



Technomate TM-7102 HD-T2 SUPER

The Opposition

Iccrypt STC6000HD PVR

Just two tuners (either satellite or terrestrial or both) and similar capabilities (including YouTube and web browser) but poorer PVR facilities and no analogue input option



Topfield SRP2100

Dual-tuner HD PVR – a little cheaper and similar spec with PIP, YouTube and internet radio but smaller HDD, no CAM, no third (terrestrial) tuner, no analogue input, and no blind search



HD sat and DTT tuners, multimedia extras and optional external video capture make this Technomate's most advanced PVR yet

Incorporating terrestrial reception into a satellite receiver is not always a good idea – it usually removes the chance of a second satellite tuner and struggles to compete with cheap Freeview receivers that cost only £30 anyway.

Although the Technomate TM-7102 HD-T2 Super does incorporate a terrestrial tuner it adds real value too, because this is a three-tuner receiver, with two satellite tuners in addition to the terrestrial module, and both satellite and terrestrial tuners are for HD reception as well as standard SD.

The TM-7102 HD-T2 is also a PVR, with a stonking 1TB hard drive and the capacity to add additional storage via USB, it has two common interface slots and a multicam

for encrypted channels (Technomate encourages the use of patches for the more obstinate encryptions), and there is an optional (and desirable) analogue input option too.

Build and connectivity

The TM-7102 HD-T2 is a square, solid, traditional-looking machine, all in black with a display in the middle of the front panel to show the channel name, menu, time and so on. On the right side there are two buttons and a natty four-way control cluster with the power light around the edge. Very Sky+. The fold-down flap across the centre hides a USB socket for temporary storage and download connections, two CI slots for plug-in CAMs, and two card reader slots for the multiCAM.



The receiver is pre-loaded with data for 1,500 satellite channels and there are copious configuration options and a very fast blind search



Channel lists can be sorted A-Z, by transponder or conditional access system and satellite and terrestrial lists viewed separately



The EPG for DTT channels supports 7-day DVB data and can be used to schedule recordings. View what's on six channels or one at a time



'A fast blind search, Freeview EPG, multicam card readers, and ease of use are the cream on this multi-layered cake'

up your LNB arrangement and delete the unwanted satellites. You'll need a terrestrial scan and that takes nearly four minutes, but in the test the sensitive tuner found even the weaker multiplex with ease. In time, the pre-programmed satellite channels will become outdated and you will need a full installation. For satellite setup, the LNB arrangement is set to single LNB (with the inputs linked), twin LNBs (to use the two tuners like a Sky+), or two separate LNBs aimed at different satellites.

Then the DiSEqC switch or DiSEqC motor connections are set up to define how each satellite is accessed. Finally, the satellites are scanned for active channels. This can be done in five ways – the normal database scan, an individual transponder scan, PID scan, blind scan, and a special fast scan for Canal Digitaal and TV Vlaanderen viewers. The database scan manages a reasonable speed – nearly six minutes to find all the channels from 28°E. Conveniently, you can set the receiver to scan all the satellites, in succession and leave it to it.

The 'Advanced scan' of an individual transponder uses the tuning details from the database or you can enter your own. The PID scan is another variation of the transponder scan in which you enter the channel PIDs.

The blind scan is not as flexible as that of some receivers. You cannot alter the frequency increment to speed up the process, although you can limit the polarisations or frequencies covered. The transponders found are inserted into the satellite's database, overwriting outdated entries where appropriate. It's very fast, finding every transmission from Astra 28°E in just 8.25 minutes. You almost don't need database scans.

Finally, there's the broadband connection. We had some difficulty getting (and keeping) the TM-7102 HD-T2 connected to our network (some kind of IP address clash meant automatic DHCP configuring would not work) but that is not unusual with connected equipment.

At the back are two LNB inputs with loopthrough sockets (one input can link to the other with a single LNB), which can cater for DiSEqC 1.0 and 1.1 switches or DiSEqC 1.2 and USALS motorised dish mounts.

The terrestrial input has a loopthrough output too, and there's a further pair of terrestrial connectors for the UHF modulator (a rare sight these days).

The main output is the HDMI socket (1080p-capable) but a trio of component outputs is also provided, as well as separate composite video and TV and VCR/recorder Scart connections. Separate audio connections are taken care of with a pair of phono sockets for stereo analogue sound and an optical S/PDIF for digital audio. There are also three data connections on the rear panel – an RS232 socket (largely redundant), RJ45 network Ethernet connector, and a second USB socket for more permanent storage connections.

