



## **XtraView Installation Manual**

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## Document Revision History

Version	Date	Change Detail
1.0	14/06/2008	Initial Release of "Installation Options" document
1.1	9/07/2008	Added installation with HD and SD PVR in same room
1.2	21/07/2008	General text corrections and clarifications. Improved 1B. Improved 2B. Deleted 2C. (Obsolete due to improved 2B) Improved 3A Improved 3B Deleted 3C. (Obsolete due to improved 3A) Improved 4A Improved 4B
1.2b	24/07/2008	Added specific remote designations
1.2c	26/07/2008	Added "Which XtraView Combination Should You Use" page
1.3	19/11/2008	Document still under review – accidentally posted on forum
2.0	24/11/2008	Added "FAQ's" section Updated and improved the proposed installations based on new software capabilities. Name changed to "XtraView Installation Manual" to reflect the additional information included in the document.
2.0a	25/11/2008	Corrected Communication Port values for 2B and 4A Added LNB installation options

## 1 FAQ's

### 1.1 Why XtraView and not Dual View?

- Dual View requires complex software that proved expensive and very time-consuming when trying to add even the simplest new functionality.
- Making the HD PVR Dual View capable would have added at least R1500 to the price.
- People with one TV are not forced to pay for functionality they cannot / don't want to use.
- You can add viewing environments as and when you need them.
- With separated decoders, high-quality video and audio is possible in more than one room.
- With XtraView you can also have full interactivity at the 2<sup>nd</sup> viewing point.

### 1.2 Basically what is XtraView?

- XtraView is a simple way of proximity control – it forces two decoders to stay relatively close together which allows MultiChoice to see them as being used in the same household – and thereby allowing a reduced subscription on the second decoder.

### 1.3 How does it work?

- Decoders are linked together by way of a “heartbeat”. The heartbeat is sent from the primary decoder to the secondary decoder every 30 seconds.
- The primary decoder will talk to no other secondary decoder and the secondary decoder will listen to no other primary decoder.
- If the secondary decoder loses the heartbeat for more than 3 minutes, it will stop showing video and audio until the heartbeat is restored.
- The heartbeat is sent from a RF port via the normal RF cable and received on a RF port.
- For this reason, XtraView decoders need special RF tuners and not all decoders can be used in a XtraView network.
- The RF cable carrying the “heartbeat” can also be used to carry video and audio as well as relayed remote commands.

### 1.4 But is XtraView really secure?

- MultiChoice has only implemented the first part of the system. Implementing the second part will introduce additional complexity for the viewer and will be avoided until piracy is detected.
- MultiChoice has a very effective, county-wide anti-piracy department which is monitoring the situation closely.

### 1.5 What is this Primary and Secondary?

In an XtraView network the primary decoder is the one which sends the “heartbeat” and the secondary is the one that needs to receive it in order to continue functioning. These roles need to be assigned when you activate the network. Both decoders need to be independently connected to the satellite and have their own activated smartcards.

There is no difference in the functionality of a decoder because it is a primary or a secondary decoder. There are however some important points to remember when deciding which decoder is the primary and which is the secondary:

1. The SD PVR does not have the hardware capability to generate heartbeats (or relay remote commands), but it does have the capability of receiving it - so it can only serve as a secondary decoder.
2. The primary decoder will not lose services when the link between the decoders is broken. So for less hassles, if a decoder is to be taken on holiday, it should be selected as the primary.
3. Because a break in the heartbeat for whatever reason will interrupt recordings on the PVR if it is the secondary decoder, it should be made the primary when the network has only one PVR.

## 1.6 About TV1 and TV2 Remote modes

- In order to enable the control of multiple viewing environments, newer MultiChoice remotes all have more than one “TV” mode.
- The SD PVR had two viewing environments and its remote also made provision for 4 players in each of the two modes – 1 A, B, C, & D and 2A, B, C, & D.
- As multiplayer applications are not envisaged in the near to mid-term future, this feature has been dropped in the new generation of remote controls. The modes were reduced to TV1 and TV2 and a more robust remote language was introduced. (The SD remote language is known to sometimes cause unwanted commands)
- The SD PVR is capable of listening to both the original SD PVR as well as the new HD PVR remote.
- The HD PVR is only capable of listening to the HD PVR remote. (The first software allowed control from both remote types, but due to conflict caused when using an SD and HD PVR in an XtraView network, as well as the “wrong command” issue on the SD remote, this was dropped.)
- Due to the possibility of having three viewing environments with an XtraView combination using an SD and HD PVR and to cover any possible future expansion, the next generation of remotes will make provision for four TV modes - TV1, 2, 3 and 4.
- Until the 4-mode remote becomes available, conflict between the viewing environments of the SD PVR and HD PVR can be avoided by using the “SD Remote only” mode on the SD PVR.
- There is no fixed relationship between the primary and secondary status of the decoder and using the TV1 or TV2 remote mode. Generally TV1 is used for the primary decoder and TV2 is used for the secondary decoder, but the remote modes *can be assigned the other way around* by adjusting the remote mode in the XtraView menu

## 1.7 What are Relayed remote commands?

- XtraView-capable decoders can “pass-on” remote commands. If a decoder is set to react to e.g. TV1 commands from the remote, it can relay any TV2 command it receives.
- In other words, if your installation has decoders in different rooms and you are sitting in one room, you can watch and control content from the decoder in the other room without the need for a TV “eye” or remote blaster.
- This capability is set using the options in the XtraView menu.

## 1.8 Explain Remote Relay and tvLINK/ TV”eye”

- Neither the tvlink setting nor the Remote Relay functionality is dependant on XtraView. Both can be used with having XtraView.
- Remote Relay is only possible with the HD PVR or 1110 remotes. The remote commands from the SD PVR remote cannot be relayed. (They use different remote “languages”)
- TV “eyes” and most remote blasters are capable of relaying commands from the 1110, SD and HD PVR remotes.
- Remote relay can be sent and received with either the RF In or RF OUT ports – as long as the Communication Port setting in the XtraView menu is set correctly.
- Tvlink reception on the 1110 and HD PVR is always on as it uses the same mechanism as the heartbeat. On these decoders, the tvlink setting only serves to power the tv eye (or an external amplifier) - so if an externally powered TV eye is used, it is not necessary to turn the tvlink setting on.

**Note 1:** The tvlink power is only available off the RF OUT port.

**Note 2:** Due to a misunderstanding, current decoder software still has a dependency between tvlink and XtraView. In some cases the tvlink setting will therefore be incorrectly greyed-out. This is due to be fixed in a future software release.

1.9 **How can you view content from a decoder in another room?**

- Because the decoders have to be joined using a normal RF cable, video services from one, or even both decoders can be sent through the that cable at the same time as the heartbeat.
- This means that content from a decoder can be viewed and controlled in another room similar to TV2 on a Dual View decoder.
- In most XtraView installations it is possible to configure the network to share content from all decoders to all viewing environments.

1.10 **Which decoders are XtraView Capable?**

- Due to the RF tuner functionality required by XtraView (The ability to create or at least receive “heartbeats”), only newer decoders can be used in an XtraView network.
- The SD PVR can only be used as a secondary decoder.
- Allowed decoder combinations are:
  - 1110 + 1110
  - HD PVR + 1110
  - HD PVR + SD PVR
  - HD PVR + HD PVR

1.11 **What is HDCP?**

- HDTV is only available off the HDMI connector. The HDMI connector will only provide video if the receiving device is HDCP (copy protection) complaint.
- These restraints are as a result of contract agreements with content providers to prevent high-quality piracy.
- None of the analogue outputs (RF, AV, S-Video, YPrPb or RGB) will provide better than 576i resolution.
- MultiChoice is becoming SimPlay complaint. SimPlay is a company that tests interoperability and implementation of HDMI and HDCP. Most new HDTV devices are going for SimPlay certification.
- More intelligent and flexible HDMI and HDCP functionality will be released in future software downloads.

1.12 **Programming the HD PVR remote to emulate the SD PVR remote:**

- In rooms where access to both SD and HD PVR services are required and where the SD PVR has been set to only listen to the SD PVR remote, it might be handy to program one of the programmable modes on the HD PVR remote to emulate the SD PVR remote as that would eliminate the need to have two remotes to control the two PVRs.

This is done in the following way:

- **To program SD PVR TV1 into e.g. mode C:**

- Turn dial to C
- Press and hold standby until mode window blinks 3 times
- Enter 21589

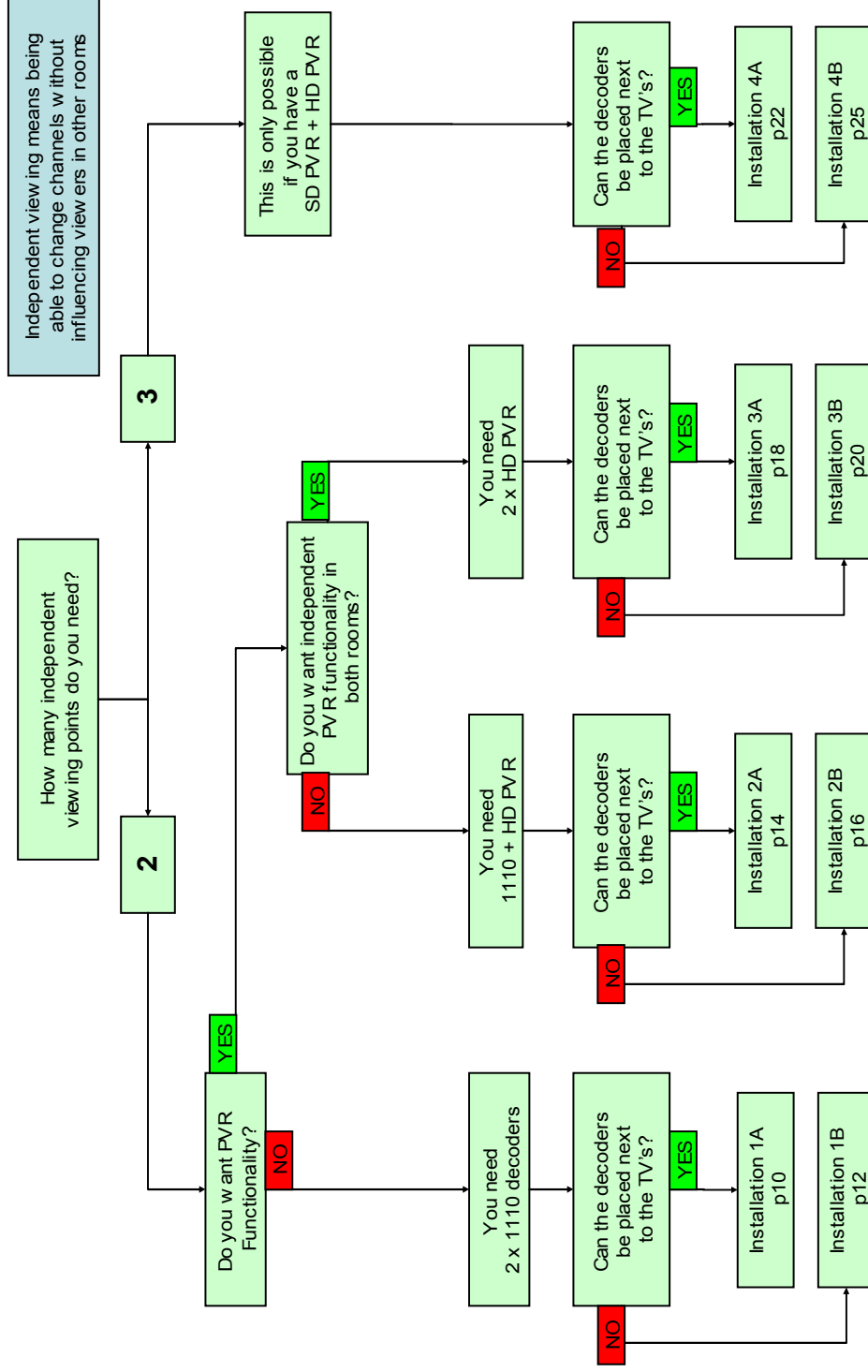
It is now possible to control the SD PVR TV1 by using the “C” mode on the HD PVR remote.

