

ProCD Audio Player Help

You can use ProCD to play your discs as well as maintain your complete audio collection (including other media types, such as DAT, cassette or LP).

Before ProCD can play discs or you can use the database you must first install ProCD (if you haven't already done so) and if you intend to use the CD Audio Player then you must also use the Windows Control Panel to install and configure the appropriate CD Audio sound hardware and device driver. If you are not sure if the devices or programs are properly installed then [Installing ProCD and \[MCI\]CDAudio driver](#) will explain the process.

Using ProCD Audio Player

[What is ProCD?](#)

[How to use ProCD](#)

[Troubleshooting and Known Problems](#)

Using the Audio Database

[What is a database?](#)

[Using and Creating the Audio Database](#)

[File Menu](#)

[Edit Menu](#)

[View Menu](#)

Program Information and Registration

[Registration Information](#)

[Credits](#)

[UNINSTALLING PROCD](#)

What is ProCD?

ProCD is a multi-purpose Windows utility designed to play and catalog your audio CD collection. With ProCD you can tell the CD to play only those tracks you like, ignoring those you never want to hear again and play them in order or shuffled.

ProCD utilizes an MPC-compatible CD-ROM drive but is not needed if you only want to catalog your audio collection or if you don't want to use your CD-ROM drive for audio playback. The Audio Collection Database lets you catalog your collection, print insert sheets, search for specific songs and more.

Features of ProCD:

Fully programmable play ordering including auto-shuffling of disc tracks playing only those tracks you select. Continuous play mode allows either whole discs or selected tracks to be continuously replayed and the autoplay feature automatically starts audio playback as soon as a disc is inserted into your CD-ROM drive.

"Smart" disc cataloging system. ProCD will automatically remember the track selections for EACH DISC and then adds the discs to your audio database, allowing you to edit the tracks, playback, and other information. Once you program a disc you never have to program it again.

Complete database for managing your complete audio library of all media types, not just CDs. You can search for specific artists or songs anywhere in the database, print media insert pages, keep notes for individual database entries and more.

Best of all, ProCD registration is only \$15.

System Requirements

To use the Audio Player feature of ProCD Audio Player running you **must** be using:

- An MPC-compliant CD-ROM drive running MSCDEX 2.2 or higher
- Microsoft Windows 3.1
- An 80386 or higher processor with 2 megabytes of RAM (4 megabytes is preferred).
- Windows operating in standard or enhanced mode
- a mouse or other pointing device

It may also be possible to run ProCD under Windows 3.0 with the MultiMedia Extensions or using a 80286 although neither installation is recommended due to potential incompatibilities.

How to use ProCD

To load ProCD AUDIO CD PLAYER, start Windows then double click on the ProCD PLAYER icon to start it. If your version is unregistered you will get a nag message box asking for you to register. Click on OK to go on.

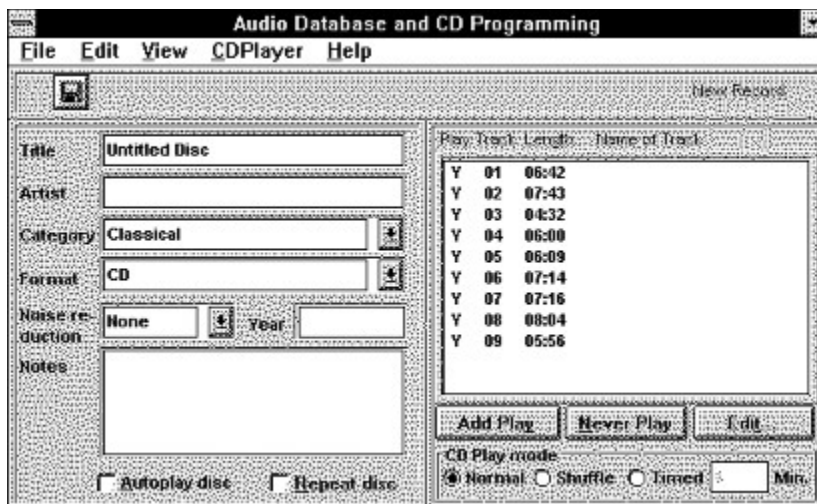


Click the part of the ProCD Player you want to know more about or scroll down using the vertical scroll bar for a tutorial on getting started.

