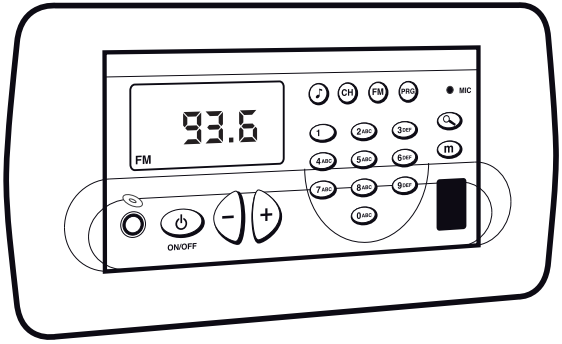
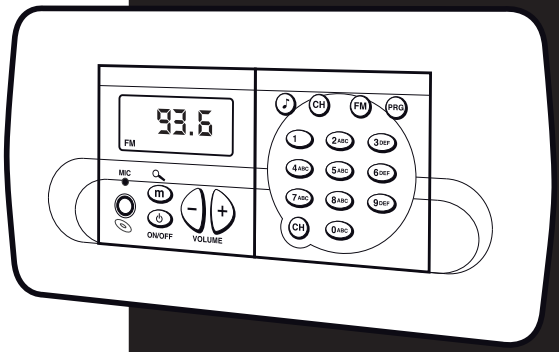
USER'S AND INSTALLATION MANUAL

400 SERIES



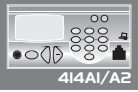


eissound

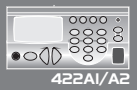
It's Soundlife!

CC-1023ENG-10

MASTER UNIT 414A1/A2



CONTROL UNIT 422A1/A2



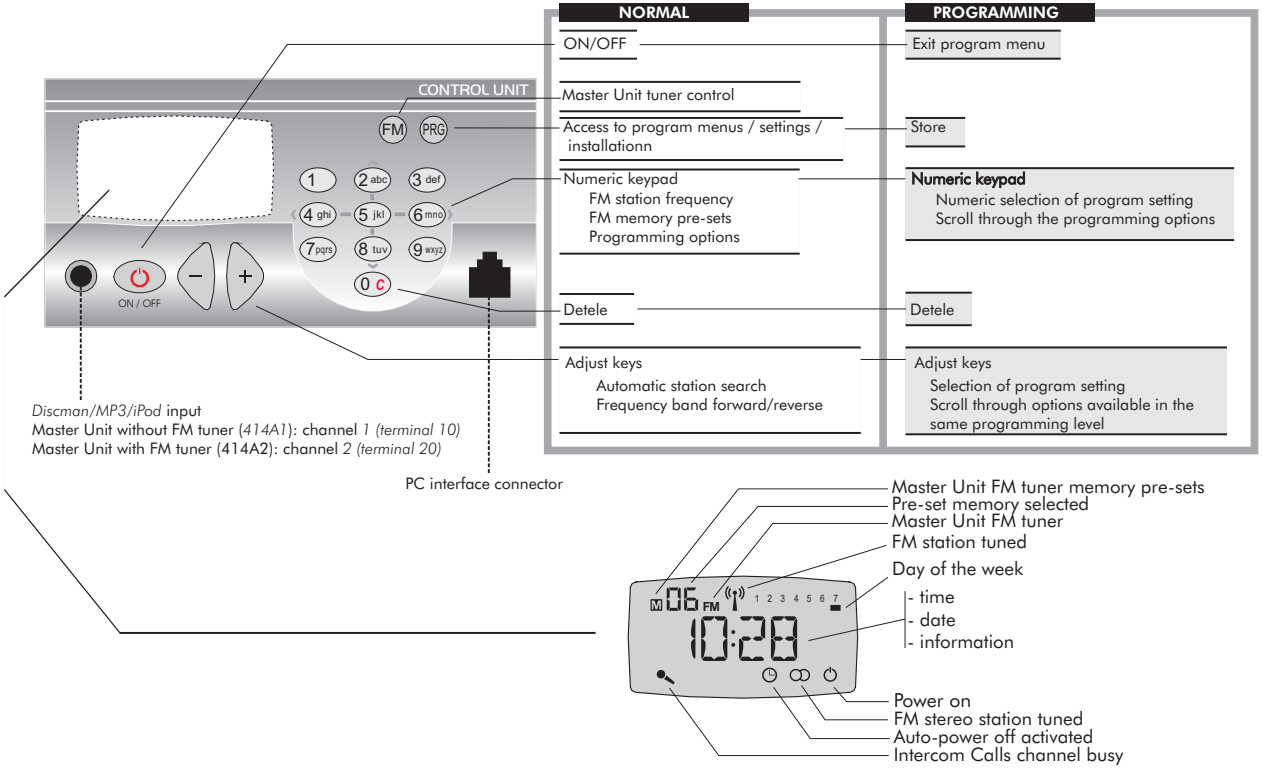
CONTROL UNIT 428A1+42991

CONTROL UNIT 428A1+42992

CONTROL UNIT 428A1/A4

1. Quick Reference Guide

1.1. Master Unit 414A1/A2



PROGRAM MENU

CLOCKS

1 1 PRG Time (Hour, minutes - Days, month, year)
1 2 abc PRG Auto power on (ON/OFF - Hour, minutes - Days of week)
1 3 def PRG Auto power off (ON/OFF - Hour, minutes - Days of week)

FM TUNER

2 abc 1 PRG FM search sensitivity - Master Unit (4=max ... 1=min)
2 abc 2 abc PRG Delete FM tuning pre-sets - Master Unit
2 abc 3 def PRG Autoscan

ADJUSTMENTS

3 def 1 PRG Dimmer off
3 def 2 abc PRG Dimmer on

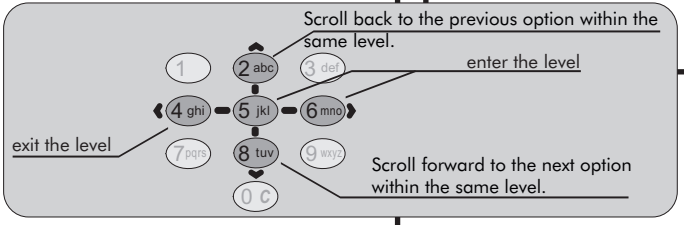
QUICK ACCESS FUNCTIONS

3 def PRG Auto power ON/OFF
4 ghi PRG Release intercom calls channel
6 mno PRG Enable/disable telecontrol function
7 pqrs PRG All zones Standby
9 wxyz PRG Clear the baby monitor throughout the system

SETTINGS MENU

1 PRG (2") Language
2 abc PRG (2") Master Unit name
3 def PRG (2") Master Unit greeting
4 ghi PRG (2") Permission to store/delete FM tuning pre-sets - Master Unit
5 jkl PRG (2") General Standby permission
6 mno PRG (2") Delete settings

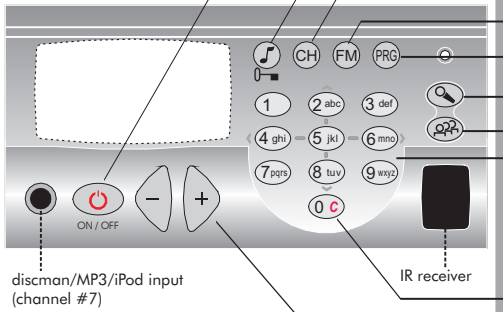
(2") indicate to hold a key down for 2 seconds



INSTALLATION MENU

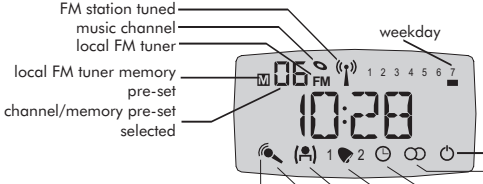
1 PRG (2") Channel number
2 abc PRG (2") Delete installation
3 def PRG (2") Software version

1.2. Control Unit 422A1/A2



discman/MP3/iPod input (channel #7)

IR receiver



NORMAL	PROGRAMMING
ON/OFF - end intercom calls operation	Exit program menu
Audio adjust mode (volume - bass - treble - loudness - balance) open the door	
Channel selection	
Local FM tuner operation (channel 0) - Master Unit (channel 1)	
Access to program menus / settings / installation	Store
Intercom calls	
Group call selection	
Numeric keypad Station frequency FM memory pre-sets Channel Programming options Intercom Call zone identification	Numeric keypad Numeric selection of program setting Scroll through the programming options
Delete	Detele
Adjust keys Audio levels (volume - bass - treble - loudness - balance) Channel Automatic station search Frequency band forward/reverse	Adjust keys Selection of program setting Scroll through options of the same programming level

STATIC	FLASHING
music activated	master power supply disabled
FM stereo tuned station	
sleep activated	auto-power-off activated
alarm 1-2 activated	alarm 1-2 activated and lagging
no permission to receive intercom calls	do not disturb
transmitting intercom calls	
voice detector	Baby Monitor

PROGRAM MENU

CLOCKS
- 1 1 PRG Alarm 1 (ON/OFF status - Hour, minutes - Days of week - Type - Volume)
- 1 2abc PRG Alarm 2 (ON/OFF status - Hour, minutes - Days of week - Type - Volume)
- 1 3def PRG Auto Standby (ON/OFF status - Hour, minutes - Days of week)
- 1 4ghi PRG Sleep
- 1 5jkl PRG Time (Hour, minutes - Day, month, year)

FM TUNER
- 2abc 1 PRG FM Search sensitivity (4=max ... 1=min)
- 2abc 2abc PRG Delete FM tuning pre-sets
- 2abc 3def PRG Autoscan

RECEIVE INTERCOM CALLS
- 3def 1 PRG Volume
- 3def 2abc PRG Individual call
- 3def 3def PRG Group call
- 3def 4ghi PRG General call

TRANSMIT INTERCOM CALLS
- 4ghi 1 PRG General call
- 4ghi 2abc PRG Baby Monitor (ON/OFF status - Sensitivity - Time - Destination address)
- 4ghi 3def PRG Auto response (ON/OFF status - Sensitivity - Time)

ADJUSTMENTS
- 5jkl 1 PRG Store "IDEAL" settings
- 5jkl 2abc PRG Dimmer off
- 5jkl 3def PRG Dimmer on

CHANNEL IDENTIFICATION NAME
- 6mno 1 PRG FM local tuner name
- 6mno 2abc PRG channel #1 name
- 6mno 3def PRG channel #2 name
- 6mno 4ghi PRG channel #3 name
- 6mno 5jkl PRG channel #4 name
- 6mno 6mno PRG channel #5 name
- 6mno 7pqrs PRG channel #6 name
- 6mno 8tuv PRG discman/MP3/iPod channel name

QUICK ACCESS FUNCTIONS

- 1 PRG Alarm 1 status ON/OFF
- 2abc PRG Alarm 2 status ON/OFF
- 3def PRG Autostandby status ON/OFF
- 4ghi PRG Do not disturb status ON/OFF
- 5jkl PRG Baby Monitor status ON/OFF
- 6mno PRG Redial directory
- − + Activate Ideal mode
- (2") Activate Sleep
- 7pqrs PRG All zones Standby
- 8tuv PRG Store "Ideal"
- Clear the Baby
- 9wxyz PRG Monitor throughout all zones
- 0 c PRG Consult zone #, name and group

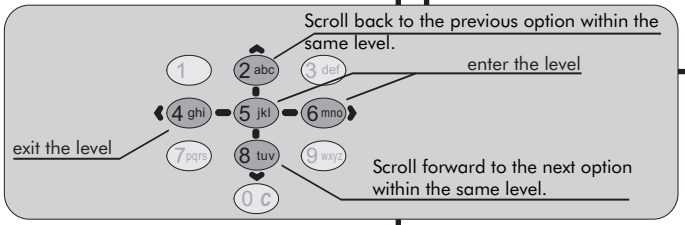
SETTINGS MENU

- 1 PRG (2") Language
- 2abc PRG (2") Control Unit name identification
- 3def PRG (2") Control Unit greeting
- 4ghi PRG (2") Permission to receive intercom calls
- 5jkl PRG (2") Access to FM tuner-Master Unit
- 6mno PRG (2") Permission to store/delete FM pre-sets
- 7pqrs PRG (2") General Standby permission
- 8tuv PRG (2") IR remote control Un
- 9wxyz PRG (2") Delete settings

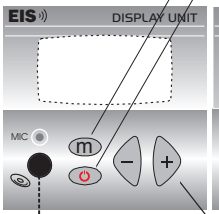
(2") indicate to hold a key down for 2 seconds

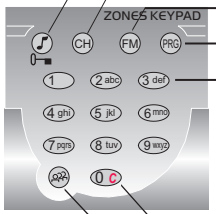
INSTALLATION MENU

- 1 PRG + (2")Zone identification
- 2abc PRG + (2") Group
- 3def PRG + (2") Mono/Stereo
- 4ghi PRG + (2") Audio output
- 5jkl PRG + (2") Permission intercom
- 6mno PRG + (2") Perm. Baby Mon.
- 7pqrs PRG + (2") Channel number
- 8tuv PRG + (2") Delete installation
- 9wxyz PRG + (2") Software version



1.3. Control Unit 428A1+42991





NORMAL	PROGRAMMING
Intercom calls	
ON/OFF - end intercom calls operation	Exit program menu
Audio adjust mode (volume - bass - treble - loudness - balance) Open the door	
Channel selection	
Local FM tuner operation (channel 0) - Master Unit (channel 1)	
Access to program menu / settings / installation	Store
Numeric keypad Station frequency FM memory pre-sets Channel Programming options Intercom Call zone identification	Numeric keypad Numeric selection of program setting Scroll through the programming options
Delete	Detele
Group call selection	
Adjust keys Audio levels (volume - bass - treble - loudness - balance) Channel Automatic station search Frequency band forward/reverse	Adjust keys Selection of program setting Scroll through options of the same programming level

STATIC	FLASHING
music activated	master power supply disabled
music channel	
FM local tuner	
alarm activated	alarm activated and lagging
no permission to receive intercom calls	do not disturb
transmitting intercom calls	Baby Monitor

PROGRAM MENU

CLOCKS
- 1 1 PRG Hour, minutes
- 1 2abc PRG Day, month, year

ALARM
- 2abc 1 PRG ON/OFF
- 2abc 2abc PRG Hour, minutes
- 2abc 3def PRG Type
- 2abc 4ghi PRG Volume

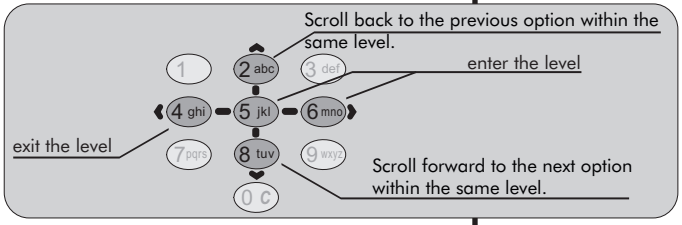
FM TUNER
- 3def 1 PRG FM Search sensitivity (4=max ... 1=min)
- 3def 2abc PRG Delete FM tuning pre-sets
- 3def 3def PRG Autoscan

INTERCOM CALLS
- 4ghi 1 PRG Do not disturb
- 4ghi 2abc PRG Volume
- 4ghi 3def PRG Auto-response ON/OFF

BABY MONITOR
- 5jkl 1 PRG ON/OFF status
- 5jkl 2abc PRG Identification
- 5jkl 3def PRG Sensitivity

ADJUSTMENTS
- 6mno 1 PRG Language
- 6mno 2abc PRG Dimmer on
- 6mno 3def PRG Dimmer off

SETTING OPTIONS
- 7pqrs 1 PRG Control Unit name identification
- 7pqrs 2abc PRG FM local tuner name
- 7pqrs 3def PRG channel #1 name
- 7pqrs 4ghi PRG channel #2 name
- 7pqrs 5jkl PRG channel #3 name
- 7pqrs 6mno PRG channel #4 name
- 7pqrs 7pqrs PRG channel #5 name
- 7pqrs 8tuv PRG channel #6 name
- 7pqrs 9wxyz PRG discman/MP3/iPod channel name



QUICK ACCESS FUNCTIONS

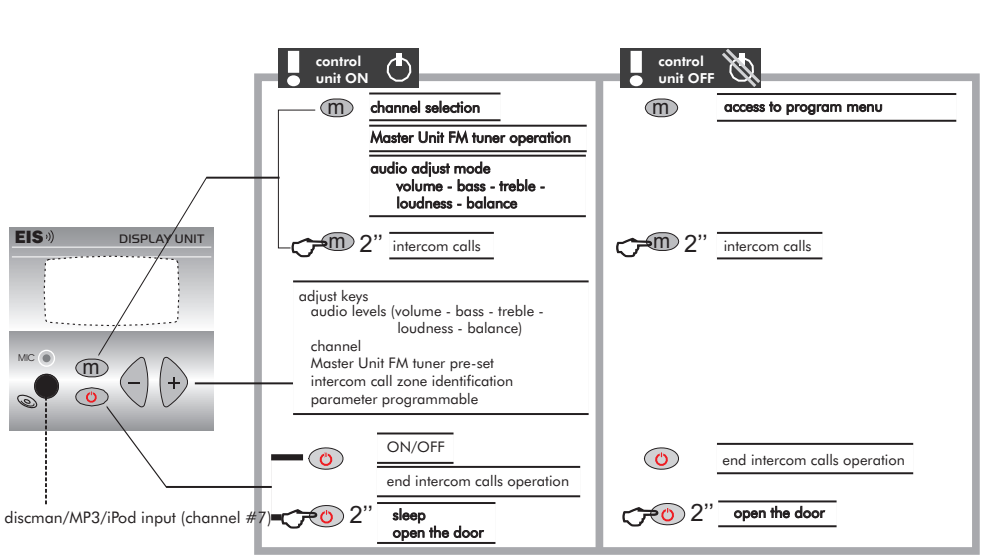
- 1 PRG Alarm status ON/OFF
- 4ghi PRG Do not disturb status ON/OFF
- 5jkl PRG Baby Monitor status ON/OFF
- 7pqrs PRG General Standby for all zones
- 9wxyz PRG Clear the baby monitor throughout the system
- 0 c PRG Consult zone #, name and group
- ⏻ (2") Activate Sleep

(2") indicate to hold a key down for 2 seconds

INSTALLATION MENU

- 1 PRG > (2") Zone identification
- 2abc PRG > (2") Group
- 3def PRG > (2") Mono/Stereo
- 4ghi PRG > (2") Audio output
- 5jkl PRG > (2") Channel number
- 6mno PRG > (2") Permission to transmit intercom calls
- 7pqrs PRG > (2") Permission to receive intercom calls
- 8tuv PRG > (2") Baby Monitor permission
- 9wxyz PRG > (2") Access to FM tuner-Master Unit
- 1 0 c PRG > (2") General Standby permission
- 1 1 PRG > (2") Auto-response sensitivity
- 1 2abc PRG > (2") Auto-response silence time
- 1 3def PRG > (2") Delete installation
- 1 4ghi PRG > (2") Software version

1.4. Control Unit 428A1 , 428A4 , 428A1+42992



PROGRAM OPTIONS (m)

control unit OFF

- Alarm ON/OFF status (2)
- Alarm time (hour-min) (2)
- Alarm type (2)
- Alarm volume (2)
- FM Search sensitivity (3)
- Delete FM tuning pre-sets (3)
- Autoscan (3)
- Do not disturb (2) (1)
- Intercom calls volume (2) (1)
- Auto-response ON/OFF status (2) (1)
- Baby Monitor ON/OFF status (2) (1)
- Baby Monitor identification (2) (1)
- Baby Monitor sensitivity (2) (1)
- Language
- Dimmer off level
- Dimmer on level

INSTALLATION OPTIONS (m) + 2"

control unit OFF

- Zone identification
- Group
- Mono/Stereo
- Audio output
- Channel number
- Permission to transmit intercom calls
- Permission to receive intercom calls
- Baby Monitor permission
- Access to FM tuner-Master Unit
- Auto-response sensitivity
- Auto-response silence time
- Delete installation
- Software version

STATIC	FLASHING
music activated	master power supply disabled
music channel	
Master Unit FM tuner	
alarm activated	alarm activated and lagging
no permission to receive intercom calls	do not disturb
transmitting intercom calls	Baby Monitor

(1) Depends on installation options
(2) Depends on the connection to the Master Unit
(3) Not available mod.428A1

2. 400 series overview

2. 400 Series Overview

2.1 Introduction

The new 400 Series has arrived with optimal features and unparalleled quality. It showcases conspicuous and compact design especially tailored to the user. A superb ergonomic blending of the keypad and the screen icons make understanding its operation easy. It was designed for intuitive operation by the user through clear and easily accessible menus.

The 400 Series was designed to provide a sound system for residential, commercial and business use. The system is flexible and can easily be adapted or extended. Being compatible with the EISSOUND Universal Line 100 Series, the new 400 Series control units are now also adaptable to most major electrical mechanisms.

