



Starting with Tachyon



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Touring the Heavens

Tachyon is a very sophisticated astronomy software for your PDA. The myriad of options and functions available may mesmerize even the most experienced PDA user. This document aims to explain the usage of each function and the power you have in your hands.

Let's begin with a menu tour to explore Tachyon capabilities. Upon initialization it tries to connect to a telescope, if set up, and loads its main catalogues. After a while a screen like in the image at right will show up and Tachyon can be used. If your sound is on you will hear a message.

This screen, that we call "Main Screen", has a bottom menu where you can reach

almost all Tachyon functions. It has, also, an information area, where you can see your location name, Universal (Greenwich) Time, Local Time and Julian Date.

You can see in the image a red ball next to COM Port info. This ball shows, if red, that telescope is not connected and, if green, that it is connected. Also if you click over the ball Tachyon tries to connect to a telescope.

At top, left and right, you can see two images. At left is a drawing of a constellation and is a shortcut to skymaps. The handpad at right is a shortcut for handpad emulation, if your telescope is connected and support it.



Highlights

- Tachyon is the best software for Astronomy in a PDA and one of the most complex ever developed for this platform
- Tachyon brings the heavens to your hands and shows with astonishing details and beauty the wonderful universe we live in

Setting up your Location and Equipment

To have Tachyon calculating correctly some ephemerides, skymaps and events you must define some data about your Location and about your equipment.

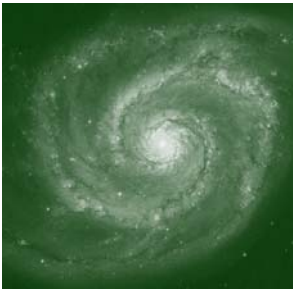
Go to page 22 of this document to learn how to setup your personal data in Tachyon.

There you can find detailed instructions to start Tachyon from your home site.

This is an important step before you use Tachyon as many calculations consider your location in Earth and your local time.



Using Profiles (Info Menu)



A powerful tool in Tachyon is the “User Profile” that is available in “Info” Menu,

The main objective of this tool is to save Tachyon environment for future use. This environment includes location setup, telescope and accessories setup, skycharts flags and so on.

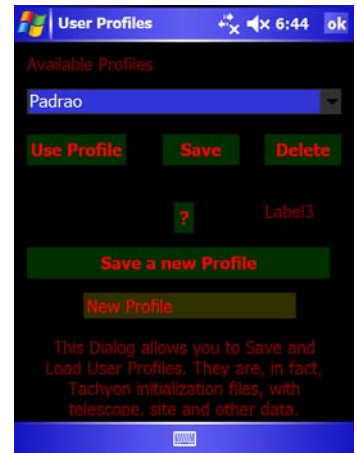
That way you have a fast switch for changing sites or setups.

To select a saved profile you pick up one from top com-

bobox and press ‘Use Profile’ button.

To save current settings you have two options. If you use “Save” button, Tachyon will save currently selected profile in combobox. Otherwise, to generate a new profile you will fill up the textbox at bottom with the desired profile name and press “Save a new Profile” button.

To delete a profile you need to select an item in combobox and press “Delete” button.



Time System (Tools Menu) and ? (Help)

You can do precise measurements of times of events, like Moon eclipses, occultations, planetary phenomenae, using Time System of Tachyon.

You can use Time System for timing of astronomical phenomenae.

The first tab is “Clock”. Upon selecting this dialog you will hear ticks and see clock advancing.

You have Local Time and UTC (Greenwich) time.

You can change the tick feedback using numericupdown at right. That way you can have audible feedback of advancing time.

You can Mark an event by pressing the “Mark” button or the center button in your joy-pad.

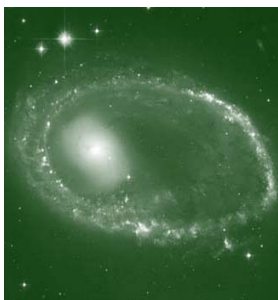
Also you have the timing marks available in clipboard. That way you can paste in any application, like PocketWord to edit some log of observations.

The second tab available is the

Time Data. In this dialog you have several data about time. You can change, using calendar at top, to any other date/time and go back to current time by pressing Now button.

You can use “?” to reach help in almost all dialog in Tachyon.

There you can find detailed technical information about data presented.



Celestial Calculator (Tools Menu)

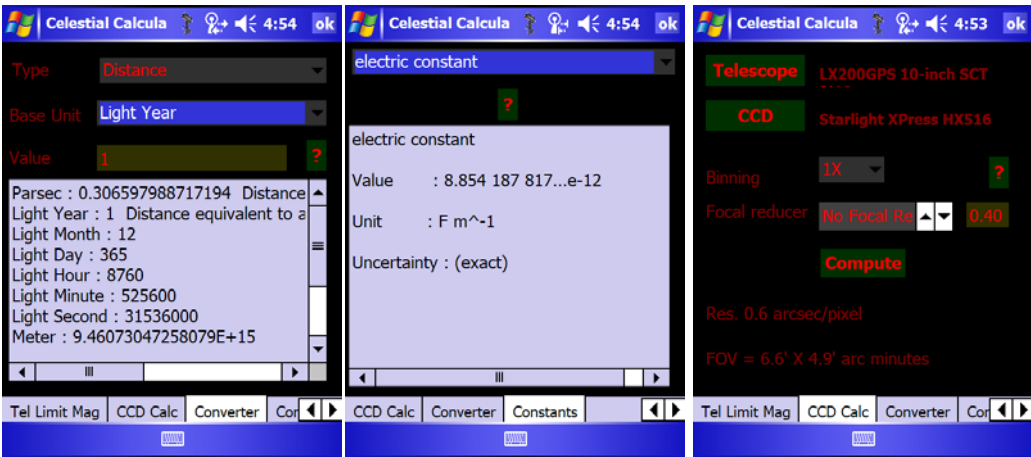
Celestial calculator is a powerful tool that shows several astronomical and physical data.

The first tab calculates the expected maximum telescope magnitude limit. You must provide data as to match your personal experience and equipment. Use Experience textbox to define parametrization. Use “Calculate” button to get results.

The second tab is a field calculation considering your

equipment and CCD. You can use “Telescope” and “CCD” buttons to redefine your setup. “Compute” button will calculate data.

The third tab is a conversion calculator and the last a physical constants dialog. The use is straightforward picking up combobox items and defining scales in case of Converter.

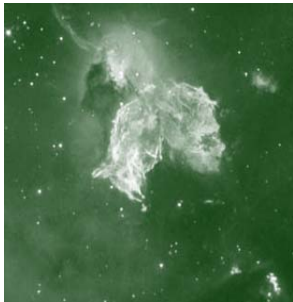
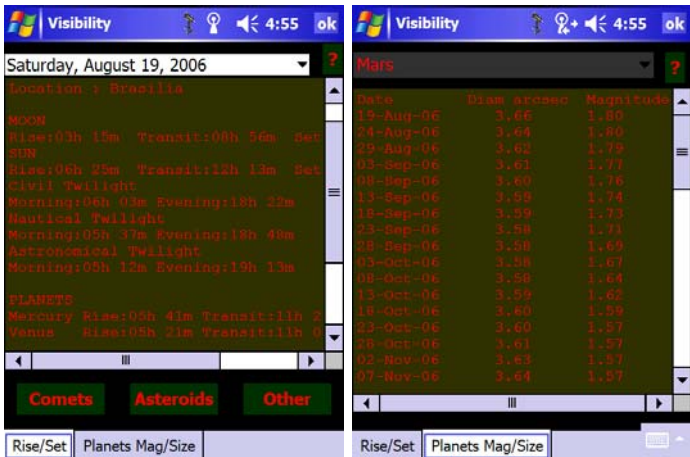


Celestial Calculator is a powerful tool for forecasting magnitude limits in telescopes, CCD field sizes and physical data.

