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digitaluk

Meridian Aerial Installer Newsletter

2nd Edition – June 2011

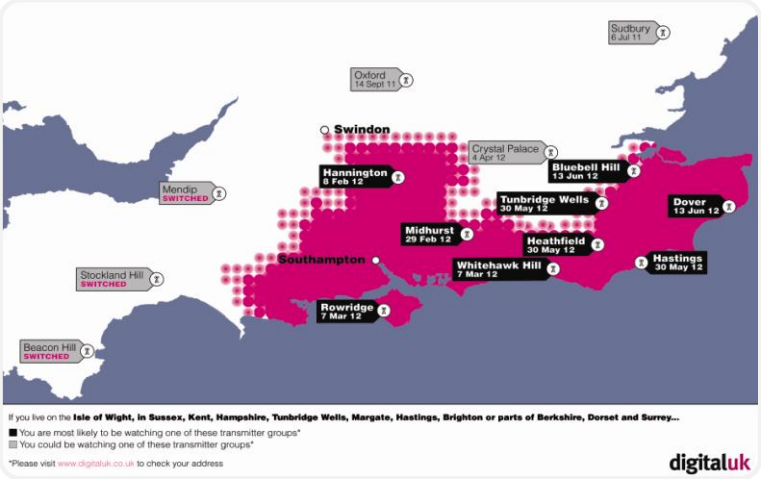
The Tunbridge Wells, Hastings, Heathfield, Bluebell Hill and Dover switchovers are less than 12 months away – it's time to prepare!

Welcome to the first of three newsletters from Digital UK - the independent body leading the UK's digital TV switchover (DSO).

This newsletter is aimed at installers covering homes served by the Tunbridge Wells, Hastings, Heathfield, Bluebell Hill and Dover transmitter groups in the Meridian TV region.

The next will be issued three months before switchover and a third (and last) will be published around one month before the first switchover day.

There will be an increasing level of detail in each newsletter. This edition focuses on key dates, reception factors and the tools we offer. The second covers common technical issues in detail, while the last will give proposed switchover timings on the day and other important information to help you and your customers to make final preparations for the transition to digital-only TV. Digital UK will also hold face-to-face briefing events around six months before switchover for installers and those retailers with a switchover promotional licence.



There are 8.8 m homes that have now completed switchover with few issues.

Retuning of digital equipment is the most common reason for consumer calls, and this is set to remain for homes in the Meridian region. Another key factor will be the number of transmitter overlaps that occur bringing potential for viewers to receive unexpected regional variants of BBC and ITV services or continental European services. Be sure to prepare your business and retail partners for handling retuning and overlap enquiries.

On 10 May 2011, Digital UK announced the switchover dates for the Tunbridge Wells, Hastings, Heathfield, Bluebell Hill and Dover transmitter groups (dates for the other four* transmitter groups in the Meridian TV region were previously announced on 15 March 2011.) * The Margate transmitter is now being treated as a relay in the Dover transmitter group. The table below lists all nine transmitter groups in the Meridian TV region, the areas each serves and the respective switchover dates, colour matched to show those that switch on the same date.

TV Region	Transmitter Group	Area served	Homes (000s)	Switchover Stage One (DSO1)	Switchover Stage Two (DSO2)	Transition
Meridian A	**Hannington**	parts of Hampshire, Berkshire and Surrey	481	**08 Feb 12**	**22 Feb 12**	14 days
Meridian A	**Midhurst**	much of West Sussex	99	**29 Feb 12**	**14 Mar 12**	14 days
Meridian A	**Whitehawk Hill**	the Brighton area	114	**07 Mar 12**	**21 Mar 12**	14 days
Meridian A	**Rowridge**	Hampshire, the Isle of Wight, parts of Dorset and West Sussex	733	**07 Mar 12**	**21 Mar 12**	14 days
Meridian B	**Hastings**	the Hastings area	18	**30 May 12**	**13 June 12**	14 days
Meridian B	**Heathfield**	East Sussex	216	**30 May 12**	**13 June 12**	14 days
Meridian B	**Tunbridge Wells**	the Tunbridge Wells area	54	**30 May 12**	**13 June 12**	14 days
Meridian B	**Bluebell Hill**	north and mid Kent	217	**13 June 12**	**27 June 12**	14 days
Meridian B	**Dover***	south and east Kent	240	**13 June 12**	**27 June 12**	14 days

*NB: *The Margate transmitter is now being treated as a relay of the Dover transmitter group.*

Switchover will happen in two stages – 14 days apart

Note that this general approach can differ for some masts through planned technical events such as those listed below.

