

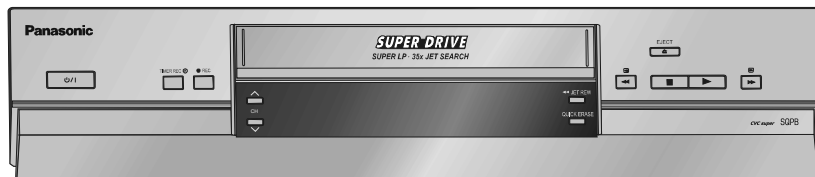
Panasonic®

Video Cassette Recorder

NV-MV21EB/EBL

(Model suffix: 'EB' for UK model, 'EBL' for Ireland model)

Operating Instructions



VIDEO *Plus+*®

VHS
PAL



SUPER DRIVE

Before connecting the device, operating it or adjusting settings please read these operating instructions completely; especially the safety precautions on pages 2-3.

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Important Safety Warnings



- The moulded three pin mains plug is supplied for your safety and convenience and must NOT be cut off.
- A 5 amp fuse is fitted in the mains plug. If the fuse has to be replaced, it must be of the same rating and approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

To replace the fuse, open the fuse compartment with a screwdriver as shown and replace the fuse and the cover securely.

- To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service engineer only.

- WARNING:** To reduce the risk of fire, electric shock or product damage, do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



- Do not insert metal object into the slots or openings of the unit.
- This unit is not disconnected from a.c. mains while it remains connected to a live mains outlet, even if it has been turned off.

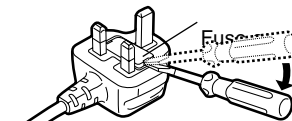


- The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

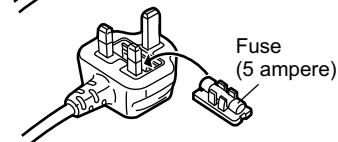


- This unit is intended for use in moderate climates.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



-If you see this symbol-

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



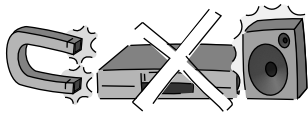
This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product. Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.



CAUTION!



Caution

- Avoid exposing the unit to direct sunlight or other heat sources.
- Avoid sudden change in temperature or humidity, dew or condensation may form, causing malfunction.
- Dispose of batteries in accordance with the instructions given in this book.
- Place the unit on a flat, stable surface. Do not place heavy object on top of the unit.
- Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast materials may infringe copyright laws.
- This unit is designed for indoor use only.
- Do not use in area with strong magnetic fields, e.g. near transmitting antenna.
- This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

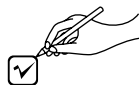
- Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation vents.
- Do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.
- Do not place sources of naked flames, such as lighted candles, on the unit.
- Dispose of batteries in an environmentally friendly manner.



Care and Maintenance

- The cabinet can be wiped clean with a damp cloth, disconnect from mains before cleaning. Do not use detergent or solution containing benzol or petroleum.
- Video heads clogging can occur with use, when this happens picture and sound will become distorted during playback. Purchase a head cleaning tape or consult your dealer. Note that video head cleaning is not covered by the warranty.

Included Accessories



Check that you have the accessories and items shown



☐ Remote control
N2QAJB000089

Included Accessories

☐ AC Mains Lead
RJA0044-3C



☐ RF cable



K2KF2BA00001, VJA0728-A
or K1TWACC00001

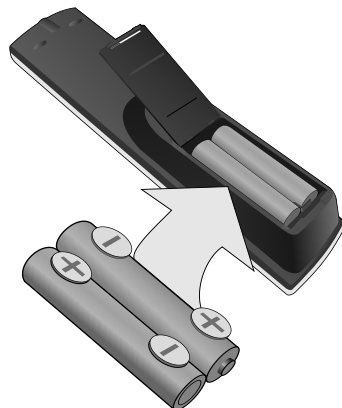
☐ Batteries for the Remote Control
R6 size



☐ Operating Instructions
RQTD0104-B

☐ Quick Start Guide
RQCAD0015

☐ Guarantee Card



Inserting batteries into the remote control unit:

The batteries last for about a year, depending on how often you use the RC unit.

- Do not mix old with new batteries or batteries of different types.
- Only use batteries without any harmful substances (such as lead, cadmium, mercury).
- Do not use rechargeable type batteries.
- Remove the batteries if the remote control unit will remain unused for longer periods of time.
- Do not heat or short-circuit the batteries.
- Immediately remove used-up batteries and replace with batteries of type AA, UM3 or R6.
- Be sure to put in the batteries the right way round (+ and -).

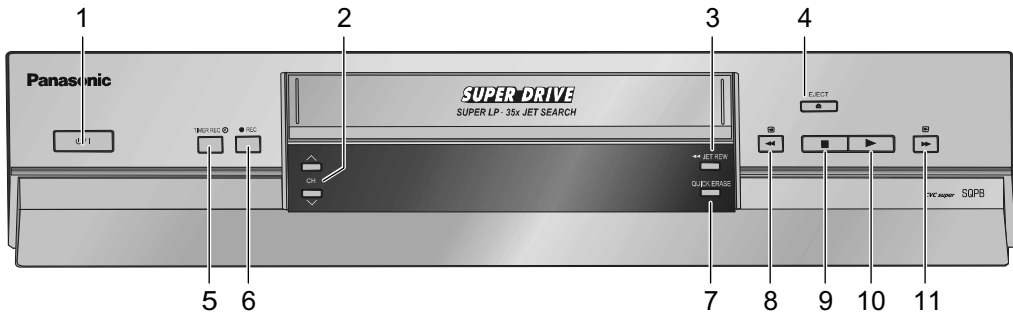
Dispose of **batteries**, packaging material and the unit **according to statutory regulations**. They must not be thrown into the household refuse.



Front Panel VCR

VCR= Video Cassette Recorder

Detailed information is available on the specified pages.



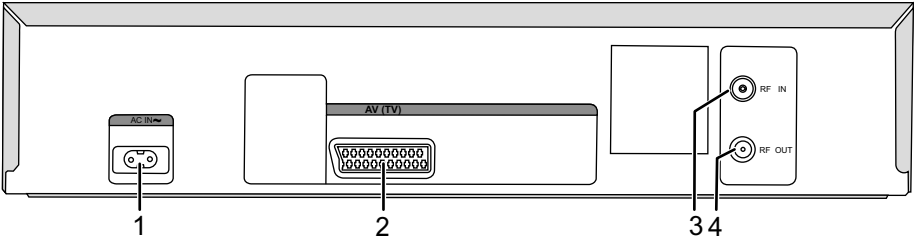
1		Stand-by/on switch	
2		Selects a channel	
3		Fast rewind to the beginning of the tape.	18
4		Ejects the cassette.	19
5		Activates the recording timer	21

6		Starts recording.	20
7		Erases a cassette.	19
8		Fast winding / JET SEARCH	18
9		Stop button	
10		Starts playback.	16
11		Fast winding / JET SEARCH	18

Rear Panel VCR

Rear Panel Connectors





1	AC IN~ (Power supply)
2	AV (21-pin Scart socket)
3	RF IN = Aerial input
4	RF OUT = Aerial output














Remote control functions

TV Controls

Some Panasonic television sets may be controlled with the remote control unit of this VCR. However, some of old Panasonic TVs cannot be operated using this remote control.















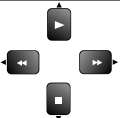
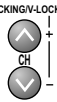





























































	Press to switch the TV from on to stand-by mode or vice versa.
	Selects the TV set's AV port.
	TV Channel selector.
	To adjust the volume of the TV.

VCR Playback Control

	Normal playback 
	Stop ends recording, playback, or winding. Eject: Press and hold for more than 3 seconds.
	Fast forward/rewind when stopped, search forward or backwards during playback. 
	Stop a recording session. Still playback. 
	Search beginning of a recording session. 
	Fast rewind to beginning of tape. 