How to start playing discs

To use the player, do the following:

- 1) Insert a disc into your CD drive like you normally would, use the EJECT button if necessary to open the drive door. Once this is done, close the drive door and then the disc should automatically be sensed in the drive.
- 2) Your CD-ROM in-use light should come on for a second or so as ProCD reads a small section from the disc, getting track information and times of tracks. At this time ProCD will also look through the existing database of CD's, and if the CD is known it will jump automatically to whatever play mode you have previously selected for the disc.
- 3) If the disc is not in the database, you will see a window asking for information and the play mode and play list of the disc. The window should look as follows (note the track information for your CD won't be the same as the one in this example):



- 4) You can now enter the information about the disc, for example the title, Artist, year or any notes you might have. The category automatically defaults to CLASSICAL and format defaults to CD but if you

would like to change either of those you can by just typing a new category name or format name in the category or format boxes.

5) If you would like this disc to automatically play as soon as it is placed in the CD drive then click using the mouse on the AUTOPLAY DISC at the bottom of the window. Likewise, if you would like the disc to keep repeating once the playback has completed, click REPEAT DISC.

6) The track list consists of a the playback mode (either a Y for YES to play or N if you do not want a track to be played), the track number, the length of the track, and the name of the track. In the example above all the names of the tracks are blank.

To remove a track from the playlist, click on the track number (or if you can't see the track on screen then scroll through the list until you can see it). Once the track is highlighted click on NEVER PLAY, which will remove the track from the play list. Once a track has been removed it will show an "N" in the first column of the list.

To add a track from the playlist is the same as removing one, click on the track you want to add then click on the ADD PLAY button.

Note: When a track is removed from the play list it will NEVER be played while you are using the CD Player disc in PROGRAMMED mode (see MENU for more information on PROGRAMMED mode).

7) If you would like to edit the specific track names, first select a track by clicking on it then either press ENTER or click on EDIT TRACK. When you are in the Track Edit window, you can enter a name of the track, whether it should be on the play list, or if it should be continually repeated. TIME on this form is optional and is NOT USED by the CD Audio Player. Select OK if all the information on this form is correct or CANCEL if you don't want to change anything.

8) If all the record entry is complete, click on the disk panel button to save the record and add it to the database. As soon as you do this you will return to the CD Player.

9) If you want to test the disc programming, select MENU from the ProCD Audio Player then PROGRAMMED CONTROLS. The disc should, depending on how to programmed it, start playing.

10) Sit back and enjoy.

What the display is saying



The **Track** displays the current number of the track being played or selected.

Time meter is a percentage meter showing how much of the current track has passed

Time Played/Time Remaining will show (depending on the mode you use for the COUNTER) either display the time that has been passed (played) in the track or the time remaining. Time is in minutes and seconds.

Mode displays the current mode that the CD-ROM drive is in, in the example above the CD is currently in PLAY mode.

Installing ProCD and [MCI]CDAudio driver

1) If currently you are in Windows, open the Program Manager, select RUN... then enter the location of the INSTALL program for ProCD. If you are not sure, click on BROWSE and find it that way then, once it is found select RUN.

If not currently in windows, move to the current location of the ProCD Installation program then type from the DOS prompt

INSTALL

Windows should then start up and the INSTALLATION PROGRAM is run.

2) A window should now pop up and the install program will ask you where the files to be installed are located. If you are installing from a floppy disk, this would normally be A: or B:. Click on OK to continue.

3) The screen should now clear and display a window with ProCD Audio Player and Database Setup then another window asking you where you would like the files needed by ProCD to be stored. The default directory and drive is C:\PROCd.

4) Enter the drive and directory where you would like ProCD to be installed then click OK. The install program will start decompressing the files it needs onto your hard drive and adding program groups to Program Manager.

5) The program should now have been successfully installed. If you at any point got error messages then re-check the installation directory and make sure all the files listed in the FILES.TXT list are in the

6) To start the ProCD Player or ProCD Audio Database, double click with the mouse button on either of their icons. If you would like additional help, click on the ProCD Help icon.

7) If you are using the ProCD Audio Player with your CD-ROM drive and are not sure if the drivers required to support it are correctly installed then read INSTALLING [MCI]CDAUDIO DRIVER below.

Installing [MCI]CDAudio Driver

If you do not have a CD-ROM drive or do not intend to use the Audio Player module of ProCD then skip this section of the manual.

