Prolog:

My third review is on Desktop Universe from Main-Sequence, version 1.10. You get a small bound printed black & white manual and two CD's with the product. There is a license key you have to use and it only runs on the Windows platform. Which brings us to the System Requirements. DU runs on any Windows version from Windows 95 to XP. However; the minimum requirements are at least a 500MHz Pentium, 256MB of ram, 800X600 16bit colour and IE4.0+.

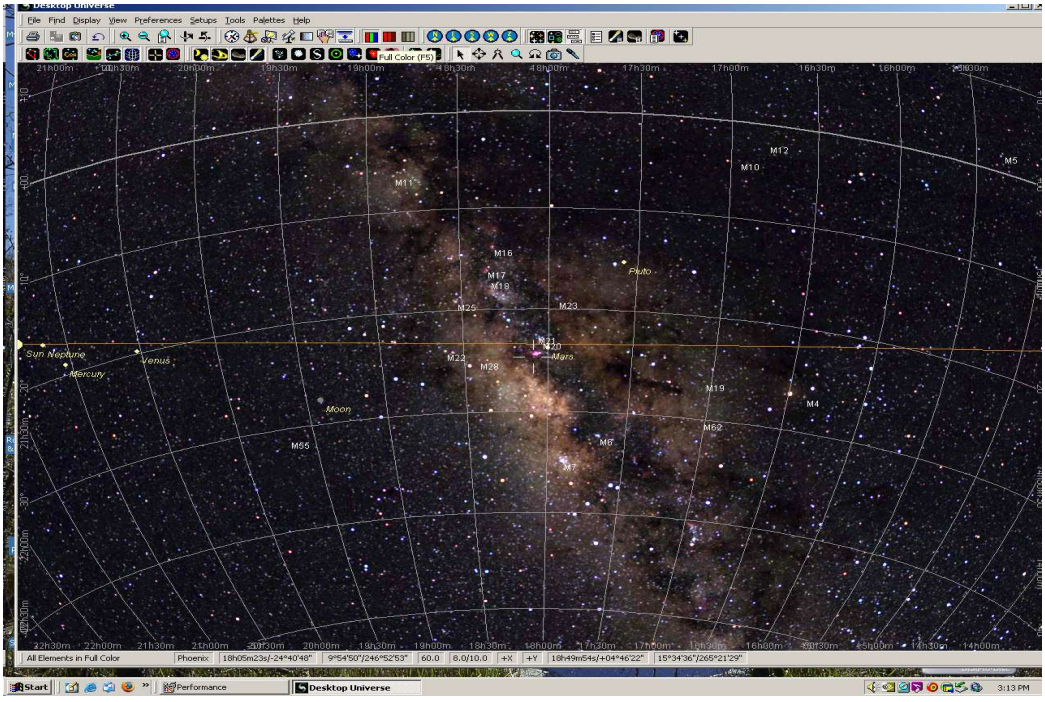
I ran the program on an Apple 867MHz G4 with 640MB under Virtual PC from Microsoft. Under the VPC the processor was labeled as 500MHz, with 450MB dedicated ram and 32MB of video ram. It worked but load up times were very long and responses to mouse clicks on menus were slow. I noticed performance improvements when Desktop Universe was used under Windows 2000 and Windows 98 – all using Virtual PC on the Mac. More on this later.

I also ran this on my Windows 2000 machine, a 2700MHz AMD processor with a full gig of memory and 128MB of video ram. This was much better but it still loaded slower than SkyMap Pro or Starry Night and response was a bit slower but much better than running under the emulator on the Mac. I fear this program is a memory hog. Throw as much high end hardware at this beast as you can afford for the best performance. It will work at the lower end but you will need some patience.

