

ClearOne.

Converge 560/590

USER'S MANUAL



TECHNICAL SUPPORT

TELEPHONE	1.800.283.5936	FAX	1.801.977.0087
	1.801.974.3760	EMAIL	tech.support@clearone.com

MAX WIRELESS INSTALLATION AND OPERATION MANUAL

CLEARONE PART NO. 800-153-560 NOVEMBER 2005 (REV. 1.0)

© 2005 ClearOne Communications, iinc. All rights reserved. No part of this document may be reproduced in any form or by any means without written permission from ClearOne Communications. Printed in the United States of America. ClearOne reserves specific privileges. Inforrmation in this document is subject to change without notice

TABLE OF CONTENTS

INTRODUCTION 5

The Converge 560/590 5

Product Overview 7

Basic Room Design 10

Installation Overview 11

CONNECTING THE CONVERGE 13

Basic connections 13

Auxiliary devices 17

RAV-WARE SOFTWARE CONFIGURATION 23

Getting started with RAV-Ware 23

RAV-Ware overview 24

RAV-Ware connections 25

RAV-Ware files 26

Network find 27

Configuring system settings 28

Customizing Converge components 32

Microphone configurations 41

Line input and output 42

Record and playback 44

Camera controls 46

Dialer and phonebook usage 48

Advanced features 51

USING THE CONVERGE 55

Using the controller 55

Programming phone preferences 57

TABLE OF CONTENTS (CONTINUED)

WEB INTERFACE 71

Accessing the web interface 71

Dial 72

Event log 74

System check 75

APPENDIX 77

Maintenance 77

Troubleshooting 77

Camera pinouts 80

Specifications 81

Serial commands 83

Compliance 136

Index 141

COMPLIANCE

The following paragraphs present all of the required compliance and declaration of conformity information.

FCC PART 15/ICES-003 COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules and Industry Canada ICES-003. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Changes or modifications not expressly approved by ClearOne Communications could void the user's authority to operate the equipment.

FCC PART 68 COMPLIANCE

US:FBIBR00BRAV Ringer Equivalence Number (REN): 0.0B(ac)

This equipment complies with Part 68 of the FCC Rules Requirements adopted by ACTA. On the mixer unit of this equipment contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this information must be provided to your telephone company.

The REN is used to determine the number of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to obtain the maximum RENs for the calling area. The REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g. 03 is a REN of 0.3).

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

This equipment uses an RJ-11C jack that is used to connect this equipment to the premises wiring and telephone network. This RJ-11C jack complies with the applicable FCC Part 68 Rules and Requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 Rules and Requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

If you experience problems with this equipment, contact ClearOne Communications, 1825 Research Way, Salt Lake City, Utah 84119, or by phone at (800) 945-7730 for repair and warranty information. If the equipment is causing harm to the telephone network, the telephone company may request you disconnect the equipment until the problem is resolved.

No user-serviceable parts are contained in this product. If damage or malfunction occurs, contact ClearOne Communications for instructions on its repair or return.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information. This equipment cannot be used on telephone company provided coin service.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

Electrical Safety Advisory

This equipment uses AC power which can be subjected to electrical surges, typically lightning transients which are very destructive to customer terminal equipment connected to AC power sources. The warranty for this equipment does not cover damage caused by electrical surge or lightning transients. To reduce the risk of this equipment becoming damaged it is suggested that the customer consider installing a surge arrestor.

IC COMPLIANCE

IC: 1970 A-RAV

Ringer Equivalence Number (REN): 0.0B(ac)

NOTICE: The term "IC" before the certification/registration number signifies that Industry of Canada technical specifications were met.

This certification means that the equipment meets certain telecommunications network protective operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

The REN is used to determine the number of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to obtain the maximum RENs for the calling area. The REN for this product is listed above.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the companies inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by ClearOne Communications. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

NEW ZEALAND COMPLIANCE

In the event of main power failure, the Converge 560/590 equipment will become inoperable with regard to making telephone calls.

Also, all persons using the Converge 560/590 for recording telephone conversations shall comply with New Zealand law, which requires that at least one party to the conversation be aware that the conversation is being recorded. In addition, the principles enumerated in the Privacy Act of 1993 shall be complied with in respect to the nature of any personal information collected, the purpose of this collection, how it is used, and what is disclosed to any other party.

JAPANESE COMPLIANCE

The DC resistance of the PSTN line is restricted to $1700 - 308 = 1392$ Ohms.

Conformity of the equipment with the guidelines below is attested by the CE mark.