Also, ProCD requires that the MSCDEX driver is installed in your AUTOEXEC.BAT. If it isn't installed or if you are not sure how to install it then consult either your CD installation guide or the Microsoft DOS on-line help. Please note that older versions of MSCDEX will NOT operate with DOS 6.

1) To use the audio playback capabilities of ProCD you should first verify that the driver to allow audio playback from the CD-ROM drive is installed. To do this, open the WINDOWS CONTROL PANEL from the PROGRAM MANAGER by double clicking on its icon. You should then see a window resembling the one below:



2) Double Click with the mouse on the DRIVERS icon. With the list of drivers on the screen, look through the list for a driver called [MCI] CD Audio.



3) If you see this driver already installed (as it is in the above example) select **CANCEL** from the drivers dialog box and then exit the from the Control Panel.

If the MCI CD Audio driver was not listed as being installed then click **ADD...** then scroll through the list of drivers until you see the driver named [MCI] CDAudio. Select it with a single mouse click then click **OK**.

4) Windows should now ask for you to insert one of the Microsoft Windows 3.1 disks or a disk with the CDAudio driver on it. Insert the disk number it asks for, changing the default drive if needed. Your disk drives should light up as the file is being copied then Windows. If you have any problems consult your Windows 3.1 installation guide or your CD-ROM installation guide.

After Windows finishes it should display the message:



If this message doesn't appear or if the MCI driver still isn't listed in the drivers list then consult your CD-ROM drive installation manual or your Windows manuals.

6) If the setup was successful, you may have to restart Windows for the driver to be loaded. Just follow the on-screen prompts and restart if needed. If Windows doesn't need to restart then just Click on **OK** to continue then click **CLOSE** to return to the control panel, then close the control panel by double clicking on the close box or selecting **EXIT** from the **SETTINGS** menu.

Credits and Program Information

Copyright © 1993, Ted Forrisdahl
All Rights Reserved
September 1993, Release 0.0
Version 1.03C

This program was entirely written (well, sort of) using Visual Basic Pro for Windows 3.0 on an i486sx system running DOS 6.0 and Windows 3.1. Testing was performed using a Creative Labs Multimedia Upgrade Kit (SoundBlaster Pro) and Panasonic CD ROM drive and also with a Mitsumi CDROM drive.

InterMedia Designs would like to thank Lance Underwood for his invaluable input and testing of this program during its development. If you are a volunteer firefighter then check out his shareware application ***FIREFIGHTER FOR WINDOWS***, a personnel and equipment management tracking system. It is available on a variety of online services or from his bbs at 1 (604) 955-6145 (USR HST)

Registration Information

You can print this form by selecting PRINT from the file menu.

SHIP TO:
NAME _____

ADDRESS _____

CITY _____ STATE/PROV _____

POSTAL/ZIP _____ COUNTRY _____

Please also fill in the system survey, it will help us better support your system and design products specifically to your needs.

SYSTEM USED: (CIRCLE APPROPRIATE)

DISK TYPE 3.5" 5.25"

CPU: 386 486 386sx 486sx Intel AMD Cyrix

MHZ: 16 20 25 33 40 50 66 80

CD Interface: SBPro ProAudioSpectrum SCSI

Other _____

CD DRIVE: Creative Labs Sony NEC Mitsumi

Panasonic Other _____

Features of ProCD you would like to see in the next version: _____

Please fill in this form and send, along with \$15 (US residents please remit in US funds), to:

**Ted Forrisdahl
InterMedia Designs
P.O. Box 125
Celista, B.C.
V0E 1L0 CANADA**

A disk will be sent out with the newest version as soon as we get your order.

Thank you for registering!

Troubleshooting Tips and Known Problems

While testing this application we found several CD's with tracking information that caused some problems, for example track numbers wouldn't always update correctly or track time would be incorrect. (*Simon and Garfunkel's Greatest Hits* was one, for example.) The problem only exists with few CDs for brief moments (under 3 seconds) and only if the CD isn't being played.

Playback may also seem to skip. This could be caused by debris or a defect on the CD or a dirty laser pickup. If this occurs examine your disc for any noticeable scratches or lint or clean your CD drive with a CD cleaning kit. If the problem still persists then contact the manufacturer of your CD drive.

ProCD can be running at the same time as other multimedia applications that use the CDROM drive as well, for example the Microsoft Media Player. It is generally NOT RECOMMENDED that you do this though, since timeformat codes used by the Media Player are incompatible with ProCD, causing display errors in both programs. If possible then do not share the CD drive with any other application while using ProCD.

