



# Red-Eye [www.redremote.co.uk](http://www.redremote.co.uk)

Remote control translator for Pace ® 1000, 1010, 2000 and 4000 series Digital Cable TV Set Top Boxes.

The Red-Eye provides an alternative infra-red (IR) remote control system for the Pace model 1000,1010,2000 and 4000 series digital cable set-top box (STB). It overcomes the problems encountered by users of many universal/learning remote controls and remote repeater systems, which are caused by the Pace STB's use of a non-standard remote control protocol (based on the IRDA ® computer protocol). The Red-Eye uses an alternative remote control protocol (the RC6 system, as used on the Philips ® DTX6370/1 Digital Terrestrial STB), allowing the Pace STB to be controlled by any remote control which supports this protocol. This includes replacement remotes for the Philips STB, some universal remotes, most learning remotes, and programmable remotes like the Philips Pronto, either directly or through an infra-red repeater system.

The Red-Eye also has the ability to teach its control codes to a learning remote.

## Installation

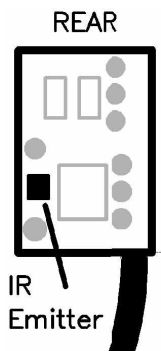
(If you need to use the Red-Eye to teach its commands to a learning remote, don't stick it onto the STB yet – see later for details.)

Disconnect the STB from the mains. Fix the Red-Eye to the left-hand side of the display window on the STB, using the sticky pad provided. Take care to get it the right way round – it needs to be positioned so that the cable emerges from the bottom left-hand corner of the Red-Eye. Take care to place the sticky pad so that it does not obstruct the Infra-Red emitter (shown right). Pass the cable under the receiver, and plug it into the **IR Blaster Out** socket on the rear of the STB (this is the uppermost of the two 3.5mm jack sockets).



Reconnect the mains supply to the receiver – when power is applied, you should see the red LED on the front of the Red-Eye light brightly for approximately 5 seconds, then go out. **Don't try using a remote during this initial 5s period** or Red-Eye might enter teach mode (see *learning remotes* section overleaf).

While power is on, the LED will normally remain on very dimly, and will flicker if it sees any infra-red signal (e.g. from another remote). It will flash more brightly when it receives a Red-Eye remote command. If you see it continuously flickering instead of the steady dim illumination, it could be that it's picking up stray light, (e.g. from fluorescent or energy-saving bulbs), or electrical interference. This may reduce the reliability of reception, and you should try to reposition if possible (e.g. shading from overhead lighting). In some cases you may find that using the other jack socket (*IR In*) on the rear of the cable receiver might help. (Tests on a 1000 series STB showed that the upper socket produced less electrical noise – this may be different on other models.)



## Remotes supported by Red-Eye

Red-Eye works with programmable and learning remotes, as well as the following original/replacement/preprogrammed remotes:

- 1) Original remote for the Philips DTX6370/1 OnDigital STB, Philips remote model number RC2580/01. This remote also provides basic controls for most makes of TVs and VCRs.
- 2) Wallis replacement remote for Philips DTX6370/1. Wallis part number 90 57 96 07. Available from CPC ([www.cpc.co.uk](http://www.cpc.co.uk), 08701 20 25 30), order code HS0040366
- 3) *One For All 4 Digital* URC-7541/44 (N.B. must be the *Digital* model). This is a universal remote which can also control most makes of TV, Video and other equipment. Available from many retail outlets, including Argos (catalogue number 534-0521) Use the OnDigital (Philips) stick-on overlay, with code S0133 (code system A) or S0134 (code system B) in SAT mode.

For up-to-date information on other supported remotes and sources of the above units, please visit the website [www.redremote.co.uk](http://www.redremote.co.uk)

**Table 1 : Functions which are labelled differently on the Philips remote and compatibles listed above.**

Pace STB function	Philips remote key	Pace STB function	Philips remote key
Favorites	Wide	Interactive	Menu
Back	Exit	Help	Subtitle
TV	TV/DTV	Page up/down	Volume up/down*
TV On Demand	Not available (access via TV guide)	Skip	Not available

\* Volume up/down action depends on which state Red-Eye thinks the STB is in. When Red-Eye is in **Volume** mode, the *Volume* keys send volume commands, and in **Page** mode, they send page up/down commands. Red-Eye switches to **Volume** mode if *TV* is pressed, and to **Page** mode if any of *TV Guide*, *Text*, *Interactive*, *Favorites* or *Help* is pressed. Other keys have no effect on the mode. This action covers most normal usage, but there will be occasions when it won't switch back to **Volume** mode - e.g. when exiting the TV guide with *OK*. In this case, pressing *TV* will change to **Volume** mode if required.

Note that NTL areas don't have the volume function enabled in the software version in use at the time of writing.

**Home** and **Guide** keys on Telewest "Silver remote" are not available. They are available with Pronto and learning remotes.

Red-Eye can use either the system A or B command sets supported by the Philips DTX6370/1, to reduce the risk of clashes with this or other products. Red-Eye will automatically use whichever code system it receives first after power-up, so if you need to use a specific system to avoid clashing with the Philips DTX or other unit, ensure that the remote you want to use with Red-Eye is the first one it 'sees' after powering up. This setting will be retained for as long as mains power is on (the STB on/off button does not control power to Red-Eye). Instructions for selecting the code set on the Philips remote are on the website [www.redremote.co.uk](http://www.redremote.co.uk).

## Use with learning remotes

Red-Eye provides a special **Teach Mode** to teach its commands to learning remotes.