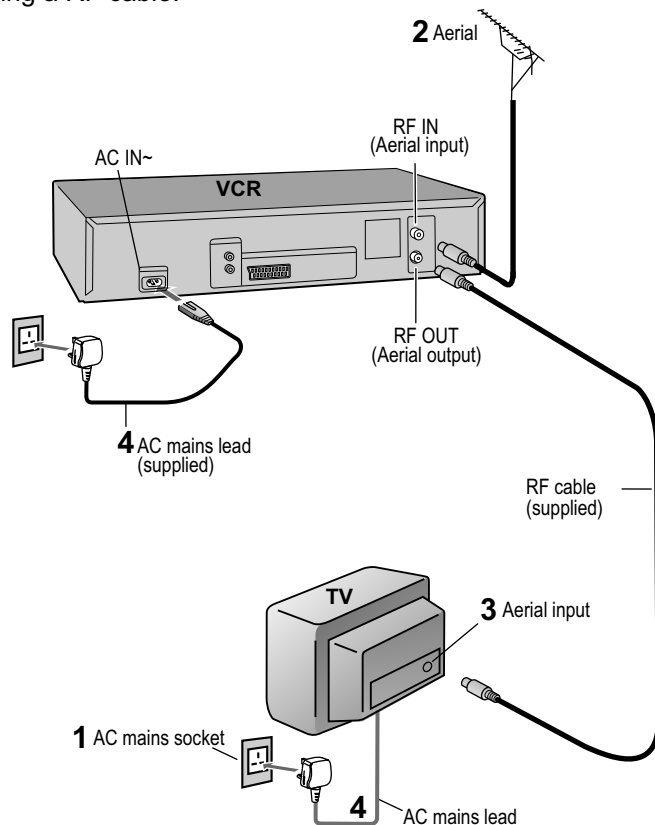


VCR Standard Controls

	Stand-by/on switch Press to switch the unit from on to stand-by mode or vice versa. In stand-by mode, the unit is still consuming a small amount of power.	
	Displays the menu.  15	
	Quits a menu.  15	
	Switches between AV input and TV station.	
	RESET : Resets the counter to 0:00.00. CANCEL : Clears an entry you made.  19	
	Delete highlighted station.  28	
	Move highlighted station.  28	
	This button has no function.	
	Selecting or storing settings.	
	Menu navigation buttons.	
	Channel select buttons. Tracking control of VCR picture disturbance.  17	
	Select programme storage position or enter the VIDEO Plus+ number. E.g.: 18 =                                                           	

Connecting with RF cable

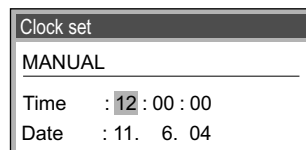
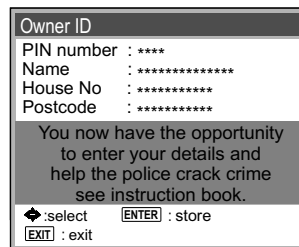
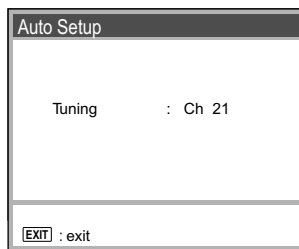
You can connect the VCR to your TV set by using a RF cable.



Follow the steps described below.

- 1** Ensure TV Power is disconnected from AC Mains socket.
- 2** Connect aerial to the RF IN (Aerial input) connector of the VCR.
- 3** Connect the VCR's RF OUT (Aerial output) to the TV set's aerial in connector.
- 4** Connect VCR and TV set to the AC mains socket.

VCR Display



VCR Auto Setup with RF cable (Automatic tuning)

- Turn on your television set.
- With the **Stand-by/on switch** turn on the VCR. Automatic tuning for all available TV stations begins. Approximate duration is 5 minutes.
- After Automatic tuning has finished, press **EXIT**. The Owner ID screen will appear.
- While Auto Setup is running the first digit of the VCR display will flash. After a while it will stop flashing and the RF output channel number will be displayed.
- Select an unused channel pre-set on your TV and tune it to the RF output channel number shown on the VCR display (or until you can clearly see the Auto Setup screen). Store the new video playback channel (refer to the instructions for your TV).
- * In some cases, the RF output channel may interfere with the TV stations transmitted in your area. This may prevent you from seeing the On-Screen Display clearly. Please see page 14 for removing the interference before restarting Auto Setup (page 29).

Owner ID

You can complete the Owner ID now or skip this step and do it later. To do it later, press the **EXIT** button. Your VCR is now ready to use.

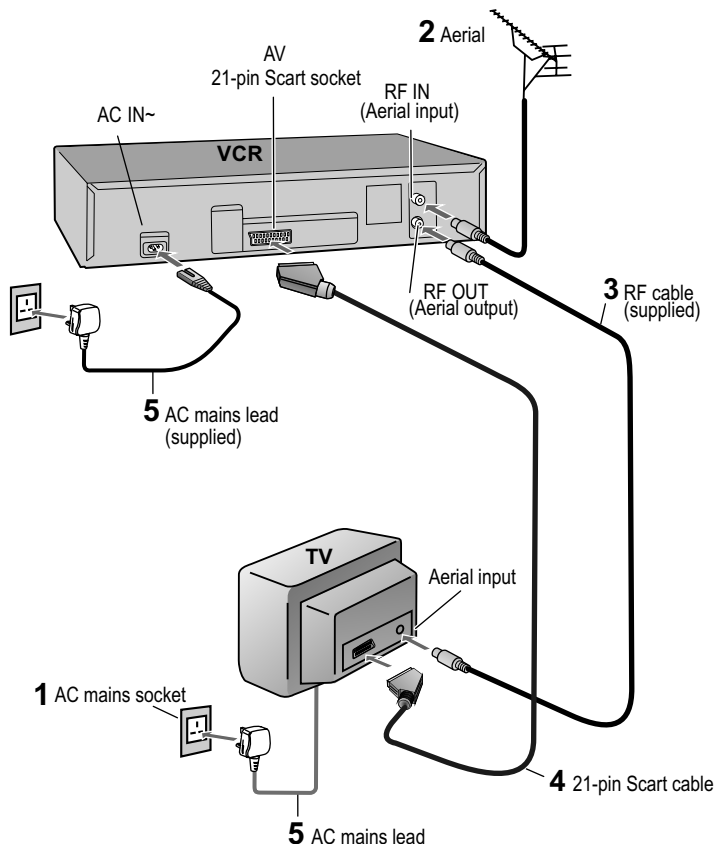
- To set the Owner ID now, press the **Numeric** buttons or **▲▼▶** to enter a four-digit PIN number.
- Press **◀**, to correct the digit.
- Make sure that you will remember the PIN number (make a note of it).
- Press the **ENTER** button twice to confirm.
- Enter the [Name], [House No] and [Postcode] in the same way.
- Press the **ENTER** button to confirm each entry.
- Press the **EXIT** button to leave the Owner ID screen.
- You will now see the TV picture. Your VCR is now ready to use.

If the clock setting menu appears

(Auto clock set was not possible due to a weak signal)

- Press **▲▼◀▶** to set the correct time and date.
- Press the **ENTER** button to finish this setting.
- * Mind that a wrong date or time will influence the programmed recording of TV programmes (don't forget to change summer time and winter time).

Connecting with 21-pin Scart cable (Fully wired)

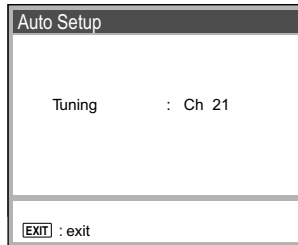


Follow the steps described below.

