C&J ELECTRONICS
Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
Tel. +31 10 4735703
Fax +31 10 4738641

PRODX-3300 Dream team Review

At last ! A Free-to-air digital receiver that's really affordable.

Chances are that you have not heard of the ProDX range of receivers before, but that is bound to change. Sofar, 2 receivers in this range are available, one digital only and one combined analog / digital receiver (both CAM-less), the latter of which is on review here. Costing HFL 1099,- (Approximately DM 999,- / USD 550,-) the ProDX-3300A is sure to win over a number of potential buyers by being one of the cheaper digital receivers around. It is worth noting that because this system has no CAM, it will only provide access to the unencrypted channels (Free To Air). However, as it has been designed with the real multi-satellite enthusiast in mind, it is no problem to find all FTA signals in the sky. The huge channel memory surely comes in handy here.

The front

The front panel boasts a 4-digit LED display which in normal operation shows the channel number. During a channel search, a scrolling bar is displayed. In analog mode, this display shows the IF frequency of the tuner. Also on the front panel are the standby button, 4 cursor keys and a menu button. In case you lost your remote control, everything you need can be controlled from the front panel keys.

C&J ELECTRONICS

Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
Tel. +31 10 4735703
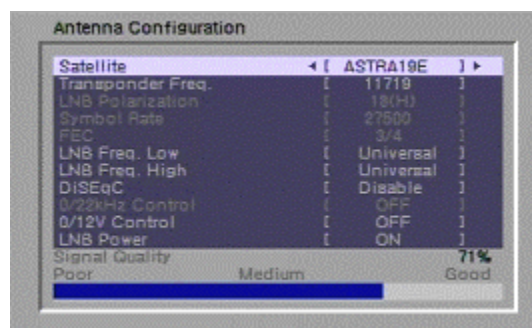Fax +31 10 4738641

Impressive backpanel

Turn the ProDX around and you will find an impressive array of socketry - far better then on some of the more expensive systems like the Nokia 9600. There are a total of 3 F-connectors, two of which are used for the analogue section and one for the digital section. Scart output to the TV, as well as a decoder scart which provides clamped-, unclamped and MAC baseband to external decoders. Also 2 spring clips can be found here to drive a magnetic polarizer. Of course a modulator is built in, the output frequency of which can be adjusted from one of the service menus and a 12V switch output has been provided for. Last but not least, 6 chinch sockets for audio and video outputs can be found here, as well as a proper S-VHS output and a high speed serial port (new firmware loads in just under 4 minutes).

The hardware

The hardware of the receiver looks impressive. It consists of three boards : The digital section, the analog section and a seperate switched mode power supply, which operates at an impressively low temperature. The digital section looks as had it just been developed as it is based around a third generation chipset. Cable sets with lock-connectors connect all the 3 board together. Extensive use has been made of surface mount components, resulting in very small boards. The cabinet this is all housed in only measures 320mm x 60mm x 220mm.

Testdrive, channel searching

Once powered up, a picture of the sky is displayed with a satellite in the middle. The frontpanel display shows a scrolling segment and the receiver starts to hunt for signals. If your LNB differs from the default setting, the system naturally comes back with 'no signal'. Setting up the receiver for a wide variety of LNBs is simple. Just go to the antenna adjustment menu and select the LNB setting of your choice.

C&J ELECTRONICS
Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
Tel. +31 10 4735703
Fax +31 10 4738641

Both local oscillator frequencies for high and low band can be altered here and even C-band LOFs have been catered for. Your LNB is not supported ? No problem, just enter the frequencies of your particular LNB and save. A look at the signal strength bar at the bottom of the screen will show you whether your settings have been successfully stored. For more demanding setups, from the same menu you can toggle the 12V option output, select a DiSEqC setting or toggle the 22KHz toneburst.

In order to understand how the ProDX finds channels, it is important to know that the receiver holds a database with 999 transponders divided over 50 satellites. This means you can enter parameters like frequency, polarity, FEC and Symbolrate for a given transponder. During a search for channels, it is this database the ProDX uses to find channels. The receiver comes preprogrammed with the transponder details for 50 satellites, but adding new transponders is a doddle. Simply go to the transponder edit menu and add the relevant information. This way, you are also in control over what channels will eventually be found during a channel search. As the receiver is FTA only, you can simply ignore those transponders that carry encrypted signals, leaving more space for other channels. But it is doubtfull you will ever run into memory problems when you consider a total of 2900 channels can be stored.
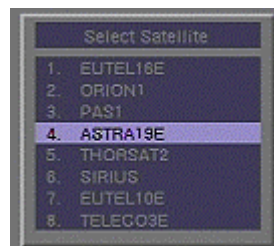
Being in control of the transponder database also solves a problem for those of you that are using a mechanical polarizer. You could group the transponders per polarity so that you do not have to be so quick in changing the polarity on your analogue receiver that is controlling it. Also, during a search, the receiver not only shows the progress of channels stored, but also indicates which transponder frequency is currently searched, it's polarity and FEC / SR parameters. Once you see a different polarity come up, there is still plenty of time to change the setting on your analogue system.