Note that the infra-red (IR) emitter on Red-Eye is less bright than the one on a normal remote, as it works close to the STB's IR receiver. It's possible that some learning remotes may not be sensitive enough to learn from this less bright emitter, even when very close. It may be necessary to position the Red-Eye's IR emitter much closer to the learning remote's receiver than you would when learning from a normal remote. The position of the emitter on the rear of Red-Eye is shown in the *Installation* section. You may need to experiment to find the exact position of your learning remote's IR sensor so it can be placed as close as possible to Red-Eye's emitter. If this still doesn't work you'll need to borrow a compatible remote to teach from.

To use Teach mode, you need to use another remote control to step Red-Eye through the stages of the teach process. Almost any type of remote will do (except the original Pace STB remote). This remote will be referred to as **Rx**. "Rx" below means "any key on Rx". You may need to hold Rx for up to half a second, depending on the type of remote used.

Teach mode is rather fiddly to use, but should only need doing once! You will find it MUCH easier if Rx, Red-Eye and the learning remote are placed on a flat surface (fix RedEye down with tape or Blu-Tak), so your hands are free to press buttons. It will also save a lot of time if you plan exactly what functions you want to map to which keys BEFORE you start!

When Red-Eye is initially powered up (by connecting mains power to the STB), the LED lights for 5 seconds. During this 5s period, press and hold Rx – the LED will start flickering. Continue holding Rx down until the LED goes out – this will take 1 to 5 seconds depending on the type of remote used.

When the LED goes out, release Rx.

Red-Eye is now in Teach mode, and the LED will be showing a series of 6 short flashes, repeating after a 2 second gap.

In teach mode, Red-Eye alternates between two states, a press of Rx being used to switch between them (see Table 2).

In the first state, it shows a repeating pattern of 6 long and/or short flashes, to tell you which code will be taught next (see Table 3). When Rx is pressed, it enters the second state: the LED lights for 5 secs, goes out for 1s, then the IR code to be taught is transmitted continuously for 15s, during which time the LED flickers rapidly. You should start the *learn* function on your remote shortly after releasing Rx, i.e during the 5s period when the LED is on. Ensure you start learning shortly after releasing Rx (to avoid picking up a false code from Rx), and before the LED goes out. If you activate it while the LED is flickering, your remote may not learn the code correctly, leading to unreliable or sluggish Red-Eye operation when that code is used. If you don't manage to activate the learn function before the LED starts flickering, wait until the flickering stops and LED comes on again before trying again.

This 5 sec LED / 15s IR send sequence repeats until Rx is pressed, to allow further attempts on the same code if the learning remote did not capture correctly the first time. Once the code has been successfully learnt, you don't have to wait until the end of the 15 seconds to move onto the next code - Rx can be pressed at any time to move onto the next code, and this will return to the 6-flash mode to show which code will be taught next. The learn process is then repeated for each code. If you don't want to teach all the functions, you can skip over the unwanted codes by exiting the teach state with Rx as soon as the LED starts flickering. Table 3 shows the sequence of key functions taught. After the last step, it restarts at step 0 (channel up)

When teaching is complete, power down Red-Eye by powering off the STB at the mains for 10 seconds.

	Repeating pattern showing the next code to be taught (0)
	5s flash acknowledges Rx, 1s gap, fast blink as IR code 0 is sent for 15s. Pattern repeats until Rx press
	Repeating flash pattern showing the next code to be taught (1)
	Long flash acknowledges Rx, 1s gap, fast blink as IR code 1 is sent for 15s. Pattern repeats until Rx
Sequence repeats for codes 2..38, then restarts at 0	

No	Function	LED Flash sequence (2 sec gap between repeats)	RC6
0	Channel Up		20
1	Chan Down		21
2	TV		43
3	Up		58
4	Down		59
5	Left		5A
6	Right		5B
7	OK		5C
8	Page Up *		34
9	Page Dn *		35
10	Red		6D
11	Green		6E
12	Yellow		6F
13	Blue		70
14	TV Guide		CC
15	I (info)		0F
16	Back		83
17	Skip		31
18	Power		0C
19	Mute		0D
20	help		4B
21	Interactive		54
22	Favorites		D8
23	TV On Dem		30
24	Text		3C
25	0		00
26	1		01
27	2		02
28	3		03
29	4		04
30	5		05
31	6		06
32	7		07
33	8		08
34	9		09
35	Vol up *		32
36	Vol down *		33
37	Pg/vol up **		10
38	Pg/vol dn**		11
39	Home (TW)		36
40	Guide (TW)		37

\* These codes ignore the page/volume mode state  
 \*\* These codes use the page/volume mode state - see Table 1 for more info.  
 (TW) Telewest "Silver remote" codes.  
 RC6 codes are in hexadecimal. Full RC6 code is 28 xx for System A, 2F xx for System B. For Pronto etc, the RC6 string is 6000 0073 0001 0000 0028 00xx for system A (.002F 00xx for system B)

## Information for programmable remotes, VCRs and other products

Please check [www.redremote.co.uk](http://www.redremote.co.uk) for the latest updates

**JVC VCRs** : Philips Code **84** **Panasonic VCRs** : Code **218**

**TiVo®** Make : Philips, code : **20012**

**Philips Pronto®** CCF files for configuring the Pronto remotes via *ProntoEdit* software available at [www.redremote.co.uk](http://www.redremote.co.uk) RC6 code data is also listed in Table 3

If your remote/VCR has an option for the Philips DTX6370 , use this setting, if not, other Philips codes may be worth trying.

If it has a facility to enter RC6 commands, these are listed in Table 3.