lemon

®

digital insight.

Lemon 020-T

Lemon 030-T

Manual

Digital Terrestrial Receiver

Lemon 020-T
Lemon 030-T

DVB

®

Digital **V**ideo
Broadcasting

Table of Contents

1. Safety Precautions

This set-top box has been manufactured in accordance with international safety standards. For your own safety, you should read the notes on safety precautions carefully, and take note of them, before operating your new receiver.

For your own safety, please be sure to follow these safety precautions:

Mains power supply: Connect the unit only to a mains power supply that has the following characteristics: 90-260 V AC, 50-60 Hz

Connection to the TV set and video recorder: Here, too, the receiver must be disconnected from the mains power supply before using a Scart cable to establish connections to the TV set and video recorder.

Optimum location: Set up your digital receiver indoors, in an area where it is protected from lightning, rain water and direct sunshine.Ensure a minimum distance of 5 cm around the apparatus for sufficient ventilation. Ensure that the ventilation is not impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc…
Do not place naked flame sources, such as lighted candles on the apparatus. Do not expose the apparatus to dripping or splashing. Do not place objects filled with liquids, such as vases on the apparatus.

Do not open the unit: Never open the casing, as you are in danger of electrocution!

Protect from humidity: Ensure that no humidity, dampness or liquid can get into the unit. You should therefore also not position any liquids near the receiver. Do not use any liquid detergents, as these may damage the unit, and may subject you to high-voltage shock.

Prevent intrusion of foreign matter: The receiver is fitted with small ventilation slits on the top and along the sides to assist in circulating air. Small objects could fall into these slits, so please do not put any objects on top of the receiver.

Ensure adequate ventilation: Never cover the ventilation slits on the unit casing. When in operation, the digital receiver should be placed on a straight and solid base. It should not be placed in direct sunshine nor too close to a heater or radiator. Ensure there is sufficient free space around the unit for free air circulation.Use the apparatus only in moderate climates (not in tropical climates).

Protection from lightning: In case of thunderstorms, switch off the receiver, disconnect from the main power supply, and disconnect the antenna cable from the unit. This will prevent your appliances being damaged when there is a thunderstorm in your area.

Use only original parts and accessories: Use only original parts, or parts recommended by a specialist retailer, as other parts may cause damage to the appliance, or bear the risk of personal injury. Non-observance of this warning cancels the unit guarantee. Any repairs should only be carried out by qualified specialist personnel. Take attention to the environmental aspects of battery disposal.

Disconnecting power during extended absence: If the appliance is to be unattended for an extended period of time, e.g. when you go on holidays, you should disconnect it completely from the mains power supply.

Retain original packaging material: Please retain the original packaging, should it be necessary at some stage to return the unit.

The manufacturer undertakes no responsibility for damage or injury caused by non-observance of these safety precautions, or by inappropriate handling of the appliance.

2. Control elements and connections

View of the front panel

Lemon 020-T

Lemon 030-T
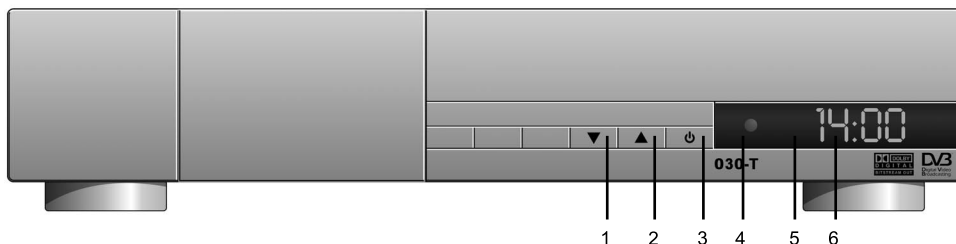
Control elements on the front panel

1. **Programme down key**
    Decreases the programme counter
2. **Programme up key**
    Increases the programme counter
3. **On/Off switch**
    Switches the receiver on or off
4. **On/Off LED**
    Indicates whether the receiver is on or off
5. **Infra-red sensor (Remote Control)**
    Receives signals from the remote control unit
6. **Display**
    Shows programme counter or time

View of the rear panel

Lemon 020-T

L
R

DIGITAL AUDIO
COAXIAL

VIDEO
OUTPUT

AC 90-260V ∼ 50-60 Hz

ELEKTROSCHOCK-GEFAHR !
NICHT OFFNEN !
ELECTRICAL SHOCK HAZARD !
DO NOT OPEN !

AUDIO

VCR

DATA INTERFACE

TV

DC OUT 5V
35mA max.

RF OUT   ANTENNA IN

7   3 9 8   1   4   2   6   5

Lemon 030-T

VCR

10.5V-14V DC
2 A max. (In)

TV

VIDEO
OUTPUT

L

AUDIO
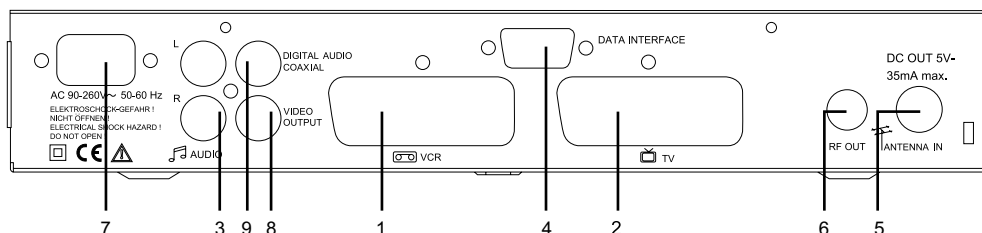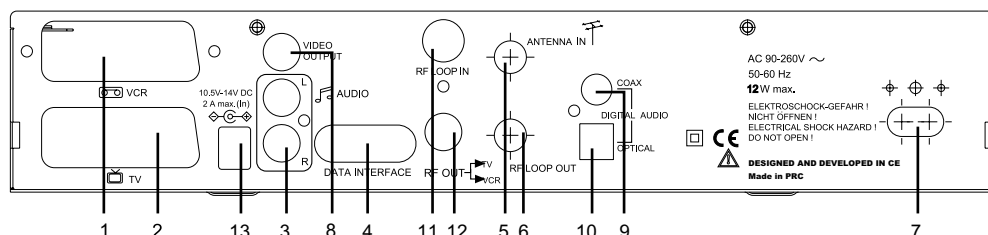
R

DATA INTERFACE

RF OUT

RF LOOP IN

ANTENNA IN

TV
VCR

RF LOOP OUT

COAX

DIGITAL AUDIO

OPTICAL

AC 90-260V ∼
50-60 Hz
12 W max.

ELEKTROSCHOCK-GEFAHR !
NICHT OFFNEN !
ELECTRICAL SHOCK HAZARD !
DO NOT OPEN !

DESIGNED AND DEVELOPED IN CE
Made in PRC

1   2   13   3   8   4   11 12   5 6   10   9   7

Connections on the rear panel

1. **VCR Scart**
   Facility for connecting a video recorder
2. **TV Scart**
   For connection to TV set
3. **Audio outputs (L/R)**
   Cinch analogue connections for connecting to a Hi-Fi system
4. **RS-232 Data Interface**
   Serial interface for updates, etc.
5. **ANTENNA IN**
   Terrestrial antenna input
6. **RF LOOP OUT**
   Output of the terrestrial antenna signal -UHF channel for connection to the TV or to the RF LOOP IN (recommended)
7. **Mains power connection**
   For connecting to domestic power supply (cable supplied)
8. **Video connector**
9. **Digital audio output connector "coax"**
10. **Digital optical Audio output**
    For connection to an HiFi system
11. **RF LOOP IN**
    Input for a terrestrial antenna signal or connection to RF LOOP out (recommended)
12. **RF OUT**
    Output of the terrestrial antenna signal -UHF channel
13. **External power supply connection**
    For connecting to an external 10,5 – 14 V DC, 1.0 A max power supply

3. Remote Control

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digital insight.

