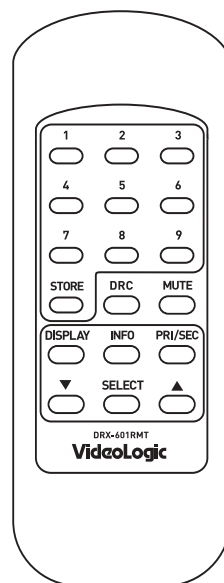
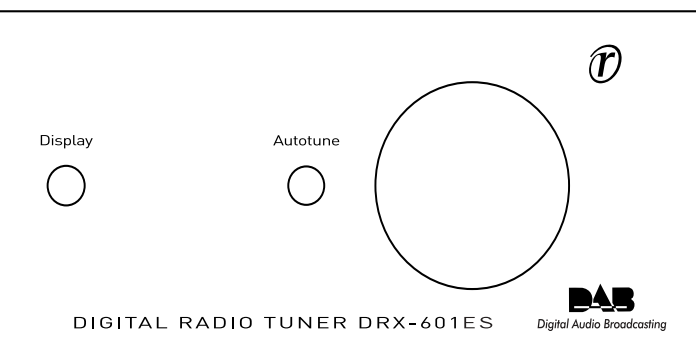
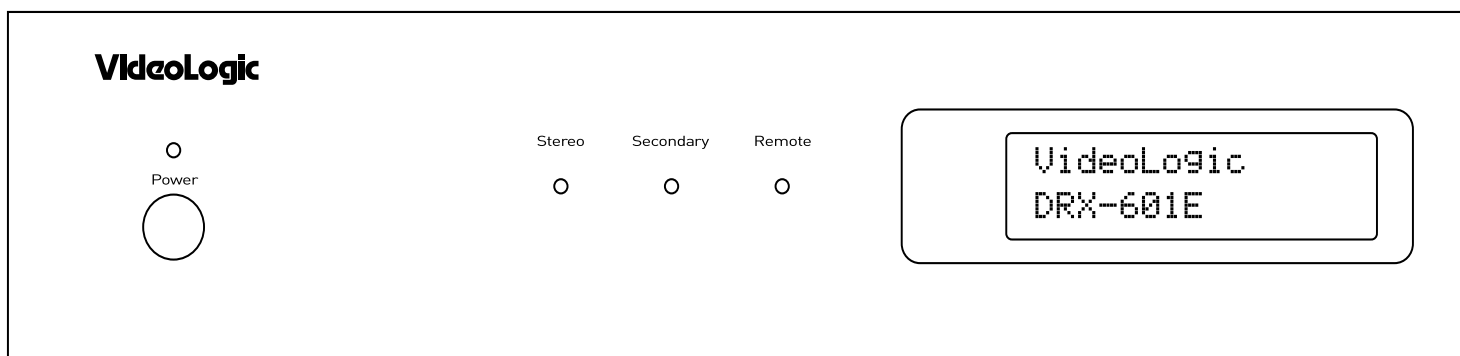


DIGITAL RADIO TUNER DRX-601E/ES



DAB
Digital Audio Broadcasting

digital **radio**
tomorrow's wireless™



VideoLogic

Safety instructions

Keep the unit away from heat sources.

Do not use the unit near water.

Avoid objects or liquids getting into the unit.

Unplug the power lead if the unit will not be used for a long period.

Mains safety

The unit uses a 230-240V AC 50 Hz mains supply.



When replacing the fuse in the supplied moulded mains plug, always refit the integral fuse holder/cover. Always fit a 3 amp fuse either in the plug or adapter, or at the distribution board.

Do not attempt to remove any screws or open the unit.

No user serviceable parts are inside.

For your safety, always obey the warning:

CAUTION - RISK OF ELECTRIC SHOCK - DO NOT OPEN COVER

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Credits

This manual was written by Bruce Murray and illustrated by Philippa Page. It is a product of VideoLogic Systems, Imagination Technologies Ltd., Home Park Estate, Kings Langley, Hertfordshire WD4 8LZ, UK.

Edition 2 November 2001

Contents

Introduction	2
Unpacking	3
Controls and Connectors	4
Setting up	5
Using your DRX-601E/ES	6
Using the remote control	8
Guide to Digital Radio	9
Troubleshooting	10
Technical Specifications	11
Getting Help	12
Accessories	12
Index	13

Introduction

Thank you for choosing the DRX-601E or DRX-601ES Digital Radio Tuner.

This manual provides information on setting up your unit, instructions on using it and details of the accessories and support available. Throughout this manual we refer to the DRX-601E (black) and DRX-601ES (silver) jointly as the DRX-601E/ES unless the information only applies to one of the units.



The DRX-601E/ES is a dedicated high performance digital radio tuner. Also known as Digital Audio Broadcast (DAB), digital radio provides superb quality sound, eliminating the hiss, crackle and fade associated with analogue radio broadcasts.