- **To program SD PVR TV2 into e.g. mode D:**

- Turn dial to D
- Press and hold standby until mode window blinks 3 times
- Enter 21590

It is now possible to control the SD PVR TV2 by using the “D” mode on the HD PVR remote.

## 2 CHOOSING AN XTRAVIEW OPTION



The installation options as shown on these pages are not the only ones possible. These have been selected as providing the best balance between flexibility and simplicity.



## 3 EXPLANATION OF XTRAVIEW MENU ITEMS

### 3.1 “Communication Port”:

- This setting indicates which port (RF In or RF Out) is connected to the cable that links to the other decoder.
- This is the port through which the heartbeat is sent or received.
- Any port can be used on the decoders as long as the actual installation & communication port option are exactly the same.
- This setting will also determine if video is shared from the decoder or received from another decoder.
- This is also the port from which and Relayed remote commands will be sent. (If applicable)
- Relayed remote commands are detected off both ports.

### 3.2 “Remote Mode”

- This setting determines the remote mode that the decoder will react to.
- On the HD PVR or 1110 decoders the choice is between TV1 or TV2.
- On the SD PVR the choice is between “SD and HD Remote” or “SD Remote only”. When set to SD remote only, the SD PVR will ignore commands from the HD PVR or 1110 remote.
- On the HD PVR and 1110, the chosen Remote Mode will determine the available choices for the next two settings: (Note that changing the remote mode at any time will set both these settings to “Off”)

### 3.3 “Relay Remote Commands”

- This determines if the decoder will relay unused remote commands to the network through the selected Communication Port.
- Available settings are OFF and the opposite of whatever the Remote Mode setting is. I.e. OFF and TV1 (if the remote mode is TV2) or OFF and TV2 (If the remote mode is TV1)
- This basically enables the decoder to act like a tv “eye”
- Commands from the SD PVR remote cannot be Relayed

### 3.4 “Accept Relayed Commands”

- This setting enables or disables the reception of commands as relayed from another decoder or tvlink.
- Available settings are OFF and whatever the Remote mode is. (The decoder can only react to commands as selected in Remote Mode)

### 3.5 tvLINK

- This setting is not found in the XtraView menu, but it is important to note the following:
  - **For the SD PVR the tvLINK setting MUST BE ON for XtraView to work.** (The SD PVR’s heartbeat reception circuitry is disabled if the tvLINK setting is not on.)



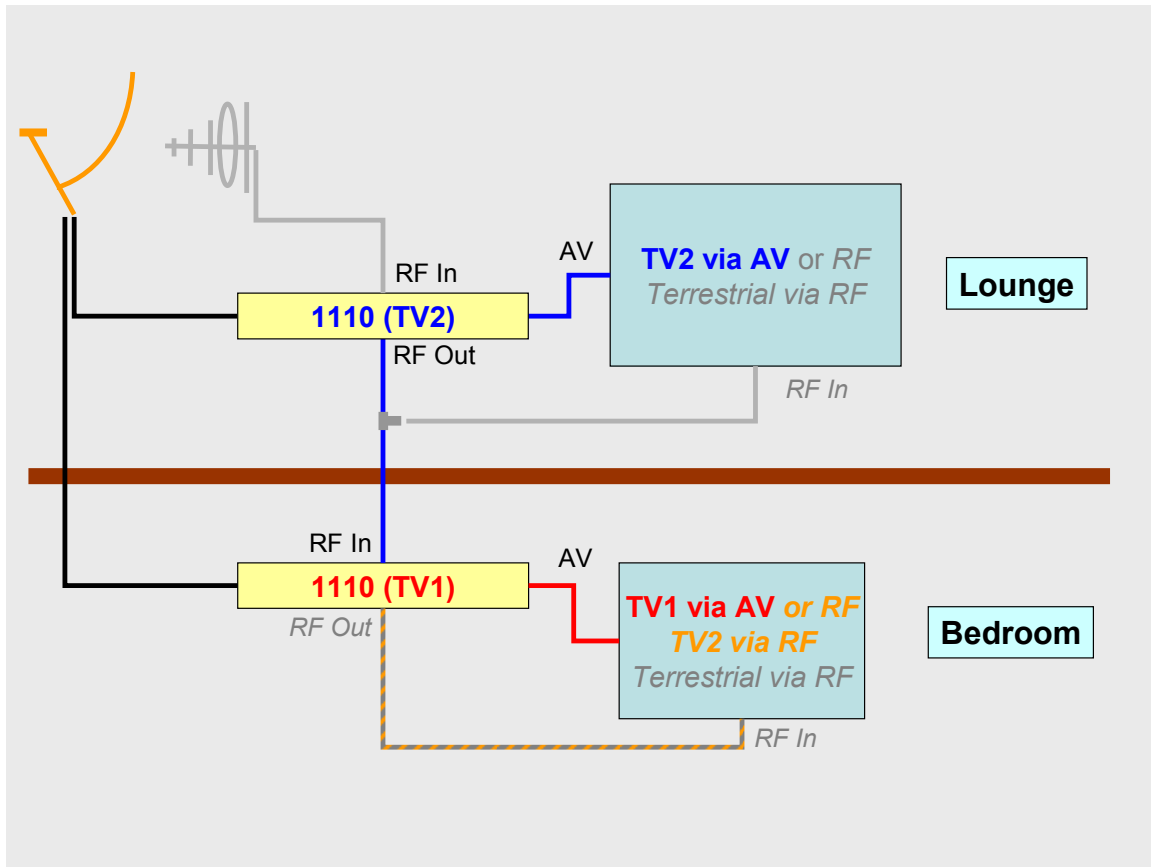
- Power can only be supplied through the RF Out port. Any externally powered equipment must therefore be connected through RF Out if it is to make use of the tvLINK power setting.

Note: Due to a misunderstanding, current decoder software still has a dependency between tvlink and XtraView. In some cases the tvlink setting will therefore be incorrectly greyed-out. This is due to be fixed in a future software release.

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## 4 INSTALLATION 1A: 1110 + 1110 DECODERS IN SEPARATE ROOMS

### 4.1 Installation Diagram



### 4.2 In Short:

Each room has independent access to all live MultiChoice services. Optimum video and audio quality is possible in each room.

### 4.3 Advantages:

- Each room has totally independent access to all live MultiChoice services
- Each room has access to the best possible picture and sound quality
- It is possible to view/ monitor and control TV2 services from the bedroom.
- TV1 is private and cannot be viewed from the lounge.

### 4.4 Disadvantages:

- TV1 services cannot be viewed from the lounge.

### 4.5 Notes:

- Grey and orange items are optional and need only be included if that additional functionality is required.
- The banded line just indicates that the cable carries multiple signals.
- The default RF channel on at least one decoder will have to be changed.

4.6 **Settings:**

**Suggested Primary/ Secondary**

There is no real technical reason to choose one over the other. Choose the one on which you least want to lose viewing, or intend taking with you on holiday as primary.

**TV1 Settings**

- Set "Communication Port" to RF IN
- Set "Remote Mode" to TV1
- Set "Relay Remote Commands" to TV2
- Set "Accept Relayed Commands" to OFF

**TV2 Settings**

- Set "Communication Port" to RF OUT
- Set "Remote Mode" to TV2
- Set "Relay Remote Commands" to OFF
- Set "Accept Relayed Commands" to TV2

4.7 **Usage:**

**Viewing terrestrial channels at any TV (optional):**

- Just switch TV to the correctly tuned RF channel.

**To view TV2 in the lounge:**

- Switch TV to AV.
- Use TV2 mode on the remote control.

**To view TV1 in the bedroom:**

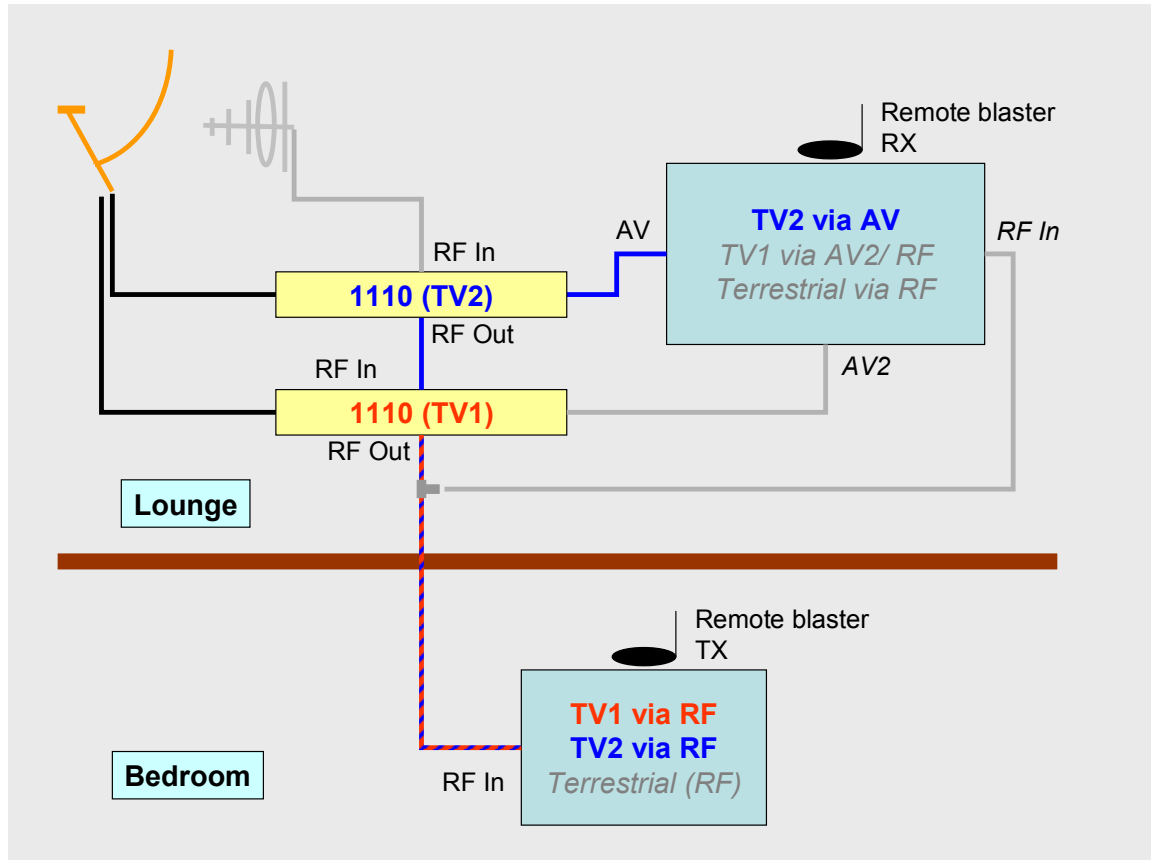
- Switch TV to AV
- Use TV1 mode on the remote control