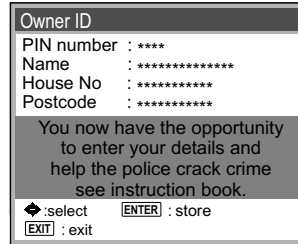
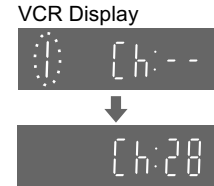
- 1** Ensure TV Power is disconnected from AC Mains socket.
- 2** Connect aerial to the RF IN (Aerial input) connector of the VCR.
- 3** Connect the VCR's RF OUT (Aerial output) to the TV set's Aerial in connector.
- 4** Connect the VCR's AV socket (21-pin Scart socket) to the TV set's Scart In socket.
- 5** Connect VCR and TV set to the AC mains socket.

VCR Auto Setup with 21-pin Scart cable

(Automatic tuning)



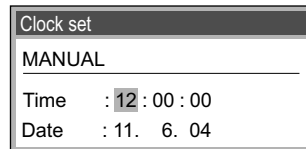
- Turn on your television set.
- With the **Stand-by/on switch** turn on the VCR. Automatic tuning for all available TV stations begins. Approximate duration is 5 minutes.
- After Automatic tuning has finished, press **EXIT**. The Owner ID screen will appear.



Owner ID

You can complete the Owner ID now or skip this step and do it later. To do it later, press the **EXIT** button. Your VCR is now ready to use.

- To set the Owner ID now, press the **Numeric** buttons or **▲▼▶** to enter a four-digit PIN number.
- Press **◀**, to correct the digit.
- Make sure that you will remember the PIN number (make a note of it).
- Press the **ENTER** button twice to confirm.
- Enter the [Name], [House No] and [Postcode] in the same way.
- Press the **ENTER** button to confirm each entry.
- Press the **EXIT** button to leave the Owner ID screen.
- You will now see the TV picture. Your VCR is now ready to use.



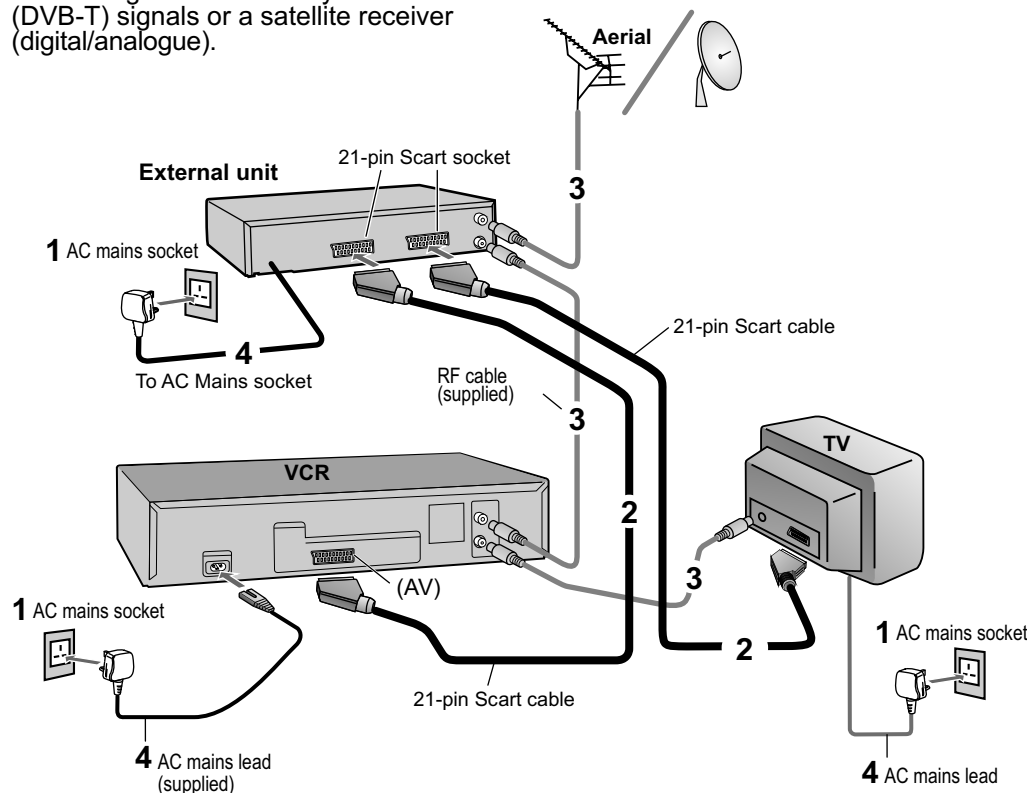
If the clock setting menu appears

(Auto clock set was not possible due to a weak signal)

- Press **▲▼◀▶** to set the correct time and date.
- Press the **ENTER** button to finish this setting.
- * Mind that a wrong date or time will influence the programmed recording of TV programmes (don't forget to change summer time and winter time).
- * If Auto Setup has previously been completed the VCR will not start Auto Setup automatically. In this case you can re-start Auto Setup again. See page 29.
- * If you want to cancel Auto Setup before it has finished, press the **EXIT** button. You can restart Auto Setup again. See page 29.

Connecting to Satellite Receiver, Set Top Box

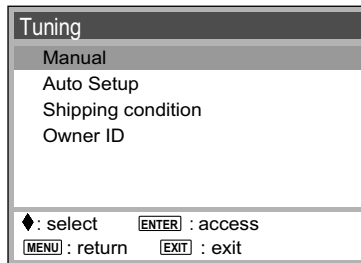
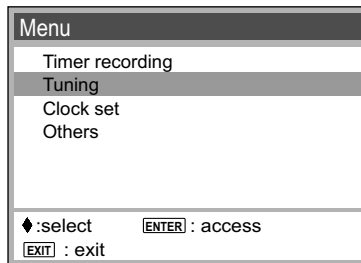
You can connect a Set Top Box to receive digital broadcast by aerial (DVB-T) signals or a satellite receiver (digital/analogue).



Follow the steps described below.

- 1 Ensure TV Power, External unit Power and VCR Power are disconnected from AC Mains socket.
- 2 Connect a 21-pin scart cable (fully wired) to the AV 21-pin scart socket on the VCR and to the 21-pin scart socket of the External unit. Connect a 21-pin scart cable (fully wired) to the AV 21-pin scart socket on the TV set and to the 21-pin scart socket of the External unit.
- 3 Connect aerial to the Aerial in connector of the External unit. Connect the External unit's Aerial out connector to the VCR's RF IN (Aerial input). Connect the VCR's RF OUT (Aerial output) to the TV set's Aerial in connector.
- 4 Connect the External unit, VCR and TV set to the AC mains supply.
- 5 Switch on the External unit. Then follow page 9 for VCR Auto Setup with RF cable.

Checking the Settings after Auto Setup



To confirm that the TV stations have been tuned correctly by Auto Setup

- Press the **MENU** button to display the OSD Main menu on the TV screen.
- Press **▲▼** to select Tuning then press the **ENTER** button.
- Press **▲▼** to select Manual then press the **ENTER** button to display the list of tuned TV stations and confirm that all available TV stations have been set correctly.
- * If station name is [****]:
The asterisks indicate that a station was found during Auto Setup but has not been named (due to weak signal).
The stations in the list with asterisk will need to be named manually see page 28.
- * If station name is [- - - -]:
The dashes represent unused channel positions.
The stations in the list with dashes will need to be set manually. See page 27.



- Press the **EXIT** button to exit the On Screen Display.

When the station names and/or channel numbers have not been set correctly, see page 28 for details.

When no station has been found, confirm all connections of the VCR again and restart the Auto Setup. See page 29 for details.

TV Reception Channels

Tuning					
Pos	Name	Ch	Pos	Name	Ch
1	BBC1	22	6	****	30
2	BBC2	23	7	----	---
3	ITV	24	8	----	---
4	CH4	25	9	----	---
5	CH5	26	10	----	---

Example of UK model

Tuning					
Pos	Name	Ch	Pos	Name	Ch
1	RTE1	2	6	ITV	24
2	NET2	4	7	CH4	25
3	TNG	6	8	CH5	26
4	BBC1	22	9	----	---
5	BBC2	23	10	----	---

Example of Ireland model

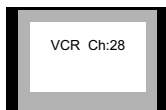
The reception channels are different for UK and Ireland.