Function keys on the remote control unit

The keys on the remote control can be divided into groups:

-Function keys that directly control a specific function
 (these keys have a double functionality according to the situation)
- Navigation keys
- Numeric keys 0-9

Mute
Muting the loudspeakers (on/off)

Sleep Timer
Calls up the sleep timer switch

Teletext
This calls up the built-in teletext
decoder (only operational on TV
programmes providing teletext
or videotext)

Numeric keys 0-9

TV/red function key
Switch to TV reception, special
function in on-screen displays

Navigation (direction) keys
Used for navigating in the on-
screen displays (right, left, up,
down)

OK / Menu
Confirming a selection, calling
up the Main Menu

**Last programme/yellow
function key**
Direct jump back to last
programme viewed, special
function in on-screen displays

On/Off (Standby)
Switching the receiver on and off

Radio
Switch to radio reception

Audio - Subtitles A/B
Selecting audio channels
(language 1, language 2, etc.) or
activates the subtitles

EPG/green function key
Calling up the electronic
programme guide, special function
in on-screen displays

Question mark/blue function key
Details about the active channel
1x press: programme information
2x press: detailed program
information
3x press: technical parameters

Exit
Quick exit from a menu page

Batteries:

Batteries are required to operate the remote control unit (supplied with unit) To insert the batteries, open
the battery compartment cover on the rear of the remote control unit, insert the batteries (AA size, 2 x 1.5
Volt), and replace the compartment cover.

Spent batteries should not be discarded in your domestic refuse. In most countries, you are legally obliged
to ensure spent batteries are properly recycled. They can be disposed of either in special bins provided
in your community, or may be returned to any retailer who sells batteries.

4. Connecting and operating the receiver

4.1 Connections

Your digital receiver provides a multitude of possible connections to other appliances. Here we list the most important options available.

4.1.1 Connection to the terrestrial antenna

The digital receiver is connected directly to a terrestrial antenna on the ANTENNA IN connector (see page 4, connections on the rear panel item 8). , by means of a coaxial cable. This connection must be done while the receiver is switched off.

4.1.2 Connection to the TV set

Digital receivers and TV sets are usually connected by means of a Scart cable. Simply connect the two ends of the cable with the main socket on the TV set and with the TV socket on the receiver, respectively. The Scart connection ensures that audio and video signals are transmitted to the TV set in optimum quality.

If your TV set is not equipped with a Scart socket: the receiver is also optionally obtainable fitted with a built-in HF modulator. In this case, use an antenna (coaxial) cable to connect the RF output of the receiver (socket "RF OUT") with the antenna input socket of the TV set. In this case, it is also necessary to connect together the RF LOOP OUT connector to the RF LOOP IN connector using a coaxial cable.

 The digital TV programme currently being received is converted in the receiver to a UHF channel (channel selectable via the installation menu), and is transmitted to the TV set via the antenna cable. The antenna cable previously connected to the TV set should now be connected to the ANTENNA input socket of the receiver (socket "ANTENNA IN"). In this way, the terrestrial antenna connection is looped through the receiver. If you also have a video recorder connected to the terrestrial antenna cable, this terrestrial antenna connection should run first from the receiver to the video recorder, and only from there to the TV set. As in this case the audio and video signals have to be modulated for high-frequency transmission on a UHF channel, signal quality is a little worse than when connection is made via a Scart cable.

4.1.3 Connection to a video recorder

Just as the TV set, the video recorder is connected to the receiver via a Scart connection. Use the "VCR" socket for this purpose.

4.1.4 Connection to a hi-fi system

The audio quality of digital TV and radio programmes can be enjoyed even more when reproduced through a hi-fi system. To do this, use a RCA cinch stereo cable to connect the sockets marked "Audio L/R" on the receiver to one of the inputs of your hi-fi system marked either "Line", "Aux", "Spare" or "Extra".

The receiver is also equipped with optical and electrical digital audio outputs, "Optical Digital Output" and "Video/electrical digital audio" connectors. These can be used in order to connect the receiver to hi-fi system supporting digital audio inputs.

4.2 On/Off switch

Press the On/Off key (Standby), on the remote control. The receiver is now ready for operation. Now switch on your TV set, if it is not already switched on, and set it to an "AV" programme slot ("EXT","AV", "External Source", or similar).

When you have completed connecting the digital receiver to the terrestrial antenna and the TV set, as well as to the video recorder and hi-fi system where applicable, you can now proceed to switch it on for the first time. In order to do this, press the On/Off (Standby) key on the remote control. The receiver will now be switched on. The receiver is now ready for operation.

To switch the unit off, press the Standby key.

4.3 Programme selection

4.3.1 Using the directional Up/Down keys

You can move up or down the programme list one slot at a time by using the two Up/Down keys on the remote control unit.
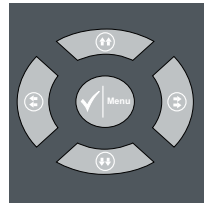
4.3.2 Using the numeric keys

If you want to select a programme directly, and you know its programme number, then it is easiest to enter the programme by means of the numeric keys. As the receiver is equipped to store several hundred programme, the programme number always has three digits. However, you can also enter a number consisting of only one, two digits. In this case, press the „OK/Menu" key when you have entered the number, in order to speed up the selection process.

4.3.3 Using the programme list

Press either the "TV" or "Radio" keys, depending on which programme category you wish to choose. A programme list will now be displayed on-screen.
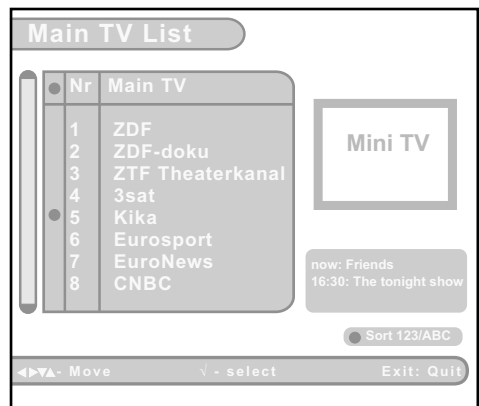
Use the up/down directional keys to navigate through this list one programme slot at a time, backward or forward.

Use the left/right directional keys to skip through the list one page at a time, forward or backward. Press the "OK/Menu" key to view the selected programme.

The now/next program guide is shown under the Mini TV when available.

The list can be dynamically sorted using the yellow function of the remote (toggle between A..Z and 1..9 sorting).

Main TV List

Nr	Main TV
1	ZDF
2	ZDF-doku
3	ZTF Theaterkanal
4	3sat
5	Kika
6	Eurosport
7	EuroNews
8	CNBC

Mini TV

now: Friends
16:30: The tonight show

Sort 123/ABC

◄►▼▲ - Move   √ - select   Exit: Quit

4.4 Volume control/ Mute switch

The sound volume can be adjusted either using the remote control of your TV set, or the remote control of your receiver (in the latter case, use the left/right directional keys).

Use the "Mute" key to switch off the sound temporarily. Press the key again to return to the same sound level as set before.
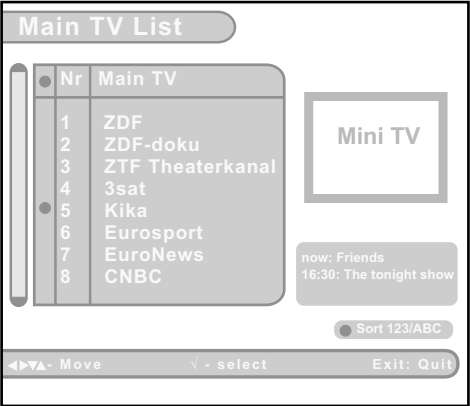
4.5 TV/ Radio operation

The DVB standard allows you to enjoy both TV and radio programmes in digital quality. For ease of use these are listed separately in the receiver in the programme lists "Radio" and "TV".

Press the "Radio" key to switch to radio reception. A programme list showing available radio programmes will be displayed on screen.

Press the "TV" key to return to viewing TV programmes. A programme list showing available TV programmes will be displayed on screen.

Main TV List

Nr	Main TV
1	ZDF
2	ZDF-doku
3	ZTF Theaterkanal
4	3sat
5	Kika
6	Eurosport
7	EuroNews
8	CNBC

Mini TV

now: Friends
16:30: The tonight show

● Sort 123/ABC

◄►▼▲ - Move   √ - select   Exit: Quit

4.6 Switching between various audio channels (Soundtrack) and subtitling activation

Some TV broadcasters provide several audio channels or subtitles information, carrying commentary in various European languages, to accompany the TV image. To use this facility, press the "Audio - Subtitles A/B" key.

