA 2	RCB 210
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA	NB 2280
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)	CAB	APEC MRA 1	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)	CAB	APEC MRA 1	
Singapore	Infocomm Development Authority (IDA)	CAB	APEC MRA 1	
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)	CAB	APEC MRA 1	
Vietnam	Ministry of Communication (MIC)	CAB	APEC MRA 1	

**APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement.

Is a recognition agreement under which test lab is accredited to regulatory standards of the APEC member countries

Phase I - recognition for product testing

Phase II – recognition for both product testing and certification

N/A – Not Applicable

**EU MRA – European Union Mutual Recognition Agreement.

Is a recognition agreement under which test lab is accredited to regulatory standards of the EU member countries

**NB – Notified Body

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

1.3. Product Certification

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; <http://www.a2la.org/scopepdf/2381-02.pdf>



United States of America – Telecommunication Certification Body (TCB)

TCB Identifier – US0159

Industry Canada – Certification Body

CAB Identifier – US0159

Europe – Notified Body

Notified Body Identifier - 2280

Japan – Recognized Certification Body (RCB)

RCB Identifier – 210

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 8 of 42

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft		
Rev A	20th July 2017	Initial Release

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

3. TEST RESULT CERTIFICATE

Applicant:	Polycom Inc. 6001 America Center Dr. San Jose, California 95002 USA	Tested By:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton, California 94566 USA
EUT	Wireless LAN Access Point	Tel:	+1 925 462 0304
Model:	RealPresence Trio 8500	Fax:	+1 925 462 0306
S/N:	64167F1D02FA		
Test Dates:	18th June to 3rd July 2017	Website:	www.micomlabs.com

STANDARD(S)
FCC CFR 47 Part 15B & IC ICES-003

TEST RESULTS
EQUIPMENT COMPLIES

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

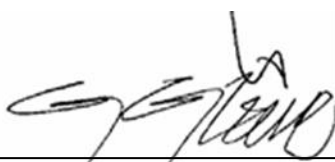
Notes:

- This document reports conditions under which testing was conducted and the results of testing performed.
- Details of the test methods used have been recorded and are kept on file by the laboratory.
- Test results apply only to the item(s) tested.

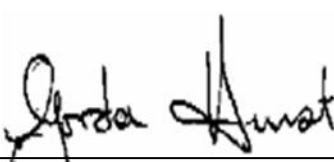
Approved & Released for MiCOM Labs, Inc. by:



TESTING CERT #2381.01



Graeme Grieve
Quality Manager MiCOM Labs, Inc.



Gordon Hurst
President & CEO MiCOM Labs, Inc.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

Ref.	Publication	Year	Title
(i)	FCC CFR 47 Part 15, Subpart B	2016	Title 47 CFR Part 15, Sub Part B; Unintentional Radiators
(ii)	ICES-003	Issue 6 January 2016	Information Technology Equipment (ITE) - Limits and methods of measurement
(iii)	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
(iv)	IEC 55016-2-3	2006	CISPR 16-2-3: "Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurements of disturbances and immunity - Radiated disturbance measurements".
(v)	M 3003	Edition 2 Dec. 2007	Expression of Uncertainty and Confidence in Measurements
(vi)	LAB34	Edition 1 August 2002	The expression of uncertainty in EMC Testing
(vii)	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
(viii)	A2LA	June 2015	R105 - Requirement's When Making Reference to A2LA Accreditation Status



4.2. Test and Uncertainty Procedures

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.



5. TEST SUMMARY

List of Measurements

The following table represents the list of measurements required under CISPR 24 standard.

TABLE OF REQUIRED TESTS – Emissions

Test Standard	Description	Limits	Compliance
FCC Part 15B ICES-003	Radiated Emissions	Class B	Complies
FCC Part 15B ICES-003	Conducted Emissions - ac power I/O port	Class B	Complies

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

6. PRODUCT DETAILS AND TEST CONFIGURATIONS

6.1. Test Program Scope

The scope of the test program was to test the Polycom Inc RealPresence Trio 8500 for compliance against the appropriate emission standards listed within this report in order to satisfy the following standards.

- FCC CFR 47 Part 15, Subpart B - Title 47 CFR Part 15, SubPart B; Unintentional Radiators
- ICES-003 Issue 6 - Information Technology Equipment (ITE) - Limits and methods of measurement