EC Declaration of Conformity

Application of Council Directive(s):	1999/5/EC Radio equipment and Telecommunications Terminal Equipment (R&TTE) Directive
Manufacturer's Name:	ClearOne Communications
Manufacturer's Address:	1825 West Research Way Salt Lake City, Utah 84119 U.S.A.
Model Name:	Converge 560, Converge 590, Converge 560 Wired & Converge 590 Wired
Model No.:	910-153-560 through 910-153-595

Standard(s) to which Conformity is declared: 89/336/EEC "Electromagnetic Compatibility (EMC) Directive":

EN 55022: 1998 (Emissions)	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement.
EN 301489-1 & EN 301489-3 (Converge 560 & Converge 590)	ElectroMagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz.
EN 55024: 1998 (Immunity) (Converge 560 Wired & Converge 590 Wired)	Information technology equipment - Immunity characteristics - Limits and methods of measurements.
EN 61000-3-2:1995/A1/A2:1998 EN 61000-3-3:1995	Part 3: Limits - Section 2: Limits for harmonic current emissions. Section 3: Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current up to and including 16 A.
EN 61000-4-2: 1995/A1:1998	Electrostatic Discharge
EN 61000-4-3: 1996/A1:1998	Radiated RF Immunity
EN 61000-4-4: 1995	Electrical Fast Transients
EN 61000-4-5: 1995	Lighting Surge
EN 61000-4-6: 1996	Conducted RF Immunity
EN 61000-4-11: 1994	Voltage Dips and Voltage Interruptions

73/23/EEC "Low Voltage Directive (LVD)":

IEC 60950-1: 2003	Safety of Information Technology Equipment, Including Electrical Business Equipment.
-------------------	--

73/23/EEC "Low Voltage Directive (LVD)":

IEC 60950-1: 2003

Safety of Information Technology Equipment, Including Electrical Business Equipment.

Radio Equipment (Converge 560 & Converge 590):

EN 301 220-1

Electromagnetic compatibility and Radio Spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods.

Telecommunications Terminal Equipment:

EN 301 437 (CTR-37)

Terminal Equipment (TE); Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE supporting the voice telephony service in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signaling.

ETSI TS 103 021

Access and Terminals (AT); Harmonized basic attachment requirements for Terminals for connection to analogue interfaces of the Telephone Networks; Update of the technical contents of TBR 21, EN 301 437, TBR 15, TBR 17.

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

Manufacturer

Legal Representative in Europe



Signature

Signature

Tracy Bathurst
Full Name

Martin Offwood
Full Name

VP of Product Line Management
Title

Managing Director - EMEA North
Title



RAV 600/900 User Manual

ClearOne.
You're Virtually ThereSM

Table of Contents

Introduction	1
The RAV 600/900	2
Product Overview	4
Basic Room Design	7
Installation Overview	9
Connecting the RAV	13
Basic Connections	14
Auxiliary Devices	18
RAV-Ware Software Configuration	25
Introduction	26
Configuring System Settings	31
Customizing RAV Components	35
Line Input and Output	38
Record and Playback	40
Camera Controls	42
Dialer and Phonebook Usage	43
Advanced Features	46
Using the RAV	51
Using the Controller	52
Programming Phone Preferences	54
Web Interface	63
Overview	64
Appendix	71
Maintenance	72
Troubleshooting	72
Pinouts	75
Specifications	76
Compliance	116
Index	120

RAV 600/900 Installation and Operation Manual

ClearOne Part No. 800-153-001 Rev. 1.1 March 2005

© 2004 ClearOne Communications, Inc. All rights reserved. No part of this document may be reproduced in any form or by any means without written permission from ClearOne Communications. Printed in the United States of America. ClearOne Communications reserves specific privileges. Information in this document is subject to change without notice.

Warranty information can be found on the ClearOne website.

www.clearone.com

Introduction

1

The RAV 600/900

The RAV product line is the first out-of-the-box room audio conferencing solution with the sound quality and flexibility of a professionally installed system. The RAV includes an audio conferencing mixer that uses distributed acoustical echo-cancelling technology to provide the most intelligible full-duplex audio conference experience possible. Features include:

- Audio mixer for high-quality audio performance in all acoustical environments.
- RF (radio frequency) controller with call controls including auto-answer, flash duration adjustment, ringer adjustment and phonebook with speed dial capabilities.
- Internal telephone hybrid with touch-tone dialing capability.
- Microphone pods provide 360° audio pickup so every participant within the microphone pick-up range can be heard.
- Ceiling- or wall-mount Bose® loudspeakers allow everyone in the room to experience rich, natural sounding audio.

Services and support

If you need additional information on how to install, set up or operate your RAV 600/900, please contact us. We welcome and encourage your comments so we can continue to improve our products and serve your needs.