**To view TV2 in the bedroom (optional):**

- Switch the TV to the channel tuned to receive the RF signal from the secondary (TV2) decoder.
- Use TV2 mode on the remote control. (The bedroom decoder will relay TV2 commands to the lounge decoder)
- Note: Changing channels will affect viewing in the lounge

## 5 INSTALLATION 1B: 1110 + 1110 DECODERS IN ONE ROOM

### 5.1 Installation Diagram



### 5.2 In Short:

Each room has independent access to all live MultiChoice services.

### 5.3 Advantages:

- Each room has totally independent access to all live MultiChoice services.
- Both TV1 and TV2 services can be viewed and controlled from the bedroom.

### 5.4 Disadvantages:

- Bedroom viewing is restricted to RF (terrestrial analogue) quality video and mono audio.
- This installation requires a remote blaster (not included with the decoders) for relaying remote commands from the 2nd environment.

### 5.5 Notes:

- All grey items are optional and need only be included if that additional functionality is required.
- The default RF channel on at least one decoder will have to be changed.
- A remote blaster (not supplied) is required for this installation
- The banded line just indicates that the cable carries multiple signals.

5.6 **Settings:**

**Suggested Primary/ Secondary**

There is no real technical reason to choose one over the other. Choose the one on which you least want to lose viewing, or intend taking with you on holiday as primary.

**TV1 Settings**

- Set "Communication Port" to RF IN
- Set "Remote Mode" to TV1
- Set "Relay Remote Commands" to OFF
- Set "Accept Relayed Commands" to OFF

**TV2 Settings**

- Set "Communication Port" to RF OUT
- Set "Remote Mode" to TV2
- Set "Relay Remote Commands" to OFF
- Set "Accept Relayed Commands" to OFF

5.7 **Usage:**

**Viewing terrestrial channels at any TV (optional):**

- Just switch TV to the correctly tuned RF channel.

**To view TV2 in the lounge:**

- Switch TV to AV.
- Use TV2 mode on the remote control.

**To view TV1 in the lounge:**

- Switch TV to AV2/ RF
- Use TV1 mode on the remote control

**To view TV1 in the bedroom:**

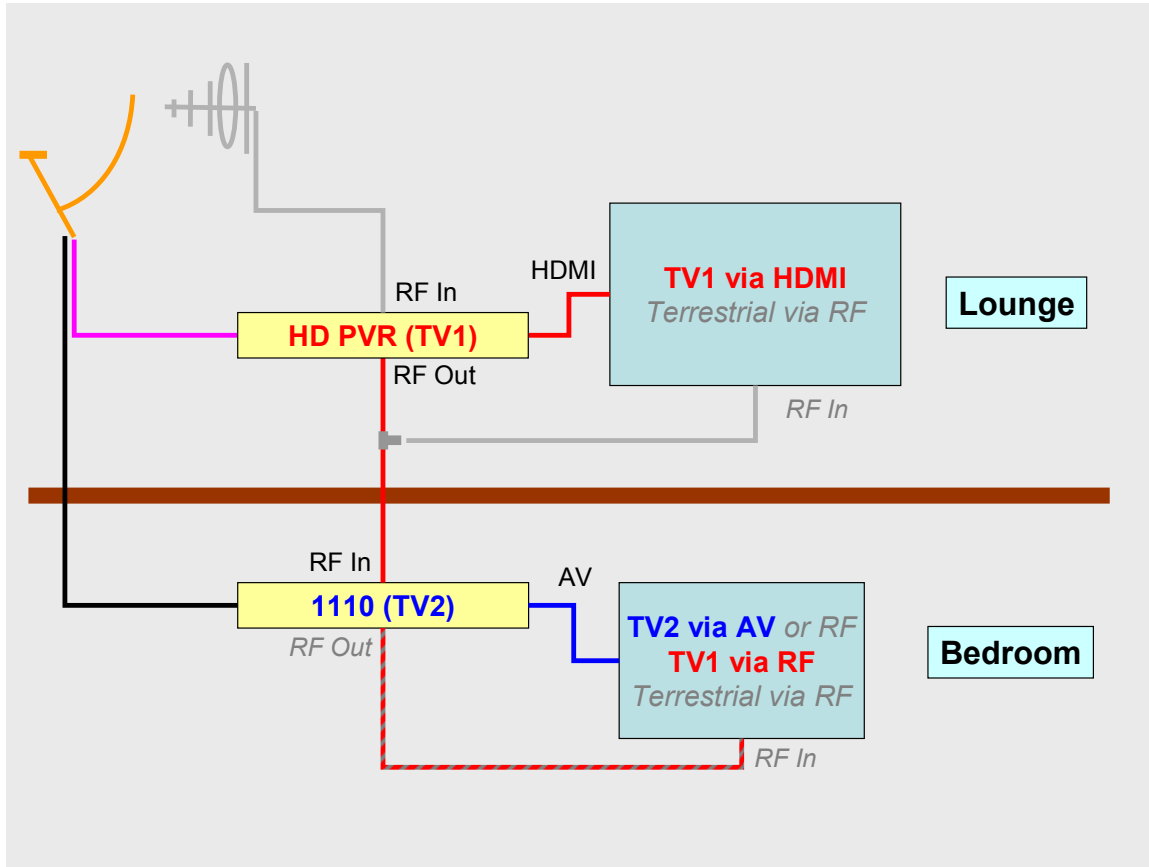
- Switch the TV to the channel tuned to receive the RF signal from the primary (TV1) decoder.
- Use TV1 mode on the remote control. (Remote blaster to relay the commands to the decoder)
- Note: Changing channels may affect viewing in the lounge.

**To view TV2 in the bedroom:**

- Switch the TV to the channel tuned to receive the RF signal from the secondary (TV2) decoder.
- Use TV2 mode on the remote control (Remote blaster to relay the commands to the decoder)
- Note: Changing channels may affect viewing in the lounge

## 6 INSTALLATION 2A: HD PVR + 1110 DECODER IN SEPARATE ROOMS

### 6.1 Installation Diagram



### 6.2 In Short:

Each room has independent access to all live MultiChoice services. Optimum video and audio quality is possible in each room. The PVR and its stored content can be viewed and controlled from both rooms.

### 6.3 Advantages:

- Each room has totally independent access to all live MultiChoice services
- Each room has access to the best possible picture and sound quality
- It is possible to view/ monitor and control the HD PVR (TV1) services from the bedroom.
- TV2 is private and cannot be viewed from the lounge.

### 6.4 Disadvantages:

- TV2 services cannot be viewed from the lounge.

### 6.5 Notes:

- Grey and orange items are optional and need only be included if that additional functionality is required.

- The purple line indicates a connection to the satellite dish and may consist of up to 4 cables, depending on the LNB used.
- The banded line just indicates that the cable carries multiple signals.
- The default RF channel on at least one decoder will have to be changed.

## 6.6 **Settings:**

### **Suggested Primary/ Secondary**

It is suggested that the HDPVR is used as the primary – it prevents any recordings from being lost due to any possible failure of the link between the decoders and also enables you to take the PVR (and all its recorded content) with you on holiday.

### **TV1 Settings**

- Set “Communication Port” to RF OUT
- Set “Remote Mode” to TV1
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to TV1

### **TV2 Settings**

- Set “Communication Port” to RF IN
- Set “Remote Mode” to TV2
- Set “Relay Remote Commands” to TV1
- Set “Accept Relayed Commands” to OFF

## 6.7 **Usage:**

### **Viewing terrestrial channels at any TV (Optional):**

- Just switch TV to the correctly tuned RF channel.

### **To view TV1 in the lounge:**

- Switch TV to HDMI.
- Use TV1 mode on the remote control.

### **To view TV2 in the bedroom:**

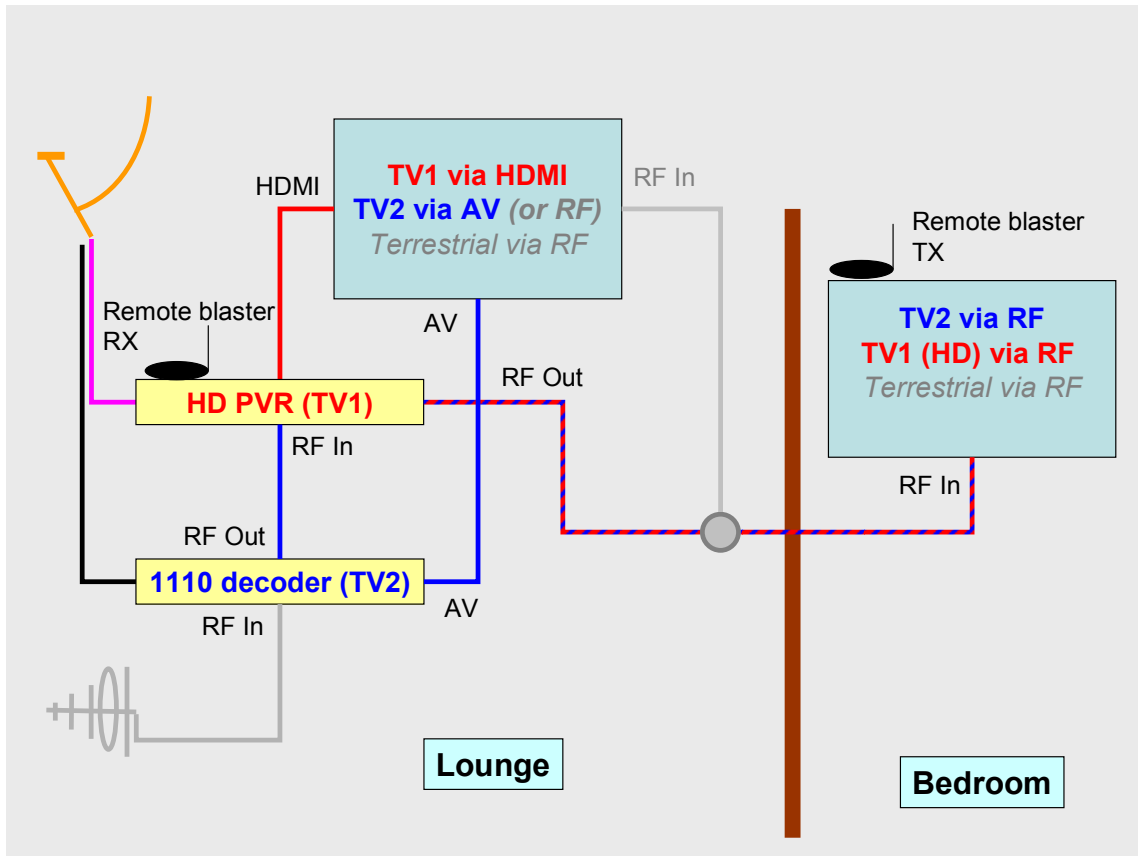
- Switch TV to AV
- Use TV2 mode on the remote control