At stage one:

- On the first date (DSO1), analogue BBC Two broadcasts stop permanently at all masts (primary and relays) in the particular transmitter group.
- At the same time, the existing low power Digital Terrestrial TV (DTT) Multiplex 1 is switched off permanently to leave the other lower powered multiplexes (Mux2, A, B, C and D) on air.
- At all masts in the group, the new BBC-A mux (replaces Mux1) is launched at high power in 64QAM / 8KCOFDM mode at different times. We will notify you of the anticipated times approx one month before DSO for each transmitter group.
- At some UK masts one of the remaining analogue (BBC One, ITV or Channel 4) services moves to the old vacated analogue BBC Two slot for the length of the transition period, until switched off permanently. This means that the relevant analogue service will appear on button "2" on analogue TVs and video recorders. Any existing advance timer settings stored on a recorder for BBC Two will record programmes from the moved analogue service unless the recorder is retuned. We will confirm where this applies for the Meridian B transmitters in the last newsletter about one month before switchover.
- **At this stage, DTT viewers should retune their Freeview equipment (including Top Up TV and BT Vision).**

At stage two (DSO2):

- All remaining analogue services and existing low powered Mux 2 and Mux B digital services will be switched off and will stop broadcasting permanently.
- At all transmitters, the BBC-A mux will remain on-air but be subject to switching breaks.
- The new high power DSO PSB muxes BBC-B (HD) and D3&4 launch at all masts, but at different times, from the morning onwards. We will inform you of the anticipated times approximately one month before DSO for each transmitter group.
  - D3&4 launches in 8k COFDM/64QAM mode
  - BBC-B launches with HD content using DVB-**T2**. *A 'Freeview HD' DVB-**T2** (32KCOFDM-256QAM-MPEG4) receiver will be needed to view these services.*
- At primary transmitters only, the new 3COM muxes (SDN, Arqiva A and Arqiva B) launch.
  - Transmission modes and power levels can vary for some muxes, at some sites, pending later technical events as below. We will provide full details of such cases in future newsletters.
- **At this stage, DTT viewers should retune their Freeview equipment (including Top Up TV and BT Vision).**

Note that the general approach above can differ for some masts through planned technical events such as those below.

The need to retune

The close proximity of the Meridian TV region to neighbouring ones means that short-term use of parking channels or later mode and power changes can apply. Some require viewers to retune their Freeview TVs, boxes or recorders on other dates, either in advance or after those for DSO stage one and stage two dates. The table below lists expected retune event dates for Meridian B primary transmitters. High impact events that require all homes to retune to prevent loss of services are in **bold font**, others are medium impact events that only require some homes to retune. These events are still subject to possible change. We will confirm full details in the one-month out newsletter. Further retunes can be required if Freeview adds or move services.

Retune events (dates)	TUNBRIDGE WELLS	HASTINGS	HEATHFIELD	BLUEBELL HILL	DOVER
Pre DSO					**26 Jan 2011 (done)**
DSO stage one	**30 May 2012**	**30 May 2012**	**30 May 2012**	**13 June 2012**	**13 June 2012**
DSO stage two	**13 June 2012**	**13 June 2012**	**13 June 2012**	**27 June 2012**	**27 June 2012**
Post DSO	**27 June 2012**		**27 June 2012**		

Viewers should always run a full (first time installation) retune to receive all of the services available. They should do this from time to time to always have the latest channel line-up and maintain their Freeview equipment's optimum speed and performance.

The Retune challenge

Retuning is the single most common issue that causes consumers to contact helplines and retailers. Retailers and installers are reminded to have sufficient staff available to handle retuning for their customers not able to manage it themselves.