Removing Interference / Changing RF-output channel



TV screen

The picture with interference



On-Screen Display
Test pattern indication

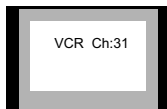
VCR display



Indication when the RF output
channel is 28 (example)



Indication after changing the RF
output channel to 31 (example)



Test pattern indication

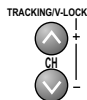


The clear picture

In some cases, interference (lines or patterning) or a very poor picture may appear on the TV when the VCR is connected. If this happens, follow the steps below to change the video playback channel (RF output channel) to remove the interference.



- Press the **MENU** button for more than 5 seconds. The RF output channel number is displayed on the VCR display.



- Press the **Numeric** buttons or use the Channel (**CH**) button to select a channel number, which differs by 2 or 3 from the present channel number. (For example, if the original channel number was 28, enter 31.)



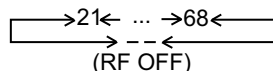
- Retune your TV until you receive the Test pattern. It may be necessary to repeat steps above until you can see the Test pattern clearly. If using a Scart cable please see the note below.



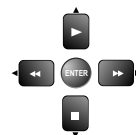
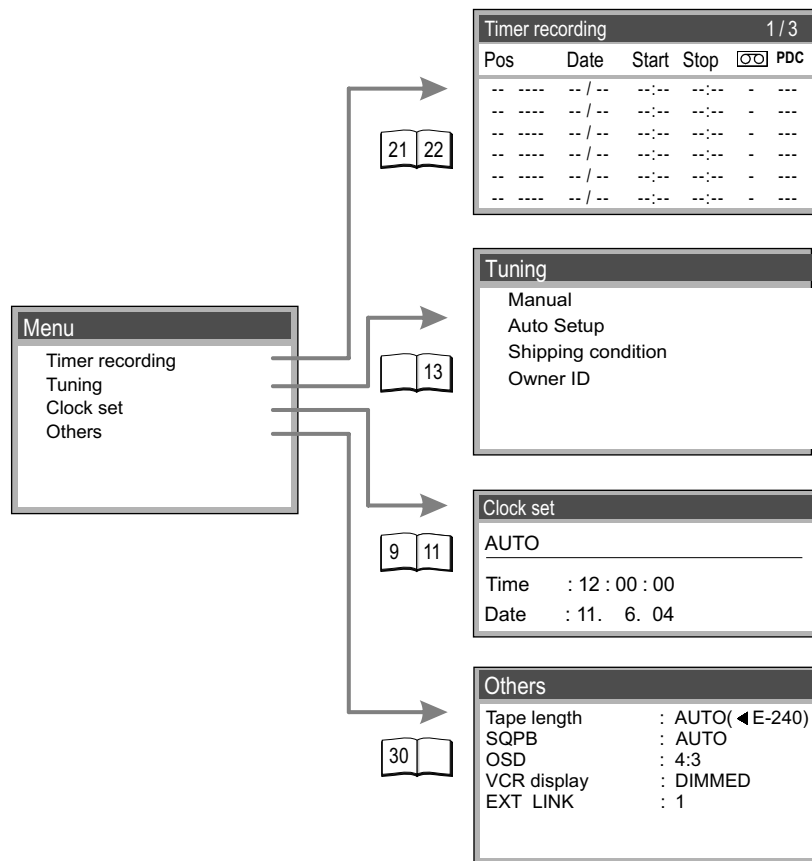
- Press **ENTER** to finish this setting.

* Set the RF output channel of the VCR to [- -] (RF OFF) if the VCR is connected to the TV via the 21-pin Scart cable.

- Press **MENU** for about 5 seconds. The preset channel will be displayed on the VCR-display.
- Press channel select buttons **CH** or **0** to invoke [- -].
- Confirm with **ENTER**.



Menu System



The cursor buttons on the remote control unit allow you to navigate through menus and change selected entries.

- Press **MENU**, the menu screen appears.
- With **▲▼** select the desired sub-menu.
- Press **ENTER**, the selected menu appears.
- With **▲▼** select the entry you would like to change, then confirm with **ENTER**.
- Make your changes following the menu steps.
- With **MENU** return to the previous menu.
- Press **EXIT** to leave the menu.

Playback

Normal playback

- Turn on the VCR.
- Be sure the TV set is turned on and tuned to the video playback channel.
- Insert a video cassette.
- Press **PLAY** ▷ to start playback.
- Press **STOP** □ to end playback.



Playback from power stand-by mode

- When inserting a cassette and pressing **PLAY** ▷, the device will turn itself on and start playing back.

Starting automatic playback

- When inserting a cassette with removed protection tab, playback will start automatically.

Repeat playback

- The VCR repeats playback from beginning to the end of the recording.
- In stop or playback mode press **PLAY** ▷ for longer than 5 seconds.
The symbol [R] appears on the VCR's display.
- Press **STOP** □ to end playback.

Still playback

- Press **PAUSE/SLOW** during playback.
- To exit still playback press **PAUSE/SLOW** again or **PLAY** ▷.

PAUSE/SLOW



Tracking control



Playback picture containing noise bars



Adjusting the playback picture

Under normal conditions, the VCR automatically adjusts the tracking for optimum performance.

However, in some cases it may be necessary to adjust it manually.

If the picture contains noise bars and it is not clear to see (tracking adjustment):

If noise bars appear during normal playback or still playback, follow the operations below.



During normal playback, press **CH** \vee or \wedge until the noise bars disappear.

To return to Auto Tracking:

Press **CH** \vee or \wedge simultaneously.

If the still picture jitters or jumps (V-lock adjustment):

If the still picture jitters or jumps, perform the following.

During still playback, keep the **CH** button \vee or \wedge pressed until the picture becomes stable.

- * With certain TV models and tapes, it may not be possible to adjust the tracking perfectly.
- * If you play back a cassette that was recorded on another unit of VCR, the picture quality may be inferior in the normal playback, slow playback, and still playback, and it may need to manual adjust the tracking by above method.
- * Also, on some TVs, the picture may scroll up and down in the special playback functions.
- * However, these are not malfunctions.

General convenient functions

Auto-Start

When inserting a cassette the VCR will automatically switch on.

Automatic rewinding

When a cassette is played to the end, the VCR will automatically rewind it to the beginning of the tape.

* This function is not available during programmed recording sessions.

Search forward ►► or backwards ◀◀



- While playing back press ►► or ◀◀, the search begins.
- When pressing the button twice (JET SEARCH) the search speed increases.
- When holding the button down the search will run for the duration of the button being held.
- Press **PLAY** ► to end search.
- * This function is not available in some cases (e.g. at the beginning or end of the tape).

Fast winding forward ►► or backwards ◀◀



- In stop mode press ►► or ◀◀.
- Press **STOP** ◻ to end winding.

JET REW

JET REW



For fast rewinding to the beginning of the tape.
On a E180 cassette approx. 43 seconds.

* Tape counter and tape remain display are unavailable during this function.

Quick search for a beginning of a recording

INDEX



While playing back or in stop-mode.

- **INDEX** ►► tape winds forward / **INDEX** ◀◀ tape rewinds.
- Every time you press the button (max. 20 times) the
- VCR will find the start of the next recording.
- Playback will start automatically.
- Press **STOP** ◻ to exit the Search function.

Time limited recording or playback

OFF-TIMER



During recording, playback or stop mode the device switches to stand-by after a preset period of time.

Press the button repeatedly to increase this period from 30 to 60, 120, 180 or 240 minutes.

The set time appears in the VCR's display.

- Press **OFF-TIMER**

Automatic stop function

To protect the video heads the device will automatically quit the functions search backwards/forwards, quick search, still playback and slow playback after 5-10 minutes. Interference and motor noise are not a malfunction.