### **To view TV1 in the bedroom (optional):**

- Switch the TV to the channel tuned to receive the RF signal from the HD PVR decoder.
- Use TV1 mode on the remote control
- Note: Changing channels will affect viewing in the lounge

## 7 INSTALLATION 2B: HD PVR + 1110 DECODER IN ONE ROOM

### 7.1 Installation Diagram



### 7.2 In Short:

- Both decoders are installed in one room. Only one cable is required to the 2nd room. Live services are available independently and the PVR can be shared.

### 7.3 Advantages:

- Each room has totally independent access to all live MultiChoice services.
- Only a single cable is required to the 2<sup>nd</sup> room.
- PVR services can be viewed and controlled from the bedroom as well.

### 7.4 Disadvantages:

- The bedroom will be able to view RF (terrestrial analogue) quality video and mono audio only.
- A remote blaster (not supplied with the decoders) is required for controlling viewing from the 2<sup>nd</sup> room.

### 7.5 Notes:

- All grey items are optional and need only be included if that additional functionality is required.



- The purple line indicates a connection to the satellite dish and may consist of up to 4 cables, depending on the LNB used.
- The default RF channel on at least one decoder will have to be changed.
- The banded line just indicates that the cable carries multiple signals.
- A remote blaster (not supplied with the decoders) is required for remote control from the second room.

## 7.6 **Settings:**

### **Suggested Primary/ Secondary**

It is suggested that the HDPVR is used as the primary – it prevents any recordings from being lost due to any possible failure of the link between the decoders and also enables you to take the PVR (and all its recorded content) with you on holiday.

### **TV1 Settings**

- Set “Communication Port” to RF IN
- Set “Remote Mode” to TV1
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to OFF

### **TV2 Settings**

- Set “Communication Port” to RF OUT
- Set “Remote Mode” to TV2
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to OFF

## 7.7 **Usage:**

### **Viewing terrestrial channels at any TV (Optional):**

- Just switch TV to the correctly tuned RF channel.

### **To view TV1 in the lounge:**

- Switch TV to HDMI.
- Use TV1 mode on the remote control.

### **To view TV2 in the lounge (Optional):**

- Switch TV to AV.
- Use TV2 mode on the remote control.

### **To view TV1 in the bedroom:**

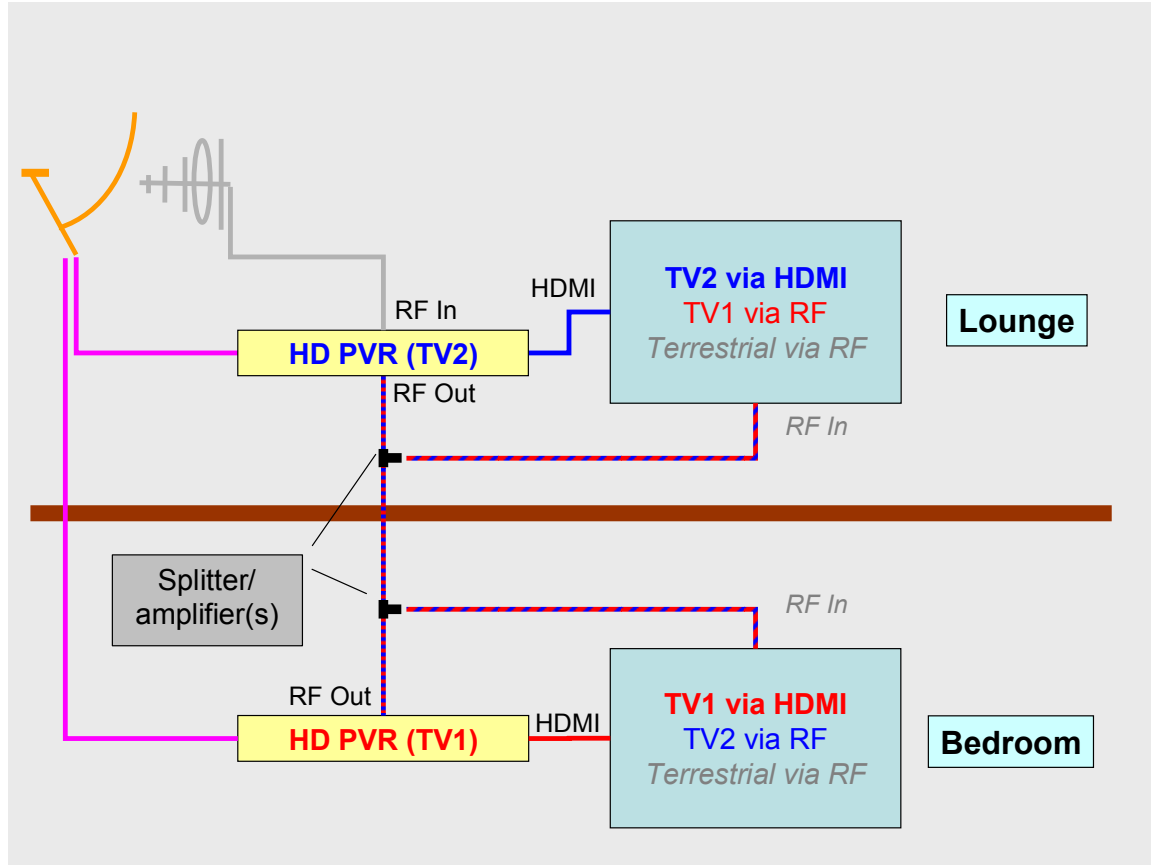
- Switch TV to the RF channel tuned to the TV1 decoder.
- Use TV1 mode on the remote control (The remote blaster will relay the commands)

### **To view TV2 in the bedroom:**

- Switch TV to the RF channel tuned to the TV2 decoder.
- Use TV2 mode on the remote control (The remote blaster will relay the commands)

## 8 INSTALLATION 3A: HD PVR + HD PVR IN SEPARATE ROOMS

### 8.1 Installation Diagram



### 8.2 In Short:

Each room has independent access to all live MultiChoice services. Optimum video and audio quality is possible in each room. Content from both HD PVRs can be viewed and controlled from either room. Note: Content from the PVR in the “other” room will be in RF (terrestrial analogue) quality only.

### 8.3 Advantages:

- Each room has totally independent access to all MultiChoice services with PVR functionality.
- Each room has access to the best possible picture and sound quality
- It is possible to view/ monitor and control all services from the either room.
- A combined total of up to 300 hours of recorded content is accessible from both rooms.

### 8.4 Disadvantages:

- Content from the PVR “in the other room” is only available in RF quality.
- Watching content from the PVR “in the other room” will affect any viewing in that room.

8.5 **Notes:**

- Grey items are optional and need only be included if that functionality is required.
- The purple lines indicate a connection to the satellite dish and may consist of up to 4 cables, depending on the LNB used.
- The banded line just indicates that the cable carries multiple signals.
- The default RF channel on at least one decoder will have to be changed.

8.6 **Settings:**

**Suggested Primary/ Secondary**

There is no real technical reason to choose one over the other. Choose the one on which you least want to lose viewing, or intend taking with you on holiday as primary.

**TV1 Settings**

- Set "Communication Port" to RF Out
- Set "Remote Mode" to TV1
- Set "Relay Remote Commands" to TV2
- Set "Accept Relayed Commands" to TV1

**TV2 Settings**

- Set "Communication Port" to RF Out
- Set "Remote Mode" to TV2
- Set "Relay Remote Commands" to TV1
- Set "Accept Relayed Commands" to TV2

8.7 **Usage:**

**Viewing terrestrial channels at any TV (Optional):**

- Just switch the TV to the correctly tuned RF channel.

**To view TV1 in the lounge:**

- Switch TV to RF channel tuned to the TV1 PVR.
- Use TV1 mode on the remote control. (The local decoder will relay the remote command) Note: This will affect any viewing in the bedroom.

**To view TV2 in the lounge:**

- Switch TV to the HDMI input.
- Use TV2 mode on the remote control.

**To view TV1 in the bedroom:**

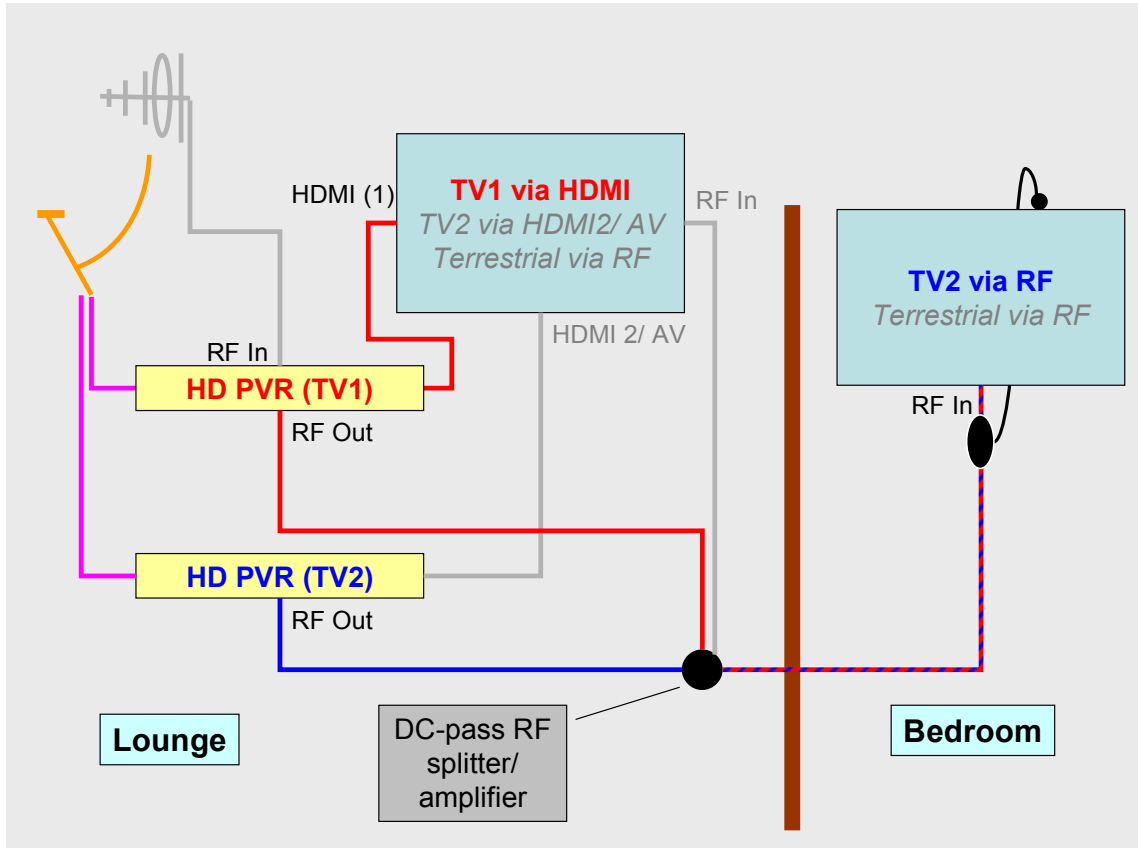
- Switch TV to the HDMI input.
- Use TV1 mode on the remote control