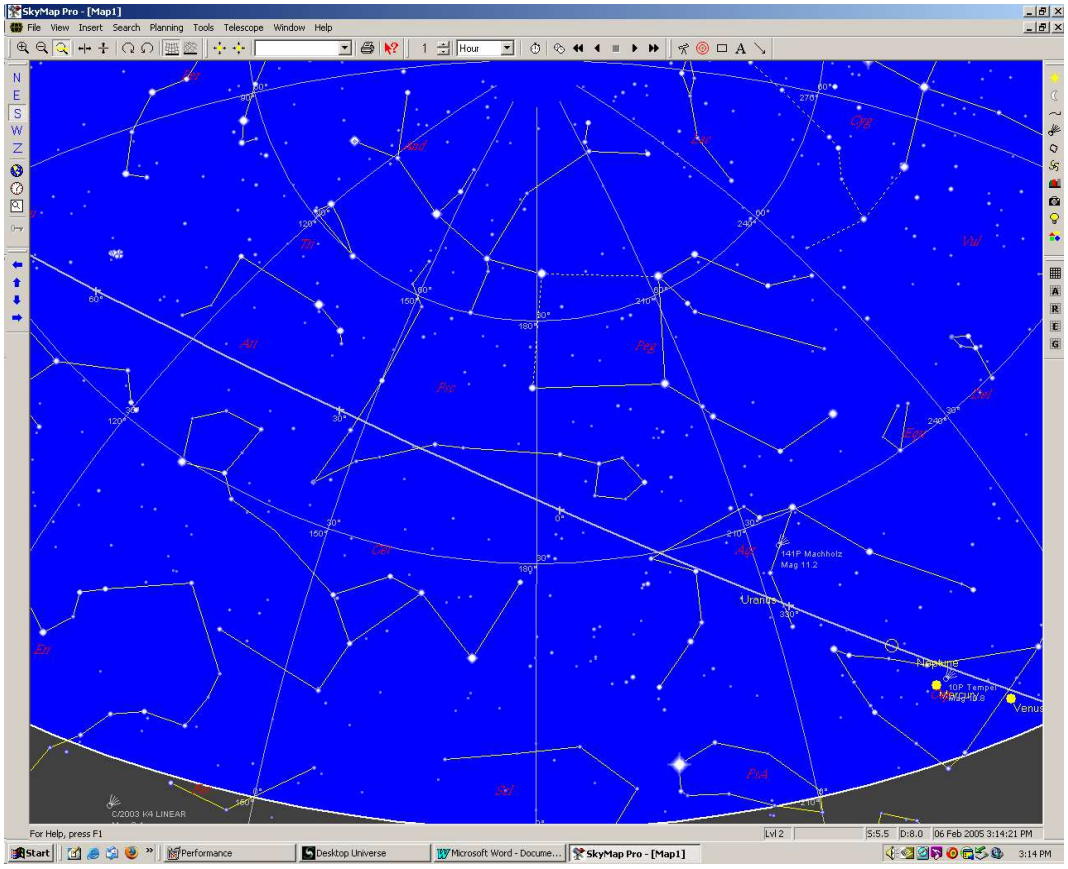
For more information online; www.desktopuniverse.com or http://main-squence.com will take you to:
http://www.cyanogen.com/products/dtu_main.htm The new home page for this product.

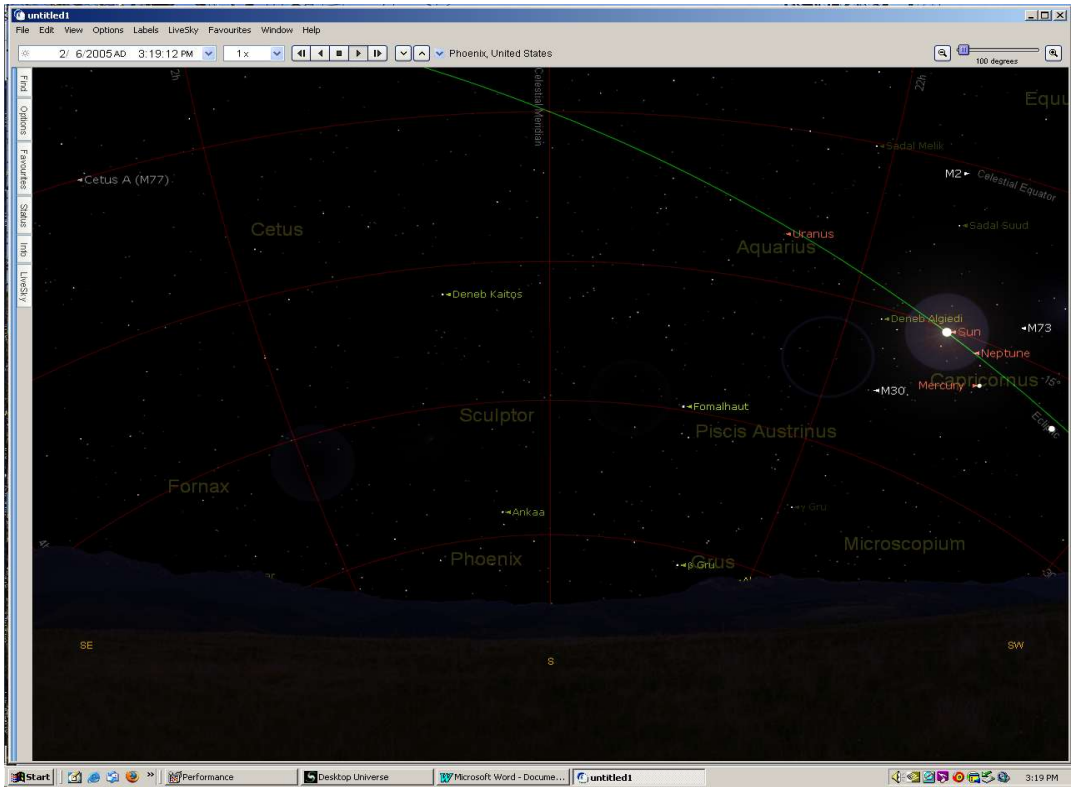
First Look:

Here is the opening screen shot of Desktop Universe V1.10. Time of day is about 3:30 on Super Bowl Sunday. The elliptic is shown as straight across the screen with no horizon lines. As you will see later this is not the only viewing option available.