Previous Track



Previous Track will move to the previous track on the disc, or if already on the first track, will wrap around to the last track.

Next Track



Next Track moves to next track on the disc. If you are on the last track it will automatically move to the first track on the disc.

Fast Review



Fast rewind (or fast review), will move play 15 seconds backward from current play position.

Fast Forward



Fast Forward moves play position 15 seconds forward into track.

Play



Play the disc at the current position. Play may be pressed twice and acts as a toggle between pause and play. Above the play button is a red light which shows the disc is currently being played.

Pause



Pause playback will halt playback until you again press play. While disc is paused the red in-use light above the play button will blink.

Stop



Stop Playback is used to stop the disc. It does not reset the disc to the first track, instead only to the start of the track.

Eject



Eject the disc is used to stop the cd from being played and then (on appropriate CD drives) open the drive door and ejects the disc so it can be removed or replaced.

Mute



Mute turns off all sound output from the disc player. It is a "sticky" button, that is, it will remain in the on or off position until again clicked with the mouse.

Counter

The counter button acts as a toggle switch, telling the ProCD Player to either display the time left in a track or the elapsed time (default.)

Menu is a pop-up menu. From it you can select the following other menu options:

Help (F1) - Help gives help on what keys do what and what buttons on screen control certain actions.

Manual Control - Tells the Audio Player that you would like to control the playback of a disc. If you this option has a check mark beside it in the menu then this is the mode selected for playback.

Programmed Control - Will tell the Audio Player to follow the play list you have previously programmed for the disc that is in the CD-ROM drive. If you haven't programmed it then this command is ignored.

Jump to Track - Selecting Jump To Track will pop up a dialog that asks which track you would like to jump to. This command is only available in manual playback mode.

Always on top - Will keep the ProCD Audio Player always on top of whichever all other windows.

Program disc/Database - Switches you over to the database module, where you can re-program your current disc or edit selection or remove database entries.

About ProCD - Tells all about ProCD and the number of times you have used it. Really exciting stuff.

Exit - Closes the ProCD player and Database (if being used) and return back to Program Manager.

Minimize

Minimize will reduce the ProCD Audio Player to an icon, displaying the track and the time display (either time remaining or time elapsed). Minimizing ProCD also increases system performance.

What is a database?

A **database** is a collection of information. In its simplest form it is very similar to a card catalog or Rolodex, each card being a **record** (don't confuse this with the term also used for vinyl LPs) which when added with more records becomes the database. The Audio Database consists of a series of "cards", much like one of the catalogs mentioned above, except in an electronic form, each card in the database is actually a block of memory stored on your hard drive. When new records are added or deleted from the database it is in a similar manner to how a collection of index cards would be maintained, except only faster.

Within the database, each individual record consists of a number of "**fields**", sections of the record which are used to store specific things. For example in this database, we are using one field to hold the information on CD titles, another field to hold the name of the artist, and so on. This combination of all the individual fields that relate specifically to each other is what makes a record unique.

Using the Audio Database

The database is controlled by a series of buttons or menus, most accesable using the mouse and keyboard as well as having keyboard short cuts. Button-bar shortcuts are shown as the graphics images, in the center in text is the name of the menu which could also be used to access the particular option, and lastly the applicable shortcut key. Although most options are accessed by button bar or quick keys, not all can be. Those that cannot must be accessed using the pull-down menu.

Creating Database Records

A non-CD or CD (if not using CD-ROM drive) entry can be added to your database by the following:

1) Select the ProCD Audio Database. This can be done by double clicking from the PROGRAM MANAGER or if you are already using the ProCD Audio Player by selecting PROGRAM DISC/DATABASE... from the MENU button. DO NOT run the database from Program Manager if you are already using ProCD's Audio Player