The 400 Series is flexible, allowing the user to tailor the feature settings to customized needs. It is also sophisticated, providing three programming levels: Installer Level, Settings Level and User Level for the configuration and differentiation of its applications, before, during and after installation.

Highlights of the 400 Series include:

- Multiple languages. Bigger alpha and numeric characters on display screen. Adjustable dimmer for ON/OFF position (10 levels)
- Standby of system executable from any Control Unit
- General intercom calls (both group and individual calls) with vox-control hands-free automatic response. Ability to code 250 zones and 250 different groups.
- Vox-control electronic baby monitor.
- Automatic adjustment of microphone sensitivity (without the need for volume control). Ability to program adjustment of activation sensitivity for automatic response and for electronic baby monitor (each feature independently).
- Redial directory
- Direct keying in of selected FM station tuning, automatic storing the best FM stations, …
- … and over 30 functions you'll discover in this manual

	422A1	422A2	428A1+ 42991	428A1+ 42992	428A1	428A4
Output	1,5W+1,5W	1,5W+1,5W	1,5W+1,5W	1,5W+1,5W	1,5W+1,5W	1,5W+1,5W
Output impedance (ohm)	8/16	8/16	8/16	8/16	8/16	8/16
Discman input	X	X	X	X	X	X
FM tuner		X	X	X		X
Automatic seek and save		X	X	X		X
Stereo channels	6	6	6	6	2	2
IR remote control	X	X		X		
Zone intercom calls	X	X	X	X	X	X
Group intercom calls	X	X	X	X	X	X
General intercom calls	X	X	X	X	X	X
Hands-free auto-response	X	X	X	X	X	X
Zone name	X	X	X	X	X	X
Voice activated baby monitor	X	X	X	X	X	X
Do Not Disturb function	X	X	X	X	X	X
Redial list	X	X				
Auto-standby	X	X				
Sleep	X	X	X	X	X	X
General standby	X	X	X			
Ideal function	X	X	X	X	X	X
Access to central unit tuner	X	X	X	X	X	X
Programmable illumination	X	X	X	X	X	X
Languages	9	9	9	9	9	9
Welcome message	X	X				
Names of personalized channels	X	X	X			
Clock-calendar	X	X	X	X	X	X
Programming clock-calendar	X	X	X			
Alarms	2	2	1	1	1	1
Day of the week	X	X				
Programming and access from PC	X	X	X	X	X	X
intercom calls from the switchboard	X	X	X	X	X	X
Intercom/entryphone	X	X	X	X	X	X

2.2. 400 Series Components

master unit			
ref.	sound inputs	FM tuner	PC interface connector
414A1	1		X
414A2	1	X	X

power supply		
ref.	power	type
11295	14W	reg.
11296	30W	switch

422A1/A2

428A1+42991

428A1/A4

428A1+42992

2.3. Connecting Terminals

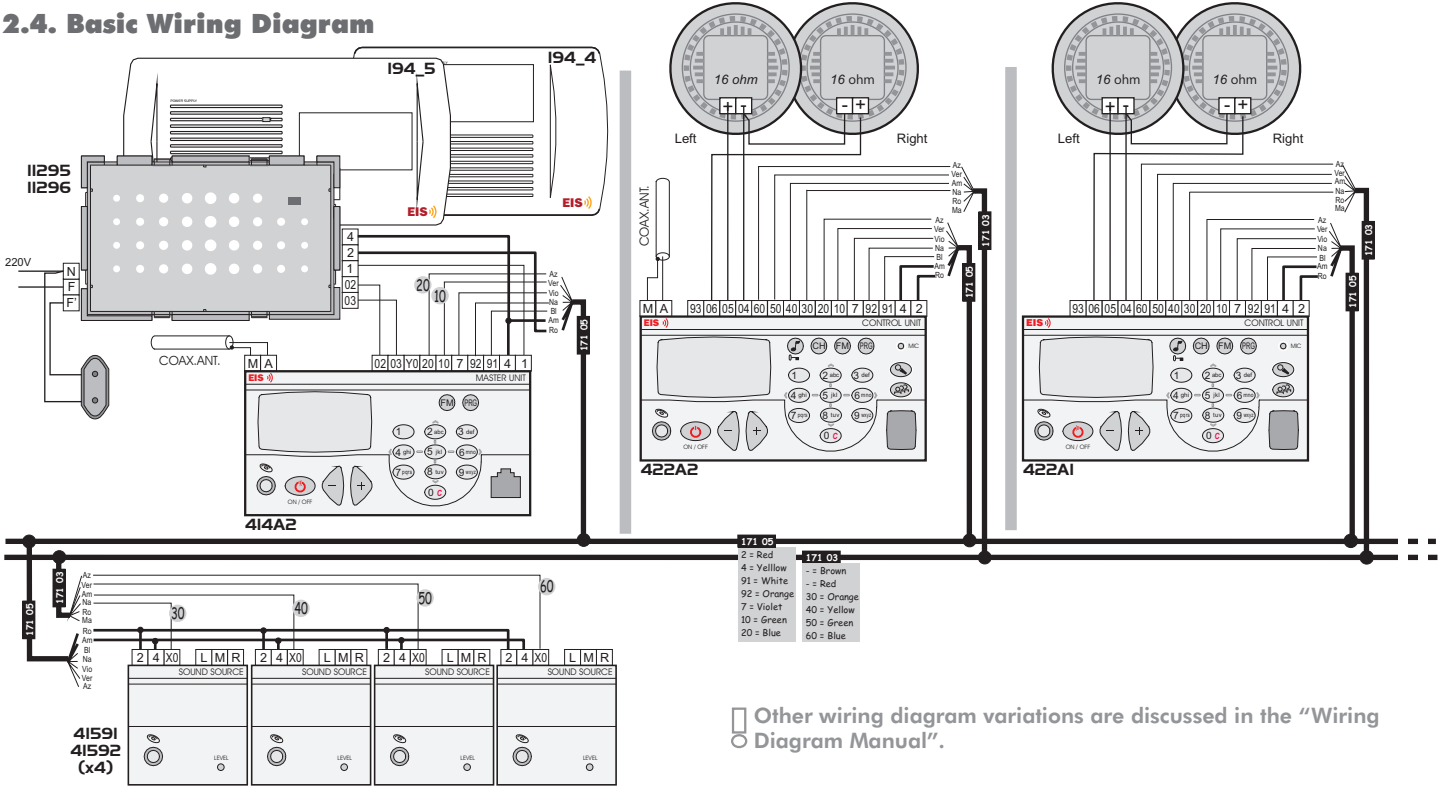
Unit Control	
2	Supply voltage
4	Mass
91	Data (+)
92	Data (-)
93	Data (IR)
7	Intercom calls signal
10	MPX sound channel input, music program #1
20	MPX sound channel input, music program #2
30	MPX sound channel input, music program #3
40	MPX sound channel input, music program #4
50	MPX sound channel input, music program #5
60	MPX sound channel input, music program #6
05	Left channel speaker output (+)
06	Right channel speaker output (+)
04	Mass fot speakers of both channels (-)
A	FM antenna
M	FM antenna mass

Master Unit & Power Supply	
1	Standby power voltage
4	Mass
02	Activation of power supply power-on
03	Telecontrol signal
91	Data (+)
92	Data (-)
7	Intercom calls signal
10	MPX sound channel output, music program #1
20	MPX sound channel output, music program #2
A	FM antenna
M	FM antenna mass
N	Neutral power supply from current network 230V
F	Phase power supply from current network 230V
F'	Telecontrol network base phase 230V

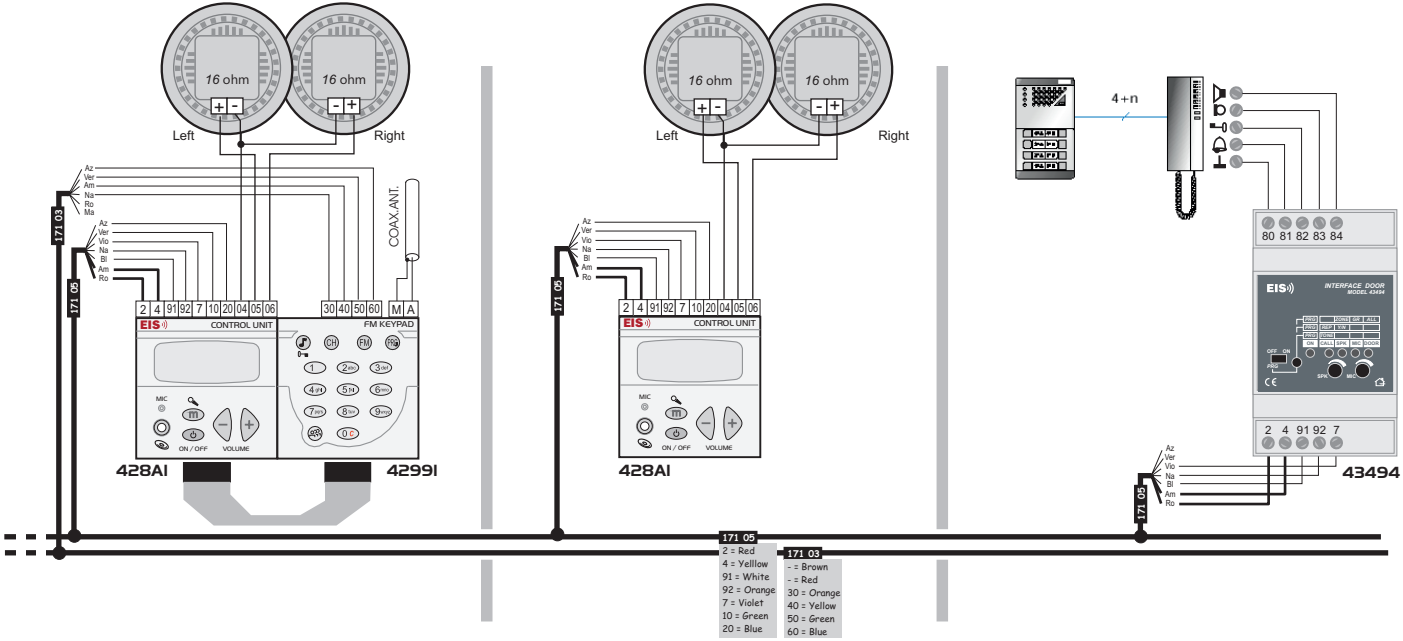
Sound Input	
2	Supply voltage
4	Mass
X0	MPX sound channel output
L	Left channel input
R	Right channel input

entryphone intercom interface	
80	Mass
81	Intercom line
82	Door opening line
83	Intercom/entryphone loudspeaker line
84	Intercom/entryphone microphone line

2.4. Basic Wiring Diagram

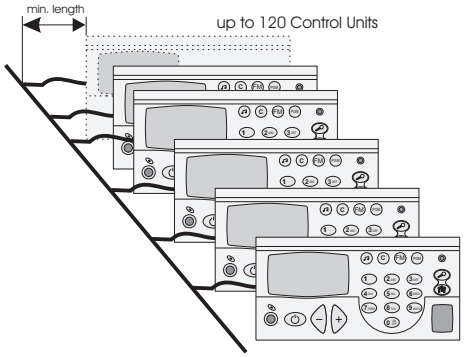


Other wiring diagram variations are discussed in the "Wiring Diagram Manual".


16 ohm
16 ohm
Left
Right
Az
Ver
Am
Na
Ro
Ma
Vio
Bl
171 03
171 05
COAX.ANT.
2 4 91 92 7 10 20 04 05 06
30 40 50 60 M A
EIS
CONTROL UNIT
FM KEYPAD
MIC
ON / OFF
VOLUME
428AI
4299I
16 ohm
16 ohm
Left
Right
2 4 91 92 7 10 20 04 05 06
EIS
CONTROL UNIT
MIC
ON / OFF
VOLUME
428AI
4+n
80 81 82 83 84
EIS
INTERFACE DOOR
MODEL 43494
2 4 91 92 7
43494
171 05
2 = Red
4 = Yellow
91 = White
92 = Orange
7 = Violet
10 = Green
20 = Blue
171 03
- = Brown
- = Red
30 = Orange
40 = Yellow
50 = Green
60 = Blue

2.5. General Installation Notes

- √ A 400 Series system consists of two basic elements: a CENTRAL UNIT and several CONTROL UNITS.
- √ The CENTRAL UNIT can be placed anywhere in the system and consists in one or more Power Supply Units a Master Unit 414A1/A2 and, optionally, several Sound Input Units 41591/92
- √ Tuner of 414A2 Master Unit will be defaulted to channel #1 (terminal 10). Channel #2 (terminal 20) will be the Master Unit's discman/MP3/iPod input. The additional audio channels should be connected consecutively using terminals 30, 40, ...
- √ Master Units not equipped with tuners (414A1) will use channel #1 for the discman/MP3/iPod input (terminal 10). The rest of audio channels should be connected consecutively using terminals 20, 30 ...
- √ The number of channels used should be configured on the Master Unit (see 3.14.A.Number of Audio Channels Installed).
- √ If the room is monophonic, connect any of the speakers and set the Control Unit to MONO (see 4.1.6.C. Control Unit Installation: Mono/Stereo).
- √ 8 ohm speakers can be connected to the Control Unit outputs. The Control Unit must be set to 8 ohm in this case (see 4.1.6.D. Control Unit Installation: Audio Output).
- √ To connect the FM antenna, connect a 76 cm wire to terminal A or connect a 75W antenna input to terminals A (signal) and M (mass).
- √ If it is necessary to connect an amplifier or power stage to a Control Unit's output, this Control Unit must be set to AMPLIFIER (see 4.1.6.D. Control Unit Installation: Audio Output). Connect the amplifier to terminals 2, 4, 05 and 06 on the Control Unit (see *"Wiring Diagram Manual"*)
- √ If the size of the installation requires the use of several power supply units, the different rooms should be divided in terms of the size of the power supplies. Rooms are connected to 2 and 4 of each supply.
- √ It is advisable to keep the primary line shunts as short as possible.



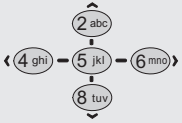
- √ Consult the manufacturer regarding installations of over 600 meters and/or 60 Control Units.
- √ All wire sections are 0.25 mm except supply wires (terminals 2 and 4), which are 1 mm. The network tapping wires are standard.

KEYS TO THE SYMBOLS USED IN THIS MANUAL

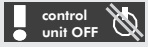
The appearance of this symbol over a key is a prompt to hold a key down for the time specified.

In some cases it is necessary to hold down two keys simultaneously to execute a specified operation.

Certain keys have a cursor function to scroll through different menus. When a key is used as a cursor, it will look like the cursor symbols on the face of the Control Unit.



This indications is pictured when access to a function requires that the device be in a particular state before any key is pressed (such as "off").



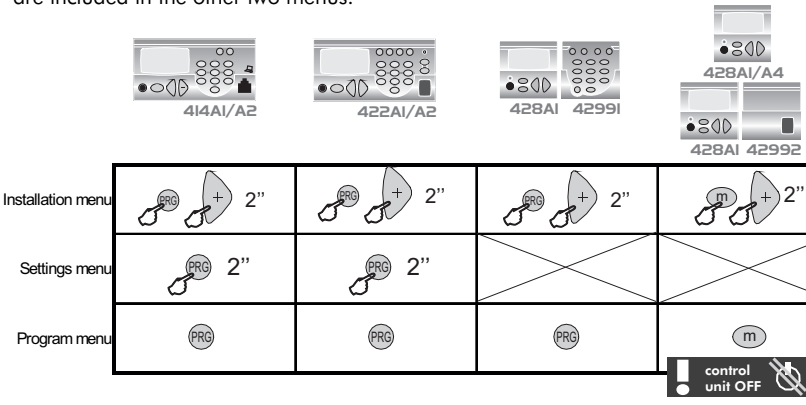
2.6. Program Menus

2.6.1. Three Access Levels

The 414A1/A2 Master Units and the 422A1/A2 Control Units have three program menus of settings at different access levels.

- ***Installation Menu:*** Discusses the settings related to the proper operation of the system. These settings should be programmed by a professional.
- ***Settings Menu:*** Discusses each user's custom operation mode. None of these settings will affect the system's operation and, once defined, the settings will usually not have to be changed.
- ***Program Menu:*** Discusses features that are programmable by the user and which are easily changed.

The ***settings menu*** options for the ***428A1***+42991, 428A1+42992, 428A1 y 428A4 control units are included in the other two menus.



The following options are not available in 428A1, 428A4, 428A1+42992 models

2.6.2. Programming Permission

Pressing the 0 and 9 keys simultaneously blocks access to the programming and settings menus.

To restore access to these menus, hold down the 0 and 9 keys.

Key Sequence	Display Visual
0 C + 9 wxyz	PGR X
0 C + 9 wxyz	PGR ✓

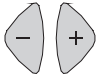
2.6.3. Menu Navigation

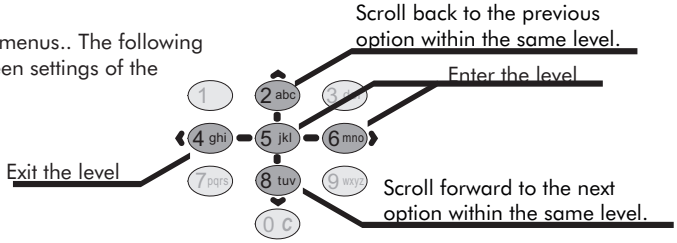
The program menus are structured in level and sub-level menus.. The following operations and keys in the menu will scroll the user between settings of the list of options.

When a setting to be programmed appears on the display, it will be flashing, indicating it is ready to be programmed.

If more than one setting is available (for example, days of the week or digits of a date) use the +/- keys to scroll forward/back.

The numeric keys can be used to change a setting. In some cases, in addition to the numeric keys, the +/- keys can also be used to change settings





Once you select the desired setting, press the PRG key to store. PRG
The entry will begin to flash quickly, indicating that the new setting has been stored.

To delete an entry at any time, press the ZERO key for 1" 0 C 1"

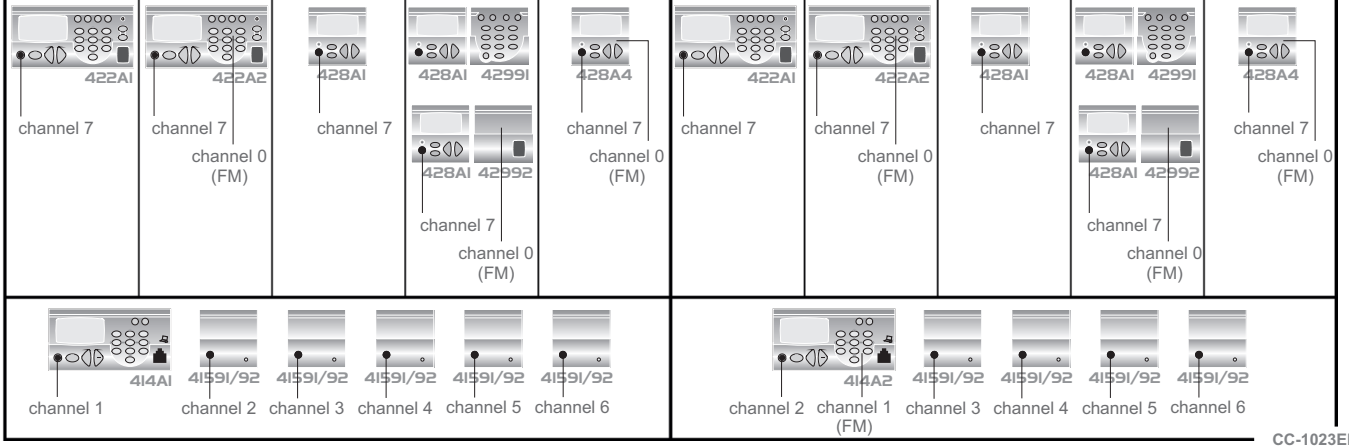
To exit a programming option without storing a setting, press the ON/OFF key.

2.6.4. Quick Access To A Menu Option

As an alternative to scrolling through the menus to find an option, directly key in the option code followed by the menu access key (see code list in 2. Quick Reference Guide)

2.7. Music channels

# channel	master unit mod. 414A1					master unit mod. 414A2				
	422A1	422A2	428A1	428A1+ 42991/92	428A4	422A1	422A2	428A1	428A1+ 42991/92	428A4
0		local FM		local FM	local FM		local FM		local FM	local FM
1	master jack	master jack	master jack	master jack	master jack	master FM	master FM	master FM	master FM	master FM
2	sound input 1	sound input 1	sound input 1	sound input 1	sound input 1	master jack	master jack	master jack	master jack	master jack
3	sound input 2	sound input 2		sound input 2		sound input 1	sound input 1		sound input 1	
4	sound input 3	sound input 3		sound input 3		sound input 2	sound input 2		sound input 2	
5	sound input 4	sound input 4		sound input 4		sound input 3	sound input 3		sound input 3	
6	sound input 5	sound input 5		sound input 5		sound input 4	sound input 4		sound input 4	
7	local jack	local jack	local jack	local jack	local jack	local jack	local jack	local jack	local jack	local jack



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3. Central

3.1. Master Unit

3.1.1. Operation

3.1.1.A. Manual System Off/On

The first time power is fed to the Master Unit, the Master Unit begins operating in off mode.