**To view TV2 in the bedroom:**

- Switch TV to RF channel tuned to the TV2 PVR
- Use TV2 mode on the remote control. (The decoder will relay the remote command) Note: This will affect any viewing in the lounge.

## 9 INSTALLATION 3B: HD PVR + HD PVR IN ONE ROOM

### 9.1 Installation Diagram



### 9.2 In Short:

Independent access to all MultiChoice services with PVR functionality at two viewing points. The 2<sup>nd</sup> point (bedroom in this case) has reduced quality of service but requires only a single cable.

### 9.3 Advantages:

- Each room has totally independent access to all live MultiChoice services with PVR functionality.

### 9.4 Disadvantages:

- HDTV services can only be viewed in standard resolution and terrestrial signal quality (RF quality video and mono audio) in the bedroom.
- A tvLINK or remote blaster (neither is supplied with the decoders) is required for controlling viewing from the 2<sup>nd</sup> room.

### 9.5 Notes:

- All grey items are optional and need only be included if that additional functionality is required.
- The purple lines indicate a connection to the satellite dish and may consist of up to 4 cables, depending on the LNB used.
- The default RF channel on at least one decoder will have to be changed.

- The banded line just indicates that the cable carries multiple signals.
- A tvLINK “eye” or remote blaster (neither is supplied) is required.

9.6 **Settings:**

**Suggested Primary/ Secondary**

There is no real technical reason to choose one over the other. Choose the one on which you least want to lose viewing, or intend taking with you on holiday as primary.

**TV1 Settings**

- Set “Communication Port” to RF OUT
- Set “Remote Mode” to TV1
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to TV1\*

**TV2 Settings**

- Set “Communication Port” to RF OUT
- Set “Remote Mode” to TV2
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to TV2\*

\* Applicable if a tvLINK eye is used. If so, one of the decoders must also have its tvLINK setting switched ON in order to power the tvLINK eye in the 2<sup>nd</sup> room.

9.7 **Usage:**

**Viewing terrestrial channels at any TV (Optional):**

- Just switch TV to the correctly tuned RF channel.

**To view TV1 in the lounge:**

- Switch TV to HDMI.
- Use TV1 mode on the remote control.

**To view TV2 in the lounge:**

- Switch TV to HDMI 2 or AV (or RF).
- Use TV2 mode on the remote control.

**To view TV1 in the bedroom:**

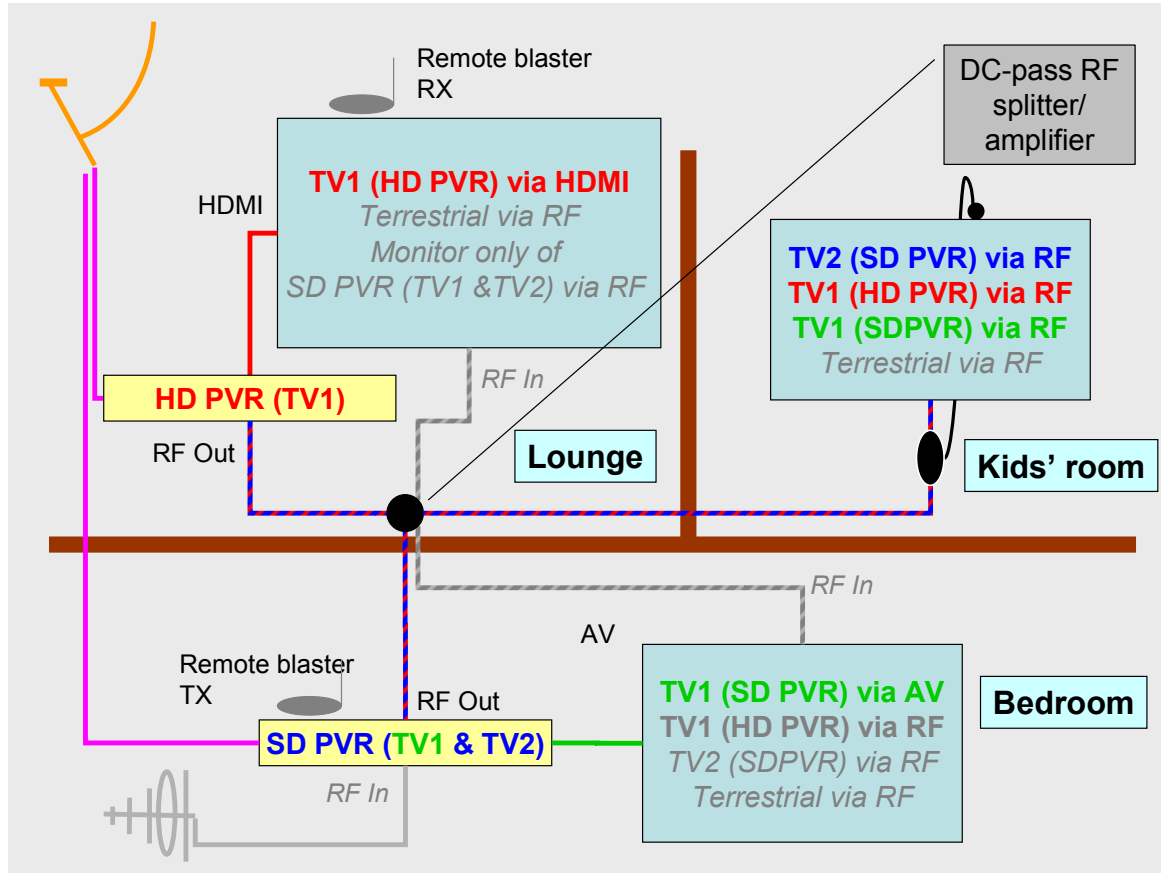
- Switch TV to the RF channel tuned to the TV1 PVR.
- Use TV1 mode on the remote control. (tvLINK or remote blaster will relay the commands)

**To view TV2 in the bedroom:**

- Switch TV to the RF channel tuned to the TV2 PVR.
- Use TV2 mode on the remote control. (tvLINK or remote blaster will relay the commands)

## 10 INSTALLATION 4A: HD PVR + SD PVR IN SEPARATE ROOMS

### 10.1 Installation Diagram



### 10.2 In Short:

Three rooms with independent access including PVR functionality to all MultiChoice services. Each room has independent access to all live MultiChoice services. Optimum video and audio quality is possible in two rooms. HD PVR content can be made available everywhere, but SD PVR content can only be viewed *and controlled* from 2 rooms.

### 10.3 Advantages:

- Three rooms each with totally independent access including PVR functionality to all MultiChoice services.
- Optimum viewing experience possible in two rooms.
- HD PVR content can be made available everywhere.

### 10.4 Disadvantages:

- If HD control is desired from the bedroom, a remote blaster (not supplied) is required.
- Additional HD remotes may be required for controlling HD viewing from the 2<sup>nd</sup> and 3<sup>rd</sup> rooms.
- SD services can only be viewed and controlled in two rooms\*.

\*Note – an extra set of remote blasters could transfer remote signals from the lounge to the bedroom, thereby allowing control of the SD PVR content from the lounge as well. (I.e. SD and HD content then available and controllable from everywhere) If attempting this, the remote blaster pairs needs to be shielded from one another, or it will cause an unending remote circuit.

10.5 **Notes:**

- All grey items are optional and need only be included if that additional functionality is required.
- The purple lines indicate a connection to the satellite dish and may consist of up to 4 cables, depending on the LNB used.
- The default RF channel setting on at least one decoder will have to be changed.
- The striped lines are still single cables - the different colours just indicate that multiple channels are carried in that cable.

10.6 **Settings:**

**Suggested Primary/ Secondary**

The HD PVR decoder has to be the primary due a hardware limitation on the SD PVR.

**HD PVR (TV1) Settings**

- Set “Communication Port” to RF OUT
- Set “Remote Mode” to TV1
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to TV1

**SD PVR Settings**

- Set “Remote Mode” to “SD Remote only”
- tvLINK setting must be ENABLED.

10.7 **Usage:**

**Viewing terrestrial channels at any TV (Optional):**

- Just switch the TV to the correctly tuned RF channel.

**To view TV1 (HD PVR) in the lounge:**

- Switch TV to HDMI.
- Use TV1 mode on the HD PVR remote control.

**To monitor SD PVR services in the lounge:**

- Switch TV to the RF channel tuned to the TV1 or TV2 services of the SD PVR – see “note” under “Disadvantages”.

**To view TV1 (SD PVR) in the bedroom:**

- Switch TV to AV
- Use TV1 mode (1A, B, C or D) on the SD PVR remote control

**To view TV1 (HD PVR) in the bedroom (optional):**

- Switch TV to the RF channel tuned to the HD PVR.
- Use the TV1 mode on the HD PVR remote control. (Remote blaster will transfer commands to the HD PVR)

**To view TV2 (SD PVR) in the bedroom:**

- Switch TV to AV2 or the RF channel tuned to the TV2 services of the SD PVR
- Use TV2 mode (2A, B, C or D) on the SD PVR remote on the SD PVR remote control.