A screen will be displayed with the "Soundtrack" and "Subtitles" lists.

Choose the desired Audio Language and subtitle and press "OK/Menu" to select.

Select Language

Audio	Subtitle
Soundtrack 1	None

● Switch List
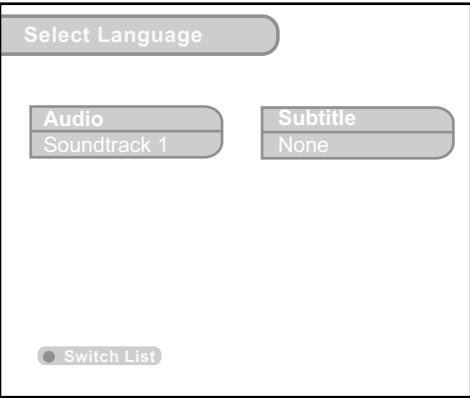
4.6.1 Switching between various audio channels (Soundtracks)

Select the "Soundtrack" list after pressing the
"Audio - Subtitles A/B" key. Use the Up/Down
directional keys to select a specific audio channel,
and confirm by pressing the "OK/Menu" key.

Press "Exit" to exit this menu.

Unfortunately only very few TV programmes provide
additional audio channels, most are broadcasting a
stereo signal in one language only.

4.6.2 Activate/Deactivate a subtitle

Select the "Subtitles" list after pressing the
"Audio - Subtitles A/B" key. Use the Up/Down
directional keys to select a specific subtitling
language, and confirm by pressing the
"OK/Menu" key.

Press "Exit" to exit this menu.

To deactivate a subtitling, choose the option "None".

Unfortunately only very few TV programmes provide subtitling, most are broadcasting without any subtitling.

Select Language

Audio	Subtitle
Soundtrack 1	None

● Switch List
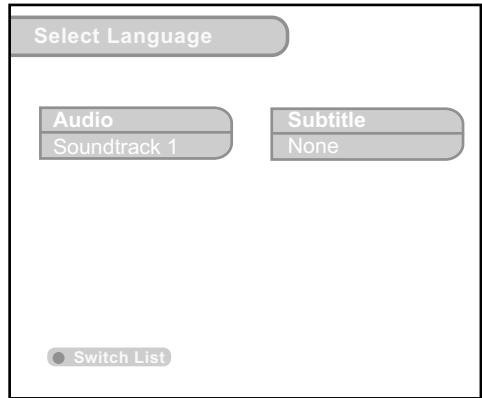
4.7 Zapping

Various options exist to facilitate quick switching between programmes:

a) Fast zapping using the directional keys Up/Down:
Press the directional Up key to select the next higher programme in the programme list, or the directional key Down to select the next lower programme in the list.

b) Direct selection using the numeric keys:
As soon as a numeric key has been pressed, a small display field appears on screen, which will display the selected channel number. A channel number may consist of up to three digits. After a digit has been entered, the receiver will wait to see whether any more digits are going to be entered. If no additional digits are entered, the receiver will switch to the programme slot selected. This waiting period can be avoided by pressing the "OK/Menu" key immediately after the last digit has been entered.

Example 1: You wish to select channel 1
Press "1" on the remote control
The receiver will wait for 1 second to find out whether any more digits are to be entered
The receiver will then switch to channel 1

Example 2: You wish to select channel 12
Enter "1" on the remote control, followed by "2" within no more than 1 second of the first digit
The receiver will wait for 1 second to find out whether any more digits are to be entered
The receiver will then switch to channel 12.

4.8 Free-to-air and scrambled programmes

Whenever you switch to a different channel, programme information will be displayed on the screen for a few seconds. (Go to the Main Menu and the heading "Installation/Setup" then choose "Display settings" and the item "Popup time" allows to setup for how long this information should be displayed.)

Where the channel provides EPG (TV guide) information, you will also see on screen the name of the current as well as the following programme. A bar graph will indicate what portion of the current programme has already elapsed.
If there is no reception, in the top left-hand corner of the screen "No Signal" is displayed.

Some digital TV and radio programmes are broadcast in encrypted, or scrambled form. Where a programme cannot be viewed either because the signal is encrypted, the comment "scrambled" will be displayed on screen.

You can get to the same on-screen menu by pressing the "?" key. Pressing this key again (second and third press) will display more detailed information regarding the programme currently selected. Press "Exit" to close this window again.
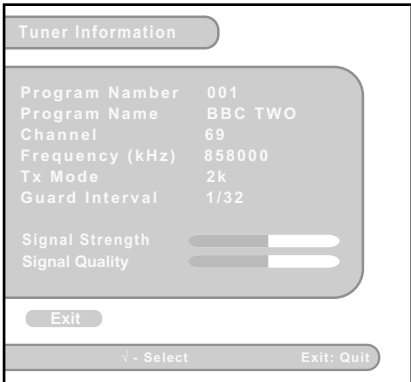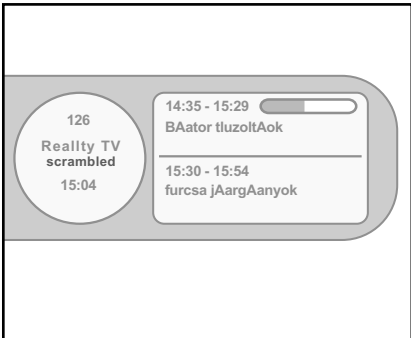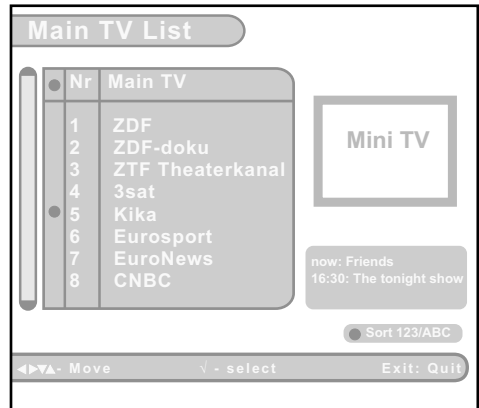
4.9 Programme lists

In order to help you find your way around the several hundred TV and radio programmes available, the programmes found during a Channel Search are stored in memory, and organized as Programme Lists, with separate lists for TV and radio programmes. In order to view these lists, press either the "TV" or "Radio" keys on the remote control, as appropriate. The relevant list will then be displayed on screen.

Use the directional up/down keys to move from one programme to the next in these lists, then press "OK/
Menu" to switch to the selected channel.

You may use the directional left/right keys to move forward or backward one page at a time in the programme list. Press the "OK/Menu" key to view the selected programme.

Main TV List

Nr	Main TV
1	ZDF
2	ZDF-doku
3	ZTF Theaterkanal
4	3sat
5	Kika
6	Eurosport
7	EuroNews
8	CNBC

Mini TV

now: Friends
16:30: The tonight show

● Sort 123/ABC

◄►▼▲- Move   √ - select   Exit: Quit

4.10 Teletext/Videotext

The teletext or videotext feature familiar from analogue TV programmes is also broadcast on many digital TV programmes. The digital receiver is equipped to decode the teletext/video text signal internally, and to display it on the TV screen.

Press the "Teletext" key to display the videotext or teletext of the programme currently being viewed.

The teletext/video text will be displayed as an overlay on the screen over the current TV image.

In order to view a specific page of teletext/video text, use the numeric keys to enter the three-digit page number. The receiver is capable of storing a large number of videotext pages in a temporary memory, which reduces waiting times when calling up a new page. Enter "100" at any time to return to the home page of the teletext/video text pages of the TV programme being viewed.

You may use the directional keys Up/Down to page quickly through the complete teletext/video text section of a particular TV programme. The benefit of the temporary page storage function is of particular benefit when using this function for fast page scanning.
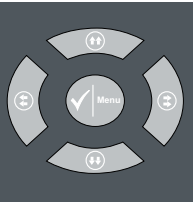
4.11 Calling up the Main Menu

The receiver can now be individually configured, using the on-screen menu display.