The ON/OFF status of all system Control Units is regulated from the Master Unit. To switch on all the Control Units. press ON/OFF for the time specified. The Master Unit activates power supply to the system. The Control Units start up with the same settings playing as when last switched off.

To switch off the whole system press ON/OFF for the time specified. The Master Unit cancels power supply to the system. The Control Units store their current settings (ON/OFF status, audio levels, active music channel).

After a power loss: After a power loss, whether by disconnecting the power supply or because of a power failure, the status of the system once power is restored is the following: The Master Unit starts up with the same settings as at power loss (off/on) and the Control Units start up in their "ideal" state.

3.1.1.B. Auto Switch On

This feature allows the user to program the Master Unit to automatically switch on the system at a specific time. That is, at the time and days of the week defined by the user, power will be fed to all Control Units. The Control Units switch on with the same settings as at power off (ON/OFF status, audio levels, music channel). It is programmed accessing the program menu and selecting the ON/OFF status, time and days of the week to program the function.

See 3.1.2.B.

Key Sequence	Display Visual
	OFF
5"	ON ✓
5"	OFF

The master unit automatically performs supervision and coordination tasks pertaining to the operation of all the connected control units. These tasks last brief periods of time during which the keypad's response will be slightly delayed.

During these operations the letters CC will appear on the display.

1 2abc PRG	AUTO POWER ON

3.1.1.C. Auto Switch Off

This feature allows the user to program the Master Unit to automatically switch off the system at a specific time. That is, at the time and days of the week defined by the user, power will be shut off from all Control Units. It also alerts the Control Units prior to switching off so that the current settings are stored. Thus, the Control Units switch on with the same settings as at power off (ON/OFF status, audio levels, music channel).
Access the program menu and select the ON/OFF status, time and days of the week to program the function.

See 3.1.2.C.

The function can only be activated or cleared from this option in the program menu.

The quick function can also be used.

The function is activated when the ◷ icon is flashing.

Key Sequence	Display Visual
1 3 def 1 PRG	AUTO-POWER OFF
1 3 def 1 PRG	ON/OFF
3 def PRG	POWER OFF ✓

3.1.1.D. General Standby

The Master Unit (and any Control Unit) has the ability to make all the units connected to the system go into standby mode (music off). Use the quick function.

Key Sequence	Display Visual
7 pqrs PRG	STANDBY ✓

The associated permission must be activated to execute this feature. See 3.1.3.E. Permission To Access General Standby

3.1.1.E. Operation of Master Unit FM Tuner (only 414A2)

The Master Unit's FM tuner is user-friendly and intuitive and is exactly the same as for the FM tuner of Control Unit 422A2

Ver 4.1.2.D. Operation Of The Control Unit's Local FM Tuner
Ver 4.1.2.E. Store Station Pre-sets Into The Local FM Tuner
See Program Menu: 3.1.2.D. FM Search Sensitivity - Master Unit
3.1.2.E. Deleting FM Tuning Pre-sets -Master Unit
3.1.2.F. Storing Station Frequencies Automatically

3.1.1.F. Telecontrol function

This feature allows the Master Unit to control the off/on status of the sound sources (apparatus) that supply the music channels. With this feature, the apparatus only switch on when a Control Unit activates a music channel, that is using the apparatus.

The Control Units alert the Master Unit of a need for remote control, that is, that a Control Unit has switched to a music channel that requires remote control. At that time the sound device that is connected to the remote control base network feed (for example, a CD reader) immediately switches on. At the same time, the Master Unit regularly monitors the remote control status. Thus, the remote control ON/OFF function is carried out automatically, without direct user intervention.

When none of the Control Units are operating a music channel that requires remote control, the Master Unit waits a few seconds and then disables the remote control. The sound device connected to the Master Unit remote control feed switches off.

The telecontrol feature can be enabled and disabled using the function with quick access 6+PRG

	telecontrol	
channel	central 414A1 (without FM)	central 414A2 (with FM)
0 (local FM)		
1	ON	
2	ON	ON
3	ON	ON
4	ON	ON
5	ON	ON
6	ON	ON
7 (discman)		

3.1.1.G. Access To Intercom Calls Channel

The intercom calls channel (terminal #7) is the channel for conversation between the system's Control Units. Because there can only be one active conversation at a time, the Master Unit controls access to this channel to avoid mixing two or more concurrent conversations.
The microphone icon indicates that the intercom calls channel is busy.

A quick function can be used to manually make the intercom calls channel available if the channel is busy when no intercom calls are taking place. This may be due to a problem in the system. Any intercom call in progress is cut off at the time this function is activated.

Key Sequence	*Display Visual*
4 ghi PRG	NOTIF ✓

An intercom call operation may not last for more than 3 minutes in total.
After three minutes, the Master Unit unilaterally cancels the operation.

3.1.2. Program Menu

3.1.2.A. Time and Date

The system's time and date are shared by all connected units and can be programmed at any given unit. All other units will instantly be updated accordingly.

	Key Sequences	Display Visual
For programming installation time and date	1 1 PRG	TIME-DATE
	5 jkl	HH-MM
Enter	5 jkl	13-43
for example, to set 10:54	1 0 c 5 jkl 4 ghi	10-54
Store	PRG	HH-MM
Scroll to the next step	8 tuv	DATE
Enter	5 jkl	28-AUG-02
key in the 10th	1 0 c	10-AUG-02
Scroll to the month of December	8 tuv 8 tuv 8 tuv 8 tuv	10-DEC-02
Scroll to set the year	+	02
Scroll to 2004	2 abc 2 abc	10-DEC-04
Store	PRG	

3.1.2.B. Auto Power On

The option to program a time for the Master Unit to switch on the power supply at the time and days of the week programmed.

For example, auto power on at 07:55 every day of the week except Saturdays and Sundays.

Key Sequences	Display Visual
1 2 abc PRG	AUTO-POWER ON
5 jkl	ON/OFF
5 jkl	OFF
2 abc	ON
PRG	ON/OFF
8 tuv	HH-MM
5 jkl	00-00
0 c 7 pqrs 5 jkl 5 jkl	07-55
PRG	HH-MM
8 tuv	DAYS
5 jkl	MO ON
+	TU ON
•••	
+	SU ON
2 abc	SU OFF
PRG	

Store

3.1.2.C. Auto Power Off

The option to program a time for the Master Unit to switch off the power supply at the time and days of the week programmed, switching off all the Control Units.

For example, auto power off at 17:50 every day of the week except Saturdays and Sundays.

Key Sequences	Display Visual
1 3 def PRG	AUTO-POWER OFF
5 jkl	ON/OFF
5 jkl	OFF
2 abc	ON
PRG	ON/OFF
8 tuv	HH-MM
5 jkl	00-00
1 7 pqrs 5 jkl 0 c	17-50
PRG	HH-MM
8 tuv	DAYS
5 jkl	MO ON
+	TU ON

... CONTINUED

	Key Sequences	Display Visual
	+	SA ON
	2 abc	SA OFF
	+	SU ON
	2 abc	SU OFF
Store	PRG	

3.1.2.D. FM Search Sensitivity - Master Unit (only 414A2)

The option to adjust the automatic station search sensitivity for the Master Unit FM tuner.

	Key Sequences	Display Visual
	2 abc 1 PRG	CENTRAL FM SENSITIVITY SENS-4
To adjust the new sensitivity; 4=max. 1=min.	2 abc	SENS-2
Store	PRG	

3.1.2.E. Deleting FM Tuning Pre-sets -Master Unit (only 414A2)

The option to delete all the Master Unit FM tuning pre-sets.

	Key Sequences	Display Visual
	2 abc 2 abc PRG	DELETE CENTRAL FM MEMORY
To confirm the command to delete the data	2 abc	OFF ON
To initiate the process	PRG	

This option is only available in Master Unit models that have an internal tuner. Permission for this option must be activated in the Master Unit's settings menu. See 3.1.3.D. Permission to Store/Delete FM Tuning Pre-Sets - Master Unit

3.1.2.G. ON/OFF dimmer

Display window brightness for Master Unit ON/OFF status is programmed from these options.

	Key Sequences	Display Visual
	3 def 1 PRG o 3 def 2 abc PRG	LIGHT OFF o LIGHT ON
To adjust level	− +	LT 5 LT 8
Store	PRG	

3.1.2.F. Storing Station Frequencies Automatically (only 414A2)

The Master Unit will store into memory the stations that are received with the highest quality, ordered from lowest frequency (87.5 MHz) to highest frequency (108.0 MHz). The system will use all the memory slots available, reaching the maximum of 20.

This option is only available in Master Unit models that have an internal tuner. Permission for this option must be activated in the Master Unit's settings menu. See 3.1.3.D. Permission to Store/Delete FM Tuning Pre-Sets - Master Unit

	Key Sequences	Display Visual
Enter code	2 abc 3 def PRG	AUTOSCAN OFF
To confirm the command	2 abc	ON
To initiate the process	PRG	

3.1.3. Settings Menu

3.1.3.A. Languaje

To select the language of all display text.

To select a different language (for example, English)

Store

Key Sequences	Display Visual
1 PRG 2"	LANGUAGE ESPAÑL
2 abc	ENGLSH
PRG	

3.1.3.B. Master Unit Name

Allows you to personalize the Master Unit's name (a maximum of 8 characters).

Scroll through the name until you reach the character you want to change

Key in the new name using the alphanumeric keypad

Store

Key Sequences	Display Visual
2 abc PRG 2"	NAME ZONA
− +	ZONA
7 pqrs 7 pqrs 7 pqrs 7 pqrs	S
2 abc	SA
5 jkl 5 jkl	SAL
6 mno 6 mno 6 mno	SALO
6 mno 6 mno	SALON
PRG	

3.1.3.C. Greeting

Allows you to personalize the message that appears on the display when the Master Unit is switched on (a maximum of 18 characters).

Scroll through the name until you reach the character you want to change

Key in the new greeting using the alphanumeric keypad

Key Sequences	Display Visual
3 def PRG 2"	WELCOME MESSAGE HELLO
− +	HELLO
9 wxyz	W
3 def 3 def	WE
5 jkl 5 jkl 5 jkl	WEL
2 abc 2 abc 2 abc	WELC
...	WELCOME
PRG	

3.1.3.D. Permission To Store/Delete FM Tuning Pre-sets - Master Unit

Disallows access to store and delete Master Unit internal tuning pre-sets.

Disallow permission

Store

Key Sequences	Display Visual
4 ghi + PRG 2"	SET FM MEMORY PERMISSION
2 abc	ON
PRG	OFF

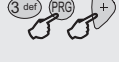
3.1.3.E. Permission To Access General Standby

Disallows Master Unit access to the option to switch off the whole system.

Disallow permission

Store

Key Sequences	Display Visual
5 jkl + PRG 2"	STANDBY PERMISSION
2 abc	ON
PRG	OFF

	Key Sequence	Display Visual
3.1.3.F. Deleting Settings From The Master Unit Deletes all setting and programming data from the Master Unit, restoring the initial default settings. This option does not affect installation data (audio output, zone #, etc.). This operation does not start up the system's clock-calendar.	 2"	DELETE CONFIGURATION OFF
Activate delete process		ON
Initiate the process		LOADING DATA
3.1.4. Installation Menu **3.1.4.A. Number Of Audio Channels Installed** Defines the number of audio channels that exist in the system.	 2"	NUMBER OF CHANNELS CHN 0
For example, to define a 4-channel system (terminals 10, 20, 30, 40)		CHN 4
Store		
3.1.4.B. Deleting Installation Data From The Master Unit (manufacturer reset) Deletes all installation, settings and programming data from the Master Unit, restoring manufacturer default settings. Once the Master Unit starts up, the manufacturer default settings are activated. This operation does not start up the system's clock-calendar.	 2"	DELETE INSTALLATION OFF
To activate delete process		ON
To initiate the process		LOADING DATA
An alternative way to make the manufacturer reset y to hold 0 & 2 keys for 5 seconds	 5"	LOADING DATA
3.1.4.C. Knowing The Software Version Shows Master Unit's software version.	 2"	VERSION SOFT SOFTWARE CENTRAL SERIE 400, 112702, 141211

3.1.5. Technical Specifications

414A1/A2	MIN	NORMAL	MAX		COMMENTS
Measurements		135,5x70,5x44		mm	exterior (width x height x depth)
		116x54x36		mm	cavity (width x height x depth)
		99x51		mm	face cover (width x height)
Voltage		15	16	Vdc	terminal 1
Consumption demand	95		125	mA	terminal 1, mod. 414A1
	110		140	mA	terminal 1, mod. 414A2
Input signal	55		3800	mVeff	jack 3,5mm
Input impedance		3700		ohms	jack 3,5mm
Output signal		3		Veff	terminals 10,20,Y0
Passband	20		15000	Hz	
Frequency range	87,5		108	MHz	only mod. 414A2
Antenna impedance		75		ohms	only mod. 414A2
Antenna sensitivity		3,5	5	uV	only mod. 414A2
Tuner distortion			3	%	only mod. 414A2
Number of station pre-sets			20		only mod. 414A2
Battery life	2			weeks	master unit without voltage
Telecontrol power off delay		20		seconds	
System length		600	1000(*)	m	(*) consult

Connecting terminals mod. 414A1	
1	Standby power voltage
4	Mass
02	Activation of power supply power-on
03	Telecontrol signal
91	Data (+)
92	Data (-)
7	Intercom calls signal
10	MPX sound channel output from discman input

Connecting terminals mod. 414A2	
1	Standby power voltage
4	Mass
02	Activation of power supply power-on
03	Telecontrol signal
91	Data (+)
92	Data (-)
7	Intercom calls signal
10	MPX sound channel output from FM tuner
20	MPX sound channel output from discman input
A	FM antenna
M	FM antenna mass

3.2. Sound Input Unit

3.2.1. Description

For more than 2 music channels (up to a maximum of 6, including the tuner), additional sound input must be added (see 2.4. Basic Wiiring Diagram). They may be placed anywhere in the system, not necessarily adjacent to the Master Unit.

41591 model need no adjustment during installation. Its built-in compressor makes it unnecessary to have a potentiometer to regulate the signal input level. 41592 model has a potentiometer level manual adjustment

3.2.2. Technical Specifications

41591/92	MIN	NORMAL	MAX		COMMENTS
Measurements		45x45x42		mm	exterior (width x height x depth)
		45x45x36		mm	cavity (width x height x depth)
		45x45		mm	frontal (width x height)
Voltage		15	16	Vdc	terminals 2,4
Consumption demand	15		20	mA	mod.41591; terminals 2,4
	28		36	mA	mod.41592; terminals 2,4
Input signal	55		3800	mVeff	mod.41591; jack 3,5mm; term.L,R
	100		3800	mVeff	mod.41592; jack 3,5mm; term.L,R
Input impedance		3700		ohms	mod.41591; jack 3,5mm; term.L,R
		15000		ohms	mod.41592; jack 3,5mm; term.L,R
Output signal		3		Veff	terminals 10,20,Y0
Passband	20		15000	Hz	

3.3. Power Supply Unit

3.3.1. Description

All sound systems have at least one primary power supply to constantly feed the Master Unit. If the size of the system warrants auxiliary power supplies, as many auxiliary power supplies as necessary may be added.
The operation of the power supplies is fully automatic and directly controlled by Master Unit 414A1/A2

There are several power supply models compatible with the 400 Series (models 11204, 11295, 11296 and 11299). The only difference is their size and power. Their installation and operation are the same. All of these power supply models can function as primary or auxiliary power supplies to the sound system, depending on how they are connected. (see *Wiring Diagram Manual*).

The Master Unit powers the system on and off. When the system is off, the power supplies are on standby, supplying power to the Master Unit only 414A1/A2

See 3.1.1.A. Manual System Off/On

LED	central unit power (1 - 4 terminals)	control unit power (2 - 4 terminals)	telecontrol (F'-N terminals)
off	ON (15Vdc)	OFF	OFF
green	ON (15Vdc)	ON (15Vdc)	OFF
orange	ON (15Vdc)	ON (15Vdc)	ON (230Vac)

3.3.2. Technical Specifications

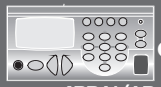
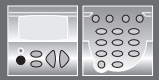
11295	MIN	NORMAL	MAX		COMMENTS
Measurements		118x70x48		mm	exterior (width x height x depth)
Voltage	185	230	265	Vac	50Hz, terminals F,N
Power			14	W	terminals 2,4
Output voltage	14	15	16	Vdc	terminals 2,4
Output current			1,2	A	terminals 2,4
Consumption demand	0		18	W	standby/maximum power
Auto-power-on level	10			Vdc	terminal 02

11296	MIN	NORMAL	MAX		COMMENTS
Measurements		118x70x48		mm	exterior (width x height x depth)
Voltage	185	230	265	Vac	50Hz, terminals F,N
Power			30	W	terminals 2,4
Output voltage	14,5	15	15,5	Vdc	terminals 2,4
Output current			2,1	A	terminals 2,4
Consumption demand	0		40	W	standby/maximum power
Auto-power-on level	10			Vdc	terminal 02

11299	MIN	NORMAL	MAX		COMMENTS
Measurements		106x91x72		mm	exterior (width x height x depth)
Voltage	185	230	265	Vac	50Hz, terminals F,N
Power			20	W	terminals 2,4
Output voltage	14	15	16	Vdc	terminals 2,4
Output current			1,5	A	terminals 2,4
Consumption demand	0		24	W	standby/maximum power
Auto-power-on level	10			Vdc	terminal 02

11204	MIN	NORMAL	MAX		COMMENTS
Measurements		196x122x52		mm	exterior (width x height x depth)
		160x100x50		mm	cavity (width x height x depth)
		143x95		mm	face cover (width x height)
Voltage	185	230	265	Vac	50Hz, terminals F,N
Power			30	W	terminals 2,4
Output voltage	15	15	16	Vdc	terminals 2,4
Output current			2,1	A	terminals 2,4
Consumption demand	0		50	W	standby/maximum power
Auto-power-on level	10			Vdc	terminal 02

4. Control Units

4.1. Control Units  & 

422AI/A2 428AI 4299I

4.1.1. The First Time...

The power supply for any Control Unit is controlled from the Master Unit 414A1/A2. See 3.1.1.A. Manual System Off/On

The first time power is fed to a Control Unit it must be installed. The first step (required to continue) is to program its identification.
A Control Unit is identified by:

- ☑ an individual zone identification (installation menu)
- ☑ a group identification (installation menu)
- ☑ a name (program menu)

A zone identification number must be defined prior to enabling the control unit's normal operation mode. The number must be between 1 and 250 and be different for each of the control units of the same installation.

Key Sequence	Display Visual
	ADDRSS 1
2 abc 8 tuv PRG	ADDRSS 28
	✓ 28
	X 28

To do this, key in the identification to be assigned and press the PRG key. For example, in order to assign zone 28.

The Control Unit verifies that no other zone exists in the system with that identification. If it does not already exist, the identification is validated and normal operation begins

If the zone identification has already been assigned to another Control Unit, the installer will be prompted to key in another identification. The Control Unit will not operate until a valid zone identification is entered

By default, the Control Unit settings are stereo and 16 ohms speaker. Other settings can be defined in the installation menu options 4.1.6 , 4.1.8

To know the zone identification, group and name:

0 c PRG	ROSA ADDRESS 40 GROUP 2

Once the Control Unit has been installed it is ready for normal operation.

4.1.2. Operating audio functions

4.1.2.A. Manual Off/On Of Control Unit

Key Sequence	Display Visual
	10:56 ⏻

The Control Unit activates audio output with the previous settings with the press of a key. The display will be illuminated and the ⏻ icon will be activated.

Manual power off takes place in the same manner, the display darkens and the ⏻ icon is disabled.

When all the installation's Control Units are switched off from the Master Unit (by pressing the ON/OFF key), the units store the current settings in terms of ON/OFF, audio levels, active music channel, … and when later switched on, the Control Units power on with the same settings.

After a power loss, whether by disconnecting the power supply or because of a power failure, the status of the system once power is restored the Control Units start up in their "ideal" state.

See 4.1.2.i. "Ideal" mode

Because units 428A1+42991 do not have the "ideal" settings mode, they power on with the settings last stored.

4.1.2.B. Selection of Music Channels

The audio inputs of each Control Unit mod. 422A1, 422A2 or 428A1+42991 can handle up to 6 music channel connections. The internal FM tuner is set as channel 0. Channel #1 will synch up to the Master Unit's FM tuner, which can be operated remotely from the Control Unit itself. The sound input through the jack on the face of the Control Unit synchs up to channel #7. In total, each Control Unit can have up to 8 music channels, depending on the Master Unit (414A1/A2) and Sound Input Units (41591/92) installed, numbered as shown in chapter 1.7.

