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The Truth About
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Compression**



FortecStar
Mercury II
Digital FTA
Satellite Receiver



GT-Sat
LNB Series
with just 0.2dB Noise



SatcoDX
New Satellite
Footprints in
Last 2 Months



TechnoTrend
NEW: DVB-S2 Card



Dr. Farrag
Is it a Helmet?
No, it's a
Multifeed
Luneberg
Antenna

Monster Antenna

ENG CD

"Five-meter dish for sale, disassembled"



Fortec Star Mercury II

FTA Receiver with Unique Extras



Once again Fortec Star has added a new receiver to their North American lineup. The new model Mercury II was introduced to the world at the Sat Expo 2006 in Atlanta, Georgia, USA. It is a simple FTA receiver that includes a number of extra features that make it more fun to use for the user. Naturally, we wanted to take our magnifying glass and have a closer look at what makes this new box tick.

At 300 x 210 x 60mm (11.8 x 8.3 x 2.4 inches), it is a typically sized receiver. Its silver-colored front panel sports eight silver, horizontally placed buttons that can be used to control and program the receiver should the remote be lost somewhere in the cushions of the couch. The four-digit green display located in the center of the front panel displays the current time or the currently selected channel. What is unique is that when you switch to a new channel, the channel number is displayed for a moment and then the current time reappears. The current time can be entered in manually or you can have the receiver extract the correct time from the data stream by selecting GMT to "on" in the Time Setup menu. Just keep in mind that time data may not always be available from every transponder.

The rear panel comes with all the standard connectors that you'd expect to find such as an IF input with looped-through output, video and analog stereo audio outputs on three RCA jacks, a VHF modulator output that can be switched between Channel 3 or 4, a terrestrial TV antenna/cable input that is looped through to the modulator output when the Mercury II is in standby mode and also an RS-232 serial interface. But there are also a number of pleasant surprises on the connector panel: not only will you find an S-Video output and a

digital audio output, there is also an additional set of three RCA jacks that provide component video outputs (Y, Pb and Pr). There's even a main power switch; something you might not find on other receivers.

In contrast to the silver color of the receiver, the included universal remote control is mostly black. The underside of the remote is shaped so that it sits comfortably in your hand. It comes with all of the standard buttons including a numeric keypad, ring buttons for volume and channel control, an "OK" button along with Info, EPG, Exit and Menu buttons positioned to the left of the ring buttons. Since this is a universal remote, it can be programmed to operate other electronic equipment such as a TV, VCR or DVD player. This is a convenient feature allowing you to control almost everything with just a single remote control. There are even extra buttons on the remote for controlling typical features found on a VCR plus an Edit button that lets you conveniently edit a channel (add to a Favorites list, lock it, delete it, rename it, etc.).

Everyday Use

The receiver comes with a power cord that is fitted with a standard North American plug. The power supply itself is rated at 100-120 VAC/60 Hz so don't try plugging it into a wall socket in Europe or

other parts of the world that supply 220 VAC; you might blow it up.

When you turn on the box for the first time, the user is initially asked to select the desired menu and audio languages. For the menu language you can choose between English, Arabic, Croatian, Czech, Danish, Dutch, Farsi, Finnish, French, German, Greek, Hungarian, Indonesian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Swedish and Turkish.

With the languages selected, the next screen to appear is the Installation menu. From here the user can set up the satellites that are to be received. You can select the proper local oscillator frequency (LOF) from a list or enter it manually if the LOF you need is not in the list. From this screen an antenna motor – be it DiSEqC 1.2 or USALS – can also be activated. If you don't have an antenna motor but instead have multiple antennas or a multifeed antenna, the receiver's DiSEqC 1.0 and 1.1 protocols allow this box to work effortlessly with these types of antennas.

Most new receivers that appear on the market come with an extremely powerful scan function. This Power Scan, also included in the Mercury II receiver, lets you perform a satellite scan without knowing any transponder param-

eters in advance. It will find all active digital DVB transponders on a satellite and then scan each of those transponders for any TV and radio channels. Considering the capabilities of a Power Scan, this would seem to be the next logical step after a satellite has been activated. While the included transponder data may be up to date, new transponders may have appeared since the transponder list was loaded into the receiver. A Power Scan would quickly identify any of these newcomers and add them to the transponder list. Simply put, a Power Scan is by far the easiest way to keep your receiver's transponder and channel data up to date.

The Power Scan in the Mercury II can be conveniently accessed directly from the remote control and can be customized in a number of different ways. Instead of running a full range scan, the user can restrict the scan to a single polarity, the start and end frequency can be specified, the scanning steps can be set to 4, 6, 8, 10, 12 or 15 MHz and the scan itself can be set to look for FTA-only channels or all channels. There is also a "Locking Speed" option that offers the choices "detailed", "quick" and "normal". If you are only interested in scanning for transponders with symbolrates over 10 Ms/sec., then the "quick" option would be the best choice. "Normal" would be best for symbolrates over 5 Ms/sec. and "detailed" should be selected if you want all symbolrates; even those less than 5 Ms/sec. It goes without saying that a "detailed" scan would take more time to complete. Also, the scanning steps selected would also dictate how much time would be needed for a scan.

To test the Power Scan function, we pointed our dish to Intelsat Americas 5 at 97 deg west and opted to do a "detailed" scan in steps of 4 MHz. During the scan, any transponder that was found was displayed in a list. The Power Scan screen also displayed the current frequency that was being scanned as well as a progress bar at the bottom of the screen. After all active transponders were found, the Power Scan then searched



each of the transponders for any channels. A scan from 11.7 to 12.2 GHz on both polarizations required about 12min 51sec to complete.