Other elements proven to work include:

- Explain retuning and its importance when you sell equipment.
- **Offer chargeable "Home Help"** retuning options for switchover and beyond.
- Have dedicated/temporary staff to run an **in-store "retune area". This helps separate the customers wanting advice** from those wanting to buy.
- Tailor your answerphone message – direct those seeking advice to the Digital UK advice line.
- Know where other retuning advice is available.

Digital UK Retune Tools:

To help consumers, Digital UK has created simple retune guides that are being included by manufacturers in their UK DTT model packaging. These are also available on the Digital UK website for downloading alongside generic guides ideal for retailers. There is also a manual search helpsheet for the more technical user, a webvideo designed to reassure users and a drop down search area where full instruction manuals can be accessed for many models. All can be accessed via **www.digitaluk.co.uk/retune**

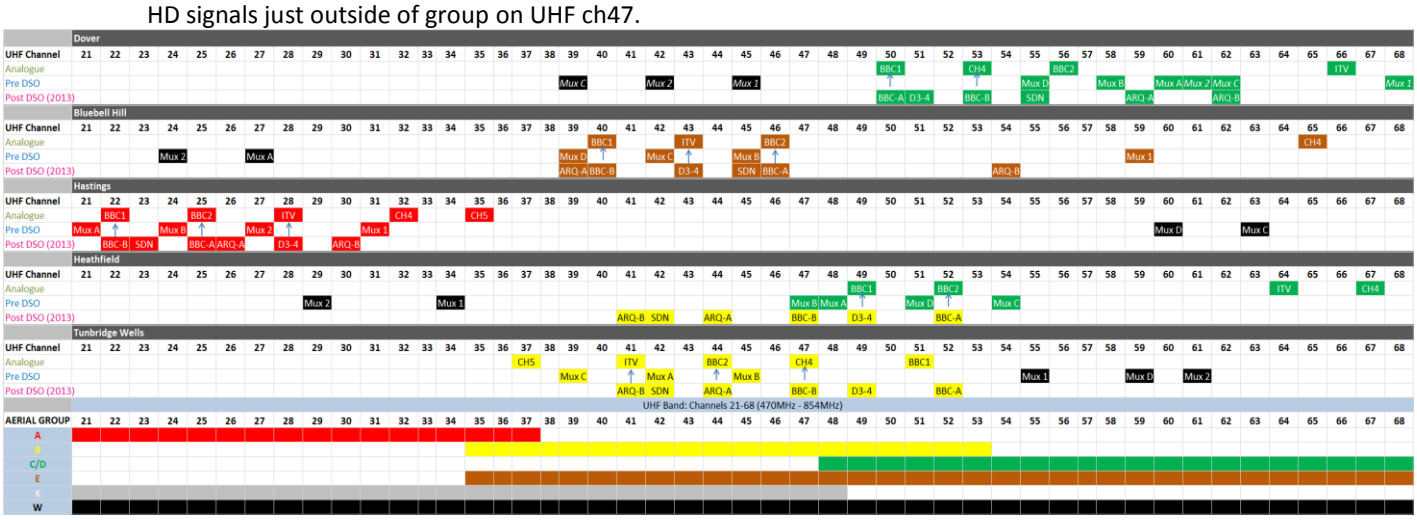
Don't forget the TV Retune website

The website (www.tvretune.co.uk) originally built for the Freeview National Retune of 30 September 2009 is being maintained. It carries hundreds of dedicated retune guides for many digital boxes, IDTVs and DTRs as well as some generic retune guides produced by manufacturers. There are also many 'full user manuals' for those who need more non-tuning related information.

Existing aerials will be fine for digital – in most cases

In most cases viewers' existing aerials will be fine for digital from switchover unless their old one is not in good condition. The table below shows this is true for homes covered by the **Dover**, **Bluebell Hill**, **Hastings**, **Heathfield**, **and Tunbridge Wells primary transmitters** where, except for **Heathfield,** the existing analogue aerial groups will be used after switchover. At **Heathfield** the existing (group C/D) analogue aerial group will swap to group B for post-switchover services. However, most homes the mast serves will still be OK as:

- Since the introduction of analogue Channel Five, for most parts of the UK, weather-damaged aerials have largely been replaced by wideband models, as industry has focused on manufacturing and fitting these models. *(A 2008 survey of the CAI, aerial manufacturers and distributors showed that over 85% of aerials sold and fitted are wideband models. This situation has continued to date.)*
- More than 89% of homes in regions yet to switch have already adopted digital TV on their main sets, those with Freeview equipment and served by **Heathfield** or **Bluebell Hill,** would have needed a wideband aerial to receive all multiplexes and the same aerial in good working order will cover their needs for switchover.
- **For all relays** at switchover, all muxes will be within the analogue aerial group.
    - This is except for the **Margate** relay in the Dover transmitter group which will change from the analogue group A to group C/D at switchover.
    - Group E is the theoretical analogue aerial group for the **Hastings Old Town** relay and will cover post switchover needs. However some homes might have group B aerials as there is only one analogue channel that sits above Group B frequencies. Such homes will need to change to a group C/D aerial for switchover or a Wideband alternative to be ready for any subsequent changes.
- Those homes who still use a grouped aerial will still receive the three public service muxes (3PSB) to include all those provided under the TV licence fee and the new HD mux. They would only need to change to a wideband model if wanting to receive the commercial services.
    - This should also apply to homes served by the **Heathfield** mast and have a group C/D aerial as it should still provide HD signals just outside of group on UHF ch47.



** Prior to switchover Dover operates alternative out of group UHF channels for some Freeview muxes if homes suffer interference.*

- Ofcom research in 2006 showed that between 5 and 10% of UK homes may need to change their aerials. This has been substantiated in the recent G-Tech Report commissioned by the Department for Business, Innovation and Skills (BIS); and proven at all switchovers to date.
- Around half of existing indoor set-top aerials should be adequate for receiving DTT after switchover. A substantial number of the remaining indoor aerials will work satisfactorily most of the time, or for many but not all services.

The current analogue reception, taken together with the Digital UK Postcode Checker will be the best indicator of likely post-switchover DTT reception. Use the trade view of the postcode checker to see allocations for all primary and relay transmitters available to a home.

Don't forget post-switchover transmission power increases

DSO provides for substantial DTT power increases at all UK transmitters when analogue services end. This will enable Ofcom's condition of matching the 98.5% UK analogue coverage figure. Power increases for individual muxes vary. The average is a ten-fold increase that provides a further 10dB gain into the Freeview receiver. We will notify you of the transmission power increases for **Tunbridge Wells**, **Hastings**, **Heathfield**, **Bluebell Hill** **and** **Dover** and their relay transmitters in future newsletters.

Amplifiers

When transmission powers increase, homes with aerial amplifiers could get service loss or picture and sound disturbance due to the DTT receiver's tuner being overloaded. Old aerial amplifiers with poor filtering could cause video/ audio synchronisation problems where the receiver tries to read noise as a DTT signal. Removing the amplifiers should rectify both issues.

A Single Frequency Network will apply

The move to 8K COFDM allows for a Single Frequency Network (SFN) to operate between the **Heathfield** and **Tunbridge Wells** transmitters. The SFN is deliberately designed to use the overlapping coverage between these two masts and apply the same UHF channels to each mux. In analogue, this would make the overlapping channels unusable due to the mutual interference, however the 8K transmission mode allows the signals to add rather than interfere with each other in the overlap area, thus improving reception.

Bexhill: A new relay for the Heathfield transmitter group

The new Bexhill relay will be introduced for switchover and is designed to improve coverage for Bexhill households that may not find the service provided by Heathfield to be sufficiently reliable. A new aerial is expected to be required as the new site is not in line with Heathfield, although it is the same polarisation and aerial group.