Broadcast by the BBC since 1995, and by national commercial stations since 1999, DAB provides high-detail, digital-quality sound; supports over 60 national, local and digital-only channels; and enables broadcasters to provide additional text information such as the station name and track information or a scrolling ticker showing sports results, news headlines and financial information.

Designed to complement your hi-fi separates system, the DRX-601E/ES provides a new radio input source to your hi-fi amplifier or works with an existing FM/AM radio tuner. The DRX-601E/ES comes with an LCD display and fully-featured infrared remote control.

The DRX-601E/ES has a range of input and output sockets for maximum connectivity including: dual phono for stereo analogue audio output; coaxial and optical S/PDIF digital output (48 kHz) for direct digital recording to MiniDisc, CD-R or DAT; AM/FM tuner line-level input with auto pass-through to output at power off; optical RDI data output connector and RF F-connector for your aerial.

If you are new to digital radio check out our quick guide on page 9.

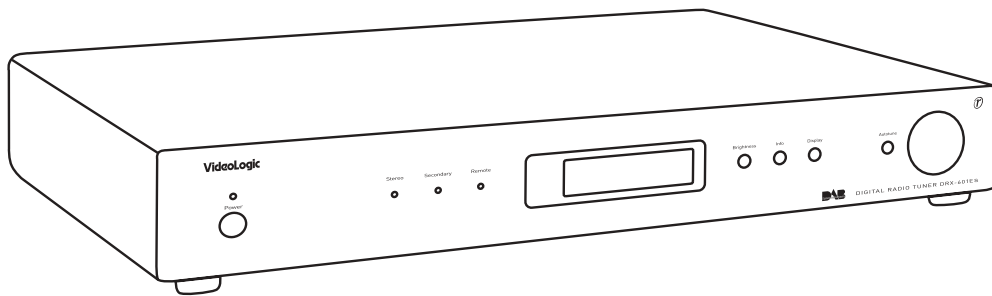
Unpacking

This section lists the contents of your DRX-601E/ES package. After unpacking your box check that you have all of the following items. Contact us if any items are missing or damaged.

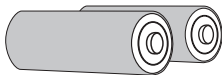
Package contents

1. One DRX-601E or DRX-601ES Digital Radio Tuner unit
2. Two AAA batteries for the remote control handset
3. One DRX-601RMT infrared remote control handset
4. One stereo phono to stereo phono cable
5. One DAB 'T' indoor aerial