Polycom Inc RealPresence Trio 8500
Top View



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

Polycom Inc RealPresence Trio 8500
Bottom View

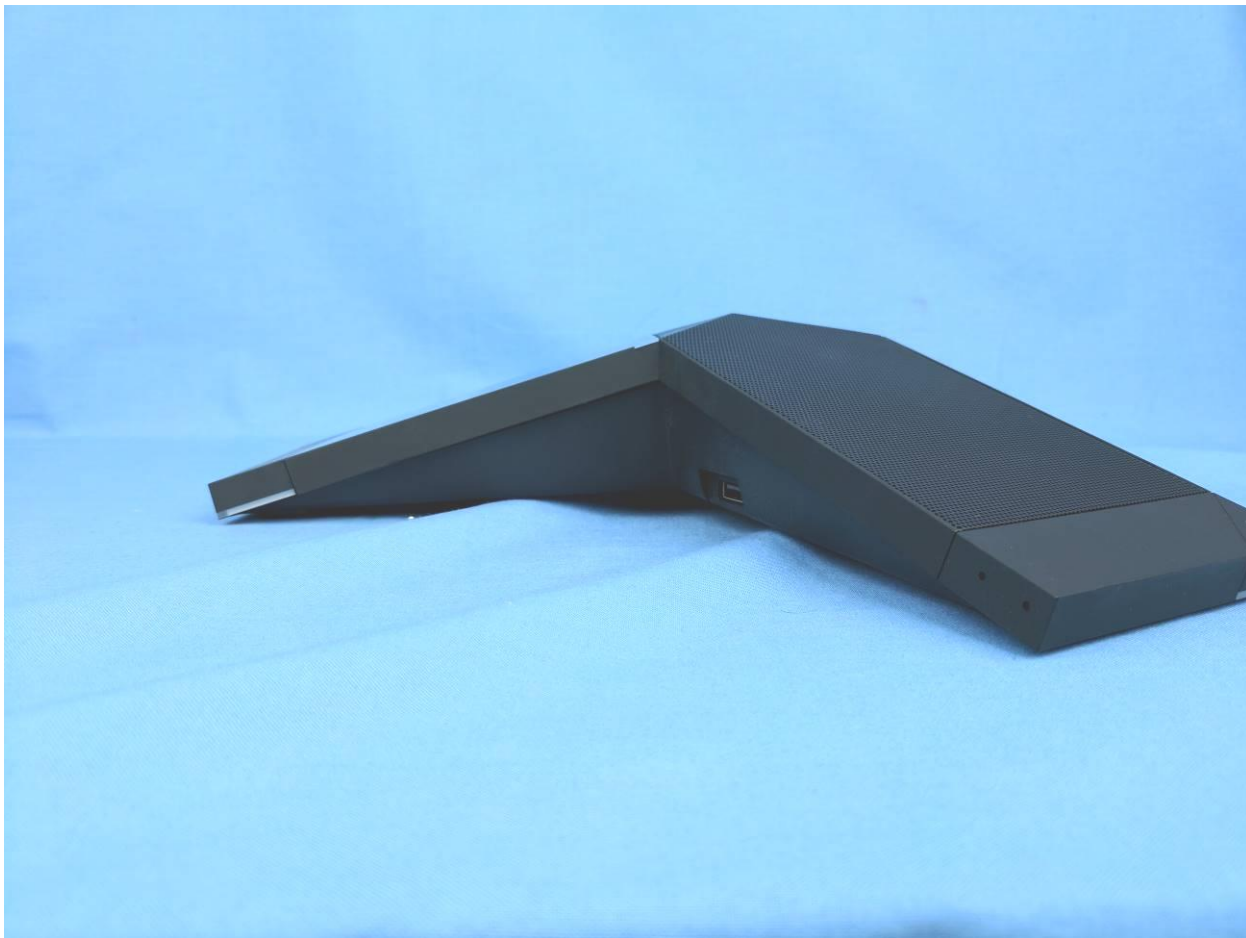


This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

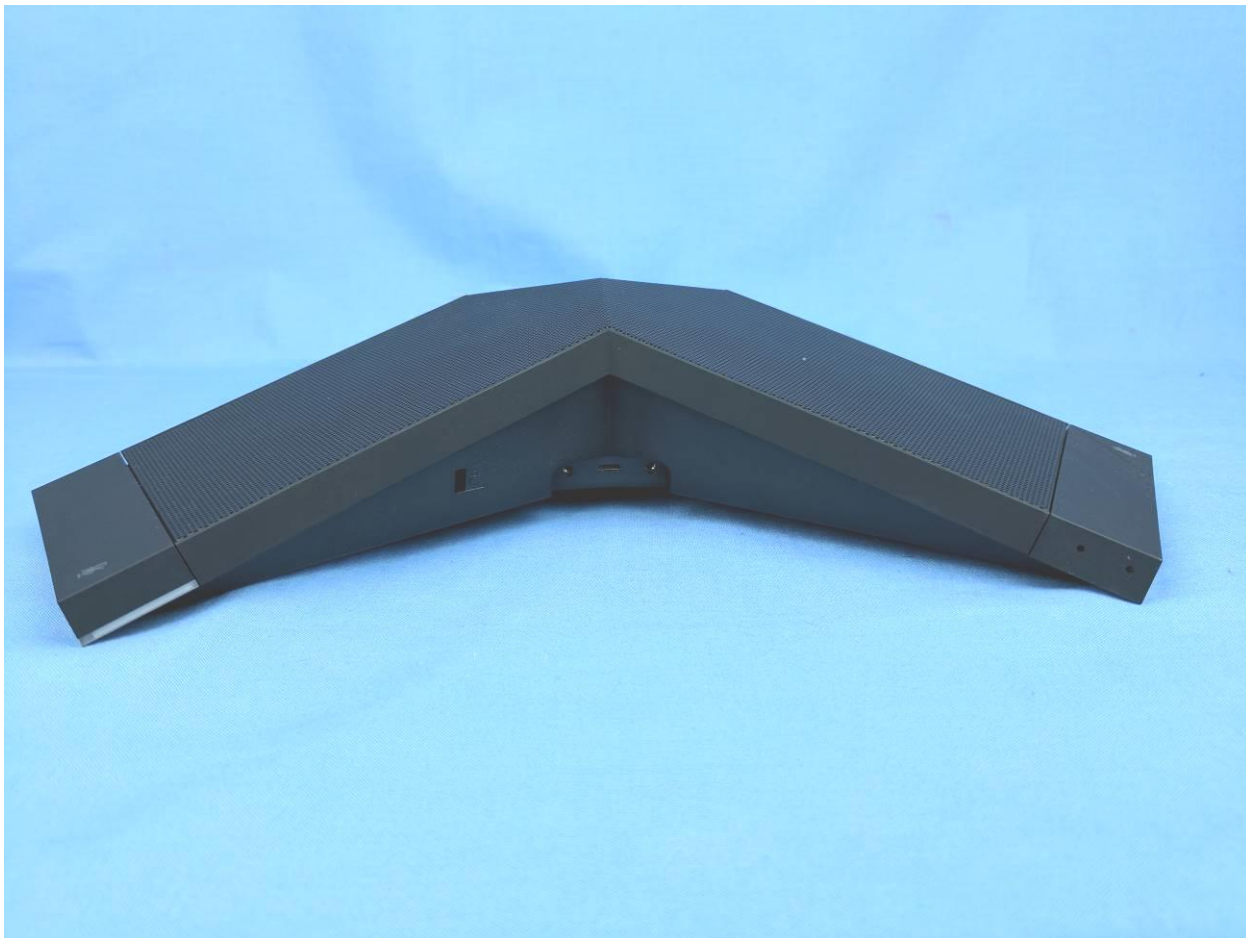
Polycom Inc RealPresence Trio 8500
Side 1 View



Polycom Inc RealPresence Trio 8500
Side 2 View



Polycom Inc RealPresence Trio 8500
Side 3 View



Polycom Inc RealPresence Trio 8500
Ports View





Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 19 of 42

6.2. EUT Details

Detail	Description
Purpose:	Test of the Polycom Inc RealPresence Trio 8500 for compliance to; FCC specification FCC Part 15B; ICES-003 Issue 6.
Applicant:	Polycom Inc. 6001 America Center Dr., San Jose, California 95002 USA
Manufacturer:	Same as Applicant
Test Laboratory:	MiCOM Labs, Inc. 575 Boulder Court, Pleasanton, California 94566, USA
Test report reference number:	POLY35-U8 Rev A
Date EUT received:	26 th of June 2017
Dates of test (from - to):	18th June to 3rd July 2017
No. of Units Tested:	1
Type of Equipment:	Conference Phone/Video Conference
Product Name:	RealPresence Trio 8500
Model No.:	RealPresence Trio 8500
Serial No.:	64167F1D02FA
Type of Technology:	Conference Phone/Video Conference
Installation type:	Fixed installation
Construction/Location for Use:	Indoor
Rated Input Voltage and Current:	POE (POE adaptor sold with unit) 56Vdc
Operating Temperature Range:	Declared Range 0°C to 40°C
ITU Emission Designator:	1M1G1D
Equipment Dimensions:	450 x 150 x 150 mm
Weight:	1kg
Firmware Version	5.5.2.9007
Software Version:	5.5.2.9007
Hardware Version:	Rev. 1
Operating Frequency:	Rated: 50/60 Hz
Primary Function:	Conference Phone/Video Conference
Equipment Secondary Function(s):	None

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



6.3. External A.C/D.C. Power Adaptor

PoE Injector
Phihong Model: POE29U-1AT(PL) Part Number: 221-66700-001 I: 100 – 240 V _{AC} 0.8A MAX, 50-60 Hz O: +56 V _{DC} 0.536 A

6.4. Cabling and I/O Ports

The following is a description of the cable and input, output ports available on the EUT;
Number and type of I/O ports;

Port Type	Port Description	Qty	Screened (Yes/ No)	Length
Ethernet	Ethernet PoE Port	1	Yes	> 3m
USB	USB	1	No	< 3m
Micro-USB	Micro-USB	1	No	< 3m

6.5. Antenna Details

Type	Manufacturer	Model	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
Integral Chip Antenna	Unictron Technologies Corporation	H2U84W1H1S0100	1.4	NA	360	No	2400 - 2500

BF Gain - Beamforming Gain
Dir BW - Directional BeamWidth
X-Pol - Cross Polarization



6.6. Equipment Details

The following is a description of supporting equipment used during the test program.