Easy to operate
Average day use is easy. Once all channels on the different satellites are loaded into memory, pressing OK on the remote will bring up a list of channels on the currently selected satellite. Scrolling through the list is real fast and using the right- and left cursor keys you can also scroll a page at a time. One of the menus allows you to rearrange the order in which the channels appear in the list. Similar to the Nokia receivers, simply hit OK to highlight the channel and move it to another position. Once highlighted, the channel can also be deleted or added to the list of favourite channels by pressing the FAV button on the remote. A bonus is that you can also enter the channel number which - although scrolling is real fast - saves you from having to go way down the list to get to a channel. A similar menu is there in case you want to rearrange all the stored radio channels.

C&J ELECTRONICS
Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
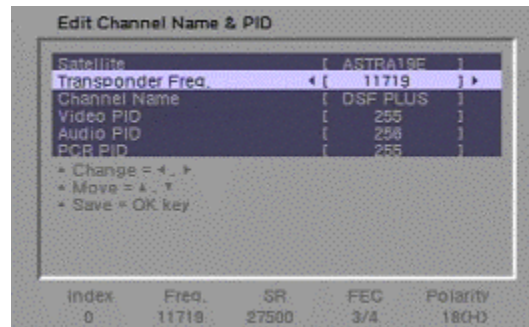Tel. +31 10 4735703
Fax +31 10 4738641

On the main menu, you will also find an entry labelled 'Select Satellite'. This is what really distinguishes this receiver from the competition (as well as its ability to cope with just about any digital signal out there). At first, the menu may look empty, but this will soon change when you searched a couple of satellites. The names for the satellites are taken from the receivers database but can be altered simply by using the remote control. Once a satellite is selected from this menu, the receiver briefly searches for the relevant information and then displays the channel last used on the selected satellite. If this was a radio station, radio mode will be initiated automatically.

Problems ? Not really …

Normal signals are not a real problem for the average digital receiver, although many still fail to properly support SCPC reception. At this point you may wonder if there are any channels the ProDX had a problem with receiving. Here's some results in shortform :

- All NTSC signals available at the test site (around 7 different sources / signals) were tested, covering every strange system / resolution) : Good results on all NTSC SCPC and MCPC signals in Powervu MCPC/SCPC, NTL SCPC and Reuters (anyone knows what equipment they are using ?) Only the high quality NBC NTSC video would not be processed. Normally not a problem as this kind of signal should be rare as it is only used for rebroadcasting purposes. But a firmware update quickly cured the problem.

- TMT on Gorizont 53E C-band caused some problems. This is SCPC with 4.498 MS/s and 2/3 but there was no telling what brand of encoding equipment they use as they don't care transmitting the SDT or NIT PID. Video and audio runs for about 5 sec. after which horizontal lines appear and the screen turns black with the message 'no / bad signal'. A variation of the PCR PID had no positive effect. Video resolution for this feed is 704 x 576, PAL. However, just after the test, a new firmware update arrived which cured the problems encountered on this channel.

- A six channel package called TELEFE from Latin America on Intelsat 806 40W, 3.669 RHC 20.006 2/3 had a problem with the audio. Sadly this signal transmits no PSI (or better : in the range from 0000 to 0020 hex no PSI PIDs could be found) and the channels need manual PID entry.

C&J ELECTRONICS
Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
Tel. +31 10 4735703
Fax +31 10 4738641

From this menu you can enter the PID codes whenever needed. But what's more, you can also edit the name of the channel or enter your own in case one is not transmitted. There is no need to scroll through the channel list. With a transponder selected, simply go to the channel name field and scroll through the different service IDs listed. Now as already stated, there are not that many stations you need to enter PID codes for. A nice example is the Dutch TV-Vandaag channel. Where the Nokia required you to go to the advanced tuning menu and find the channel to save it under the name 'Demo', the ProDX found this channel automatically and all there was left to do was enter the appropriate channel name in the menu shown above.

