

# Technical Manual

# IR44CF-II

Version 2006

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## Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>4</b>
1.1	Purpose .....	4
1.2	Target Group .....	4
1.3	Identification label .....	4
1.4	Software version .....	4
1.5	IR44CF II Interface Block Diagram.....	5
<b>2</b>	<b>General Safety Instructions .....</b>	<b>6</b>
2.1	Danger .....	6
2.2	Caution .....	6
<b>3</b>	<b>First Use .....</b>	<b>7</b>
3.1	Unpack .....	7
3.2	Select Location.....	7
3.3	Installation of the IR44CF II .....	7
3.3.1	Steps to install the IR44CF II.....	7
3.3.2	Connecting to telephone (Hook mode).....	8
3.3.3	Connecting COR contact (COR mode).....	8
3.3.4	Installing the power supply .....	8
3.3.5	Ground connection .....	9
3.3.6	Other connections .....	9
3.4	Switch on the IR44CF II.....	10
3.5	Perform Device Settings after First Start.....	11
3.6	IR44CF II Default Settings .....	12
<b>4</b>	<b>Hardware .....</b>	<b>14</b>
4.1	Control Elements.....	14
4.1.1	Control elements for the standard IR44CF II.....	14
4.1.2	Function key labelling chart.....	15
4.2	Technical Specifications .....	17
4.3	Channel Configuration Options .....	21
4.3.1	Add-on cards.....	21
4.3.2	Basic channel configuration options .....	21
4.4	Overview of Interfaces .....	22
4.5	Telephone Connection.....	24
4.5.1	Analog connection.....	24
4.6	Power Supply .....	24

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4.7	Signal Input Cable – Audio Outputs, Loudspeaker, COR, Alarms .....	25
4.8	RS1/RS2 - RS-232 Connections .....	26
4.9	LAN Connector.....	27
4.10	Jumpers and Connectors on the Mainboard.....	28
4.10.1	Connectors (internal) overview .....	29
4.10.2	Power connector J2.....	29
4.10.3	Jumpers.....	30
4.10.4	Fuses.....	30
4.10.5	Analog add-on card .....	30
4.11	Alarm Contacts.....	31
<b>5</b>	<b>Software .....</b>	<b>33</b>
5.1	Installing IR44CF WEBAccess Software.....	33
5.1.1	Hardware requirements .....	34
5.1.2	Installation.....	34
5.2	Managing IR44CF II Software Update .....	34
5.2.1	Installing software update from the CF card using IR44CF II configuration menu.....	35
5.2.2	Entering the hardware address .....	37
5.2.3	Troubleshooting software update .....	38

# 1 Introduction

This “IR44CF II Technical Manual” is made to offer information to the system administrator, which goes beyond the information given in the “IR44CF II User’s Manual”.

## 1.1 Purpose

It is to offer a reference to the following:

- Hardware interfaces
- Pin connections
- Board descriptions
- Component descriptions
- Technical guidance
- Software update and installation procedures

## 1.2 Target Group

This technical manual exclusively addresses experienced system administrators, which ideally have passed a product specific training by VOICECOLLECT GMBH.

To use this manual, comprehensive knowledge in using the IR44CF II recorder locally and over the network, and in handling hardware and software is necessary.

## 1.3 Identification label

*TIP:* The last 5 digits of the serial number (SN) are required to build the unique hardware address (MAC) of the IR44CF II. The input of these digits may be requested by the IR44CF II after a software upgrade.

The identification label of the IR44CF II is located at the rear panel of the system.



Figure 1, IR44CF II – Identification label

## 1.4 Software version

The software version is displayed after switching on the IR44CF II.

ATIS-IR44CF
Vxx.xx
08/02/29
Initializing 4 ch...

Tab. 1, IR44CF II display – Software version

### 1.5 IR44CF II Interface Block Diagram

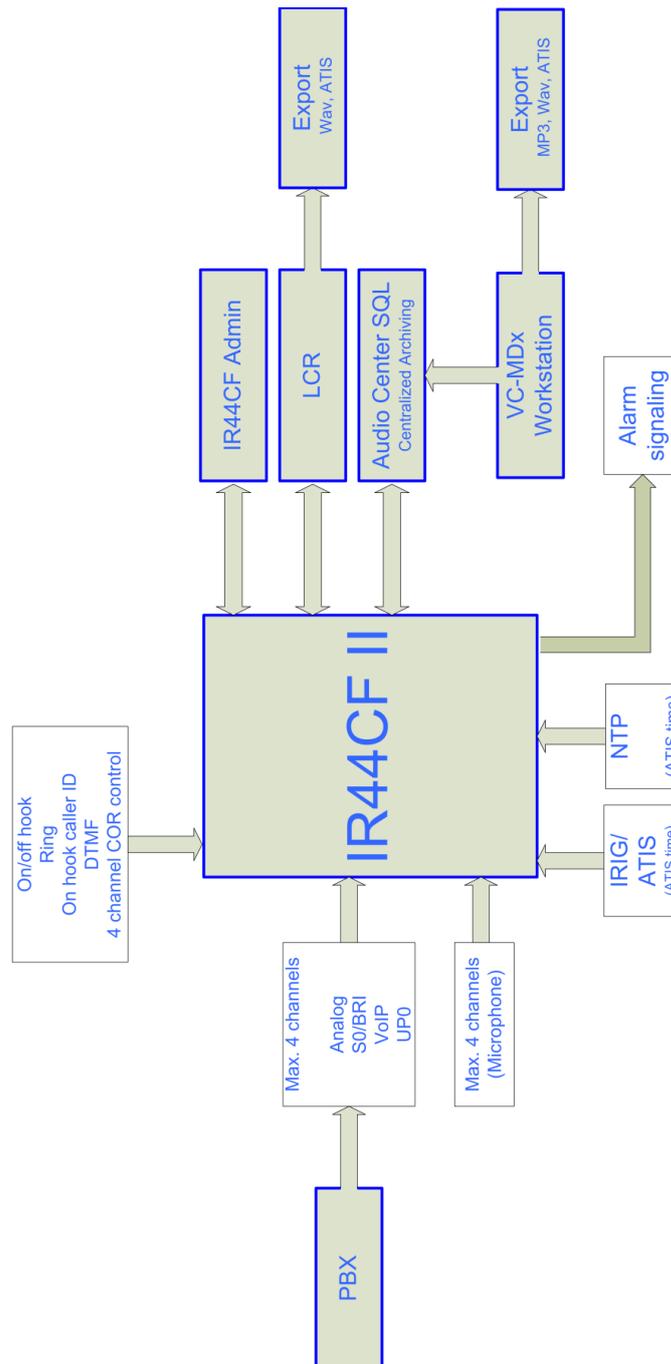


Figure 2, IR44CF II – Block diagram

## 2 General Safety Instructions

Read these Safety Instructions carefully before you repair, maintain or modify your IR44CF.