Type (EUT/Support)	Equipment Description (Including Brand Name)	Mfr.	Model No.	Serial No.
EUT	Conference Phone/Video Conference	Polycom Inc.	RealPresence Trio 8500	64167F1D02FA
Support	PoE Injector	Phihong	POE29U-1AT(PL)	A00122400380FE0041
Support	Switch	Netgear	GS308P	-
Support	Laptop PC	DELL	Latitude E7450	-
Support	Conference Phone/Video Conference	Polycom Inc.	RealPresence Trio 8500	-
Support	Microphone Pods	Polycom Inc.	2201-69085-001 Rev 2	82153100220/1DR
Support	Iphone	Apple	5s	-

6.7. Equipment Modifications

No modifications were required to bring the equipment into compliance:

6.8. Deviations from the Test Standard

No deviations from the test standard were required in order to complete the test program:



6.9. EUT Configurations

6.9.1. EUT Configuration - Radiated Emissions:

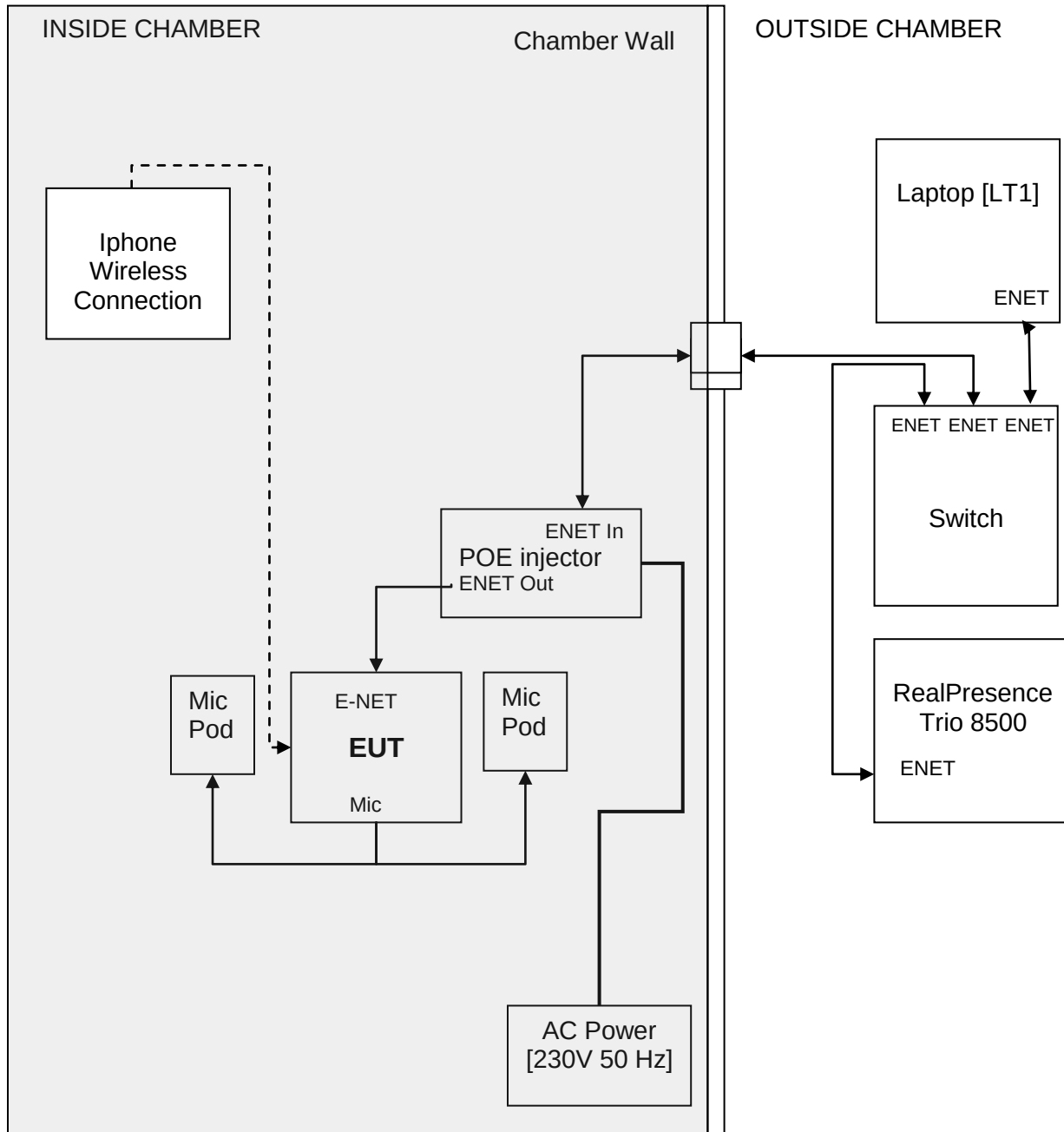
Test setup

The EUT setup consist of PoE injector powered configuration.

Laptop (1) used for a continuously ping communication.

EUT was connected to an Ethernet Switch. Conference call and data was setup between the EUT RealPresence Trio 8500 and conference phone outside of the chamber via a Ethernet Switch. One (1) laptop computer [LT1], was connected to the EUT via the Switch for ping communication. Using PoE adaptor represents worst case scenario in terms of emissions and normal representation use declared by customer.

Diagram of EUT Configuration for Emissions Measurements



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



7. TEST RESULTS

7.1. EMC EMISSIONS TEST RESULTS

7.1.1. Radiated Emissions

FCC, Part 15 Subpart B §15.109
Industry Canada ICES-003 Section 6.2

Test Procedure

Testing 30 – 6,000 MHz was performed in a anechoic chamber using a CISPR compliant receiver. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. To further maximize emissions the receive antenna was varied between 1 and 4 meters. The emissions are recorded with receiver in peak hold mode.

Emissions nearest the limits were chosen for maximization and formal measurement using a CISPR Compliant receiver. Emissions from 30 MHz – 1000 MHz are measured utilizing a CISPR compliant quasi-peak detector with a tuned receiver, using a bandwidth of 120 kHz. Emissions above 1000 MHz are measured utilizing a CISPR compliant average detector with a tuned receiver, using a bandwidth of 1 MHz. Only the highest emissions relative to the limit are listed.



Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.

$$FS = R + AF + CORR - FO$$

FS = Field Strength

R = Measured Spectrum analyzer Input Amplitude

AF = Antenna Factor

FO = Distance Falloff Factor

$$CORR = \text{Correction Factor} = CL - AG + NFL$$

CL = Cable Loss

AG = Amplifier Gain

NFL = Notch Filter Loss or Waveguide Loss

Field Strength Calculation Example:

Given receiver input reading of 51.5 dB μ V; Antenna Factor of 8.5 dB; Cable Loss of 1.3 dB; Falloff Factor of 0 dB, an Amplifier Gain of 26 dB and Notch Filter Loss of 1 dB. The Field Strength of the measured emission is:

$$FS = 51.5 + 8.5 + 1.3 - 26.0 + 1 = 36.3 \text{ dB}\mu\text{V/m}$$

Conversion between dB μ V/m (or dB μ V) and μ V/m (or μ V) are done as:

$$\text{Level (dB}\mu\text{V/m)} = 20 * \text{Log (level (\mu V/m))}$$

$$40 \text{ dB}\mu\text{V/m} = 100 \mu\text{V/m}$$

$$48 \text{ dB}\mu\text{V/m} = 250 \mu\text{V/m}$$



Limits

The ancillary equipment shall meet the class B limits given in CISPR 22, and the limits above 1 GHz shown below.

FCC Spurious Emissions Limits

Limits below 1 GHz:

Class A limits

Frequency(MHz)	Quasi-peak Limit (dB μ V/m)	Measurement Distance (meters)	Quasi-peak Limit (dB μ V/m)	Measurement Distance (meters)
30 to 88	40	10	49.5	3
88-216	43.5	10	54	3
216-960	46.4	10	56.5	3
960-1000	49.5	10	60	3

Class B limits

Frequency(MHz)	Quasi-peak Limit (dB μ V/m)	Measurement Distance (meters)	Quasi-peak Limit (dB μ V/m)	Measurement Distance (meters)
30 to 88	29.5	10	40	3
88-216	33	10	43.5	3
216-960	35.6	10	46	3
960-1000	43.5	10	54	3

Limits above 1GHz:

Frequency(MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Measurement Distance (meters)	Class (A/B)
1 000 to 6000	54	74	3	Class B

Frequency(MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Measurement Distance (meters)	Class (A/B)
1 000 to 6000	60	80	3	Class A

Traceability

Laboratory Measurement Uncertainty	
Measurement uncertainty	+5.6/ -4.5 dB

Method
Measurements were made per work instruction Work instruction WI-07 Radiated Emissions Test

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



Test Equipment Utilized

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	30 Nov 2017
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	02 May 2018
330	Variac 0-280 Vac	Staco Energy Co	3PN1020B	0546	Cal when used
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	15 Aug 2017
373	26III RMS Multimeter	Fluke	Fluke 26 series III	76080720	26 Oct 2017
377	Band Rejection Filter 5150 to 5880MHz	Microtronics	BRM50716	034	16 Aug 2017
396	2.4 GHz Notch Filter	Microtronics	BRM50701	001	16 Aug 2017
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	09 Oct 2017
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	10 Oct 2017
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	09 Oct 2017
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
416	Gigabit ethernet filter	ETS-Lingren	Gigafoil 260366	None	Not Required
447	Rad Emissions Test Software	MiCOM	Rad Emissions Test Software Version 1.0.109	447	Not Required
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	16 Aug 2017
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	16 Aug 2017
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	16 Aug 2017
480	Cable - Bulkhead to Amp	SRC Haverhill	157-157-	480	16 Aug 2017

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

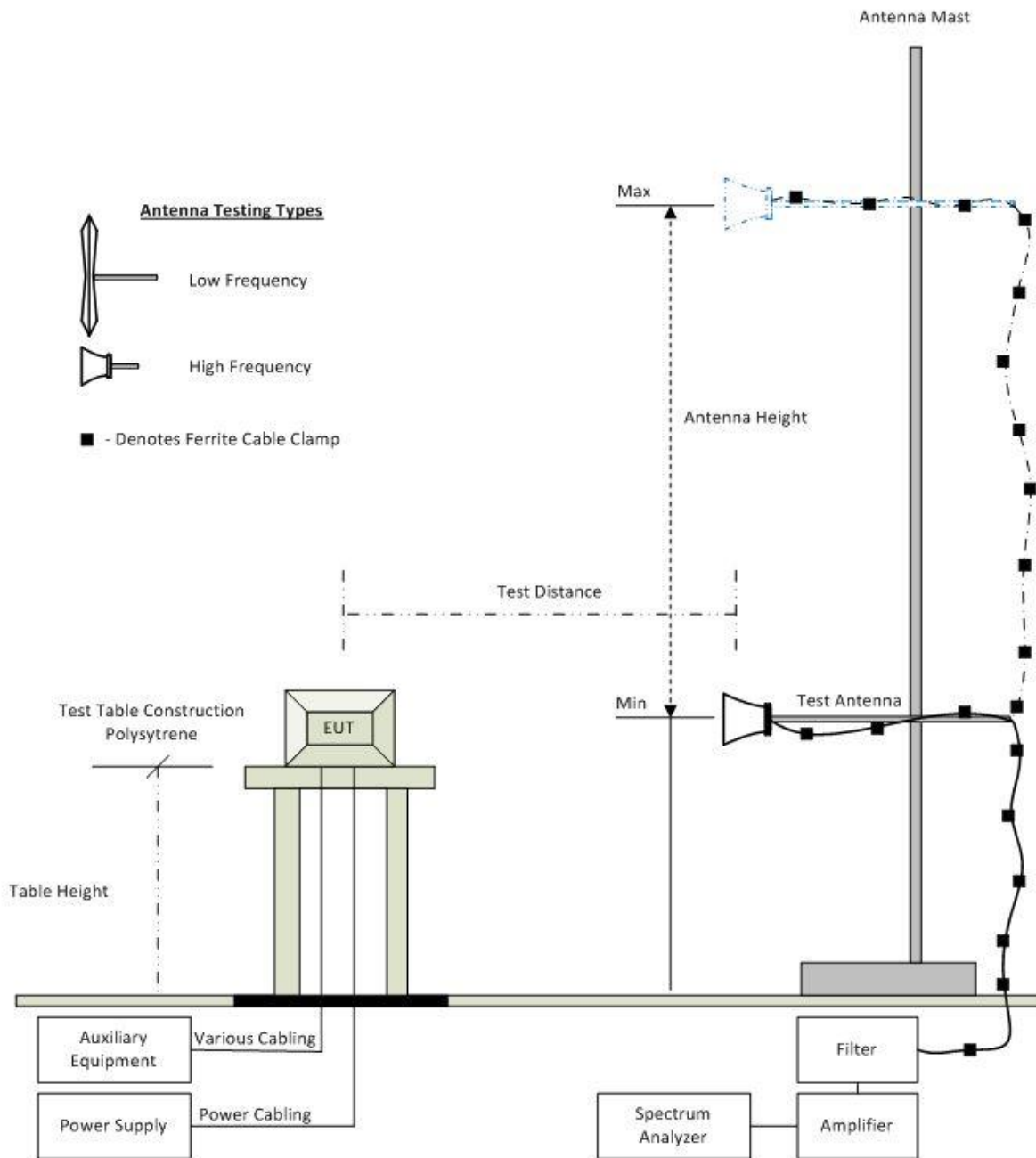


Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 28 of 42

			3050360		
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-151-3050787	481	16 Aug 2017
482	Cable - Amp to Antenna	SRC Haverhill	157-157-3051574	482	16 Aug 2017
502	Test Software for Radiated Emissions	EMISoft	Vasona	Version 5 Build 59	Not Required
87	Uninterruptible Power Supply	Falcon Electric	ED2000-1/2LC	F3471 02/01	Cal when used
VLF-1700	Low pass filter DC-1700 MHz	Mini Circuits	VLF-1700	None	16 Aug 2017