Playing back S-VHS Cassette Tape (SQPB=S-VHS Quasi Playback)

It is also possible to play back tapes recorded on an S-VHS VCR.

- The picture quality will be similar to VHS playback.
- It is not possible to make an S-VHS recording with this VCR.

General convenient functions

Tape Counter

When inserting a video cassette the tape counter will automatically reset to [0:00.00].

- The tape counter may also be reset to [0:00.00] by pressing the **RESET/CANCEL** button.

Automatic shut down and removing cassettes



If the VCR is switched into stand-by mode, the cassette may be removed by pressing the **EJECT**-button. Once done the VCR will switch back to stand-by mode.

Playing back NTSC video cassettes

You can play back NTSC video cassettes for viewing on a PAL system TV set.

If there is any interference when playing back NTSC, try readjusting your TV set.

Read the operating instructions of your TV set. You cannot record or copy video cassettes in NTSC format.

QUICK ERASE

QUICK ERASE



To record on a cassette containing previous recordings without loss of quality, erase these recordings with the QUICK ERASE function.

- Press and hold the **QUICK ERASE** button for a few seconds.

It takes approx. 30 minutes to erase an E-180 cassette.

Tape Care

Some do's and don'ts on tape care.

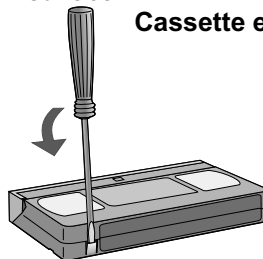
DO:

- Use a good quality branded tape, such as Panasonic.
- Keep in the box supplied with the tape, or a video case, when not in use.
- Try to use the whole tape when making recordings and avoid re-recording over the same section of the tape repeatedly as this will help prevent premature tape wear.
- Take care to insert a tape correctly into the VCR to avoid damage.
- Take tape out of the VCR when not in use.

DO NOT:

- Expose the tape to high humidity or temperature.
- Expose to liquid.
- Expose to dust particles by storing directly on a carpet for example.
- Use a damaged tape or attempt to repair it.
- Dismantle the cassette housing.
- Attempt to lift the front cassette flap or touch the tape surface.






Cassette erasure protection



Break out the erasure protection tab to protect the cassette against accidental erasure of recordings you wish to keep.


Stick adhesive tape over the gap if you wish to re-record a protected cassette.

Recording

Recording functions	
Instant recording	
Instant recording of the VCR - TV picture.	
Timer recording	
Recording controlled by timer.	
Recording with INTELLIGENT TIMER	
Repeating programmed recordings.	
Recording with Video Plus+	
Programming recordings using the Video Plus+ function.	
Recording with external recording controls	
Recording is controlled by an external device.	

Instant recording

Set the TV set to the video channel and insert a cassette into the VCR; make sure that the cassette's protection tab is intact.

- Select channel to record from.
- When recording from an external device, select from Scart input AV.
- Press **REC** to start recording.
- Press **STOP**  to stop recording.
- Press **PAUSE/SLOW** to pause recording.
- To protect the video heads this function will be terminated after approx. 5 minutes.
- Press **PAUSE/SLOW** again to resume recording.



Tape speed

- Prior to starting the recording session, press **REC MODE** to set the tape speed.

SP : normal recording time	- optimal picture quality
LP : double recording time	- lower picture quality
EP : triple recording time	- lowest picture quality

When playing back LP or EP recordings, interferences may occur when using certain types of cassettes (e.g. Type E-300). These are not indicative of a VCR malfunction.



Tape Remain counter

The display of the VCR shows:

Time - Counter - Tape Remain.

- Press **STATUS** until [RE] is displayed.



Timer recording

Timer recording 1 / 3						
Pos	Date	Start	Stop	PDC		
1	BBC1 31/12	10:30	11:30	SP	ON	
2	BBC2 31/12	11:30	12:30	SP	ON	
3	ITV 31/12	12:30	13:30	SP	ON	
4	CH4 31/12	13:30	14:30	SP	ON	
5	CH5 31/12	14:30	15:30	SP	ON	
--	-- --	-- --	-- --	SP	--	--
:select : store : delete : exit						



The Timer recording allows you to programme the recording time of TV programmes up to 1 month in advance. Use the on-screen menu to programme a maximum of 16 recordings. Do not forget to verify that there is enough tape left. The length of the recording must not exceed the tape left on the video cassette.



- Press **MENU**, and confirm **▲▼** Timer recording with **ENTER** or press **PROG/CHECK** to display the Timer recording menu.
- Press **ENTER** to access timer programming.
- Select a station **▲▼** (e.g. BBC1).
- Press **►** to set date, week or weekday with **▲▼** (e.g. 31/12).
- Press **►** to set start- and stop-time with **▲▼**, **►** (e.g. 10:30). Hold buttons down to change time in 30-minute steps.
- Press **►** to select tape speed: **A** (Automatic), **SP**, **LP**, **EP** with **▲▼**.

- Press **►** to set PDC ON/OFF with **▲▼**.
- Press **ENTER** to save timer programme.
- Repeat these steps for further recordings you may wish to programme.
- Press **TIMER** to activate the VCR's timer mode.
Make sure the symbol is displayed on the VCR display.



To cancel the Timer recording Standby Mode

When you want to use the VCR for playback or manual recording before the programmed timer recording will be performed, you can temporarily cancel the timer recording standby mode.



- Press **TIMER** button. The indication on the VCR display disappears.

However, after you have finished using the VCR, remember to reactivate the timer recording standby mode.

- Press **TIMER** button again, otherwise the programmed timer recording will not take place.

Timer recording

Checking the timer programme

PROG
/CHECK

- Press **PROG/CHECK**, the Timer recording menu appears.
- Press **PROG/CHECK** again or **EXIT** to quit the menu.

Changing or cancelling a timer programme

PROG
/CHECK

- Press **PROG/CHECK**, the Timer recording menu appears.
- With **▲▼** select the entry you would like to edit, confirm with **ENTER**.
- Modify entries with **◀▶▲▼** and confirm with **ENTER**.
- Press **RESET/CANCEL** to delete a recording.

Playing back programmed recordings

PROG PLAY

- Press **PROG PLAY**.
- The device will rewind to the beginning of the recording, and automatically start playing it back. You can also play back programmed recordings manually. This function will not work if the tape has been ejected after Timer Recordings have been completed.

Automatic SP/LP selection

A: If, at the beginning of a timer programme, there is not enough tape left to complete it, the SP/LP function will automatically run the tape at LP speed. This ensures that the entire programme will be recorded. If the LP mode is not enough to 'stretch' the remaining tape to fit, you will not be able to record all of the TV programmes.

* It is not possible to automatically activate the EP mode.

PDC function

Programme Delivery Control adjusts the start and stop time of a timer recording automatically to ensure the recording starts and finishes in line with the programme broadcast.



This is useful when a programme over-runs the published times.


The station must be transmitting PDC and the exact time must be set for PDC to work. The VCR detects whether a station is transmitting PDC only during the tuning process. If PDC is introduced or discontinued by a station you will need to re-tune the VCR before it becomes aware of this. PDC transmissions are not currently nation-wide so please check with your local broadcaster for more information.



ON: The station transmits PDC signals. You must set the timer to the time specified in the TV magazines.

---: The station does not transmit PDC signals. Try to set the start and stop time such that the entire film can be recorded even if a programme begins or ends earlier or later than planned.

Recording with INTELLIGENT TIMER

INTELLIGENT TIMER 25/10/04					
Pos	Date	Start	Stop		PDC
1	BBC1 25/10	10:30	11:30	SP	ON
1	BBC1 25/10	18:30	19:30	SP	OFF
 2	BBC2 25/10	12:30	13:30	A	ON

Timer recording 1 / 3					
Pos	Date	Start	Stop		PDC
1	BBC1 26/10	10:30	11:30	SP	ON
1	BBC1 26/10	18:30	19:30	SP	OFF
--	--/--	--:--	--:--	-	---
--	--/--	--:--	--:--	-	---
--	--/--	--:--	--:--	-	---
--	--/--	--:--	--:--	-	---

INTELLIGENT TIMER 25/10/04					
Pos	Date	Start	Stop		PDC
1	BBC1 25/10	10:30	11:30	SP	ON
1	BBC1 25/10	18:30	19:30	SP	OFF
 2	BBC2 25/10	12:30	13:30	A	ON

The INTELLIGENT TIMER allows you to easily time the recording of programmes broadcasted by the same TV station at the same daytime at different days.