This product may only be operated by fully trained staff which has read and understood these instructions completely.

### 2.1 Danger

Repair and maintenance duties may only be performed by experienced staff (qualified electrical employee according to IEC 364 and DIN VDE 105 part 1). Operation of this device may only be performed by a fully trained person who has read and understood this manual completely.

Read this manual thoroughly before putting the device into operation. Please observe all the rules and regulations.

### 2.2 Caution

Electrical voltage is latent within this device. Unplug the power supply before opening the housing, to avoid injuries.

No warranty on hardware damage or loss of data! Every modification on this system which is not done by VOICECOLLECT GMBH results in loosing warranty by VOICECOLLECT GMBH. Consult our technical customer service before and modify nothing on the system without instruction of VOICECOLLECT GMBH!

Risk of destruction! Before connecting the power supply, please check whether the available and the required mains voltage are the same.

System failure or loss of data because of additional Software! Every access, from additional software to the device (e. g. monitoring software, evaluation or playback software) which is not tested and certified by VOICECOLLECT GMBH, results in loosing warranty.

Maintenance and repair work may only be performed by the VOICECOLLECT GMBH customer service or authorized companies. In all other cases, the manufacturer warranty becomes void.

Save the system settings once the system is configured for work.

Repair: Always work on an antistatic, grounded base and wear an antistatic, grounded armband because of the danger of damage by static electricity charge.

## 3 First Use

In most cases, installation and commissioning are handled by our customer service. Should this for some exceptional reason not be possible, please perform the installation in close consultation with our customer service to avoid damages to the device.

### 3.1 Unpack

Please unpack carefully. Inspect the device for any transportation damage. We only accept warranty for any damage which is claimed before putting the device into operation.

### 3.2 Select Location

Select a location that meets the following requirements:

- enough space when installed in a cabinet
- strong and safe foundations (table)
- room temperature (5 ... 40° C)
- dry room (humidity max. 75%, not condensing)
- adequate air flow around the device
- installation of additional for rack mounting recommended

### 3.3 Installation of the IR44CF II

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**CAUTION****Risk of destruction**

Wrong adjusted voltage on the power supply may damage your system.

Before connecting the power supply, check whether the available and the required mains voltage are the same.

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**DANGER****Risk of electric shock!**

Power carrying parts may be dangerous to persons if the IR44CF II is operated without the housing or with incorrect mains connection.

- Do not operate IR44CF II without the housing.
  - Establish the mains connection in accordance with national standards.
- 

#### 3.3.1 Steps to install the IR44CF II

- ⇒ Install the IR44CF II in a 19 inch installation frame or in a housing depending on the model.
- ⇒ Connect the power as described in the chapter “Installing the power supply”

- ⇒ Connect the analogue channels to the two inner pins of the RJ12 socket.
- ⇒ If you would like to use an external serial time code encoder (IRIG / ATIS protocol), connect it to the RS1.
- ⇒ If you want synchronize to a NTP server, install the NTP time server in the network.
- ⇒ If you would like to copy recordings to another recording device, connect the recording device to the rerecording output.
- ⇒ If you would like to use headphones, connect these to the headphones output.

### 3.3.2 Connecting to telephone (Hook mode)

Always connect the IR44CF II parallel to the line.

- ⇒ Connect the analog channels to the two inner pins of the RJ12 socket.

You can connect several telephone lines with the IR44CF II corresponding to the number and the type (analogue) of available channels.

### 3.3.3 Connecting COR contact (COR mode)

Connect the COR contact to the rear-side connector. See chapter: "Signal Input Cable – Audio Outputs, Loudspeaker, COR, Alarms" in this manual.

### 3.3.4 Installing the power supply

The IR44CF II is operated with 12 V DC. The following connection options exist:

- Standard connection to an AC/DC converter with a 4-pin DIN plug with screws. See chapter: "Power supply" in this manual).
- Option (only with separate order): Direct voltage module with 5-pole screwed DIN plug, metal design; 9 ... 36 or 18 ... 75 V DC, e.g. when using an external battery.

Connection Option	Installation Steps
Connection with the AC/DC converter: <ul style="list-style-type: none"> <li>▪ Input: 100 ... 240 V AC or 230 V AC (automatic switchover)</li> <li>▪ Output: 15 V DC</li> </ul>	<ul style="list-style-type: none"> <li>▪ Connect the 4-pin DIN plug to the IR44CF II and screw it.</li> <li>▪ Connect the plug of the AC/DC converter to the 230 V (110 V) AC socket.</li> </ul>
DC connection option: <ul style="list-style-type: none"> <li>▪ Input: either 9 ... 36 or 18 ... 75 V DC (according to version ordered)</li> <li>▪ Output: 15 V DC</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ensure that the power supply provides the specified voltage for the IR44CF II.</li> <li>▪ Connect the power supply input of the IR44CF II to the power source. Take note of the pin assignment provided with the IR44CF II.</li> </ul>

Tab. 2, IR44CF II – Power supply connection

### 3.3.5 Ground connection



Figure 3, IR44CF II – Ground connection of IR44CF II housing

- ⇒ Connect the ground connection of the IR44CF II housing to ground if you install the device in a cabinet or motorcar.