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

Test Setup for Radiated Emissions for above and below 1 GHz



Radiated Emission Test Setup

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



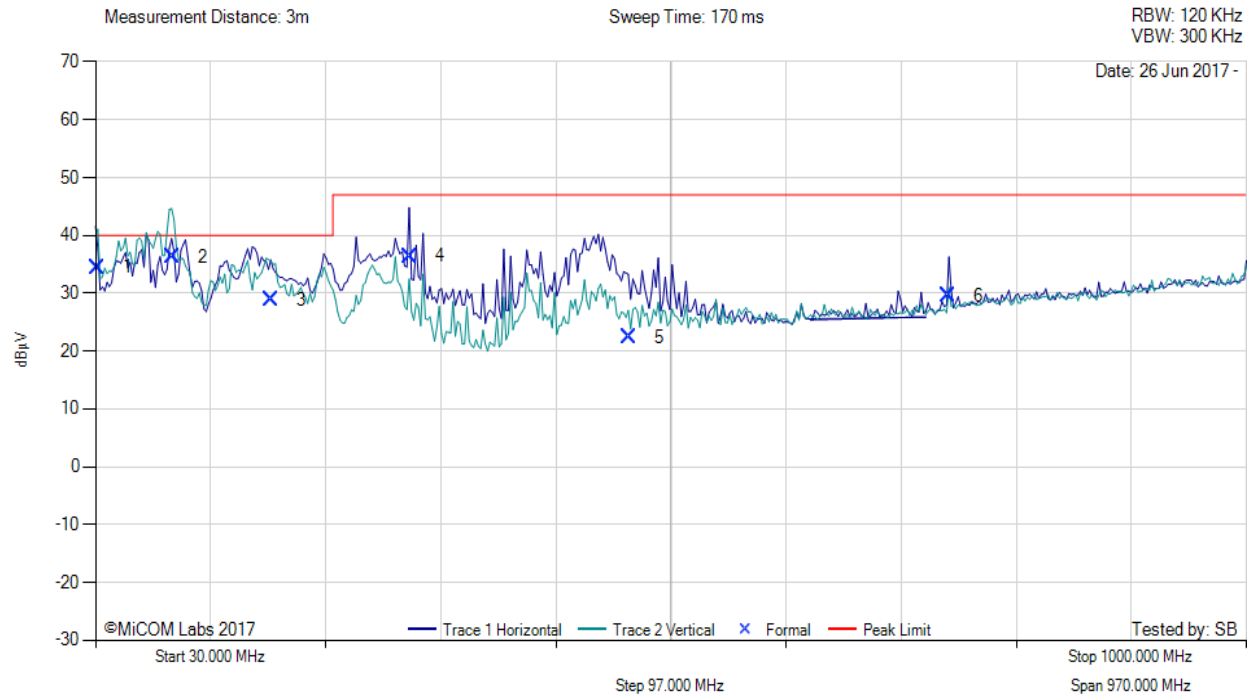
Title: Polycom Inc RealPresence Trio 8500
 To: FCC CFR 47 Part 15B & IC ICES-003
 Serial #: POLY35-U8 Rev A
 Date: 20th July 2017
 Page: 30 of 42

7.1.1.1. Measurement Results: 30-1000MHz

Model:	Trio 8500	Configuration tested:	POE Adaptor
Input power:	120V/60Hz	Standard:	FCC 15B



Variant: Digital Emissions, Antenna: Integral



30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	31.57	42.26	3.44	-11.21	34.49	MaxQP	Vertical	98	17	40.0	-5.5	Pass
2	94.61	55.22	3.85	-22.74	36.33	MaxQP	Horizontal	179	84	40.0	-3.7	Pass
3	178.12	44.49	4.25	-19.91	28.83	MaxQP	Horizontal	160	236	40.0	-11.2	Pass
4	294.98	49.02	4.69	-17.30	36.41	MaxQP	Horizontal	104	291	47.0	-10.6	Pass
5	479.37	29.86	5.28	-12.80	22.34	MaxQP	Horizontal	209	262	47.0	-24.7	Pass
6	748.88	33.01	5.99	-9.46	29.54	MaxQP	Horizontal	101	73	47.0	-17.5	Pass

Test Notes: PHIHONG POE29U-1AT(PL) with DC blocking caps

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



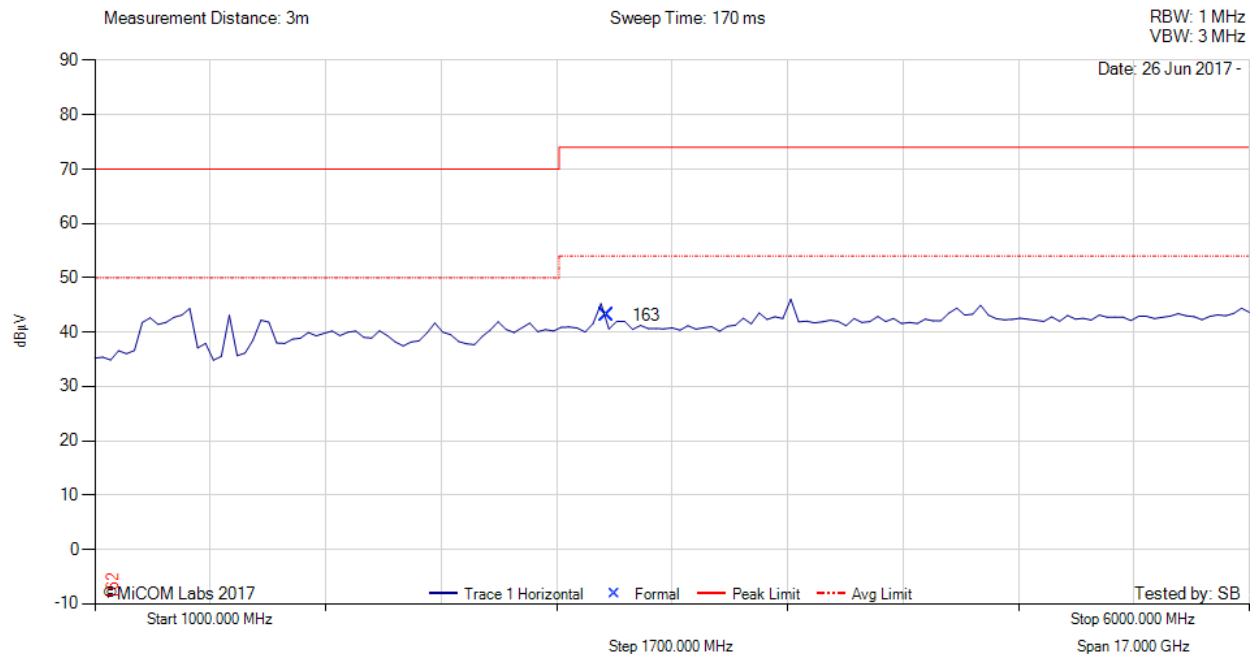
Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 31 of 42