1



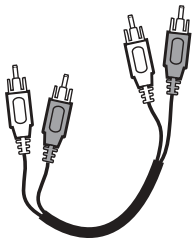
2



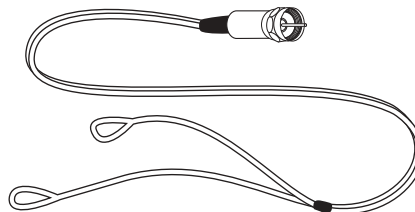
3



4

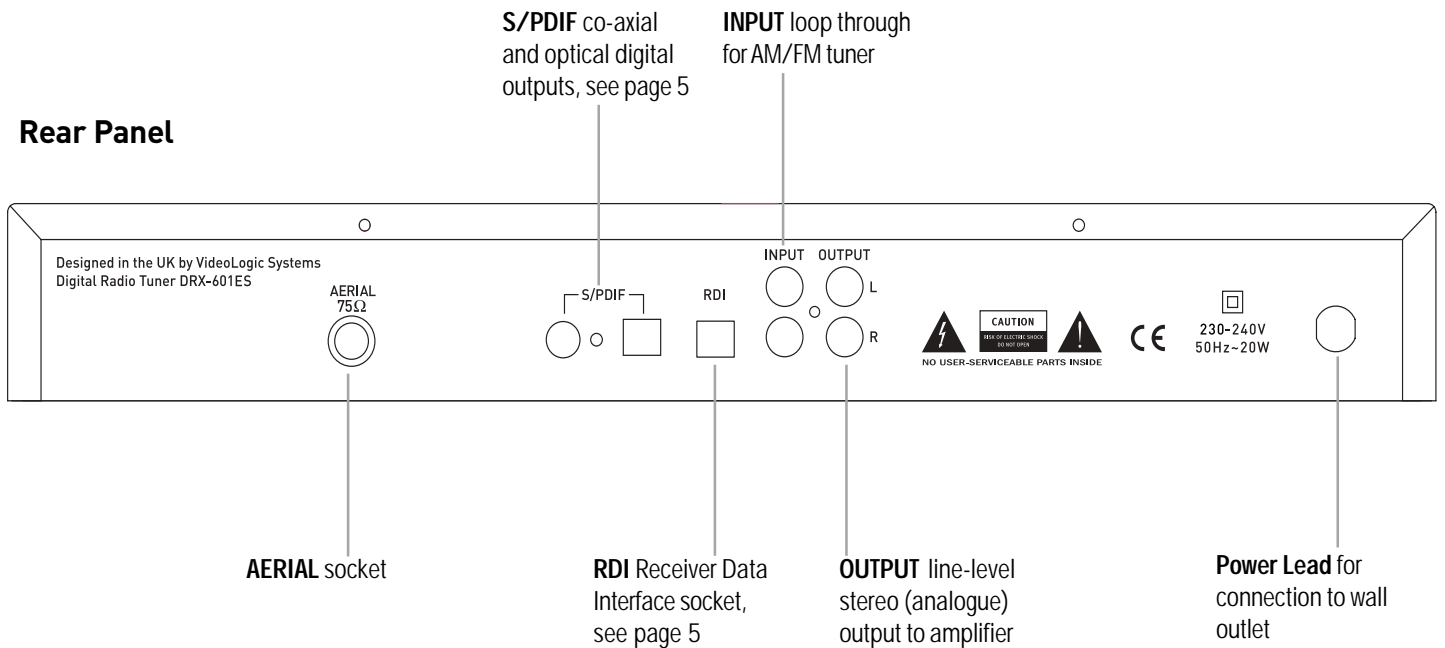
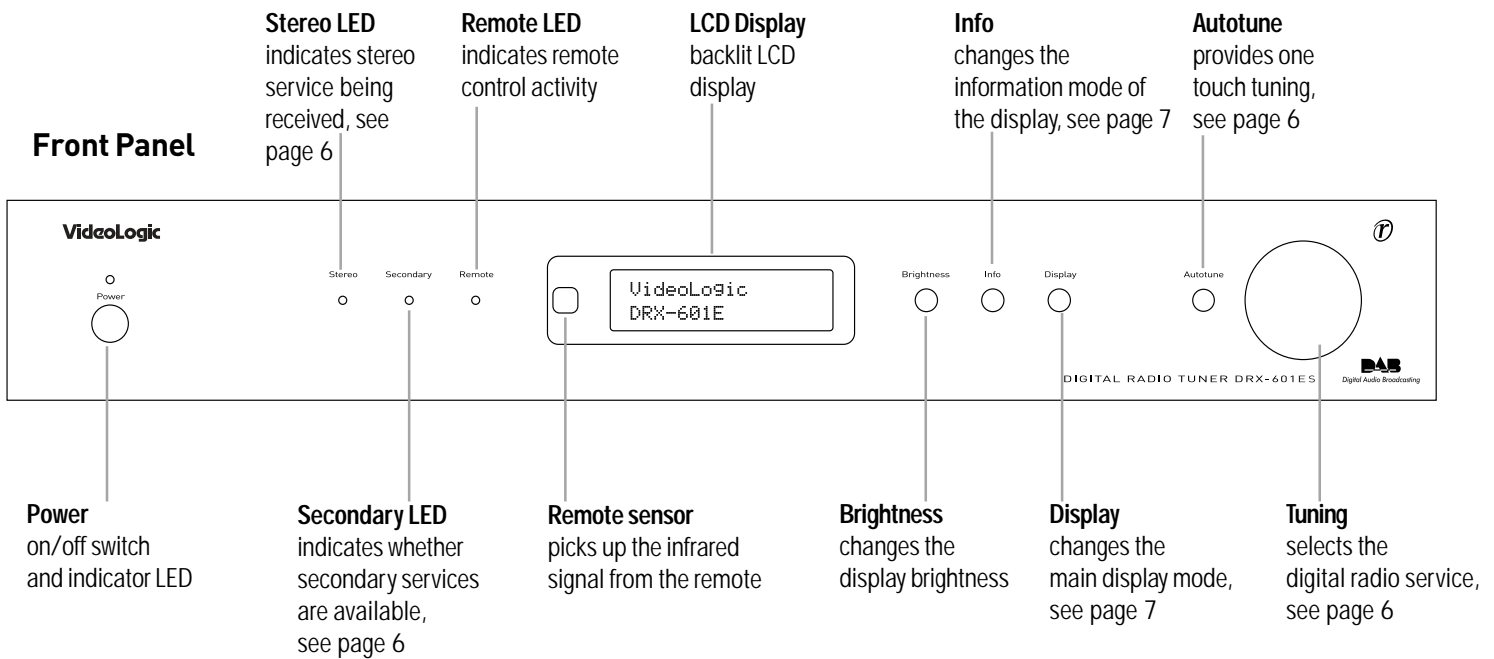


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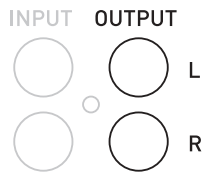
Controls and Connectors

This section provides information on the controls and connectors available on the front and back panels of your DRX-601E/ES. For information on the remote control, see page 8.



Setting up

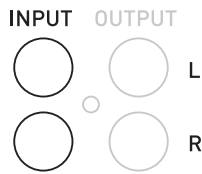
This section provides information on connecting your DRX-601E/ES to your hi-fi and connecting your aerial. Connector sockets are provided on the back panel of your DRX-601E/ES. Before connecting other devices to your DRX-601E/ES, switch both devices off.