### 3.3.6 Other connections

Install the following optional connections only if required:

- ⇒ Connect the LAN interface to your LAN.
- ⇒ Install time control (NTP, ATIS).
- ⇒ Install the alarm contacts.

### 3.4 Switch on the IR44CF II

<b>i</b>	<i>TIP:</i> As long as no user is configured, no password input is required. The device logs on as administrator automatically.
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⇒ Establish the power connection to the IR44CF II.

☺ All LEDs light up. The display shows the software version for three seconds:

 ATIS-IR44CF
 Vxx.xx
 08/02/29
 Initializing 4 ch...

Tab. 3, IR44CF II display – Software version

⇒ Press any key to initiate log on.

⇒ After demand by IR44CF II only: Enter the password with the channel buttons (maximum 8 characters).

<b>i</b>	<i>TIP:</i> You can cancel an incorrect password entry with the  (Stop).
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⇒ Press  (Play).

☺ The IR44CF II shows the information on the CF card for ten seconds:

Display	Notes
 Volume ATIS-000001	Designation of the storage medium
 Size 62512 KB	Size of the storage medium
 Free 156 KB	Free recording memory
 Records 250	Number of saved recordings

Tab. 4, IR44CF II display – CF card information

☺ *The IR44CF II is ready to operate when the **Main** menu appears.*

 C1:1+	Fr:7s07m
 C2:0	CF:Idle
 C3:0	08/02/29
 C4:0	05:00:00*

Tab. 5, IR44CF II display – Main menu

	<i>SEE ALSO:</i> “IR44CF II User’s Manual”, chapter: “Setting Operational Readiness”.
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### 3.5 Perform Device Settings after First Start

<b>i</b>	<p><i>TIP:</i> In the most cases it will be sufficient to set the following parameters for a proper beginning:</p> <ul style="list-style-type: none"> <li>▪ IP address</li> <li>▪ Card mode (append)</li> <li>▪ User application</li> <li>▪ Start condition</li> </ul> <p>You can adapt the setting later on to meet the requirements of your individual use case.</p>
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<b>i</b>	<p><i>TIP:</i> If agreed, our customer service will configure the IR44CF II parameters corresponding to your needs.</p>
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The following parameters should be set:

- Users for the IR44CF II
- Card mode (append, play) for the CF card
- User application (Control Center, Monitoring, Selective, Malicious)
- Start condition (Manual, Vox, Hook, COR)
- Gain on input
- Warning tone to indicate to the other end of a telephone call that the call is being recorded
- File format
- Data rate (compression)
- Record mode (Card overwrite, Delete at time, Time to live)
- Contact control (COR) operation

- Volume
- Play mode (Normal, Autoplay, Play last seconds)
- Jump distance for playback
- Menu language
- Date / time
- Time synchronization
- Alarm signals
- Network parameters (IP address)

	<p><b>SEE ALSO:</b> For more information, read the following manuals:</p> <ul style="list-style-type: none"> <li>▪ “IR44CF II User’s Manual”, chapter “Configuration”</li> </ul>
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### 3.6 IR44CF II Default Settings

	<p><b>TIP:</b> The IR44CF II can be reset to the default settings with the Setup defaults function. See “IR44CF II User’s Manual”, chapter “Resetting all Settings”.</p>
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The default settings are:

Parameter	Pre-setting
User application	Control Center
Start condition	VOX VOX threshold= -21 dB VOX prologue = 1 ms VOX epilogue = 5 ms VOX duration = 100 ms
Input level	Fixed, 0 dB
Warning tone	Off
File format	WAV
Data rate	64 Kbps
Record mode	Card overwrite = inactive Delete at time = inactive Time to Live = inactive

Parameter	Pre-setting
COR invert all	Off
Volume (output)	0 dB
Play mode	Normal = active Autoplay delay = 3 s Play last seconds = 10 s
Play jump	10 s
Language	English
Alarm settings	LCD = active Speaker = active Relays = active
Network	Current setting will not be reset.
Time synchronizat	Current setting including NTP server address will not be reset.
User managemen	Users will be reset.

Tab. 6, IR44CF II – Default settings

## 4 Hardware

This chapter gives you information about the hardware of your IR44CF II.

### 4.1 Control Elements

As a standard, the IR44CF II is operated with the control elements on the front panel. For the configuration, there is also the optional Windows software IR44CF WEBACCESS, which enables the operating parameter to be set from a remote PC via the network. For evaluation on the Windows PC you can also use the LAST CALL REPEAT software.

#### 4.1.1 Control elements for the standard IR44CF II

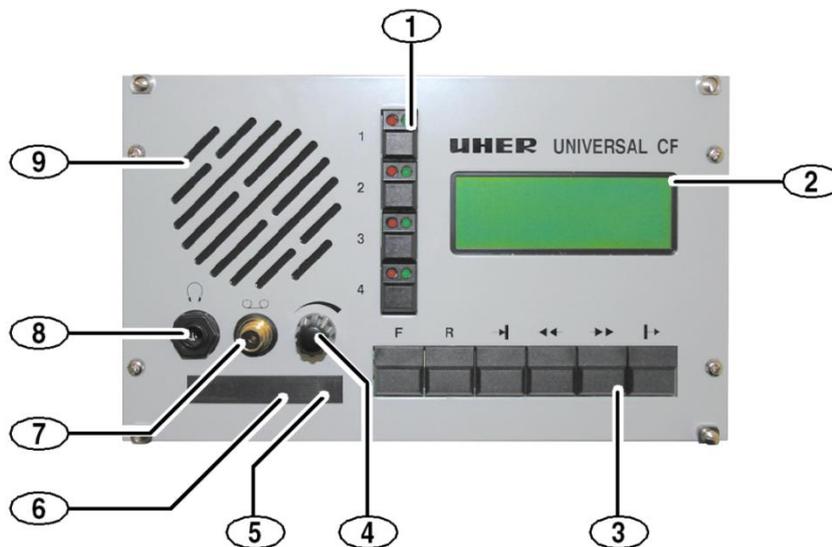


Figure 4, IR44CF II – with metal front panel



Figure 5, IR44CF II –with composite front panel

Pos	Description
1	Channel buttons with LED indicators

Pos	Description
2	Display
3	Function keys
4	Volume control
5	Eject key
6	Card reader (not for models with build-in not replaceable CF card)
7	Recording output
8	Headphone output
9	Loudspeaker

Tab. 7, IR44CF II – Control elements

### 4.1.2 Function key labelling chart

*TIP:* Depending on the date of purchase, the labelling of the function keys can be different, but the functions will be the same.