7.1.1.2. Measurement Results: 1000-6000 MHz

Model:	Trio 8500	Configuration tested:	POE Adaptor
Input power:	120V/60Hz	Standard:	FCC 15B



Test Freq: 2442.00 MHz, Power Setting: Max, Duty Cycle (%): 99



1000.00 - 6000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	3203.34	51.43	3.00	-11.28	43.15	Peak (NRB)	Vertical	100	0	--	--	Pass

Note: A notch filter was placed in front of preamplifier to prevent clipping and overload of equipment from the Transmitter fundamental. Device was placed in transmit mode to represent worst case operating mode conditions.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

7.1.2. AC Mains Power Input/Output Ports

Scope

This test assesses the ability of the EUT to limit its internal noise from being present on the AC mains power input/output ports.

Test Method

The test method shall be in accordance with CISPR 22 and the Artificial Mains Networks (AMNs) shall be connected to the AC mains power source.

The measurement frequency range extends from 150 kHz to 30 MHz. When the EUT is a transmitter operating at frequencies below 30 MHz, then the exclusion band for transmitters applies for measurements in the transmit mode of operation.

Test Procedure

The conducted emissions are measured in a shielded room with a spectrum analyzer in peak hold in the first instance. Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation. The highest emissions relative to the limit are listed.

Limits

The equipment shall meet the class B limits given in CISPR 22. Alternatively, for equipment intended to be used in telecommunication centres only, the class A limits given in CISPR 22 may be used.

Class B Emissions

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency

Class A Emissions

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	79	66
0.5-30	73	60

Traceability

All conducted emission measurements are traceable to national standards. The uncertainty of measurement at a confidence level of not less than 95 %, with a coverage factor of k=2, in the range 9 kHz – 30 MHz (Average & Quasi-peak) is ± 2.64 dB.

Laboratory Measurement Uncertainty	
Measurement uncertainty	± 2.64 dB

Method
Measurements were made per work instruction WI-EMC-01 'Measurement of Conducted Emissions'



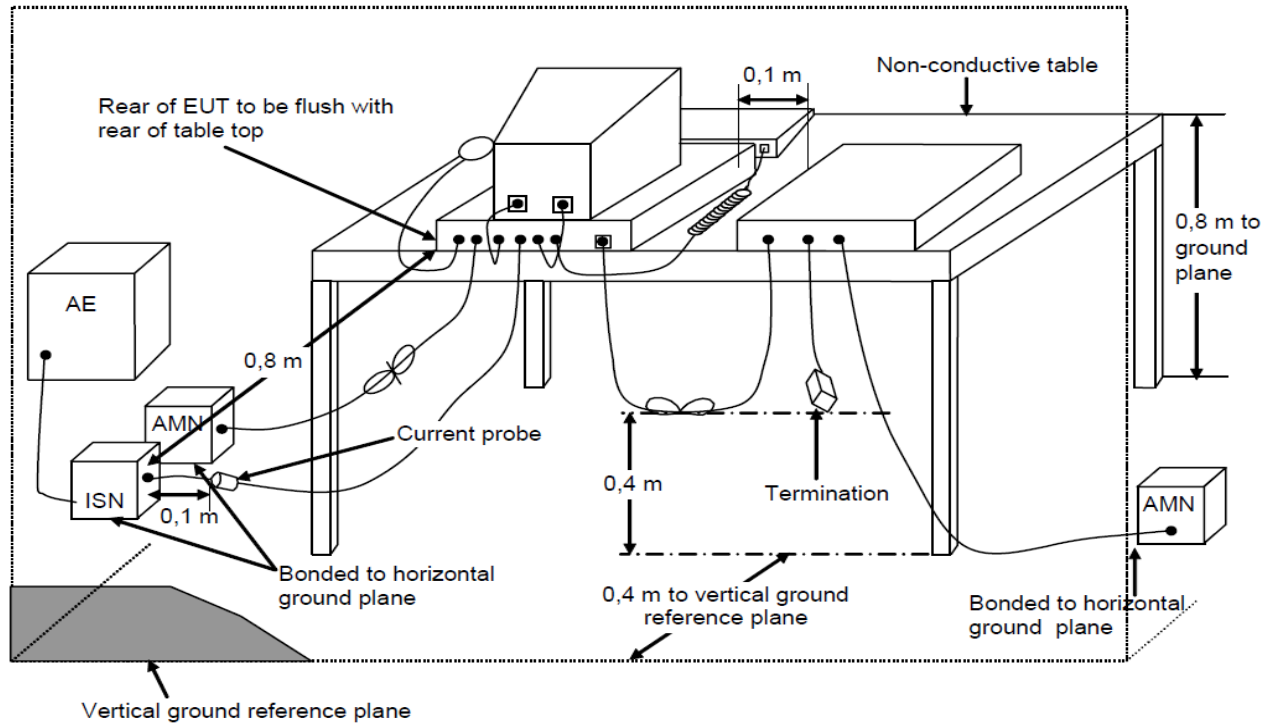
Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 34 of 42

Test Equipment Utilized

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	30 Nov 2017
184	Pulse Limiter	Rhode & Schwarz	ESH3Z2	357.8810.52	6 Oct 2017
190	LISN (two-line V-network)	Rhode & Schwarz	ESH3Z5	836679/006	29 Oct 2017
193	Receiver 20 Hz to 7 GHz	Rhode & Schwarz	ESI 7	838496/007	10 Oct 2017
307	BNC-CABLE	Megaphase	1689 1GVT4	15F50B002	6 Oct 2017
316	Dell desktop computer workstation with Vasona	Dell	Desktop	WS04	Not Required
351	Data Impedance Stabilization Network	Teseq	ISN T800	24809	30 Nov 2017
372	AC Variable PS	California Instruments	1251P	L06951	Cal when used
388	LISN (3 Phase) 9kHz - 30MHz	Rohde & Schwarz	ESH2-Z5	892107/022	30 Oct 2017
496	MiTest Conducted Emissions Test Software	MiCOM	CE Test Software Version 1.0.87	496	Not Required
ADAPT SMA#1	SMA Cable	Megaphase	SMA Cable #1	None	6 Oct 2017