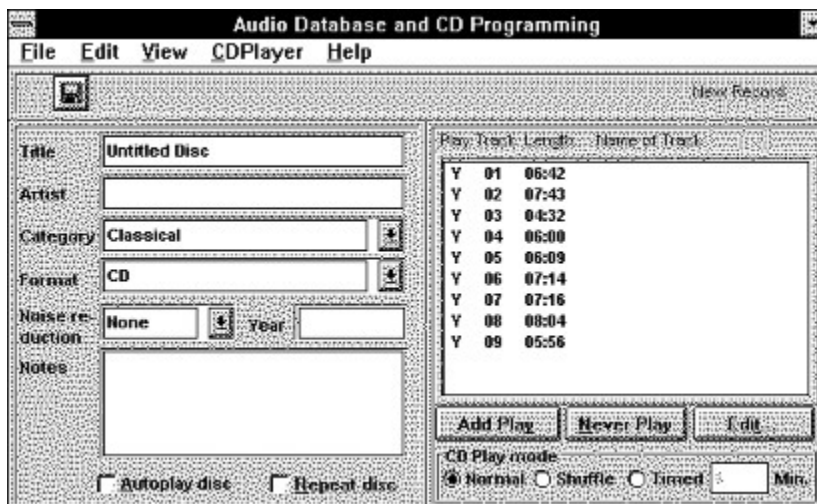
2) If a database does not already exist then ProCD Audio Database will ask you to start entering the information to store in the database. ProCD will ask you for the number of tracks (songs) that you would like to add for the first entry. Type a number from 1 to 30.

-or-

If a database already exists and you wish to create a new record, select FILE then NEW, or click on the NEW RECORD button (see below for more information on the panel buttons). ProCD will ask you for the number of tracks (songs) that you would like to add for the first entry. Type a number from 1 to 30.

Note: CD entires intended for playback cannot be created using this method. You must enter each disc manually into your CD-ROM drive and ProCD then will compute checksums based on the information on the disc.

3) Depending on the number of tracks you selected, you should see something like the screen below.



4) You can now enter the information about the disc, for example the title, Artist, year or any notes you might have. The category automatically defaults to CLASSICAL and format defaults to CD but if you would like to change either of those you can by just typing a new category name or format name in the category or format boxes.

Note: Autoplay and Repeat disc, as well as the CD Play Mode settings are all ignored for non-CD entries or if you are not using CD-ROM player.

5) The track list consists of a the playback mode (either a Y for YES to play or N if you do not want a track to be played, which is ignored if you are not using a CD-ROM drive), the track number, the length of the track, and the name of the track. In the example above all the names of the tracks are blank.

6) If you would like to edit the specific track names, first select a track by clicking on it then either press ENTER or click on EDIT TRACK. When you are in the Track Edit window, you can enter a name of the track, whether it should be on the play list, or if it should be continually repeated (ignored for non CD-ROM users). Select OK if all the information on this form is correct or CANCEL if you don't want to change anything.

7) If all the record entry is complete, click on the disk panel button or EDIT then SAVE to save the record and add it to the database. As soon as you do this you will return to the CD Player.

9) Entry is now in the database and may be edited or deleted as you want.

FILE MENU

New (Ctrl-N)

This button is used to create new record for addition to the database. Once this option is selected you will be asked the number of tracks you wish to add to the media, a which can range from 1 to 30. Type the number of tracks you want then select OK from the dialog box then you will see a blank entry on the screen. Once you are finished entering information then save the information by clicking on the SAVE button. Once started though you must save the record before you can continue onto other options. If you decide you didn't want this record, save it first then delete it to cancel adding it to the database.

If you are using the Audio Player then use this option for NON-CD titles only unless you do not intend to play them. CDs for use by the Audio Player are not recognized based on the programming information that you would enter but by a checksum that is obtained from the disc itself. If you want to add a new disc to the database then select EJECT from the CD Audio Player, then insert a new CD into your drive. If ProCD has not already cataloged the title it will prompt you and tell you that it is a new disc then will let you program it.

If you are already programming a disc and insert a new CD into the drive before saving, ProCD will automatically, as soon as the first record has been saved to the database, create a new entry for the new, not yet cataloged CD.

Save (Ctrl-S)

Select this option to save the entry you are editing to the database. You can either use this option to save a new record to the database or to save (overwrite) an existing one.

If while you are editing a new or existing record then insert a CD in your CD-ROM drive, ProCD will recognize that a non-cataloged disc has been placed in the drive. ProCD will automatically, as soon as the record being edited has been saved to the database, create a new entry for the new CD. You can do this only one disc at a time, that is you cannot insert and eject a number of discs since ProCD will only remember the information it takes from the last disc. If you intend to catalog a number of discs it is recommended that you save record changes first THEN insert a new disc into your CD-ROM drive.