Visibility (Tools Menu)

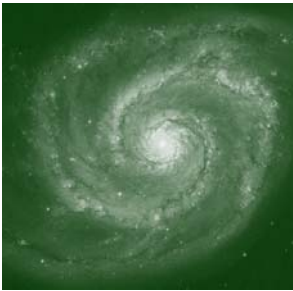
Visibility tool provides ephemerides data for Sun, Moon and Planets and you can append data from every imaginable object in Tachyon database. You can use “Comets”, “Asteroids” and “Other” buttons to get additional data.

The second tab provides magnitude and apparent size of each planet in solar system along next 6 months. You can change planets using combobox.





Earth (Tools Menu)



Some of phenomena we see in the sky are much nearer than astronomical events. In dialog Earth we can have a view of some data that can be useful for planning astronomical observations or see some events in the atmosphere.

In “Weather/Aurorae” tab you have access to a myriad of data including :

- GOES images from the whole world
- Aurorae forecasting data
- ClearSky

All of these data can be updated from the internet, if you have one connected to your PDA (You can use PC Client to transfer these files to PDA).

To include your own images see file web.dat in config folder in PDA’s Tachyon.

You can also see the main annual Meteor Showers and

plot radiant on SkyCharts and verify beginning of each season, year by year.

To access Zoom functions and Goto Map you need to press the stylus over dialog for 1/2 seconds and pop up menu (context menu) will appear.



With Moon Tool in Tachyon you have access to a detailed Clementine map with features labeling. Also you can plan observations using rise/set data

Moon (Tools Menu)

The Moon dialog is more powerful than several of desktop PC astronomical applications.

In the “Current” tab you have a drawing of moon and its age.

In “Moon Data” tab you have access to some apparent physical moon data.

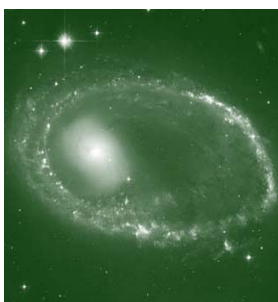
In “Moon Map” tab you have access to a whole moon map from Clementine mission with a resolution of up to 500m per pixel.

To access the several zoom

levels you must use a context help when you click the stylus over the map and maintain pressed until menu appears.

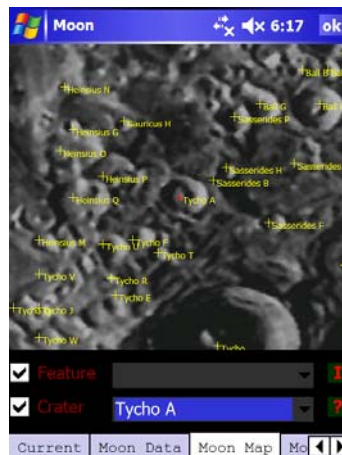
When you checkbox Features and Craters the map will be labeled accordingly, and you can pickup any crater or feature..

Using “I” button you can have information about selected crater/feature, including Moon rising/setting of the Sun, what allows you a planning to observe features in grazing light.



You can move directly to a feature/crater by selecting its name in respective com-boboxes.

The Eclipses dialog shows you details about next eclipse or any eclipse after a specified date in datetime control.



Sun (Tools Menu)

Get realtime information about our Sun from the internet. Among other features you can have a view of sunspots, SOHO images, Sun Solar Cycles and so on.

You can configure also images using same criteria as in Earth dialog.

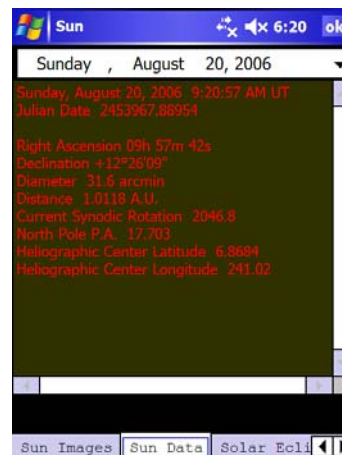
Each image can be zoomed using context sensitive menu.

You have also some Sun data calculated for the specific moment of use or any other

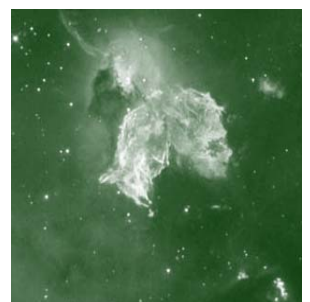
desired date.

The Solar Eclipse tool forecasts the next eclipse and its type. However there is no calculation for viewing conditions for your specific site.

You can use Sky Charts to simulate the Sun disappearing below the Moon.

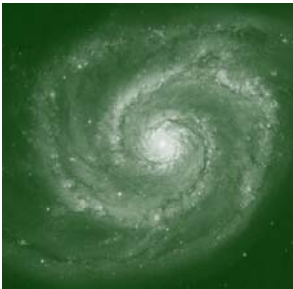


Sun Tool let's you, in almost real time, if an internet connection is available, have data about our Sun.





Planets (Tools Menu)



The Planets dialog tries to presents the user with the main planets main physical data and satellites events.

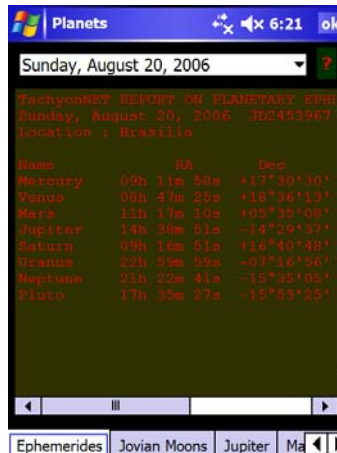
In ephemerides tab you have detailed information about position in sky, size and magnitude of all planets. We include Pluto for historical reasons.

The next tab is “Jovian Moons”. You can see immediately a two graphic display of Jupiter and its moons. The upper graphic is a small scale that shows all main four moons positions relative to the planet. The lower one shows a more close-up view. Moons are indicated by letters (I—Io, E—Europa, G—Ganymede, C—Callisto). You can change the view for telescope or binoculars usind N/S and W/E buttons. You can change also the current time using date combobox.

You can animate using step definition and < X > buttons..Also you can calculate moons events using Calculate button. Precision is around 2 minutes. We do not recommend spans of time over 5hr because of delays in calculation process. You can set the events span using the numeric up down control.

The results will came back in the lower combobox. Upon picking up an item in combobox Tachyon will show the position of the moons at that time.

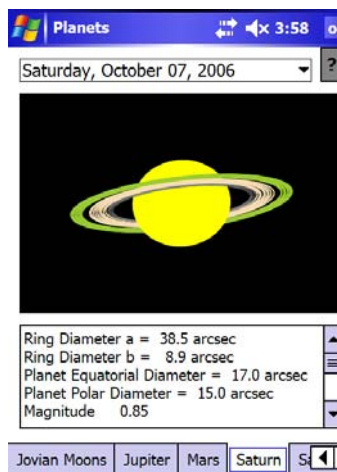
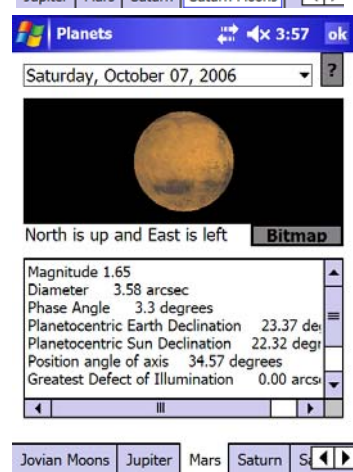
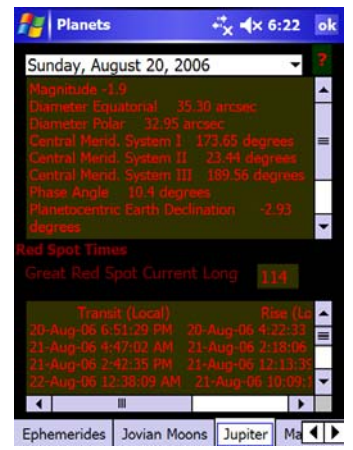
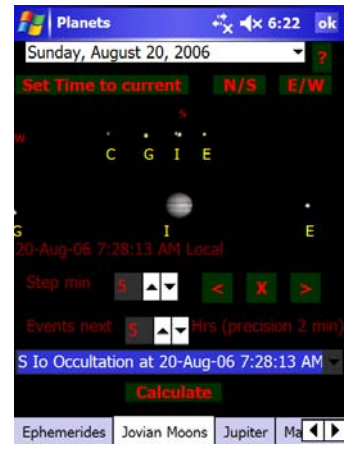
The same idea is implementd in “Satun Moons” dialog. Every moon is represented by a set of letters (Th—Thetis, H—Hyperion, D—Dione, T—Titan, E—Enceladus, Rh—



Rhea, M—Mimas and I—Iapetus). Titan is the brightest moon and can be visible in a small 2.5" inches telescope. The other moons needs a 6-8".