UHF channel changes and impact to communal aerials

When planning communal aerial system installations or upgrades, installers should take account of UHF channel allocations changing at some point in the UK switchover process, and possibly later if other interleaved DTT services are introduced. Installers may need to revisit flats and other shared accommodation sites to retune head-end equipment or to remove or replace filters. Some installers continue to adopt lower cost fixed UHF channel systems and will have to contemplate having to replace these in the next couple of years with further UHF channel changes that will occur. Go to the **Digital UK Postcode Checker** and use the "Trade View" to see which UHF channels are reassigned between now and 2013. Those fitting cluster levellers or other filters should ensure that products used offer easy full UHF band access. Previously unused channel slots will be used post–switchover, when some UHF channels are auctioned off by Ofcom and reassigned for new services.
See http://stakeholders.ofcom.org.uk/consultations/ddr/

The Digital UK Postcode Checker: the accurate tool

The Digital UK Postcode Checker is an important predictive tool to provide consumers and trade with all relevant and accurate switchover information. It lists the transmitter a home is likely to be using and all available platforms to a home before, during and after switchover. The postcode checker also shows all known DTT retune events for the home and when Freeview HD services are available to the given postcode. Importantly, unlike other third party checker sites, the DTT predictions are the same as those being used to design the transmitter network. The Digital UK postcode checker uses actual transmitting antenna patterns and takes account of UK and continental interference. Check it out on the front page at **www.digitaluk.co.uk.**

Consumer View

Trade View

Digital Switchover Trade Support

In addition to the Postcode checker, Digital UK offers other important web-tools and a dedicated trade helpline:

Freeview Service Variations

The range of available DTT channels to homes depends on which transmitter they receive signals from. (Channel line-up always subject to change)

- Virtually all households will be able to receive around 15 of the most-watched standard definition (SD) Freeview channels via their aerial. Many households will be able to receive more than 40 (SD) channels.
- Homes served from a primary main transmitter (i.e. one that has delivered Freeview since 2002) will receive 6 multiplexes that deliver all Freeview (SD) channels, plus optional Top Up TV and ESPN subscription services.
- The remaining relays will broadcast the three public service broadcast multiplexes and served homes will receive around 15 of the most watched Freeview (SD) channels and text services from the BBC, ITV, Channel 4, and Channel Five.
- All DTT homes will be served 'Freeview HD' signals too. These can be viewed with a compatible 'Freeview HD' receiver and HD ready TV connected via an HDMI interface or by a 'Freeview HD' TV.

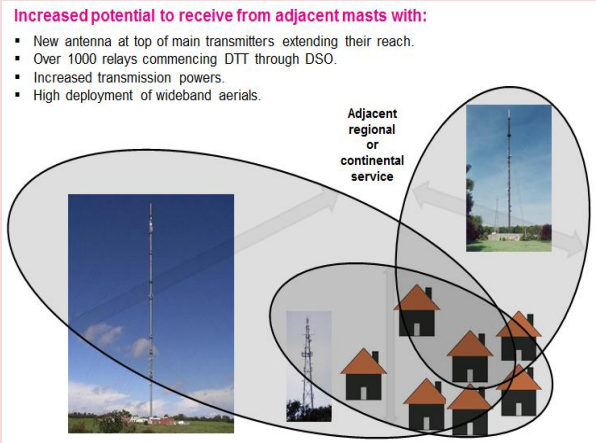
Ofcom sets minimum coverage levels for public service channels at 98.5%. However, due to limited availability of frequencies and high cost for updating transmitter sites, commercial channels and pay TV providers are not subject to the same coverage requirements. At switchover they have to transmit from the current list of 80 primary transmitter sites - which with efficiencies from switching off analogue and increasing power will provide commercial DTT coverage to around 90% of UK households. An Ofcom fact sheet can be found at:

www.ofcom.org.uk/research/tv/reports/dsoind/factsheets/no3factsheet.pdf.

Prepare for increasing cases of overlapping signals

Experience from previous switchover regions has showed that some receivers simply store the first received signals and do not compare with a stronger desired alternative.

Viewers may need help in resetting their preferred line-up or using the favourite channels facility. Until new products appear that offer easier intelligent handling and storing of duplicated or different regional channels, there are four main ways to set up products to display only the desired services:



1. **The manual tune procedure - you need to know the UHF channels for each mux.**
2. **Running a tuning search with aerial plug removed and then inserting just before the process gets to the wanted UHF channels – impractical when different regional services from neighbouring masts are interleaved and use adjacent UHF channels**
3. **Add an attenuator – to knock out unwanted weak UHF channels. If removing the attenuator afterwards to maximise signals, remember it will need to be added again for future retunes.**
4. **Alternatively, for most products the favourite channel or channel-sort settings can be used to reorganise services to the household's preferred order.**

