

# Digital Television Reception Predictors

## Teletext Aerial Checker - Summary

Version 1.1 – 8<sup>th</sup> October 2007

### Introduction

The performance of television aerial systems can become worse over time. Weather, corrosion and perching birds can all cause damage to the aerial system and so an aerial and its downlead will gradually become less effective.

With analogue television, this often goes un-noticed because the picture gradually becomes more and more snowy as the aerial system deteriorates. However, with digital television, reception will remain good until the aerial system is no longer delivering enough signal for the receiver to work, at which point reception will stop and the screen will go blank. This means that an aerial which has deteriorated but is providing a watchable analogue picture may not be good enough for digital television.

Many people, particularly in areas where digital is not currently available, have asked Digital UK how they can be sure that their existing aerial system will be good enough to reliably receive digital television after switchover. We agree that it is important to be able to do this and so we have devised three ways of assessing the effectiveness of an aerial system. One way involves the use of a test signal transmitted via analogue teletext, and this is described in the following sections.

### The teletext aerial checker

A teletext test pattern is being transmitted on the four main analogue terrestrial channels to help you determine whether your aerial system is likely to be good enough to receive digital television after switchover. The test pattern does not help you assess whether your aerial is good enough to receive Freeview today.

The check will highlight some of the possible problems with your aerial system, and if the check fails, it is very likely that you will need to have your aerial system upgraded for switchover.

The check is indicative, and cannot be used by everyone because there may be other factors affecting your reception which mean that your aerial system may need to be upgraded. If you need a more definitive answer then you may wish to try using a handheld Aerial Checker (where available), or seek advice from a good aerial installer or retailer.

You can discover more information about television coverage in your area, both now and after switchover, by using the postcode checker on our website [www.digitaluk.co.uk](http://www.digitaluk.co.uk) or by telephoning us on 08456 50 50 50.

### Who can use the teletext check

You can use the teletext check if:

- you live in an area which will be covered by digital television through an aerial after switchover;
- **and** you are not likely to need to make changes to your aerial as a result of changes at the transmitter which covers you;
- **and** you have your own aerial which is:
  - on the roof
  - in the loft
  - a set-top aerial

You may not be able to use the check if you use an aerial which is shared by several homes. These systems might use components which mean that the result may not be correct. If you know that you are, or suspect that you may be, connected to a shared aerial system then you should seek advice from the system owner. This is probably your landlord.

## When to use the check

Although the test pattern is available all the time, we recommend that you only use it during the six months leading up to switchover in your area to reduce the chance of your aerial system deteriorating further between the time you make the test and switchover itself, which could mean the check is an incorrect guide.

You *could* carry out the check earlier, but if you do, you should repeat it nearer the time of switchover, even if you have your aerial system upgraded or replaced as a result of the first test.

You can find out which region you are in by seeing which ITV News you receive, or by selecting ITV Teletext page 106. You can find the date of switchover in your area by using the postcode checker on our website [www.digitaluk.co.uk](http://www.digitaluk.co.uk) or by telephoning us on 08456 50 50 50.

## Where to find the check

The teletext aerial check can be found on:

- BBC One      Ceefax page 284
- BBC Two      Ceefax page 284
- ITV1          Teletext page 284
- C4/S4C        Teletext page 284

A Welsh-language version of the test is also available:

- S4C          Teletext page 484

## What the check looks like

The check consists of two alternating teletext pages.

One page sets out a brief explanation of the check, and provides the contact details to obtain more information.

**Note:** One source of information is this document, which gives the most complete description of the test.

```
Digital UK - Switchover Aerial Test

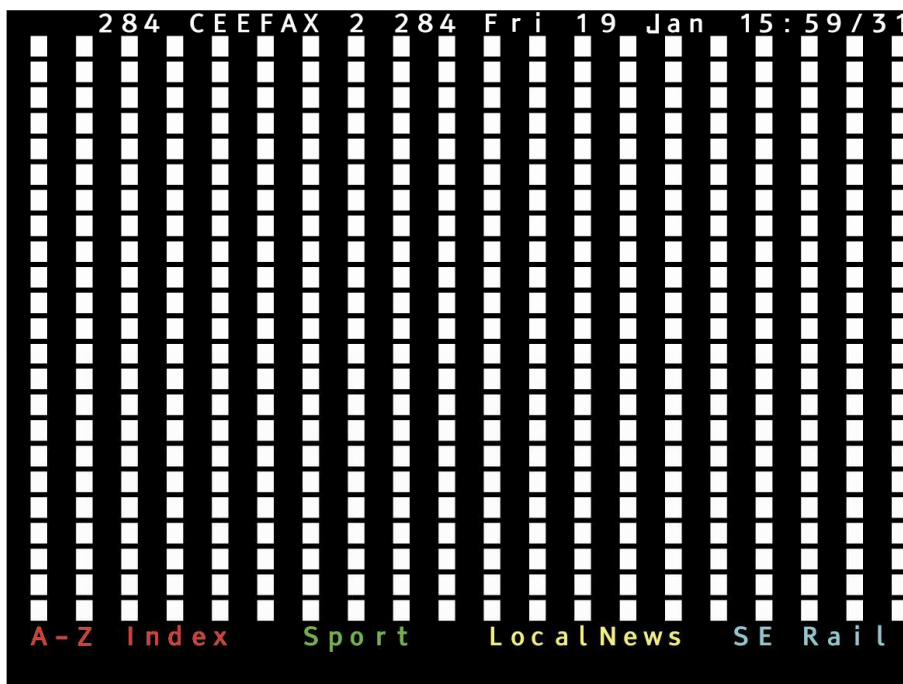
STEP 1 Use our web/phone postcode check
to see if digital TV through an aerial
will be available in your area after
switchover and to see if you may need a
new aerial due to transmitter changes.

STEP 2 Use the test below as a guide to
whether your aerial system definitely
needs to be checked before switchover.

STEP 3 Repeat Step 2 for each of BBC1,
BBC2, ITV1 & C4 page 284, S4C page 484.

TEST The screen that follows shortly
shows a regular test pattern of white
blocks. Look at the pattern. Ignore any
missing rows. If there are any white
blocks missing from the rest of the
pattern then we suggest you have your
aerial checked before switchover.
www.digitaluk.co.uk      08456 50 50 50
```