“Jupiter” tab shows a myriad of physical data, including transit of the Great Red Spot. You can update meridian of GRS, that changes slowly, but continuously. You can even set the longitude of a new feature and Tachyon will calculate Transit times.

In “Mars” dialog you can also have access to a lot of physical data and have a drawing of the planet orientation visible from Earth. You can see also a rendered image of the planet as seen through the telescope.



Planets is a tool the allows you to forecast dynamic of our neighbors and its satellites



Asteroids and Comets (Tools Menu)

Other very interesting objects in Solar System are Asteroids and Comets. Tachyon allows you to really calculate ephemerides from those, sometimes, elusive objects.

The first tab in dialog is “Best”. From this dialog you have instantaneous information about visibility of objects, including current magnitudes, visibility status, altitude/azimuth and so on. Upon pressing “Asteroids” or “Comets” buttons you fill up listview with respective data. Pressing over titles in top listview and you will sort by column clicked. That way you can sort by magnitudes, as an example.

“Asteroid Data” tab has some important functions. You can use “Ast File” button to select a file that contains asteroids data. This file is in MPCorb format. You can then use any set of asteroid files, including those freshly downloaded from the internet using Data Update menu option in Info Menu.

Selecting an asteroid from top combobox you can see ephemerides data. Using “Eph” and “Elements” buttons you can switch from Ephemerides to Orbital Elements data of selected object.

The “Select” button lets you create subsets of original Asteroids file. Beware that a huge number of asteroids (>200) in one file can cause delays if you are using Sky Charts.

The next tab available is “Asteroid Eph”. This dialog allows you to calculate a set of ephemerides and draw a trail in skychart. To do so, you must select the desired Asteroid in combo. Below asteroid combo you set the desired initial date. In this case the time is not selected in date control, but in

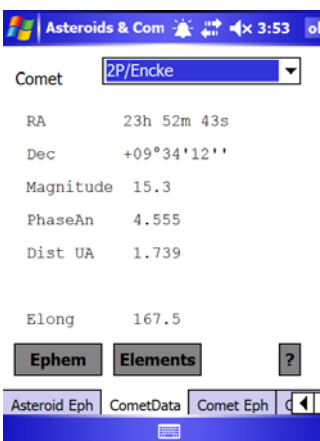
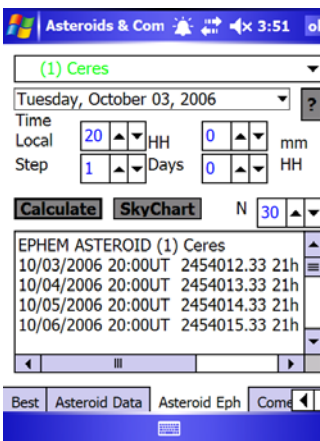
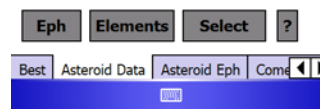
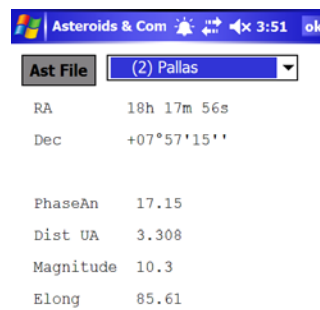
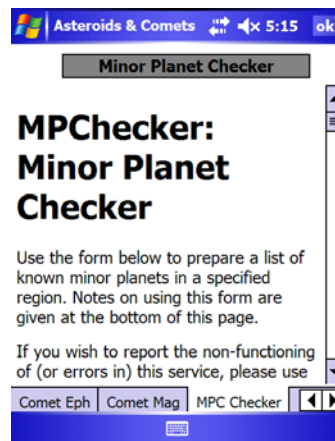
“Time Local” numericup-downs.

You must select also the step of calculation in days/hours.

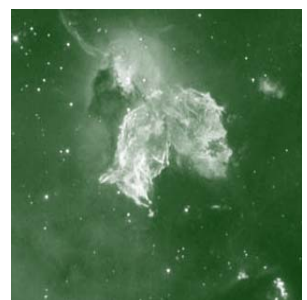
After setting up dialog you can press “Calculate” button and data will appear in textbox. After calculation you can draw a trail in SkyChart by pressing “SkyChart” button.

These same procedures apply to Comet dialogues that follows.

The “MPC Checker” tab is used to check, using internet, if there is an object of asteroidal origin in a specific coordinate. This is used to check for supernovae, novae and other transient phenomena.

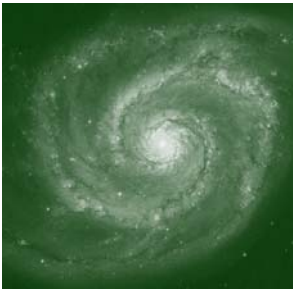


Tachyon has a powerful orbital calculation that shows you positions of Asteroids and Comets





Variable Stars (Tools Menu)



In variable stars dialog you have the complete GCVS catalog.

Using the search tool you try to find using star's designation. In case of greek letters stars you use the first three letters (ex: ETA CAR for eta Carinae).

Upon finding your choice Tachyon shows variable data and automatically loads Charts and Light Curves, if available in PDA.

You can use PC Client to get the charts from AAVSO and

transfer to PDA.

You can use context menu to go to a Sky Chart, To go to a telescope, to include a log or include in a current plan.

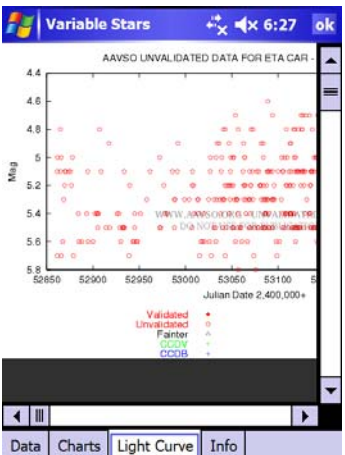
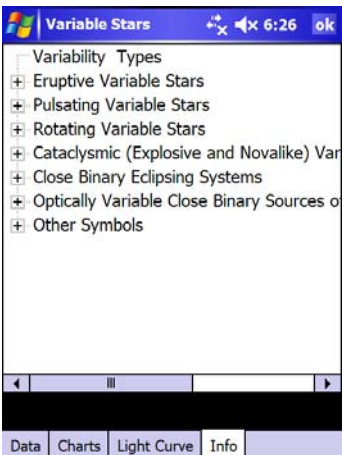
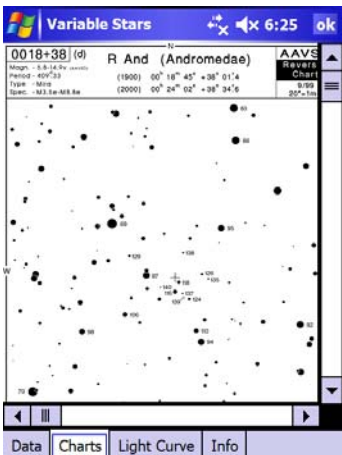
Tachyon loads all charts related with selected star. That way you can have several charts for field use, telescopic use and so on..

Every chart is selected by a context menu.

