

8dtek DSM Desired

- includes features normally only found in much higher priced products
- shows constellation and spectrum
- handles all DiSEqC variants including motors
- thanks to a remote control it can be used as satellite receiver
- easy-to-read LED display ideal for installers



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For the Professionals

A HDTV signal analyzer with 16:3 screen

In TELE-satellite 06-07/2011 we presented the DSM Gifted meter, a very powerful satellite finder in an attractive design. But the manufacturer 8D Technology didn't stop there: they expanded their range of meters with another very advanced meter and called it DSM Desired. It sports a 16:9 LSD screen and has many additional numeric buttons. There is a secondary 2-digit LED display located in the top right corner, which shows the quality of a signal. This is quite useful in direct sunshine when it is hard to read the main liquid crystal display.

There are two F type connectors: to one you connect

the antenna system while to the other one (the loop through) you can connect a receiver. We intentionally say "the antenna system" and not just LNB because the DSM Desired can control not only DiSEqC switches, DiSEqC motors (1.2 and US-ALS) but also any combination of switches and motors.

Hidden under the flaps on both meter sides are: DC power socket (mains power unit and car charger are included), combined A/V plus RS-232 output, USB port for software upgrades and data storage and an Ethernet port that can be used to test your Internet connection. Rather unexpectedly, there is also a remote control included in

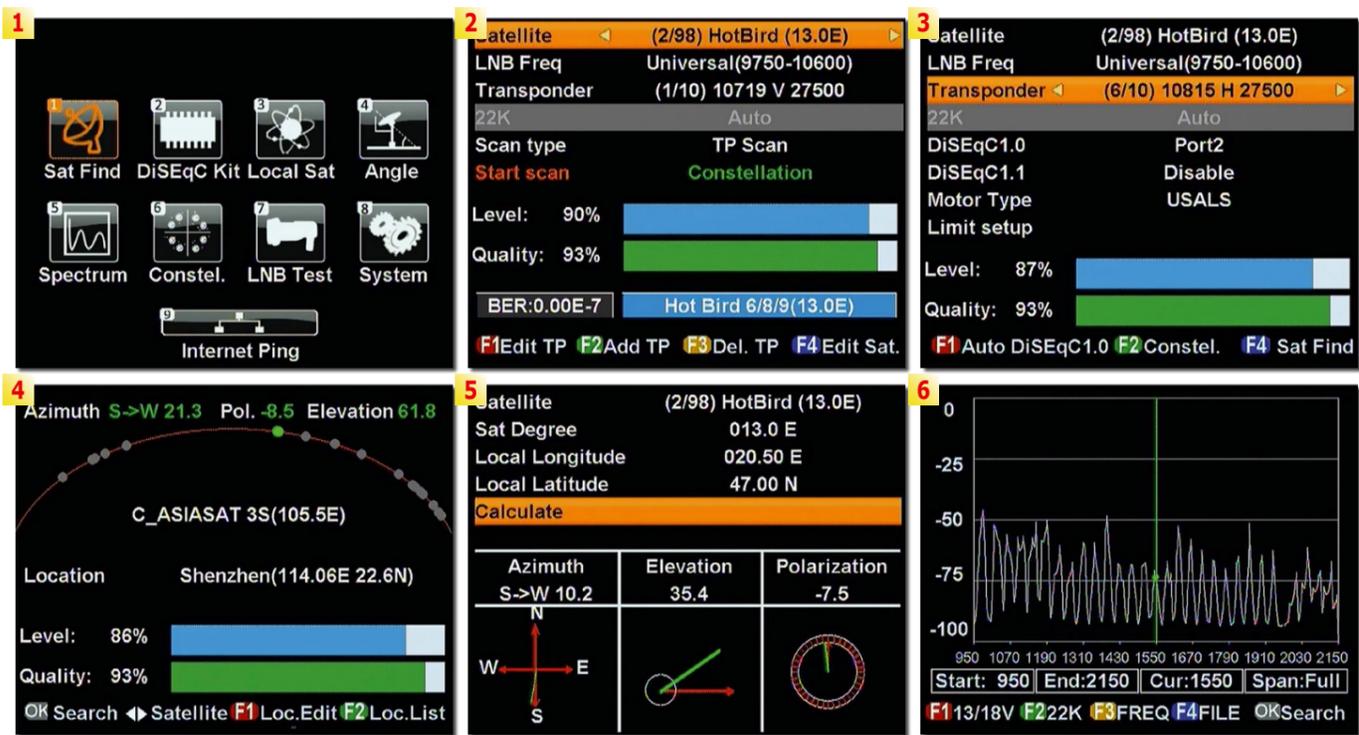
the set. Well, perhaps there are situations in which you would like to put the meter on the ground or at a distance and operate it with a remote control. However, 8D Technology offer you another solution for difficult operating positions – you can use an included protective meter bag and wrap its strap around your wrist. This innovative solution seemed more practical to us.