To use the INTELLIGENT TIMER function, at least one recording session must be programmed in the Timer recording menu (page 21). This information will be copied into the INTELLIGENT TIMER menu.

Upon completing the programmed recording session, such session information will be deleted from the Timer recording menu, but remain available in the INTELLIGENT TIMER menu. From there such information may be copied back to the Timer recording menu, thus allowing you to easily programme the recording session again with changed dates.

The INTELLIGENT TIMER menu will contain information about the last 5 programmed recording sessions.

Copying stored recording sessions



- Press **I-TIMER**.
- With **▲▼** or **I-TIMER** select recording session.
- Press **TIMER** to activate the VCR's timer mode.

Editing a programme

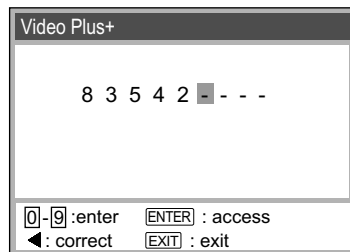
- Press **I-TIMER**.
- Press **▲▼** or **I-TIMER** to select a programme and confirm with **ENTER**. The Timer recording screen appears.
- With **◀▶▲▼** modify the desired data, and store changes with **ENTER**.
- Press **TIMER** to activate the VCR's timer mode.

Protecting I-TIMER programmes

Once 5 entries are stored in INTELLIGENT TIMER menu, any new entry will overwrite the oldest stored programme.

- Press **I-TIMER**.
- With **▲▼** or **I-TIMER** select an entry.
- To protect the entry press **►**. The  symbol appears.
- To remove protection press **◀**. The  symbol disappears.

Recording with VIDEO Plus+



Timer recording						1/3
Pos	Date	Start	Stop	[VCR icon]	PDC	
1	BBC1 31/12	10:30	11:30	SP	ON	
1	BBC1 31/12	11:30	12:30	SP	ON	
2	BBC2 31/12	12:30	13:30	SP	OFF	
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The **VIDEO Plus+** system is manufactured under license from Gemstar Development Corporation.

Programming recordings with the VIDEO Plus+ function

The VIDEO Plus+ code simplifies entering programme information to record TV and SAT programmes. The recording time may be slightly longer than the TV programme.



- Press **VIDEO Plus+**.
- Enter the VIDEO Plus+ number (◀ to correct entry).
- Confirm entry with **ENTER**. The Timer recording screen appears.

If you do not wish to edit the Timer recording data activate timer mode

- Press **TIMER** to activate the timer mode. The ⌚ symbol appears on the VCR display.
- To edit Timer recording data press **ENTER**.
- Select station ▲▼ and use ▶ to set date.
- Use ▲▼ to set the date, week or day of week and use ▶ to set the start time.
- Use ▲▼ to change the start time and use ▶ to set the stop time.
- Use ▲▼ to change the stop time and use ▶ to set the tape speed.
- Set the tape speed: **A** (Automatic), **SP**, **LP**, **EP** ▲▼ use ▶ to set PDC. (for automatic setting and PDC recording see page 22)
- Press **ENTER** to confirm the settings.
- Press **TIMER** to activate the timer mode.

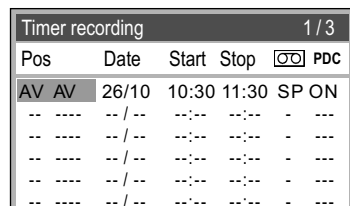
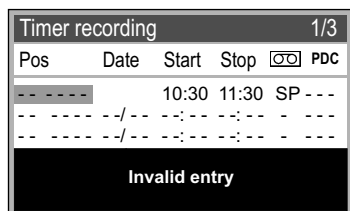
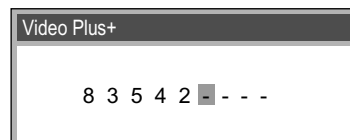


Ensure that the video recorder symbol ⌚ is displayed.

To cancel the Timer recording Standby Mode see page 21.

- * If the device fails to recognise the TV station automatically, the [- -] indication appears under the programme position (Pos). The [- -] will also appear, when using VIDEO Plus+ to record from a Satellite broadcast for the first time. For each satellite station, you will have to set the Pos for the first time (for details see page 25).
- The TV station must be entered manually with ▲▼. The VCR will store this information so it will not have to be entered again.

Recording with VIDEO Plus+



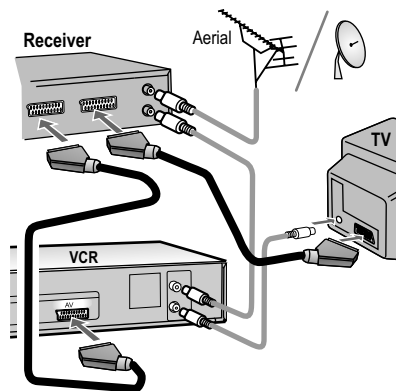
VIDEO Plus+ Codes for Satellite Receivers / Set Top Box

This VCR is not designed to control (switch on or change channel) your satellite receiver or Set Top Box, however, it can be taught to recognise VIDEO Plus+ Codes for Satellite stations. The Satellite Receiver or Set Top Box must be switched on and the correct station selected. Some receivers have their own timer facility for this purpose. Please refer to your Satellite Receiver/Set Top Box instructions for use of such timer facilities. For your VCR to recognise the VIDEO Plus+ Codes for each satellite station, you must teach your VCR which channel or AV input to record from for the first time. Otherwise when setting a VIDEO Plus+ recording, the [- -] symbol will appear in the channel position indicating that the VCR does not know which channel position to set. Once you have set the channel/AV input the VCR will remember it whenever you use a VIDEO Plus+ Code for the station again.



- Press the **VIDEO Plus+** button.
- Enter a VIDEO Plus+ Code from a Satellite TV Guide for a satellite channel, e.g. Sky 1 using the **Numeric** buttons. Press **◀** to correct any mistakes.
- Press the **ENTER** button. [- -] will appear instead of a channel number/AV input.
- Press the **CH** button to select the channel or AV input that is to be used for recording from the satellite channel.
- Press the **ENTER** button to memorise the setting. The VCR will now automatically set the programme position or AV input correctly when a VIDEO Plus+ recording is set for this satellite station in the future.
- Press **▲▼** to select the programme that you have just set. Now press the **CANCEL** button to delete it from the timer recording list. It is no longer needed.
- Repeat the steps above until you have set and deleted dummy timer recordings for each of the satellite stations that you will make VIDEO Plus+ recordings from.
- Press **EXIT** when you have finished.

Recording with external recording controls



Others	
Tape length	: AUTO(◀E-240)
SQPB	: AUTO
OSD	: 4:3
VCR display	: DIMMED
EXT LINK	: 2
◀ : select	
[MENU] : return [EXIT] : exit	

EXT LINK



EXT LINK

The AV input of this VCR is equipped for use with external equipment having external timer recording control such as digital satellite receivers. The AV input can be set to EXT LINK 1 or EXT LINK 2 depending on the equipment to be connected. Fully wired 21-pin scart cable is required. Refer also to the manufacturer's instruction for the external unit.

- Press **MENU**, the Menu screen appears.
- With ▼ select menu Others and confirm with **ENTER**.
- With ▲▼ select [EXT LINK] and turn to [2] or [1] ◀▶.
- Press **MENU** to return to the Menu screen.

EXT LINK 1: The VCR recording start and stop time is controlled by a control signal sent via the 21-pin scart cable from the external unit (e.g. Sky Digibox).