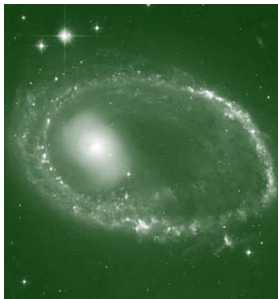
"Info" tab is a detailed information of Variables types and its characteristics.



Variable Stars module can use standard AAVSO charts downloadable through the internet



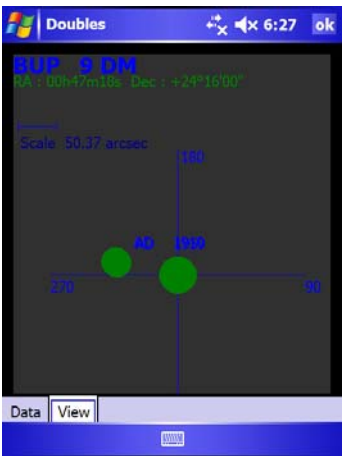
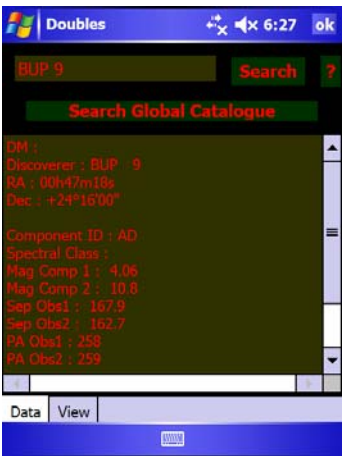
Double Stars (Tools Menu)



Double Stars dialog have a subset of WDC catalog. It includes, however, almost all telescopic doubles that can be viewed through a 10 inches telescope.

You can search by WDS name or use a Search Global. You can send the telescope or draw a Sky Chart using context menu.

Tachyon draws in View tab the positions and apparent distances of objects. You can use context menu to change scale.



Supernovas (Tools Menu)

With supernovas tool you can update from web the latest supernova data and Tachyon, magically, will plot for you the exact position of star in Galaxy field. This can be done using the Survey/DSS tool where you can get the image centered on supernova coordinates.

You can use context menu to access several functions like plotting a skychart, moving the telescope to the object, include in a plan or recording a log.

Using Web Update button you can update supernova catalog from web if you are connected.

Typically astronomers and amateurs discover some 200 supernovae each year but, only a few, reach magnitudes that allow visual observation through mid sized telescopes. Expect 1 to 3 supernovae per year that can be visible in a 8 inches telescope.



Catalogs (Tools Menu)

Tachyon has a large number of catalogs and a lot more can be imported from Vizier.

Also you have a powerful cross-reference module that let's you find all objects in selected catalogs in a distance in arc minutes defined by the user. That way you can now details of different designated objects that, in fact, are the same.

You can also, as in Tachyon

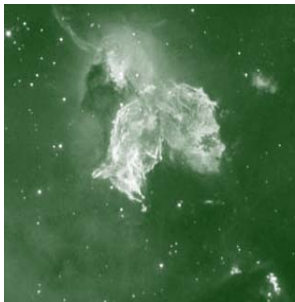
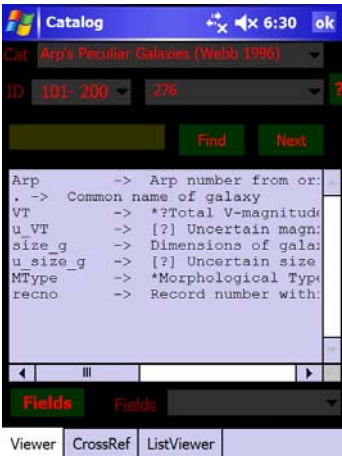
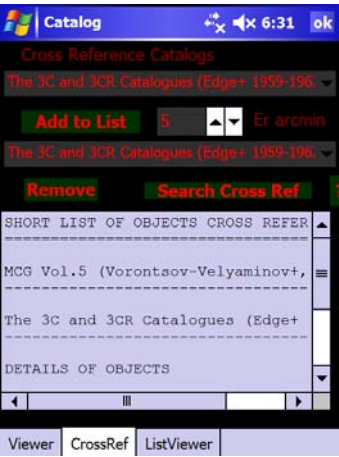
almost every module, draws a sky chart centered in an object or go to a telescope using context menus.

You can also take a view of whole catalog. But beware that large catalogs can delay eons in PDA, before showing anything.

Using PC Client you can import and transfer Astronomical catalogs to PDA.

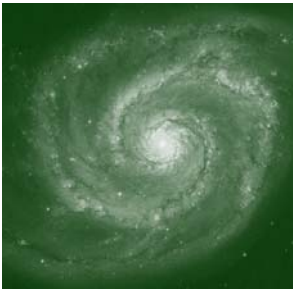


Tachyon has a set of deepsky catalogs that is a mindfreak. You can even imports Vizier professional data and use in your research





Surveys DSS-SDSS-GSC2 (Tools Menu)



One of the most powerful Tachyon tools is to capture real sky images from all-sky surveys like DSS and SDSS, that reach over magnitude 21. These dialogs need internet connection.

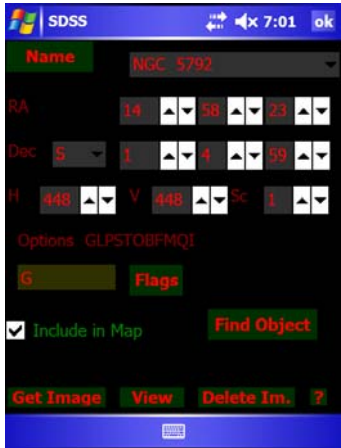
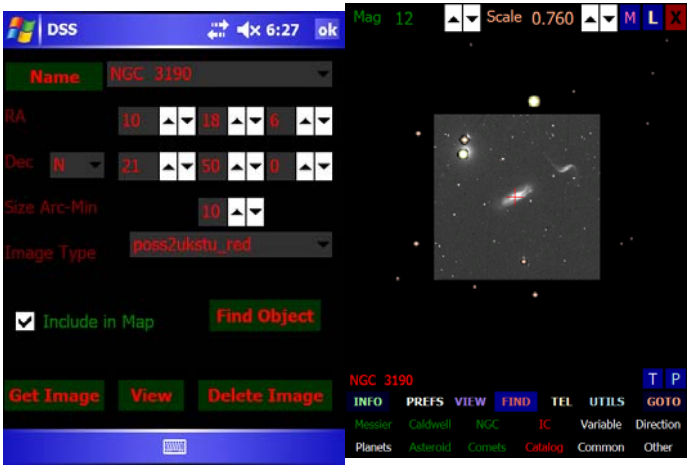
You have two options to use these dialogs. One is entering information directly. The other is using any other dialog context sensitive menu or SkyChart and Tachyon will fill up coordinates automatically.

You must inform the name of picture/object, coordinates, field size (maximum 15 arc min for DSS) and plate.

Also you check “Include in Map” if you want that downloaded picture is depicted in SkyChart.

Use “Get Image” button to get image from the internet. After a while the image is shown. You can go back to Search window pressing “Search”. And you can see the image again pressing “View” button. The help “?” button has detailed explanation about plate choices.

In case of SDSS you do not have the whole sky, only parts



of northern skies far from milky way. In this case you have a sophisticated set of options and you can define size “H” and “V” and scale of image “Sc”.

Using DSS/SDSS tools you have access to whole real sky up to 21st magnitude.

User Objects (Tools Menu)



User Objects are objects defined by the user that, typically, does not exist in traditional catalogues. These are objects like novae stars.

You can define objects coordinates, symbol (you can use your own and put in Images/System folder in PDA).

This object will be drawn in Sky Charts as a normal catalogued one. It will not have, however, information.