On the other hand, the remote control unit may be useful if you would like to use your DSM Desired as your satellite receiver. Yes, it can show live channel video. To start viewing, all you have to do is to scan a selected satellite or a transponder so

that list of channels is created, out of which you then can choose from. Of course, its usability is limited and can not be compared to a regular satellite receiver but it is a nice addition.

You can fully control the DSM Desired either with the remote control or directly - using the front panel membrane keyboard. Menu button is used for entering menu items and for leaving them. SPCM stands for Spectrum and is a shortcut taking you directly to signal spectral view. The big round SAT button is another shortcut – to Local Sat menu. F1-F4 function buttons have varying functions depending where you are in the menu





system. Four LED's located near the bottom indicate charging status, signal lock, and LNB voltage as well as high/low band switching signal (22 kHz).

The Local Sat windows shows you graphically what satellites are located in which position over horizon at your location. Just overwrite the default settings (which in our case were for the manufacturer's hometown Shenzhen in China) with your own location and the pre-programmed list of satellites, which contains the "birds" from all over the world, will show you the satellites visible at your location.

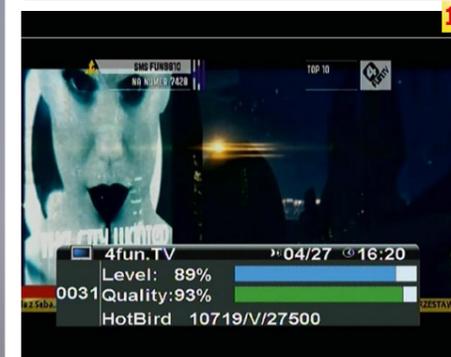
If you already know quite well what satellite you want to receive, you might be interested in the Angle menu item. In this screen, you enter your coordinates, select the satellite and DSM Desired calculates all necessary angles: azimuth, elevation and LNB tilt.

Now, you have to inform

the meter if this is a simple fixed antenna for one satellite or a multifeed system with DiSEqC switches, DiSEqC motors or a combination of them. This is done in the DiSEqC menu item. Every satellite is set independently. So, some of them may be configured as received with a motorized dish and the others as fixed feeds connected to given inputs of DiSEqC switches.

When you are ready to start turning your dish, we suggest using the first menu item: Sat Find. Here you can select the satellite, your LNB LOF's, the transponder you want to tune to and the meter displays the signal strength and signal quality expressed in percentage, Viterbi BER, and the satellite name it recognized analyzing received signal. If you prefer, you can switch to the constellation graph view – either directly from the Sat Find window or from Main menu.

8D Technology can really be proud of the number of frequencies they offer in the



1. Main Menu
2. Sat Find window
3. DiSEqC settings
4. Local Sat window
5. Angle calculation screen
6. Spectrum viewer
7. Setting spectrum viewer parameters
8. Measuring transponder parameters in spectrum view
9. Constellation graph window
10. Detailed signal measurement results
11. LNB test
12. Systems settings
13. Internet Ping window
14. Watching channel video

Sat Find menu item. Here is the impressive list of local oscillator frequencies (LOFs) you can select in DSM Desired: 5150, 5750, 5950, 9750, 10000, 10050, 10450, 10600, 10700, 10750, 11250, 11300, 5150-5750, 5750-5150, Universal (9750-10600) and SCR (9750-10600).

