NavRules is a training aid for teaching the various light patterns, dayshapes, and sound signals listed in the 72 COLREGS.   These lights, dayshapes, and sound signals form the foundation of an internationally recognized method of recognizing vessels and obstructions in various degrees of visibility.

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Copyright/License/Warrantee

NavRules, including all program, data, and help files is   Copyright © 1994-1995 by Bruce A. Pennypacker.   All rights pertaining to Navrules and the associated files are reserved by the author.

Disclaimer

This program is supplied "as is".   No warrantee, implied or explicit, is made with regard to this program or it's fitness.   Under no circumstances will the author be held liable for any damages that may be incurred by using this program, even if the author has been notified in advance of
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This version of NavRules may be freely distributed as long as the following conditions are met:

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Dayshapes

One or more special geometric marks, such as a black diamond, that is hung aloft to indicate the type, state, or occupation of a vessel.   A single ball, for example indicates a vessel at anchor.   Dayshapes, as the term indicates, are used only during daylight conditions.

Light Patterns

A collection of one or more red, green, white, or yellow lights displayed by a vessel or other object in the water.   The number, pattern, and color of the lights indicate the type or purpose of the vessel or object, and can also indicate the direction in which the vessel is traveling.

Sound Signals

A series of specific sound patterns created by whistles, bells and gongs.   Sound signals are used to warn vessels of different situations during times of restricted visibility as well as to indicate the intentions and actions of vessels maneuvering within close proximity of each other.

Requirements for running NavRules

NavRules will run on any PC running Microsoft Windows 3.1, Windows 95, or Windows NT.   A color monitor is needed for displaying the various light patterns, and a Windows compatible sound card is recommended for the sound signals.   If NavRules is run on a computer that does not contain a compatible sound card, the following message will be displayed when sound signals are selected:

See the section Playing sounds over the PC Speaker for details on having NavRules play sounds over the PCs internal speaker.
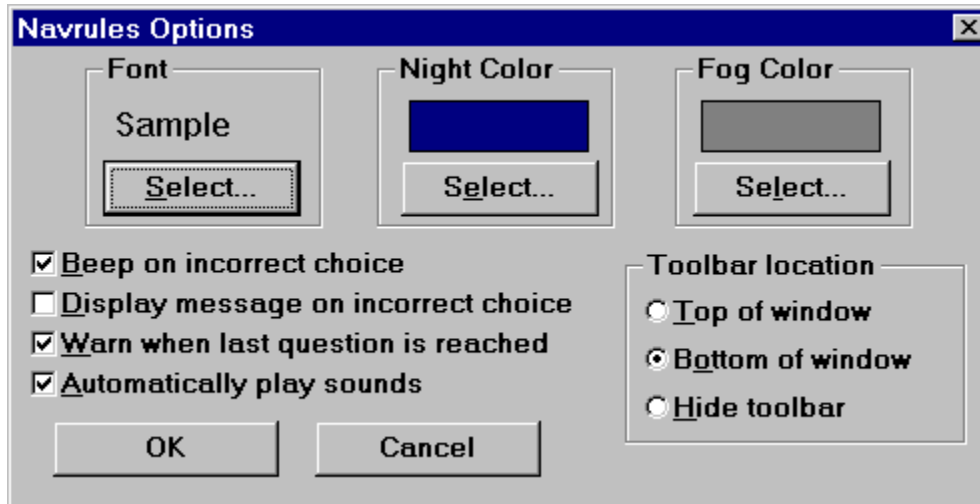
Playing sounds over the PC speaker

A Windows compatible sound card is not required for playing the sound signals that NavRules teaches.   If a sound card is not present then you will need to install a sound driver that allows sounds to be played over your PCs internal speaker.

There are various commercial, shareware, and public domain drivers available that will let you play sounds over your PCs speaker.   The drivers that you use will depend on the environment that you are running under (Windows 3.1, Windows 95, or Windows NT).   These types of drivers can be found on many BBSs, on-line services such as Compuserve and America Online, or the internet.

Configuration options

Selecting the **Options...** choice from the **File** menu will display the following dialog box.
Click on the different parts of the dialog box for detailed descriptions:

Navrules Options

Font

Sample

Select...

Night Color

Select...

Fog Color

Select...

☑ Beep on incorrect choice
☐ Display message on incorrect choice
☑ Warn when last question is reached
☑ Automatically play sounds

OK   Cancel

Toolbar location

○ Top of window
◉ Bottom of window
○ Hide toolbar

Font

Select the font that will be used to display all the NavRules text.   The color of the text can also be selected, and will be used to display the text in the upper left and right corners of the window when a light pattern is being shown.