I have included screen shots from the two other astronomy programs I have reviewed for a quick comparison
The SkyMap Pro 10 screen shot (note the daylight colour scheme) is on the next page. As you review the screen shots take notice of the different ways the menus are presented to the user. Depending on your experience you may find one more to your liking than the others. All three programs offer extensive menus with steep learning curves.

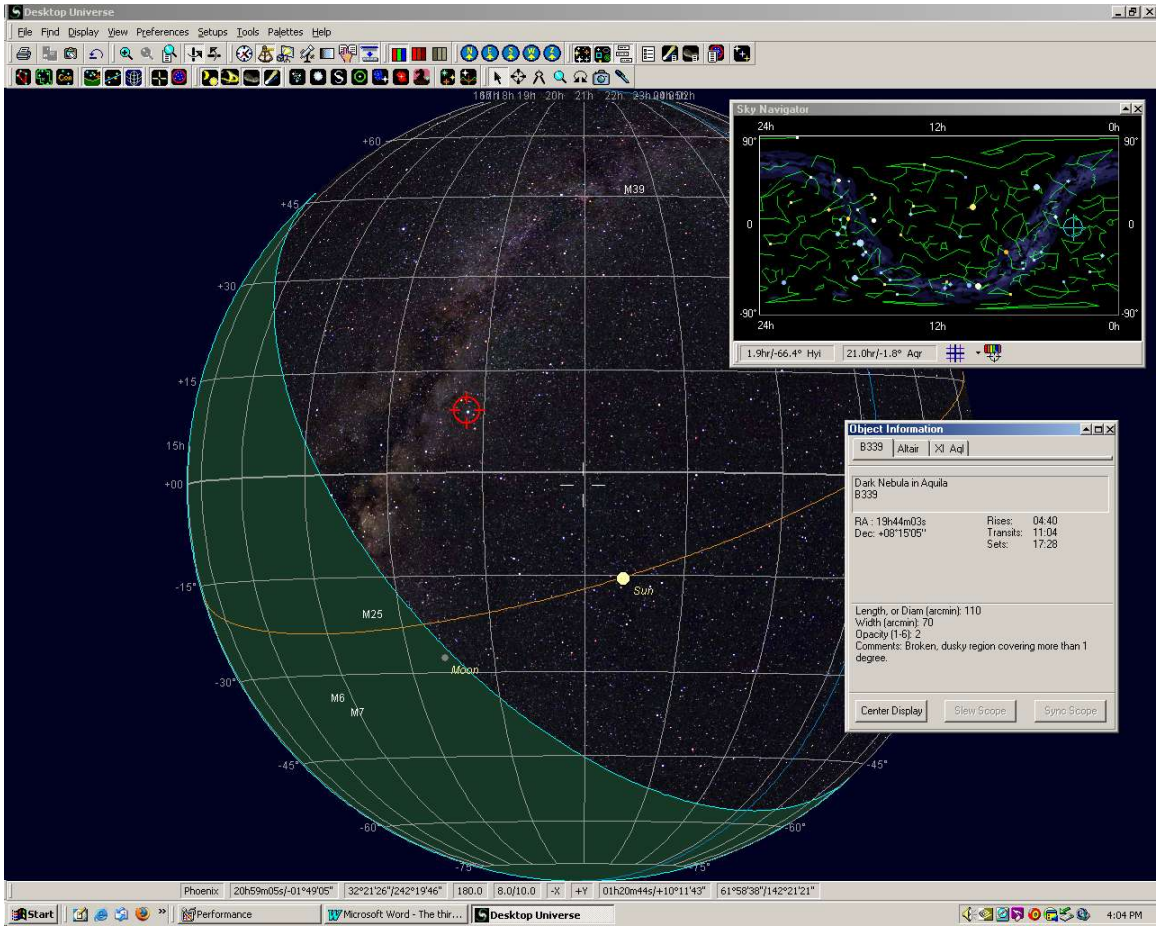




Starry Night 4.5 is the next screen. Since it is daylight it looks a bit different so you may wish to read the earlier review on it.

Menus and Moving Around:

In the screen shot below you can see an extensive button menu along with the standard text menus. The icon based tool bar can be modified in the extreme to the users satisfaction. My only complaint here; the quality of the graphics falls well below the graphics presented in the sky. Certainly a cut or two below what Starry Night provides and on par with SkyMap Pro. The choices are plenty and I found it easier to use the text based menu bar rather than the tool bar with few exceptions. They are grouped by function and you can select which groups are visible on the tool bar. With time I'm sure the user will get used to it. I thought it distracted from the product having such a primitive looking GUI. You may say that as long as the sky is accurately presented everything else is just eye candy but a poor user interface can make an other wise excellent program hard to use.



