

Eycos S55.12.PVRH

PVR in premier league with HDMI



The decisive HDMI port which Eycos uses to output the scaler signals

In recent months an up-and-coming company from South Korea has made the headlines a number of times when it comes to new, innovative and technologically superior products. We're talking about

Eycos here. Together with their Austrian distributor Satforce they have high-flying goals and live by the motto "there's nothing that cannot be improved further".



The youngest Eycos receiver deserves the description 'quantum leap' without a doubt. Countless owners of plasma or LCD screens are furious about the often miserable video quality of many free-to-air satellite channels and doubt they have made a wise move by investing lots of money into state-of-the-art screens which are fed by low-quality satellite channels. Everyone knows that a bad picture becomes worse the bigger the screen it is watched on. Many viewers lament the low resolution of their favourite channels and the limited bandwidth the program providers use. Unfortunately, these complaints are hardly ever listened to and in order to keep operational expenses low many program providers experiment with using even less resources to transmit their signals.

Eycos, on the other hand, has listened very thoroughly and they have thought about how these problems could be solved. That's when the idea of a PVR receiver with an integrated scaler came up. The scaler is used to increase the resolution of the input signal and to interpolate the missing pixels to make sure the increased resolution does not cause the raster that would be unavoidable with a mere increase of the resolution. They looked for a qualified partner and found one in Pioneer, which assisted in the development of the S55.12 PVRH. The final result of this challenging project reached our test lab a few days ago.

The excitement was almost audible when we opened the package and the first impression lived up to our high expectations.

The design of the S55.12 PVRH can best be described as unpretentious but elegant. The front panel sports an extremely easy-to-read alphanumeric display (VFD) as well as eight buttons to operate the receiver without using the remote control. A flap in the middle of the lower half of the front panel hides two CI slots for all standard modules such as Irdeto, Seca, Viaccess, Conax, Nagravision etc. There is also a blind slot for an integrated card reader and Eycos is expected to offer this particular model with embedded Conax in the near future.

The excitement does not stop when we look at the packed back panel which includes – apart from the IF input and looped-through outputs for the two tuners – two smart euroconnectors, an S-

Video output and an HDMI port for connection with a plasma or LCD screen, three RCA jacks for stereo audio and video, a switchable 0/12 V output, an RS-232 interface as well as an USB 2.0 port for connecting the receiver to a PC, an RF modulator and an optical audio output for perfect surround sound. A main power switch rounds off the perfect picture.

The included remote control features an ergonomic design, user-friendly layout and sits nicely in your hand. As a special treat Eycos includes a second, smaller remote control with limited features, which is a great idea as the smaller remote control is ideal for those family members who only want to turn on the receiver and then zap through the channels. This will certainly be an excellent argument when





Eycos encloses all needed cabling

trying to persuade the rest of the family to upgrade to this box.

The user manual is available in German and English and deserves special praise. It is clearly arranged, comprehensive and features pictures when you need them. Hardly any questions regarding the S55.12 PVRH will be left unanswered by this manual.

Everyday use

When performing our tests we quickly discovered that the pre-programmed channel list was not very up-to-date and many channels on the list could not be received any longer using the pre-set parameters. When we approached Eycos about this point they reacted in an unusually fast manner and only a few days later sent us new software for the receiver by e-mail which included a perfectly current channel list together with fixes for some minor software bugs. By the time you read this report the new software should be available for download via satellite for all users.

Once you activate the very smart and animated main menu a whole world of options opens up in front of you. This Eycos receiver seems to be a genuine globetrotter, and the languages it can understand are German, English, French, Italian, Spanish, Polish, Hungarian, Dutch, Romanian, Russian, Swedish, Turkish and Farsi.

The receiver supports DiSEqC protocols 1.0, 1.1, 1.2 and 1.3 (USALS), so that really every user should be able to connect their system to this box, no matter whether it's a Wavefrontier antenna or a DiSEqC motor.

Contrary to other manufacturers' receivers the Eycos S55.12 PVRH does not require the user to select the tuner he or she wants to use, which is why the receiver needs to know right at

the start whether both tuners should get the same satellite signals or not. We believe this is a very efficient way of dealing with two tuners and once everything is properly installed there is no need to worry which tuner to use, as the receiver takes care of all this. In our test the automatic tuner selection worked brilliantly, as we had a fixed antenna connected to tuner 1 and a DiSEqC motor-controlled antenna connected to tuner 2.

The channel search on an 80-transponder satellite took a little over three minutes, which is a remarkably good result.

Now we get to the interesting part: in the 'User Preferences' menu the HDMI output signal – among other parameters – can be set according to personal preferences. When tested on a Technisat LCD screen and a Pioneer plasma screen it soon became obvious why this is an important configuration for achieving the best possible picture quality. Apart from brightness, contrast and sharpness this menu also allows activating a three-stage noise reduction system. The scaler offers three different resolution modes: 576p, 720p and 1080i, of which the 1080i setting is the most desirable one, of course.

Depending on the user's needs and requirements the Eycos receivers output the video signal either as CVBS, RGB or S-Video, YUV is also available in case a beamer is connected to the box. The S55.12 PVRH can also receive NTSC signals and the automatic switching between PAL and NTSC takes place without any glitches. The preferred colour norm can be set permanently in the on-screen menu.

Among all the various sub-menus one stands out in particular: it can be accessed to decode all scrambled recordings on the harddisk after the record-

ing itself. This means that the receiver is able to decode all saved and scrambled programs of the harddisk at a certain point in time and save a free-to-view copy of all saved items. If the module supports this feature, the S55.12 PVRH can even save two decoded streams at the same time. We tested it with an Alphacrypt module and it worked just fine.