The other page is the test pattern that is used to make the check.



The test pattern will look like this picture if it is received perfectly.

**Note:** *the top header and bottom footer text rows do not form part of the test*

## Making the check

### Step 1 - Prepare

Use the Digital UK postcode checker to check that:

- you live in an area which will be covered by digital television through an aerial after switchover; and
- that there are no transmitter changes which may mean that you will need a new aerial

If you will not be covered, or if you need to make a change due to changes at the transmitter then the teletext check will not provide a correct result. Seek advice from a reputable aerial installer.

If the postcode check doesn't highlight any issues, then proceed to make the test.

### Step 2 - Use the teletext test

The test is made using analogue television.

The test must be done on each of BBC One, BBC Two, ITV1 and C4 (S4C in Wales) – four times in all. A Welsh language version of the test is also available in Wales on S4C only.

**Note:** *It is neither necessary nor possible to carry out the test on C5 since the C5 transmitter network has significantly different coverage to the other four terrestrial channels.*

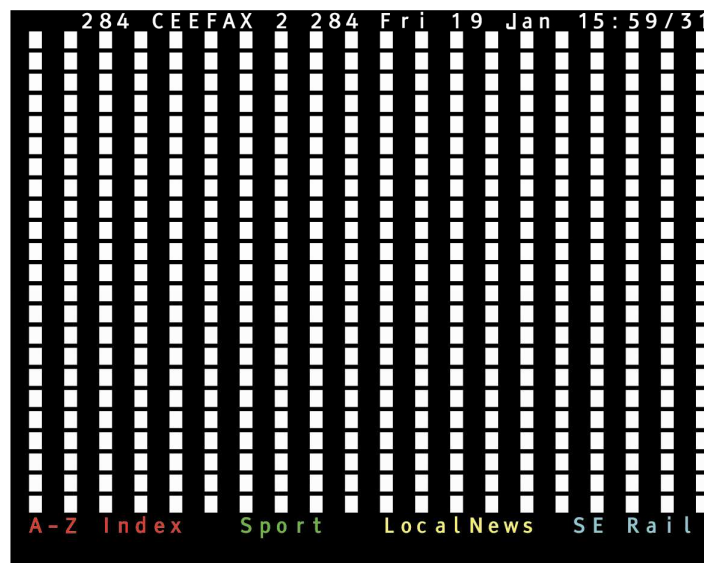
*It is neither necessary nor possible to carry out the test on the equivalent services delivered in digital form (DTT, Freeview, Satellite, Cable).*

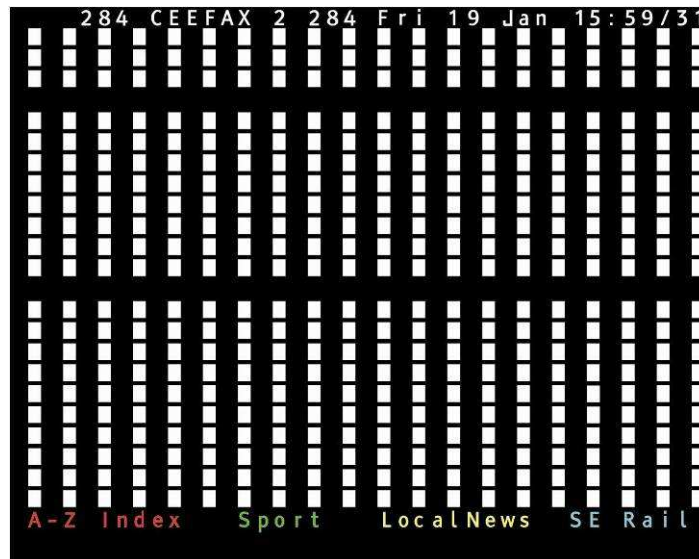
**On each channel**

- 1) Select the correct teletext page number for the channel being tested to access the test pattern
- 2) Wait for the pattern of blocks to be displayed
- 3) Ignore the top (header) row and bottom (footer) row.
- 4) Ignore any rows which are completely missing (there may be more than one row missing)
- 5) Ignore any text characters which may be displayed
- 6) Look carefully at the white blocks in the rest of the test pattern
- 7) Are there any other blocks missing? If so, the test has failed.
- 8) Double check your decision by waiting for the pattern of blocks to be redisplayed after the instruction page comes round again
- 9) Repeat the test on the remaining channels

