

PianoDisc[®]

PDS-128 Plus *Silent Drive* User's Guide



M
MUSIC EXPANSION

Quiet Time

Piano CD

SP
SYMPHONY PRO

TFTRecord

Thank You

We appreciate your purchase of the PianoDisc system. PianoDisc elegantly integrates advanced player piano technology and modern music production capabilities, and will provide you with many years of enjoyment. In order to utilize the system to its fullest extent, please read and understand all the information contained in this user's guide.

For your future reference, please copy the serial number of your PDS-128Plus below, and fill in the purchase date and the name and telephone number of your PianoDisc dealer.

SERIAL NUMBER: _____

PURCHASE DATE: _____

DEALER NAME: _____

DEALER PHONE NUMBER: _____

PianoDisc® PDS-128Plus
User's Guide (September 1999)
Distributed with PDS-128Plus, featuring OS Version 4
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Other patents pending.

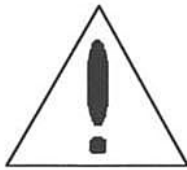
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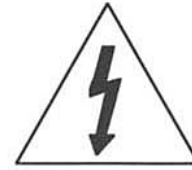
IMPORTANT: READ THIS FIRST!

Safety Instructions

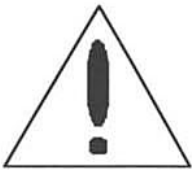
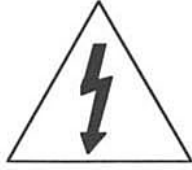
SPECIAL MARKINGS



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



IMPORTANT NOTICE: Complete Safety of operation is assured by PianoDisc when system is properly installed and operated in its normal fashion. Do not attempt, or commission others, to modify any portion of the PianoDisc system unless specifically authorized by PianoDisc.

IMPORTANT SAFETY AND INSTALLATION INSTRUCTIONS

INFORMATION RELATING TO POSSIBLE PERSONAL INJURY, ELECTRIC SHOCK AND FIRE HAZARD POSSIBILITIES HAS BEEN INCLUDED IN THIS LIST.

WARNING - When using electrical products, basic precautions should always be followed, including the following:

1. Read all instructions before using the product.
2. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
3. Do not open the cover under any circumstances.
4. Power is supplied through a polarized line plug (one way blade). Connect only to an outlet designed for a polarized plug.
5. Keep the power cord away from other objects. Make sure that the cord is not twisted, placed in any lane of traffic, or trapped under the piano.
6. Locate your PianoDisc unit away from direct sunlight, water or moisture, or hot or cold air currents.
7. If the PianoDisc unit is to remain unused for an extended period of time, its power supply should be disconnected.
8. If repair is necessary, refer only to authorized service personnel.
9. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
10. The product should be located so that its location or position does not interfere with its proper ventilation.
11. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
12. The product should be serviced by qualified service personnel when:
 - a) The power supply cord or the plug has been damaged; or
 - b) Objects have fallen, or liquid has been spilled onto the product; or
 - c) The product has been exposed to rain; or
 - d) The product does not appear to operate normally or exhibits a marked change in performance; or
 - e) The product has been dropped, or enclosure damaged.

SAVE THESE INSTRUCTIONS

FCC Information

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

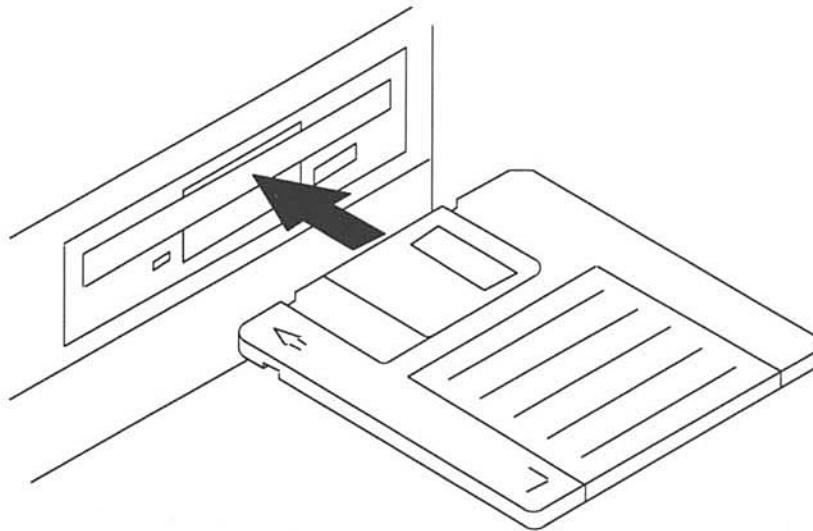
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Caring For Your PianoDisc Music Library Diskettes

By following these simple guidelines, your collection of PianoDisc Music Library diskettes should provide a lifetime of musical enjoyment:

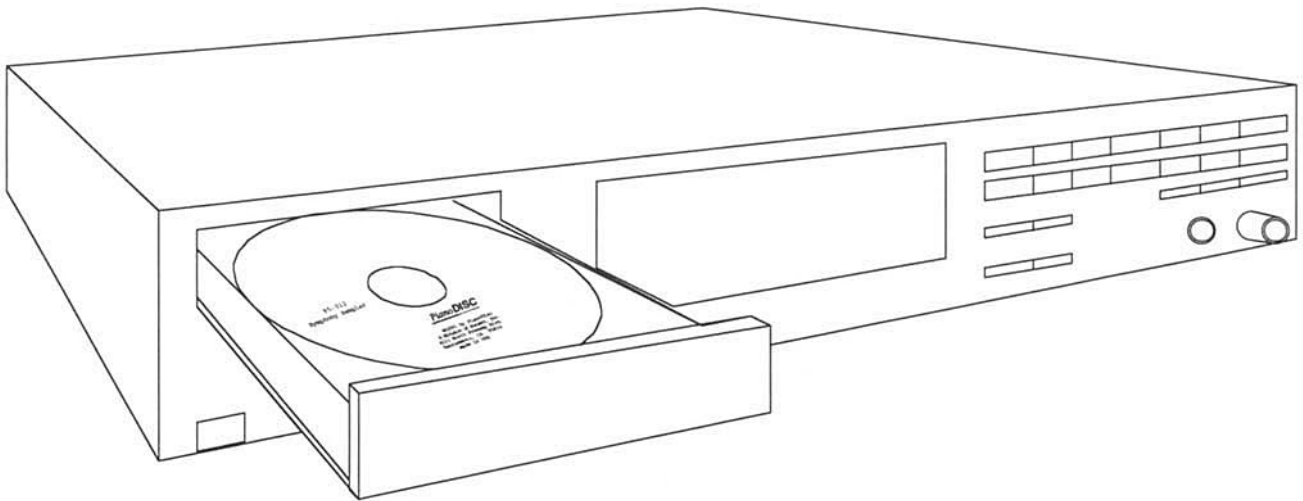
- Do not eject the diskette when the disk drive light is on or during playback. (The disk drive light is the green or amber light directly below the disk drive opening.)
- Avoid turning the main power on and off while playing a diskette. First stop playback, then turn off the power.
- Store your diskettes in a cool, dry place, away from direct sunlight, heat, cold, or any moisture.
- Keep diskettes in their protective cases when not in use to protect them from dust and mishandling.
- Do not subject your diskettes to violent vibrations or shocks; do not try to take them apart or tamper with the casings.
- Keep your diskettes away from electrical appliances, magnets, or anything else capable of producing a magnetic field.
- Insert your diskettes into the PDS-128Plus as shown below, with the label side up.



Caring For Your PianoDisc Compact Discs (CDs)

By following these simple guidelines, your collection of PianoDisc Compact Discs (CDs) should provide a lifetime of musical enjoyment:

- Keep your compact discs in their protective case when not in use to protect them from dust and mishandling.
- Store your compact discs in a cool, dry place, away from direct sunlight, heat, cold, or any moisture.
- Review care and handling instructions in your compact disc player user's manual for additional instructions.
- Place the compact disc in the tray with the label facing up as shown below.



NOTE:

Both portable and full size CD players can be used with the PDS-128Plus System. Unfortunately, the quality of the CD player will affect the performance of the player system. Make every effort to ensure there are good batteries in the portable CD player. It is highly recommended that an AC adapter is used.

Full size CD players include advanced features like digital filtering or special DSP effects. Disable these features or similar ones when playing PianoDisc PianoCDs.

For best results, use a *PianoCD* unit, which has an integrated CD player.



General Operating Notes

- When the control unit is turned off from the front panel, the unit will continue to consume power (approximately 1.5 W) and generate a minute amount of heat. Unplugging the piano from the power source will completely shut down the unit unless the control unit is being powered by its own power supply.
- Make sure the control unit has adequate ventilation underneath, behind, and on top. Do not place the PDS-128Plus on a cushioned surface such as a pillow or towel.
- The PianoDisc PDS-128Plus is used with an acoustic piano and a mechanical drive system—it cannot be manipulated like a home stereo. Changes in volume and tempo may alter the playback in ways you may not have anticipated.
- The PDS-128Plus can be purchased with an internal symphony module that provides additional sounds and instruments that can play along with your piano. This module is optional.

The features and operations of the PDS-128Plus, with the internal module, are identical to the PDS-128Plus without the internal module, except for a few functions. Users of the PDS-128Plus without the module should ignore any information in this guide regarding the internal symphony module.

- The PDS-128Plus can also be purchased with—or upgraded to—the Music expansion option, offering many hours of uninterrupted, user-customizable playback.

Users of the PDS-128Plus without *MX* should ignore any information* in this guide pertaining to its unique capacity (focused in the “*MX (M*usic *e*Xpansion) Option” Section).

Alternately, see the “*MX (M*usic *e*Xpansion) Section” to consider compelling reasons to upgrade to *MX*.

*For instance, some references to the *SOURCE* options throughout this User Guide will mention *MX*. If this option is available to you, it will display on-screen. If not, it is hidden from view to keep menu navigation clear.