Night Color

Select the color to use as a background when displaying light patterns and vessel silhouettes.   Black should not be used, otherwise the vessel silhouettes will not be visible. Any color that your computer is capable of displaying can be selected. The default night color is dark purple.

Fog Color

Select the color to use as a background when studying sound signals.   Some sound signals are used only during times of restricted visibility, so NavRules displays a screen that is gray by default to simulate fog.   Any color that your computer is capable of displaying can be selected.
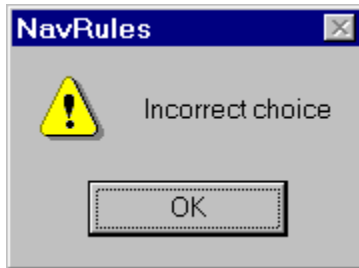
Beep on Incorrect Choice

When this check box is selected, NavRules will generate a short beep when an incorrect choice is selected during a quiz.

When an incorrect choice is made during a quiz, the text of the selected choice will always turn red.   Having NavRules beep is an optional method of indicating an incorrect choice.

Display Message on Incorrect Choice

When this check box is selected, NavRules will display the following message when an incorrect choice is selected during a quiz:
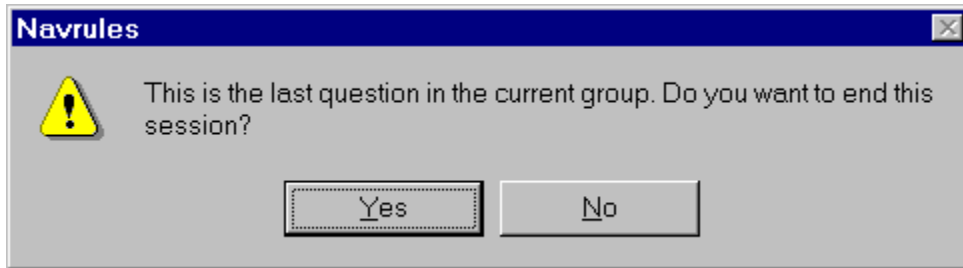

When an incorrect choice is made during a quiz, the text of the selected choice will always turn red.   The message that NavRules displays is an optional method of indicating an incorrect choice.

Automatically Play Sounds

Select this option to have NavRules automatically play sound signals when sound questions are displayed.   If this option is not selected then no sounds will be played until the **Play Sound** button on the toolbar is pressed.

Warn When Last Question is Reached

When this check box is selected, NavRules will display the following message when the last question has been reached:

This option allows you to backtrack and review questions, or ensure all questions have been answered before ending a quiz.   If this option is not checked then NavRules will return immediately to the main screen after the last question has been reached.

Top of Window

Shows the toolbar at the top of the NavRules window, immediately below the menu bar.

Bottom of Window

Shows the toolbar at the bottom of the NavRules window.

Hide Toolbar

Hides the toolbar.   The toolbar choices can still be accessed using the keyboard by pressing the characters underlined on the toolbar buttons.

OK

After all options have been selected, click on the **OK** button to permanently save the changes.   The changes will take effect immediately.

Cancel

Click on the **Cancel** button to abort any changes and return immediately to the main program.

Light Patterns - Learning and Quizzes

Light patterns in NavRules are displayed differently than sound signals and dayshapes. Light patterns are displayed twice, once showing only the lights, and once showing a silhouette of the vessel or object as well as the lights.   When selecting to either learn or quiz light patterns, the following window will appear, allowing for various options to be selected. Click on an option with the mouse for a detailed description:

When learning light patterns, the orientation of the vessel will be displayed immediately below the displayed lights.   Below this the description of the current rule will be shown (see Learning vs. Quizzes for details).   When the rule is first displayed only the lights will be shown.   Clicking on the **Next** button will cause the silhouette of the vessel/object to be shown as well.   Clicking the **Next** button again will continue on to the next rule.

A quiz operates in a similar method.   At first only the lights are shown, and four possible descriptions of the rule are listed.   Once the correct rule is selected, a choice of viewing angles (if appropriate) is listed.   Selecting the correct viewing angle (starboard, port, bow, stern) will cause   the silhouette of the vessel/object to be shown.   If a viewing angle is not appropriate for the rule then the silhouette is immediately shown and the viewing angle is not asked.   At any point, the   **Next** or **Previous** buttons will take you to another question.