Connecting to your amplifier

To get sound from your DRX-601E/ES you need to connect it to your speakers via an amplifier. This may be a stand alone unit or it may be built into your existing hi-fi system or powered speakers.

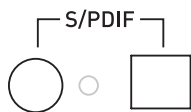
1. Locate the OUTPUT sockets on the back of your DRX-601E/ES and the Tuner-in sockets on the back of your amplifier.
2. Connect the white or black plugs to the white sockets (L) and red plugs to the red (R) sockets using the supplied stereo phono cable.



Connecting to an auxiliary source

If you have an existing radio tuner or other auxiliary device you can connect it through your DRX-601E/ES to reduce connections to your amplifier. The auxiliary device output will then be passed through the analogue outputs to your amplifier when your DRX-601E/ES is switched off.

1. Locate the INPUT sockets on the back of your DRX-601E/ES and the OUT sockets on the back of your auxiliary device.
2. Connect the white or black plugs to the white sockets (L) and red plugs to the red (R) sockets using a stereo phono cable.



Connecting to digital devices

Your DRX-601E/ES can provide digital audio output for connection to digital speakers, digital devices such as MiniDisc, CD-R or DAT recorder or the digital input on your amplifier.

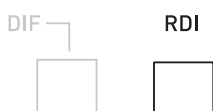
1. Locate the S/PDIF sockets on the back of your DRX-601E/ES and the digital-in socket on your digital device.
2. Connect the devices via either the coaxial or the optical socket using a suitable cable. Suitable connecting cables are available from VideoLogic, see the Accessories section on page 12 for details.



Connecting to your aerial

You need to connect either the supplied indoor aerial or an external DAB aerial to your DRX-601E/ES to receive digital radio transmissions. Refer to the aerial advice sheet, supplied with your DRX-601E/ES for information on the different types of aerials available. For information on how to find out about DAB coverage in your area, see page 9.

1. Screw the aerial plug onto the F-type AERIAL connector on the rear of your DRX-601E/ES.
2. For the best reception, if using the indoor aerial supplied, attach the aerial horizontally to a wall using some adhesive tape and extend the arms on the end of the aerial wire vertically into a 'T' shape on its side, as illustrated above.



Connecting to an external decoder

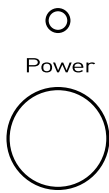
The RDI (Receiver Data Interface) optical connector provides access to raw multiplex data. This may be used in the future to connect to an external decoder or computer for access to extra services.

Connecting to power supply

Once all audio connections are complete as described above connect the power cord to a wall outlet.

Using your DRX-601E/ES

This section provides information on using the main functions of your DRX-601E/ES including tuning, selecting a service and altering the displayed information.



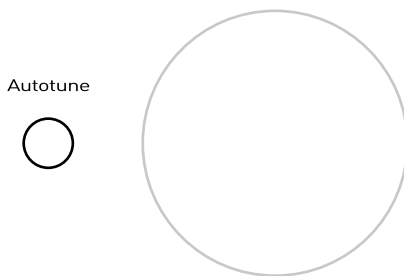
Switching on and off

Before switching on for the first time, check all connections and ensure that the volume on your amplifier is turned down.

We recommend that you switch off your DRX-601E/ES when not in use to prevent energy wastage. Note that if you leave the unit switched off for an extended period (around a month or longer) you may need to re-tune the unit to refresh the available services.

Push and release the **Power** button on the front of your DRX-601E/ES to switch the unit on or off. The blue power on LED will light up when the unit is switched on.

You should now perform the tuning operation described below.



Tuning

Tuning the DRX-601E/ES is very simple. In most cases you only need to perform this operation once, when you first set up the unit. The tuning facility has two modes:

Rapid - scans frequencies in the UK channel allocation. This should take around 45 seconds.

Full - scans the full range of digital frequencies in Band III. This may take several minutes.

All UK digital radio services currently available in your area will be found using the rapid mode.

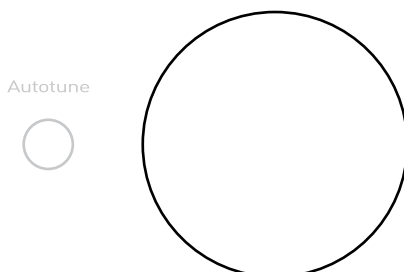
1. Ensure your DRX-601E/ES is switched on and your aerial is connected and positioned correctly.
2. Push and release the **Autotune** button on the front of your DRX-601E/ES once for rapid mode and twice for full mode.

Note You can cancel Autotune by pushing the **Autotune** button a third time.

The display will indicate tuning is underway. When finished, the name of the first service found will be shown on the top line of the display and you should hear it through your speakers. All the services found are now stored in the unit and you can select a service as described below.

Note If no services are found the display will show the message NO ENSEMBLES. Check your aerial connection and positioning and try the tuning process again.