Table of Contents

Section I Description of PianoDisc Equipment

PDS-128Plus Front Panel	2
PDS-128Plus Rear Panel	4
PDS-128Plus Side Panel	6
Description of Features and Controls	7

Section II *Quick-Start* Guide to Playing Music (from Diskette, CD, or *MX*) 9

Section III Diskette Mode

The Mode Pages	14
Tour of the Menus	15
TEMPO	15
TRANPOSE	15
BALANCE	16
SYNC	16
PIANO	17
SPLIT	17
ACCOMPANIMENT	19
EDUCATION	21
DISK REPEAT	22
SONG REPEAT	22
SHUFFLE	23
GLOBAL REPEAT	23
SCOPE	25
MUTE	25
MIDI IN	26
MIDI OUT	26
REDIRECT	27
PASSTHROUGH	28
SOURCE	28
DEFAULT	29
ERASE	29
NAME	30
FREE	31
FORMAT	31
Front Panel Functions	32
PRODUCER	32
RECORD	33

Section IV CD Mode

The Mode Pages	38
SYNC	39
BALANCE	39
GLOBAL REPEAT	40
TRANSPOSE	41
MUTE	42
PIANO	42
SOURCE	42
DEFAULT	43
TREBLE	43
BASS	43
BYPASS	44
DEFEAT	44

Section V MX (Music eXpansion) Option

The Mode Pages	49
GLOBAL REPEAT	50
LIBRARY	51
NAME	51
FILE COPY	52
FILE ERASE	52
MASK	53
REPEAT OPTIONS	53
SHUFFLE	53
PRODUCER	53

Section VI Remote Control

Remote Control Description	58
Direct Song Access	61
Remote Control Type	61

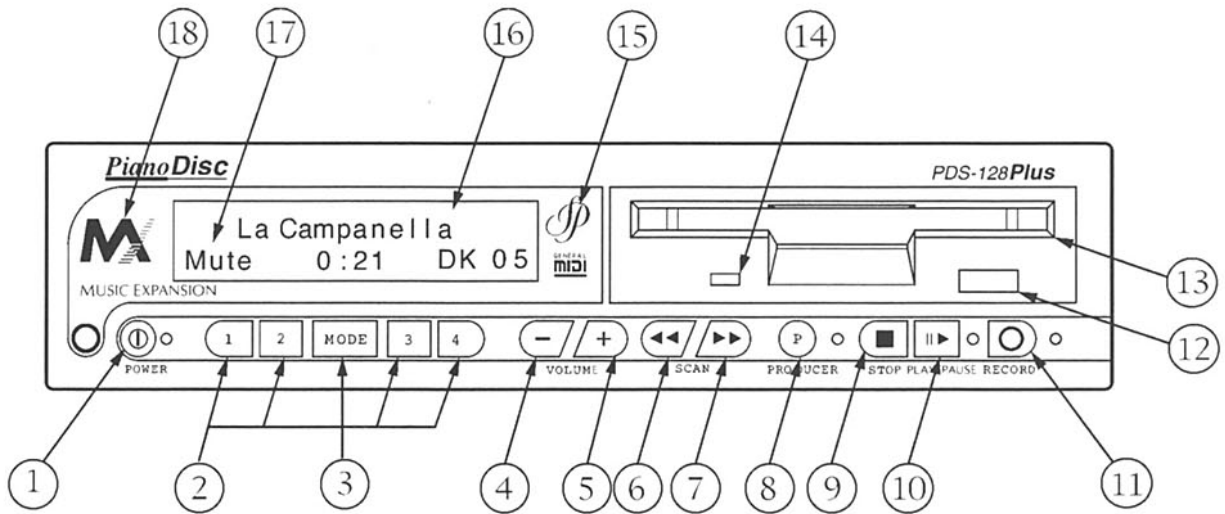
Section VII Appendices

A. Accompaniment Mode Instrument List	64
B. System Exclusive Messages (SYSEX)	65
C. Music Software Formats	68
D. Using Educational Software	69
E. CPU Interface	71
F. Connecting the PDS-128Plus to a Stereo or Home Entertainment System	72
G. Connecting the PDS-128Plus to a Computer	73
H. Software Upgrade Information	74
I. Troubleshooting	75
J. MIDI Implementation Chart	77
K. MX Song List (Alphabetical within Library)	78

Section I

Description of PianoDisc Equipment

PDS-128Plus Front Panel

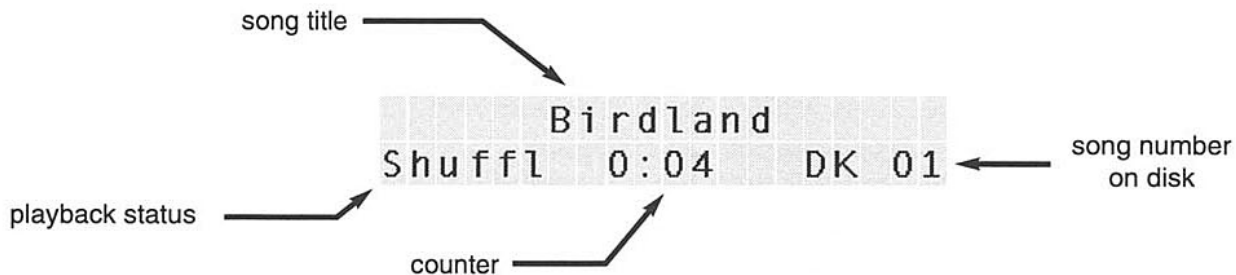


1. **POWER:** Power on, off.
2. **FUNCTION BUTTONS:** Used to select modes, and to make changes or choose options during MODE operations. Buttons [1] and [4] are typically used to decrease and increase settings, while buttons [2] and [3] normally return settings to default values.
3. **MODE:** Push and release to display menus; select options by using function buttons. Hold to view media type or—with *MX* option—current library
4. **DECREASE VOLUME:** Pressing (-) decreases volume.
5. **INCREASE VOLUME:** Pressing (+) increases volume.