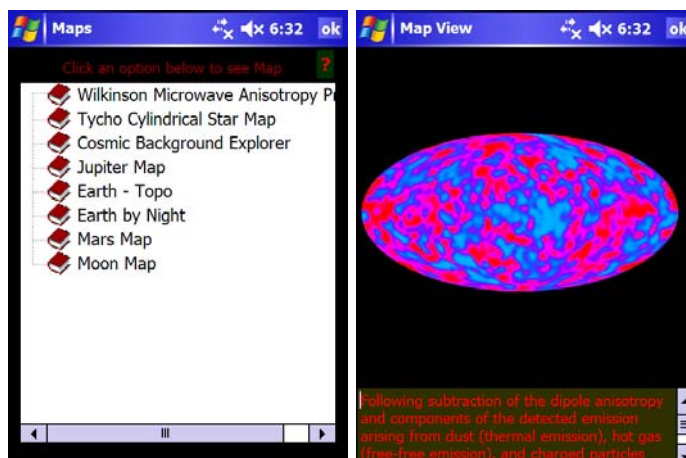


Maps (Views Menu)

Tachyon has a Maps dialog where you can see some maps of interest.

User can include your own. To do this see folder Maps in Tachyon in your PDA. Be aware to do not use a resolution over 800x800 as to not stress PDA's memory.

The map can have a text attached and can be zoomed in using context menu.



Drawings (Views Menu) (Not yet available)

Drawings is a very curious tool. Its main purpose is to allow registering observations through drawings. To help user there are some useful tools for drawing stars and globular clusters.

You can access the menu by pressing the lower left textbox in dialog. You can select a star or a globular cluster.

You can define stars colors using the color textbox at right of numericupdown. The colors are shown and spectral classes are indicated.

The numericupdown defines the size of stars and globular images.

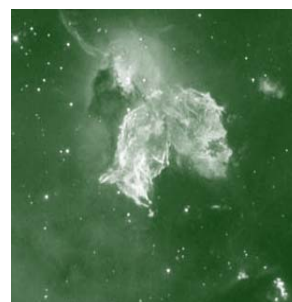
You can save and load files using file menu at lower right.

This is a simple tool that can register some of your visual observations.

Files are saved in bmp format.

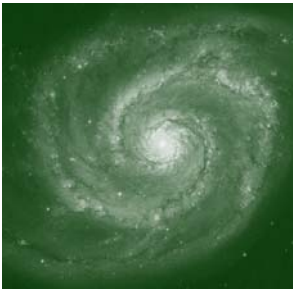


With Tachyon you can draw your impressions of objects at a telescope.





Sky Impressions (Views Menu)



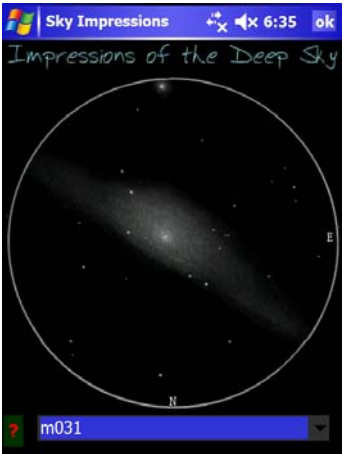
This is a nice set of drawings of deepsky objects that can be seen through a moderately sized telescope. You can make a choice from Messier, NGC or IC objects available using the combobox at the bottom of dialog.

These beautiful images were gently allowed by Jere Kahanpää, that used several sized telescopes from several locations.

These drawings represents what you really can expect to see through your telescope.

It is a common mistake to think

that it is possible to see with visual observations those beautiful colored images of nebulae and galaxies.



Internet (Views Menu)



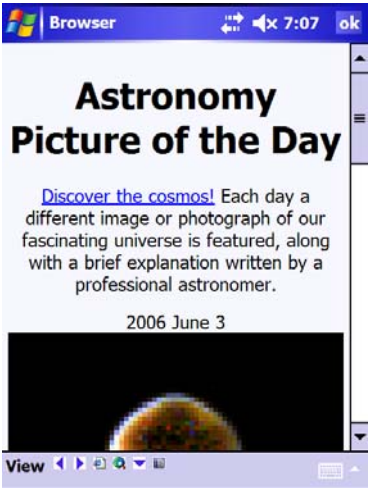
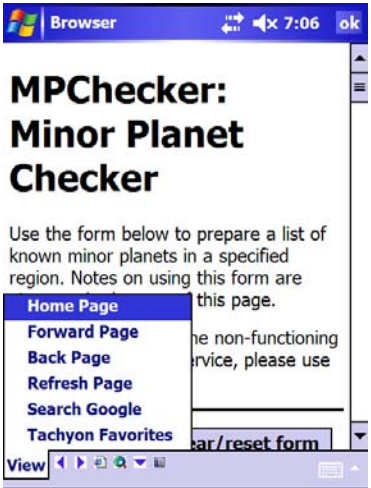
“To catch the reader’s attention, place an interesting sentence or quote from the story here.”

You can use internet menu option in Views Menu to reach some of the most important and common astronomical sites to get updated information.

In case of Star Tales Tachyon allows you to store each “card” you receive.

By changing dates is dialog you get cards accordingly.

You have a powerful internet tool called AtoTools. You have access to a set of astronomy sites through Tachyon Favorites. You can edit favorites file editing web.dat file in Config folder.



Managing Bitmaps (Views Menu)

This story can fit 150-200 words.

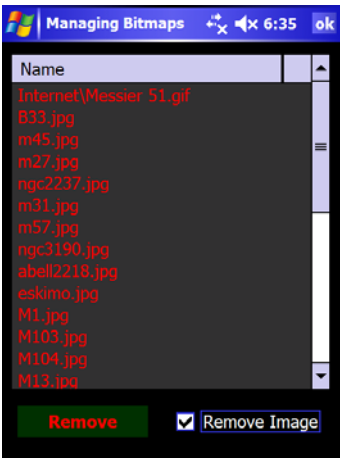
One benefit of using your newsletter as a promotional tool is that you can reuse content from other marketing materials, such as press releases, market studies, and reports.

While your main goal of distributing a newsletter might be to sell your product or service, the key to a successful newsletter is making it useful to your readers.

A great way to add useful content to your newsletter is to develop and write your own articles, or include a calendar of upcoming events or a special offer that promotes a new product.

You can also research articles or find “filler” articles by accessing the World Wide Web. You can write about a variety of topics but try to keep your articles short.

Much of the content you put in your newsletter can also be



Log Book (Party Menu)

Log book is a tool that allows user to register its observations.

You can enter data in “New Log” tab. If you press record button you can record audio messages.

Log entry is not changeable after confirming data.

In the Log Viewer tab you can recollect your night impressions by picking up an object from topmost combobox.

If you have recorded audio messages Tachyon will reproduce it upon your choice.

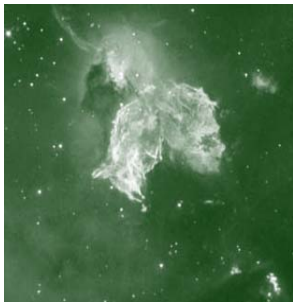
Note that audio files may be big enough to fill up your storage memory in few minutes of recording.

If you install Tachyon in the main device memory we do not recommend the use of audio recording. However, if you have installed Tachyon in your Storage Card it is very likely that you have room to store recording files.

These files are stored in Sound folder in Tachyon in your PDA.



With log book you can register and record your observations



Plan Maker (Party Menu)

PlanMaker is a very specialized and interesting tool. Its main objective is to collect a set of objects that you plan to observe and organize information as to allow you to see them easily and in between sessions.

You can, an example, select all mssiers objects and observe them through the yaar. Tachyon will record observed objects and goto your telescope accordingly.

In the first tab you have a Plan

www.ilangainc.com/ASTROPLANNER/

You can also create a new plan from scratch. Tachyon allows you to include almost every object imaginable. To do this, after you create a new plan by using New Plan button, you can go to any dialog that has objects like Variable Stars, Catalogs and so on and context menu to include the selected object in the Plan.

After selecting your active plan by "Make Current" button we will see know how to use Planning in Tachyon. Go-

that time. You can expand each book icon to see detailed information about objects, like rising/setting time and position.

Using Context menu you can execute a myriad of functions. like setting object status, see object in a SkyChart, Go to a Telescope, Get a DSS image and so on.

The option Goto Nearest object will send your telescope to the object that is nearer its current location in the sky.