You may want to repeat this procedure in the future if you change your aerial position or if you want to receive a newly introduced service.



Selecting a service

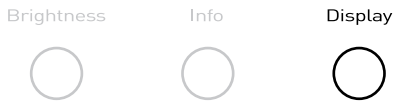
Once you have tuned your DRX-601E/ES as explained above you can select the digital radio service you want to listen to. You use the large turn-and-push button to select a service.

1. Rotate the large tuning button to see the names of other stored services on the bottom line of the display. Stop when you find the service you want to listen to.
2. Push and release the large tuning button to listen to the service you have selected.

If the service you select is in stereo, the Stereo LED will light up. If the service you select has one or more secondary services available, the Secondary LED will light up.

See page 9 for information on primary and secondary services and see page 8 for details on selecting primary or secondary services.

Note If reception is poor, check the signal strength and try repositioning your aerial using the signal strength indicator as described on page 7.



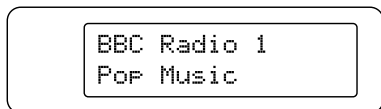
Changing the display mode

The DRX-601E/ES display feature has four modes which enable you to view different elements of the broadcast data on the bottom line of the display.

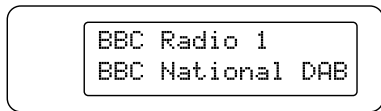
Press the **Display** button on the front panel of your DRX-601E/ES and repeat or hold down to cycle through the four different display modes.



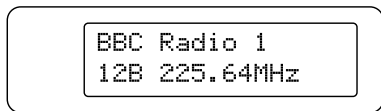
Dynamic Label Segment The default mode, displays scrolling text messages which accompany the audio, where available.



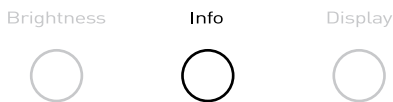
Program Type A label describing the type of content being broadcast by the service.



Multiplex name Displays the name of the Multiplex in which the current service is found. See the Guide to Digital Radio section on page 9 for information on Multiplexes.



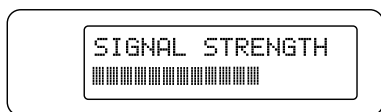
Technical Information Displays the channel label and centre frequency for the current multiplex. See the Guide to Digital Radio section on page 9 for information on channels and digital radio frequencies.



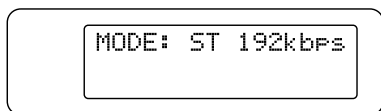
Viewing extra information

The DRX-601E/ES has two information modes which enable you to view extra information about the current multiplex.

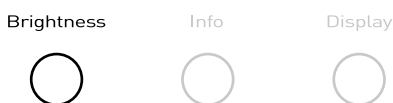
Press the **Info** button on the front panel of your DRX-601E/ES and repeat or hold down to cycle through the two different information modes.



Signal strength Displays the strength of the signal for the current multiplex. Maximum strength is indicated by 16 bars across the display. **Note** If sound quality is poor, try repositioning your aerial whilst observing the signal strength indicator, you may be able to increase reception quality.



Mode Displays the mode of the current service, Stereo (ST) or Mono (MN) and the data rate at which the audio signal is being transmitted. This rate is set by the broadcaster to suit the type and quality of material being transmitted.



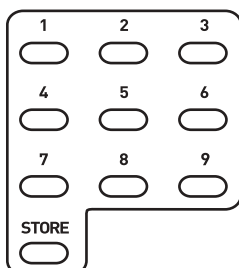
Changing the display brightness

The DRX-601E/ES has four levels of brightness which you can alter to suit your room's light levels.

Press the **Brightness** button on the front panel of your DRX-601E/ES and repeat or hold down to cycle through the four levels of brightness available.

Using the remote control

This section provides information on using the remote control. The infrared remote control provides access to the main functions of your DRX-601E/ES and also advanced facilities such as presets and dynamic range control. Before using your remote, insert the supplied batteries. Aim the remote control at the sensor on the display panel on your DRX-601E/ES.



Preset buttons

The numbered buttons (1-9) and the **STORE** button enable you to store your favourite radio services for one-touch access.

To store a service

While listening to the service you want to store.

1. Press the **STORE** button.
The display on your DRX-601E/ES shows **1-9?**
2. Press a numbered button to store the service under that number.

To recall a previously stored channel

Press the numbered button under which you stored the service.



DRC button

The **DRC** Dynamic Range Control button enables you to alter the dynamic range of the received audio (dependent on broadcast material) by making the quieter sounds in a broadcast more audible. This may be useful in noisy environments or particularly quiet parts of programmes.

Press the **DRC** button to check whether DRC is available for the current service then press the **DRC** button again to toggle DRC on or off. The default setting is off.



MUTE button

The **MUTE** button is a quick way of reducing the output volume from your DRX-601E/ES.