NOTE: Volume changes affect the loudness of both the piano and the symphony accompaniment. To change their relative volumes, use the **BALANCE** function.

6. **SCAN BACKWARD:** When playback is stopped, pressing [SCAN <<] steps through song selections in reverse order. When playback is engaged, pressing [SCAN <<] returns playback to the beginning of the song being played.
7. **SCAN FORWARD:** When playback is stopped, pressing [SCAN >>] steps forward through song selections. When playback is engaged, pressing and immediately releasing [SCAN >>] during playback advances to the next song. To “fast-forward” during playback, hold down the [SCAN >>] button.

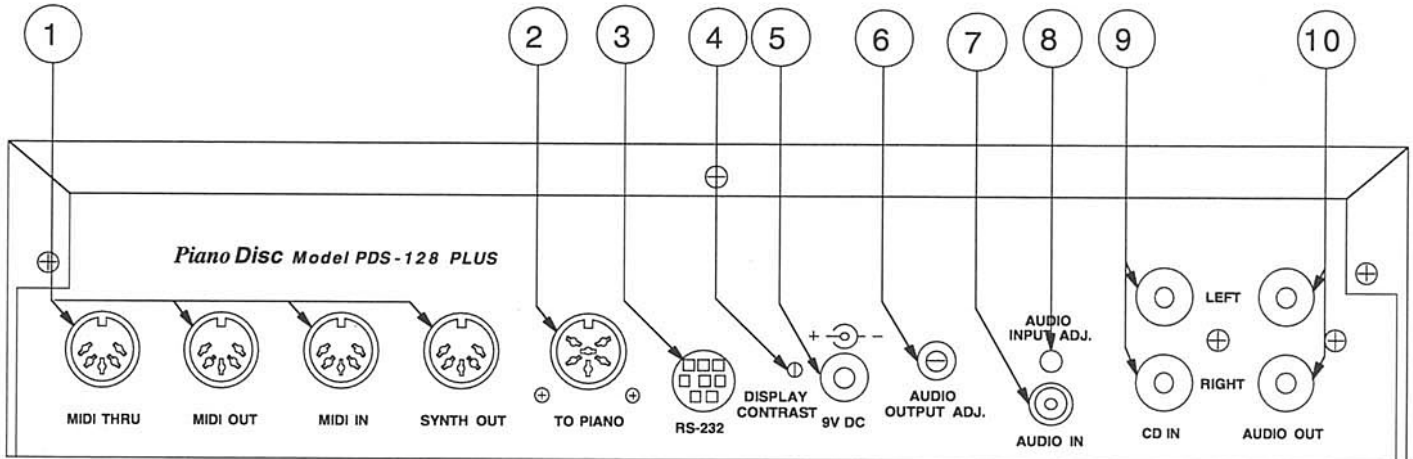
8. **PRODUCER:** Used for advanced playback customization.*
9. **STOP:** Stops playback or exits the current mode.
10. **PLAY/PAUSE:** Press to play; press again to pause. During playback, the green light next to the PLAY/PAUSE button will be illuminated. When playback is paused, the green light (LED) will flash.
11. **RECORD:** If piano is equipped with a *Record Option*, records performance onto a diskette or into an *MX* library (where *MX* option is installed).*
12. **DISK EJECT:** Press to eject disk from disk drive.
13. **DISK DRIVE:** Used for loading and saving song data onto a 3.5 inch diskette.
14. **DISK DRIVE LIGHT:** Illuminated during diskette operations such as playback, record, etc.
15. **SYMPHONY LOGO:** Indicates whether this PDS-128Plus is equipped with the Symphony Pro option.
16. **LCD DISPLAY:** 20-character, 2 line display shows current system status and dynamic button choices.
17. **PLAYBACK STATUS:** The display indicates which function is active, if any (mute, piano off, song repeat, disk repeat, global repeat, shuffle).



18. **MX Logo:** This logo appears on the face of your PDS-128Plus if you have the *MX* option installed.

**The PianoDisc PDS-128Plus has many more capabilities that are not immediately apparent from the front panel. For a general introduction to accessing these functions, please refer to the section of this guide entitled "Description of Features and Controls." To find detailed instructions for each function, refer to the appropriate sub-section (e.g., PRODUCER, RECORD) of this guide.*

PDS-128Plus Rear Panel



- 1. MIDI PORTS:** Used to connect the PianoDisc PDS-128Plus control box to any external MIDI device via MIDI cables. MIDI cables are 5-pin connectors available in various lengths. Care should be taken to avoid damaging the pins when inserting them into the MIDI ports.

MIDI THRU - Echoes, or duplicates, MIDI data received from MIDI IN.

MIDI OUT - Transmits MIDI data directly from diskette, unaffected by front panel controls. MIDI OUT also has several alternative functions, such as to provide the pathway for "link mode" with the PianoCD. See the PianoDisc PianoCD brochure for details of this exciting device!

MIDI IN - Receives MIDI data from an external MIDI device, such as a keyboard, sequencer, or computer.

SYNTH OUT - Sends MIDI data for an external synthesizer, including all MIDI data on diskette except the piano part (MIDI channel 1). It is not necessary to use SYNTH OUT if the PDS-128Plus is equipped with the symphony option.