**To view TV2 (SD PVR) in the kids' room:**

- Switch TV to the RF channel tuned to the TV2 services of the SD PVR
- Use TV2 mode (2A, B, C or D) on the SD PVR remote on the SD PVR remote control. (tvLINK will relay the commands)

**To view TV1 (HD PVR) in the kids' room:**

- Switch TV to the RF channel tuned to the HD PVR
- Use TV1 mode on the HD PVR remote. (tvLINK will relay the commands)

**To view TV1 (SD PVR) in the kids' room:**

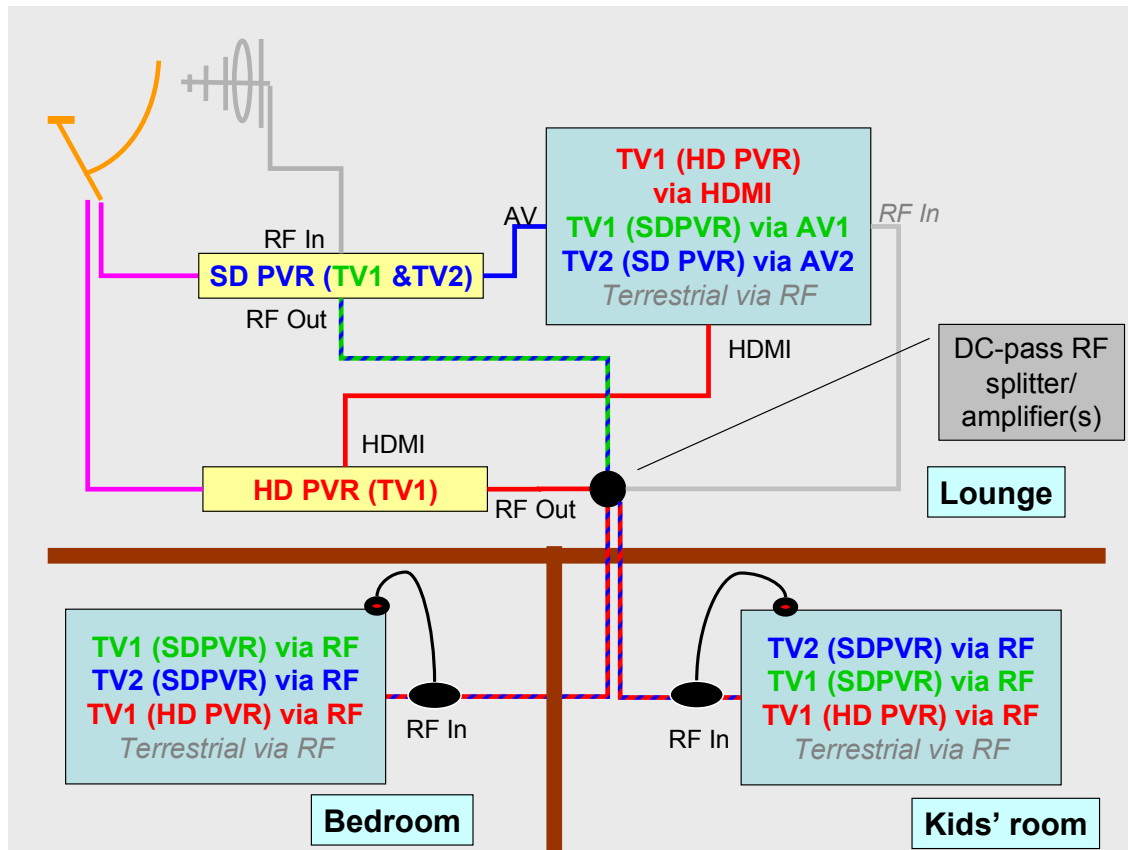
- Switch TV to the RF channel tuned to the TV1 services of the SD PVR
- Use TV1 mode (1A, B, C or D) on the SD PVR remote on the remote control. (tvLINK will relay the commands)

*Remember that the HD PVR remote can be programmed to emulate the SD PVR remote.  
(See p6)*



## 11 INSTALLATION 4B: HD PVR + SDPVR IN ONE ROOM

### 11.1 Installation Diagram



### 11.2 In Short:

Decoders in one room, so less cabling. 3 Viewing environments each with independent access to live services as well as the recorded content from both PVRs.

### 11.3 Advantages:

- HD and SD PVR services are available everywhere.

### 11.4 Disadvantages:

- Viewing at 2nd and 3rd points is restricted to RF (terrestrial analogue) quality video and mono audio.
- Additional HD remotes may be required for controlling HD viewing from the 2<sup>nd</sup> and 3<sup>rd</sup> rooms.
- Additional TV “eyes” (or remote blasters) are required.

### 11.5 Notes:

- All grey items are optional and need only be included if that additional functionality is required.
- The purple lines indicate a connection to the satellite dish and may consist of up to 4 cables, depending on the LNB and or multi-switch used.
- The default RF channel settings will have to be changed.
- The banded line just indicates that the cable carries multiple signals.

11.6      **Settings:**

**Suggested Primary/ Secondary**

The HD PVR decoder has to be the primary due a hardware limitation on the SD PVR.

**HDPVR Settings**

- Set “Communication Port” to RF OUT
- Set “Remote Mode” to TV1
- Set “Relay Remote Commands” to OFF
- Set “Accept Relayed Commands” to TV1

**SD PVR Settings**

- Set “Remote Mode” to “SD Remote only”
- tvLINK setting must be ENABLED.

11.7      **Usage:**

**Viewing terrestrial channels at any TV (Optional):**

- Just switch TV to the correctly tuned RF channel.

**To view TV1 (HD PVR) in the lounge:**

- Switch TV to HDMI.
- Use TV1 mode on the HD PVR remote control.

**To view TV1 (SD PVR) in the lounge:**

- Switch TV to AV1.
- Use TV1 (1A, B, C or D) on the SD PVR remote control\*.

**To view TV2 (SD PVR) in the lounge:**

- Switch TV to AV2.
- Use TV2 (2A, B, C or D) on the SD PVR remote control\*.

**To view TV1 (SD PVR) in the bedroom or kids’ room**

- Switch TV to the RF channel tuned to TV1 on the SD PVR
- Use TV1 (1A, B, C or D) mode on the SD PVR remote. (tvLINK will relay the commands)

**To view TV2 (SD PVR) in the bedroom or kids’ room**

- Switch TV to the RF channel tuned to TV2 on the SD PVR
- Use TV2 (2A, B, C or D) mode on the SD PVR remote. (tvLINK will relay the commands)

**To view HD PVR in the bedroom or kids’ room**

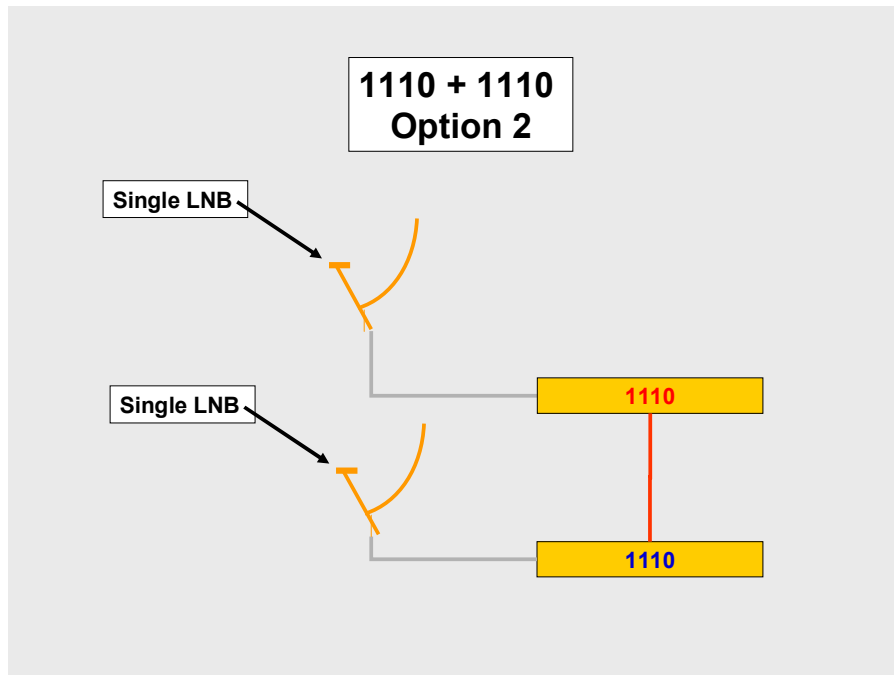
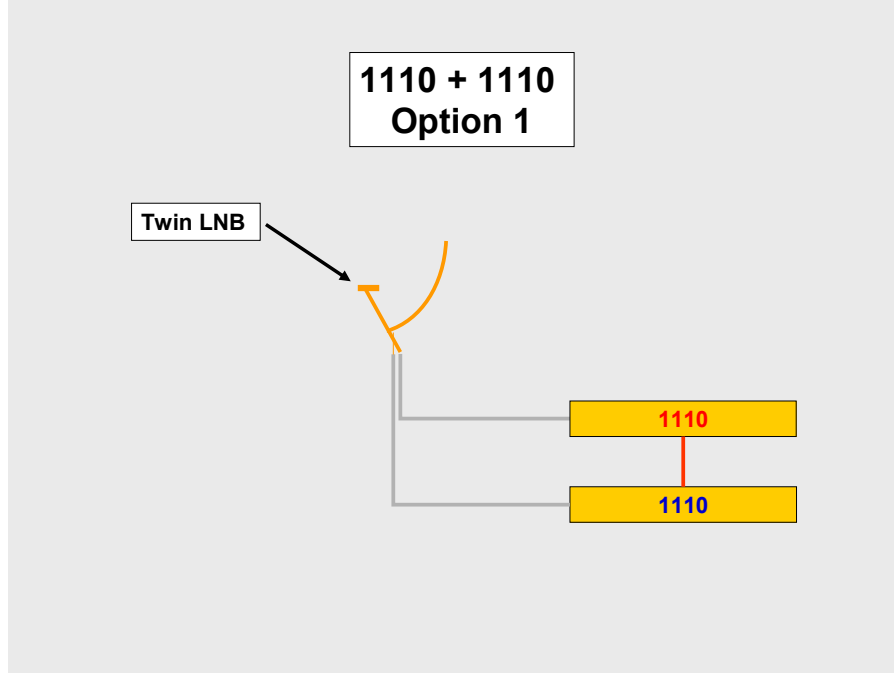
- Switch TV to the RF channel tuned to the HD PVR
- Use TV1 mode on the HD PVR remote. (tvLINK will relay the commands)

*\*Remember that the HD PVR remote can be programmed to emulate the SD PVR remote. (See p6)*