The function keys (3) shown in figure “IR44CF II insertion frame model on page 14 can be labelled as follows:

Key name	Display instructions in the manuals	Old IR44CF II	New IR44CF I	Composite key label
Final key	-			EXIT 
Record key	-			REC 
Stop key	<input type="text" value="No"/> <input type="text" value="No"/> Or: <input type="text" value="No"/> <input type="text" value="&gt; "/>			STOP 
Reverse key	-			REW 

Key name	Display instructions the manuals	Old IR44CF II	New IR44CF I	Composite key label
Forward key	-			FWD 
Play key	<input type="text" value="Yes"/> <input type="text" value=" &gt;"/>			PLAY 

Tab. 8, IR44CF II – Function key labeling chart

## 4.2 Technical Specifications

General parameter	Specifications
Type of construction	½ 19”/3 HU form factor module insert
Dimensions (W x H x D)	(214 x 128 x 180) mm
Front panel	RAL 7035 light grey
Weight	approx. 2 kg
Scope of supply	<ul style="list-style-type: none"> <li>▪ IR44CF II</li> <li>▪ CF card (internal or changeable)</li> <li>▪ Plugged power pack</li> <li>▪ Operating instructions</li> </ul>

Tab. 9, IR44CF II – General parameters

Power supply	Specifications
Input voltage	9-15 V DC or 115/230 V AC via plugged power pack
Power consumption	12 VA

Tab. 10, IR44CF II – Power supply parameters

Operating condition	Specifications
Operating temperature	0 ... 40 °C
Temperature (storage)	-10 ... +60 °C
Relative humidity	10 ... 95%, non-condensing

Tab. 11, IR44CF II – Operating conditions

Recording capacity	Specifications

Recording capacity	Specifications
16 GB CF card (max.)	<ul style="list-style-type: none"> <li>▪ Maximum 6000 channel hours at highest compression</li> <li>▪ Max. 80,000 calls totally or per channel</li> </ul>
Internal volatile buffer	<ul style="list-style-type: none"> <li>▪ 4 minutes at 64 Kbps</li> <li>▪ Max. 10 calls</li> </ul>
Memory management	<ul style="list-style-type: none"> <li>▪ Overwrite (First In/First Out)</li> <li>▪ Delete at time</li> <li>▪ Delete manually</li> <li>▪ Stop recording when full</li> <li>▪ Manual overwrite protection</li> <li>▪ Internal buffer for bridging a media change</li> </ul>

Tab. 12, IR44CF II – Recording capacity

Recording interfaces	Specifications
Interface provision	2 or 4 analog channels
Analog specification	<ul style="list-style-type: none"> <li>▪ Impedance &gt; 10 kΩ, 5 ... 500 mV, potential-free</li> <li>▪ RJ11 input hardware interface</li> <li>▪ Input gain: fixed (-48 ... +28 dB) or adaptive (AGC, -31 ... 0 dBm output target level)</li> </ul>
Analog recording start	<ul style="list-style-type: none"> <li>▪ VOX mode (voice controlled)</li> <li>▪ Hook mode (phone call controlled)</li> <li>▪ COR mode (contact controlled)</li> <li>▪ Manual mode.</li> </ul>
Phone line signalling detection	<ul style="list-style-type: none"> <li>▪ On / Off hook</li> <li>▪ Ring</li> <li>▪ On hook caller ID</li> <li>▪ DTMF</li> </ul>
External contacts   inputs (COR)	4, active (CMOS logical levels) or passive (short to GND)
Codec types	4kHz A-law (G.711), 32kHz (G.726), 6.4kHz and 5.3kHz (G723.1)
Frequency range	300 up to 3400 Hz, + 3 dB max (software)

Recording interfaces	Specifications
Data rate	Options: 64 Kbps; 32 Kbps; 6.4 Kbps; 5.3 Kbps

Tab. 13, IR44CF II – Recording interfaces

Operation	Specifications
Display	4 x 20 LCD alphanumeric
Keys	<ul style="list-style-type: none"> <li>▪ 6 function keys</li> <li>▪ 4 channel buttons with LEDs</li> </ul>
Recording modes	<ul style="list-style-type: none"> <li>▪ Stop when full</li> <li>▪ Overwrite</li> <li>▪ Clear at time</li> <li>▪ Time to live</li> </ul>
Playback	<ul style="list-style-type: none"> <li>▪ Adjustable fitted loudspeaker</li> <li>▪ Headphones connection</li> <li>▪ Rerecording output</li> </ul>
Network	100 BaseTx for LAN, NTP, VoIP
Warning tone	1400 Hz, 1 sec on / 14 sec off, -20 dBm into 300 ohms per channel selectable

Tab. 14, IR44CF II – Operation

Outputs	Specifications
Output, audio line	<ul style="list-style-type: none"> <li>▪ 1, low impedance (50 <math>\Omega</math>)</li> <li>▪ +3 dBm max. level</li> <li>▪ Gain: software, fixed (-48 ... +28 dB)</li> </ul>
Output, speaker channel	<ul style="list-style-type: none"> <li>▪ 700 mW into 8 <math>\Omega</math></li> </ul>
Alarm signalling	LCD, speaker, external outputs, switchable
Alarm outputs	2, Normally Open, 350 V, .2 A

Tab. 15, IR44CF II – Outputs

Options / Accessories	Specifications
Power Supply	9 to 36 V DC / 18 to 75 V DC
Model	Table casing
Special accessories	<ul style="list-style-type: none"> <li>▪ Special front panels for control table integration</li> </ul>
CF card	<ul style="list-style-type: none"> <li>▪ from 128 MB to 16 GB capacity</li> <li>▪ internal or external</li> </ul>
Software / LAN access	<ul style="list-style-type: none"> <li>▪ Call playback from CF card</li> <li>▪ Call playback via LAN, e. g. Last Call Repeat (LCR) or WEBAccess</li> <li>▪ Administration via LAN (WEBAccess software)</li> <li>▪ Access from up to 4 Workstations</li> <li>▪ Access from 1 AudioCenter SQL</li> </ul>
Time code receiver	NTP, IRIG-B, ATIS (RS-232)

Tab. 16, IR44CF II – Options/accessories

### 4.3 Channel Configuration Options

The following fundamental channel configuration options are possible:

- Basic channel configurations: See chapter 4.3.2: “Basic channel configuration options” (below).
- Other options for microphone channels (not in this manual)

#### 4.3.1 Add-on cards

In the basic configuration two analog channels are available.