To personalize the names of the different music channels, see 4.1.4.0 Personalized Name for Music Channels

Key Sequence	Display Visual
	03
	
	

To access a channel directly, press the channel number followed by the CH key. For example, to select channel 3.

To flip through the different channels, enter channel selection mode by pressing the CH key.

In this mode the function of the +,- keys is channel selection. The channels scrolled through are the channels set up in each Control Unit only.

To limit the channels flipped through to the channels installed, this information must be previously set up in the Master Unit installation (see 3.1.4.A. Number Of Audio Channels Installed). This information can be supplemented by assigning a personalized channel number to each Control Unit to limit or extend channel access to certain zones of the system. (See 4.1.6 , 4.1.8)

4.1.2.C. Audio Level Adjustment

The default function for the +/- keys when the Control Unit is on is to adjust the volume. A few seconds after the last key entry the Control Unit will return to its default function of volume adjustment.

Pressing the ♪ key sequentially switches between the bass, treble, loudness and balance mode adjustments. The +/- keys can be used to adjust the level of each parameter that is activated at that time.

Key Sequence	Display Visual
	VOL 55
	BAS +12
	BAS +24
	TRE +11
	TRE +17
	LOUD 1
	LOUD 0

4.1.2.D. Operation Of The Control Unit's Local FM Tuner (only: 422A2 & 428A1+42991)

Some 400 Series Control Unit models are equipped with an internal FM tuner, set as music channel #0. Stations can be tuned in several different ways:

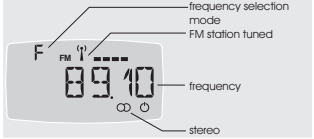
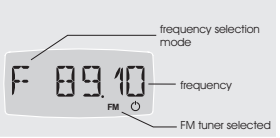
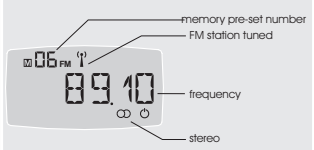
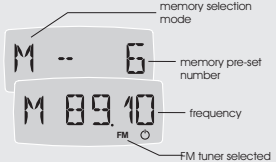
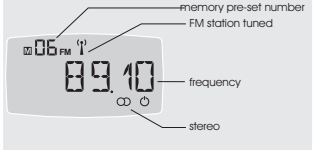
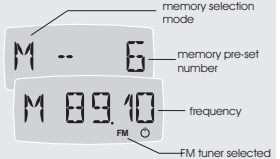
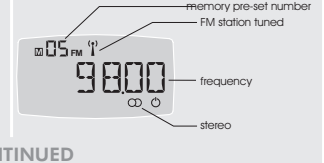
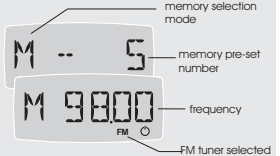
1. By directly keying in the station frequency, for example, to select the station 89.10 MHz.

   A minimum of three digits must be entered when keying in a frequency.

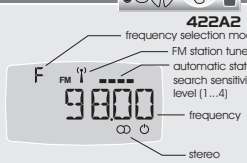
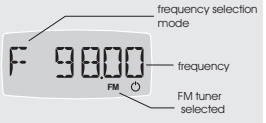
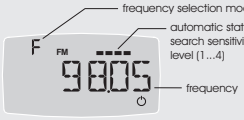
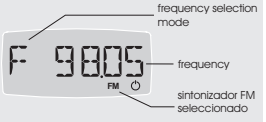
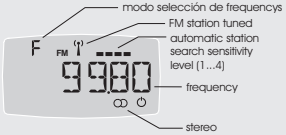
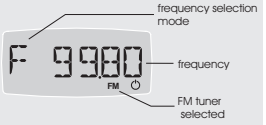
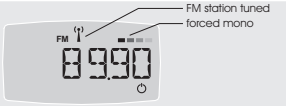
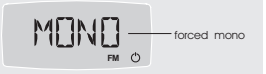
2. By directly keying in the station's memory pre-set value, for example, if pre-set #6 is set to station (89.10 MHz).

3. To enter the memory pre-set selection mode, press FM. The display will show the frequency of the current station.

We can scroll through the different pre-set stations in memory with the +/- keys.

Key Sequence	Display (422A2)	Display (428A1 42991)
8 tuv 9 wxyz 1 0 c FM		
6 mno FM		
FM		
− +		

CONTINUED

Key Sequence	Display 422A2	Display 428AI 4299I
4 To enter the frequency selection mode, press FM again. (FM)		
When pressed with a short key press, the +/- keys tune the frequency in intervals of 0.05 MHZ. *quickly pressed*		
5 In the same mode, by keeping the +/- keys pressed down, the tuner will automatically search the next station (the sensitivity level is as programmed in 4.1.4 or 4.1.7). *held down*		
If the stereo signal quality is not satisfactory you can overrule and select mono mode manually, which is less demanding, by pressing FM again. (FM)		
To switch between stereo and forced mono modes, use the +/- keys.		

4.1.2.E. Store Station Pre-sets Into The Local FM Tuner (only 422A2 & 428A1+42991)

Select the station frequency to be stored using any of the methods described in the previous point. If the reception quality is not satisfactory in stereo you can select forced mode, which is less demanding.

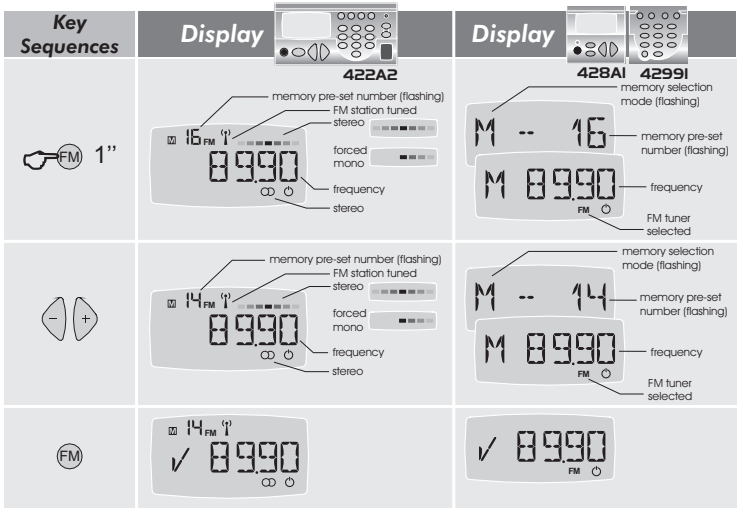
In the Control Unit model 422A2 the associated permission must be activated to execute this feature. See 4.1.5.F. Permission to Store/Delete FM Tuning Pre-sets.

To enter the store to memory mode, press the FM key.

The pre-set memory number will appear flashing. By default, the Control Unit offers the first available memory position, which may be changed using the +/- keys.

The Program Menu has the option to search and automatically store stations at the optimal reception level (see 4.1.4.G or 4.1.7.E)

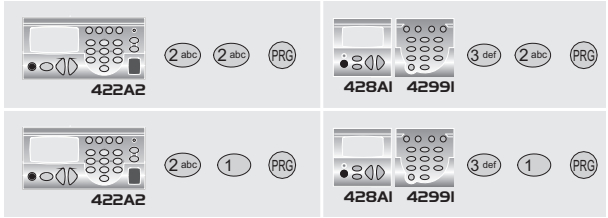
To confirm it has been stored, press FM again.



4.1.2.F. Delete Station Pre-sets Stored In The Local FM Tuner (only 422A2 & 428A1+42991)

Access the program menu option for each model of Control Unit

In the Control Unit model 422A2 the associated permission must be activated to execute this feature. See 4.1.5.F. Permission to Store/Delete FM Tuning Pre-sets.



4.1.2.G. Adjust the automatic station search sensitivity (only 422A2 & 428A1+42991)

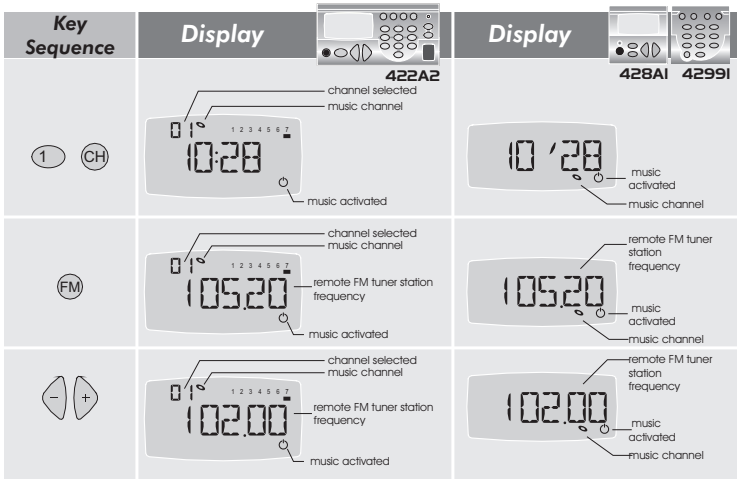
Access the program menu option for each model of Control Unit

4.1.2.H. Remote Use of the Master Unit FM Tuner

If the system's Master Unit has a tuner and the Control Unit is tuned to channel #1, access to the master tuner is possible. Unlike the case with the local tuner, stations can be tuned in only one way: by sequential scroll through the different pre-sets.

The station tuned on the Master Unit tuner will be played throughout the system. There is an option to disable access to tuning from certain Control Units, allowing users to listen but not to change the station tuned.

See Setting Menu: Access to Master Unit FM Tuner (4.1.5.E ó 4.1.8.i)

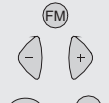


If access to the Master Unit FM tuner is not activated, (see 4.1.5.E. or 4.1.8.i) the FM key function is selecting the FM tuner.

Storing/deleting memory settings from the central FM tuner can only be done at the Master Unit.

4.1.2.i. "Ideal" Settings Mode (only 422A1/A2)

Each Control Unit has the feature to store "ideal" audio settings, which are pre-programmed settings that can be activated quickly and immediately. These settings consist of an audio channel and pre-set levels of volume, balance, bass, treble and loudness.

	Key Sequence	Display Visual
Select the music channel to be designated as the "ideal" settings mode. If the channel selected is the internal FM tuner, the pre-set station will be stored as part of the "ideal" settings mode.		98.6
Using the quick function indicated, the ideal settings mode will be automatically stored.		VOL 72
		IDEAL ✓
Pressing the +/- keys down simultaneously activates the audio ideal settings mode.		IDEAL

4.1.2.J. Autostandby (only 422A1/A2)

The Control Unit will go into standby mode (music off) at the time and days of the week programmed.

Access the program menu. Select the ON/OFF status, time and days of the week to execute the function.		AUTO-STANDBY
The function can be activated or cleared from this option in the program menu.		ON/OFF
The quick function can also be used.		STANDBY ✓ STANDBY X

See 4.1.4.B. Program Menu: Autostandby

The function is activated when the ◷ icon is flashing.

4.1.2.K. General Standby

All Control Units have the ability to make any unit connected to the system go into standby mode (music off).

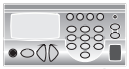
Key Sequence	Display Visual
For activate/clear use the quick function: 7 pqrs PRG	STANDBY ✓

The associated permission must be activated to execute this feature (see 4.1.5.G or 4.1.8.J)

4.1.2.L. Sleep

The sleep function shuts the Control Unit off after a predefined time entered at power on. The user can program the time. Once the pre-set time has elapsed, the Control Unit will automatically power off. If the Control Unit is switched off manually before the end of the pre-set time, the sleep function will be cleared.

The procedure to define sleep time depends on the model of the unit



Key Sequence	Display Visual
Access the program menu and select the time in minutes: 1 4 ghi 1 PRG	SLEEP MIN 20
It is activated by pressing the ON/OFF key down for 2"	SLEEP ✓
The ◷ icon will be static if the sleep function is activated	

Key Sequence	Display Visual
It is activated by pressing the ON/OFF key down for 2"	SLEEP 15
The duration of sleep time will appear on the screen sequentially as long as the ON/OFF key is pressed.	SLEEP 30
	SLEEP 45
As soon as the key is released the sleep function will be activated with the time that appears on the screen at that moment.	SLEEP 60
The seconds hand on the clock will flash in the characteristic manner.	

4.1.2.M. Alarms

The 400 series Control Units are equipped with two alarms that can be individually programmed and can operate in two different modes:

"Music" mode alarm:

- Operates only when the Control Unit is off.
- At the time and days programmed, the Control Unit switches on with the last music channel played.
- The volume is programmable and different for each alarm

"Beep" mode alarm:

- Operates whether the Control Unit is off or on
- At the time and days programmed, the Control Unit switches on and a specific beep signal is activated. The alarm 1 and alarm 2 beeps are different and have programmable volumes.
- Is equipped with a "delay" function: a short key press of any key returns the Control Unit to its previous state (standby or music) and after 4' the beep signal is activated again
- To cancel the alarm, press any key until a continuous beep sounds: it will return to its previous state (standby or music) and the alarm function ends. The snooze function may be cancelled at any time by holding down the ON/OFF key for 2 seconds
- If the Control Unit is powered off or on during the "delay" period, the alarm function ends.
- Also, if 4' elapse without any key press, the Control Unit returns to its previous state (standby or music) and the alarm function ends

See Program Menu (4.1.4.A or 4.1.7.B)

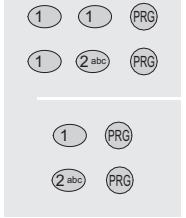
Units 422A1/A2 have two alarm clocks which can be programmed for each day of the week

Access the program menu, select the ON/OFF status, time and days of the week the function should operate, as well as the function mode and volume.

They are activated/cleared by using the quick functions...

The 1 2 icons indicate if the alarms are activated.

Key Sequences



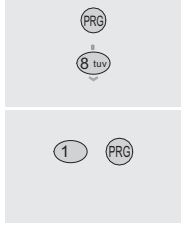
Units 428A1+42991 have a single alarm clock which can be programmed daily

Access the program menu, select the ON/OFF status, and time the function should operate, as well as the function mode and volume.

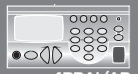
It is activated/cleared by using the quick function....

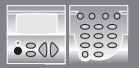
The icon indicate if the alarm is activated.

Key Sequences



4.1.3. Operating intercom calls functions



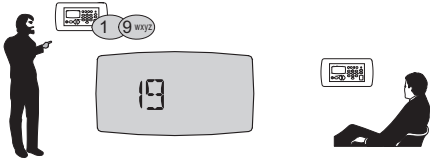


4.1.3.A. Calls To An Individual Zone

An intercom call to an individual zone is an intercommunication call between two zones in half-duplex setup with hands-free response. A Control Unit is identified by its zone identification number (see 4.1.6.A or 4.1.8.A) and a name (see 4.1.5.B or 4.1.7.M).

1 Select the zone that will receive the call

On the numeric keypad, key in the zone number you wish to call (to delete digits of an entry, press the 0 key for ½"). For example, to call zone 19 key in that number.

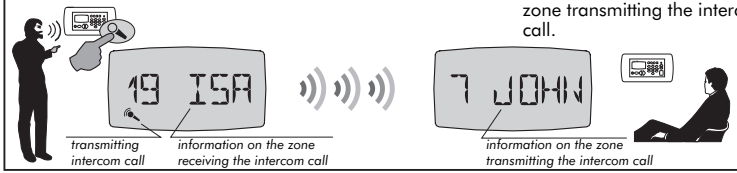


2 Transmit the intercom call

To talk, press the key and hold it down throughout the transmission. By default, pressing the key directly and no zone number will place a call to the last intercom zone. If the operation could not be initiated for any reason, a message will appear on the display. If the communication takes place, the name of the zone called will be displayed.

The intercom call will be transmitted while the key is held down (the maximum duration is 1').

The Control Unit receiving the message displays the name of the zone transmitting the intercom call.

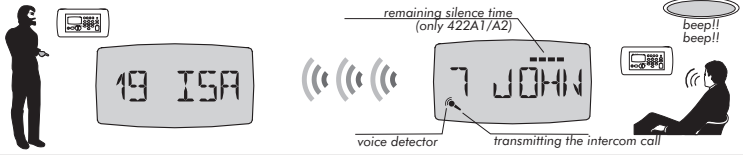


3 Receiving the response

When the key is released the Control Unit goes into hands-free auto response mode and a response to the intercom call is received. The person who had initiated the conversation can then hear the response from the other party. This mode remains active as long as the person is talking (auto-response sensitivity and silence time settings can be programmed).

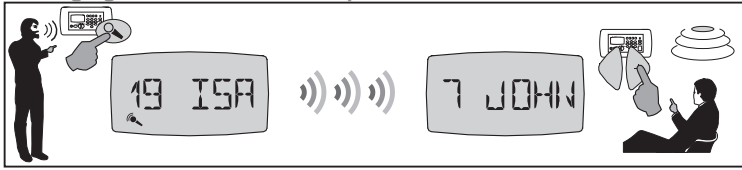
Hands-free auto-response

The zone receiving the intercom call opens its microphone and a specific beep signal is sent through the loudspeakers to signal that the microphone is capturing the sound from that zone (this avoids unauthorized hearing of intercom calls). The auto response will be activated as long as the voice detector does not detect a silent period longer than the time programmed. In any case, the maximum duration is 1'.



In units 422A1/A2, hands-free auto-response settings can be programmed by using the Programming Menu (see 4.1.4.L). In units 428A1+42991 they are programmed using the Programming Menu (see 4.1.7.H) and the Installation Menu (see 4.1.8.K and 4.1.8.L)

Changing the intercom call receipt volume



The volume of the intercom call received is the volume programmed in sections 4.1.4.H or 4.1.7.G Receive Intercom Calls Volume. To adjust the volume, use the +/- keys while the intercom call is being received (when the intercom call is over, the volume setting will be stored in memory).

4 Initiating a conversation

Either of the two parties may initiate a conversation at any time by pressing the key.

It is possible to totally or partially block the call/auto-response process. See 4.1.3.E."Do not disturb" function and 4.1.3.H. Intercom Call Permissions.. When a Control Unit cannot receive intercom calls, the icon will be lit if the block is permanent or flashing if the "Do not disturb" function is activated.

5 Ending an intercom call operation

Either of the two parties may end the intercom conversation at any time by pressing the key.
When said key is held 2'', further to canceling the receipt of the call, the control unit will switch to "do not disturb" mode.
The maximum duration of an intercom operation (calls + responses) is 3 minutes.

4.1.3.B. General Calls And Zone Group Calls

An intercom call to a zone group is a call transmitted from a Control Unit and received by the Control Units under the same group (see 4.1.6.B ó 4.1.8.B Control Unit Installation: Group)

A general call is a call to group #0. All the Control Units belong to group #0 and therefore receive the intercom call unless inercom call reception is blocked at that time (see 4.1.3.H. Permissions for Intercom Calls Operations).

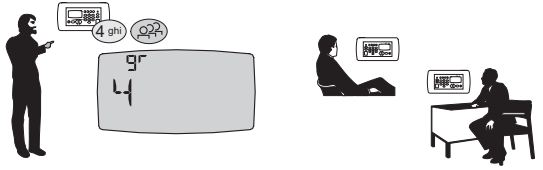
Auto response is not possible in this type of calls.

The key switches between "individual identification" and "group identification". The zone identification number keyed will be read as individual or group depending on the "gr" status on the display.

Pressing the group key in general calls is redundant because identification 0 only refers to group identification or general calls (zone 0 does not exist).

1 Select the group that will receive the intercom call

On the numeric keypad, key in the group number you wish to call, followed by the group key (to delete an entry, pres the 0 key for ½").
For example, to call group 4...

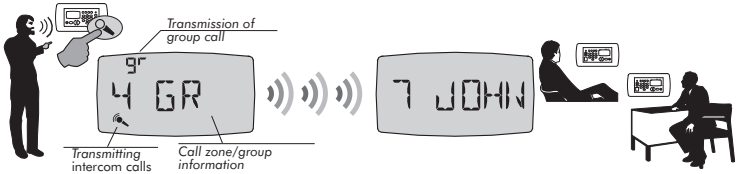


2 Transmit the intercom call

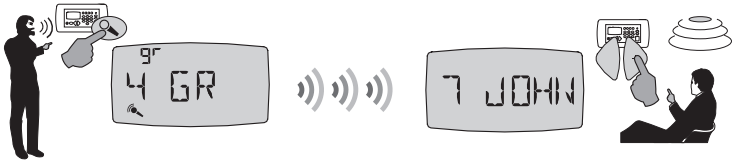
To talk, press the key and hold it down throughout the transmission.
If the operation could not be initiated for any reason, a message will appear on the display.

The intercom call will be transmitted while the key is held down (the maximum duration is 1').

The name of the zone transmitting the intercom call appears on the display of the Control Unit receiving the message.



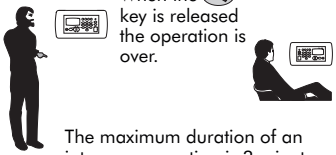
Changing the intercom call receipt volume



The volume of the intercom call received is the volume programmed in sections 4.1.4.H or 4.1.7.G Receive Intercom Calls Volume. To adjust the volume, use the +/- keys while the intercom call is being received (when the intercom call is over, the volume setting will be stored in memory).