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

Test Setup – Power Input / Output Port



IEC 1344/08

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



Title: Polycom Inc RealPresence Trio 8500
 To: FCC CFR 47 Part 15B & IC ICES-003
 Serial #: POLY35-U8 Rev A
 Date: 20th July 2017
 Page: 36 of 42

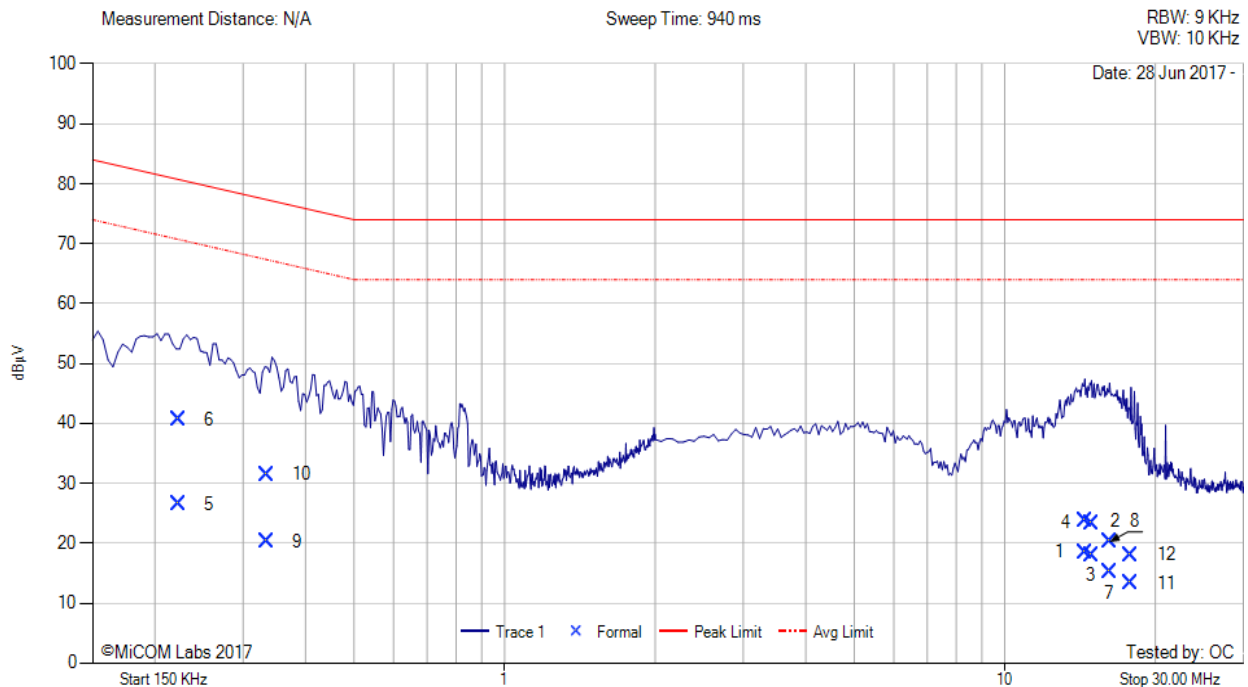
Measurement Results

Model Number	TRIO 8500	Engineer	OC
Variant	AC Wireline 110VAC, 60Hz	Temp (°C)	17
Freq. Range	0.150 MHz - 30 MHz	Rel. Hum.(%)	45
Power Setting	NA	Press. (mBars)	1007
Antenna	N/A		
Test Notes 1	AC powered		
Test Notes 2	Class B Limits FCC 110VAC, 60Hz		

Test Measurement Results



Variant: AC Wireline, Test Freq: 0.15 - 30 MHz



Num	Frequency MHz	Raw dBµV	Cable Loss dB	Factor dB	Total Correction dBµV	Corrected Value dBµV	Measurement Type	Line	Limit dBµV/m	Margin dB	Pass /Fail
1	14.491	8.47	0.50	9.56	10.06	18.53	Max Avg	Telecom	64.0	-45.5	Pass
2	14.491	13.66	0.50	9.56	10.06	23.72	Max Qp	Telecom	74.0	-50.3	Pass
3	14.898	7.93	0.52	9.57	10.09	18.02	Max Avg	Telecom	64.0	-46.0	Pass
4	14.898	13.33	0.52	9.57	10.09	23.42	Max Qp	Telecom	74.0	-50.6	Pass
5	0.223	16.42	0.06	10.00	10.06	26.48	Max Avg	Telecom	71.9	-45.4	Pass
6	0.223	30.53	0.06	10.00	10.06	40.59	Max Qp	Telecom	81.9	-41.3	Pass
7	16.179	5.03	0.55	9.61	10.16	15.19	Max Avg	Telecom	64.0	-48.8	Pass
8	16.179	10.04	0.55	9.61	10.16	20.20	Max Qp	Telecom	74.0	-53.8	Pass
9	0.334	10.25	0.04	9.99	10.03	20.28	Max Avg	Telecom	68.7	-48.5	Pass
10	0.334	21.41	0.04	9.99	10.03	31.44	Max Qp	Telecom	78.7	-47.3	Pass

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



Title: Polycom Inc RealPresence Trio 8500
To: FCC CFR 47 Part 15B & IC ICES-003
Serial #: POLY35-U8 Rev A
Date: 20th July 2017
Page: 37 of 42

11	17.896	3.17	0.55	9.66	10.21	13.38	Max Avg	Telecom	64.0	-50.6	Pass
12	17.896	7.87	0.55	9.66	10.21	18.08	Max Qp	Telecom	74.0	-55.9	Pass

Test Notes: Model: RealPresence Trio 8500.S/N: 64167F1D02FA. PoE powered configuration 120V 60Hz. AC Mains

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.