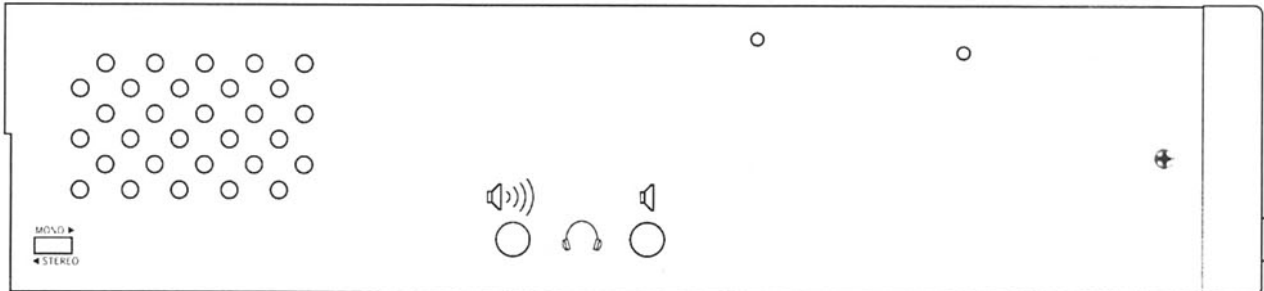
- 2. TO PIANO:** This special 6-pin DIN port is used to connect the PDS-128Plus to a piano fitted with the PianoDisc system, allowing information to and from the piano to be transmitted by one cable. Power to the PDS-128Plus unit is supplied with this same cable.

3. **RS-232 PORT:** This port is for high speed data transfer with a computer or an external expansion option.
4. **DISPLAY CONTRAST:** On PDS-128Plus models featuring an LCD front panel display, this small control may be used to adjust the display so it can be seen at the desired viewing angle. If your PDS-128Plus features a VFD screen, no such control is needed, so the control will have no effect.
5. **DC POWER CONNECTOR:** This connector is for connecting the PDS-128Plus to a stand-alone 9 volt transformer, (ordinarily the PDS-128Plus is powered through the "To Piano" port by means of a special 6-pin DIN cable). If a DC power supply is necessary, it must be purchased from PianoDisc. **DO NOT** attempt to use an off-the-shelf power supply to power the PDS-128Plus control unit.
6. & 8. **AUDIO OUTPUT/INPUT ADJUST CONTROLS:** These allow you to adjust the "strength" of the audio signals going into or out of the PDS-128Plus.
7. **AUDIO IN:** 1/8" stereo jack for microphone or other audio input signal which will be heard through AUDIO OUT.
9. **CD IN CONNECTORS:** These are to be used for the CD mode. Connect the AUDIO OUTs of a CD player to these ports.*
10. **AUDIO OUT CONNECTORS:** These are used to connect a PDS-128Plus equipped with the Symphony option to a listening device, such as a pair of amplified speakers. If only one amplified speaker is to be connected to the PDS-128Plus, slide the mono/stereo switch to mono.**

* These inputs are designed to accept a line level signal up to 1 volt RMS each. Because the inputs are designed to work with consumer-grade CD players at *line level*, **avoid** connecting amplified signals to these inputs.

** The audio output of the PDS-128Plus **IS NOT** a speaker output. This system must be connected to an amplified device, such as the aux. input of a stereo system or the line level input of a musical instrument or P.A. system. The audio output of the PDS-128Plus sums (mixes) the output of the internal symphony option and the audio input jacks. The output level is attenuated (turned down) by the AUDIO LEVEL ADJUST OUTPUT control located on the rear panel of the PDS-128Plus.

PDS-128Plus Side Panel



STEREO HEADPHONES

There are two stereo headphone jacks on the side of the PDS-128Plus Control Box. The left jack duplicates the *Audio OUT** signal to the speakers (*i.e.*, both speakers and headphones will receive audio output signal, meaning that you will hear sound from both simultaneously). Plugging headphones into the right jack will disable output to the speakers (leaving only the sound coming from the headphones). (See diagram above)

Before playing any music (especially through headphones!), lower the audio level to a **low setting** from the front panel. *Then, for best playback results, set the audio out adjustment on the rear panel to 1/8 turn from maximum.* Start your music playback. (Details on following pages.) Finally, return to the front panel to raise volume to a suitable level.

MONO/STEREO Selector Switch

Ordinarily, this switch should be set to STEREO to take advantage of both *left* and *right* audio output channels (both speakers).

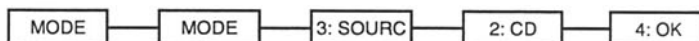
If your setup uses only one channel of audio output—*e.g.*, if playback is to be heard from only one speaker—set this switch to MONO.

**Audio OUT* is the mix of *Audio IN* and accompanying sounds from the sound module (Symphony Option).

Description of Features and Controls

The PDS-128Plus front panel was designed to offer easy and convenient access to the most important controls.

Buttons on the front panel, such as PLAY, RECORD and VOLUME, are more apparent than advanced functions which are accessed by pressing the MODE button. MODE offers control over many functions, in conjunction with the four numbered buttons (underneath the display). The numbered buttons are used to choose options displayed on the bottom line of the display. To select an option or make a change, simply press the numbered button directly below the desired choice. In this manual, next to each function that requires a series of buttons to access, is a small "menu-flow" diagram that shows the necessary steps to access that function. For example, consider the following diagram:



To select CD Mode, first press the MODE button twice, then the [3] button (for SOURCE), then [2] (for CD), and finally [4] (to confirm your selection).