Press the "OK/Menu" key on the remote control. The Main Menu will be displayed.

Now use the directional keys to select the line "Installation/Setup", and confirm by pressing the "OK/Menu" key.

In the sub-menu "Installation/Setup" select the entry "Display Settings", and confirm by pressing the "OK/Menu" key.

Main Menu   17:00 9-4-02

Installation / Setup
Sleep Timer
Parental Lock
Channel list Manager
TV Guige
Default Settings
Exit

5. Graphical User Interface (Menus)

The various on-screen displays available are described in detail in this chapter. The actual on-screen displays generated by your receiver may differ slightly from those shown here, as continuous updates of the software may alter the appearance or even the structure of the displays.

Navigation within the on-screen displays is effected by means of the four directional keys, by means of the "OK/Menu" key, which is used to confirm a selection, as well as in some cases by means of the colored function keys. In each case you can exit from a page by pressing the "Exit" key.

Press the "OK/Menu" key to call up the Main Menu. From here you can select the various sub-menus:

5.1 Installation/Setup

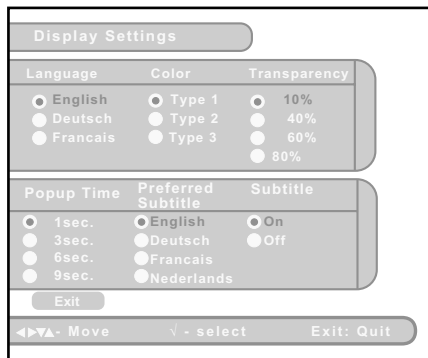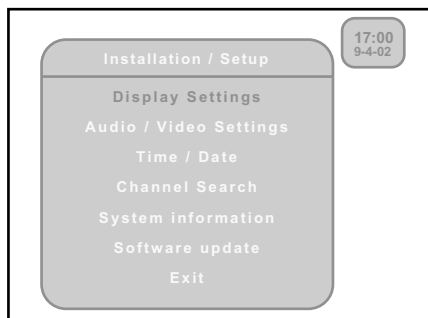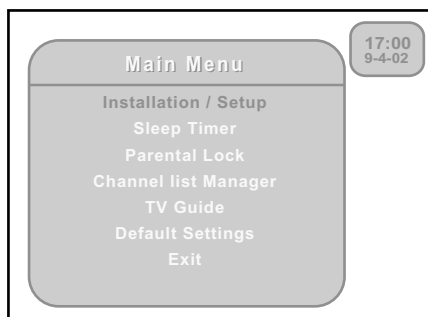This is the place to set the basic parameters of your receiver.

5.1.1 Display Settings

Display Language: The on-screen display may be shown in a variety of languages. Use the directional keys to select the desired language, then confirm by pressing the "OK/Menu" key.

Display Colour: If you would prefer to view the display in a different colour, use the directional keys to select the desired colour (Type 1, 2 or 3), and confirm by pressing the "OK/Menu" key.

Display Transparency: the transparency, too, can be adjusted, i.e. the degree to which the TV image is visible through the overlaid on-screen text display. Use the directional keys to select the degree of transparency, from 40% to 100%, then confirm by pressing the "OK/Menu" key.

Message Time: When switching between programmes, for instance, a message is briefly displayed with programme information. The duration of this message being displayed can be set, from 1 to 9 seconds. Use the directional keys to select the desired message time, then confirm by pressing the "OK/Menu" key.

17:00 9-4-02

Main Menu

Installation / Setup
Sleep Timer
Parental Lock
Channel list Manager
TV Guide
Default Settings
Exit

17:00 9-4-02

Installation / Setup

Display Settings
Audio / Video Settings
Time / Date
Channel Search
System information
Software update
Exit

Display Settings

Language	Color	Transparency
● English	● Type 1	● 10%
● Deutsch	● Type 2	● 40%
● Francais	● Type 3	● 60%
		● 80%

Popup Time	Preferred Subtitle	Subtitle
● 1sec.	● English	● On
● 3sec.	● Deutsch	● Off
● 6sec.	● Francais	
● 9sec.	● Nederlands	

Exit

◄►▼▲ - Move   √ - select   Exit: Quit

5.1.2 Audio/Video Settings

Scart connectors: Depending on the type of appliance connected, you can determine the type of signal to be fed to the Scart connectors marked "TV". Use the directional keys to select from: CVBS (Composite/FBAS) or RGB (only for TV Scart connector).

Screen size (aspect ratio): Use the directional keys to select the appropriate picture format for your TV set (4:3 or 16:9), then confirm by pressing the "OK/Menu" key.

Video/Audio out: The rear panel of the receiver has got a Cinch connector which can be used either to output a Video signal or a digital electrical audio output signal. Activate the wanted output (see connector 12 page 4).

Digital Audio out: The receiver is also equipped with two digital audio outputs (electrical and optical). Choose one format, PCM (normal stereo) or Dolby digital (AC3). When Dolby digital is chosen, the receiver will automatically detect if AC3 sound is available and will activate it on the digital audio output, if no AC3 is available the digital Audio outputs will have a classic stereo PCM signal.

RF Modulator (optional): the receiver is also available equipped with a built-in RF modulator, which provides the facility to output the currently selected TV programme via a UHF channel. Select the audio frequency (5,5 MHz for PAL B/C/G/H, 6,0 MHz for PAL I as well as 6,5 MHz for PAL D/K/L). Then use the numeric keys to enter the UHF channel on which the TV image is to be transmitted.

Test image (optional): In order to find the optimum setting of the receiving channel at the TV set, a test image can be generated.

Preferred Audio
Select in the lists the preferred Audio language, this will be automatically activated if available after a zapping.

5.1.3 Time/Date

General Settings: If the "Automatic Time Setup" (bottom right) is set to "On", the receiver will receive the digital clock time and date as broadcast by the digital TV programme providers, and will apply these. The DVB standard will broadcast this in the GMT time zone. In order to display local time correctly, it may be necessary to set a time offset, indicating the difference between local time and GMT (e.g. in Germany daylight savings time in summer is + 2h, winter time s + 1h).

Clock mode: The time can be displayed in 12 or 24 hour format.

Automatic Time Setup: The receiver can either receive the current time via the digital TV programmes (On), or it can calculate current time independently (Off). In this case, the current time must be selected under "General Settings" on this page use the "OK/Menu" key), then the time must be entered manually by using the directional keys.

5.1.4 Channel Search

New digital TV and radio programmes are added sometimes, or existing programmes change their frequency. If you wish to receive these programmes, you must allocate them to specific programme slots in the programme list, and store them in memory. The Channel search functions are designed to assist you in this activity, and there are various types of programme search available.

Several procedures can be followed in order to initiate a programme search. Press the "OK/Menu" key to call up the Main Menu, then using the directional keys select the sub-menu "Installation Setup", followed by "Channel Search", confirming your selection in each case by pressing the "OK/Menu" key. Here you can decide between the two options available, as described below.

5.1.4.1 Auto Tune

The Auto Tune scan function can be used to allow the receiver to search for new programmes. In this case, the entire frequency range is scanned.
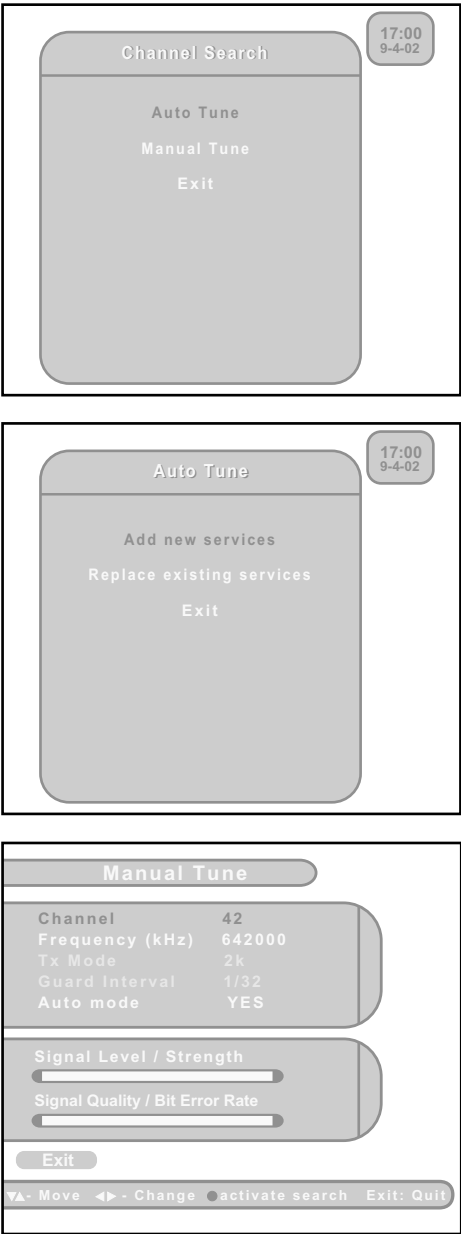
Then, it is necessary to choose between "Add new services" or "Replace existing services" options. The "Add new services" deletes all the channels which were in the memory and scan. The option "Replace existing services" scans and add the new channels to the existing list in the receiver.