1. Press the **MUTE** button to mute the sound.
The display on your DRX-601E shows **MUTE**.
2. Press any key on the remote control or main unit to remove the mute and return to the previous listening volume.



DISPLAY button

The **DISPLAY** button enables you to change the display mode on your DRX-601E/ES. This button performs the same function as the **Display** button the main unit. See page 7 for details.

Press the **DISPLAY** button and repeat or hold down to cycle through the four display options.



INFO button

The **INFO** button enables you to change the information mode on your DRX-601E/ES. This button performs the same function as the **Info** button on the main unit. See page 7 for details.

Press the **INFO** button and repeat or hold down to cycle through the two information modes.



PRI/SEC button

The **PRI/SEC** button enables you to select between the primary and secondary services where secondary services are available. If a secondary service is available for the current service, the Secondary LED will light up on the front of your DRX-601E/ES. See page 9 for an explanation of primary and secondary services. Press the **PRI/SEC** button and repeat or hold down to cycle through the available services.



Service select buttons

The **▼▲** and **SELECT** buttons enable you to cycle through and select services. Together, these buttons perform the same function as the large tuning knob on the main unit.

1. Press and release or hold down the **▼** or **▲** button to cycle through the stored services.
2. The bottom line of the display on your DRX-601E/ES shows the service names.
3. Press the **SELECT** button to select and listen to the displayed service.

Guide to Digital Radio

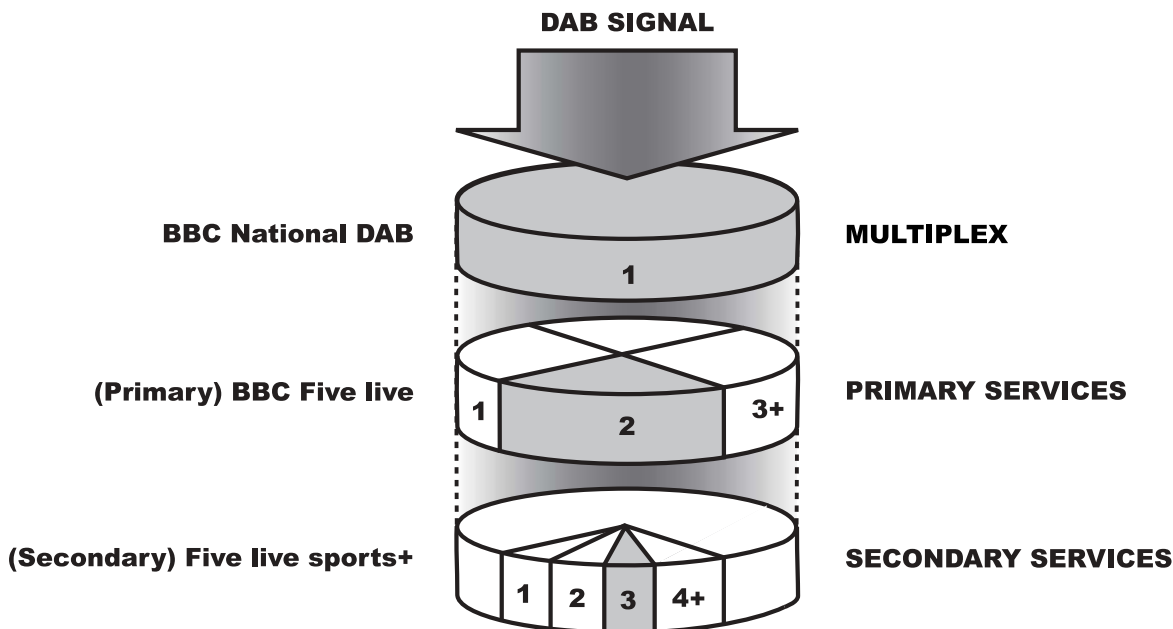
This section provides a brief guide to digital radio (DAB), explains how the features of your DRX-601E/ES provide access to it and provides some useful addresses for finding out more.

Your DRX-601E/ES enables you to receive and listen to the new DAB radio programmes. Digital Audio Broadcast (DAB) is a new form of radio broadcasting using digital signals rather than traditional analogue signals. DAB provides near CD-quality audio with virtually interference-free reception. DAB also enables broadcasters to transmit additional data along with the audio including other audio channels, text and in the future, perhaps computer data and images.

Digital radio is broadcast as groups of data called ensembles or multiplexes. Each multiplex can contain a number of services (stations) and each service contains a primary service and can contain secondary services as illustrated in the following diagram.

Each multiplex is transmitted in a set frequency range and received by your DRX-601E/ES for decoding. Your DRX-601E/ES enables you to receive multiplexes broadcast in frequency band III (174-240 MHz) and store the services in each multiplex for you to access. The number of multiplexes you receive will vary depending on your location. Band III is divided into 41 channels labelled 5A to 13F. Each channel can contain one multiplex. Channels allocated to the UK are in the range 11B to 12D.