To navigate select the sexton icon on the tool bar to get a small navigation window (the small window in the upper right in the screen shot above). Place your cursor anywhere within this widow and click. Not nearly as handy as navigating in Starry Night where you can grab the sky with your mouse and pull yourself around but it's very useful if you need to go to some far flung part of the sky - now. See the screen shot above for a shot of the navigation window in use. The directions claim you can **drag** the cursor in the navigation window to change the display but I was not able to get that feature to work. Clicking any where in the navigation window causes the screen to redraw at the new location.

To move about the sky I found it was easier to right click on the screen and select **Center** from the menu. This insured that the area was above the horizon in case I wanted to slew the scope there and it was easier to track the changes . I never did get a feel for the navigation window.

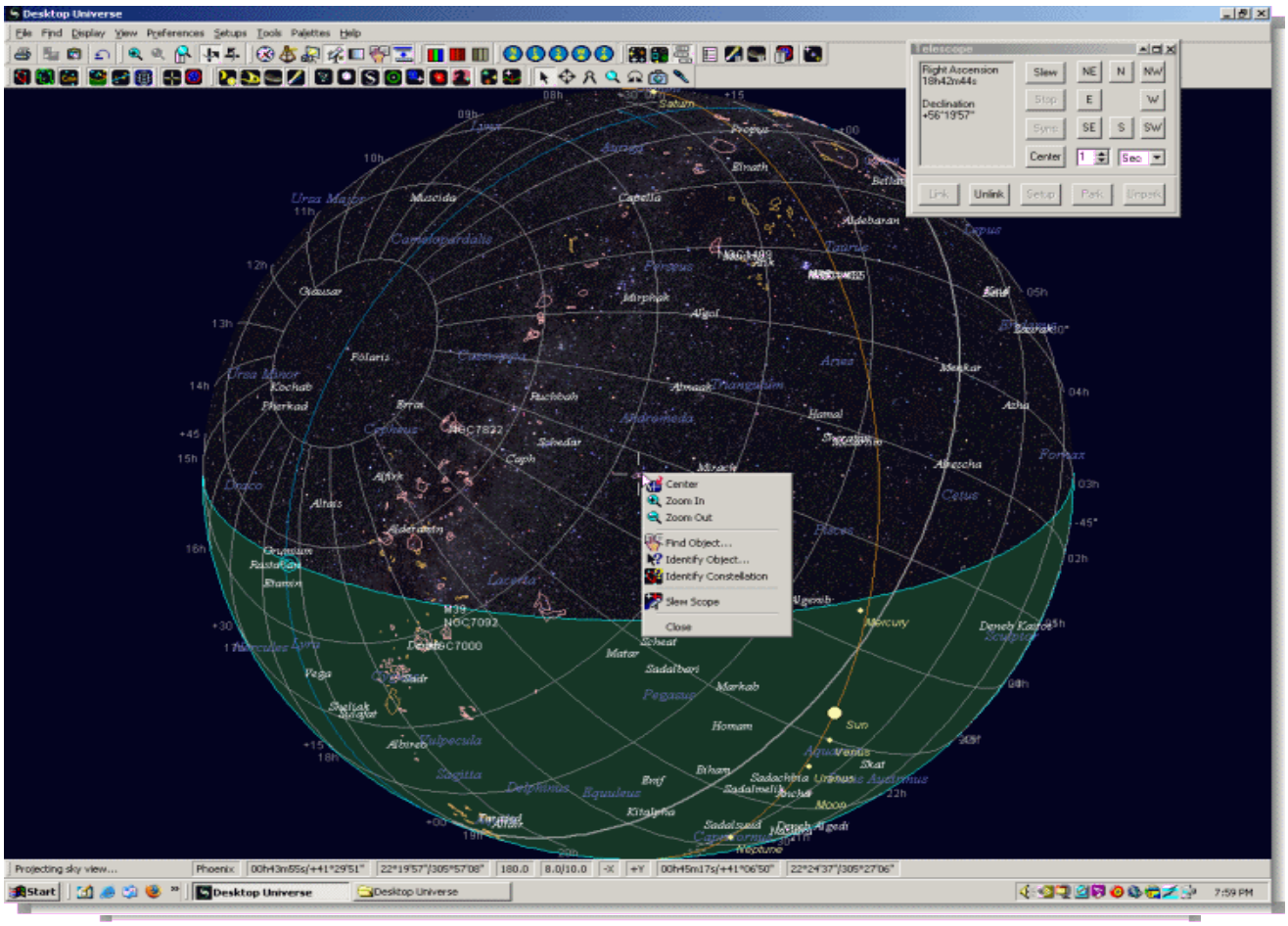
There is a massive search function where you can choose the type of object or catalog to use (see the list of catalogs at the end of the article, twenty nine are listed in the search menu with **Other** making it thirty); I dare you to stump it.