The constellation menu not only shows you the constellation but additionally displays S/N and C/N

measurement results. From here, press F2 and you can go deeper into a window we could name "detailed signal quality". Here you can see all relevant signal parameters in large font along with bar graphs. Alternatively, when

you are still in the constellation window, you can change transponder or store the results to a USB stick (F1 and F4 buttons respectively).

Spectrum analyzer has more possibilities compared

to the previously tested DSM Gifted (see TELE-satellite 06-07/2011). You can set frequency span and you can lock to a marked transponder and measure its basic parameters. However, it is still quite slow so do not count



on using it for fast signal detecting when initially setting up your dish.

System menu lets you customize meter settings as well as initiate firmware upgrades. We did firmware and transponder upgrades twice and all of them were very fast and easy. You can also set here the Internet connection you would like to test using the meter's Ethernet port. If the connection is realized via a DHCP router, you should configure it accordingly in the system menu.

When we started taking actual measurements we realized that the DSM Desired has similar limitations as its simpler brother. The quality readings were changing not with 1% step but with 6-7%. So in the ascending order the signal quality may take only one the following values: 46%, 53%, 60%, 66%, 73%, 80%, 86%, 93% and 99%. 46% is already below reception threshold, so practically we are left with 8 discreet values. The other signal quality measures: S/N and C/N have equally fixed discreet values. For example for Quality=93%, S/N is always 14 dB and C/N 14.35. For Q=80, S/N=12 and C/N=12.35dB, for Q=73%, S/N=11 and C/N=11.35dB. Since the measurement results are only in fixed steps, you should treat them as indications rather than precise results.

As a result, DSM Desired has a measurement performance similar to its brother DSM Gifted. But its full color display, possibility to watch MPEG-2 channel video and audio and interesting menu functions look like something taken from a much more expensive and powerful meter, like the showing of constellation and spectrum views, a feature only found in much more expensive products.



Another feature typical for more advanced meters is an A/V output, but available in the DSM Desired. All the screenshots accompanying this report were taken from this output. If you use the meter on the desk, you should connect it to a suitable screen with a CVBS video input. The graphics is very nice indeed.

Along with its accessories DESM Desired is very practical. Its battery has a high capacity and the meter can be used to turn DiSEqC motorized dishes without a fear that it will die in a minute or two. It can drive even more complex DiSEqC switch/motor antenna systems. So except for antenna alignment, you may also use it for checking signal distribution.

Although its precision and accuracy does not match that of high class professional meters, DSM Desired should perform quite satisfactory in aligning fixed dishes for strong European satellites like ASTRA 1 or HOTBIRD.

Expert Opinion

Measures DVB-S, DVB-S2 and analog signals. Support for DiSEqC 1.0/1.1 and SCR. Suitable for turning motorized dishes (DiSEqC 1.2 and USALS).

Quality readings duplicated on an easy to read LED display.

Big enough and well readable 16:9 LCD.

Looped through signal output to connect a receiver.

No MER measurement

Signal quality, S/N and C/N readings in only 8 steps

No MPEG-4 decoder



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TECHNICAL DATA	
Manufacturer	8D Technology Ltd., Hong Kong
Webpage	www.8dtek.com
Email	8dtek@8dtek.com
Fax	+852 3965 3222
Model	DSM Desired
Description	Satellite meter for antenna alignment
C/Ku Band	Yes
Unicable	Yes
DiSEqC	1.0 – 1.2 and USALS
Quantities measured	Signal level [%], signal quality [%], BER
Inputs	L-Band (950-2150 MHz), DVB-S/S2 and analog signal
Video Decoder	MPEG-2
Outputs	L-Band (looped through), A/V (composite + mono)
Data ports	USB, RS-232
PSU	100-240 V 50/60Hz
Dimensions	140 x 100 x 40 mm (ca. 5.5 x 4 x 1.5")