Multiplexes and Services have labels (names) which are used to identify them. Instead of needing to know a particular frequency to listen to your favourite broadcast you can simply select the service name. Secondary services and additional data such as text containing programme or multiplex information are also easily accessed using your DRX-601E/ES.



Useful addresses

The following addresses provide additional useful information about digital radio including coverage, available services and usage tips:

BBC Digital Radio
Room 5661
Broadcasting House
Portland Place
London, W1A 1AA

e-mail: bbcdigitalradio@bbc.co.uk
website: www.bbc.co.uk/digitalradio

Digital Radio Development Bureau
The Radiocentre
77 Shaftesbury Avenue
LONDON, W1D 5DU

tel: 020 7306 2630
e-mail: info@drdb.org
web: www.drdb.org

Digital One
20 Southampton Street
LONDON, WC2E 7QH

tel: 0870 9090250
e-mail: info@digitalone.co.uk
web: www.ukdigitalradio.com

Troubleshooting

This section gives some of the most likely solutions to problems you might have with your DRX-601E/ES.

I can't get any sound

Make sure your DRX-601E/ES and your amplifier are switched on as explained on page 6.

Check that you have connected the DRX-601E/ES to your amplifier correctly, as explained on page 6 and that your amplifier has the correct source selected.

Check that the volume on your amplifier is not too low or that you have selected MUTE on the remote control, see page 8 for details.

Ensure that you have completed the Autotune procedure to find digital radio services as explained on page 6.

Remote control not functioning

Check that you have inserted the batteries correctly.

Check that you are not too far away from the main unit (not more than 7 metres recommended).

Check that the remote sensor on the main unit is not obscured.

Check if the Remote indicator LED lights up indicating that the remote signal is being received.

Display says 'No Service Check Setup'

Check that your aerial is connected and positioned properly. Use the Autotune facility to search for services. Try using the Full search as explained on page 6.

I can't access secondary services

At the time of publishing not many secondary services are available. If secondary services are available for the currently selected service the Secondary indicator LED will light up. You use the remote control to select secondary services, see page 8 for details.

Display says 'Memory Reset Presets Lost'

This may occur if the unit has been switched off for an extended period of time (longer than two weeks). Use the Autotune feature as described on page 5 to refresh your stored services if necessary. You can then re-enter your presets using the remote control, as described on page 8.

Display has gone blank

This may occur if a broadcaster changes the label of a service or removes a label whilst you are listening to it. As the display is constantly updated it therefore may go blank. Follow the Autotune procedure, on page 6, to restore all available services to your unit.

I've lost my remote control

If you lose your remote control you can still use your DRX-601E/ES but you will not be able to access your preset stations, switch between primary or secondary services or use DRC or mute facilities. Contact VideoLogic Support to obtain a replacement remote control, see page 12 for details.

I can't hear my FM/AM radio although it is connected

Ensure that you have connected your FM/AM radio to your DRX-601E/ES and your DRX-601E/ES to your amplifier correctly, as described on page 5.

Ensure that your FM/AM radio and amplifier are switched on and that the FM/AM radio is tuned to a station.

Ensure that your DRX-601E/ES is switched off. The DRX-601E/ES allows your FM/AM radio to pass through the analogue outputs to your amplifier only when it is switched off.

I can't hear the station I have selected on the display

To hear the station you need to confirm your selection by pressing the large tuning knob, as described on page 6.

I hear a 'burbling' sound on some stations

Although DAB is excellent at providing quality audio from very little signal, the quality can suffer if the signal strength is too low. If that happens, a 'burbling' sound can sometimes be heard.

To help reduce this, check your aerial connection and position, as described on page 5.

If the problem persists, then a signal booster may be the solution - these are available from our on-line store at www.videologic.com

For the latest troubleshooting information and a list of Frequently Asked Questions (FAQs), visit the DRX-601E/ES support section on our website at www.videologic.com.

Technical Specifications

This section lists the technical specifications for the DRX-601E/ES.