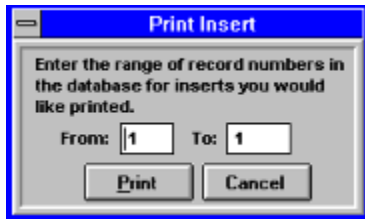
Delete (Ctrl-D)

Delete will permanently remove the record being displayed from the database. To select the record you wish to delete, use the previous or next keys, FIND, or the JUMP command and then select DELETE. You will be asked before a record is deleted if you are sure you want to delete it from the database.

Print Inserts... (Ctrl-P)

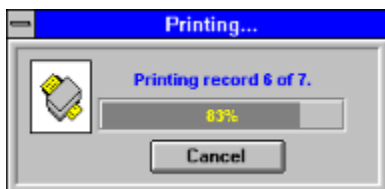
This option prints insert pages (pages that list information about track titles and other information) for a selected range of records that you specify. When prompted, enter the starting record and end record. If you want only a single page to be printed out then use the same number for starting and end records.

An example of the dialog box is below:



Once you've selected what records you would like to print (in the example given above the program would print an insert page on the first record in the database only), you would then select PRINT to print the page(s) or Cancel to abort.

If you select to print, another dialog, like the one below, will be shown. At any point if you decide to cancel printing you can by clicking the CANCEL button. This aborts the printing and stops the printing once the current insert sheet has been completed.



EDIT MENU

Undo All (Ctrl-Z)

Will undo ALL changes to the complete record since it was created or last saved. Once you UNDO you cannot revert back to the previous condition.

Cut (Ctrl-X)

Cut is used to cut sections of highlighted text from the editing screen to the clipboard. It will not copy tracks from the track list, however.

Copy (Ctrl-C)

Copy will take the currently highlighted text and copy it to the clipboard for future use by the paste command. It will not, however, copy complete tracks from the track list.

Paste (Ctrl-V)

Paste takes the contents of the copy buffer (if it is text) then places it in the currently focused text field (the one with the blinking insertion bar cursor). If nothing is in the clipboard or the clipboard contains non-text this option is ignored.

Delete (Del)

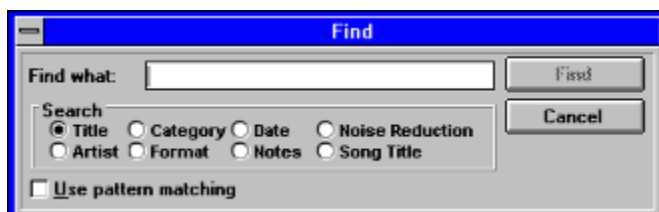
Delete can be used to delete either single characters from the screen or selections of text that are highlighted. It acts much as the way CUT does except it does not move the text to the clipboard.



Find (Ctrl-F)

The Find allows you to search for a section of text that might appear in a song title, artist's name, or media format type. You can search for either specific keywords or use a search pattern when you are unsure of the exact contents of a field or when you would like to find all occurrences that match a certain condition, for example you might want to find all the CD titles that start with the letter "A".

To search for something in the database, select FIND from the EDIT menu then. The following dialog will pop up on the screen.



To search for a specific item, type the text as it might appear in your database, upper and lower case characters are ignored so don't worry about capitalization of words.

For example, if you wanted to search for an artist by the name of "Jones" you would type "jones" in the text box then select the ARTIST as the field you wish to search in then click "FIND". Find will then look through the database and find any incidence of Jones. If you have multiple Jones records you want to search for you can press F3 to repeat the last search or select from the EDIT menu SEARCH NEXT.

For help on using Pattern Matching, click [Pattern Matching](#)

Find Next (F3)

The FIND NEXT option will repeat the last used find command (see FIND for more information on how to use find.) If the item you are searching for is not found then ProCD Audio Database will respond with a dialog box, telling you that it has completed the search.

FIND NEXT will not find multiple incidences of the same word within a field, for example you cannot specify to search for "The" in an CD titled "The Night Of The Cold Weather", since FIND searches only for the first incidence of an item within a field.

VIEW

Previous Record

Previous Record will move you from your current record number in the file to the record before it in the database. If you are already on the first record then previous record will "wrap around" to the last record in the file.

Next Record

Next Record will move you from your current record number in the database to the next position in the database. If you are already at the last position in the database then you will be moved to the first position in the database.

still another card

these two things are not linked to anything else and are for future use, in case you wonder

still another card
more and more cards!