Another feature allows recording four programs simultaneously. Since the receiver comes with 'only' two tuners, it follows that the four programs must be transmitted on the same two transponders. The receiver then only highlights those channels in the list that can actually be received while the recordings take place. This list of recordings is arranged with the most recent recording showing up on top of the list, contrary to most other PVRs which sort the recording the other way round. While this may take some time to get used to, it is nonetheless a clever idea that you'll soon begin to really appreciate. Recordings that have already been watched are marked with a specific symbol and the receiver also remembers the exact position at which a playback was stopped.

In general, Eycos did a great job for the EPG, as it is nicely arranged, builds up quickly on the screen and shows all information correctly and efficiently sorted. Timer entries can be created and saved directly through the EPG.

The tuner used by Eycos has a very low threshold and managed to flawlessly process even the weak signals from EUROBRD2 26° East and NILESAT 7° West in our test. It also passed our SCPC test and the symbol rates from 2 to 45 MS/s as claimed by the manufacturer were verified in our test. Our test transponder on EUTELSAT SESAT 36° East with its very low symbol rate of 1 Ms/s could not be received, however. Additional reception

tests at our location in Munich included ASTRA2D with a 90-cm antenna and yielded positive results as well. All this confirmed that the good tuner built into the S55.12 PVRH is way above most competing products and even signals right around the threshold level came in remarkable well and hardly showed a pixelated image. The only point we would like the manufacturer to work on is SCPC compatibility – 1 Ms/s should be possible with a little bit of effort, shouldn't it?

Even though the motion picture industry and some pay TV operators are unhappy about it, almost all manufacturers of PVR receivers have to include a USB 2.0 port in order to generate enough sales to survive. Eycos is no exception, but they have tried a little harder and finally found a chipset that allows using the full USB 2.0 capacity. This way, a 2-GB recording made its way from the receiver to a connected PC in about three minutes, even without requiring any special software as the harddisk of the receiver is shown as an external drive in the Windows Explorer. Furthermore, Eycos offers its own settings editor which allows a convenient editing of channel and favourite lists on the PC.

As Eycos is always working on offering even better products they provide new software at certain intervals, which can be downloaded and installed directly via satellite.

What is the actual benefit of a scaler?

As if we needed proof for the great potential of a scaler/PVR receiver combination a low-brow visitor to the TELE-satellite test lab stopped in front of our plasma TV and wanted to know with a very surprised tone in his voice, since when German public broadcaster ZDF was transmitting a HDTV signal. He was even

Expert conclusion

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The Eycos S55.12 PVRH is a sound and easy-to-use receiver which did not show any problems whatsoever during our test. Thanks to the integrated scaler even regular SDTV signals can be displayed with amazing quality, so that some of the quality losses caused by cost-cutting measures of the program providers can be compensated. If a channel transmits a high-quality SDTV signal in the first place, the scaler does an even more brilliant job. The extremely fast USB 2.0 port and the possibility of recording four streams at the same time are features that deserve additional praise.




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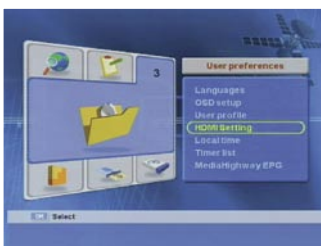
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Overscale output is not yet available.

more surprised when we told him that ZDF has not yet upgraded to HDTV and that he was looking at a regular SDTV signal that had been improved by the scaler. Most visitors in our lab were not sure whether they were looking at real HDTV or scaler-enhanced SDTV when we asked them.

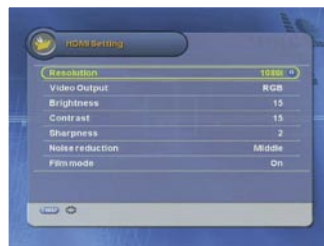
When we connected the S55.12 PVRH to various different LCD and plasma screens we noticed that it provides the HDMI signal

as original picture, not as over-scale. Unfortunately this means that – depending on the selected channel – you are faced with black stripes around the actual picture. Our plasma screen was able to compensate this and to provide a full screen picture, while some less expensive LCD screens left the black frame around the picture. Eycos has promised to look into this and solve the problem with one of the coming software releases.

TECHNIC DATA	Manufacturer	Eycos
	Distributor	Satforce Kommunikationstechnik GmbH
	Tel	+49 - 86 54 773 851
	Fax	+49 - 86 54 773 852
	E-mail	info@satforce.com
	Model	S55.12 PVRH
	Function	Digital satellite PVR receiver with integrated scaler
	Channel memory	8000
	Symbol rates	2-45 Ms/sec.
	Satellites	45
	SCPC compatible	yes
	USALS	yes
	DISEqC	1.0 / 1.1 / 1.2 / 1.3
	Scart euroconnectors	2
	Audio/video outputs	3 x RCA
	UHF modulator	yes
0/12 Volt socket	yes	
Digital audio output	yes	
EPG	yes	
C/Ku band compatible	yes	
Power supply	100-240 VAC, 50/60 Hz	



Main menu |



HDMI menu |



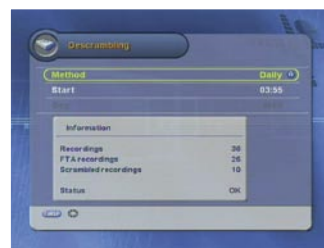
Info bar |



EPG |



SCPC reception |



Automatic decoding |