EXT LINK 2: The VCR will start recording when AV input detects the video signal and stop recording when the video signal is switched off by the external unit.

- Press **EXT LINK** to activate the VCR's recording stand-by mode. Make sure the VCR's EL1 or EL2 display appears. As long as the satellite or digital receiver transmits the special recording signal (EL1), or a video picture is transmitted (EL2), the VCR will continue to record.

EL1

EL2

The following screen will be shown if you select [EXT LINK 2]:

- Press **ENTER** to hide this message.
- Press **EXT LINK** to stop recording.

EXT LINK recording in progress

[ENTER] : yes [EXT LINK] : cancel

- * Be sure that the timer programmes stored by your VCR do not overlap with the ones of the satellite or digital receiver. Some external equipment may not work with this function, refer to the operating instructions for the external unit.

EXT LINK



Quitting recording stand-by mode

- Press **EXT LINK** to quit recording stand-by mode. The EL1 or EL2 display disappears.

You can now play back a cassette or make a manual recording. You must press **EXT LINK** again to reactivate the recording stand-by mode.

Manual Functions

Tuning					
Pos	Name	Ch	Pos	Name	Ch
1	BBC1	22	6	****	30
2	BBC2	23	7	----	---
3	ITV	24	8	----	---
4	CH4	25	9	----	---
5	CH5	26	10	----	---

[A]: delete **[B]**: move
[↔]: select **[ENTER]**: access
[MENU]: return **[EXIT]**: exit

Pos	:	7
Name	:	----
Channel	:	----

[↔]: select
[MENU]: return **[EXIT]**: exit

This VCR has 99 programme positions that can be tuned to receive TV stations. In certain circumstances you may wish to tune in a station manually or rename a TV station.

Manual Tuning

- Press **MENU**, the Menu screen appears.
- Select the Tuning menu by pressing **▼** and confirming with **ENTER**.
- Confirm [Manual] by pressing **ENTER**.
- With the **◀▶** buttons, select an open storage position.
- Press **ENTER**.
- Press **◀▶** to start Channel tuning, or **Numeric** buttons to enter the channel number.
- Wait until the desired station has been set.
- Press **MENU** to return to the Tuning screen.
- * If you have performed Manual Tuning to find TV stations, the [- -] indication may appear under [Pos/Name] on the On Screen Display when programming a VIDEO Plus+ timer recording.

Options available for tuning the channels

Pos		Station position	28
Name		Station name setting	28
Channel		Channel setting	27

Manual Functions

Tuning					
Pos	Name	Ch	Pos	Name	Ch
1	BBC1	22	6	****	30
2	BBC2	23	7	----	---
3	ITV	24	8	----	---
4	CH4	25	9	----	---
5	CH5	26	10	----	---

[A] : delete **[B]** : move
[↔] : select **[ENTER]** : access
[MENU] : return **[EXIT]** : exit

Pos : 1
 Name : **BBC1**
 Channel : 22

[↔] : select
[MENU] : return **[EXIT]** : exit

Tuning					
Pos	Name	Ch	Pos	Name	Ch
▶ 1	BBC1	22	6	****	30
2	BBC2	23	7	----	---
3	ITV	24	8	----	---
4	CH4	25	9	----	---
5	CH5	26	10	----	---

[A] : delete **[B]** : move
[↔] : move **[ENTER]** : store
[MENU] : return **[EXIT]** : exit

Changing the name of TV stations

- Press **MENU**, the Menu screen appears.
- With ▼ select the Tuning menu, confirm with **ENTER**.
- Confirm [Manual] with **ENTER**.
- With ◀▶ select the name entry.
- Press **ENTER**.
- With ◀▶ select the name entry.
- The cursor will mark the first letter **B**BC1.
- With ▲▼ change that letter.
- With ▶ select the next letter **B**BC1.
- Press **MENU**.
- The new name will be stored in Tuning.

Changing the order of TV stations or deleting a station

- Press **MENU**, the Menu screen appears.
- With ▼ select the Tuning menu, confirm with **ENTER**.
- Confirm [Manual] with **ENTER**.
- Press **[B]**. An arrow to the left will mark the selected field.
- With ◀▶▲▼ move the station to any other desired location.
- Press **ENTER**.
- Press **[A]** to delete the station.

Manual Functions

Tuning	
Manual	
Auto Setup	
Shipping condition	
Owner ID	
OK?	
[ENTER] : yes [EXIT] : no	



Auto Setup	
Tuning	: Ch 1

Tuning	
Manual	
Auto Setup	
Shipping condition	
Owner ID	
OK?	
[ENTER] : yes [EXIT] : no	

Creating a new station table

- Press **MENU**, the Menu screen appears.
- With ▼ select the Tuning menu, confirm with **ENTER**.
- With ▼ select [Auto Setup], confirm with **ENTER**.
- Press **ENTER** to confirm.

The Auto Setup menu will be displayed.
The Automatic Tuning will start.

- * When no stations have been set, confirm all connections and restart Auto Setup.
- * You can restart Auto Setup, without using remote controller, by pressing some buttons on the front of the unit. Hold down  and  on the main unit simultaneously for about 5 seconds.

Shipping condition/factory defaults

Shipping condition resets the VCR back to the original factory settings except Owner ID information. This is useful if the VCR is going to be used in a new location as auto-setup will begin again when the unit is switched on (after connecting to aerial and mains).

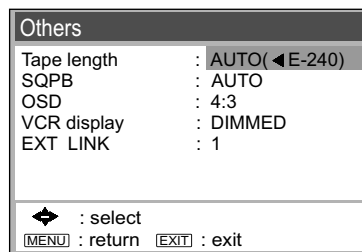
- Press **MENU**, the Menu screen appears.
- With ▼ select the Tuning menu, confirm with **ENTER**.
- With ▼ select [Shipping condition] and confirm with **ENTER**.
- Press **ENTER** to confirm.

- To re-tune the VCR, disconnect and reconnect the AC Mains lead.

Manual Functions

Displaying the Others Menu

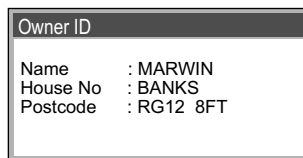
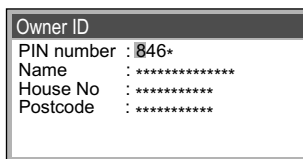
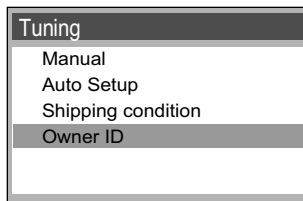
- Press **MENU** and select Others **▲▼**.
- Press **ENTER**.
The Others menu appears.



Others Menu

Tape length	Sets the tape length of the cassette you use. AUTO (◀ E - 240), E - 195, E - 260, E - 300
SQPB	AUTO : The VCR automatically detects the type of recording. ON : Plays back S-VHS format cassettes in quasi S-VHS format. OFF : Plays back cassettes recorded in VHS format only.
OSD	4:3 : Displays appear at the edge of the screen (displays not visible on 16:9 format screens). WIDE : Displays appear at the edge of the screen (displays appear in the middle on 4:3 format screens). OFF : No on-screen displays
VCR display (only in stand-by mode)	DIMMED : The VCR's display is dimmed. ON : The VCR's display is on at normal brightness.
EXT LINK	1 : The VCR recording start and stop time is controlled by a control signal sent via the 21-pin cable from the external unit, for example Sky Digibox. 2 : The VCR will start recording when AV input detects the video signal and stop recording when the video signal is switched off by the external unit.