Sound Signals - Learning and Quizzes

Sound signals are divided into Inland and International Rules.   When choosing to learn sound signals or run a sound signal quiz, the following window will allow you to choose which signals to use.   Click on an option for more detailed information:

When both learning and running a sound quiz, a new button will appear on the NavRules toolbar.   This new button, **Play Sound**, provides a method of replaying a sound signal. Clicking on the button with the mouse or pressing the **L** or **F2** key on the keyboard will cause the entire sound signal to be replayed in full.

Sound signals are displayed very similarly whether being learned or quizzed.   Depending on the sound signal, either a vessel silhouette or a phrase describing the current visibility conditions will be displayed.   The sound signal will then be played.   When learning sound signals a description of the rule will appear at the bottom of the screen.   Clicking on the **Next** or **Previous** buttons will cause the next rule to be played. (see Learning vs. Quizzes for details).   When performing a quiz a list of possible choices will appear.

Basic Light Patterns

Select this option to view basic light patterns.   Basic lights include those displayed by common power, sail, and row boats.   At least one of the **Light Patterns** options must be selected.

Advanced Light Patterns

Select this option to view advanced light patterns.   Advanced lights include those displayed by tug boats, barges, unusual vessels such as submarines, and all other not covered by the basic light patterns.   At least one of the **Light Patterns** options must be selected.

Inland   Rules

Select this option to display/play rules covered by the Inland Rules.   See 72 COLREGS for a description of Inland and International Rules.   At least one of the **Rules** options must be selected.

International Rules

Select this option to display/play rules covered by the International Rules.   See 72 COLREGS for a description of Inland and International Rules.   At least one of the **Rules** options must be selected.

Sequential Order

Select this option to proceed through the selected rules in sequential order.   The order of the rules is essentially arbitrary, with the basic and more common rules coming first.

Random Order

Select this option to proceed through the selected rules in a random order.   All rules will be scrambled in a thoroughly random order before starting.
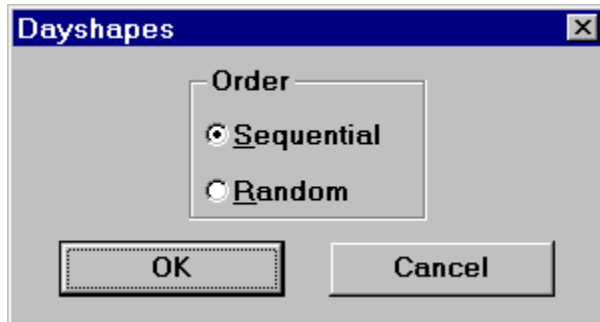
OK

Once the above options have been selected, click on **OK** to begin learning the rules or start the quiz.

Cancel

Click on the **Cancel** button to abort the quiz or learning of rules that has been selected. NavRules will return back to its previous state.

Dayshapes - Learning and Quizzes

Most dayshapes are identical for both Inland and International Rules.   As a result, NavRules only allows you to select a sequential or random order when viewing dayshapes.   The following window will be displayed when dayshapes are selected.   Click on an option for more detailed information:

Dayshapes are the simplest set of rules for NavRules to display.   When learning the rules, a silhouette of the vessel with the appropriate dayshape is shown.   A description of the dayshape is displayed below the image. (see Learning vs. Quizzes for details).   Clicking on the **Next** or **Previous** buttons will continue on to another dayshape.   For a dayshape quiz, the silhouette will be displayed with four possible choices for the dayshape.

Learning vs. Quizzes

The behavior of NavRules varies slightly when learning a set of rules and taking a quiz. When learning a set of rules, each rule is displayed and/or played over the speakers one rule at a time.   A description of the correct rule will be displayed at the bottom of the window. In some situations more than one description will be displayed.   For example, a single white light may be a vessel under 50 meters at anchor, a stern view of a power driven vessel, or a vessel propelled by oars.   When a single white light is displayed, all three of these descriptions are displayed.   Simply click on the **Next** or **Previous** buttons with the mouse or press **N** or **P** on the keyboard to view the next or previous rule.   If the rule is a sound signal the sound can be replayed by clicking on **Play Sound** or pressing **L** or **F2** on the keyboard.

When taking a quiz, each rule is displayed and/or played over the speaker(s) one at a time. Four possible choices will be displayed for the current rule.   Simply click on the button associated with the correct choice, or press the letter **A**, **B**,**C**, or **D** on the keyboard.   If an incorrect choice is selected the text of that choice will turn red.   Depending on the selected options, incorrect choices may also cause the computer to beep and/or display a message indicating the choice was incorrect.   Once the correct choice has been selected the display is changed to show only the correct answer.   To continue on to another question click on the **Next** or **Previous** buttons with the mouse or press **N** or **P** on the keyboard.