The following add-on cards can be used to provide additional channels:

Add-on card	Added functions	See also chapter
Analog add-on card	two additional analogue channels	“Analog add-on card”

Tab. 17, IR44CF II – Add-on cards

#### 4.3.2 Basic channel configuration options

<b>i</b>	<i>TIP:</i> Further configurations like jumper settings must be made by our technical service or on technical service’s instructions.
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Channel Option	Required add-on card
Two analog channels (C1, C2)	No add-on card needed.
Four analog channels (C1, C2, C3, C4)	Analog add-on card

Tab. 18, IR44CF II – Basic channel configuration options

### 4.4 Overview of Interfaces

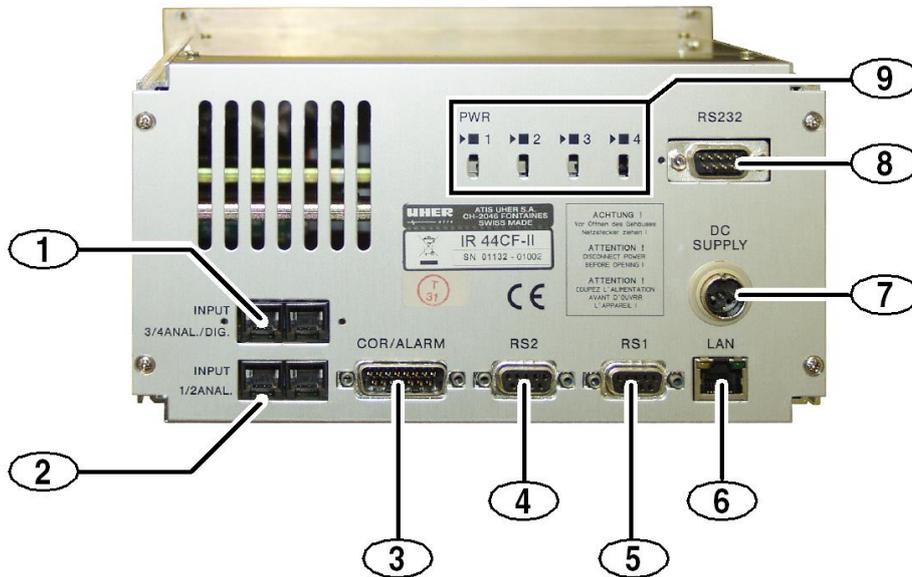


Figure 6, IR44CF II – Example for rear view

Pos.	Description
1	Analog (add-on)
2	Analog input 1/2 (default)
3	COR/ALARM
4	RS2
5	RS1
6	LAN
7	DC input
8	(not used)
9	Additional optional channel LEDs

Tab. 19, IR44CF II – Rear view connections

Interface	Specification/Use	Label on main board

Interface	Specification/Use	Label on main board
Inputs (standard)	Inputs for analog connections 2 RJ12 sockets for 2 channels (standard model)	P8, P9
Inputs (options)	Inputs for analog connections 2 RJ12 sockets for 2 channels	-
COR/ALARM	15 pole Sub-D-plug Input signal for recording in COR mode via four channels, mechanical alarm outputs	P4
RS1	15 pole Sub-D-socket RS-232 Input signal for external time code encoder DCF	J1
RS2	15 pole Sub-D-socket RS-232 Input signal for other external devices, service	J3
LAN	Network socket	P1
DC input	4-pin DIN plug 12 – 15 V DC, only DC models available.	J2
Headphones jack	600 $\Omega$ on the front panel	-
Tape jack	DIN audio jack, on the front panel	-

Tab. 20, IR44CF II – Interfaces overview

## 4.5 Telephone Connection

### 4.5.1 Analog connection

The analog telephone connection uses pin 3 and 4 of a standard RJ12 connection:

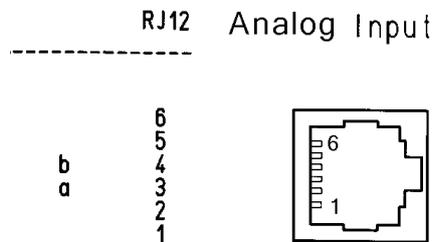


Figure 7, IR44CF II – Input 1/2 analog / Input 3/4 analog/digital

## 4.6 Power Supply

Pins of the DC Power Supply (DIN plug looking from the rear panel from the outside)

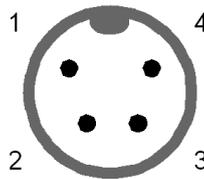


Figure 8, IR44CF II – DC Supply / P1

Pin number	Description
1, 3	+12 V Power
2	GND

Tab. 21, IR44CF II – Pin connections plug P1 / DC SUPPLY

<b>i</b>	<i>TIP:</i> A five (5)-pole plug with metal case is available as an option.
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### 4.7 Signal Input Cable – Audio Outputs, Loudspeaker, COR, Alarms

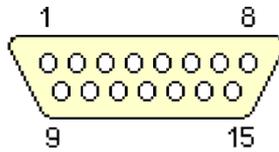


Figure 9, IR44CF II – Connection COR/ALARM plug P4 (D-Sub 15 male)