5.1.4.2 Manual Tune

In case specific programmes cannot be found by means of the automatic search, e.g. because the programme broadcasting format does not comply with DVB standards, you may employ a manual programme search function.

In this on-screen display, you will have to specifically input the broadcast channel/frequency, TX mode and Guard interval if available (Auto mode field in mode No). If the TX mode and guard interval are not known, it is possible to setup Auto mode to Yes.

Press the yellow key on the remote control to activate the search.

Channel Search

17:00
9-4-02

Auto Tune

Manual Tune

Exit

Auto Tune

17:00
9-4-02

Add new services

Replace existing services

Exit

Manual Tune

Channel	42
Frequency (kHz)	642000
Tx Mode	2k
Guard Interval	1/32
Auto mode	YES

Signal Level / Strength

Signal Quality / Bit Error Rate

Exit

▼▲- Move ◄► - Change ●activate search Exit: Quit

5.1.5 System information

In the last category of the Installation/Setup display you will find detailed technical information relating to the programme currently being viewed, as well as to the hardware and software of the receiver.

Tuner Information

The technical reception data of the programme currently being received are displayed here:

Program Number: Number of the program in the main list.

Program Name: Name of the program in the lists.

Service Type: Type of the program (TV, Radio or Data Service).
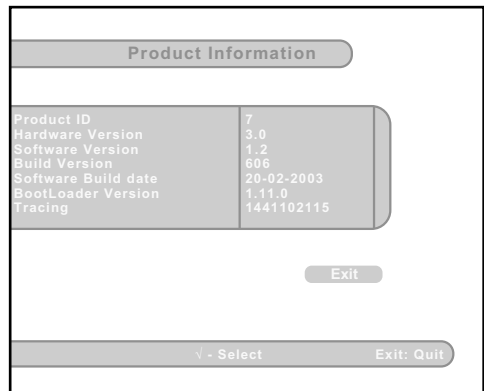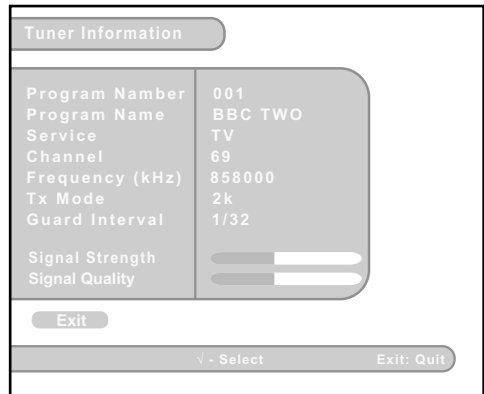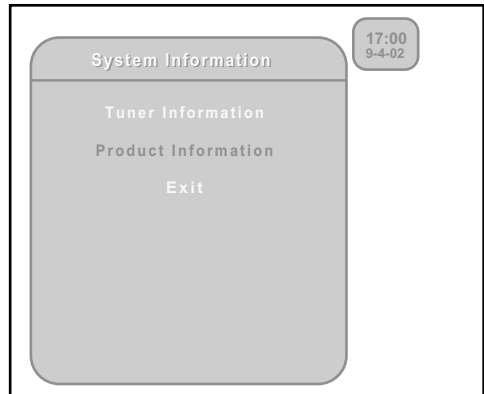
Frequency: Frequency of the channel in kHz.

Tx Mode: Tx value of the channel (2k or 8k).

Guard Interval: The Guard interval value of the channel (1/4, 1/8, 1/16 or 1/32).

Below this, you will see two bar graphs indicating signal strength and signal quality.

Product Information

The sub-display "Product Information" provides you with all data relating to the hardware and software of the receiver. Each unit has its own unique serial number (Product ID). When making service calls it is important to specify the hardware version applicable, as the technician then knows exactly which components, circuit boards, etc. have been used in the unit.

System Information	17:00 9-4-02
Tuner Information	
Product Information	
Exit	

Tuner Information

Program Number	001
Program Name	BBC TWO
Service	TV
Channel	69
Frequency (kHz)	858000
Tx Mode	2k
Guard Interval	1/32
Signal Strength	
Signal Quality	

Exit

√ - Select   Exit: Quit

Product Information

Product ID	7
Hardware Version	3.0
Software Version	1.2
Build Version	606
Software Build date	20-02-2003
BootLoader Version	1.11.0
Tracing	1441102115

Exit

√ - Select   Exit: Quit

5.2 Parental Lock function

Not all TV and radio programmes are suitable for listeners or viewers of all age groups. The receiver therefore provides an active parental control (lock) function, allowing you to block specific menu settings or individual channels by means of a four-digit security code (PIN or Personal Identification Number). It also makes sense to block menu settings if you want to prevent the receiver from being incorrectly programmed by unauthorised persons. The standard functions such as receiving programmes, EPG, Sleep Timer etc., remain fully functional without a PIN having to be entered.

If no PIN code is activated (default setting), all receiver functions and operations can be utilized without any restrictions.
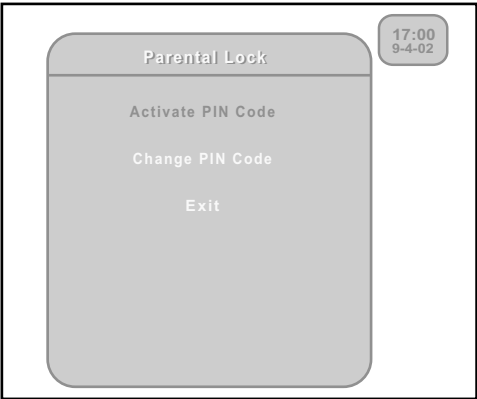
5.2.1 Activating the PIN code

Press the "OK/Menu" key to call up the Main Menu, then select the sub-display "Parental Lock". Now select the line "Activate PIN code", and confirm by pressing the "OK/Menu" key.

You can now enter a four-digit PIN code to be used in future as a parental lock. Press the "OK/Menu" key to confirm this number.

If the receiver accepts this PIN entry, you must reconfirm this by means of the green function key and the "OK/Menu" key respectively. If the number is not accepted, you must repeat the entry of the PIN code. From this point on, all the display (menus) are accessible only when the PIN is entered (see illustration right).
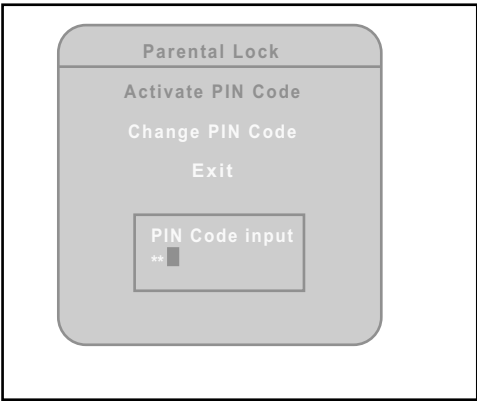
5.2.2 Changing the PIN code

If you wish to change the PIN code, go to the display "Parental lock", and select the line "Change PIN code". You will now have to enter both the previous and the new PIN code.