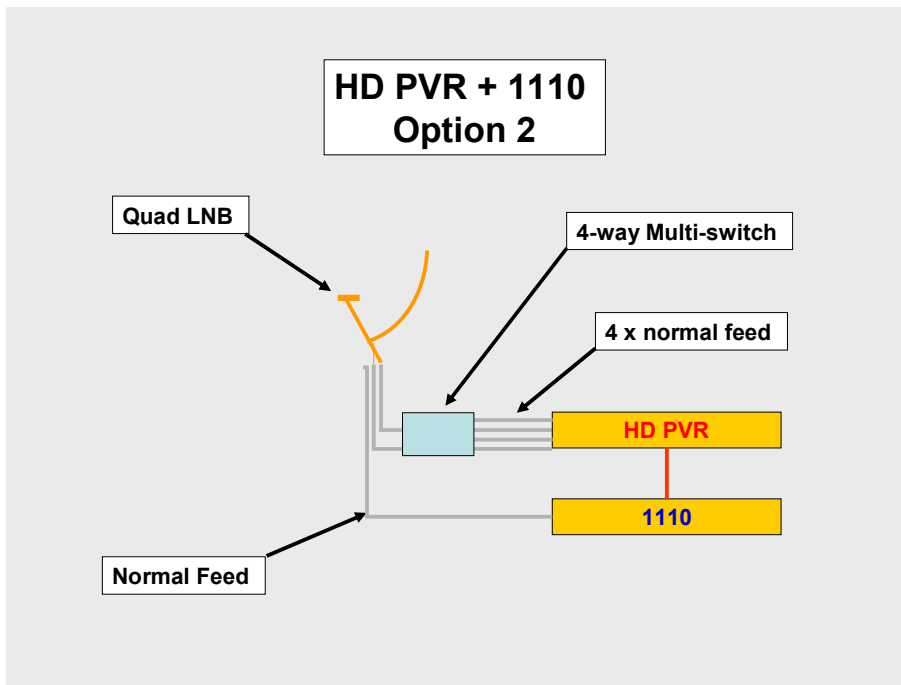
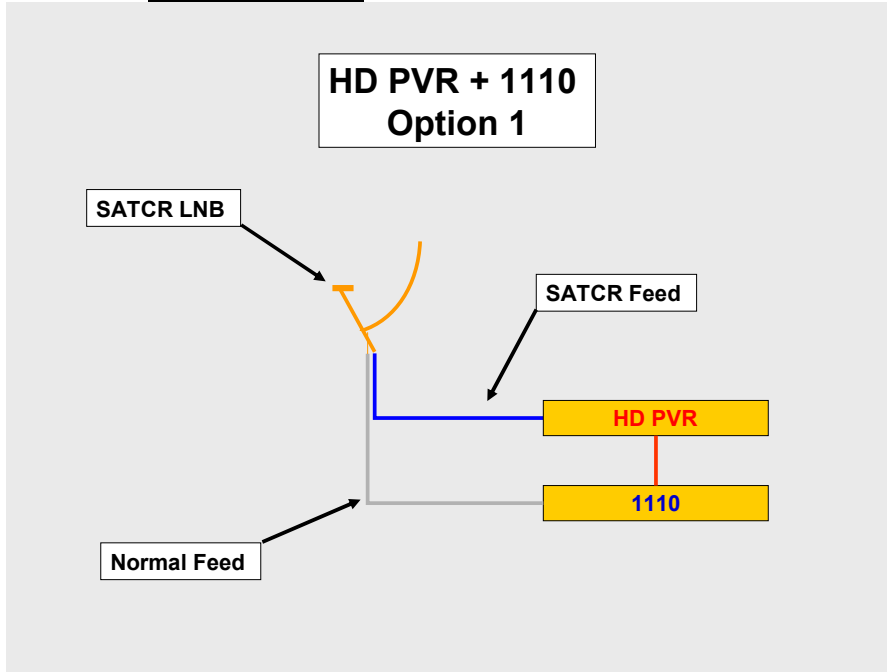
*Note: The TV “eyes” could be replaced with remote blasters if desired.*

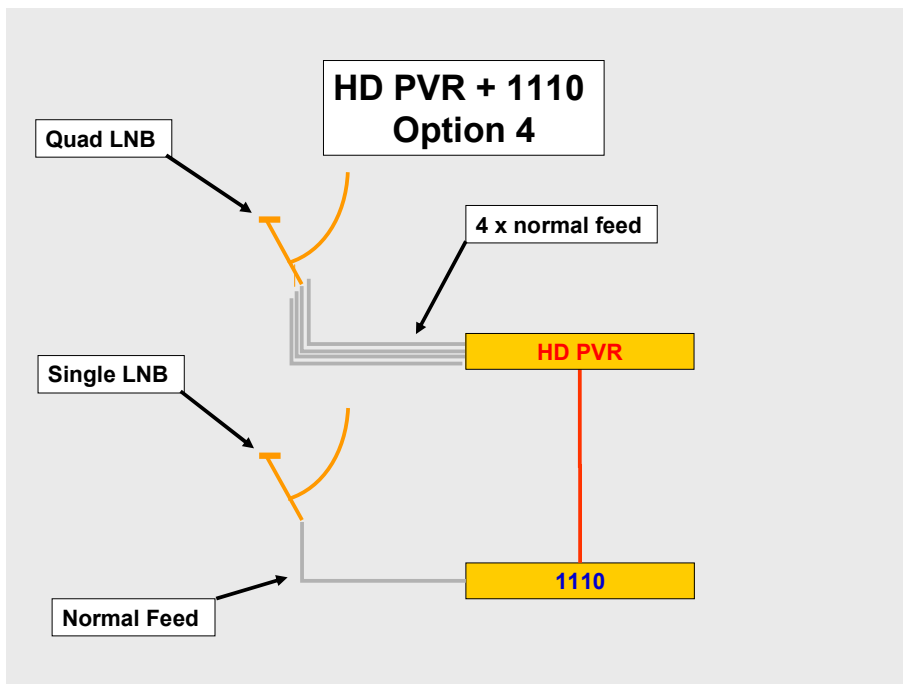
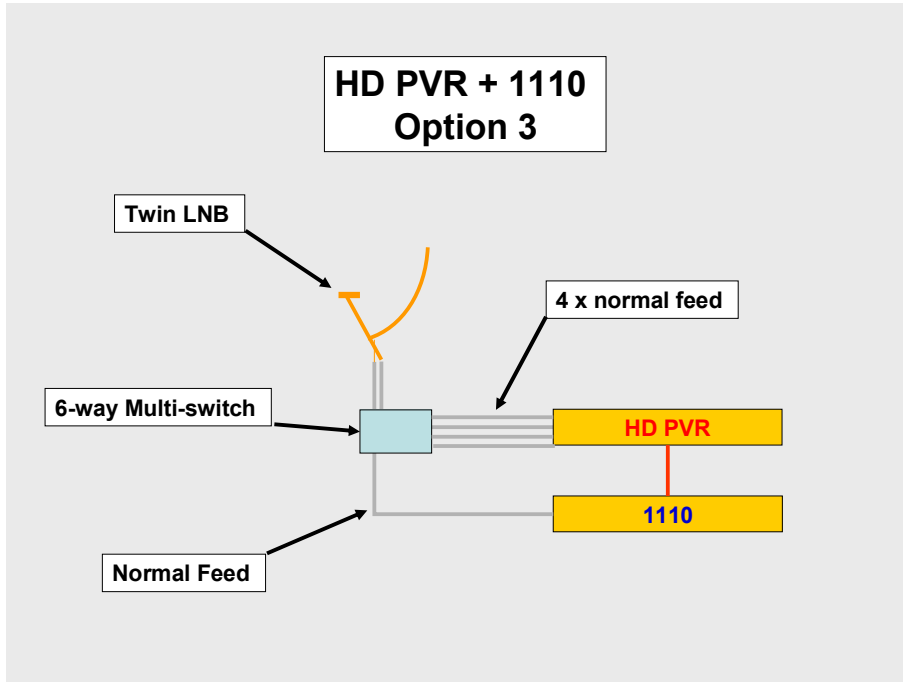
## 12 LNB INSTALLATION OPTIONS

### 12.1 1110 + 1110

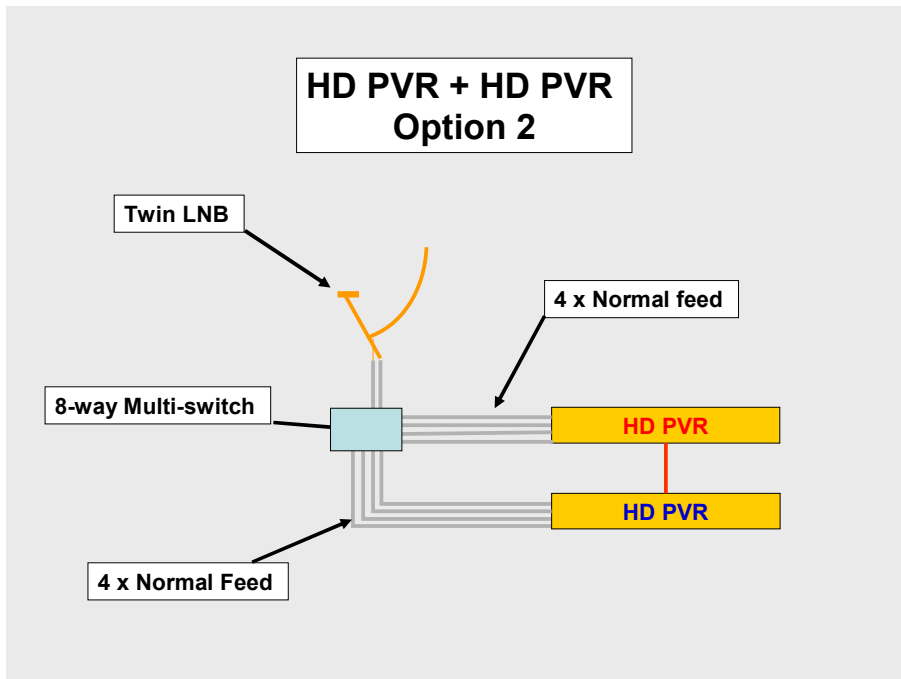
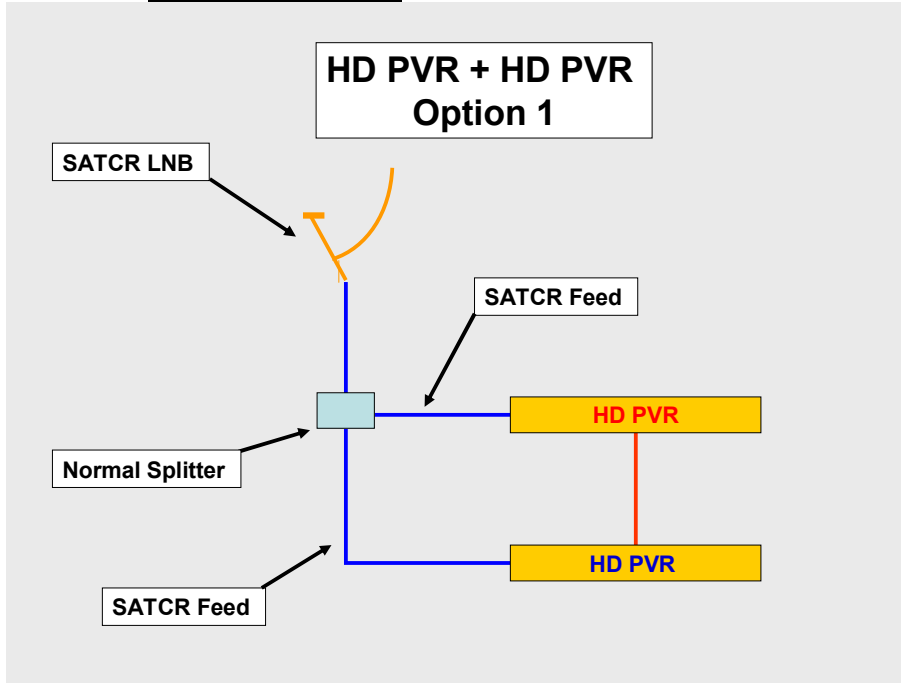