Pin number	Usage
1	Playback output channel 1
2	Playback output channel 3
3	Loudspeaker output
4	COR 1 input
5	COR 3 input
6	COR GND
7	Alarm contact 2 (information messages) – connection point no. 2 normal open
8	Alarm contact 1 & 2 GND
9	Playback output channel 2
10	Playback output channel 4
11	Analog audio GND
12	COR 2 input
13	COR 4 input
14	Alarm contact 1 (error messages) – connection point no. 1
15	Common connection point no. 2 of the alarm contacts 1 and 2 and Common +12 V for alarm contacts 1 & 2 if JP1 is closed

Tab. 22, IR44CF II – Pin connections plug P4 COR/ALARM

## 4.8 RS1/RS2 - RS-232 Connections

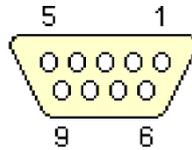


Figure 10, IR44CF II – Connections RS1/RS2 J3/J1 (D-Sub 9 female)

Pin number	Usage RS1 / J3
1	N/C - Unused
2	RS-232 INPUT
3	RS-232 OUTPUT
4	Analog GND for loudspeaker OUTPUT
5	GND
6	+ 12 V power supply
7	+ 12 V power supply
8	Loudspeaker OUTPUT of JP 2
9	N/C - Unused

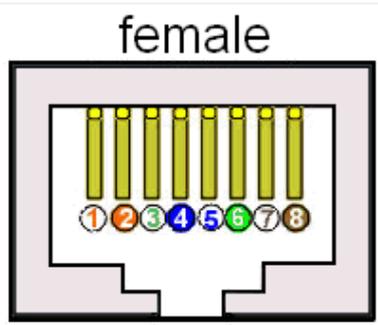
Tab. 23, IR44CF II – Pin connections RS1 / J3 (time code transmitter RS-232)

Pin number	Usage RS2 / J1
1	N/C - Unused
2	RS-232 INPUT
3	RS-232 OUTPUT
4	N/C - Unused
5	GND
6	N/C - unused
7	N/C - unused
8	Audio OUTPUTS (mixer OUTPUT)
9	Analog GND for RREC OUTPUT

Tab. 24, IR44CF II – Pin connections RS2 / J1 (RS-232)

## 4.9 LAN Connector

The RJ45 LAN connector at the backside of your device allows the mainboard to connect with a local area network by means of a network hub.

	Pin	Description
	1	TX+
	2	TX-
	3.	RX+
	4.	N/C
	5.	N/C
	6.	RX-
	7.	N/C
	8.	N/C

Tab. 25, IR44CF II – Ports and jumpers network connector

### 4.10 Jumpers and Connectors on the Mainboard

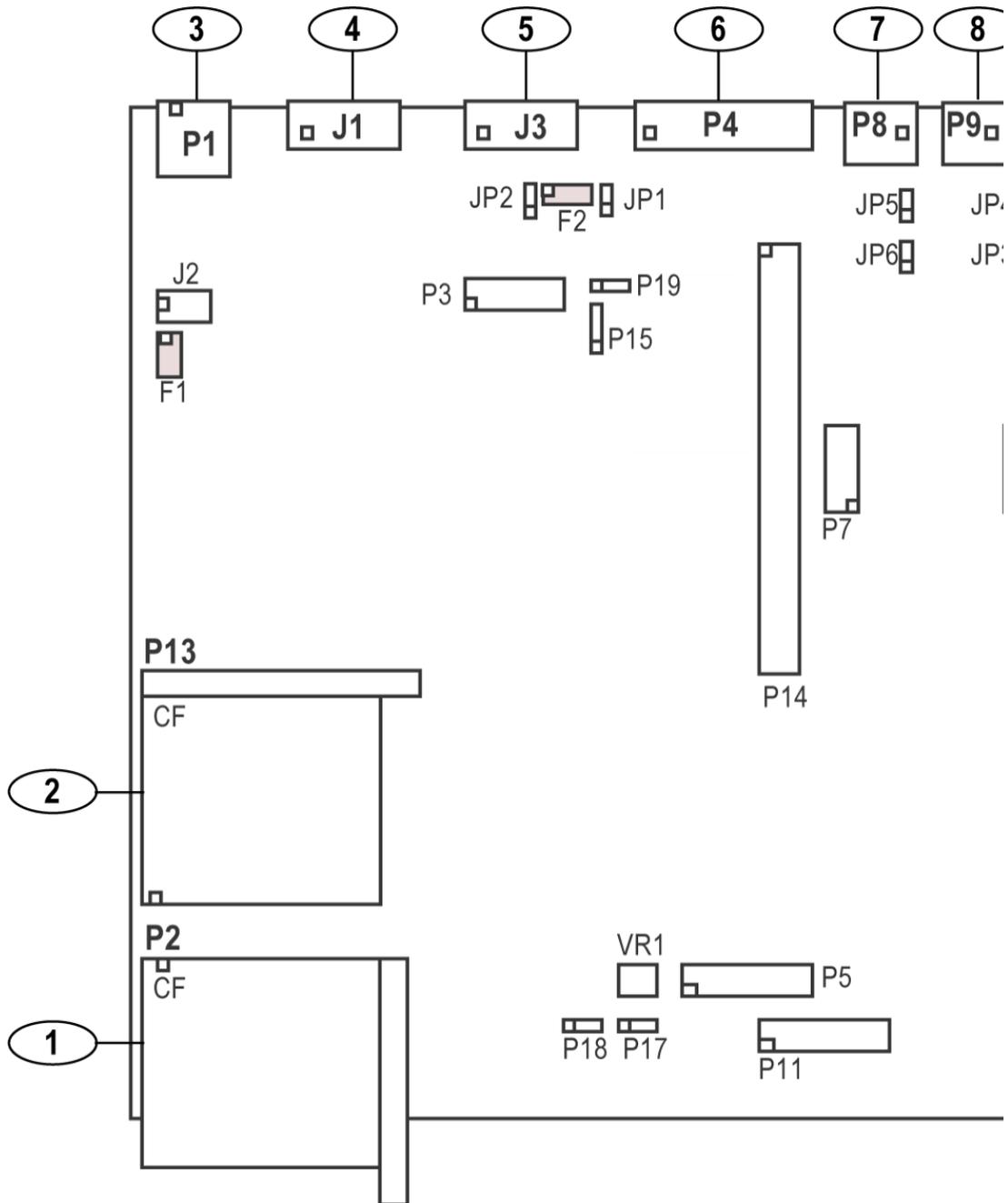


Figure 11, IR44CF II – Mainboard IR44CF II

Pos.	Connection
1	CF Card external
2	CF Card internal
3	LAN
4	RS1
5	RS2
6	COR/ALARM
7, 8	Input 1/2 analog