If the receiver accepts the altered PIN code, you must then confirm this by pressing the green function key, resp. the "OK/Menu" key.
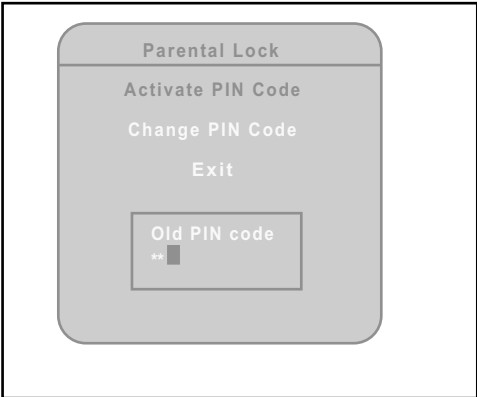
5.2.3 Blocking individual channels

As soon as a PIN code has been activated in the "Parental lock" display, it is automatically possible to also block access to individual programmes. In the display "Parental lock" you will now also see a line "Programme access", which you can use at a later stage to lift the channel restrictions again at a later stage.

The default setting provides unrestricted access to all TV and radio programmes.

How to block individual channels:

Press the "Exit" key to exit from the display "Parental control". You will find yourself in the Main Menu. Use the up/down directional keys to select the entry "Channel list", and confirm by pressing the "OK/Menu" key. As the parental lock function is already active at this stage, you must now enter the PIN code, and confirm by pressing the "OK/Menu" key.

On the following display page you must select the programme list in which you wish to block individual programmes. Use the directional keys to go to the relevant programme in the main list (left), then block access to this programme by pressing the red function key.
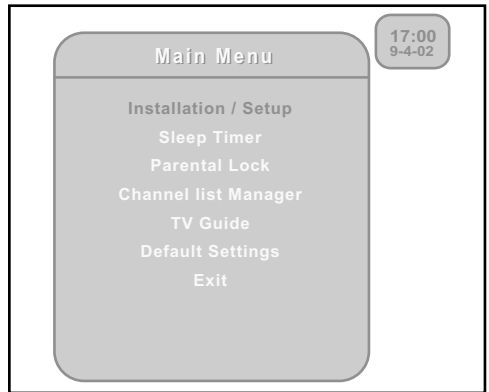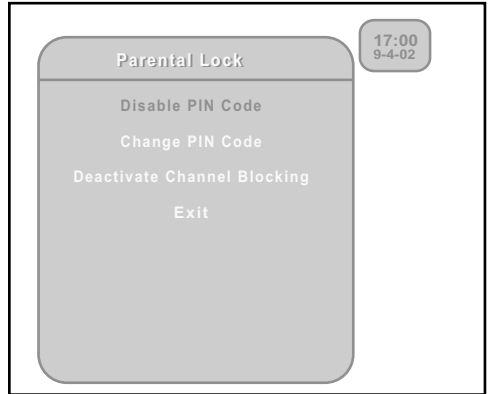
For as long as the parental lock is active, this programme can only be viewed if the PIN is entered immediately after the programme has been selected.

The red function key is also used if you wish to **remove the block on this channel** at a later stage.
General deactivation of channel restrictions:

In order to remove completely the restrictions on individual channels and on-screen displays, go to the display „Parental lock", select the line "Deactivate channel blocking" and enter the PIN code.

General deactivation of parental lock function:

In order to remove completely the parental lock function in any form, go to the display "Parental lock", then select the line "Disable PIN code", enter the PIN code. With immediate effect, no PIN code will be required for any of the functions of the receiver.

Parental Lock   17:00 9-4-02

Disable PIN Code

Change PIN Code

Deactivate Channel Blocking

Exit

Main Menu   17:00 9-4-02

Installation / Setup

Sleep Timer

Parental Lock

Channel list Manager

TV Guide

Default Settings

Exit

Channel List Manager

Nr	Main TV
1	ZDF
2	ZDF-doku
3	ZTF Theaterkanal
4	3sat
5	Kika
6	Eurosport
7	EuroNews
8	CNBC

Lock / Unlock   Sort
Move a channel   Move a block   Exit
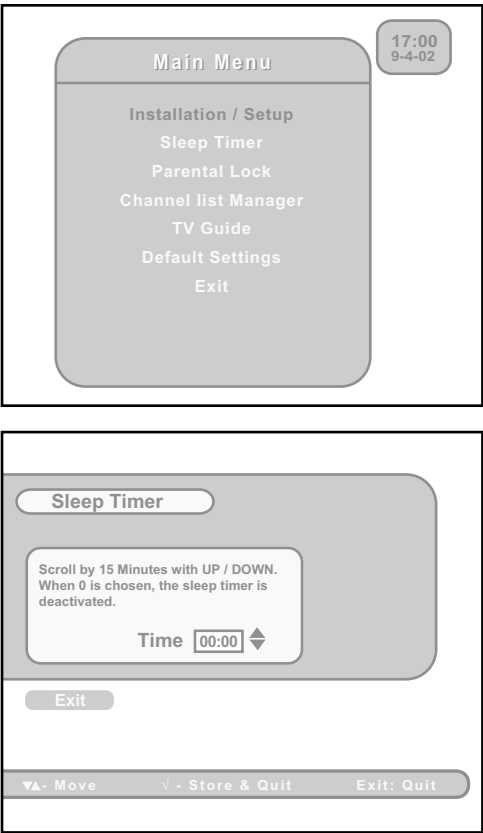
ab- removes station from list

5.3 Sleep-Timer

You can use the Sleep timer to specify a time (e.g. at night) at which the receiver is to switch over into standby mode. This is particularly useful if there is no person available at this time to switch off the receiver manually.

Press the "OK/Menu" key to display the Main Menu.

Use the directional keys to select the entry "Sleep Timer", and confirm by pressing the "OK/Menu" key. The display "Sleep Timer" is now on screen, and you can use the up/down directional keys to change the time, at which the receiver should switch itself off in 15-minute steps.

Press the "OK/Menu" key to confirm your selection. The Sleep Timer is active with immediate effect, and will count backwards the time still remaining to switch off time.

Exit from the "Sleep Timer" display without modifying the value by pressing the "Exit" key.

Main Menu   17:00
                       9-4-02

Installation / Setup
Sleep Timer
Parental Lock
Channel list Manager
TV Guide
Default Settings
Exit

Sleep Timer

Scroll by 15 Minutes with UP / DOWN.
When 0 is chosen, the sleep timer is
deactivated.

Time 00:00 ⬍

Exit

▼▲- Move   √ - Store & Quit   Exit: Quit

5.4 Creating a list of personal favourite programmes

Many viewers prefer to use the huge list of TV and radio programmes found in an automatic channel search in a particular order, or to use the list only selectively.

Your receiver provides the facility of creating up to height separate lists of personal favourite programmes. This means that each member of the family, for instance, can create his own list of personal favourites, sorted according to his or her individual preference.

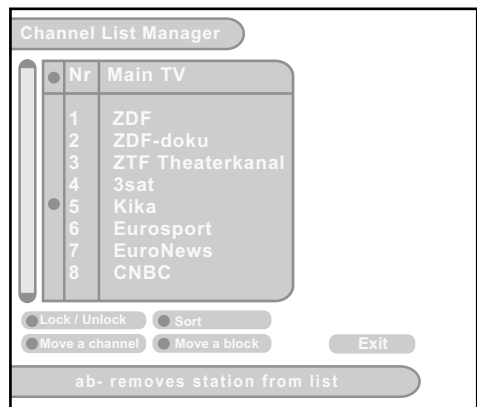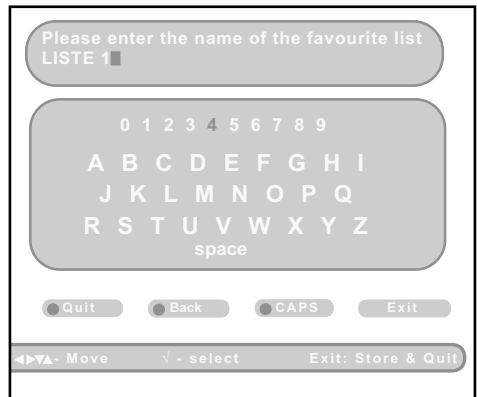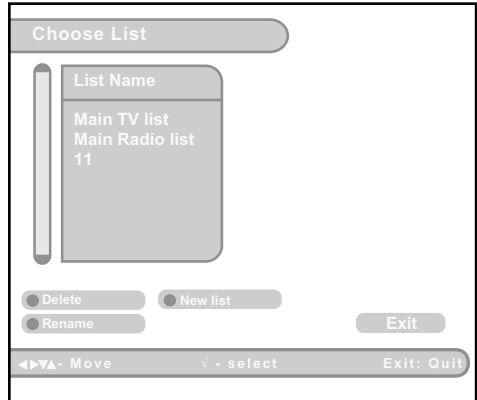**How to create a list of Personal Favourites:**

Press the "OK/Menu" key to display the Main Menu, then select the sub-display "Channel /List Manager", and confirm by pressing the "OK/Menu" key.