The review model tested here came complete with the optional analogue input board that adds composite video, component video and stereo audio input sockets, so the output of additional equipment can be routed through the receiver and viewed or recorded as though off-air. This can be used for security cameras and also for the output from, say, a Sky Digibox to combine all your recordings in one place.

The remote control is almost as crowded as the rear panel, with 53 buttons. Several of these are sensibly dedicated to a particular function, which makes using the TM-7102 HD-T2 all the easier.

Setup

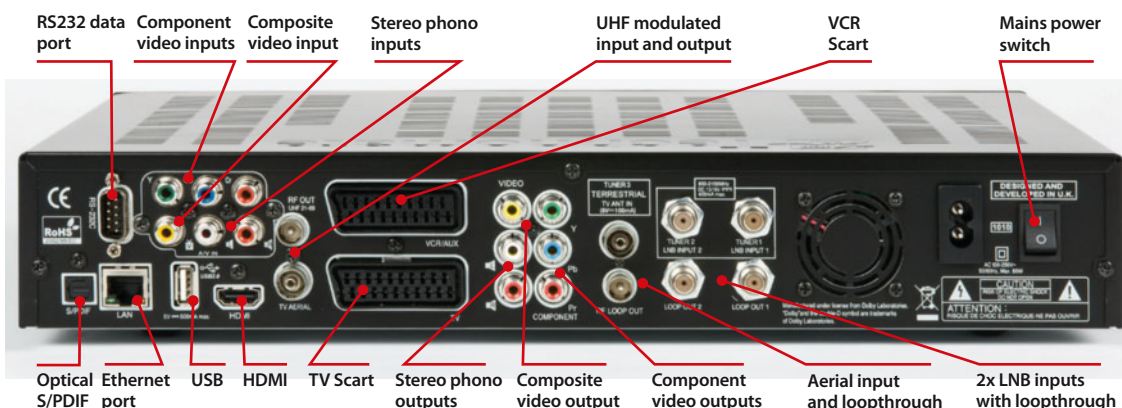
The TM-7102 HD-T2 arrives pre-programmed with 1,500 satellite channels so all you have to do to get going is set

Tech Data

FTA Scan, Astra 19.2°E: 4m 28s	0 5 mins
FTA Scan, Hot Bird: 6m 40s	0 10 mins
Full Scan, Astra 19.2°E: 4m 35s	0 5 mins
Full Scan, Hot Bird: 6m 46s	0 10 mins
Full Scan, digital terrestrial: 3m 48s	0 5 mins
Blind Search, Astra 28.2°E: 8m 12s	0 10 mins
Power consumption: 60W max	

Features

- No LNB inputs:** 2
- LNB loopthrough:** Yes
- No aerial inputs:** 1
- Aerial loopthrough:** Yes
- DiSEqC:** 1.0/1.1/1.2/USALS
- No. channels:** 10,000
- Selectable FEC:** No
- Symbol rate range:** 2000-45000
- Blind search:** Yes
- Linux:** No
- CAM:** Multicam
- Common interface:** 2
- Teletext:** DVB decoded and reinserted in SD
- EPG support:** DVB now-and-next and 7-day, Freeview 7-day
- Timer:** Unlimited events, 7 days
- Hard drive:** 1TB caddy and via USB
- UHF modulator tuning:** 21-69
- Software upgrade:** USB download
- Data ports:** RS232, 2x USB, Ethernet
- AV outputs:**
 - SD out:** TV Scart (composite, RGB), VCR Scart (composite video), composite video
 - SD in:** Component video, composite video
 - HD out:** HDMI, component
 - Audio out:** Stereo phonos, optical S/PDIF
 - Audio in:** Stereo phonos



TEST SATELLITE



The front panel conceals twin CI slots, two smart card readers and a USB port

move them in the channel list.

The TM-7102 HD-T2 provides 16 favourite channels lists, each with a programmable name that can be populated with any of the channels from the satellite, or terrestrial tuners (you can even add all the HD channels in one go). You can then select a favourite channels group and your channel choice is constrained to those channels only. A mosaic button fills the screen with thumbnail images of consecutive channels, up to nine at a time. A more useful means to get to the channel you want is the Recall button, which produces a menu of the last 10 channels viewed.