Tab. 26, IR44CF II – Connections main board

#### 4.10.1 Connectors (internal) overview

Connectors	Usage
J2	Power connector
P3	not used
P5	LCD
P7	not used
P10	Analog add-on Card
P11	Keyboard
P14	not used
P17	Activity LED
P18	Power ON LED

Tab. 27, IR44CF II – Internal connectors (overview)

#### 4.10.2 Power connector J2

Pin number	Usage power connector
1	+12 V Power
2	GND
3	+12 V Power

Tab. 28, IR44CF II – Pin connections J2 / power connector

### 4.10.3 Jumpers

Jumper	Usage jumper
JP1 1-2	Supplies +12 V to both alarm contacts – connection point 15) (fuse F2 must be installed)
JP2 1-2	Connects the SPKRF (speakers output) signal to J3/Pin 15
P15	Software update switch Pin 2-3 open: Software reset to IR44CF II basic software version) during software update Pin 2-3 closed: Software update to the version on CF card during software update

Tab. 29, IR44CF II – Usage jumpers

### 4.10.4 Fuses

Jumper	Usage fuse
F1	+12 V input fuse
F2	+12 V to alarms fuse

Tab. 30, IR44CF II – Fuses

### 4.10.5 Analog add-on card

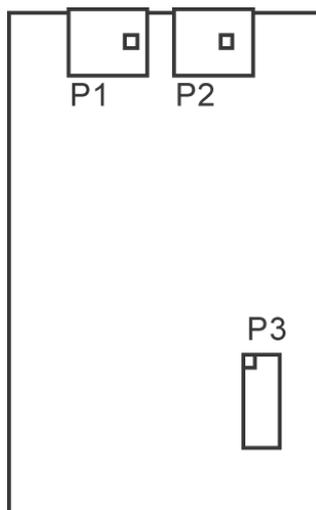


Figure 12, IR44CF II – Analog Add-On Card

Connectors	Usage
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Connectors	Usage
P1	Input 4 analog
P2	Input 3 analog
P3	Connection main board

Tab. 31, IR44CF II – Connectors analog add-on card

## 4.11 Alarm Contacts

	SEE ALSO: „IR44CF II Repair and Maintenance Manual”, chapter
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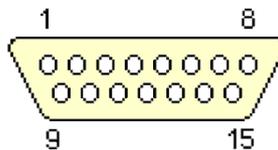


Figure 13, IR44CF II – Connection COR/ALARM plug P4 (D-Sub 15 male)

PIN number	Usage
7	Alarm contact 2 (information messages) – connection point no. 2 normal open
8	Alarm contact 1 & 2 GND
14	Alarm contact 1 (error messages) – connection point no. 1
15	Common connection point no. 2 of the alarm contacts 1 & 2. Common +12 V for alarm contacts 1 & 2 if JP1 is closed

Tab. 32, IR44CF II – Relevant pin connections plug P4 COR/ALARM

The alarm contacts are realized via optocoupler. They are located between the following pins:

- Pin 15 and pin 14 (Alarm contact 1, error messages)
- Pin 15 and pin 7 (Alarm contact 2, information messages)

After the application of power the alarm contacts of the IR44CF II go into work position and are closed (Alarm contacts active = closed).

In the alarm case the alarm contacts will be open (Alarm contacts inactive = open).



*TIP:* If you close jumper JP2 (1-2), there are +12 V connected to p  
use this +12 V to let the alarm signal be switched through against

For more information please consult our customer service.

The voltages will be in this case:

- Alarm contact active = closed = 12 V
- Alarm contact passive = open = 100 mV

## 5 Software

Before the shipping of your system all for the operation necessary software is installed on it according to your configuration requirements.

The following chapters show you how to install software on your system. This might be necessary in the following cases:

- Software update
- Device failure (Re-installation after consultation with VOICECOLLECT GMBH customer service only).

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**CAUTION****No warranty on hardware damage or loss of data!**

Every modification on this system which is not done by or after consulting VOICECOLLECT GMBH results in loosing warranty by VOICECOLLECT GMBH.

Consult our technical customer service before and modify **nothing** on the system structure of VOICECOLLECT GMBH!

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**CAUTION****System failure or loss of data because of additional Software!**

Every installation of additional Software (Playback software, monitoring software) which is not tested and certified by VOICECOLLECT GMBH results in loosing warranty by VOICECOLLECT GMBH about consequential losses or fee required reparations.

Do not install any additional Software without consulting VOICECOLLECT GMBH!

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### 5.1 Installing IR44CF WEBAccess Software

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**CAUTION****System instability possible!**

Changing the given and described installation path may result in system instability.

Observe the given installation path!

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The IR44CF WEBACCESS software is used on a PC workstation with network access to one or more digital recorders with the designation "IR44CF II".

The software is used for administration and central technical control of the connected IR44CF II recorders.

### 5.1.1 Hardware requirements

The following hardware requirements must be met to use the IR44CF WEBAccess software:

- Processor CORE i3 or higher
- Main memory 1 GB RAM or more
- Hard disk 4 GB or more free hard disk memory
- TCP/IP network link to the recorders
- Operating system Microsoft Windows 7 (other Windows versions after consultation).

### 5.1.2 Installation

To install the IR44CF WEBAccess software on your PC, follow the procedure described into the WEBAccess Installation and Configuration Manual. Please, ask VOICECOLLECT GMBH Service Department to provide it.



*RESULT:* You installed the IR44CF II WEBACCESS software.