Installers adopting RF bypass filters need to remember that these should be flexible enough to take account of sixteen UHF channels being auctioned off post-switchover by Ofcom on behalf of the Government. For more detail see www.ofcom.org.uk/radiocomms/ddr

Digital UK manual retune widget

The Digital UK website now includes a tool to help guide viewers to successfully complete a manual retune. On entering a postcode at **www.digitaluk.co.uk/postcodechecker/manual_retuning** a page is created that highlights the overlaps issue. It lists all available DTT muxes for the address and the UHF channels each mux uses, on that date, and at subsequent DSO and other retune events. The user can then print a handy PDF page with all the details needed.

Freeview HD: update and clarification

Freeview HD content will be broadcast from all primary and relay masts using the new DVB-T2 standard. Viewers will need a DVB-T2 (32KCOFDM-256QAM-MPEG4) based set top box or recorder connected via an HDMI cable to an 'HD ready' TV or an integrated DVB-T2 television to view any of the 'Freeview HD' services. Existing integrated TVs such as those with MPEG4-chips alone, early Freesat satellite TVs and others with HD logos will not display the aerial-based HD services. Look for boxes or TVs with the 'Freeview HD' logo and recorders with the 'Freeview+ HD' version. Freeview HD models also provide the user with menus that offer simplified retuning and overlaps handling.

A move to 8k COFDM and 64 QAM only transmissions = 2K-only products stop working

Post-switchover DTT will be based on the 8K COFDM* transmission system only. This greatly improves signal robustness, while 64 QAM* can enable more services to be carried. However, such a move means that **old ITV Digital/On Digital and other 2K-only set top boxes** will not work after switchover. **2K-only IDTVs** can be updated with any current Freeview digital box or DTR. Check the latest list of affected models on the Digital UK website: www.digitaluk.co.uk/2kequipment

Split-NIT cases could still appear

In the summer 2008, Freeview and the Digital Multiplex Operators updated transmissions to enable more TV and radio services to run on DTT. This meant that the broadcasted Network Information Table (NIT) needed to be split and caused some models without the 'digital tick' (different to 2K cases) to fail with a retune. The majority of 'Split NIT' models are expected to have been revealed through the Freeview National Retune on 30 September 2009. However, some may still emerge through such as consumers inheriting product from family or buying second-hand models. See: **www.digitaluk.co.uk/splitnit** or **www.freeview.co.uk** for more information on models affected.

Other equipment issues

In addition to 2K and Split NIT factors there are other equipment issues that appear at each switchover. These include:

- Early Vestel T810 DTRs not working with 8K/negative offsets
- Memory shortfall on old IDTVs
- Extended NIT handling
- RF connected equipment

More information on each of these and any other equipment factors that emerge will be provided in the next newsletter. In the meantime for more information go to the "find help" section on the homepage at www.digitaluk.co.uk, type the topic in the search box and press 'enter.'

Don't forget recorders

After switchover, viewers who want to record one channel while recording another will need to convert their VCR or analogue DVD recorder to digital too. For the majority, moving to a twin-tuner digital TV recorder (DTR) is the most practical way – providing one box to convert both their TV and recorder.

Only those DTRs with the standard 7-8 day EPG will work with any transmitter in the UK. Models with a proprietary 14-day EPG that relies on data broadcast from one of the commercial multiplexes will not work fully in homes served by relay masts.

Those who want to record from a digital box connected to their existing recorder by SCART must remember to select the AV channel (E1; L1) on their recorder and the desired service on the digital box. After switchover, VIDEO Plus+ can still be used to set start and finish times for recording but users will need to manually select the "AV output" on their recorder and ensure that their DTV or box is switched to the channel to be recorded. PDC functionality will cease working at DSO.

The 'digital tick' logo – a registered certified mark

The 'digital tick' logo is owned by the Department for Business, Innovation and Skills (BIS). It formally became a registered certification mark on 28 March 2008 and was developed to give consumers confidence in the products they are buying, by identifying equipment and services designed to continue working throughswitchover. The 'digital tick' logo is now recognised by 8 in 10 people in the UK as the way to find reliable information and services for the digital TV switchover.