You can also use the centering tool to select an object. Right clicking on the object will give you a menu where you can ask to center on the object, identify it or its' constellation or zoom in or out. If you ask for much more useful data about the object than the little blurb SN gives you (note the smaller data window in the screen shot above). Full marks to Main Sequence for this.

Computer Control:

I was quite excited to try and finally control my Celestron NexStar11GPS with a computer. After several false starts, a new cable and an USB serial converter I was in business. Indoors. I had less success outdoors. While I tried to sort that out I went ahead and played around with the computer and the scope indoors as the weather pretty much limited these experiments to indoors anyway.

In the screen below you see the scope setup menus. You select the telescope icon from the tool bar, click on the Setup button, select your scope (Celestron NexStar11GPS in this case although there are many to choose from) then properties to select the proper COM port. When using the USB serial adapter check the Hardware Profile to see which COM port the computer has selected for it so it can be chosen here. DU uses ASCOM Platform 2.1 to control the scope and this software must be loaded seperately during the installation and is provided for you on the install discs.



Later on I ran NexRemote from Celestron, a software program that replaces the hand controller provided with the NexStar and set up a virtual COM4 port and told Desktop Universe to use it. I still used the USB serial adapter but I used the PC cable from Celestron and plugged into the PC port on the NexStar instead of the RS-232 port in the controller. This worked as well

as using the cable through the hand controller. If your hand controller ever fries you still have a software version of it that works with just about any planetarium software package out there. This is very cool.

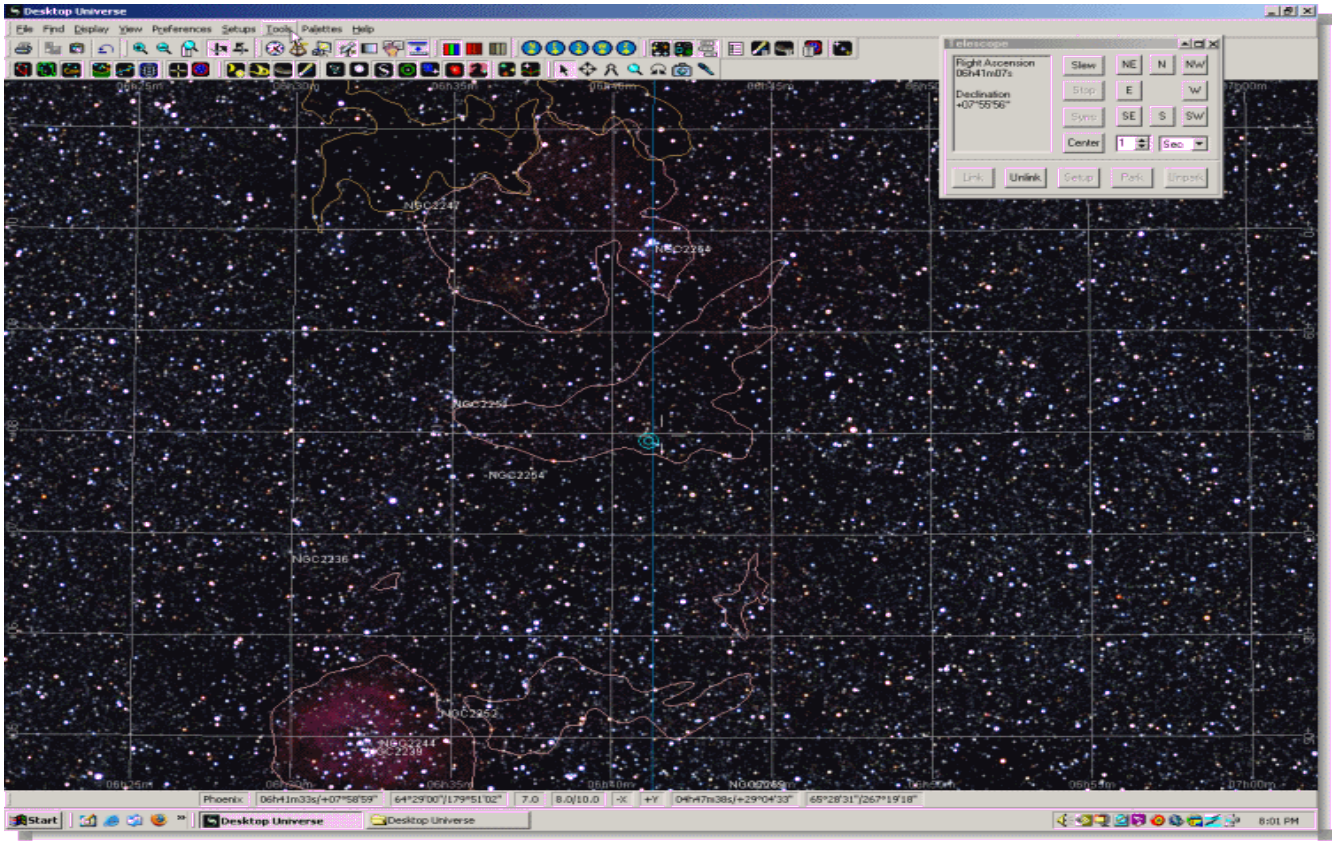
Once you have made the setup choices then you click on the link button to establish communications with the scope as you see is this next screen shot. If communications are established you will see in the Telescope window the coordinates of the scope. In the middle of the screen you see an object that has been right clicked on – the point of interest is the Slew Scope option now available. Selecting Slew Scope will make the program move the scope to this location – and it will if the initial alignment is good. If you don't see the coordinates appear you have a problem and will have to sort it out before you can proceed. I was given the opportunity to do plenty of sorting.