## 5.2 Managing IR44CF II Software Update

#### CAUTION

#### Device error due to power loss



If the power gets lost during a software update there will be nothing on the display after a restart (device does not start). The IR44CF II must be sent to the VOICECOLLECT GMBH customer service for repair.

Do not power-off the IR44CF II during the software update!



*PREREQUISITE:* Do not record during the software update. Set the Channel Trigger to manual control before updating the software.



*PREREQUISITE:* Make sure the mainboard jumper P15, PIN 2-3 is set. If P15 PIN 2-3 is open, no software update will take place. Instead the IR44CF II initial software will be loaded from the internal flash memory (basic software version). See chapter 5: "Hardware", paragraph "Jumpers" in this manual.



*TIP:* Note down all device settings (IP address, user application, start condition etc.) before you start the update.

You receive new software for your IR44CF II in the form of two files: *ldr.bin* and *ir44cf.bin*. The update files can be placed on the CF card or on the IR44CF PC.

There are two start options for the update if the update files are on the CF card:

- Start from within the IR44CF II configuration menu.
- Start from the IR44CF WEBACCESS.

## 5.2.1 Installing software update from the CF card using IR44CF II configuration menu

- ⇒ Copy the current files *ldr.bin* and *ir44cf.bin* to the ATIS directory on the CF card.
- ⇒ Insert the CF card into the card reader.
- ⇒ Select the `Update software` entry in the SYSTEM CONFIG. Menu of the IR44CF II. See chapter “Configuring” in the “IR44CF II User’s Manual”.



Tab. 33, IR44CF II display – Software update selection

- ⇒ Press `>` (Play, Yes).Play.

☺ *Line 2 contains the confirmation query:*



Tab. 34, IR44CF II display – Security request for software update

- ⇒ Option A: To cancel the update, press `>|` (Stop, No).
- ⇒ Option B: To proceed with the update, press `>` (Play, Yes).

☺ *If you pressed `>` (Play, Yes), the system reads the update files from the CF card. The update has not started yet:*



Tab. 35, IR44CF II display – Reading installation files from CF card

☺ *The following request appears:*



Tab. 36, IR44CF II display – Request for correct setting of jumper P15

- ⇒ Make sure the mainboard jumper P15, PIN 2-3 is set. If P15 PIN 2-3 is open, no software update will take place. Instead the IR44CF II initial software will be loaded from the internal flash memory (basic software version).
- ⇒ Option A: To cancel the update, e. g. you are not sure of the JP15 setting, press  (Stop, No).
- ⇒ Option B: To proceed with the update, press  (Play, Yes).

☺ *If you pressed  (Play, Yes), the update starts. The deletion messages of the flash memory appear.*



Tab. 37, IR44CF II display – Deletion messages during update on the display

☺ *The following message indicates that the installation file is being written into the internal flash memory.*



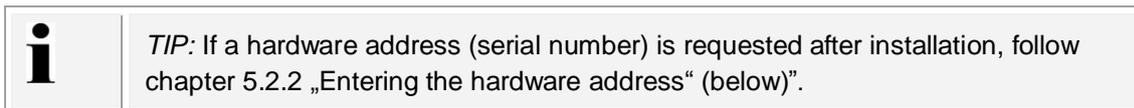
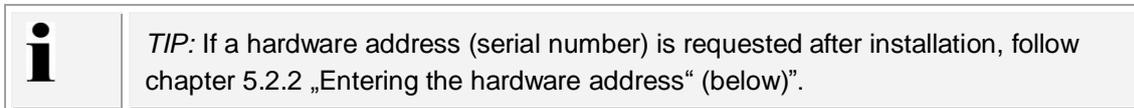
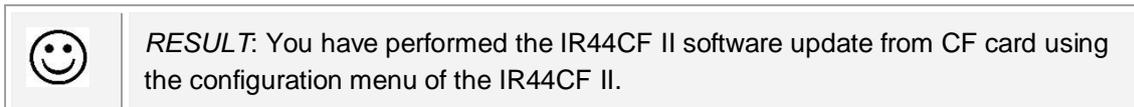
Tab. 38, IR44CF II display – Writing installation file to flash memory

- ☺ *The message `Check ir44cf.bin` indicates that the IR44CF II checks the update for correctness.*
- ☺ *A message like this appears if the update has been performed properly.*

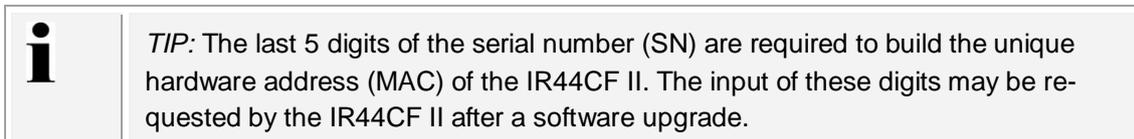


Tab. 39, IR44CF II display – SW update okay message

☺ *The IR44CF II will start with the new software version without any further user interaction.*



## 5.2.2 Entering the hardware address



The prompt to enter the serial number appears after the first software installation on the IR44CF II display.

The reason for this is that the IR44CF II builds up a device-specific MAC address from the last 5 digits of the serial number and an internal IR44CF II device code.

The serial number can be found on the identification label on the back of the device.



Figure 14, IR44CF II – Identification label

- ⇒ If the hardware address is requested by the IR44CF II, enter the last five (5) digits of the IR44CF II serial number.
- ⇒ Press  (Play, Yes).
- ☺ *The device specific MAC address will be displayed.*
- ⇒ Press  (Play, Yes).
- ☺ *The device specific MAC address will be saved internally.*



*RESULT:* You have configured the MAC address of the IR44CF II.

### 5.2.3 Troubleshooting software update



*TIP:* If the IR44CF II should not be rebooted automatically after the software update:

- ⇒ Disconnect the power supply of the IR44CF II for a short time.

☺ *The IR44CF II starts with the new software version.*



*TIP:* If the IR44CF II fails to work after a software update it is possible to reset the IR44CF II to its initial software which is guaranteed to work properly with your IR44CF II, but is functionally limited (basic software version).

See also “IR44CF II Repair and Maintenance Manual”, chapter “Troubleshooting Software”.