See Also
Light Patterns - Learning and Quizzes
Sound Signals - Learning and Quizzes
Dayshapes - Learning and Quizzes

About the Author

The author of NavRules is an instructor and crew member in the <u>United States Coast Guard Auxiliary</u>, Flotilla 1, Division 5, 1st Northern Region (5-1 1NR), actively teaching boating courses in the greater Boston area.   He is also a professional software engineer with over five years experience in programming Microsoft Windows.

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                 Winchester, MA 01890

Comments

Any comments, suggestions, bug reports, etc. will be gladly received if sent to one of the above addresses.

United States Coast Guard Auxiliary

In 1939, Title 14, USC was adopted as Public Law by Congress authorizing the United States Coast Guard to activate a non-military Coast Guard reserve.   This reserve was a civilian component of the Coast Guard providing support in promoting small boat safety.

In 1941 the Coast Guard Reserve was retitled by Congress to form the Coast Guard Auxiliary.   The Coast Guard Auxiliary is a non-military civilian organization that functions under the direction of the Commandant of the Coast Guard.   There are several fundamental purposes to the Coast Guard Auxiliary which are stated as follows by the Act of Congress that established the organization:

> To promote safety and effect rescues on and over the high seas and on the navigable waters.
>
> To promote efficiency in the operation of motorboats and yachts.
>
> To foster a wider knowledge of, and better compliance with, the laws, rules, and regulations governing the operation of motorboats and yachts.
>
> To facilitate other operations of the Coast Guard.

In carrying out these purposes, the Coast Guard Auxiliary has four basic programs, or cornerstones.   The first cornerstone, public education, involves teaching various classes from water safety to advanced navigation.   The next cornerstone involves vessel examinations, where Auxiliarists are trained to examine vessels for all legal and safety requirements.   These vessel examinations are entirely voluntary and private between the examiner and vessel owner - no information regarding the examination is forwarded to any authorities.   All boat owners are strongly encouraged to have their boats examined by qualified examiners.   The next cornerstone is operations, which encompasses all activities on, and above, the water.   Safety patrols, Search and Rescue operations, airplane patrols, regatta and fireworks patrols are all examples of operations that the Coast Guard Auxiliary are involved in.   The Coast Guard Auxiliary works very closely with the Coast Guard in the field of operations.   The last cornerstone is fellowship.   Auxiliarists not only work together, but also enjoy many social activities together as well.

To find out more about the Coast Guard Auxiliary contact your local Coast Guard or Boating Safety office.   Many marinas, marine stores and yacht clubs also have information on contacting and joining the Coast Guard Auxiliary.

Registration Information

CompuServe users can register NavRules on-line.   Just **GO SWREG**.

Select **Print Topic** from the **File** menu to print out the below registration form, or select **Copy** from the **Edit** menu to copy the registration form to a word processor.   Registration entitles you to a copy of the latest version of NavRules and notification of future updates.

NavRules Registration

```
NavRules version 2.1 (c)

Name:           _____

Address:        _____Apt. # _____

City:           _____

State/Prov: _____Zip_____Country_____

Compuserve Address: _____

Internet Address:   _____

Are you a member of the Coast Guard, Coast Guard Auxiliary, or
Coast Guard Reserve?  If so, list flotilla, station, etc.:

_____


Comments:

_____

_____

_____

_____

_____

Disk format: _____  3.5          _____  5.25

Be sure to enclose $20 in US funds.

Send to:    Bruce Pennypacker
            18 Hancock Street
            Winchester, MA 01890
```

Program History

15 May 1994 - Version 1.1
Initial Release

6 June 1994 - Version 1.2
- Minor internal modifications
- Updated readme file
- Fixed minor problems in installation program

6 August 1994 - Version 2.0
- Added full online help, including text of all rules
- Added ability to view/quiz all rules at once
- Added   ability to review incorrect choices after a quiz
- Incorporated new installation program

22 August 1994 - Version 2.01
- Fixed minor problem with focus when using keyboard

17 September 1994 - Version 2.02
- Added missing optional light pattern for sailboats

5 September 1995 - Version 2.1
- Vastly improved user interface
- Added support for saving and loading quizzes
- Redesigned help files
- Added NavView program
- Tested under Windows 3.x, Windows 95, and Windows NT