Notice that Menu terms are abbreviated as necessary. For instance, in the above example SOURCE appears on the LCD Display as "SOURC "

A Note About Pressing Buttons

The buttons on the PDS-128Plus are very responsive to touch, and should not be pressed with excessive force. Instead of repeatedly pressing a button (e.g., while changing tempo or transposing a song), the button may typically be held down to induce a continuous change. All changes are reflected in the display. If no change occurs, release the button and try again.

Section II

Quick-Start! Guide

Taking the Fastest Track to Enjoying Music from Your *PDS-128Plus*

This section shows you how to get “up and running” with your PianoDisc system in a matter of minutes.

Have a PianoDisc diskette or CD ready (for playback from PianoCD or an external audio CD player).

Step 1: Press the Power Button

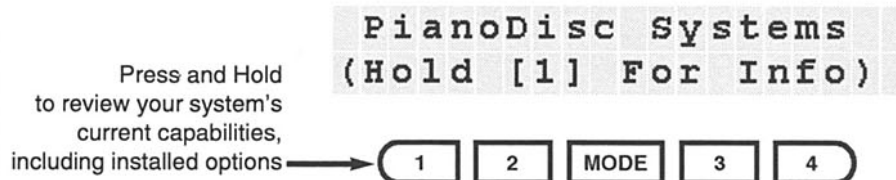
Find the POWER button on the front face of the PDS-128Plus. When you press it, your player system will turn on. The LED indicator (green light) beside the POWER button will glow, to confirm that the power is “On.”

Reviewing System Info

When the screen shown below appears, you have a few seconds during which you may opt to view more info about your system—including the options installed with your system.

If you wish to skip viewing system info, simply do nothing. Your PDS-128Plus will finish booting up automatically. When the words “PianoDisc Systems” disappear from the display, the system is ready for your input.

If you wish to view your system info, simply press and hold [1] as shown below. Then, press [4] to page through the info screens. Finally, press [4] to EXIT. Your PDS-128Plus will finish booting up.



Step 2: Set a Safe Volume Level!

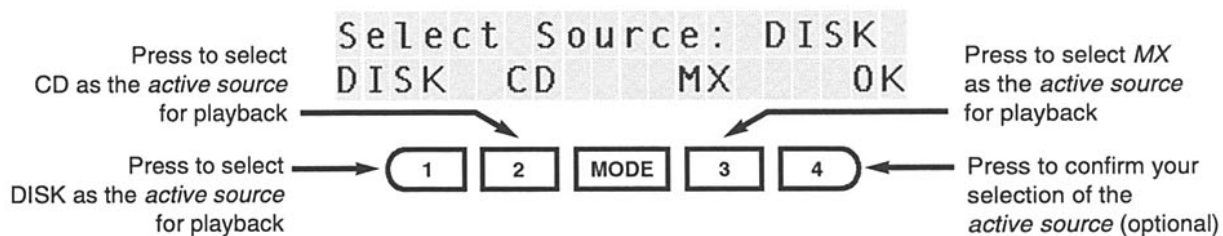
Warning! Before you press **PLAY**, ensure that your volume is at a low setting. After you have begun playback, then raise the volume to suit your ears and environment.

Step 3: Choose your Music Source



This is where you choose where your music comes from—DISK, CD, or the amazing new MX option.

- Do you want to play music from a 3.5" Diskette?
Choose DISK.
- Or would you prefer to play a PianoDisc *Symphony* or *Live* CD?
Choose CD.
- Or perhaps you want to play hours-upon-hours of your favorite music,
Choose MX.*



Step 4: Play!

Press **PLAY** on the front panel to begin playback of your favorite music!

Adjust the Volume as it suits you, and...“Enjoy!”

*Some users will not see this option displayed because they have not purchased the *MX (Music eXpansion)* card. Contact your dealer or *PianoDisc* for an upgrade to your existing system.

Section III

Diskette Mode

PDS-128Plus "Diskette Mode"