The display "Choose list" will display all active programme lists. This includes the three Main Lists, for TV and radio programmes, as well as any lists of favourites that have already been created. The Main List reflects all the programmes found by the most recent automatic channel search.

Use the green function key to create a new list of favourite radio programmes, and the blue function key to create a new list of favourite TV programmes.

A new display window will be shown that includes an on-screen keyboard. Here you can enter a name for the list of favourites to be created, simply use the directional keys to select each letter individually, then confirm each letter by pressing the "OK/Menu" key. You may delete the entry one letter at a time - to correct errors - by pressing the yellow function key, and you can use the blue function key to switch between upper-case and lower-case letters. Press the green function key to return to the display of channel lists.

Here you should select the name of the list just created, and confirm by pressing the "OK/Menu" key. The display "Channel List Manager" will be shown, and you can now copy programmes from the Main List (left) to the selected list of favourites (right). To do this, select a programme in the Main List and confirm by pressing the "OK/Menu" key. The programme will be copied to the list on the right, and will appear in the list of favourites. You can navigate between the Main List and the favourites list by means of the blue key.

Choose List

List Name

Main TV list
Main Radio list
11

◉ Delete   ◉ New list
◉ Rename   Exit
◀▶▼▲- Move   √ - select   Exit: Quit

Please enter the name of the favourite list
LISTE 1█

0 1 2 3 4 5 6 7 8 9
A B C D E F G H I
J K L M N O P Q
R S T U V W X Y Z
space

◉ Quit   ◉ Back   ◉ CAPS   ◉ Exit
◀▶▼▲- Move   √ - select   Exit: Store & Quit

Channel List Manager

Nr	Main TV
1	ZDF
2	ZDF-doku
3	ZTF Theaterkanal
4	3sat
5	Kika
6	Eurosport
7	EuroNews
8	CNBC

◉ Lock / Unlock   ◉ Sort
◉ Move a channel ◉ Move a block   Exit
ab- removes station from list

Press the red function key to lock/unlock a channel (Parental lock)

Press the yellow function key to move a channel , when the function is activated, follow then the instructions appearing in the Information text field at the bottom of the screen. To move a block, press a second time the yellow function key and follow the instructions.

To delete a channel in the favorite list, put the cursor in the favorite list with the blue function key, select the channel to delete with the directional keys and press "Audio-Subtitles A/B".

5.5 Sorting channels

You can re-sort the TV and radio channels found in the course of an automatic channel search with the help of the display „Choose lists" In order to do this, press the "OK/Menu" key to call up the Main Menu, then select the sub-display "Channel List Manager", and confirm by pressing the "OK/Menu" key.

The display "Channel list" reflects all active programme lists. At the top you will find the Main TV and Main Radio lists. These include all the programmes found in the course of an automatic channel search. In addition, there may be up to four lists of favourite programmes, which can reflect individual, personal programme selections (see last page).
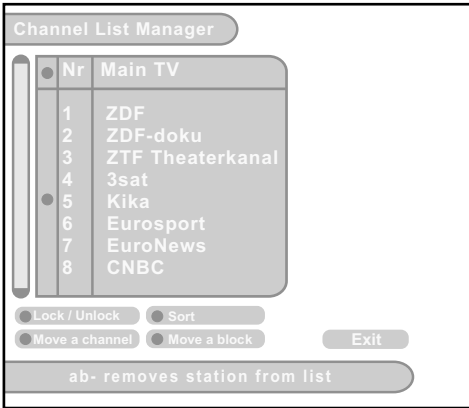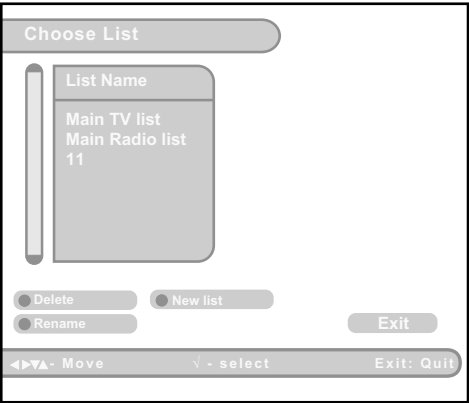
How to sort the channels:

You should now select the list of favourites in which you wish to sort the programmes, and confirm by pressing the "OK/Menu" key.

The page „Channel List Manager" will now be displayed, and you can use the yellow function key in order to move around individual programmes or a block within the list.

After selecting the function Move a channel, follow the instructions in the text field at the bottom of the screen to move a channel or press a second time the yellow key to activate the Move block, then follow also follow the instructions in the text field at the bottom of the screen to move a block .

A list can be sorted (alphabetically, numerically,) using the green key.

You can exit from this display by pressing the "Exit" key.

Choose List

List Name

Main TV list
Main Radio list
11

Delete   New list
Rename   Exit
◀▶▼▲- Move   √ - select   Exit: Quit

Channel List Manager

Nr   Main TV

1   ZDF
2   ZDF-doku
3   ZTF Theaterkanal
4   3sat
5   Kika
6   Eurosport
7   EuroNews
8   CNBC

Lock / Unlock   Sort
Move a channel   Move a block   Exit

ab- removes station from list
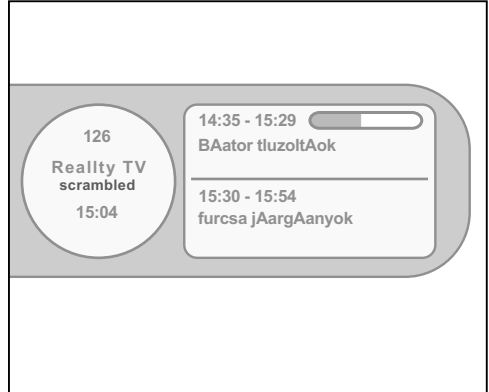
5.6 Electronic Programme Guide (EPG)

Almost all TV and radio broadcasters utilize the DVB SI (Service Information) data stream to provide programme information relating to their programmes. These can be interpreted by the receiver, and displayed on screen in an internally generated electronic programme guide (EPG).

5.6.1 Current Programme (Now/Next)

Each time you switch channels, there is a brief message on screen, displaying the programme name, current time, starting and end time, title and content of the current programme.

The elapsed time bar graph display indicates how much of the programme's total broadcast time has already elapsed. In addition, the starting and end times as well as the title of the next (following) programme is displayed.

You can specify how long this (and any other) information should be displayed on screen (go to "Installation / Setup", then select entry "Display Settings", followed by "Popup Time".

126
Reallty TV
scrambled
15:04

14:35 - 15:29
BAator tluzoltAok

15:30 - 15:54
furcsa jAargAanyok

From this widget, the user can toggle the time using the Left/Right navigation keys and define/cancel a reminder pressing the Timer keys on the remote control. When the reminder will start, the user will have the ability to zap to the programmed reminder event automatically from a popup message. A small clock logo is displayed at the right of the widget when there is a reminder.

5.6.2 Calling up the EPG

You can access the electronic programme guide at any time by pressing the "EPG" key (yellow function key) on the remote control. You can also access the EPG via the Main Menu. Here, you must use the directional keys to select the entry "TV Guide / EPG", then confirm by pressing the "OK/Menu" key.