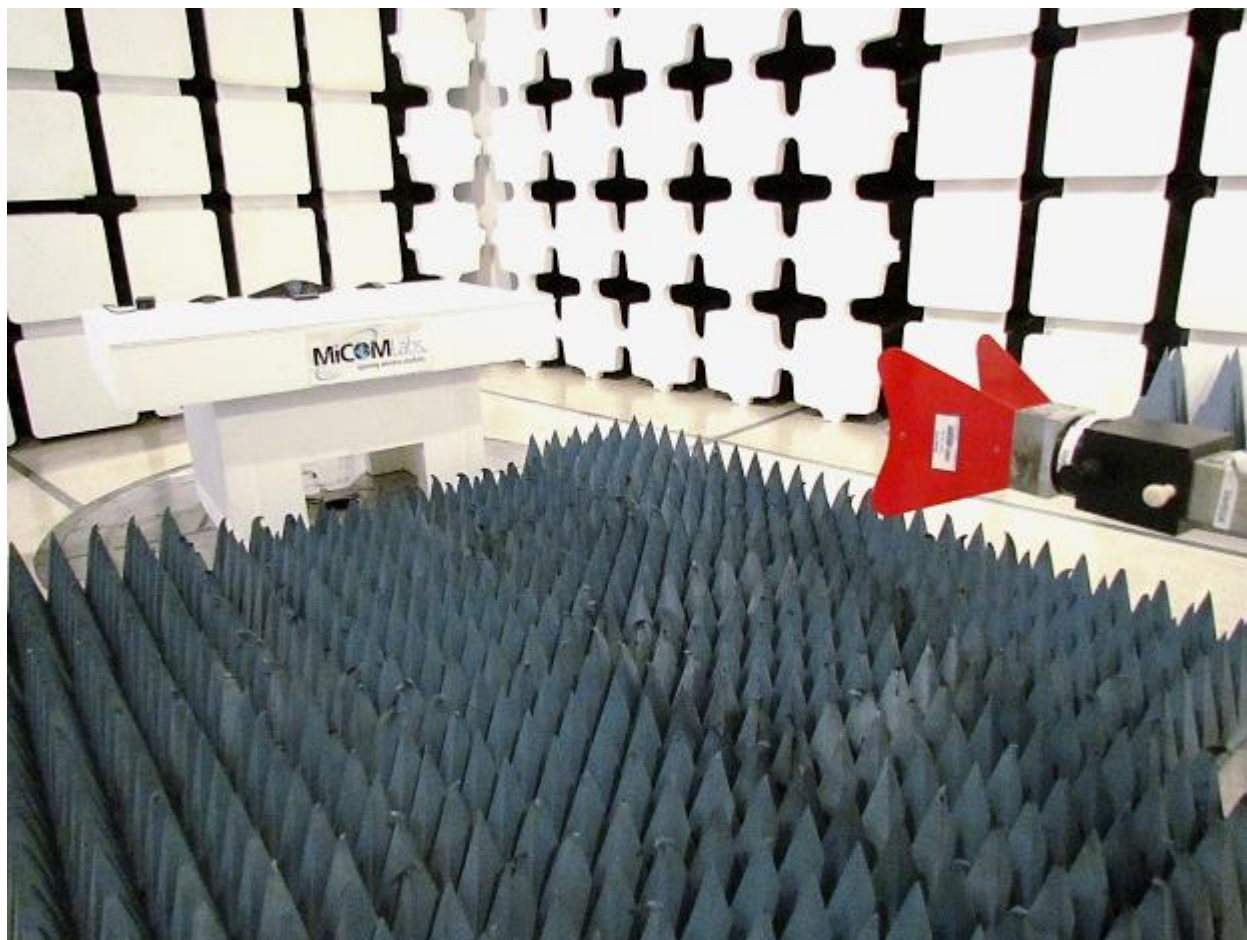
8. PHOTOGRAPHS

8.1. Radio Emissions < 1 GHz



Note: Support equipment located outside chamber.

8.1. Radiated Emissions 1 - 6 GHz

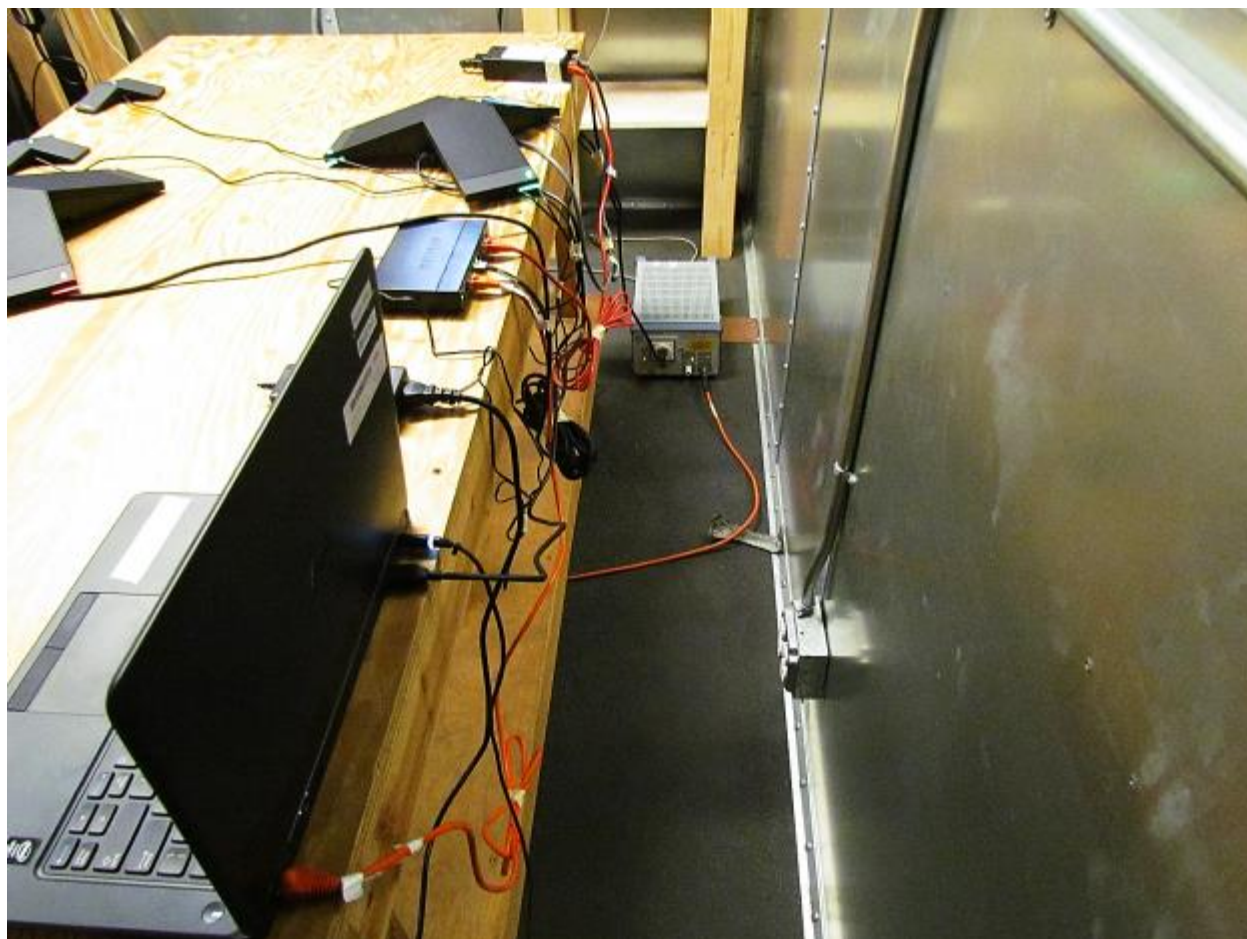


Note: Support equipment located outside chamber.

8.2. AC Wireline Emissions



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel and any changes noted in the Document History section of the report.



MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: 925.462.0304, Fax: 925.462.0306, www.micomlabs.com



575 Boulder Court,
Pleasanton, California 94566, USA
Tel: 1.925.462.0304
Fax: 1.925.462.0306
www.micomlabs.com