Technical support

Tel: 1-800-283 5936 (USA) or
1-801-974-3760

Fax: 1-801-974-3669

E-mail: tech.support@clearone.com
Web: www.clearone.com

Sales and customer service

Tel: 1-800-945-7730 (USA) or
1-801-975-7200

Fax: 1-800-933-5107 (USA) or
1-801-977-0087

E-mail: sales@clearone.com

Product returns

All product returns require a return materials authorization (RMA) number. Please contact ClearOne Technical Support before attempting to return your product. Make sure you return all the items that shipped with your product and include a brief description of how the product was being used when the problem occurred.

Unpacking

Carefully remove all components of the RAV system from the packaging. Ensure that you received the following items:

RAV 600/900

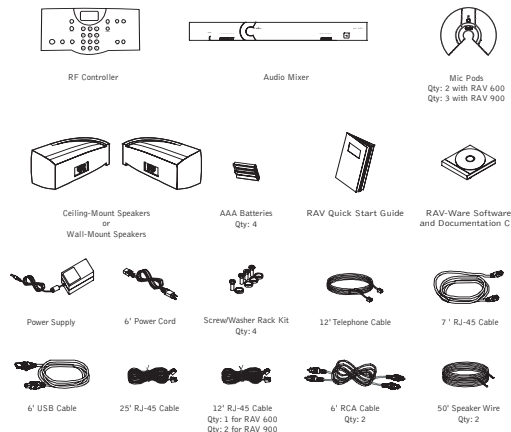


Figure 1.1 RAV unpacking

Note: Rack mount ears are attached to the Mixer box. Refer to the Quick Start Guide or Chapter 2 of this manual for installation instructions.

If any parts are missing, please call the Technical Support Group at 1-800-283-5936 (USA) or 1-801-974-3760.

Note: ClearOne is not responsible for product damage incurred during shipment. You must make claims directly with the carrier. Inspect your shipment carefully for obvious signs of damage. If the shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

Compliance

FCC Part 15/ICES-003 Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules and Industry Canada ICES-003. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Changes or modifications not expressly approved by ClearOne Communications could void the user's authority to operate the equipment.

FCC Part 68 Compliance

US:FB1BR00BRAV Ringer Equivalence Number (REN): 0.0B(ac)

This equipment complies with Part 68 of the FCC Rules Requirements adopted by ACTA. On the mixer unit of this equipment contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this information must be provided to your telephone company.

The REN is used to determine the number of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to obtain the maximum RENs for the calling area. The REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g. 0.3 is a REN of 0.3).

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

This equipment uses an RJ-11C jack that is used to connect this equipment to the premises wiring and telephone network. This RJ-11C jack complies with the applicable FCC Part 68 Rules and Requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 Rules and Requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

If you experience problems with this equipment, contact ClearOne Communications, 1825 Research Way, Salt Lake City, Utah 84119, or by phone at (800) 945-7730 for repair and warranty information. If the equipment is causing harm to the telephone network, the telephone company may request you disconnect the equipment until the problem is resolved.

No user-serviceable parts are contained in this product. If damage or malfunction occurs, contact ClearOne Communications for instructions on its repair or return.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information. This equipment cannot be used on telephone company provided coin service.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

Electrical Safety Advisory

This equipment uses AC power which can be subjected to electrical surges, typically lightning transients which are very destructive to customer terminal equipment connected to AC power sources. The warranty for this equipment does not cover damage caused by electrical surge or lightning transients. To reduce the risk of this equipment becoming damaged it is suggested that the customer consider installing a surge arrester.

IC Compliance

IC: 1970 A-RAV

Ringer Equivalence Number (REN): 0.0B(ac)

NOTICE: The term "IC" before the certification/registration number signifies that Industry of Canada technical specifications were met.

This certification means that the equipment meets certain telecommunications network protective operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

The REN is used to determine the number of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to obtain the maximum RENs for the calling area. The REN for this product is listed above.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the companies inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by ClearOne Communications. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

New Zealand Compliance

In the event of main power failure, the RAV 600/900 equipment will become inoperable with regard to making telephone calls.

Also, all persons using the RAV 600/900 for recording telephone conversations shall comply with New Zealand law, which requires that at least one party to the conversation be aware that the conversation is being recorded. In addition, the principles enumerated in the Privacy Act of 1993 shall be complied with in respect to the nature of any personal information collected, the purpose of this collection, how it is used, and what is disclosed to any other party.

European Compliance

Conformity of the equipment with the guidelines below is attested by the CE mark.