Un-Installing ProCD

If you really don't want to use ProCD anymore and need to uninstall it, go to the File Manager then move to the directory where ProCD and its database and associated files are stored. Highlight (by clicking once on it with the mouse) the directory. Make sure that the ProCD files are the ONLY files in the directory before you delete. If they are all related to ProCD, delete them by pressing the DELETE key. Windows will prompt you and then when asked specify that you wish to confirm deleting.

Next, move to the directory where windows is being stored then find the file named PROCD.INI. Highlight it by clicking on it with the mouse then press the DELETE key on your keyboard.

Now load Program Manager and select the icons associated with ProCD (they should be in their own group). Select them individually and press DELETE to delete each one, confirming that you really want to delete them from the group. Once all the icons are gone, press DELETE again and Program Manager should ask you if you want to delete the group. Answer yes to the question and ProCD should now be completely removed from your computer system.

more and more cards!

Pattern Matching

How to Use Pattern Matching

Built-in pattern matching provides a versatile tool for finding non-specific or semi-specific things within the database. The pattern-matching features allow you to use wild card characters, such as those recognized by DOS, to match text patterns. The wild card characters and what they match are shown in the following table:

Character(s) in pattern	Matches in expression
?	Any single character
*	Zero or more characters
#	Any single digit (0-9)
[character list]	Any single character in character list
[!character list]	Any single character not in character list

Please note that pattern matching works when finding a pattern that matches the ENTIRE CONTENTS OF THE SEARCH FIELD, i.e. if you were looking for a song titled "The 59th Street Bridge Song" you could use "*Bridge Song" but not "* Bridge" since the song title does not end with "Bridge". If you are wanting to search for a specific incidence of a known word it is suggested you do not use pattern matching and instead just type the word you are looking for.

Also, pattern matching cannot be used on the DATE field. If you need to do that type of matching it is recommended you search for a specific year at a time and do not use pattern matching.

A group of one or more characters (character list) enclosed in brackets ([]) can be used to match any single character in expression and can include almost any character, including digits. The special characters left bracket ([), question mark (?), number sign (#), and asterisk (*) can be used to match themselves directly only by enclosing them in brackets. The right bracket (]) cannot be used within a group to match itself, but it can be used outside a group as an individual character.

In addition to a simple list of characters enclosed in brackets, character list can specify a range of characters by using a hyphen (-) to separate the upper and lower bounds of the range. For example, [A-Z] in pattern results in a match if the corresponding character position in expression contains any of the uppercase letters in the range A through Z. Multiple ranges are included within the brackets without any delimiting. For example, [a-zA-Z0-9] matches any alphanumeric character.

Other rules for pattern matching include:

An exclamation point (!) at the beginning of character list means that a match is made if any character except the ones in character list are found in expression. When used outside brackets, the exclamation point matches itself.

The hyphen (-) can appear either at the beginning (after an exclamation mark if one is used) or at the end of character list to match itself. In any other location, the hyphen is used to identify a range of characters.

When a range of characters is specified, they must appear in ascending sort order (from lowest to highest). [A-Z] is a valid pattern, but [Z-A] is not.

Please note that the character sequence [] is ignored.

In some non-English languages, there are special characters in the alphabet that actually represent two separate characters. For example, several languages use the character "æ" to represent the characters "a" and "e" when they appear together. Pattern matching sees the single special character and the two individual characters are equivalent.

The following table illustrates how you can use pattern matching to search for specific patterns within fields.

Kind of Matching	Search Pattern	Will find	Won't find
Multiple characters	a*a	"Aroma", "alfalfa", "abba"	"Album", "ABC"
Special character	a[*]a	"a*a"	"aaa"
Multiple characters	ab*	"abcdefg", "abyss"	"cab", "aab"
Single character	r?n	"ran", "run", "ron"	"ruin"
Single digit	a#a	"a0a", "a1a", "a2a"	"aaa", "a10a"
Range of characters	[a-z]	"f", "p", "j"	"2", "&"
Outside a range	[!a-z]	"9", "&", "%"	"b", "a"
Not a digit	[!0-9]	"A", "a", "&", "~"	"0", "1", "9"
Combined	a[!b-m]#	"An9", "az0", "a99"	"abc", "aj0"
Single special to double	[Æ]	"ae", "AE", "Æ"	"Ä", "A"