3 End of the intercom call

When the key is released the operation is over.



The maximum duration of an intercom operation is 3 minutes.

Either of the two parties may end the intercom conversation at any time by pressing the key.

When said key is held for 2" further to canceling the receipt of the call, the control unit will switch to "do not disturb" mode.

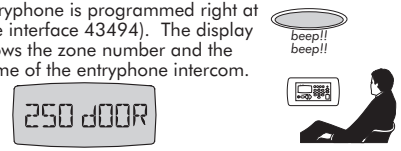
If an intercom call is sent to a non-existent group or if the Control Units are unable to receive intercom calls, a message will appear on the display. If the intercom call is delivered it means at least one Control Unit in the selected group has received the message.
NOTE: It is possible to totally or partially block the call/auto response process. See 4.1.3.H. Intercom Call Permissions.

4.1.3.C. Communication with the entryphone intercom

Systems with one or several interface units for one or several entryphone intercom units offer the ability to have a speak/listen type conversation with the person at the exterior door from any of the system's control units, including the option of letting the person in the door. Each entryphone intercom is identified by a zone address number, a name and a specific buzz tone. Buzz tones are programmable from the interface unit (ref. 43494) itself. It is possible to program the zone number and name without the assistance of the installer and can be changed with the PC software by using the PC interface (ref. 43491). For all purposes (permissions, level programming, etc.) communication operations with the entryphone intercom behave the same way as communication between zones, in this case the entryphone intercom interface being one of the zones.

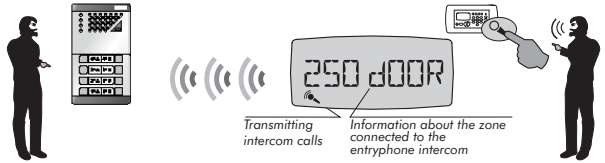
1 Receiving an intercom call from the door

When someone rings the door bell a specific ring tone is heard in all the zones of the residence that have been programmed to receive intercom calls (the destination of the call from the intercom/entryphone is programmed right at the interface 43494). The display shows the zone number and the name of the entryphone intercom.



2 Answering (generating an intercom call)

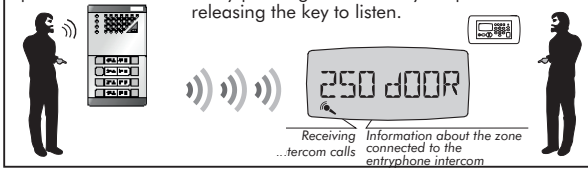
To begin speaking, press and hold it down while speaking to the person at the door. Just as with communication between control units, pressing the key without having a zone number selected will direct the call to the last zone with which intercommunication was held. Evidently in this case it would be the entryphone intercom. If for any reason it has not been possible to initiate the operation, the information will be shown on the display.



The intercom call will last as long as the key is held down (the maximum time allowable is 1').

3 Listening (receiving an intercom call)

When the key is released the unit goes into receiving mode, listening to the message from the person at the exterior door. The conversation is always managed by the person inside the home by pressing the key to speak and releasing the key to listen.



4 Opening the exterior door

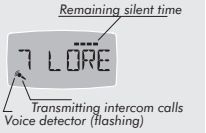
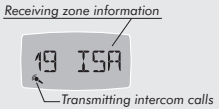
To open the exterior door, press the key. The conversation will immediately be terminated. If you wish to speak with the person at the exterior door again you will have 5 seconds during which the conversation will be reinitiated by pressing the key again.

5 Ending the operation without opening the door

To end the entryphone intercom communication without opening the door, press the key.

4.1.3.D. Electronic Baby Monitor

The Baby Monitor is an intercom call operation to an individual identification which is automatically initiated when sound is detected by a Control Unit. It is designed to monitor someone who cannot access the keypad to transmit a voice message (a child, a disabled person, an older person...).It is programmed at the transmitting Control Unit (zone to be monitored). There can be more than one Baby Monitor function operating in a system.

Key Sequence	Display Visual
5 jkl PRG	BABY MONITOR WITH LORENA DIR 5 ✓
	
	
	
5 jkl PRG 9 wxyz PRG	BABY MONITOR X

See Baby Monitor parameters definition in Program Menu 4.1.4.K. or 4.1.7.i

Activate/Desactivate: use the quick function.

If the Baby Monitor function has been activated successfully (that is, the transmitting Control Unit has the required permissions and the receiving unit is hooked up and can receive intercom calls) the icon will appear flashing. The Control Unit accepts any form of operation: on, off, ...

When sound is detected in the room the Control Unit transmits an intercom call without any key having been pressed. The intercom call will last as long as the silence time programmed in the Baby Monitor settings.

Baby Monitor operation is compatible with the intercom call operation mechanism described in section 4.1.3.A. and 4.1.3.B., that is, a call can be placed by pressing the "talk" key.

To end the operation, press the ON/OFF key from either the transmitting or the receiving Control Unit.

To switch the receiving baby monitor control unit to "do not disturb" mode, press the ON/OFF key for 2".

To cancel the Baby Monitor, use the quick function.

To cancel the Baby Monitor in all the Control Units of the system, use the quick function.

Even if the receipt of intercom calls is cleared on a Control Unit, if the Baby Monitor is activated at that time it can receive the message in Baby Monitor operation . IMPORTANT: Sensitivity levels 8 and 9 are for extremely quiet areas. At those settings the voice detector could become permanently activated due to the noise.

4.1.3.E. Do Not Disturb Function

It is possible to activate the "Do not disturb" function on a Control Unit to disallow the receipt of any kind of calls.
When this function is activated, the talk/auto-response process becomes talk only as it is no longer possible to receive intercom calls (see 4.1.3.H. Intercom Call Permissions)

4.1.3.F. Last Received Calls Directory (only 422A1/A2)

To facilitate calling a zone each Control Unit stores the identifications and names of the last 10 calls received.

The directory can be accessed through the quick function. The display shows the number and name of the last zone of an intercom call.

Use the +/- keys to scroll through the directory to consult other zones.

To initiate an intercom call to any of the zones, simply press the talk key and begin the intercom call operation as outlined in 4.1.3.A. Intercom Calls: Calls To An Individual Zone.

Key Sequence	Display Visual
4 ghi PRG	NOTIF X
6 mno PRG	1 JOHN
− +	14 DAVID
− +	7 ALBERT
	7 JOHN

4.1.3.G. A Control Unit's Neighbor Zones

The "neighbor zones" function is available in Control Units that could experience coupling in intercom calls because they are installed in the same room. Although it is unlikely that intercom calls will be made between the units since they are in the same room, a general or group intercom call could be made from either unit. The close proximity of the Control Units could cause coupling between the microphone of one unit and the loudspeaker of the other.
To avoid this problem, each Control Unit has a set of zones called "neighbor zones" from which it is not possible to receive intercom calls.
Programming and deleting "neighbor zones" in a Control Unit is only possible from the PC program.

4.1.3.H. Intercom Calls Permissions

By default, the manufacturer leaves all intercom calls permissions **activated** on Control Units. To limit any intercom call operations, access the specific blocks according to the following table. (The options are accessible from the program, settings and installation menus).

Blocking intercom call transmission

At the user level, a Control Unit can be programmed to not have the ability to transmit **General Call** type intercom calls (program menu): in this event, the user will not be able to call group #0 but will be able to transmit and receive any other type of call, be it individual or group. At the installer level, a Control Unit can be programmed to not have the ability to transmit any type of intercom call (installation menu): in this event, the user will not be able to transmit any type of intercom calls, respond with auto-response, nor use the Baby Monitor function. It will be able to receive intercom calls.

Blocking auto-response

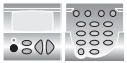
A Control Unit can be programmed to not ever transmit an automatic response when it receives an individual intercom call (program menu)

Blocking intercom call reception

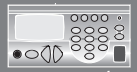
At the user level, a Control Unit can be programmed to eventually not receive any type of intercom calls by activating the "do not disturb" function. In this event, it will not be able to receive or respond to intercom calls with auto-response. A Control Unit can also be programmed to not receive any type of intercom calls (individual, group or general call) by using the program menu or using the setting menu. Note that blocking receipt of individual intercom calls disables auto-response.

Blocking Baby Monitor function

A Control Unit can be programmed so that the electronic Baby Monitor cannot be activated at that unit (installation menu).

Permission	 422AI/A2	 428AI 4299I	TRANSMIT INTERCOM CALL			RECEIVE INTERCOM CALL				AUTO-RESPONSE	BABY MONITOR
			Individual	Group	General	Individual	Group	General	Vol.Adj.		
Transmit	2"	2"	⊘	⊘	⊘					⊘	⊘
Baby Monitor	2"	2"									⊘
Receive	2"	2"				⊘	⊘	⊘	⊘	⊘	
Receive individual		NOT AVAILABLE				⊘				⊘	
Receive group		NOT AVAILABLE					⊘				
Receive general		NOT AVAILABLE						⊘			
Transmit general		NOT AVAILABLE			⊘						
Auto-response										⊘	
Do not disturb						⊘	⊘	⊘	⊘	⊘	

⊘ = blocked function

4.1.4. Control Unit  : Program Menu

422AI/A2

4.1.4.A. Alarm 1 & 2

Each Control Unit is equipped with two programmable alarms with two operation modes, as described in section 4.1.2.M. Alarms

Key Sequences	Display Visual
1 1 PRG	ALARM 1
o	ALARM1
1 2abc PRG	
5jkl	ON/OFF
5jkl	OFF
Change the setting, also available as a quick access function (see 2.2) 2abc	ON
Store. PRG	ON/OFF
Scroll to next program setting in alarm mode. 8tuv	HH-MM
Enter to program time. 5jkl	00-00
Set the time. 0c 6mno 5jkl 0c	06-50
Store. PRG	HH-MM
Scroll to next program setting in alarm mode. 8tuv	DAYS

... CONTINUED

Key Sequences	Display Visual
Enter to program the days of the week alarm will be set. 5jkl	MO ON
Scroll through days. +	TO ON
...	
Scroll through days. +	SA ON
Change. 2abc	SA OFF
Scroll through days. +	SNON
Change. 2abc	SNOFF
Store. PRG	
Scroll to next program setting in alarm mode. 8tuv	TYPE
Enter program to select alarm sound. 5jkl	BEEP
Change. 2abc	MUSIC
Store. PRG	TYPE

... CONTINUED

Key Sequences	Display Visual
Scroll to next program setting in alarm mode.	VOLUME
Enter to program the alarm volume.	VOL 75
Change.	VOL 86
Store.	

4.1.4.B. Autostandby

Option to program a time for the Control Unit to automatically go into standby mode (music shuts off)

For example, auto standby at 23:45 every weekday except Saturday and Sunday.

Key Sequences	Display Visual
1 3 def PRG	AUTOSTANDBY
5 jkl	ON/OFF
5 jkl	OFF
2 abc	ON
PRG	ON/OFF
8 tuv	HH-MM
5 jkl	00-00
2 abc 3 def 4 ghi 5 jkl	23:45
PRG	HH-MM

... CONTINUED

Key Sequences	Display Visual
8 tuv	DAYS
5 jkl	MO ON
+	TU ON
●●●	
+	SU ON
2 abc	SU OFF
PRG	DAYS

Store

4.1.4.C. Sleep

Sleep time can be adjusted to the user's needs by using the following programming option.

Key Sequences	Display Visual
1 4 ghi PRG	SLEEP MINUTES
3 def 5 jkl	MIN 20
PRG	MIN 35

4.1.4.D. Time and Date

The system's time and date is shared by all connected units and can be programmed at any unit whatsoever. All other units will instantly update the change.

Key Sequences	Display Visual
1 5 jkl PRG	TIME-DATE

See 3.1.2.A. Master Unit
Program menu: Time and Date

4.1.4.E. FM Search Sensitivity (only 422A2)

	Key Sequences	Display Visual
The option to adjust the automatic station search sensitivity for the Control Unit's internal FM tuner.	2 abc 1 PRG	FM SENSITIVITY SENS 4
To adjust the new sensitivity; 4=max, 1=min.	2 abc	SENS 2
Store.	PRG	

4.1.4.F. Deleting FM Tuning Pre-sets (only 422A2)

	Key Sequences	Display Visual
The option to delete all the Control Unit's internal FM tuner pre-sets.	2 abc 2 abc PRG	DELETE FM MEMORY OFF
To confirm the command to delete the data.	2 abc	ON
To initiate the process.	PRG	

Permission for this option must be activated in the Control Unit's settings menu. (ver 4.1.5.F)

4.1.4.G.. Storing Station Frequencies Automatically (only 422A2)

The Control Unit will store into memory the stations that are received with the highest quality, ordered from lowest frequency (87.5 MHz) to highest frequency (108.0 MHz). The system will use all the memory slots available, reaching the maximum of 20.

This option is only available in Control Unit models that have an internal tuner. Permission for this option must be activated in the Master Unit's settings menu. See 4.1.5.F.- Permission to Store/Delete FM Tuning Pre-Sets

	Key Sequences	Display Visual
Enter code	2 abc 3 def PRG	AUTOSCAN OFF
To confirm the command	2 abc	ON
To initiate the process	PRG	

4.1.4.H. Receive Intercom Calls Volume

	Key Sequences	Display Visual
To adjust the volume of the intercom calls received at this Control Unit. Adjust by raising or lowering the volume. Or adjust by directly keying in volume level. Store.	3 def 1 PRG − + 7 pqrs 0 C PRG	INTERCOM CALLS VOLUME VOL 50 VOL 60 VOL 70

The receive intercom calls volume is adjustable on-line, that is, during the receipt of intercom calls. Use the +/- keys to raise or lower the volume of the in-coming intercom calls. The volume adjustment will be stored at the end of the intercom call

Permission to receive intercom calls must be activated for this option to be available (see 4.1.5.D. Permission to Receive Intercom Calls).

4.1.4.i. Permission To Receive Individual, Group Or General Intercom Calls

	Key Sequences	Display Visual
It is possible to select the type of call received by a Control Unit. To cancel the receipt of "individual call" intercom calls (that is, when one zone sends a message to another):	3 def 2 abc PRG 2 abc PRG	INDIVIDUAL RECEPTION ON OFF
To cancel the receipt of "group intercom calls" (that is, when one zone sends a message to a group of zones under a group number):	3 def 3 def PRG 2 abc PRG	GROUP RECEPTION ON OFF
To cancel the receipt of "general call" intercom calls (that is, when one zones sends a message to all the others):	3 def 4 ghi PRG 2 abc PRG	GENERAL RECEPTION ON OFF

Permission to receive intercom calls must be activated for this option to be available (see 4.1.5.D.- Permission to Receive Intercom Calls).

4.1.4.J. Permission To Transmit General Intercom Calls

	Key Sequences	Display Visual
Transmitting "general intercom calls" can be cancelled in a Control Unit.	4 ghi 1 PRG	GENERAL INTERCOM CALLS ON
To cancel permission.	2 abc	OFF
Store.	PRG	

Permission to transmit intercom calls must be activated for this option to be available (see 4.1.6.E)

4.1.4.K. Baby Monitor

See 4.1.3.D. Baby Monitor function. To program the Baby Monitor settings.

Key Sequences	Display Visual
4 ghi 2 abc PRG	BABY MONITOR BBY MO
5 jkl	ON/OFF
Scroll to the next programmable Baby Monitor setting. 8 tuv	SENSIT
Enter to program the sensitivity of the Baby Monitor activation. 5 jkl	SEN 4
Change the setting. − +	SEN 7
Store. PRG	

... CONTINUED

Sensitivity levels 8 and 9 are for extremely quiet areas. At those settings the voice detector could become permanently activated due to the background noise.

There is a quick access function to activate and disable the Baby Monitor (ver 1.2)

Transmit intercom calls and Baby Monitor permissions must be activated for this option to be available (see 4.1.6.E.Permission to Transmit Intercom Calls and 4.1.6.F. Baby Monitor Permission)

	Key Sequences	Display Visual
Scroll to the next programmable Baby Monitor setting.	8 tuv	TIME
Enter to program the silence time.	5 jkl	4 SEC
Change the setting.	− +	8 SEC
Store.	PRG	
Scroll to the next programmable Baby Monitor setting.	8 tuv	ADDRESS
Enter the zone identification where you want the Baby Monitor call to be transmitted.	5 jkl	ADR 23
Press the key for the Baby Monitor to cover a group identification.		
Change the setting.	− +	ADR 26
Store.	PRG	
End and exit.		

4.1.4.L. Auto-response

	Key Sequences	Display Visual
See 4.1.3.A. Intercom call to an individual zone. To program auto-response settings.	4 ghi 3 def PRG	AUTO-RESPONSE
	5 jkl	ON/OFF
Enter to change the setting.	5 jkl	OFF
Change the setting.	2 abc	ON
Store.	PRG	ON/OFF
Scroll to the next programmable auto-response setting.	8 tuv	SENSIB
Enter to program the sensitivity of Baby Monitor activation.	5 jkl	SEN 4
Change setting.	− +	SEN 7
Store.	PRG	

... CONTINUED

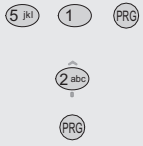
Sensitivity levels 8 and 9 are for extremely quiet areas. At those settings the voice detector could become permanently activated due to the background noise.

	Key Sequences	Display Visual
Scroll to the next programmable auto-response setting		TIME
Scroll to the next programmable Baby Monitor setting		SEG 4
Change the setting		SEG 8
Store		
End and exit		

Following permissions must be activated for this option to be available:
- Installation menu 4.1.6.E. Permission to Transmit Calls,
- Settings menu: 4.1.5.D. Permission to Receive Calls
- Program menu: 4.1.4.i. Permission to Receive Individual Intercom Calls

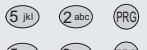
4.1.4.M. Storing "Ideal" Settings

To store the current audio settings (volume, balance, bass, tones, loudness and selected channel) as the "ideal settings" (ver 4.1.2.i)

Key Sequences	Display Visual
	IDEAL OFF ON

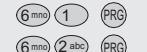
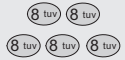
4.1.4.N. Off/On Dimmer

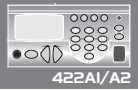
Control Unit's display window brightness for ON/OFF functions can be programmed from this

	Key Sequences	Display Visual
		LIGHT OFF o LIGHT ON
Adjust level		LT 5
Store		LT 8

4.1.4.O. Personalized Name for Music Channels

Allows for personalized naming of each of the control unit's music channels (with a six character maximum)

	Key Sequences	Display Visual
		CH FM CH 1 CH 2
Key in the code for the channel whose name you wish to change		CH 6 CH CD
Scroll through the name to the character you wish to change		CH 3
Use the alphanumeric key pad to key in the new name		T TV
Store		

4.1.5. Control Unit  : Settings Menu

422A1/A2

4.1.5.A. Language

Selects the language of all display text.

To select a different language (for example, English).

Store

Key Sequences	Display Visual
1 PRG 2"	IDIOMA ESPAÑL
2 abc	ENGLSH
PRG	

4.1.5.B. Control Unit Name

Allows you to personalize the Control Unit's name (a maximum of 8 characters).

Scroll through the name until you reach the character you want to change.

Key in the new name using the alphanumeric keypad.

Store

Key Sequences	Display Visual
2 abc PRG 2"	NAME ZONA
− +	ZONA
7 pqrs 7 pqrs 7 pqrs 7 pqrs	S
2 abc	SA
5 jkl 5 jkl	SAL
6 mno 6 mno 6 mno	SALO
6 mno 6 mno	SALON
PRG	

4.1.5.C. Greeting

Allows you to personalize the message that appears on the display when the Control Unit is switched on (a maximum of 18 characters).

Scroll through the name until you reach the character you want to change.

Key in the new greeting using the alphanumeric keypad.

Key Sequences	Display Visual
3 def PRG 2"	WELCOME MESSAGE HELLO
− +	HELLO
9 wxyz	W
3 def 3 def	WE
5 jkl 5 jkl 5 jkl	WEL
2 abc 2 abc 2 abc	WELC
...	WELCOME
PRG	

4.1.5.D. Permission To Receive Intercom Calls

The option to receive intercom calls of any kind may be permanently switched off from a Control Unit. Note that Control Units with "receive intercom calls" switched off cannot use the auto-response feature when transmitting a call.

For example, to switch off a Control Unit from transmitting intercom calls.

Store

Key Sequences	Display Visual
4 ghi + PRG 2"	RECEIVE INTERCOM CALLS PERMISSION
2 abc	ON OFF
PRG	

4.1.5.E. Access To Master Unit FM Tuner

Controls Master Unit tuner access to change the station from the Control Unit itself. By disallowing access, the station on the Master Unit tuner cannot be changed from the Control Unit itself (it can always be changed by directly accessing it through the Master Unit keypad).