The Registered Digital Installers Scheme

As required by BIS, Digital UK's marketing focuses on promoting those installers who have committed to become Registered Digital Installers (RDI's). Only installers with full RDI status (excludes ARDIs), can use the 'digital tick installer' certified logo and Aeri-Al (robot) image consistent with the usage rules at www.digitallogo.co.uk/pdf/Logos_D&D_Feb10.pdf. All RDI installers must include their membership number beneath the 'digital tick' logo in any advertising/marketing they plan for their services.

digital Registered installer
18201010

This includes media such as the Yellow Pages and Thomson listing directories. Yellow Pages has updated their sales systems to require agents to obtain and check RDI member numbers before allowing the use of any 'digital tick' logos and Digit-Al images in adverts. RDI Installers are supplied photo ID cards which they are required to always carry and show to customers. The RDI website www.rdi-lb.tv includes a postcode checker to help people find qualified installers serving their area. Full RDI installers are listed separately to Associate (ARDI) members yet to complete their NVQ qualification, and all are listed with their membership number. The checker also carries ID photos for listed members allowing users to confirm the person at their door is the same. Under the dedicated INSTALLER area of the site, anyone can report installers that are misusing the 'digital tick' logo and can attach pictures - (up to 200kb) as necessary evidence.

This may be used by the enforcement officer employed by the RDI, who will work closely with key organisations including Trading Standards, the Advertising Standards Agency and the Police.

Helpful Information

Need a new aerial?

Only licensed installers are allowed to use this logo - they must show their own unique ID number below:

digital

18269999

This means they are trained, insured, and have been security checked.

Check any installer that does not display an ID number with the RDI. For more information visit www.rdi-lb.tv or call 0870 129 8015

Latest initiatives include the introduction of a new 'rogues gallery' area of the RDI website, where companies misusing the logo or operating bad practices will be listed. This may include those with lapsed membership and ARDIs who have failed to complete the required NVQ training within the agreed time frame.

Digital UK's communications drive consumers to look for a membership number and to ask the installer for their photo ID card to match with it. Consumers are also advised not to have work done by cold-callers and as per the advert opposite to double check, by using the RDI website or helpline, those claiming to be RDI installers in adverts placed in listings directories and other publications. For more on the RDI please visit **www.rdi-lb.co.uk** or call **01353 644040.**

The Switchover Help Scheme

The Switchover Help Scheme is run by the BBC, under an agreement with Government, to offer practical help at switchover to older and disabled people who may find it difficult to switch to digital TV. It offers eligible people everything they need to switch one TV to digital, including equipment, installation, a demonstration, a new aerial or dish if necessary and aftercare for a year. It is delivered by Carillion Energy Services (formerly Eaga Plc) on behalf of DSHS Ltd. For more information see the Help Scheme leaflet or visit www.helpscheme.co.uk. Please send any feedback to jim.mcgrann@bbc.co.uk

switchover help scheme

Get an ALmanac – the installer handbook from Digital UK

Digital UK recognises that when you are on the road you may be without internet access and unable to find core technical information. To address this we have produced the ALmanac - a hardwearing, handy manual. It carries useful information on digital switchover transmissions, services and products including maps, charts and other official data from Digital UK, Ofcom and others who are directly associated with the switchover planning process. Note the ALmanac should always be viewed in conjunction with the dedicated broadcast microsite at **www.digitaluk.co.uk/transmitternetwork** where the latest and most detailed information will be. To make sure that the information in your ALmanac is the most current, relevant pages can be downloaded from the link above. If you are on our database you will be notified when new updates are available on the website. **The ALmanac is available free of charge (one per installer). If you have not already got yours contact installers@digitaluk.co.uk to obtain a registration form.**

Checklist

Things to remind your customers about include:

- Their switchover dates.
- Getting every TV in their home ready for switchover.
- The need to think about converting or replacing their recording equipment.
- Consider if they need their aerial checking, or other TVs connecting to the roof-top aerial.
- The need to retune digital equipment when new multiplexes or services are introduced.

get set for digital
08456 50 50 50 digitaluk.co.uk