Management dialog.

To select a desired plan to be active is a two steps procedure. First you pick desired plan from topmost combobox. After that you press Make Current button. Tachyon will load selected plan and show you details in textbox.

You can delete a plan by selecting it from combobox and pressing Delete Plan button,

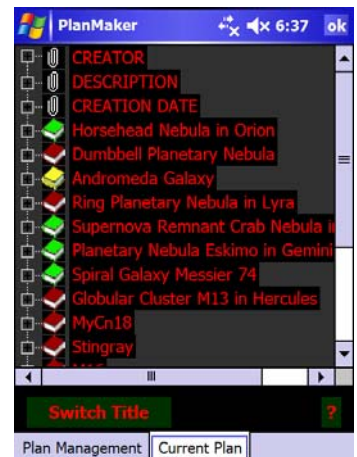
You can also Import a Plan from a file generated by Astroplaner software for PC <http://>

ing to Current Plan tab you can see a treeview of all objects available in the selected plan. The first three rows with clips icons are description of the plan, including creator, description and creation date.

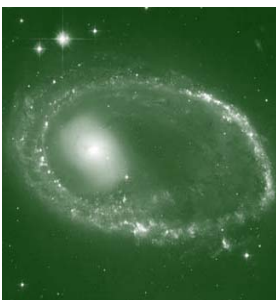
After that we have the object list. If you have a green book icon, this means that the object is currently visible from your location. If it is a yellow book, the object is near the horizon (below 15 degrees altitude), and if it is red then it is not visible from your location at

The switch title button is available because some imported plans have no clear names in the objects. That way it is possible to switch to descriptions.

When changing status of objects from observed to non-observed to abandoned, icons will change accordingly.



Using PlanMaker is an easy way for exploring celestial objects with your PDA



Slide Show (Party Menu)

SlideShow is a module that allows user to see a sequence of slides.

The first step is to pickup a dialog show. You can do this using the top combobox. In this example we had picked up Hubble slideshow. Using “<” and “>” buttons you can advance or go back the slideshow.

Below we can see a description of the object.

If you use the context menu (by pressing the drawing for

1/2 seconds) you can goto a chart where the object is located or goto the telescope, among other functions.

This function works if original slideshow file has coordinate data.

To create or modify your own slideshow is fairly easy. Take a look in slideshow folder in Tachyon and you can edit .sld files that are, in fact, text files.



Tours (Party Menu)

Even considering that Plan-Maker module is a more powerful and versatile tool, some users prefer to use Tours module.

This module uses some of the features available in Meade Autostar© Tours.

As there is available a large set of Tours in the internet, this may be an easy way to begin your night session.

Some functions are not yet available but, in general, Tachyon is capable to run majority of Tours that you can get in the internet.

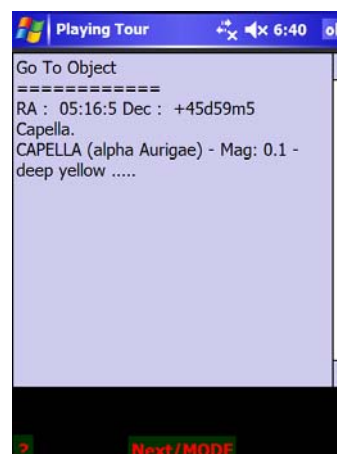
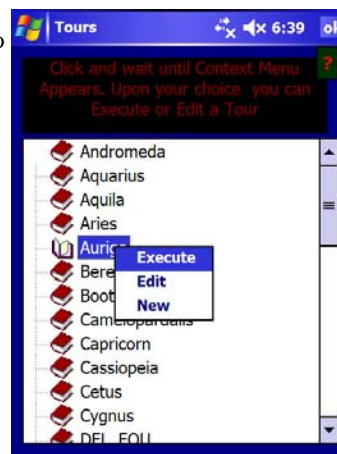
To run a tour you must press over any treeview entry and wait until a context menu appears. After that “Execute”.

You can press the “Next” button successively Tachyon will goto your telescope to the desired object.

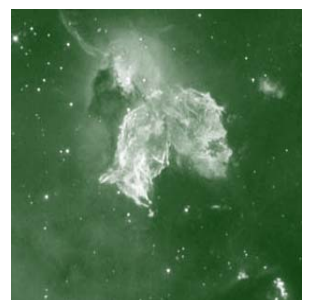
Tachyon calculates if object is visible and only stops if it is. That way you can expect that

sometimes the Tour will run to the end without stopping. This happens because no Tour object is currently visible from your location.

There are several sites in the internet where you can get Autostar Tours.

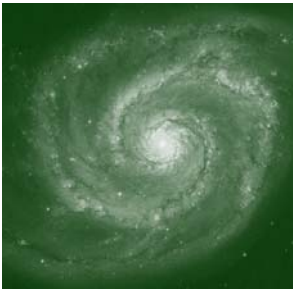


Slide Shows are beautiful windows to the night sky through your PDA





Themes (Party Menu)



Sometimes there is some interesting new event in astronomy. Sometimes you want to have access to some offline media.

Themes is a tool that can show you a huge amount of media related with some astronomical event or concept.

As a registered user, you can go to Tachyon site and get some interesting themes to have stored in your PDA.

Upon selecting desired themes a user can pick up from combobox the desired media to view.

IF marked "H" then media is an html file that will be viewed through a browser interface. If "I" it is an image. If "A" an adobe acrobat file. If "S" a sound, if "V" a video and if "O" an object. In this last option you can see a SkyChart or move your telescope to the object.



Themes show you some interesting media with Astronomical concepts and events



HandPad (Telescope Menu)

You can control your telescope using a handpad emulation. We recommend a BT connection and you can get details at our forum in Tachyon site.

With handpad you can do almost everything with your telescope. In fact, it turns your standard telescope handpas in the most powerful one available.

To go to any desired object you press any key from below keypad like 3 “Caldwell”, 6 “Messier” followed by desired number. Press SET key and object will be registered with capital letters. If above horizon at that moment you can press GOTO to move the telescope.

The same procedure applies to Asteroids, Comets and so on,

except that, after pressing the respective key followed by SET key a menu will appear.

At any moment when you press POSITION you get current Telescope position.

You can select any object and SYNC your telescope to that object.

At any moment CANCEL button return you back to main menu.

You can use SPEED key to change telescope SPEED followed by a number

You can use FOCUS key and direction keys to move automated focus in telescopes that allows it, like LX200GPS.



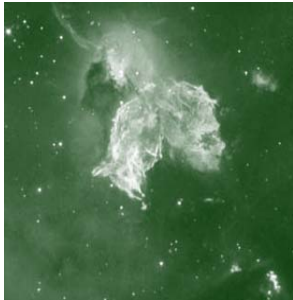
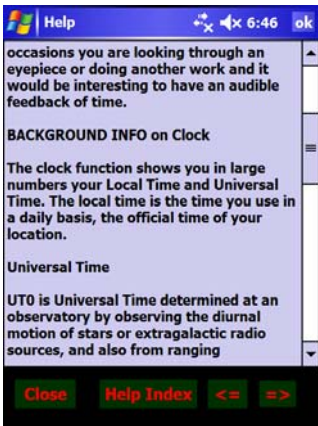
Handpad is a powerful tool for those that use telescopes connected to Tachyon.

Help and Glossary (Info Menu)

Tachyon provides a very sophisticated and detailed Help and Glossary.

You have access to detailed information about, not only procedures in using the software, but also detailed explanation about physical processes and technical data.