Below you see a zoomed in image of where we have slewed the scope. If your scope is properly aligned what you see in the eye piece will be what you see on the screen. You can tweak the scopes location using the compass buttons in the telescope menu.

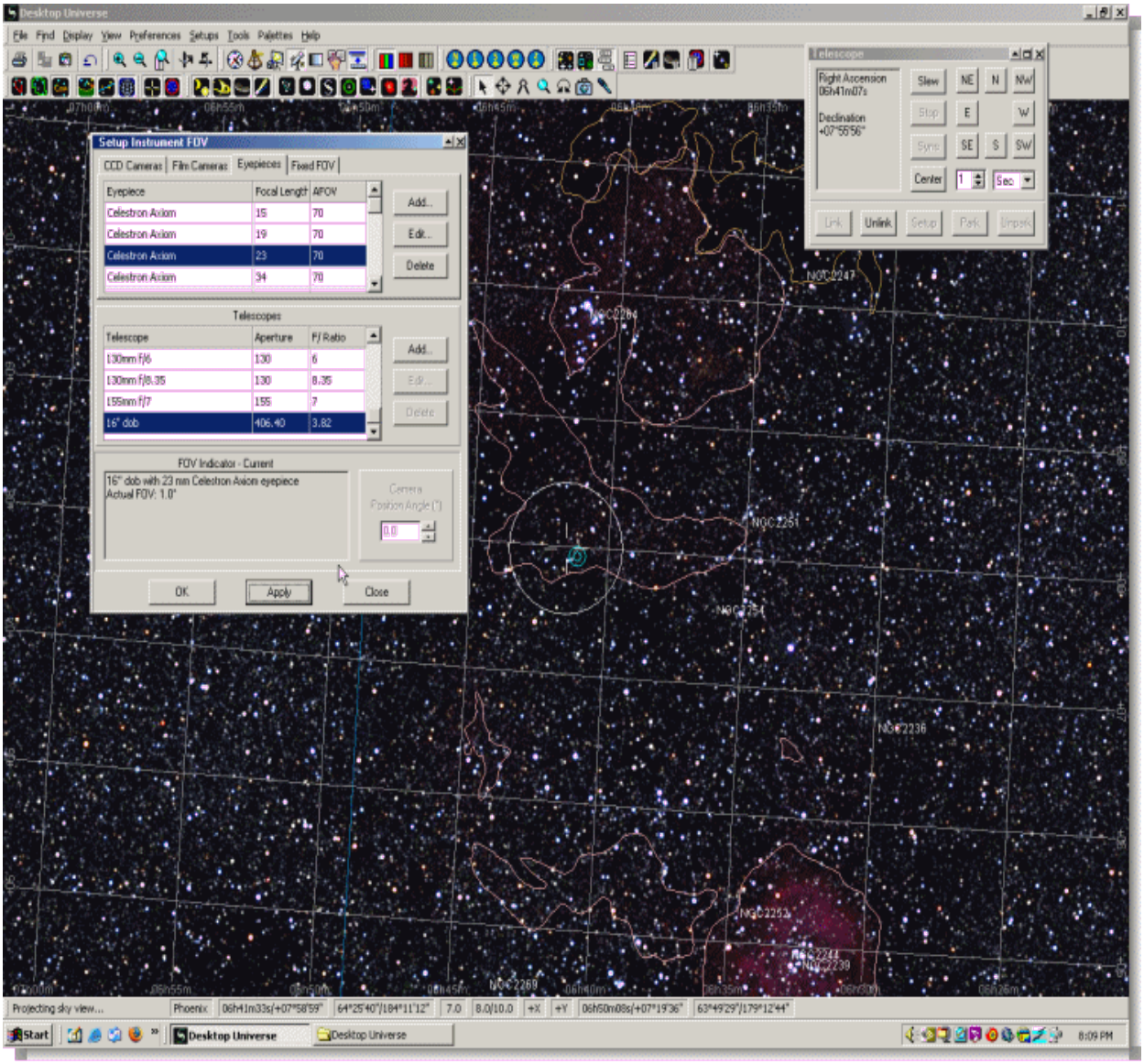
Of course you don't need to use the computer control of your scope to make use of this program as many times I only used my dob which doesn't even have digital setting circles. But I must admit that once I first installed this program I wanted to use it to control my scope and indeed this was the first program I used that way. I have since had success controlling the scope with several programs including Planetarium on a Palm M100. A whole new dimension had openned up to me as I can now see the sky as something part of a whole and not just something on a list to be viewed.