Selecting DISK MODE

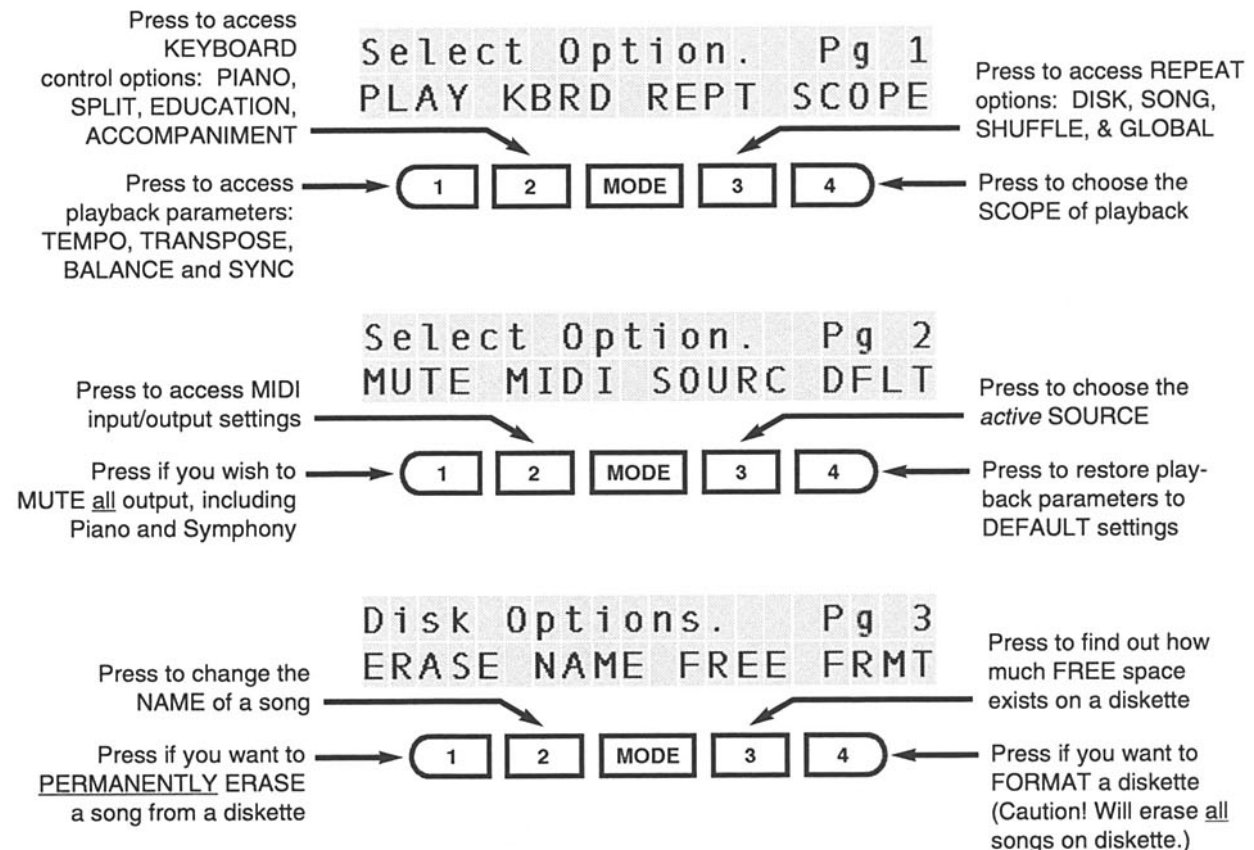


To play back from (or record onto) a floppy diskette, go to the SOURCE menu, and select DISK.

The Mode Pages

Push the MODE button to display more functions than are immediately available on the PDS-128Plus front panel. There are three pages. The first (press MODE once) contains PLAY, KEYBOARD, REPEAT, and SCOPE. The second page (press MODE again) contains MUTE, MIDI, SOURCE and DEFAULT. The third page* contains the *Disk Options*: ERASE, NAME, FREE, and FORMAT.

The following diagrams show the three mode pages available in DISK MODE. To select a function, simply press the numbered button directly below the desired function. A new screen will be displayed for each function.



*The third mode page (shown immediately above) is available only when a PDS floppy disk is in the drive. Its functions are disabled for other disks.

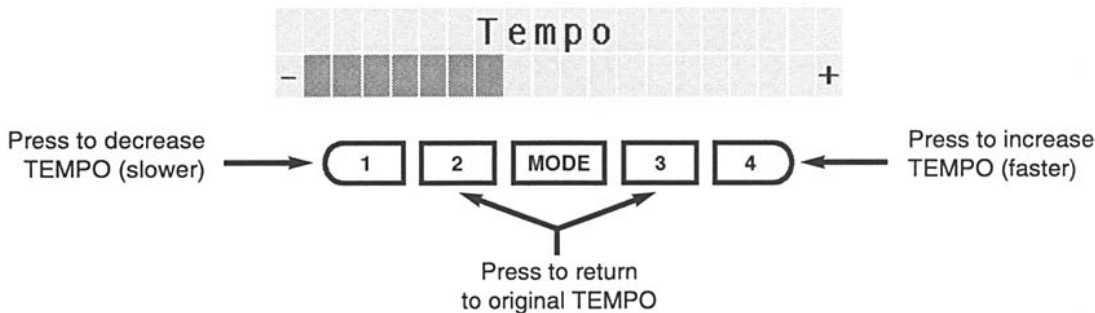
Tour of the Menus

Mode Page #1

TEMPO

MODE — 1: PLAY — 1: TEMPO

The TEMPO function may be used to adjust the playback speed of a song. The bar display indicates the relative tempo of the song, with the middle position being the original tempo of the song. Pressing “+” (the [4] button) will increase the tempo, while pressing “-” (the [1] button) will decrease the tempo. Pressing the [2] or the [3] button will return the song to its original tempo.

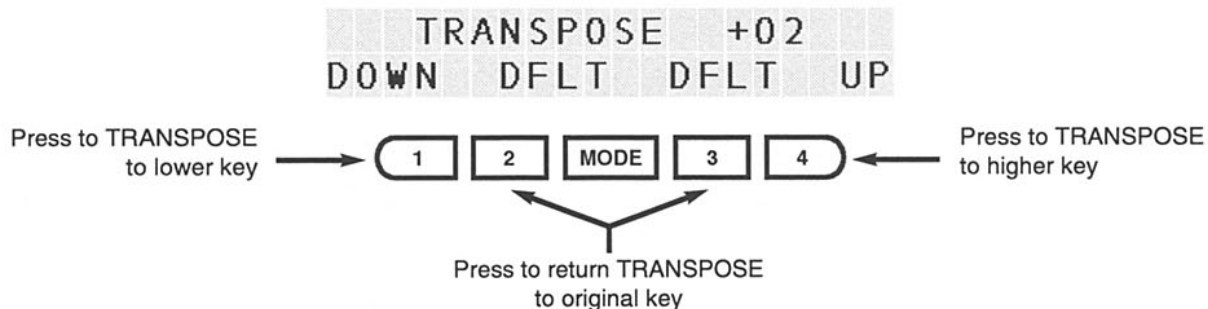


NOTE: The tempo display for Yamaha and SMF disks is slightly different.