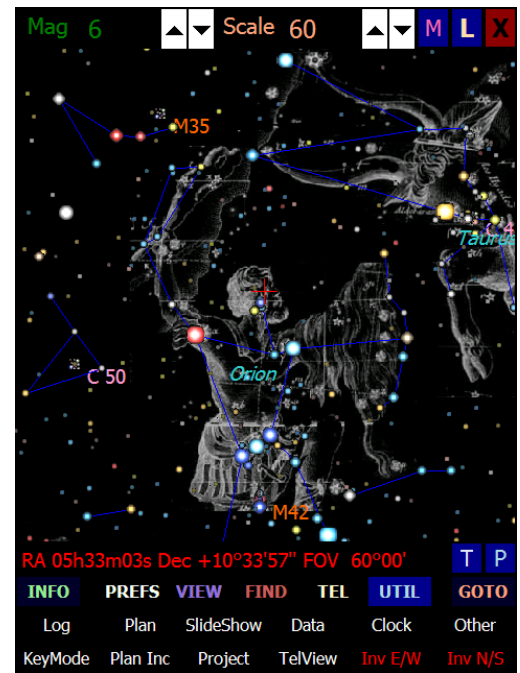
The help can be reached by using a menu option in Info Menu or, more commonly, using a question mark (?) button, that is available in almost all dialogues.



Sky Charts

Sky Charts is a powerful charting module in Tachyon. You can see any object in Tachyon database in a beautiful colored map, the kind you can see at right.

Sky Chart is totally integrated in Tachyon and you have at your finger almost any imaginable option to see objects in the sky, from planets to asteroids, from galaxies to quasars, from bright Sirius to 21th magnitude stars with GSC2, or use GSC catalog up to 15th magnitude.



Introducing the Sky Chart Screen

Identifying Controls

On the top of the chart you can see some controls. At left you have a “Mäg” button followed by the magnitude limit of the chart. You can change this limit and press “Mag” to redraw. Observe that Tachyon prevents some changes to do not clutter the screen. You can use however “ChPref” button to change this setting (this is not recommended).

Following “Mag” you can see “Scale” button. It works the same way and you can change window size in degrees.

On the rightmost top position you have three buttons. “M” button shows you a legend for spectral classes and magnitudes. “L” button remove some labels to have more space in the screen. “X” button closes SkyChart

On the middle of the screen you have the map. Every time you press anywhere in the chart Tachyon redraws centering in the region you have pressed.

On the bottom you can see a

text strip followed by “T” and “P” buttons. This strip shows information about the center of the screen. You can press “T” button to change and see several kind of informations like : Ra/DEC, Alt/Az, Location, Object name, Time and so on.

When pressing “P” you enter in measurement mode. Each time you press over the map the text strip srea will show you distande and Position Angle regarding last pressed position. Pressing “P” again and you come back to normal mode.

The bottom three rows in the screen are the Menu area. “INFO” and “GOTO” button are isolated, but “PREFS”, “VIEW”, “FIND”, “TEL” and “UTIL” buttons change the bottom two rows of menu options.

Zooming Options

You can zoom the screen by changing scale in top of the screen and by selecting an area with your stylus through dragging.

Using Context Menu

Every time you press over the map and stays pressing for 1/2 seconds a context menu will appear. In this case you can enable/disable objects and labels, chnge screen color layout and so on.

Using Menu

PREFS

ZOOM—Change menu to several zoom levels in degrees. Pressing Z buttons changes zoom level

ChPref—Chart Preferences dialog

Zoom In/Out—Zomm in and out by a fixed factor

Plarium—Planetarium visible at specified time and location

GPref—General Preferences of Tachyon like ID, Site and do on

NSEW—Fast dialog to see NSWE directions of horizon. Dialog shows a compass and a elevation option

Z buttons—Zomm levels

Maglim—Settings of magnitude limits of Messier, Comets, Asteroids and so on

Sky Chart is, by far, the most beautiful star charts available for a PDA. From it you can go deep in the cosmos and in your dreams



Help—Sky Chart Help

VIEW

Conslne—Shows up Constellation lines

ConsBor—Shows up Constellation boundaries according IAU

ConsDraw—Shows up Constellation ancient drawings. This option works only in specific zoom levels

RealSky—Shows up realsky images using bitmaps. If this is set to ON (Green button) DSS, SDSS and user defined images will be merged in SkyCharts

Grid—Opens options to show one kind of grids (Altitude-Azimuth, Equatorial (Rectangular), Galactic and ecliptical

TIME—Opens options to move time in SkyCharts or even shows a detailed Time Dialog. < << buttons move time backwards, while X stops any animation. There are buttons also that set Step interval.

GSC2—Get GSC2 data from the internet at centered location and merges with the map up to 21th magnitude

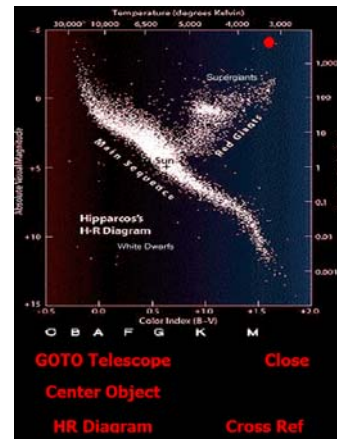
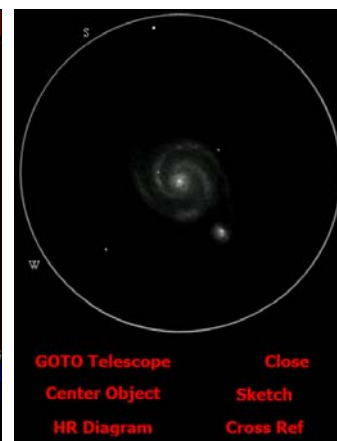
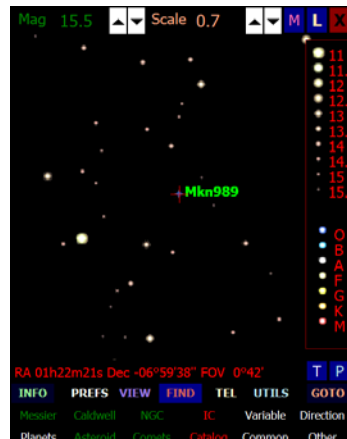
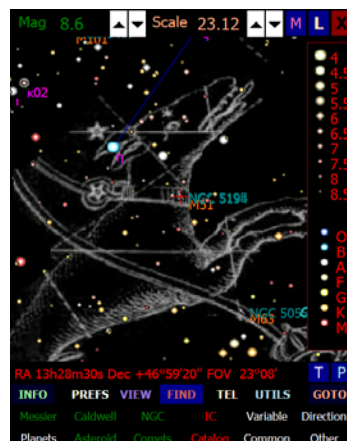
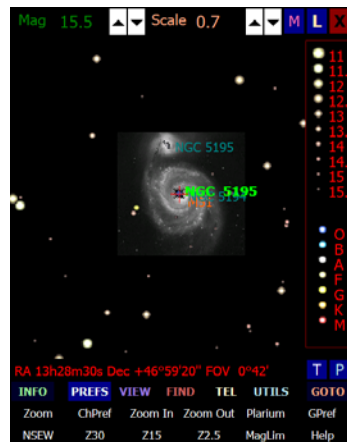
DSS—Gets DSS image from the internet and allows user to include in SkyCharts, merging actual sky images with Chart data

SDSS—Gets SDSS image from the internet and allows user to include in SkyCharts, merging actual sky images with Chart data SDSS is available only for a part of the sky (Northern and far from galactic plane)

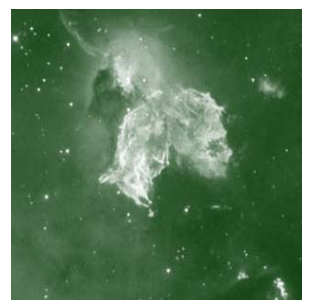
Eye—Selects active eyepiece to be shown on chart, including options for a binocular, telrad or Finder

ImgEdit—Allows user to manage user images to be shown in SkyChart

User—Managed userdefined



You can see drawings of objects at Telescope using SkyChart



Sky Charts

objects catalog. Using this option a user can include a new object at a specific location

FIND

Messier—Find a Messier object by a number and center the screen on it

Caldwell—Find a Caldwell object by a number and center the screen on it

NGC—Find a NGC object by a number and center the screen on it

IC—Find an IC object by a number and center the screen on it

These four buttons are green if enabled to be seen in Skychart and red, if not.