The receiver has enough memory to hold up to 6000 channels and as many as 100 satellites. The manufacturer claims that the Mercury II can handle signals with symbol rates from 2-45 Ms/sec. We found that the Mercury II can do much better than that. We tested the receiver on a 1.374 Ms/sec signal and are happy to say that this box did not hesitate for one second to lock onto this signal.

Pushing the OK button on the remote displays the channel list with the video of the currently selected channel shown in a window. The Channel Switch feature will determine what happens to this inserted video when you scroll up or down in the channel list. If Channel Switch is set to "direct", the channel video will change every time you scroll to another channel in the list. If it is set to "delayed", the video will not change until you find the channel you want and press the OK button. This delayed feature would be attractive if the Mercury II is connected to an antenna motor. In this way the motor will not move until you find the channel you want and press OK. In "auto" the receiver will automatically detect whether it should be "direct" or "delayed".

Naturally once there are a number of channels stored in memory, you would want to organize them in some logical manner. Although the Favorites lists are pre-named, these names can be changed to something more suitable if needed. There's also a special Favorite list that goes by the

name "Fav7". If there are certain channels that you want to store but at the same time don't want anyone else to know about, simply put them in the "Fav7" list and activate the Fav7 lock in the Lock menu. Once in this list, they are completely hidden from view by others and are not even displayed in the normal channel list.

The satellite sort function is also interesting: satellites can be sorted alphabetically or by position. But there is also a "default" setting whereby the first two satellites in the list will always be IA5 and Galaxy 10R. All the satellites after that will be listed alphabetically. This is a logical feature considering that IA5 and Galaxy 10R are the two most popular satellites to point your antenna to here in North America.

Another fascinating feature is the Channel Backup function. At first you might think that this involves uploading your channel list to a PC. But, no! Not this time! Activating Channel Backup will take your existing organized channel list and back it up to the receiver's internal memory. You can now Power Scan other satellites, upload new receiver software, perform a factory reset of the receiver, etc., and then restore the backed up channel list by selecting Channel Recovery. This will take the current channel list and replace it with the backed up channel list. In other words, the channel list will be back to what it was before.

The Recall button on the remote doesn't just switch between the last two channels that were viewed; instead, the last 10 channels will be displayed in a list from which any one of them can be selected.

The Mercury II still has some additional goodies to help make this box more exciting. For example, multi-picture mode lets you display multiple channels (4, 9, 13 or 16 pictures) on the same screen. One of the images will have live video while the others will be still images.

The Mercury II also has a reminder function: when properly set up in the Timer menu, the

receiver will remind you when a selected program is about to start. There are a number of other features such as picture-in-graphics, a data transfer function (receiver to receiver or receiver to PC), display of the provider name in the Antenna Setup menu (Satellite Identifier), display of channel numbers based on a providers numbering system (SID) plus more. If it should happen that you can't find anything to watch on TV, there's always the video games Tetris and Push Push to keep you occupied. And let's not forget the detailed user manual written in both English and French.

TECHNIC DATA



Manufacturer	Fortec Star Communications, Mississauga, Ontario, Canada
Fax	+1-905-602-5289
E-mail	fortecCA@fortecstar.com
Model	Mercury II
Function	Digital FTA Satellite Receiver
Channel Memory	6000
Symbolrate	2-45 Ms/sec.
SCPC Compatible	yes
C/Ku-band Compatible	yes
USALS	yes
Hard Disk Drive	no
DiSEqC	1.0, 1.1, 1.2, 1.3
Video/Audio Outputs	3 x RCA
Component Video Outputs	3 x RCA (Y, Pb, Pr)
S-VHS Output	yes
Digital Audio Output	yes, S/PDIF
Power Supply	100-120 VAC, 60 Hz
Power Consumption	40 Watts max.

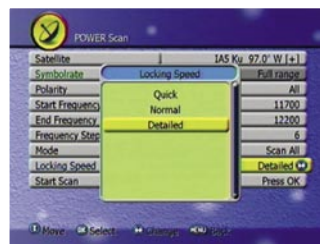
Expert conclusion

Despite being an FTA-only box, the Mercury II comes with features you'd expect to find in higher end units. The Power Scan function is extremely versatile in that most of the scan parameters can be customized to what you need. Plus its component video outputs and digital audio outputs make for higher quality TV viewing.



Ron Roessel
TELE-satellite
Test Center
North America

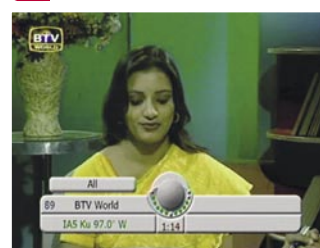
The receiver does not have a universal power supply and thus is not designed to be used outside of North America. This is supported by the fact that it also only provides an NTSC output. Also, many of the features mentioned above were only added after the production receivers were shipped. A software upgrade would be necessary to add all of these features.



Channel edit |



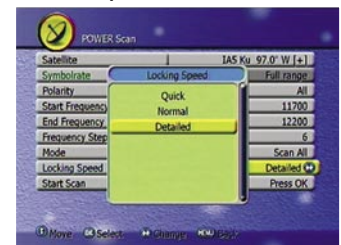
Channel list |



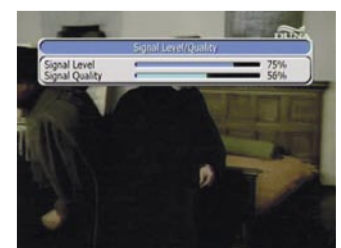
Info bar |



Multi picture |



Power scan |



Signal Quality |