**Tip:** *If you need longer to look at the pattern of blocks or the instructions, use the "Hold" facility available on the television remote control to freeze the screen, and then release it again when you are ready to carry on. If you cannot identify the correct button on the remote control, you will be able to find the information in the instructions for your television.*

If the test fails on any channel, then it is likely that you will need an aerial upgrade to receive digital television through your aerial after switchover. We suggest that you seek advice from a good aerial installer or retailer.

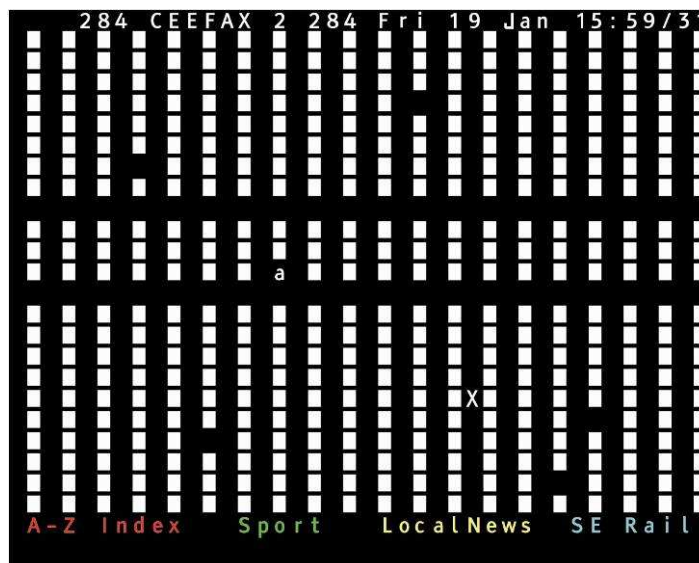
**Example checker results****Page with no errors: check passed**

**Page with errors: check passed**

Although this pattern has two entire rows missing, the check is passed.

The decisions behind this are:

- Ignore top (header) row and bottom (footer) row
- Ignore missing rows
- No other white blocks missing
- Check is passed

**Page with errors: check failed**

This check has failed.

The decisions behind this are:

- Ignore top (header) row and bottom (footer) row

- b) Ignore missing rows
- c) Ignore spurious text characters
- d) White blocks are missing from the rest of the pattern
- e) Check has failed

## How the check works

Three unrelated factors have worked together to allow this check to be possible:

- without delving into the technical details, it so happens that, on a like-for-like network basis, the signal threshold required for reliable reception of teletext is the same as for digital television through your aerial
- after switchover, digital television will in general be transmitted at the power level required to provide coverage equivalent to analogue today
- after switchover, the vast majority of transmitter sites will transmit on channels which are in the same part of the spectrum as they currently use for analogue

We can therefore use the quality of teletext reception today as a guide to the likely future quality of digital television reception, and so make an assessment.

The test pattern has been specifically designed to test the limits of teletext decoding and so reliably highlight cases of poor reception.

Laboratory assessments have confirmed the validity of the test, even in cases where the analogue picture suffers from moderate ghosting (Delayed Image Interference).

## Where the check may give the wrong answer

The check may be inaccurate in four situations:

- a) if you are using a shared aerial system (as described above)
- b) if you will not be covered by digital television through an aerial from your current transmitter
- c) if you are receiving from one of the small number of transmitters where the digital television transmitter power after switchover will be higher than the analogue-equivalent power. This is generally to overcome interference from other, more distant, transmitters using the same frequencies. In these areas the test will be pessimistic – it will suggest the aerial installation needs to be checked or upgraded for switchover, whereas in reality it may not.
- d) if you are receiving from one of the very small number of transmitters which will transmit digital television in a different part of the spectrum to that currently used for analogue. In these cases the check will be optimistic – it will suggest the aerial installation does not need to be checked or upgraded for switchover, whereas in reality it may.

You can determine whether you live in an area where the test may be inaccurate due to the transmitter effects described in b), c) and d) by using the postcode checker on our website [www.digitaluk.co.uk](http://www.digitaluk.co.uk) or by telephoning us on 08456 50 50 50.

## The small print

The check is for guidance only. Digital UK has made the check available in good faith, but it has limitations and you must draw your own conclusions about the condition of your aerial system.

If you are unable to use this check or are unsure about its results then you may wish to try using a handheld Aerial Checker (where available), or seek advice from a good aerial installer or retailer.

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