All Sky Mosaic – What it looks like up close:

In any event; in the next few screen shots you will see several levels of zoomed in views. These are very nice pictures being incredibly rich and colourful. The zoom in and zoom out buttons will change colour from blue to grey as you reach the limit.



In the picture below you see the little blue double circles that indicate where the scope is pointing with the current coordinates listed in the Telescope window. Next you see the area seen by an eye piece using the scope listed (16 inch dob).

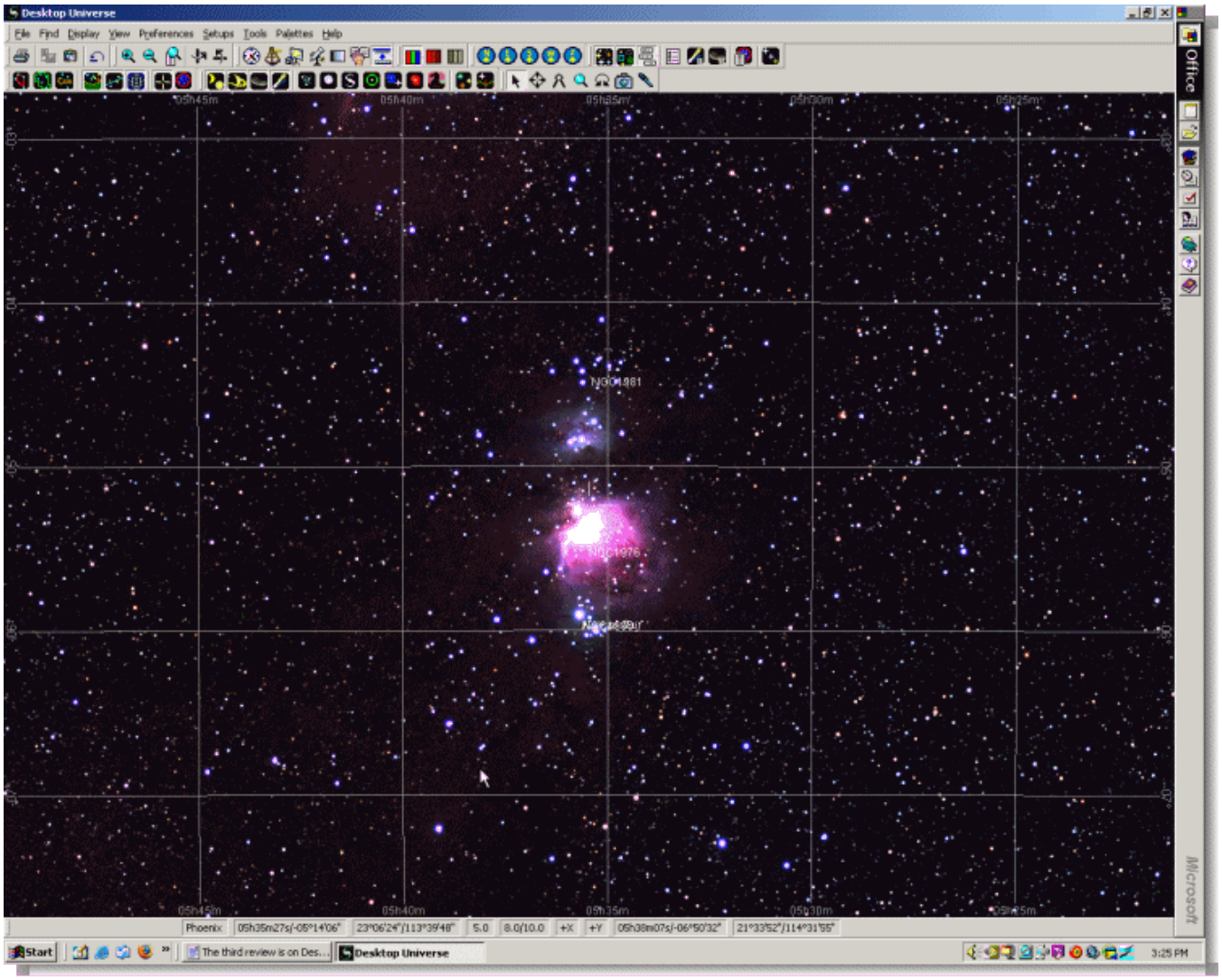


You have several eye pieces and scopes to choose from. If your kit is not listed you can add your own – both in eye pieces and telescopes. This is a very graphic way to see how little of the sky you are covering. No wonder you can't find that darn Messier object!