Manual Functions



Owner ID

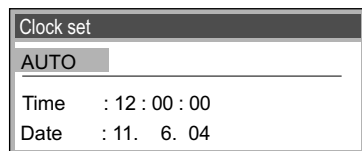
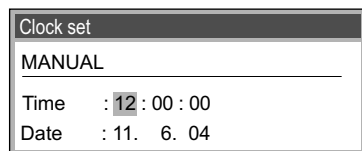
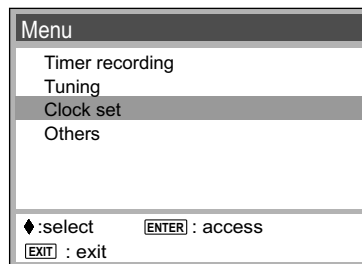
- Press **MENU** and select Tuning **▲▼**
- Press **ENTER**.
- Select Owner ID **▲▼** and press **ENTER**.
- Use the **Numeric** buttons or **▲▼** to enter the current PIN number. After entering the correct PIN number, you can change the Name, House No and Postcode.
- Press **ENTER** to conclude the setting.
- Use **▲▼◀▶**, the **Numeric** buttons and **ENTER** to select and change the desired information.
- Press **EXIT** to exit the On Screen Display.



To display the Owner ID information on TV

- Keep **EJECT** pressed for more than 5 seconds.
- * The PIN number is not displayed.
After 30 seconds, this menu automatically disappears.

Manual Functions



Clock setting

The clock will normally be set correctly during Auto-Setup however, in some circumstances the VCR cannot set the clock automatically. In this case, follow the operation steps below to manually set the clock.

To manually adjust the clock

- Press **MENU** and select Clock set ▲▼.
- Press **ENTER**.
- Confirm that Clock set is set to MANUAL, and press **ENTER**.
- Use ▲▼◀▶ or **Numeric** buttons to set the Date and Time.
- Press **ENTER** to conclude the settings.
- Press **EXIT** to exit the On Screen Display.

To activate the automatic time correction function

The correct time for the VCR clock can be automatically maintained when the VCR is tuned to a station that transmits a time signal.

- Press **MENU** and select Clock set ▲▼.
 - Press **ENTER**.
 - Use ◀▶ to set AUTO.
 - Press **ENTER** to conclude the setting.
 - Under adverse reception conditions, etc., the Automatic time correction function may not work. In this case, the indication for Clock setting is automatically reset to MANUAL. If the reception conditions improve later on, it is possible to activate this function.
 - Press **EXIT** to exit the On Screen Display.
-
- * If Clock setting is set to AUTO when you open the Clock screen, do not set it to MANUAL, otherwise, the automatic time correction function is deactivated.
 - * This VCR uses a 24 hour clock.
 - * In case of a power failure, an automatic back-up system maintains the clock for approximate 60 minutes.
 - * When Clock setting is set to AUTO, the automatic time correction function checks and if necessary adjusts the time several times every day. The automatic time correction function only works when the VCR is in standby, it does not work in the timer recording mode.
 - * Don't forget to change summer time and winter time

Before requesting service

Please contact our after sales service centre if you fail to remove problems by yourself (see Guarantee Information).

I HAVE AN ON SCREEN MESSAGE.

You have attempted to carry out a function, which is not possible at this time. It may be that no tape is inserted and you have pressed **PLAY ▷** or that you tried to change the details of a timer recording whilst it was being carried out.

- Please follow the instructions as given on the display.

THE VCR DISPLAY IS NOT ILLUMINATED.

The AC mains lead has become disconnected

- Connect mains lead securely.

THE DISPLAY IS LIT, BUT THE VCR CANNOT BE OPERATED.

The VCR is in timer recording mode.

- Press **TIMER** to cancel the mode.
- Safety devices are operating.
- Disconnect the mains, wait for 1 minute and reconnect.
- If problem persists, consult service engineer.

VCR PICTURE DOES NOT APPEAR ON THE SCREEN.

If connected via RF

- Check RF output channel and adjust if necessary. (See page 14.)

If connected via SCART

- Check connections and choose appropriate AV channel on TV.

AUTO CLOCK SETTING DOES NOT OPERATE.

Teletext information is not available or cannot be read.

- Set the clock manually. (See page 32 for details.)

THE PLAYBACK PICTURE IS DISTORTED, BLACK AND WHITE OR HAS HORIZONTAL NOISE BARS.

The tracking adjustment is not correct.

- Adjust the tracking. (See page 17.)

The playback channel on the TV has not been tuned properly.

- Re-tune the TV.

The video heads may be worn or clogged.

- Try to playback a new tape.

THE PICTURE OF A RECORDED PROGRAMME IS DISTORTED OR MISSING.

The aerial or connection is defective

- Check connections and reconnect as necessary.
- No programme was recorded because the VCR is not tuned correctly.
- Re-tune the VCR.

Incorrect programme position was selected.

- Select correct channel.

TIMER RECORDING DOES NOT OPERATE CORRECTLY.

Time and date were not set correctly.

- Re-set correctly.

The start or finish time was not set correctly.

- Re-set correctly.

The VCR was not put into timer recording mode.

- Put VCR into timer recording mode.

RECORDING FROM AN EXTERNAL SOURCE IS NOT POSSIBLE.

The cables are not connected properly.

- Check connections and adjust as necessary.

THE REMOTE CONTROL DOES NOT OPERATE CORRECTLY.

The remote signal cannot reach the VCR.

- Point the remote at the front of VCR and make sure that there are no objects in the way.

The remote is too far from the VCR

- Move closer to the VCR or replace the batteries.

The batteries have been inserted incorrectly.

- Insert the batteries correctly.

Customer Care Centre

- For UK customers:
08705 357357.
- For Republic of Ireland customers:
01 289 8333.
- Visit our website for product information **www.panasonic.co.uk**.
- E-mail: **customer.care@panasonic.co.uk**.

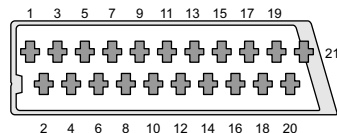
Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by telephoning our Customer Care Centre
Mon - Friday 9:00am - 5:30pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at
www.panasonic.co.uk.
- Most major credit and debit cards accepted.
- All enquiries, transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Specifications

NV-MV21EB/EBL

21-pin Scart Socket



AV Scart Socket

- 1 Audio output CH2 (R)
- 2 Audio input CH2 (R)
- 3 Audio output CH1 (L)
- 4 Audio ground
- 5 Blue ground
- 6 Audio input CH1 (L)
- 7 Blue
- 8 Switching voltage
- 9 Green ground
- 10 Reserved
- 11 Green
- 12 Reserved
- 13 Red ground
- 14 Blanking ground
- 15 Red
- 16 Blanking
- 17 Video output ground
- 18 Video input ground
- 19 Video output
- 20 Video input
- 21 Ground

Option	Technical data
Power supply Power consumption in operation	220-240 V AC, 50/60 Hz 13W
Controls	multifunctional remote control (VCR and Panasonic TV) / VCR direct controls (main functions)
Video and Audio heads (helical scanning system) Tape speed Record and playback time (E240 cassette) Fast forward or fast rewind time (E180 cassette)	2 heads (Super Ferrite Head) SP: 23.39 mm/s, LP: 11.7 mm/s SP: 240 min, LP: 480 min approx. 60 s
TV system Video input and output level RF modulated output	PAL I 625 lines 1.0 V peak-to-peak, 75 Ohm, terminated UHF channel (21-68), 75 Ohm
Audio Input level Audio Output level	-6 dBV, more than 10 kOhm -6 dBV, less than 1 kOhm
Horizontal resolution (colour) Signal-to-noise ratio video (colour) Signal-to-noise ratio audio Audio frequency response	more than 240 lines (SP) more than 43 dB (SP) more than 43 dB (SP) 80 Hz to 8 kHz (SP)
Operating temperature / humidity	5°C to 40°C / 35-80% relative humidity
Weight and Dimensions (approximate value)	3.5 kg / 430 (width) x 89 (height) x 276 mm (depth)

*** These specifications are subject to change without notice.**

List of TV Reception Channels

	VHF	UHF	CATV
UK	–	21–68	–
Ireland	A–J	21–69	104–470MHz

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