See 4.1.2.H. Operation of Master Unit FM Tuner

	Key Sequences	Display Visual
	5 jkl PRG 2"	ACCESS TO CENTRAL FM ON
Disallow access.	2 abc	OFF
Store	PRG	

4.1.5.F. Permission To Store/Delete FM Tuning Pre-sets

Disallows access to store and delete tuning pre-sets from Control Unit's internal tuner.

	Key Sequences	Display Visual
	6 mno PRG 2"	SET FM MEMORY PERMISSION ON
Disallow permission.	2 abc	OFF
Store	PRG	

4.1.5.G. Permission To Access General Standby

Disallows Control Unit access to the option to switch off the whole system.

	Key Sequences	Display Visual
	7 pqrs PRG 2"	GENERAL STANDBY PERMISSION ON
Disallow permission.	2 abc	OFF
Store	PRG	

See 4.1.2.K. Control Unit Operation: General Standby

4.1.5.H. IR Remote Control Unit Selection

Allows remote Control Unit selection. Also, it can be used to disable this feature

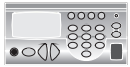
	Key Sequences	Display Visual
	8 tuv PRG 2"	IR REMOTE CONTROL IR 14
To activate the remote Control Unit use the adjust keys +/- and select 14.		IR -- IR 14
The EISSOUND remote control code should be 14.	+	IR 16
To cancel operation by means of the remote Control Unit, use the keys +/- to select a number other than 14, for example, 16.	PRG	

Key Sequence	Display Visual

4.1.5.i. Deleting Control Unit Settings

Deletes all setting and programming data from the Control Unit, restoring the initial default settings. This option does not affect installation data.

9 wxyz PRG 2"	DELETE CONFIGURATION OFF
Activate delete process. 2 abc	
Initiate the process. PRG	LOADING DATA

4.1.6 Control Unit  : Installation Menu

422AI/A2

4.1.6.A. Zone Identification

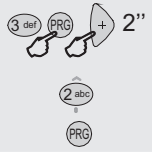
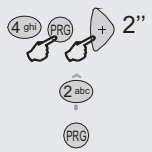
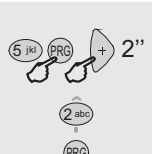
A Control Unit is identified in the system by a zone identification number, a group identification number (optional) and a name (optional). The zone identification number must be a number between 1 and 250 and be different for each Control Unit installed. It is not necessary for the numbers to be consecutive.

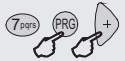
1 PRG + 2"	ADDRESS ADR 1
For example, to define a zone identification as number 64 6 mno 4 ghi	ADR 64
Before the zone identification is programmed, the Control Unit verifies that no other zone exists with that identification number. If the number already exists, the display shows an error message and the number is not stored. If the zone identification selected is available, it is stored in the memory. PRG	X 64 ✓ 64

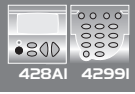
4.1.6.B. Group

Group identification numbers must be between 1 and 250. It is not necessary for the numbers to be consecutive. Group identification "0" is reserved as global identification and all the system's Control Units have it by default.

2 abc PRG + 2"	GROUP GR 1
For example, to define group number 8 8 tuv	GR 8
Store PRG	

	Key Sequence	Display Visual
4.1.6.C. Mono/Stereo Defines whether the Control Unit's audio output (terminals 04, 05, 06) is connected in mono or stereo mode. In a Control Unit in stereo, outputs 05 and 06 respond to the left and right channels. In a Control Unit in mono, both outputs are identical and can therefore be used interchangeably. To change the output setting to mono Store		STEREO/MONO STEREO MONO
4.1.6.D. Audio Output Defines the impedance connected to the Control Unit's audio output (terminals 04, 05, 06) from the following options: 16 ohm passive loudspeaker, 8 ohm passive loudspeaker, amplifier, line To change the setting to 16 ohm Store		AUDIO OUTPUT 16 Ω 8 Ω
4.1.6.E. Permission To Transmit Intercom Calls The "transmit intercom calls" option may be permanently disabled from a Control Unit without affecting its ability to receive intercom calls. Note that Control Units with "transmit intercom calls" switched off cannot use the Auto Response feature. See 4.1.3.H. Control Unit Operation: Intercom Call Permissions To block the transmission of intercom calls Store		PERMISSION SEND INTERCOM CALLS OFF
4.1.6.F. Baby Monitor Permission A Control Unit's Baby Monitor feature can be permanently switched off. See 4.1.3.H. Control Unit Operation: Intercom Call Permissions To switch off the Baby Monitor feature Store		ACTIVATE BABY MONITOR PERMMISION ON OFF

	Key Sequence	Display Visual
4.1.6.G. Last Channel Number Accessible From The Control Unit The number of music channels installed is defined in the Master Unit. The Control Units have the same setting by default in order to recognize the last channel installed. Therefore the Control Unit will initially have access to the channels defined in the Master Unit. To modify a Control Unit's access to more or less channels than those defined in the Master Unit, use that option of the installation menu. The new setting will have priority over the Master Unit's setting (in that Control Unit only).		NUMBER OF CHANNELS
For example, to install a Control Unit with access to 3 channels (terminals 10, 20, 30)		CH 0 CH 3
Store		
Audio channel #7 (jack input on front face of Control Unit) will always appear regardless of the setting programmed in this option.		
4.1.6.H. Deleting Control Unit Installation (manufacturer reset) Deletes all settings and programming data from the Control Unit, restoring manufacturer default settings.		DELETE INSTALLATION OFF
To activate delete process		ON
To initiate the process		LOADING DATA
To reset the manufacturer's settings without having to immediately go to the Installation Menu, press the 0 and 2 keys for 5"		LOADING DATA
Once the Control Unit is switched on, the manufacturer default settings are activated. This means that its zone identification must be redefined since it is required for the unit to operate. See 4.1.6.A.		
4.1.6.i. Knowing The Software Version Shows Control Unit's software version		VERSION SOFT SOFTWARE MANDO SERIE 400, 112702, 141211

4.1.7. Control Unit  : Program Menu

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4.1.7.A. Date and Time

The system's time and date is shared by all connected units and can be programmed at any unit whatsoever. All other units will instantly update the change.

	Key Sequences	Display Visual
Access to program menu	PRG	TIME
Enter to program the time	5 jkl	HH-MM

See 3.1.2.A.Master Unit program menul: Time and Date

If there is no communication with the Master Unit it is not possible to program the clock data

4.1.7.B. Alarm

Each Control Unit is equipped with one programmable alarm with two operation modes, as described in section 4.1.2.M. Control Unit Operation: Alarms

	Key Sequences	Display Visual
Access to program menu	PRG	PROG
Scroll forward until this option	8 tuv	ALARM
Enter to program	5 jkl	ON/OFF
Change the setting, also available as a quick access function (see 2.2)	5 jkl	OFF
	2 abc	ON
Store	PRG	ON/OFF
Scroll to next program setting in alarm mode.	8 tuv	HH-MM
Enter to program time.	5 jkl	00-00
Set the time.	0 c 6 mno 5 jkl 0 c	06-50
Store	PRG	HH-MM
Scroll to next program setting in alarm mode.	8 tuv	TYPE
Enter program to select alarm sound.	5 jkl	BEEP
Change	2 abc	MUSIC
Store	PRG	TYPE
Scroll to next program setting in alarm mode.	8 tuv	VOLUME
Enter to program the alarm volume.	5 jkl	VOL 75
Change	− +	VOL 86
Store	PRG	

... CONTINUED

4.1.7.C. FM Search Sensitivity

The option to adjust the automatic station search sensitivity for the Control Unit's internal FM tuner.

	Key Sequences	Display Visual
Enter code	3 def 1 PRG	FM SENSITIVITY SENS 4
To adjust the new sensitivity; 4=max, 1=min.	2 abc	SENS 2
Store	PRG	

4.1.7.D. Deleting FM Tuning Pre-sets

The option to delete all the Control Unit's internal FM tuner pre-sets.

	Key Sequences	Display Visual
Enter code	3 def 2 abc PRG	DELETE FM MEMORY
To confirm the command to delete the data.	2 abc	OFF ON
To initiate the process.	PRG	

4.1.7.E. Storing Station Frequencies Automatically

The Control Unit will store into memory the stations that are received with the highest quality, ordered from lowest frequency (87.5 MHz) to highest frequency (108.0 MHz). The system will use all the memory slots available, reaching the maximum of 20.

	Key Sequences	Display Visual
Enter code	3 def 3 def PRG	AUTOSCAN OFF
To confirm the command	2 abc	ON
To initiate the process	PRG	

4.1.7.F. "Do not disturb" function

It is possible to activate the "do not disturb" function on a Control Unit to disallow the receipt of any kind of calls.When this function is activated, the talk/auto response process becomes talk only as it is no longer possible to receive intercom calls. See 4.1.3.H. Intercom Call Permissions.

	Key Sequences	Display Visual
	4 ghi 1 PRG	DO NOT DISTURB ON
Actiivate	2 abc	OFF
Store	PRG	

When this function is activated, the talk/auto response process becomes talk only as it is no longer possible to receive intercom calls. See 4.1.3.H. Intercom Call Permissions.

4.1.7.G. Receive Intercom Calls Volume

To adjust the volume of the intercom calls received at this Control Unit.

Adjust by raising or lowering the volume.

Or adjust by directly keying in volume level.

Store

Key Sequences	Display Visual
	INTERCOM CALLS VOLUME
	VOL 50 VOL 60
	VOL 70
	

Permission to receive intercom calls must be activated for this option to be available (see 4.1.8.G. Permission to Receive Intercom Calls).

The receive intercom calls volume is adjustable on-line, that is, during the receipt of intercom calls. Use the +/- keys to raise or lower the volume of the in-coming intercom calls. The volume adjustment will be stored at the end of the intercom call

4.1.7.H. Auto-response: ON/OFF

To enable/disable auto-response operation

Enter to change the setting. (ON = auto-response activated, OFF = auto-response desactivated)

Store

Key Sequences	Display Visual
	AUTO-RESPUESTA
	ON/OFF
	OFF
	ON
	ON/OFF

Permissions to transmit, receive intercom calls a must be activated for this option to be available.

4.1.8.F. Permission to transmit intercom calls
4.1.8.G. Permission to receive intercom calls

The settings for the auto-response mode are adjusted in the Installation Menu,

4.1.8.K Auto-response Sensitivity
4.1.8.L Auto-response Silence Time

See 4.1.3.A. Calls to an Individual Identification to learn about these settings.

4.1.7.i. Baby Monitor

See 4.1.3.D. Baby Monitor function. To program its settings...

	Key Sequences	Display Visual
Access to program menu	PRG	PROG
Scroll forward until this option	8 tuv	
Enter to program	5 jkl	BABY MONITOR ON/OFF
Enter to activate/desativate the baby moniitor function (also available as a quick access function, see 2.2)	5 jkl	OFF
Change the value	8 tuv	ON
Store	PRG	
Scroll to the next programmable Baby Monitor setting.	8 tuv	ADRESS
Enter the zone identification where you want the Baby Monitor call to be transmitted.	5 jkl	ADR 23
Press the key for the Baby Monitor to cover a group identification.		

... CONTINUED

	Key Sequences	Display Visual
Change	− +	DIR 26
Store	PRG	
Scroll to the next programmable Baby Monitor setting.	8 tuv	SENSIT
Enter to program the sensitivity of the Baby Monitor activation.	5 jkl	SEN 4
Change the setting.	− +	SEN 7
Store.	PRG	

For activate/desactivate the Baby Monitor operation exists a quick access function (see 1.3.)

Transmit intercom calls and Baby Monitor permissions must be activated for this option to be available. See 4.1.8.F. Permission to transmit intercom calls , 4.1.8.H. Permission to Baby Monitor operation

Sensitivity levels 8 and 9 are for extremely quiet environments. At these levels the voice activation can be permanently triggered by background noise.

4.1.7.J. Language

Selects the language of all display text.

To select a different language (for example, English)

Store

Key Sequences	Display Visual
6 mno 1 PRG	IDIOMA ESPAÑL
2 abc	ENGLSH
PRG	

4.1.7.K. Off/On Dimmer

Control Unit's display window brightness for ON/OFF functions can be programmed from this

Adjust level

Store

Key Sequences	Display Visual
6 mno 2 abc PRG o 6 mno 3 def PRG	LIGHT OFF o LIGHT ON
− +	LT 5
PRG	LT 8

4.1.7.L. Personalized Name for Music Channels

Allows for personalized naming of each of the control unit's music channels (with a six character maximum)

Key in the code for the channel whose name you wish to change

Scroll through the name to the character you wish to change

Use the alphanumeric key pad to key in the new name

Store

Key Sequences	Display Visual
7 pqrs 2 abc PRG	CH FM
7 pqrs 3 def PRG	CH 1
7 pqrs 4 ghi PRG	CH 2
7 pqrs 5 jkl PRG	CH 3
7 pqrs 6 mno PRG	CH 4
7 pqrs 7 pqrs PRG	CH 5
7 pqrs 8 tuv PRG	CH 6
7 pqrs 9 wxyz PRG	CH 7
− +	CH 3
8 tuv 8 tuv	T
8 tuv 8 tuv 8 tuv	TV
PRG	

4.1.7.M. Control Unit Name

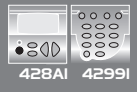
Allows you to personalize the Control Unit's name (a maximum of 8 characters).

Scroll through the name until you reach the character you want to change.

Key in the new name using the alphanumeric keypad.

Store

Key Sequences	Display Visual
7 pqrs 1 PRG	NAME ZONA
− +	ZONA
7 pqrs 7 pqrs 7 pqrs 7 pqrs	S
2 abc	SA
5 jkl 5 jkl	SAL
6 mno 6 mno 6 mno	SALO
6 mno 6 mno	SALON
PRG	

4.1.8. Control Unit  : Installation Menu

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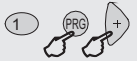
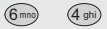
Key Sequence	Display Visual

4.1.8.A. Zone Identification

A Control Unit is identified in the system by a zone identification number, a group identification number (optional) and a name (optional). The zone identification number must be a number between 1 and 250 and be different for each Control Unit installed.

Key Sequence	Display Visual
 2"	ADDRESS ADR 1
	ADR 64
	X 64 ✓ 64

For example, to define a zone identification as number 64

Before the zone identification is programmed, the Control Unit verifies that no other zone exists with that identification number. If the number already exists, the display shows an error message and the number is not stored. If the zone identification selected is available, it is stored in the memory.

4.1.8.B. Group

Group identification numbers must be between 1 and 250. It is not necessary for the numbers to be consecutive. Group identification "0" is reserved as global identification and all the system's Control Units have it by default.

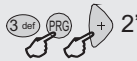
Key Sequence	Display Visual
 2"	GROUP GR 1
	GR 8
	

For example, to define group number 8

Store

4.1.8.C. Mono/Stereo

Defines whether the Control Unit's audio output (terminals 04, 05, 06) is connected in mono or stereo mode. In a Control Unit in stereo, outputs 05 and 06 respond to the left and right channels. In a Control Unit in mono, both outputs are identical and can therefore be used interchangeably.

Key Sequence	Display Visual
 2"	STEREO/MONO STEREO
	MONO
	

To change the output setting to mono

Store

4.1.8.D. Audio Output

Defines the impedance connected to the Control Unit's audio output (terminals 04, 05, 06) from the following options:

16 ohm passive loudspeaker
8 ohm passive loudspeaker
amplifier
line

Key Sequence	Display Visual
 2"	AUDIO OUTPUT 16 Ω
	8 Ω
	

To change the setting to 16 ohm.

Store

4.1.8.E. Last Channel Number Accessible From The Control Unit

The number of music channels installed is defined in the Master Unit. The Control Units have the same setting by default in order to recognize the last channel installed. Therefore the Control Unit will initially have access to the channels defined in the Master Unit. To modify a Control Unit's access to more or less channels than those defined in the Master Unit, use that option of the installation menu. The new setting will have priority over the Master Unit's setting (in that Control Unit only).

For example, to install a Control Unit with access to 3 channels (terminals 10, 20, 30)

Store

Key Sequence	Display Visual
5 jkl, PRG, + 2"	NUMBER OF CHANNELS
	CH 0
3 def	CH 3
PRG	

4.1.8.F. Permission To Transmit Intercom Calls

The "transmit intercom calls" option may be permanently disabled from a Control Unit without affecting its ability to receive intercom calls. Note that Control Units with "transmit intercom calls" switched off cannot use the auto-response feature.

See 4.1.3.H. Control Unit Operation: Intercom Call Permissions

To block the transmission of intercom calls.

Store

Key Sequence	Display Visual
6 mno, PRG, + 2"	SEND INTERCOM CALLS PERMISSION
	ON
2 abc	OFF
PRG	

4.1.8.G. Permission To Receive Intercom Calls

The "receive intercom calls" option may be permanently disabled from a Control Unit without affecting its ability to transmit intercom calls. Note that Control Units with "receive intercom calls" switched off cannot use the auto-response feature.

To block the transmission of intercom calls.

Store.

Key Sequence	Display Visual
7 pqrs, PRG, + 2"	RECEIVE INTERCOM CALLS PERMISSION
	ON
2 abc	OFF
PRG	

4.1.8.H. Baby Monitor Permission

A Control Unit's Baby Monitor feature can be permanently switched off.

See 4.1.3.H. Control Unit Operation: Intercom Call Permissions

To switch off the Baby Monitor feature

Store

Key Sequence	Display Visual
8 tuv, PRG, + 2"	BABY MONITOR PERMISSION
	ON
2 abc	OFF
PRG	

4.1.8.i. Access To Master Unit FM Tuner

Controls Master Unit tuner access to change the station from the Control Unit itself. By disallowing access, the station on the Master Unit tuner cannot be changed from the Control Unit itself (it can always be changed by directly accessing it through the Master Unit keypad).

See 4.1.2.H. Operation of Master Unit FM Tuner

	Key Sequences	Display Visual
		ACCESS TO CENTRAL FM ON
Disallow access.		OFF
Store		

4.1.8.J. Permission To Access General Standby

Disallows Control Unit access to the option to switch off the whole system.

	Key Sequences	Display Visual
		GENERAL STANDBY PERMISSION
Disallow permission.		ON OFF
Store		

See 4.1.2.K. Control Unit Operation: General Standby

4.1.8.K. Auto-response: sensitivity

See auto-response operation in 4.1.3.A. Intercom call to an individual zone. To program the sensitivity of the auto-response voice detector

	Key Sequences	Display Visual
		AUTO-RESPONSE SENSIT SEN 4 SEN 7
Change		
Store		

Sensitivity levels 8 and 9 are for extremely quiet areas. At those settings the voice detector could become permanently activated due to the background noise.

4.1.8.L. Auto-response: silence time

See auto-response operation in 4.1.3.A. Intercom call to an individual zone. To program the silence time of the auto-response

	Key Sequences	Display Visual
		AUTO-RESPONSE TIME SEC 4 SEC 8
Change		
Store		

4.1.8.M. Deleting Control Unit Settings (manufacturer reset)

Deletes all settings and programming data from the Control Unit, restoring manufacturer default settings.

Key Sequences	Display Visual
	DELETE INSTALLATION OFF
To activate delete process 	ON
To initiate the process 	LOADING DATA

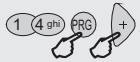
To reset the manufacturer's settings without having to immediately go to the Installation Menu, press the 0 and 2 keys for 5".

Key Sequences	Display Visual
	LOADING DATA

Once the Control Unit is switched on, the manufacturer default settings are activated. This means that its zone identification must be redefined since it is required for the unit to operate. See 4.1.8.A.

