A Brief History of MultiChoice Remote Controls

February 2009

The "Coke-bottle" Remote

This remote uses the old Philips RC5 remote protocol and was used for most decoders prior to the 990 decoder. It is also used with the Dual View decoder and came in two types – black ("TV1") and blue ("TV2"). Newer units had a small switch in the battery compartment that allows switching between TV1 and TV2 modes.

Works with:
642, 660, 720, 720i, 910, 933 decoders

Issues:
It had interference issues in that commands intended for other equipment affected it. An example was that some TV's volume-up command caused decoders using this remote to go to standby. The Radiation from the new plasma displays that were starting to emerge also tended to "swamp" the decoder so that it would not react to remote commands.

The biggest issues were however that the remote offered no unassigned colour buttons for use in applications and also had no PVR functionality – the coming PVR required a new remote…

The “2007” Remotes

The SDTV PVR (called the DV PVR at the time) and the 990 decoder launched using the remotes as shown above. The new layout was designed specifically to allow the user to operate the keys without having to look at the remote – this was done by using different key shapes, placing much-used keys at positions easy to locate and by grouping of functionality. Intuitive placing included e.g. the “Exit” key at the top right of the dial to mimic the windows “X” button above the PC screen.

The remotes could do both TV1 and TV2 modes. The 990 decoder’s remote (shown on the right) required the cover in the middle section to be lifted, removed and turned around to switch between modes.

The PVR remote (shown on the left) introduced the dial concept as well as universal TV and amplifier support on 3 programmable modes (X, Y and Z)

The PVR remote also introduced a world first for a one-way remote protocol: 4-player multiplayer ability. 1 A, B, C and D (or 2 A, B, C and D) could all be used *at the same time* without interfering with each other. The idea was to allow game shows and games to be played along with by up to four players.

The “XMP1.4” protocol was interference-free (nothing could interfere with it) and much more energy efficient than the old RC5 protocol - battery life was double what it was with the previous remote, even with the additional LED (lights). (The .4 of the name XMP1.4 refers to the 4-player ability)

The remote also featured macros and “favourites” - which allowed 10 channels to be programmed onto the 10 numeric buttons and then accessed via Shift + that number, or browsed through a “scan” function.

The SD PVR remote was also sold as a “universal” remote as it contains the ability to emulate all previous MultiChoice and M-Net remotes and had the ability to do the basic functionality of almost all TVs and amplifiers available in Africa at the time.
New keys included direct access to Parental Guidance, “About Us” (an information page) as well as 5 unassigned colour buttons, a dedicated Help button and full PVR functionality – yet it only had 3 more keys than the old remote.

The PVR remote introduced a single multi-function button for pause, play, fast forward, rewind and a 10-second “jump-back”. A 30 second add-skip (jump forward) was taken off due to complaints from the advertisers.

Works with:
990, 1110 decoders & SD PVR. (But the universal (PVR) remote can be programmed to work with any pre-2008 MCA / M-Net decoder)

Issues:

The multi-function PVR key on the PVR/ universal remote suffered two problems – the initial 10 000 had a weak mechanical arm that tended to break and the soft rubber cover requires a gentle touch otherwise it wears badly.

Because the XMP1.4 protocol used a slightly higher frequency and was very sensitive to data timing, a lot of remote blasters could not initially relay the XMP1.4 protocol.

In addition, the protocol proved to have a hole in its security allowing e.g. V+ commands to be interpreted as Standby in some circumstances where a weak/ reflected signal was being received.

The battery compartment door was not stiff enough and was prone to popping off – especially if the dial was being turned using just one hand.

The TV1/ TV2 mode cap on the other hand was a little too stiff and needed to be replaced with an easier-to-use mechanism.

Unfortunately the multiplayer idea was not (and still is not) seen as a high priority development and as a result will not be deployed within the next 3-5 years, (if ever). The added mechanical complexity of having 11 positions on the dial (8 being used for the decoder) was seen as unnecessary and combined with the wrong command issue as mentioned in the paragraph above, it forced a move away from the XMP1.4 protocol…

The “2008” Remotes

The 2008 remotes reverted to the proven XMP1.0 protocol which is used in more than 10 million remotes worldwide. It retains the interference-free feature and is even more energy efficient than the XMP1.4 protocol.