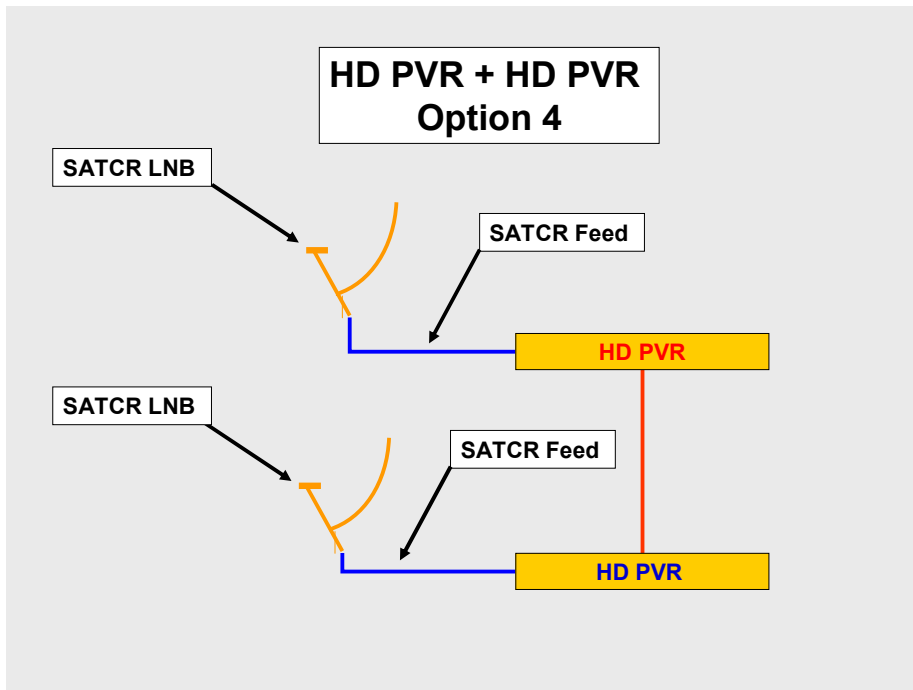
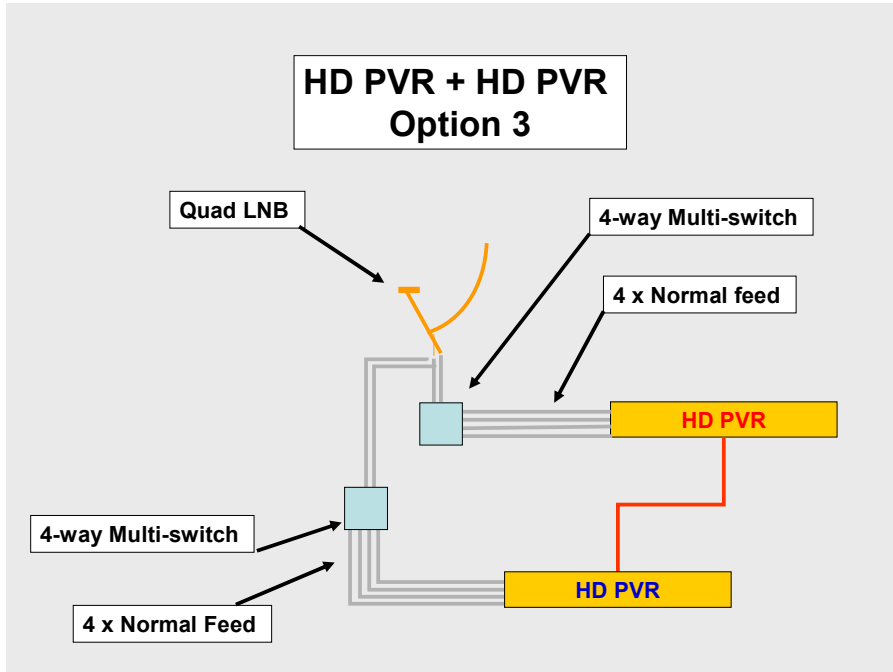
12.2 **HD PVR + 1110**





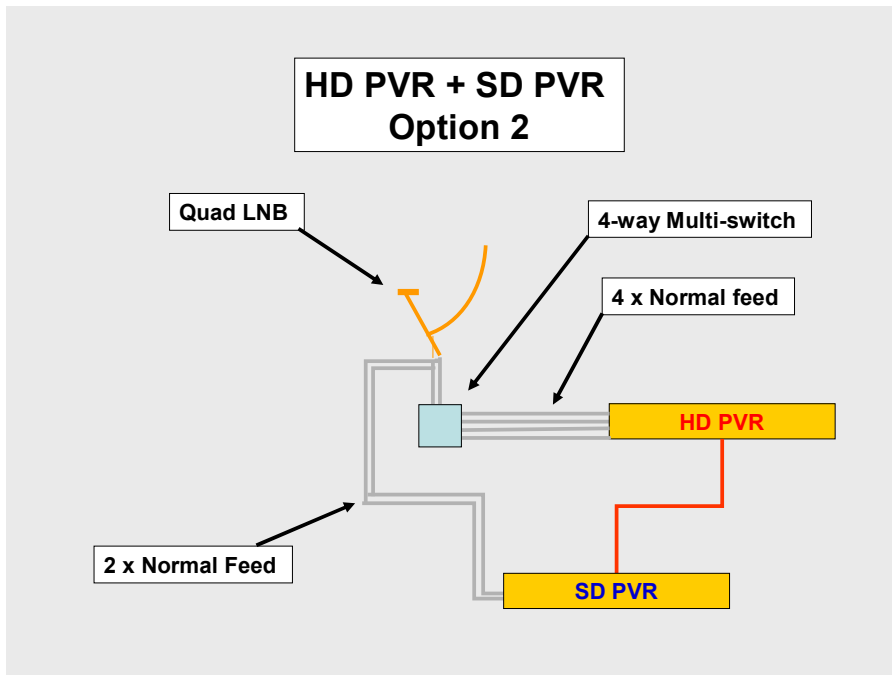
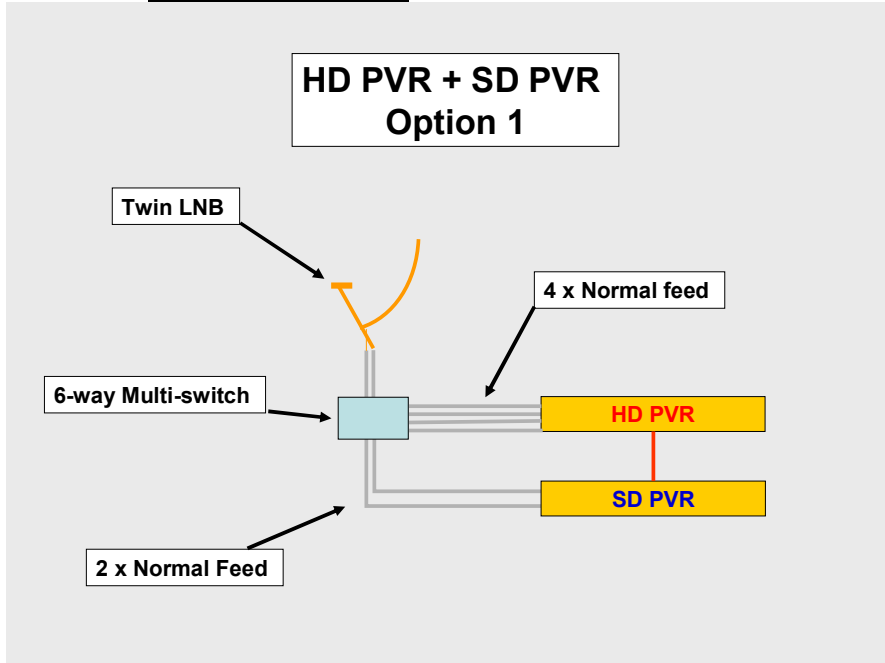
12.3 **HD PVR + HDPVR**



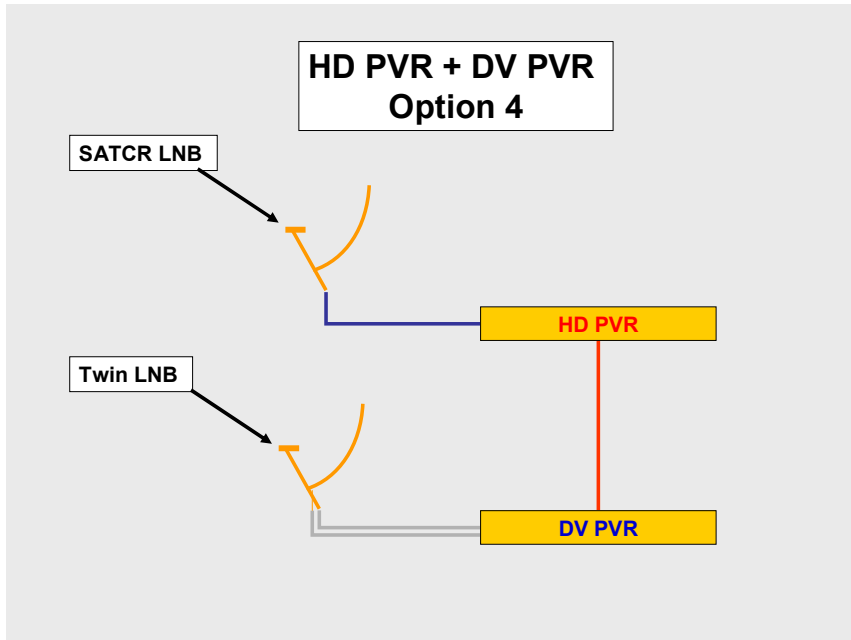


It is also possible to use 2 x quad LNB or 2 x twin LNB with 4-way multi-switches.

12.4 **HD PVR + SD PVR**







A quad LNB, or a twin running through a 4-way multiswitch could also be used for the HD PVR.

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