General	Digital radio tuner with full Band III reception capability, for reception of all UK DAB broadcasts. Fully compliant with ETS 300 401 and capable of decoding all DAB transmission modes 1-4. Analogue stereo output, optical and coaxial 48 kHz S/PDIF digital output and RDI digital output
Frequency Range	Band III (174 - 240 MHz), with fast Autotune feature
Tuner Sensitivity	-98 dBm
Integrated DAC	24-bit 96 kHz stereo DAC
Input connectors (rear panel)	RF F-connector 75 Ω for DAB aerial connection (aerial supplied) Dual phono for external line level audio input (from FM/AM/AUX tuner unit) with auto pass-through to output at power off
Output connectors (rear panel)	Dual phono for stereo analogue audio output Optical Toslink connector for digital S/PDIF output (IEC958 @ 48 kHz) Coaxial connector for digital S/PDIF output (IEC958 @ 48 kHz) Optical Toslink connector for digital RDI data output
Controls (front panel)	Power on/off Rotary selection switch - selects service Autotune - tunes in unit to broadcast services Brightness - selects between 4 levels of LCD display brightness Display - selects between DLS (Dynamic Label Segment) scrolling text, programme type, and service information Info - switches LCD between display of signal strength indicator and mono/stereo mode plus service's data rate
LCD Display	High visibility STN LCD display with 16 x 2 characters and 4 user-selectable brightness levels
Indicators (front panel)	LED power-on indicator Remote control activity indicator Stereo service indicator Secondary service availability indicator
Frequency response	20 Hz to 20 kHz for 48 kHz decode 20 Hz to 12 kHz for 24 kHz low sample frequency (LSF) decode THD (nominal output) Less than 0.005% at 1 kHz S/N Ratio: 100 dB
Remote control	Infrared remote control functions: service select, preset service store/recall, DRC (dynamic range control), mute and primary or secondary information display
Power supply	High-performance low noise internal toroidal transformer power supply. 230-240V AC 50Hz
Approvals	CE marked. Compliant with the EMC and Low Voltage Directives (89/336/EEC and 73/23/EEC)
Dimensions	430mm (width) x 65mm (height) x 270mm (depth)

Getting Help

The Troubleshooting section of this manual, on page 10, lists some of the more likely reasons for problems you might have with your DRX-601E/ES.

If you still have a problem with your DRX-601E/ES, either visit our website at www.videologic.com or contact us using the details below for the latest support information.

Videologic Systems,

Imagination Technologies Ltd,

Home Park Estate,

Kings Langley,

Herts., WD4 8LZ, UK

01923 277477

01923 270188

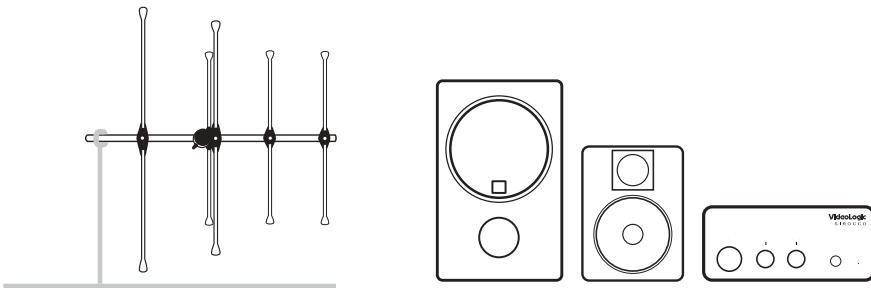
support@videologic.com

telephone

fax

e-mail

Accessories



Videologic supply a range of accessories and complementary products for your DRX-601E/ES including external aerials, signal boosters, aerial cable adapters and amplified speaker sets.

Visit our website at www.videologic.com or call us on 01923 277488 to find out more.

Index

A

Accessories 12
Address 12
Aerial 3
Aerial connector 4, 5
Autotune 6
Autotune button 4, 6

B

Band III 9
Batteries 3
Brightness button 4

C

Changing the display mode 7
Channels 9
Connecting cables
 aerial 5
 amplifier 5
 auxiliary source 5
 CD-R 5
 DAT 5
 digital devices 5
 external decoder 5
 MiniDisc 5
 power 5
 RDI 5
 S/PDIF 5
Controls and Connectors 4

D

DAB 9
Data rate 7
Display brightness 7
Display button 4, 8
Display mode 7
DRC 8
DRC button 8
DRX-601E 3
Dynamic Label Segment 7

E

E-mail 12
Ensembles 9
External aerial 5

F

Fax 12
Frequency 9
Frequency Range 11
Front Panel 4

G

Getting Help 12
Guide to Digital Radio 9

H

Help 12

I

Info button 4, 8
Information button 7
Information mode 7
INPUT sockets 4, 5
Introduction 2
Items 3

L

LCD Display 4
Leads 3
Lost remote 10

M

Main unit 3
Memory Corrupt 10
Multiplex 9
Mute 8
MUTE button 8

N

New service 6
No Services Found 10

O

On/Off button 6
OUTPUT sockets 4, 5

P

Package contents 3
Phono cable 3
Power Lead 4
Power switch 4
Preset buttons 8
PRI/SEC button 8
Primary services 9
Program Type 7

R

RDI socket 4, 5
Rear Panel 4
Remote control 8
Remote lost 10
Remote sensor 4

S

S/PDIF sockets 4, 5
Secondary LED 4
Secondary services 9
Select button 8
Selecting a service 6
Services 9
Setting up 5
Signal strength 7
Sockets 4, 5
Specifications 11
Stereo LED 4
Store button 8
Support 12
Switching on and off 6

T

Technical Specifications 11
Telephone 12
Tuning 6
Tuning button 4, 6

U

Unpacking 3
Using your DRX-601E 6

V

VideoLogic 12

W

Website 12

Please return your registration card to the following address to validate your warranty.

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