The 1110 decoder, the HD PVR and the last batches of the SD PVR were sold with this remote. Both the SD PVR and the 1110 decoders have the capability of using either the XMP1.4 or XMP1.0 remote protocols seamlessly.

On the “1110” remote (as shown on the right) the switching between TV1 and TV2 modes is done by pressing Shift + Exit or Shift + “i” which was a significant improvement on the reversible cap as used on the 2007 non-PVR model. In addition, the “1110” remote also had PVR buttons (to allow for controlling a PVR in the planned XtraView networks)

The multi-function mechanism (play/ pause/ ff/ rew) on the PVR remote was replaced with one as used on cell phones with proven reliability and a new hard plastic cap was introduced to eliminate the wearing issue. The PVR remotes were now also supplied with alkaline batteries.

The “About Us” button was replaced with ARC (aspect ratio control) – the command is the same, the button label just changed. (The real change was in the way the decoder interprets the command) The Relay function was also marked to assist in using it.

The colour buttons were left unmarked as it appeared that people had trouble using a marked button with a colour key when indicated in an application/ menu. All other keys from the 2007 models were left as-is.

The "Favourite channels" functionality was dropped in favour of 10 new macro buttons (on the numeric keys) and the macros was not assignable to the colour keys anymore – to open the possibility of using Shift+ a colour key for advanced decoder/ PVR functionality moving forward. A Brand search capability was introduced to enable the user to enter only one code – e.g. for Sony – the remote would then automatically step through all the e.g. Sony models without the user having to enter individual codes.

To make the PVR remote a truly universal remote, IR learning was introduced and the database of the TVs and amplifiers were extended to contain all known commands. A DVD database was also added. The available programmable modes was increased to four (A, B, C & D) and the TV modes reduced to two sets of TV1 and TV2 on opposite sides of the dial. Reducing the number of positions on the dial also allowed a bigger mode window with bigger writing.

A tri-coloured LED was introduced in place of the high-power white one to help indicate the correct mode while using less power.

The PVR remote was once again sold into retail as a universal remote with the ability to emulate all previous MCA and M-Net remotes.

Works with:
1110 decoder, SD PVR (selectable) and HD PVR. (But the universal (PVR) remote can be programmed to work with any previous MCA / M-Net decoder)

Issues:

Emulating the XMP1.4 protocol (the old SD PVR remote) especially in TV2 mode proved inaccurate for specifically the PVR and arrow keys. A software upgrade to fix this is available, but requires remotes to be brought or sent to the Randburg branch.

Because of the tricky timing of the XMP1.4 protocol, some remote blasters re-created commands instead of just relaying them. Sending XMP1.0 commands with XMP1.4 timing corrupted them and those blasters did not work properly with the new remotes.

When using macros, the Shift button has to blink once before the macro button can be pressed. This caused quick users to have to repeat the action.

With the SD PVR and HD PVR being allowed in an XtraView network, there were 3 viewing environments and with only two TV modes available, there was a strong demand to use the extra pair of TV1/ TV2 modes as TV3 and TV4…

This will also help enable future deployment of up to four decoders in one home.

The “2009” Remotes

The remotes all use the same XMP1.0 protocol as before and layout and features are (except where mentioned below) unchanged from the 2008 models.

The 2009 PVR (also to be sold as the universal) remote will introduce TV3 and TV4 modes, better emulation of the SD PVR and the ability to learn IR commands on the Exit key as well. The delay required when using SHIFT functionality has also been eliminated, making the Shift functions and macros quicker to use. The 2009 PVR remote can be identified by the white Menu and Help buttons at the bottom of the remote.

The “1110” (middle) remote is retained unchanged* for use with the new HD single view (non-PVR) decoder and a new, smaller remote without PVR functionality is introduced for the new 1131 entry-level decoder.

* It is also possible the HD SV decoder will use either the PVR or entry-level remote in which case the “1110” (middle) remote will be discontinued.

Works with:
1110 decoder, SD PVR (selectable), HD PVR (UEC and Pace), HD SV and 1131 (The 1110’s replacement). (Note: Some of these decoder models have not been introduced at the release of this document)

TvLINK eye:

The latest generation of the tvLINK eye looks like the illustration above. This unit has 4 times the power of the previous generation and also introduces a “pig-tail” connector for connection to the back of the TV with less stress on the unit.