Epilog:

In general I found the sky very pleasing in Desktop Universe. The folks at Main Sequence are justifiable proud of their work – taking a couple pages in the manual to explain their All-Sky Mosaic. There were times I did not feel the need to actually go outside (for the most part it was raining anyway) and setup the scope as the view on the computer was in many ways superior to what I would ever see in the eye piece. There is at least one glaring exception: M42. For the imagers among you this will come as no surprise but as you can see from the screen shot on the next page M42 is grossly over exposed so you can't make out the trapezium much less how far into it you can see. This is a nit pic to be sure but since M42 is very popular and used to determine seeing (e.g. how many stars can you make out in the trap?) I hope they can fix this in a future version.

On the other hand; while cruising around within Desktop Universe I found plenty of objects I wanted to check out with the scope. In fact, while looking at the previous screen shots you may have noticed outlines within the star fields along with the usual grid lines. From the menu buttons you can turn on these lines to show the boundary of emission, planetary, reflective and dark nebula – your choice. There are also the usual constellation labels and boundaries.



So how does this program work when you have to use it? The imagery appears to take up a lot of memory so unless you have a very fast machine with lots of main and video memory it will be slow. For older hardware I think you are better off with less demanding software. The little menu buttons do tell you if they are turned on but at high screen resolutions the effect is very subtle so this could be improved. In fact the whole menu system appears fresh from a DOS computer and could use some polishing up. Then again perhaps I'm just a spoiled Mac user.

I found syncing the scope with the screen counter-intuitive and never did noodle out how to fix it. This was true with the other planetarium programs too – but it bothered me none the less.

There is a lot to this program and at times this got in the way and a much simpler program (SkyMap Pro or Xephem) got me to where I wanted to go with much less confusion. I'm sure this would improve as I used the program more. But I don't think I'll be using it that much in the future as it only runs on Windows and I don't own a Windows laptop. The memory appetite is so high that running under emulation taxes ones patience (to be fair I'm sure it was not expected to be used this way). Don't

even think of running DU with a laptop with the minimum requirements. Too many subsystems on a laptop are optimized for battery life and this program will bring it or you to your knees. I found the combination of XP and DU to be fatal – on the Mac. On a fast desktop under Windows 2000 this program ran very well indeed.
Once you get past the clunky looking icons and menus you are left with a very nice looking sky. Zooming in will reveal stars you wish you had the aperture or dark skies to see. Since the sky is based on CCD images you will also see the pixels appear as you zoom to the maximum.

Late Breaking News:

As I was finishing this review up it came to my attention that the folks at Main Sequence and Starry Night have joined forces using the All Sky Mosaic from DU and the interface of Starry Night. In my estimation that will make for a very polished product. See the following Press Release for more details: **http://www.imaginova.com/newsroom/release.php?id=050303**

It appears that Desktop Universe is no longer a stand alone product and the only stock I found for sale were packages already in the supply line. However; for the Mac users out there the new Starry Night Pro Plus V5 will run on the Mac.

The Catalogues:

No less than twenty two star and moon catalogs were used as source material in creating Desktop Universe. As stated in the manual; some were used in full, others used as only a cross check. They are listed below:

Catalogue of the Compenents of the Double, Multiple Stars (CCDM) First Edition

Catalogue of Principle Galaxies (PGC) (Paturel+ 2002)

Hipparcos and Tycho-2

I/269 CCDM (Components of the Double and Multiple stars) (Dommanget+ 2002)

II/2124A Combined General Catalogue of Varible Stars (Kholopov+ 1998)

Moonmap (from Clementine, joint NASA DoD project)

Revised New General Catalogue of Nonstellar Astronomical Objects

V/84 Strasbourg-ESO Catalogue of Galactic Planetary Nebulea (Acker+ 1992)

VII/110A Rich Clusters of Galaxies (Abell+ 1989)

VII/191 Catalogue of Southern Dark Clouds (Hartley+ 1986)

VII/20 Catalogue of HII Regions (Sharpless 1959)

VII/202 Globular Clusters in the Milky Way (Harris, 1997)

VII/ 21 Catalogue of Reflective Nebulae (Van den Bergh, 1966)

VII/218 Southern Stars embedded in nebulosity(Van den Bergh+, 1975)

VII/220A Barnard's Catalogue of 349 Dark Objects in the Sky (Barnard, 1927)

VII/68A Dark Nebulae and Globules for I=240-360deg (Feitzinger+ 1984)

VII/7A Lynds' Catalogue of Dark Nebulae (LDN) (Lynds, 1962)

VII/9 Lynds Catalogue of Bright Nebulae (Lynds, 1965)

VII/92A Open Cluster Data 5th Edition (Lynga, 1987

2001 Uranometria 2000 Deep Sky Field Guide

Digitized Sky Survey

Details are in the back of the manual.