Finally, the comparisson
Below is a list of features of this nice receiver compared to the well known Nokia 9200S. For the purpose of this test, the Nokia was equipped with the standard FTA1.0 software :

ProDX-3300	Nokia 9200 with FTA 1.0
Huge channel memory. 1500 TV stations and 1400 radio stations on a whopping 999 transponders and 50 satellites can be stored in the receiver's memory.	Although Nokia claims the 9200 equipped with FTA1.0 can
Up to date SatcoDX transponder database preprogrammed. The user can easily add new transponders to this database when they become available, simply by using the remote control.	The Nokia has no facilities to enter transponder parameters into a database.
Channels are stored on a per satellite base which is surely a great feature when you think about the 2900 channel memory. Simply select a satellite and satellite.	The Nokia required you to browse through all the stored channels to find the one on that satellite your dish is currently aimed at.

I.N.G. bank schiedam
Rek. Nr. 68.34.71.805
Gironummer v.d. bank 553

http://www.cnj-electronics.com

Postbank rek. Nr. 61.31.735
Handelsregister Rotterdam nr. 24170831
BTW nummer NL.0085.86.184.B01

C&J ELECTRONICS

Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
Tel. +31 10 4735703
Fax +31 10 4738641

ProDX-3300	Nokia 9200 with FTA 1.0
Due to the nature of how the channel search operates on the ProDX, channel overwriting on SCPC channels is a thing of the past. Simply hit the auto search button and away you go.	Features a normal- and an advanced channel search, but quite frequently some SCPC stations tend to overwrite previously stored ones.
Fast channel search operation. The average search time per frequency is about 3 seconds.	Channel search turned out significantly slower then on the ProDX.
Looking for some of the more obscure channels, the ProDX found the complete Nick / Disc, No.1 and Genc TV package on Turksat 42E. The same applies to the Mediaset feed package on Intelsat 18W where the complete package was stored into memory.	On Turksat 42E, only the encrypted Nick / Disc package was stored. On Intelsat 18W, the 9200 only found one service in the package.
A professional settings menu allows the user to edit all the channel names, including the PIDs if needed. This means the ProDX does not require a PC with settings editor to compile a complete and perfect channel database with real and distinctive names for each service.	No facility to change channel names once stored in memory. To compile a complete database, an external PC running a settings editor program is required.
The ProDX features a perfect PAL / NTSC switch which makes it an ideal receiver to watch transmissions in both PAL and NTSC.	When trying to watch NTSC signals, the 9200 suffered from screen blanking every 20 seconds, or crashed completely.
Looking at the NTL3000/DMV SCPC signals like BET on Jazz on Orion1, a perfect picture was displayed.	Annoying digital artefacts and blocky bits and pieces
Teletext on digital channels is reïnserted into the vertical blanking line of the video and can be accessed using the TV set which is a big advantage when you are recording a program with the VCR.	The Nokia handles all the teletext which means that during recording you can not bring it up, otherwise it would ruin your tape.
Video and audio on channels using manual PID entry (of which there are not many on the ProDX, TARA is a good example) comes up the minute you enter the PID codes.	It took about 6 seconds to get TARA once the PID codes were entered on the 9200.

C&J ELECTRONICS
Telecommunications & Security

Lange Singelstraat 110b
3112 EG Schiedam
The Netherlands
Tel. +31 10 4735703
Fax +31 10 4738641

Analogue section

There is one thing I almost forgot to mention : This receiver also has an analogue section built in which is capable of storing 400 channels. It offers 2 bandwidths (18 - 27MHz), 32-step low treshold extension, dual LNB input and both the magnetic and nowadays more common 13/18V polarity switchover for universal LNBs are supported.

The software also provides a nice feature to - similar to the digital section - search for channels automatically. Just enter a start frequency and away you go.
All channels found are stored in memory for later retrieval. Analogue transmissions are slowly dissipating, but it is a nice feature to have, if only to align your dish … For the D2MAC users among us, the baseband is of great quality, resulting in clear pictures without the grainyness you normally find on the cheaper range of receivers.

Functioning nicely

Among a list of other functions are teletext, digital radio, subtitling and parental control (all accessed by dedicated buttons on the remote control) and multiple soundtrack preferences. An Electronics Program Guide (EPG) is also supplied for up to date listings information. The picture output of digital channels is as sharp and well coloured as can be expected from a digital receiver and also the analogue sections holds up quite nicely. In case you really want the best, make use of the S-VHS output on the back. If the lack of a CAM module concerns you, then keep in mind that this receiver offers the real feed hunter everything he wants. And for those, this is a great buy. At HFL 1099,- it does not come any cheaper (yet).