You can also watch what's connected via the analogue input, or even two channels at once with picture-in-picture. The inset picture is fixed in the top right of the screen but it can be two sizes, its content selected from a special PIP channel menu, and swapped with the main picture with a dedicated button.

Either the main picture or the PIP can be from satellite, terrestrial or the analogue input connectors – which makes keeping an eye on a security camera a doddle.

The EPG operates in two modes – showing 90 minutes of programmes across six channels or six shows on the current channel. You can hop a day forward or back and reserve or record a programme with a single button press. The event timer can be programmed manually too.

The TM-7102 HD-T2 can make use of the Freeview proprietary EPG data so you get the full week's programme schedule on display, but only now-and-next from satellite channels. However, interactive services aren't supported for Freeview or Freesat channels.

PVR and multimedia

The 1TB HDD is on a caddy in the receiver's side, so access is no problem. You can also add more storage via USB. There's also little limitation to how much you record at once. With the two LNB inputs connected to separate or twin LNBS, you could record two satellite channels from different transponders, another from one of the same transponders, watch a terrestrial channel and keep an eye on the front door with a security camera connected to the analogue inputs in the PIP window.

Of course, with the satellite inputs looped together

you are more restricted but even then you can record or watch live video from five different sources.

A recording can be started manually or by the event timer (set manually or by the EPG) and the TM-7102 HD-T2 will also pause live broadcasts. Reception buffering (so a pause is instant, and you can rewind a live programme) can be turned on or off. You can start to watch a recording before it's finished, and resume where you left off before. You can also fast-forward and rewind at up to 32x or slow-mo at ¼ speed, and move the progress bar to any point in the recording and place bookmarks to jump between them.

A section of a recording can be copied or deleted using thumbnails of the first and last frame of a section as a guide.

You can also play back photos, MP3 files and a host of video formats stored on USB memory (or even transferred to the hard disc). Hidden among the built-in games in the 'Entertainment' menu is access to YouTube and with the photo and MP3 playback section is a service dedicated to maps and weather in cities of the world and access to internet radio – which can be recorded, edited and exported via USB.

Performance

We had little trouble with everyday crashes on this receiver. The HD quality is excellent, with a level of detail and clarity above that found on many receivers. Even upscaled SD channels appear solid and lifelike from the HDMI output. Only the quality of the analogue input signal was found at all wanting, and that's because of the digital-analogue-digital conversion it undergoes.

Recorded images are as good as live and the sound from the TM-7102 HD-T2 is particularly full and dynamic, even from the analogue outputs ■ **Geoff Bains**

Verdict

Getting a reliable internet connection can be tricky and the scans are a touch slow, but that doesn't detract from an excellent top-tier unit. The TM-7102 HD-T2 is expensive, but three HD tuners and an analogue input make it an awesome AV centre for your home. Thanks to flexible antenna connectivity, it can provide video from almost anywhere – satellite, terrestrial, local storage, and even the internet via YouTube – and image and sound quality are second to none.

A well-featured PVR, huge hard disc, a very fast satellite blind search, Freeview EPG, multicam card readers, and all-round ease of use are the cream on the TM-7102 HD-T2's multi-layered cake.

Ratings

PLUS

- Three integrated tuners
- Fast blind search
- Analogue input option
- Internet features

MINUS

- No Freesat EPG
- No Freesat/Freeview interactive services
- Rather slow database scan

Build	★★★★★★★★
Setup	★★★★★★★★
Searching	★★★★★★★★
Navigation	★★★★★★★★
Performance	★★★★★★★★
Features	★★★★★★★★
Value	★★★★★★★★

WHAT satellite & Digital TV
90%

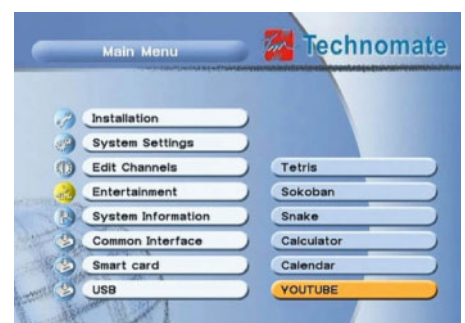
Interface



Recording options are incredibly flexible. Shows can be recorded to internal or external storage and you can watch a recording while it's in progress



Video playback options include a 32x fast-forward/rewind speed, and the ability to set bookmarks. External video/audio capture is an optional extra



Multimedia functionality currently includes video, photo and MP3 playback, YouTube and internet radio streaming, plus several games