EC Declaration of Conformity

Application of Council Directive(s):

1999/5/EC Radio equipment and
Telecommunications Terminal Equipment
(R&TTE) Directive

Manufacturer's Name:
Manufacturer's Address:

ClearOne Communications
1825 West Research Way
Salt Lake City, Utah 84119 U.S.A.
RAV 600 & RAV 900
910-153-100 through 910-153-355

Standard(s) to which Conformity is declared:

89/336/EEC "Electromagnetic Compatibility (EMC) Directive":

EN 301489-1 & EN 301489-3

ElectroMagnetic compatibility and Radio spectrum
Matters (ERM); ElectroMagnetic Compatibility (EMC)
standard for radio equipment and services; Part 3:
Specific conditions for Short-Range Devices (SRD)
operating on frequencies between 9 kHz and 40 GHz..

EN 61000-3-2:1995/A1/A2:1998

Part 3: Limits - Section 2: Limits for harmonic current
emissions.

EN 61000-3-3:1995

Section 3: Limitation of voltage fluctuations and flicker
in low voltage supply systems for equipment with rated
current up to and including 16 A.

EN 55022: 1998 (Emissions)

Information technology equipment - Radio disturbance
characteristics - Limits and methods of measurement.

EN 61000-4-2: 1995/A1:1998

Electrostatic Discharge

EN 61000-4-3: 1996/A1:1998

Radiated RF Immunity

EN 61000-4-4: 1995

Electrical Fast Transients

EN 61000-4-5: 1995

Lighting Surge

EN 61000-4-6: 1996

Conducted RF Immunity

EN 61000-4-11: 1994

Voltage Dips and Voltage Interruptions

Telecommunications Terminal Equipment:

73/23/EEC "Low Voltage Directive (LVD)":

IEC 60950-1: 2003

Safety of Information Technology Equipment, Including Electrical
Business Equipment.

Radio Equipment:

EN 301 220-1

Electromagnetic compatibility and Radio Spectrum Matters
(ERM); Short Range Devices (SRD); Radio equipment to be used
in the 25 MHz to 1000 MHz frequency range with power levels
ranging up to 500 mW; Part 1: Technical characteristics and test
methods.

Telecommunications Terminal Equipment:

EN 301 437 (CTR-37)

Terminal Equipment (TE); Attachment requirements for pan-
European approval for connection to the analogue Public Switched
Telephone Networks (PSTNs) of TE supporting the voice telephony
service in which network addressing, if provided, is by means of
Dual Tone Multi Frequency (DTMF) signaling.

Manufacturer

Signature

Roger J. Midgley

Full Name

Project Manager

Position

Legal Representative in Europe

Signature

Martin Offwood

Full Name

Managing Director EMEA North

Position

Index

Adjusting the Settings 56

Auto-Answer 56
Auto-Disconnect 57
Ring Melody 56
Ringer Level 56

Basic Connections 14

Audio conferencing 14

Basic Room Design 7

loudspeaker placement 8

Calls 52

answer 52
end 52
from the Phonebook 53
make 52
pre-dial 52
redial 53
speed dial 53

Compliance 116

Configuration 57

Country 57
Flash Duration 58
Frequency 58
IP address 60
Language 57
LCD Contrast 59
RF Radio Test 59
Version 60

Connecting auxiliary devices 18

amplifiers 19
digital phones 22
DVD players 20
PTZ cameras 20
serial control 21

sound cards 19

USB control 21

VCRs 20

video codecs 18

Device Toolbox Editor 49

add a device 49
delete a device 49
edit a device 49

Dialer and Phonebook Usage 43

Dialer 44
 make a call 44
 redial 45
Phonebook 43
 add 43
 delete 43
 edit 43

Error Messages 48

view 48

Event Log 47

print 47
save 47
track events 47

Firmware upgrades 48

Maintenance 72

Network Find 30

Network information 10

Phone Preferences 54

add a Phonebook entry 55
delete a Phonebook entry 55
edit a Phonebook entry 55

Pinouts 75

RAV Components 35

Camera Controls 42
 presets 42
Line Input and Output 38
 equalization 39
 preconfigured devices 38
 volume 39

Loudspeakers 36

ClearEffect 36
equalization 36
volume 36

Microphones 35

acoustic echo cancellation 35
ALC 35
noise cancellation 35
volume 35

Mixer 37

Record and Playback 40
 equalization 41
 preconfigured devices 40
 volume 41

RAV-Ware 26

Communication Settings 31
 camera port 32
 control port 32
 static IP address 31
 user name/password 32

connections 28

files 29

 edit 29
 import 29
 new 29
 save 29

install 26

overview 27

Regional Settings 33
 date/time 33

Telephone Settings 33
 configuration 34
 preferences 34

Serial Commands 78

Specifications 76

Status key 53

System Checks 46

System Requirements 10

Troubleshooting 72

Web Interface 64

Accessing 64
Dial 65
Event Log 67
Log Out 69
System Check 68