4.1.8.N. Knowing The Software Version

Shows Control Unit's software version

Key Sequences	Display Visual
	VERSION SOFT MANDO MODULAR SERIE 400, 112702, 141211

4.1.9. Technical Specifications

422A1 , 422A2 , 428A1+42991	MIN	NORMAL	MAX		COMMENTS
Measurements 422A1/A2		135,5x70,5x44		mm	exterior (width x height x depth)
		116x54x36		mm	cavity (width x height x depth)
		99x51		mm	frontal (width x height)
Measurements 428A1,42991		45x45x43		mm	exterior (width x height x depth)
		45x45x36		mm	cavity (width x height x depth)
		45x45		mm	frontal (width x height)
Voltage		15	16	Vdc	terminal 2
Consumption demand	93	188	375	mA	terminal 2, mod.422A1
	109	199	384	mA	terminal 2, mod.422A2
	100	189	355	mA	terminal 2, mod.428A1+42991
Input signal		100		mVeff	jack 3,5mm
		3		Veff	terminals 10,20,30,40,50,60
Input impedance		100000		ohms	jack 3,5mm
		36000		ohms	terminals 10,20,30,40,50,60
Output signal (16 ohms)			1,5	W	terminals 05,06
Left/right channel separation		50		dB	
Intercom calls signal		3		Veff	terminal 7
Passband	20		15000	Hz	
Distortion		0,1	0,4	%	
Frequency range	87,5		108	MHz	except mod. 422A1
Antenna impedance		75		ohms	
Antenna sensitivity		3,5	5	uV	
Tuner distortion			3	%	
Number of station pre-sets			20		
Zone identification address	1		250		see 4.1.1 - 4.1.6.A - 4.1.8.A
Number of control units in system		60	120(**)		(**) consult
System length		600	1000(**)	m	(**) consult

Connecting terminals mod. 428A1			
2	Supply voltage	10	MPX sound channel input, music program #1
4	Mass	20	MPX sound channel input, music program #2
91	Data (+)	05	Left channel speaker output (+)
92	Data (-)	06	Right channel speaker output (+)
7	Intercom calls signal	04	Mass fot speakers of both channels (-)

Connecting terminals mod. 42991	
30	MPX sound channel input, music program #3
40	MPX sound channel input, music program #4
50	MPX sound channel input, music program #5
60	MPX sound channel input, music program #6
A	FM antenna
M	FM antenna mass

Connecting terminals mod. 422A1	
2	Supply voltage
4	Mass
91	Data (+)
92	Data (-)
93	Data (IR)
7	Intercom calls signal
10	MPX sound channel input, music program #1
20	MPX sound channel input, music program #2
30	MPX sound channel input, music program #3
40	MPX sound channel input, music program #4
50	MPX sound channel input, music program #5
60	MPX sound channel input, music program #6
05	Left channel speaker output (+)
06	Right channel speaker output (+)
04	Mass fot speakers of both channels (-)

Connecting terminals mod. 422A2	
2	Supply voltage
4	Mass
91	Data (+)
92	Data (-)
93	Data (IR)
7	Intercom calls signal
10	MPX sound channel input, music program #1
20	MPX sound channel input, music program #2
30	MPX sound channel input, music program #3
40	MPX sound channel input, music program #4
50	MPX sound channel input, music program #5
60	MPX sound channel input, music program #6
05	Left channel speaker output (+)
06	Right channel speaker output (+)
04	Mass fot speakers of both channels (-)
A	FM antenna
M	FM antenna mass

4. Control Units

4.2. Control Units  & 

428AI/A4 428AI 42992

4.2. Control Units  & 

428AI/A4 428AI 42992

4.2.1. The First Time...

The first time power is fed to a Control Unit it must be installed. The first step (required to continue) is to program its identification.
A Control Unit is identified by:

- ☑ an individual zone identification (installation menu)
- ☑ a group identification (installation menu)

A zone identification number must be defined prior to enabling the control unit's normal operation mode. The number must be between 1 and 250 and be different for each of the control units of the same installation

The power supply for any Control Unit is controlled from the Master Unit 414A1/A2. See 3.1.1.A. Manual System Off/On

Key Sequence	Display Visual
	ADDRSS 1
	ADDRSS 28
(m)	✓ 28
	X 28

Select the individual zone identification to be assigned and press the (m) key. For example, in order to assign zone 28

The Control Unit verifies that no other zone exists in the system with that identification. If it does not already exist, the identification is validated and normal operation begins.

If the zone identification has already been assigned to another Control Unit, the installer will be prompted to key in another identification. The Control Unit will not operate until a valid zone identification is entered

By default, the Control Unit settings are stereo and 16 ohms speaker. Other settings can be defined in the installation menu options 4.2.5.C and 4.2.5.D

4.2.2. Operating audio functions

Key Sequence	Display Visual
	10:56 ⏻

4.2.2.A. Manual Off/On Of Control Unit

The Control Unit activates audio output with the previous settings with the press of a key. The display will be illuminated and the ⏻ icon will be activated. Manual power off takes place in the same manner, the display darkens and the ⏻ icon is disabled

When all the installation's control units are switched off from the 414A1/A2 Master Unit (see 3.1.1.A), the units store the current settings in terms of ON/OFF, audio levels, active music channel, … and when later switched on, the control units power on with the same settings

4.2.2.B. The (m) Key: How to Use the Functions to Adjust the Music in Control Unit

The audio inputs of each 428A1 Control Unit can handle up to 2 music channel connections. Channel #1 will synch up to the Master Unit's FM tuner, which can be operated remotely from the Control Unit itself. The sound input through the jack on the face of the Control Unit synchs up to channel #CD. In total, each Control Unit can have up to 3 music channels numbered as shown in chapter 1.7

To limit the channels flipped through to the channels installed, this information must be previously set up in the Master Unit installation (see 3.1.4.A. Number Of Audio Channels Installed). This information can be supplemented by assigning a personalized channel number to each Control Unit to limit or extend channel access to certain zones of the system. (See 4.2.5.E)

The default function for the +/- keys when the Control Unit is on is to adjust the volume. A few seconds after the last key entry the Control Unit will return to its default function of volume adjustment.
WITH THE CONTROL UNIT ON (the ⏻ icon activated), the (m) key allows you to scroll through the various functions that adjust the music.

control unit ON

Key Sequence	Display Visual
(−) (+)	VOL 55 ⏻
(m)	CH 1 ⏻
(−) (+)	CH 2 ⏻ CH CD ⏻
(m)	M 98.60 ⏻
(−) (+)	M 99.40 ⏻

In this mode the +,- keys function to select the station. The availability of the station is subject to the channels defined at the configuration of each unit

If the station selected corresponds to an FM tuner, the next function available with the (m) key is to select the station. In this mode, the +,- keys allow us to scroll through the various stations in the mater unit's memory

... CONTINUED

The station tuned on the Master Unit tuner will be played throughout the system. There is an option to disable access to tuning from certain Control Units, allowing users to listen but not to change the station tuned.

The store/clear of FM tuner memory settings on the master unit FM tuner can only be programmed at the 414A2 master unit itself.

See Setting Menu: Access to Master Unit FM Tuner (4.2.5.i)

Once the music station (or FM tuner station on the master unit, in its case) is selected, you can press the (m) key to return to the volume adjustment setting.

Pressing the (m) key several times switches you between the adjustment modes for base, treble, loudness and balance. In each of these modes the +,- keys adjust the level of the setting that is active at that time.

Key Sequence	Display Visual
(m)	VOL 67
(−) (+)	VOL 72
(m)	BAS +12
(−) (+)	BAS +24
(m)	TRE +11
(−) (+)	TRE +17
(m)	LOUD 1
(−) (+)	LOUD 0
(m)	BAL +00
(−) (+)	BAL -14

4.2.2.C. The (m) Key: How to Use the Functions to Adjust the Music in Control Units:

The audio input of each 428A4 Control Unit can handle up to 2 music channel connections. The internal FM tuner is set as channel #0. Channel #1 will synch up to the Master Unit's FM tuner, which can be operated remotely from the Control Unit itself. The sound input through the jack on the face of the Control Unit synch up to channel #7. In total, each 428A4 Control Unit can have up to 4 music channels (see 1.7)

The audio inputs of each 428A1+42992 Control Unit can handle up to 6 music channel connections. The internal FM tuner is set as channel #0. Channel #1 will synch up to the Master Unit's FM tuner, which can be operated remotely from the Control Unit itself. The sound input through the jack on the face of the Control Unit synchs up to channel #7. In total, each 428A1+42992 Control Unit can have up to 8 music channels (see 1.7)

The default function for the +/- keys when the Control Unit is on is to adjust the volume. A few seconds after the last key entry the Control Unit will return to its default function of volume adjustment.

control unit ON

WITH THE CONTROL UNIT ON (the ⏻ icon activated), the (m) key allows you to scroll through the various functions that adjust the music.

In this mode the +,- keys function to select the station. The availability of the station is subject to the channels defined at the configuration of each unit

If the channel selected corresponds to an FM tuner, the next function available with the (m) key is to select the station. In this mode, the +,- keys allow us to scroll through the various stations in the mater unit's memory

Once the music station (or FM tuner station on the master unit, in its case) is selected, you can press the (m) key to return to the volume adjustment setting.

Pressing the (m) key several times switches you between the adjustment modes for base, treble, loudness and balance. In each of these modes the +,- keys adjust the level of the setting that is active at that time.

The station tuned on the Master Unit tuner will be played throughout the system. There is an option to disable access to tuning from certain Control Units, allowing users to listen but not to change the station tuned.

Key Sequence	Display Visual
(−) (+)	VOL 55 ⏻
(m)	CH 1 ⏻
	CH 2 ⏻
(−) (+)	CH CD ⏻
(m)	M 98.60 ⏻
(−) (+)	M 99.40 ⏻
(m)	VOL 67
(−) (+)	VOL 72
(m)	BAS +12
(−) (+)	BAS +24
(m)	TRE +11
(−) (+)	TRE +17
(m)	LOUD 1
(−) (+)	LOUD 0
(m)	BAL +00
(−) (+)	BAL -14

4.2.2.D. Operation & Store Station Pre-sets of the Control Unit's Local FM Tuner

control unit ON

The Program Menu has the option to search and automatically store stations at the optimal reception level (see 4.2.4.B)

Press (m) key for channel selection. Select Local FM tuner with +/- keys.

To enter the memory pre-set selection mode, press (m) again. The display will show the frequency of the current station. We can scroll through the different pre-set stations in memory with the +/- keys. Keeping these keys pressed down, the tuner will automatically search the next station (the sensitivity level is as programmed in 4.2.4.B).

To enter the store to memory mode, press th(m) key for 2 seconds. The +/- keys tune the frequency

If the stereo signal quality is not satisfactory you can overrule and select mono mode manually, which is less demanding, by pressing (m) again. To switch between stereo and forced mono modes, use the +/- keys.

The pre-set memory number will appear flashing. By default, the Control Unit offers the first available memory position, which may be changed using the +/- keys.

To confirm it has been stored, press FM again.

Key Sequence	Display Visual
(m)	CH 1
(−) (+)	CH 2
	CH FM
(m)	M 98.60
(−) (+)	M 99.40
(m) 2"	F 99.40
(−) (+)	F 102.3
(m)	STEREO
(−) (+)	MONO
(m)	M-1
(−) (+)	M 102.3
	M-3
(m)	

4.2.2.E. Sleep

The sleep function shuts the Control Unit off after a predefined time entered at power on. The user can program the time. Once the pre-set time has elapsed, the Control Unit will automatically power off. If the Control Unit is switched off manually before the end of the pre-set time, the sleep function will be cleared.

Key Sequence	Display Visual
(⏻) 2"	SLEEP 15
(⏻)	SLEEP 30
(⏻)	SLEEP 60

4.2.2.F. Alarm

The 428A1 Control Unit is equipped with an alarm that can be programmed and can operate in two different modes:

"Music" mode alarm:

- Operates only when the Control Unit is off.
- At the time programmed, the Control Unit switches on with the last music channel played.
- The volume is programmable

See Program Menu (4.2.4.A.)

"Beep" mode alarm:

- Operates whether the Control Unit is off or on
- At the time programmed, the Control Unit switches on and a specific beep signal is activated.
- Is equipped with a "delay" function: a short key press of any key returns the Control Unit to its previous state (standby or music) and after 4' the beep signal is activated again
- To cancel the alarm, press any key until a continuous beep sounds: it will return to its previous state (standby or music) and the alarm function ends. The snooze function may be cancelled at any time by holding down the ON/OFF key for 2 seconds
- If the Control Unit is powered off or on during the "delay" period, the alarm function ends.
- Also, if 4' elapse without any key press, the Control Unit returns to its previous state (standby or music) and the alarm function ends

4.2.3. Operating intercom calls functions

4.2.3.A. The (m) Key: Entering the Intercom Calls Mode

The intercom calls mode is reached by pressing the (m) key for 2" (the unit can be on or off). Once in intercom calls mode, release the key. Using the +,- keys, you can change to 4 operating modes:

Key Sequence	Display Visual
(m) 2"	CALLS
Last call made (for example, to zone 2) (−) (+)	ADR 02
general call (−) (+)	GEN'L
individual call (−) (+)	ADDRESS
group call (−) (+)	GROUP

4.2.3.B. Calls To An Individual Zone

An intercom call to an individual zone is an intercommunication call between two zones in half-duplex setup with hands-free response. A Control Unit is identified by its zone identification number (see 4.2.5.A.)

Key Sequence	Display Visual
m 2"	CALLS
− +	ADDRES
m	ADR 01
− +	ADR 06

1 Select the zone that will receive the call

Access the call mode by pressing the m key 2" and select the individual identification call mode

Press the m key again to active the mode

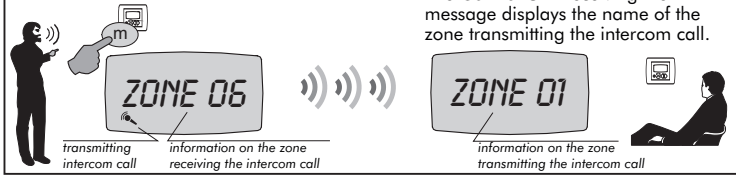
Use the +,- keys to select the zone number to which you wish to make the call

2 Transmit the intercom call

To talk, press the m key and hold it down throughout the transmission. If the operation could not be initiated for any reason, a message will appear on the display. If the communication takes place, the name of the zone called will be displayed.

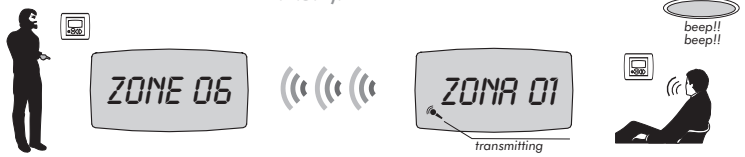
The intercom call will be transmitted while the key is held down (the maximum duration is 1').

The Control Unit receiving the message displays the name of the zone transmitting the intercom call.



3 Receiving the response

When the m key is released the Control Unit goes into hands-free auto response mode and a response to the intercom call is received. The person who had initiated the conversation can then hear the response from the other party.
This mode remains active as long as the person is talking (auto-response sensitivity and silence time settings can be programmed).



Hands-free auto-response

The zone receiving the intercom call opens its microphone and a specific beep signal is sent through the loudspeakers to signal that the microphone is capturing the sound from that zone (this avoids unauthorized hearing of intercom calls). The auto-response will be activated as long as the voice detector does not detect a silent period longer than the time programmed. In any case, the maximum duration is 1'.

☐ **The hands-free auto-response mode settings are programmed in the Programming Menu (see 4.2.4.E) and the Installation Menu (see 4.2.5.J and 4.2.5.K).**

Changing the intercom call receipt volume

The volume of the intercom call received is the volume programmed in sections 4.2.4.D. Receive Intercom Calls Volume. To adjust the volume, use the +/- keys while the intercom call is being received (when the intercom call is over, the volume setting will be stored in memory).

4 Initiating a conversation

Either of the two parties may initiate a conversation at any time by pressing the (m) key.

5 Ending an intercom call operation

Either of the two parties may end the intercom conversation at any time by pressing the (⏻) key.
When said key is held ⏻ 2", further to canceling the receipt of the call, the control unit will switch to "do not disturb" mode
The maximum duration of an intercom operation (calls + responses) is 3 minutes.

It is possible to totally or partially block the call/auto-response process. See 4.2.3.F."Do not disturb" function and 4.2.3.H. Intercom Call Permissions.. When a Control Unit cannot receive intercom calls, the icon will be lit if the block is permanent or flashing if the "Do not disturb" function is activated.

4.2.3.C. General Calls And Zone Group Calls

An intercom call to a zone group is a call transmitted from a Control Unit and received by the Control Units under the same group (see 4.2.5.B Control Unit Installation: Group). A general call is a call to group #0. All the Control Units belong to group #0 and therefore receive the intercom call unless inercom call reception is blocked at that time (see 4.2.3.H. Permissions for Intercom Calls Operations).

1 Select the group that will receive the intercom call

Key Sequence	Display Visual
m 2"	CALLS
− +	GROUP
m	GR 00
− +	GR 03

Access the call mode by pressing the (m) key 2" and select the general/group call mode

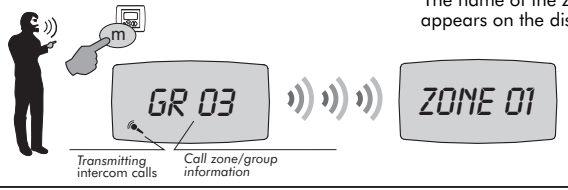
Press the (m) key again to active the mode

Use the +,- keys to select the zone number to which you wish to make the call

2 Transmit the intercom call

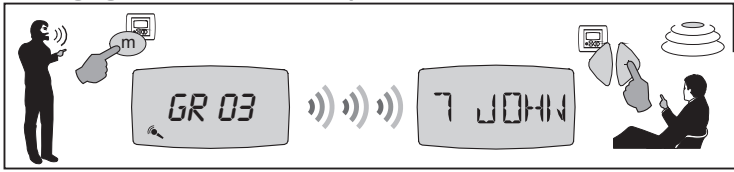
To talk, press the (m) key and hold it down throughout the transmission.
If the operation could not be initiated for any reason, a message will appear on the display.

The intercom call will be transmitted while the key is held down (the maximum duration is 1').



The name of the zone transmitting the intercom call appears on the display of the Control Unit receiving the message.

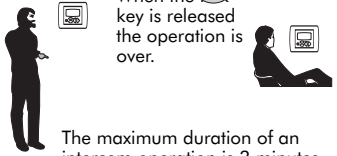
Changing the intercom call receipt volume



The volume of the intercom call received is the volume programmed in sections 4.2.4.D. Receive Intercom Calls Volume. To adjust the volume, use the +/- keys while the intercom call is being received (when the intercom call is over, the volume setting will be stored in memory).

Auto response is not possible in this type of calls.

3 End of the intercom call



When the (m) key is released the operation is over.

The maximum duration of an intercom operation is 3 minutes.

Either of the two parties may end the intercom conversation at any time by pressing the (⏻) key.

When said key is held for 2", further to canceling the receipt of the call, the control unit will switch to "do not disturb" mode (👤)

If an intercom call is sent to a non-existent group or if the Control Units are unable to receive intercom calls, a message will appear on the display. If the intercom call is delivered it means at least one Control Unit in the selected group has received the message.
NOTE: It is possible to totally or partially block the call/auto response process. See 4.2.3.H. Intercom Call Permissions.

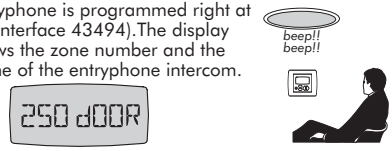
4.2.3.D. Communication with the entryphone intercom

Systems with one or several interface units for one or several entryphone intercom units offer the ability to have a speak/listen type conversation with the person at the door from any of the system's control units, including the option of letting the person in the door. Each entryphone intercom is identified by a zone address number, a name and a specific buzz tone.

Buzz tones are programmable from the interface unit (ref. 43494) itself. It is possible to program the zone number and name without the assistance of the installer and can be changed with the PC software by using the PC interface (ref. 43491).
For all purposes (permissions, level programming, etc.) communication operations with the entryphone intercom behave the same way as communication between zones, in this case the entryphone intercom interface being one of the zones.

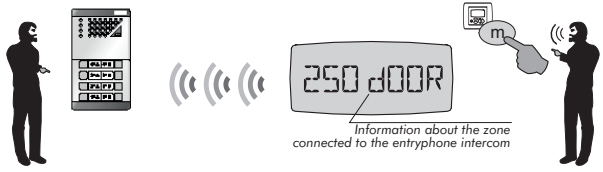
1 Receiving an intercom call from the door

When someone rings the door bell a specific ring tone is heard in all the zones of the residence that have been programmed to receive intercom calls (the destination of the call from the intercom/ entryphone is programmed right at the interface 43494).The display shows the zone number and the name of the entryphone intercom.



2 Answering (generating an intercom call)

To begin speaking, press (m) and hold it down while speaking to the person at the door. Just as with communication between control units, pressing the (el símbolo en el teclado) key without having a zone number slected will direct the call to the last zone with which intercommunication was held. Evidently in this case it would be the entryphone intercom. If for any reason it has not been possible to initiate the operation, the information will be shown on the display.



The intercom call will last as long as the key is held down (the maximum time allowable is 1').

3 Listening (receiving an intercom call)

When the (m) key is released the unit goes into receiving mode, listening to the message from the person at the exterior door. The conversation is always managed by the person inside the home by pressing the key (m) to speak and releasing the key to listen.

4 Opening the exterior door

To open the exterior door, hold down the (⏻) key for 2 seconds. The conversation will immediately be terminated. If you wish to speak with the person at the exterior door again you will have 5 seconds during which the conversation will be reinitiated by pressing the (m) key again.

5 Ending the operation without opening the door

To end the entryphone intercom communication without opening the door, press the (⏻) key (quick press).

4.2.3.E. Electronic Baby Monitor

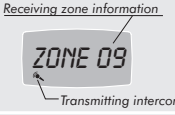
The Baby Monitor is an intercom call operation to an individual identification which is automatically initiated when sound is detected by a Control Unit. It is designed to monitor someone who cannot access the keypad to transmit a voice message (a child, a disabled person, an older person...). It is programmed at the transmitting Control Unit (zone to be monitored). There can be more than one Baby Monitor function operating in a system.