17:00
9-4-02

Main Menu

Installation / Setup
Sleep Timer
Parental Lock
Channel list Manager
TV Guide
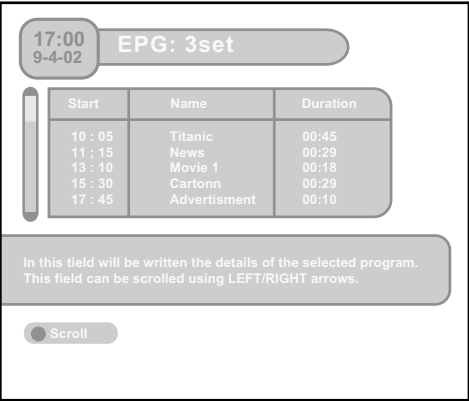**Default Settings**
Exit

Channel Guide

The receiver is able to display the programmes available on the channel currently selected, indicating the current programme as well as all following programmes.

This allows you quickly to obtain an overview of all programmes being broadcast that day, and possibly those of the next day as well.

Use the blue function key on the remote control to switch between the two sections of the display. The upper section shows a list of programmes available, while the lower section provides additional information on the programme currently selected in the upper section.

Start	Name	Duration
10 : 05	Titanic	00:45
11 ; 15	News	00:29
13 : 10	Movie 1	00:18
15 : 30	Cartonn	00:29
17 : 45	Advertisment	00:10

17:00
9-4-02   EPG: 3set

In this tield will be written the details of the selected program. This field can be scrolled using LEFT/RIGHT arrows.

Scroll

Use the up/down directional keys to scroll through each section.

The extent of this overview, i.e. how many programmes are shown in advance, is determined by the programme provider and may differ from one channel to the next.

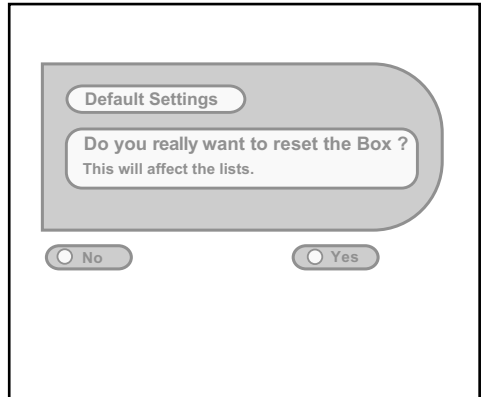## 5.7. Reset (returning to default setting)

A reset function is provided to return the receiver to all the default settings programmed at the factory before delivery to the customer. This deletes all subsequent programming commands, and means that you have to start again with the installation procedure.

A reset always makes sense when a large number of settings have accidentally been made incorrectly or in error.

In order to proceed with a reset, press the "OK/Menu" key to call up the Main Menu. Select the entry "Default Settings", then press the „OK/Menu" key to confirm your selection.

In the next display, you will be given the option of pressing the green function key to confirm the selection, or the red function key to abandon the reset and return to the Main Menu.

Please note: if you press the green function key at this stage in order to start the reset procedure, all individual settings relating, e.g. to antenna configuration, programme lists and sorting of programmes, parental control, etc., will be lost permanently!

Main Menu display showing:
17:00 9-4-02
Main Menu
Installation / Setup
Sleep Timer
Parental Lock
Channel list Manager
TV Guide
Default Settings
Exit

Default Settings dialog:
Do you really want to reset the Box ?
This will affect the lists.
No   Yes

6. Trouble-shooting

Problem	Possible cause	Solution
No box reaction	Mains power cable not connected to mains	Check mains cable and plug
No sound, no picture	antenna may not be correctly connected.	Connect the antenna to the right connector.
Sound OK, no picture	Scart cable defective, or not connected properly at socket Radio operation selected	Check Scart connection Switch back to TV operation
Time not displayed while in standby mode	Time information can not be received from the stream	Switch on receiver, select the main public service programme known to broadcast time signal and leave on for a while
Remote control no longer functioning	Batteries spent Batteries inserted incorrectly	Insert new batteries Insert batteries in correct position
No sound or picture in case of programmes that have worked previously	Antenna has been disconnected Programme has switched to different transponder Programme no longer broadcast	Adjust the antenna connection Initiate new programme search Delete programme from list
Temporary picture and sound problems (square blocks in picture, or picture frozen, gaps in sound)	Antenna too small Heavy rain or snowfall	Set up larger antenna Remove snow from antenna dish
Forgot PIN	Incorrect code entered	Contact your nearest Lemon retailer

If it becomes necessary to return the receiver for repairs, please use the original packaging if possible, and return the receiver complete with all accessories.
Please include a copy of the original sales receipt, as well as a detailed description of the problem. Please ensure full postage or other transport cost is prepaid.

Technical Data

lemon
digital insight.

OSD	
OSD / Languages	OSD with guiding menu for installation and information, 3 color variations available, selectable transparency, 8 favorite lists of 100 channels, Parental Control – Delete and Edit function, Now next EPG, 10 Languages: English, French, German, Dutch, Russian, Polish, Turkish, Spanish, Italian, Finnish.
Front Panel	
Display	4x7 Segments, LED On/Off
Control	IR Sensor, 3 Keys
Front end (RF Input)	
Input Connector	1 x IEC 169-2 Female
Loop-through Output Connector	1 x F-type
Input Frequency Range	47-862 MHz
Input Impedance	75 Ohms
Input Signal Level	-90 to –20 dBm
Bandwidth	7 or 8 MHz
Modulation type	COFDM
FFT mode	2 k, 8 k
Constellation	QPSK, 16 QAM, 64 QAM
Inner Coding Rate	1/4, 2/3, 3/4, 5/6, 7/8
RF Modulator (Optional)	
TV Standard	Pal, G/I/D/K; output channel: 21-69, SECAM and L-SECAM, NTSC M
Frequency Range	47 to 862 MHz
MPEG and A/V Decoding	
Video Decoding	According to MPEG-2 MP@ML - MPEG-1 ISO/IEC 1172-2
Aspect Ratio	4:3, 16:9, automatic adjustment for 16:9 TV sets, Letter box filtering
Video Resolution	720 x 576 (Pal)
Audio Decoding	MPEG 1/2 Audio layer 1 and 2
Sampling Frequencies	16 kHz, 22.0516 kHz, 24 kHz, 32 kHz, 44.1 kHz, 44 kHz, 48 kHz,....88.2 kHz, 96 kHz
A/V & Data In / Out	
TV Scart Output	CVBS, RGB, L & R Audio
VCR Scart Output	CVBS , L & R audio
VCR Scart Input	Input CVBS, L & R audio
Audio	Analogue: L+R Cinch Digital Audio outputs: Electrical and Optical (S/PDIF and AC3 support Dolby digital bitstreamout)
VIdeo	The Cinch used for the electrical digital audio output can be configured as a Video output by software
Serial Port	RS232C, Transfer Rate 115.200 b/s, 9 Pin D-sub, female

CPU & Memory Channels	
Main Processor	32 Bits host CPU @ 81 MHz
Flash Memory	1 Mbyte
SDRAM	8 Mbytes
Channel Scan	Automated for all DVB programs, semi-automated or manual
Channel Memories	999 channels, Last Station Memory
Remote Control	
Operating Frequency / Distance	36 kHz, / 10 Meters max
Code	RC 5
Power Supply	
Input Voltages	External: Input Voltage, +12V/2A max (95-250 Volt – AC – 50-60 Hz with adaptator) Internal: 95-250 Volt – AC – 50-60 Hz Automated management of every configuration (only external, only internal, ….)
Physical Specifications	
Size (WxDxH), Weight	315 x 152.5 x 60.8 mm. Weight: 2.2 Kg Net
Operating & Storage Temp	5° to 40°C / -20°C to +65°C
Special Features	
Software update via Satellite / advanced notice	Yes
Software update via PC / RS232	Yes
Teletext loop-through	Yes, reinsertion in VBI signal
Telextext decoder embedded	Yes (allowing watching the channel in the background)
Program list with PIG	Yes
Sleep Timer	Yes
EPG	Yes

Technical changes possible.

Designed and developed in CE, Made in PRC.

Index (A-Z)