Variable—Find a variable star. After using the dialog use GO TO Map to go back and show it in SkyChart

Direction—A complete compass that allows user to make a choice of direction and altitude to show SkyChart

Planets—You can make a choice among Planets, Earth or Sun

Asteroids—You can find a specific asteroid. Tachyon will calculate current position and center in the SkyChart

Comets—Find a Comet

Catalog—This option allows you to find any object in any catalog registered. Upon making your choice you must context menu and Go to Map.

Common—This is an option that allows you to find an object by its common name. There are two listboxes, one for Named Stars and another for Named DeepSky Objects

Other—This opens another set of FIND objects as related below:

Bayer—Find stars by Bayer letters ex: Alpha Centauri, Eta Carinae

Flamsteed - Find stars by Flamsteed numbers ex: 61 Cygni.

Hipparch - Find a star by its Hipparcos number

SNova—Find a supernova. This, with SDSS images, is a precise way to show you the supernova position in a galaxy

Position—This is a FIND to a specific position in the sky using any coordinate

Constell—This FINDS a specific constellation by name or common name

GFind—This is a Global Find Dialog

Doubles—This option Finds double stars by its name

User—This option finds a position for a user defined object

TEL

Map Sync—This option synchronizes the center of the map with current telescope position, if telescope connected

Handbox—This option shows you Tachyon Handpad

Spd Up/Dn—Changes speed of slewing in telescopes that allow it

Sync—Synchronize current telescope position to the center of skychart

StopMove—Stops telescope slewing

Home—Home telescope

CommLog—Shows telescope communication log.

Focus In/Out—Moves focus, when applied

UTILS

Log—Shows log dialog

Plan—Allows planning

SlideShow—This option calls SlideShow dialog

Data—This opens several astronomical data dialogs as below: Earth, Sun, Planets, Ast/Comets, Doubles, Variable Stars, Visibility and Moon

Clock—This option sets the clock of Skychart, including date and time

Other—This opens several other dialogs in Tachyon like: Tours, Star Tales, Calculator, Impressions of DeepSky, Glossary, Help, About, Drawing, Maps and Profile

Keymode—This option changes joystick and hardkeys functions from Telescope, to map and to nothing

Plan Inc—This option includes object in the active Plan

Project—This changes sky chart projections. Be advised that several options cannot be rotated and this is to be used only in fairly deep zooms and without RealSky

TelView—This inverts image to telescope view (inverted). Be adv

Inv EW—This inverts EW sky chart projections. Be advised that several options cannot be rotated and this is to be used only in fairly deep zooms and without RealSky

Inv NS—This inverts NS sky chart projections. Be advised that several options cannot be rotated and this is to be used only in fairly deep zooms and without RealSky

INFO

After finding an object or selecting it using context menu you can get detailed information.

There are detailed descriptions of majority of IC and NGC objects

If you have selected a star with

Sky Chart is, by far, the most beautiful star charts available for a PDA. From it you can go deep in the cosmos and in your dreams

spectral information (all hipparcos stars have) you can even plot its location in an evolutionary HR diagram

For some deepsky objects you can see a sketch of the object as seen through a medium size telescope.

GOTO

You can goto to a found object using GOTO button at lower left.

Using Hardkeys

You have three modes for operating a SkyChart in terms of hrdkeys usage. The default is telescope movement, the alternatives are chart movement and no hardkeys, allowing the access to external sw like Tasks or Contacts.

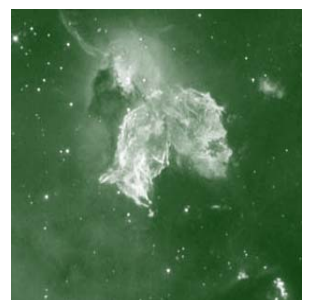
If you have yncour telescope connected then in SkyChart and in Handpad you can move telescope using joypad. The center button will stop the movement. Also telescope will move only while you are pressing joypad. If you release it the telescope will stop.

The left front button can be used to GOTO telescope and SYNC the map position with current telescope position. The right side is the button for sync the telescope with current map position.

If you are in Map mode, that is set when a telescope is not connected or if you, manually, change using UTILS/Keymode, then the joypad will move the map, the left buttons will be Zoom in and Zoom out and right buttons INFO and Text INFO changes. The button 5, at side of device, will open/close the legend .

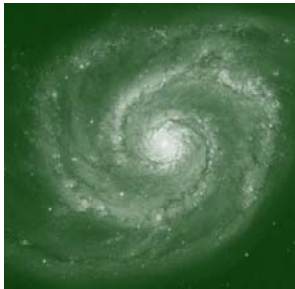


**Skychart is a
sophisticated StarChart
Tool**





Setting Up Tachyon



Setting up process of an astronomical software may be a long but, indeed, very important step.

When loading Tachyon for the first time we need to define your location, equipments and preferences.

The first tab is User Info. You can fillup with your personal data, if wanted.

After that we will define your location data using “Site” tab.

Tachyon can store up to four different locations.

The first thing is to find if your location is already available. To do so you check the “List Places” combobox to see if your city is already there. If it is there you can select it, if not, you can enter manually data. That way we suggest that you pickup a location that is near yours and change Latitude, Longitude and Timezone accordingly.

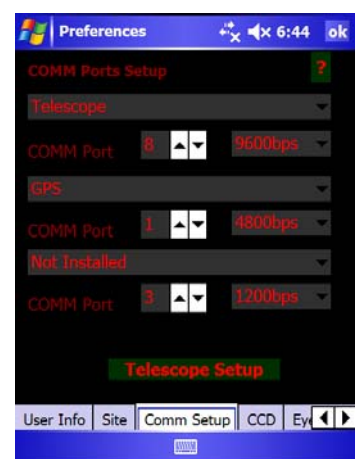
After selecting data you press “Add New Site”. This button will include your location in Primary Site combobox. If you select this new added site in Primary Site combobox you had set this site as Tachyon current site.

“Comm Setup” is a tab the allows you to define your serial communications ports to be used by Tachyon. If you use Bluetooth it is commonly COM7 or COM8. The standard speed is 9600. Check your telescope setup to see what are the correct settings.

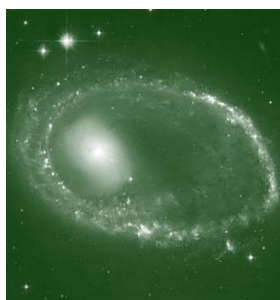
“CCD” tab is available for you to define your CCD settings. These settings are used in Calculator and can be used in other Tachyon modules

“Eyepiece” tab is the tab where you can define your eyepiece specifications. Tachyon allows you to define up to 4 eyepieces. This data is used in

SkyChart to draw eyepiece views.



Tachyon allows you to setup detailed personal and equipment information that are used to customize your preferences



Telescope setup is as simple as it gets. You can pick up a default telescope and change settings you want. You must also select the software driver that will be used to connect to your telescope.

The second tab of Telescope Setup is “Operational Setup”. In this tab you can set several working options for your telescope movements. Site Update is an option to uodate or not your current site to the telescope. The same procedure is available to updating time and date.

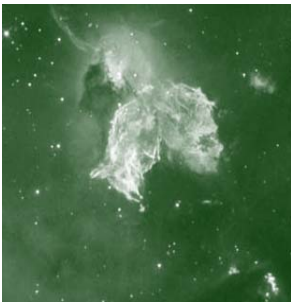
Latency is a time that Tachyon uses to delay after a send command through serial. Some telescopes are slow and needs higher values like 1000. An LX200GPS works flawlessly with 200ms.

Color Definitions is an option in Info menu that allows user to define color settings in Tachyon.

You must use context menu to Load/Save your settings and Star Colors.



You can control your Telescope using Tachyon





TACHYONMOBILE

Site : [Http://tachyonweb.net](http://tachyonweb.net)

Forum : [Http://tachyonweb.net/board](http://tachyonweb.net/board)

E-mail: support@tachyonweb.net

Tour the Universe Faster than Light !



TachyonMobile develops high quality software for Astronomy. It targets Windows PC, PDA and Smartphone markets.