If the Baby Monitor function has been activated successfully (that is, the transmitting Control Unit has the required permissions and the receiving unit is hooked up and can receive intercom calls) the icon will appear flashing. The Control Unit accepts any form of operation: on, off, ...
When sound is detected in the room the Control Unit transmits an intercom call without any key having been pressed. The intercom call will last as long as the silence time programmed in the Baby Monitor settings.

Baby Monitor operation is compatible with the intercom call operation mechanism described in section 4.1.3.A. and 4.1.3.B., that is, a call can be placed by pressing the (m) key.

See 4.2.4.F. Program menu: Baby Monitor to program Baby Monitor operation

To end the operation, press the ON/OFF key from either the transmitting or the receiving Control Unit.
If you wish to set the baby monitor receiver to "do not disturb", press the ON/OFF key for 2"

Key Sequence	Display Visual
	
m	
 2"	

4.2.3.F. "Do not disturb" function

It is possible to activate the "Do not disturb" function on a Control Unit to disallow the receipt of any kind of calls (see 4.2.4.C)
When this function is activated, the icon will appear in the display. Also, the talk/auto-response process becomes talk only as it is no longer possible to receive intercom calls (see 4.1.3.H. Intercom Call Permissions)

Even if the receipt of intercom calls is cleared on a Control Unit, if the Baby Monitor is activated at that time it can receive the message in Baby Monitor operation .
IMPORTANT: Sensitivity levels 8 and 9 are for extremely quiet areas. At those settings the voice detector could become permanently activated due to the background noise.

4.1.3.G. A Control Unit's Neighbor Zones

The "neighbor zones" function is available in Control Units that could experience coupling in intercom calls because they are installed in the same room.
Although it is unlikely that intercom calls will be made between the units since they are in the same room, a general or group intercom call could be made from either unit. The close proximity of the Control Units could cause coupling between the microphone of one unit and the loudspeaker of the other.
To avoid this problem, each Control Unit has a set of zones called "neighbor zones" from which it is not possible to receive intercom calls.
Programming and deleting "neighbor zones" in a Control Unit is only possible from the PC program.

4.2.3.H. Intercom Calls Permissions

By default, the manufacturer leaves all intercom calls permissions **activated** on Control Units. To limit any intercom call operations, access the specific blocks according to the following table. (The options are accessible from the program and installation menus).

Blocking intercom call transmission

A Control Unit can be programmed to not have the ability to transmit any type of intercom call (installation menu): in this event, the user will not be able to transmit any type of intercom calls, respond with auto-response, nor use the Baby Monitor function. It will be able to receive intercom calls (see 4.2.5.F.)

Blocking auto-response

A Control Unit can be programmed to not ever transmit an automatic response when it receives an individual intercom call (see program menu 4.2.4.E.)

Blocking Baby Monitor function

A Control Unit can be programmed so that the electronic Baby Monitor cannot be activated at that unit (see installation menu 4.2.5.H.)

Blocking intercom call reception

A Control Unit can be programmed to eventually not receive any type of intercom calls by activating the "do not disturb" function. In this event, it will not be able to receive or respond to intercom calls with auto-response (see **4.2.4.C**.). A Control Unit can also be programmed to not receive any type of intercom calls (individual, group or general call) by using the installation menu (see 4.2.5.G.) Note that blocking receipt of individual intercom calls disables auto-response.

Permission		TRANSMIT INTERCOM CALL			RECEIVE INTERCOM CALL				AUTO-RESPONSE	BABY MONITOR
		Individual	Group	General	Individual	Group	General	Vol.Adj.		
Transmit	m + 2"	⊘	⊘	⊘					⊘	⊘
Baby Monitor	m + 2"									⊘
Receive	m + 2"				⊘	⊘	⊘	⊘	⊘	
Auto-response	m								⊘	
Do not disturb	m				⊘	⊘	⊘	⊘	⊘	

control unit OFF

⊘ = blocked function

Remember that access to both the Programming Menu (m) and the Installation Menu (m + 2") on the 428A1, 428A4, 428A1+42892 Control Units takes place with the unit switched off

4.2.4. Control Units  &  : Program Menu

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4.2.4.A. Alarm

Each Control Unit is equipped with one programmable alarm with two operation modes, as described in section 4.2.2.F. Control Unit Operation: Alarms

	Key Sequences	Display Visual
control unit OFF Access the programming menu. The first option is to program the alarm clock	m	PROG ALARM ON/OFF
Enter to program alarm clock activate/clear	m 2"	OFF
Change	− +	ON
Store	m	
Scroll to next program setting in alarm mode.	+	HH-MM
Enter to program time.	m 2"	00-00
Set the time	− +	06-50
Store	m	

... CONTINUED

	Key Sequences	Display Visual
Scroll to next program setting in alarm mode.	+	TYPE
Enter program to select alarm sound.(beep/music)	m 2"	BEEP
Change	− +	MUSIC
Store	m	
Scroll to next program setting in alarm mode.	+	VOLUME
Enter to program the alarm volume.	m 2"	VOL 75
Change	− +	VOL 86
Store	m	

See 3.1.2.A.Master Unit program menu: Time and Date

If there is no communication with the Master Unit it is not possible to program the clock data

4.2.4.B. FM tuner

Not available on 428A1 Control Unit

The option to adjust the automatic station search sensitivity for the Control Unit's internal FM tuner.

control unit OFF

	Key Sequences	Display Visual
Enter to program menu and scroll to programming "FM search sensitivity"	m, + ••• +	FM SENSITIVITY
To adjust the new sensitivity; 4=max, 1=min.	m 2", − +	SENS 4 / SENS 2
Press to store	m	

The option to delete all the Control Unit's internal FM tuner pre-sets.

	Key Sequences	Display Visual
Enter to program menu and scroll to programming "delete FM memory"	m, + ••• +	DELETE FM MEMORY
To confirm the command to delete the data.	m 2", − +	OFF / ON
Initiate the process	m	

The Control Unit will store into memory the stations that are received with the highest quality, ordered from lowest frequency (87.5 MHz) to highest frequency (108.0 MHz). The system will use all the memory slots available, reaching the maximum of 20.

	Key Sequences	Display Visual
Enter to program menu and scroll to programming "autoscan" process	m, + ••• +	AUTOSCAN
To confirm the command	m 2", − +	OFF
Initiate the process	m	ON

4.2.4.C. "Do Not Disturb" Function

It is possible to activate the "do not disturb" function on a Control Unit to disallow the receipt of any kind of calls (see 4.2.3.F.)

	Key Sequences	Display Visual
Enter to program menu (control unit OFF)	m	PROG
Scroll to programming "do not disturb" function	+ ••• +	DO NOT DISTURB ON/OFF
Enter to activate/desactivate this function	m 2"	OFF
Change	− +	ON
Store	m	

4.2.4.D. Receive Intercom Calls Volume

	Key Sequences	Display Visual
Enter to program menu (control unit OFF)	m	PROG
Scroll to programming receiving calls volume	+ ••• +	INTERCOM CALLS VOLUME
Enter to change the setting	m 2"	VOL 50
Change	− +	VOL 65
Store	m	

4.2.4.E. Auto-response

The hands-free "auto-response" mode can be activated at each control unit for intercom calls (see 4.2.3.B Calls to an Individual Zone)

	Key Sequences	Display Visual
Enter to program menu (control unit OFF)	m	PROG
Scroll to programming "auto-response" function	+ ••• +	AUTO-RESPONSE ON/OFF
Enter to activate/desactivate this function	m 2"	OFF
Change	− +	ON
Store	m	

The settings for the auto-response mode are adjusted in the Installation Menu,

4.2.5.J Auto-response Sensitivity

4.2.5.K Auto-response Silence Time

See 4.2.3.B Calls to an Individual Identification to learn about these settings.

The receive intercom calls volume is adjustable on-line, that is, during the receipt of intercom calls. Use the +/- keys to raise or lower the volume of the in-coming intercom calls. The volume adjustment will be stored at the end of the intercom call

4.2.4.F. Baby Monitor

control unit OFF

Key Sequences	Display Visual
Enter to program menu.	PROG
Scroll to programming baby monitor options. Press the (m) key to enter to activate/clear the baby monitor	BABY MONITOR
	ON/OFF
	OFF
Change	ON
Store	
Scroll forward the next option	ADDRESS
Enter to program the zone identification where you want the Baby Monitor call to be transmitted	ADR 03
Change the value	ADR 07
Store	
Scroll forward the next option	SENSIT
Enter to program the sensitivity of the Baby Monitor activation	SEN 4
Change the value	SEN 6
Store	

Sensitivity levels 8 and 9 are for extremely quiet environments. At these levels the voice activation can be permanently triggered by background noise.

Transmit intercom calls and Baby Monitor permissions must be activated for this option to be available. See 4.2.5.F. Permission to transmit intercom calls , 4.2.5.H. Permission to Baby Monitor operation

4.2.4.G. Language

control unit OFF

Key Sequences	Display Visual
Enter to program menu	PROG
Scroll to programming the language and select a different language (for example, English)	LANGUAGE
	ESPAÑOL
Change	ENGLISH

4.2.4.H. ON/OFF Dimmer

control unit OFF

Key Sequences	Display Visual
Enter to program menu	PROG
Scroll to programming the ON/OFF lighting	LIGHT ON
	LT 9
Change	LT 7
Store	

4.2.5. Control Units  &  : Installation Menu

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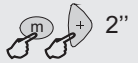
4.2.5.A. Zone Identification

control unit OFF

A Control Unit is identified in the system by a zone identification number, a group identification number (optional) and a name (optional). The zone identification number must be a number between 1 and 250 and be different for each Control Unit installed. It is not necessary for the numbers to be consecutive.

To program the zone number, enter the installation menu. The identification option is the first on the menu. Press the (m) key to change the identification. Change the value and press the (m) key again to validate the selection

Before the zone identification is programmed, the Control Unit verifies that no other zone exists with that identification number. If the number already exists, the display shows an error message and the number is not stored. If the zone identification selected is available, it is stored in the memory

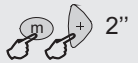
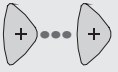
Key Sequence	Display Visual
 2"	INSTAL ADDRESS
 2"	ADR 1
	ADR 64
	X 64 ✓ 64

4.2.5.B. Group

control unit OFF

Group identification numbers must be between 1 and 250. It is not necessary for the numbers to be consecutive. Group identification "0" is reserved as global identification and all the system's Control Units have it by default.

To program the group identification, enter the installation and scroll to that option.Press the (m) key to change the group identification, change the value and press the (m) key again to validate the selection

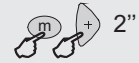
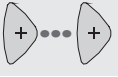
Key Sequence	Display Visual
 2"	INSTAL GROUP GR 1
	
 2"	GR 3
	
	

4.2.5.C. Mono/Stereo

Defines whether the Control Unit's audio output (terminals 04, 05, 06) is connected in mono or stereo mode. In a Control Unit in stereo, outputs 05 and 06 respond to the left and right channels. In a Control Unit in mono, both outputs are identical and can therefore be used interchangeably.

control unit OFF

Enter the installation menu and scroll to that option

Key Sequence	Display Visual
 2"	INSTAL STEREO/MONO
	

... CONTINUED

	Key Sequence	Display Visual
Enter to change the setting between mono and stereo values	m 2"	STEREO
Change	− +	MONO
Store	m	

4.2.5.D. Audio Output

Defines the impedance connected to the Control Unit's audio output (terminals 04, 05, 06) from the following options:

16 ohm passive loudspeaker
8 ohm passive loudspeaker
amplifier
line

control unit OFF

	Key Sequence	Display Visual
Entrar en el menú de instalación y avanzar hasta llegar a esta opción.	m + 2"	INSTAL
	+ ••• +	AUDIO OUTPUT
	m 2"	16 Ω
To change the setting to 16 ohm.	− +	8 Ω
Store	m	

4.2.5.E. Last Channel Number Accessible From The Control Unit

The number of music channels installed is defined in the Master Unit.
The Control Units have the same setting by default in order to recognize the last channel installed. Therefore the Control Unit will initially have access to the channels defined in the Master Unit. To modify a Control Unit's access to more or less channels than those defined in the Master Unit, use that option of the installation menu. The new setting will have priority over the Master Unit's setting (in that Control Unit only).

control unit OFF

For example, to install a Control Unit with access to 1 channel (terminal 10)enter the installation menu, scroll to that option, press the m key, change the value and press the m key again to validate the selection

Key Sequence	Display Visual
m + 2"	INSTAL
+ ••• +	NUMBER OF CHANNELS
m 2"	CH 0
− +	CH 1
m	

4.2.5.F. Permission To Transmit Intercom Calls

The "transmit intercom calls" option may be permanently disabled from a Control Unit without affecting its ability to receive intercom calls.
Note that Control Units with "transmit intercom calls" switched off cannot use the auto-response feature.

See 4.2.3.H. Intercom Call Permissions

control unit OFF

Key Sequence	Display Visual
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value	INSTAL SEND INTERCOM CALLS PERMISSION ON OFF
Change	
Store	

4.2.5.G. Permission To Receive Intercom Calls

The "receive intercom calls" option may be permanently disabled from a Control Unit without affecting its ability to transmit intercom calls.
Note that Control Units with" receive intercom calls" switched off cannot use the auto-response feature.

control unit OFF

Key Sequence	Display Visual
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value	INSTAL RECEIVE INTERCOM CALLS PERMISSION ON OFF
Change	
Store	

4.2.5.H. Baby Monitor Permission

A Control Unit's Baby Monitor feature can be permanently switched off.

control unit OFF

Key Sequence	Display Visual
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value	INSTAL BABY MONITOR PERMISSION ON OFF
Change	
Store	

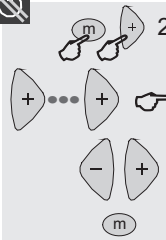
See 4.2.3.H. Intercom Call Permissions

4.2.5.i. Access To Master Unit FM Tuner

control unit OFF

Controls Master Unit tuner access to change the station from the Control Unit itself. By disallowing access, the station on the Master Unit tuner cannot be changed from the Control Unit itself (it can always be changed by directly accessing it through the Master Unit keypad).

Key Sequence	Display Visual
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value	INSTAL ACCESS TO CENTRAL FM
Change	ON OFF
Store	



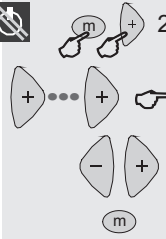
See 4.2.2.B. Operation of Master Unit FM Tuner

4.2.5.J. Auto-response: sensitivity

control unit OFF

See auto-response operation in 4.2.3.B. Intercom call to an individual zone.
To program the sensitivity of the auto-response voice detector

Key Sequence	Display Visual
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value	INSTAL AUTO-RESPONSE SENSIT
Change	SENS 05 SENS 03
Store	



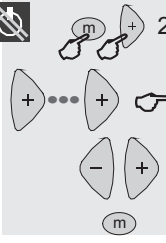
Sensitivity levels 8 and 9 are for extremely quiet environments. At these levels the voice activation can be permanently triggered by background noise

4.2.5.K. Auto-response: silence time

control unit OFF

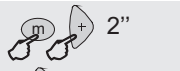
See auto-response operation in 4.2.3.B. Intercom call to an individual zone.
To program the silence time of the auto-response

Key Sequence	Display Visual
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value	INSTAL AUTO-RESPONSE TIME
Change	SEC 04 SEC 07
Store	



4.2.5.L. Deleting Control Unit Installation (Manufacturer Reset)

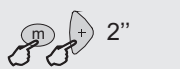
Deletes all settings and programming data from the Control Unit, restoring manufacturer default settings.

Key Sequence	Display Visual
control unit OFF 	INSTAL
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value 	DELETE INSTALLATION
To activate delete process 	OFF ON
To initiate the process 	LOADING DATA

Once the Control Unit is switched on, the manufacturer default settings are activated. This means that its zone identification must be redefined since it is required for the unit to operate. See 4.2.5.A.

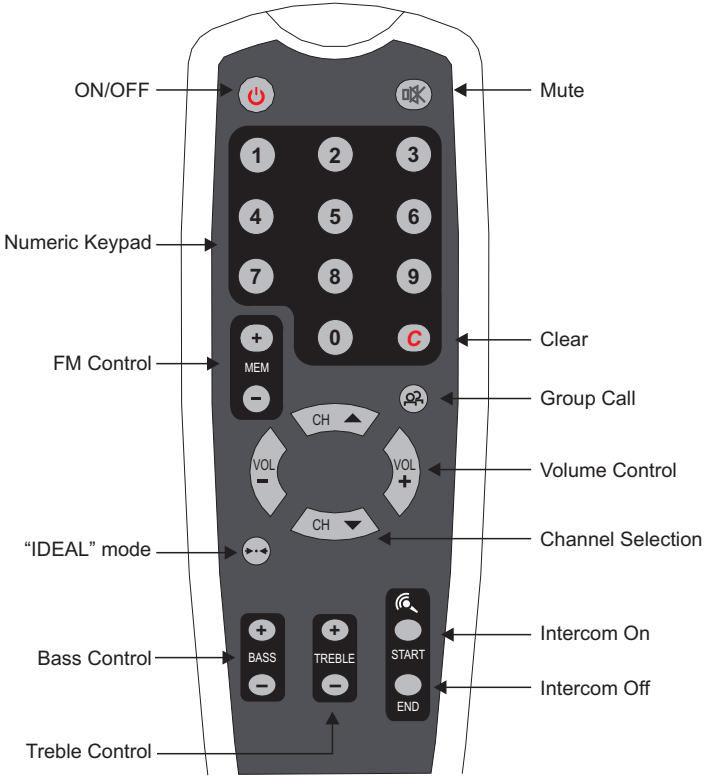
4.2.5.M. Knowing The Software Version

Shows Control Unit’s software version

control unit OFF 	INSTAL
Enter the installation menu and scroll to that option. Press the (m) key to enter and change the value 	VERSION SOFTWARE VERSION SOFT MANDO MODULAR SERIE 400, 112702, 141211

4.2.6. Control unit : Operation using the remote control unit

Further to the additional features it offers (FM tuner and 4 music channel inputs), when the supplementary 42992 unit is installed with unit 428A1, it allows the user to operate audio features and intercom calls with the same remote control unit, ref. 42791.



4.2.7. Technical specifications


428AI/A4


428AI 42992

428A1, 428A1+42991, 428A1+42992 , 428A4	MIN	NORMAL	MAX		COMMENTS
Measurements 428A1, 428A4 , 42991, 42992		45x45x43		mm	exterior (width x height x depth)
		45x45x36		mm	cavity (width x height x depth)
		45x45		mm	frontal (width x height)
Voltage		15	16	Vdc	terminal 2
Consumption demand	100	189	355	mA	terminal 2, mod.428A1+42991
	100	195	360	mA	terminal 2, mod.428A1+42992
	80	140	294	mA	terminal 2, mod.428A1
	99	150	340	mA	terminal 2, mod.428A4
Input signal		100		mVeff	jack 3,5mm
		3		Veff	terminals 10,20,30,40,50,60
Input impedance		100000		ohms	jack 3,5mm
		36000		ohms	terminals 10,20,30,40,50,60
Output signal (16 ohms)			1,5	W	terminals 05,06
Left/right channel separation		50		dB	
Intercom calls signal		3		Veff	terminal 7
Passband	20		15000	Hz	
Distortion		0,1	0,4	%	
Frequency range	87,5		108	MHz	mod. 42991, 42992 , 428A4
Antenna impedance		75		ohms	mod. 42991, 42992 , 428A4
Antenna sensitivity		3,5	5	uV	mod. 42991, 42992
		2,5	3,5	uV	mod. 428A4
Tuner distortion			3	%	mod. 42991, 42992
			0,5	%	mod. 428A4
Number of station pre-sets			20		mod. 42991, 42992 , 428A4
Zone identification address	1		250		
Number of control units in system		60	120(**)		(**) consult
System length		600	1000(**)	m	(**) consult

Connecting terminals mod. 428A1	
2	Supply voltage
4	Mass
91	Data (+)
92	Data (-)
7	Intercom calls signal
10	MPX sound channel input, music program #1
20	MPX sound channel input, music program #2
05	Left channel speaker output (+)
06	Right channel speaker output (+)

Connecting terminals mod. 42992	
30	MPX sound channel input, music program #3
40	MPX sound channel input, music program #4
50	MPX sound channel input, music program #5
60	MPX sound channel input, music program #6
A	FM antenna
M	FM antenna mass
04	Mass fot speakers of both channels (-)

Connecting terminals mod. 428A4	
2	Supply voltage
4	Mass
91	Data (+)
92	Data (-)
7	Intercom calls signal
10	MPX sound channel input, music program #1
20	MPX sound channel input, music program #2
05	Left channel speaker output (+)
06	Right channel speaker output (+)
04	Mass fot speakers of both channels (-)
A	Antena FM

Electrónica Integral de Sonido S.A. reserves the right to make changes without prior notice. Electrónica Integral de Sonido S.A. is not responsible for errors or omissions in this manual.

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