

## Targeted Help Box(es).

TVonics proposes three boxes to meet the demands of assisted help target customers.

**Switcha-Basic:** Is based on our “EcoMini” design augmented with two supplied handsets.

Handset 1: Is a Universal Control handset which can operate both the STB and basic functions on the TV.

Handset 2: Is a Large Button Handset with minimal functions. Switcha-Basic is recommended for most households and offers quality, eco friendly, easy to use and install features. A key feature is the energy efficiency of the solution which in the current climate for environmentally friendly products should be given high consideration. Additionally it should be recognised that the unit is based upon well proven in the market deployed technology which performs robustly and delivers a high quality Freeview service.

**Switcha-Audio:** Uses a higher performance decoder which contains a second audio decoder suitable for Audio Description processing.

**Switcha-Recorder:** Digital TV Recorder Based upon our “DVR300” Digital TV Recorder but uses the lowest cost CE 3.5” Hard Drive available in the market at the time but provide a minimum of 40hours of recording capacity? Augmented with a large button handset for basic Freeview operation.

All products are designed and supported in the UK and will be manufactured to a high quality standard at the Sony UK Tec Manufacturing plant in Pencoed, Bridgend, South Wales.

Note also TVonics is willing to provide Badged versions with other vendors logos and literature should there be demand. For example a major TV vendor might choose to offer an enhanced package which provides a new Flatscreen TV including one or more units to be used for converting the other TV’s and replacing VCR’s in the home..

## Switcha-Basic

### Key Features:

1. Energy efficient low power consumption:
  - a. Operational less than 4 Watts
  - b. Standby less than 2 Watts
  - c. Note that 500k units deployed of the Switcha-Basic versus a standard low cost set top box (8W) would save 6000 Metric Tonnes of Carbon Dioxide Emmisions per annum. So over a say 5 year lifetime deployment, there would be a saving of 30,000 Metric Tonnes of Carbon Dioxide.
2. Small form factor
  - a. 200mm x 60mm

- b. Small compact package (to minimise cardboard packaging)
- 3. Versatile installation options :
  - a. Horizontal
    - i. On top of TV,
    - ii. Side of TV
    - iii. In an AV rack
  - b. Vertical (Supplied stand)
    - i. Side of TV
  - c. Hidden (Supplied IR extender, Velcro/sticky pads and wall mounting bracket)
    - i. Behind the TV on the floor
    - ii. Velcroed to back or side of TV
    - iii. Velcroed to back or side of AV rack
    - iv. Velcroed to Wall behind TV
    - v. Screwed to Wall behind TV
    - vi. Screwed to back or side or AV cabinet.
- 4. Twin SCART
  - a. Connect to TV and VCR
  - b. AV Switching to select between STB and VCR/DVD
- 5. Audio Stereo Output jack (cable included with Phono left and right)
  - a. LineOut to connect to HiFi unit or Headphones.
- 6. Optical SPDIF Audio output
  - a. High quality Digital Audio Output
- 7. Supplied IR Extender and IR extender Jack
  - a. Used to facilitate “Hidden from View Option”
  - b. The jack socket could be used to connect third party designed “Special Needs” remote control devices. E.g. to a head mounted selection device for a quadriplegic. The external device would need to translate the users requests into electrical versions of IR codes. The jack socket provides feedback after each successful reception of an IR code.
  - c. Also optionally available on the front panel of the unit it is possible to expose a 10 way IDC connector which includes 3V DC power and full two way serial communications. TVonics could work on a time and materials basis with third parties to enhance the useability of the unit further. This interface can also be used to re-flash the code in the box to cater for unexpected needs in a target deployment area. For example a special tuning algorithm ,restriction of services, reprogramming to solve a broadcast issue in the local area during the switch-off period. This allows the installation engineer to download new code via a USB link from a laptop to the box and to gain extra diagnostic data from the unit regarding signals.
- 8. User Interface.
  - a. Has been designed to be consistent and simple to operate with text sizes large enough to read on portable TVs.
  - b. 8 Day TV Guide
  - c. Now and Next

- d. MHEG 1.06
    - i. Fast and responsive
  - e. Programme List
  - f. Programme Sort
  - g. Programme Hide
  - h. Parental control (Disable channels from viewing)
  - i. Timers
    - i. Set events from the EPG or enter time.
    - ii. Unit automatically switches to selected programmes at the appointed time
    - iii. Wakes up out of standby for Timed event and returns to standby on completion.
    - iv. Allows users to record programmes to their VCR or DVD whilst they are away from home. The user must set the VCR/DVD for the same times. The required times are displayed in the timer list
  - j. Special Needs customisation:
    - i. TVonics can upon request modify the user interface to meet with special needs equipment partners on a time and materials basis.
9. Front Panel
- a. Three Switches
    - i. On/Standby
    - ii. Up
    - iii. Down
    - iv. Menu Button
  - b. 4 Segment LED display
    - i. Time – In standby
    - ii. Prog Number in Operation.
  - c. Two LEDs
    - i. Red Standby
    - ii. Green – On and Flash for IR code reception.
10. Flash Memory
- a. Increased from 2Mbytes to 4Mbytes to enable special needs programming to be OAD'ed and uploaded from the download connector via a USB link.
11. SDRAM
- a. Extended from 16Mbytes to 32Mbytes to enable special needs code execution if required.
12. Tuning
- a. High performance tuner supporting 2k and 8k COFDM
  - b. Channels 21-68 Tuning
  - c. Excellent SFN support.
  - d. RF Loop Through
  - e. RF Remodulation
13. User Manual
- a. Quick start guide for basic operation.
  - b. Large Print Manual
    - i. Step by Step

- ii. Pictorial based showing expected screen displays for each major function.

## **Switcha-Audio**

As Switcha-Basic but using higher performance processor containing a second Audio Decoder which enables Audio Description. Note also the power consumption will rise to around 6 Watts to accommodate this.

## **Switcha-Recorder**

Twin Channel Digital TV recorder capable of recording two channels whilst watching a Third.

Enhancements/Downgrades from DVR300

1. Lowest cost hard drive but at least 80Gig for 40 hours recording.
2. Silver Powder coated finish
3. Front Panel Display – (As per Switcha-Basic but larger)
4. DC On/Off Switch
5. Additional large button handset for basic freeview operation.
6. Record two, watch one operation
7. Full Freeview Playback compliance.
8. Increased F:LASH memory size to 4Mbytes for code updates
9. Rear Panel software upgrade port
10. 32Mbytes of SDRAM
11. MHEG1.06
12. Remote IR extender port.
13. Large Print User Manual
14. RF Remodulation