TRANSCOPE

MODE — 1: PLAY — 2: TRNS

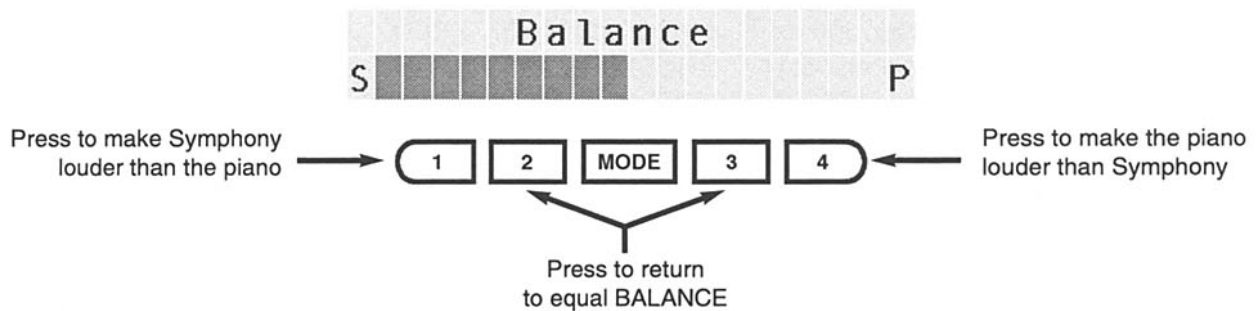
The TRANSCOPE function changes the pitch of the song in half-step increments. (A half-step is the interval between any two adjacent notes on the piano, e.g. C and C-sharp; one octave is equal to 12 half-steps.) This function is useful when a vocalist is singing with the piano and would prefer to sing in a different key. Transposing down moves the song toward the bass end of the piano, while transposing up has the opposite effect. This function is effective up to two full octaves (24 keys) in either direction.



BALANCE

MODE — 1: PLAY — 3: BAL

The BALANCE function controls the mix, or relative volumes, between the symphony and piano outputs of the PianoDisc system. Moving the bar display toward the “S” (by pressing the [1] button) raises the volume of the symphony portion of the music relative to the piano (*i.e.*, by decreasing the piano volume, the PDS-128Plus effectively makes the symphony louder than the piano). Moving the bar display toward P (pressing the [4] button) raises the volume of the piano relative to the symphony (*i.e.*, by decreasing the symphony volume).

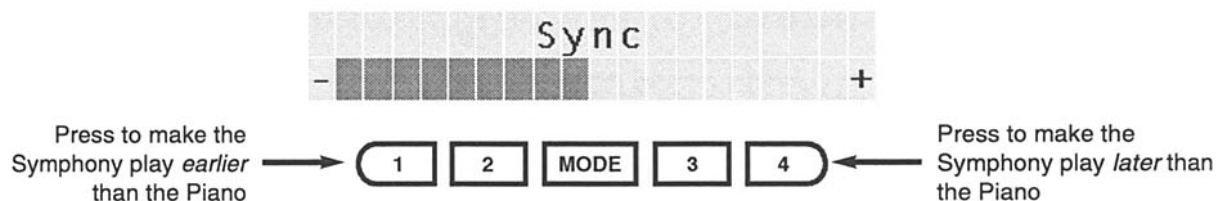


SYNC

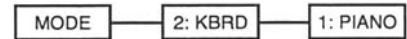
MODE — 1: PLAY — 4: SYNC

The SYNC function permits adjustments in timing so that the piano notes coincide with those of the symphony option. This allows the user to make minor adjustments to achieve good synchronization of the music. Decreasing the SYNC by pressing the [1] button will move the symphony backward in time (makes the symphony play earlier relative to the piano). Increasing the SYNC by pressing the [4] button will move the symphony forward in time (makes the symphony play later relative to the piano). Generally, the lower the volume is set, the higher the SYNC should be set.

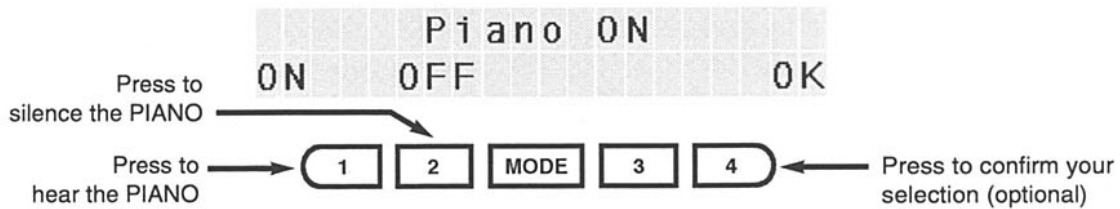
NOTE: The default SYNC value will vary depending on the type of disk currently in the drive. While your adjustments are remembered between disk changes, an offset will be automatically added or subtracted from the SYNC value to compensate for the disk type. In *MX* mode, this adjustment is made automatically on a song-by-song basis.



PIANO



The PIANO function enables the user to silence the piano operation. Whether Piano is set to “On” or “Off,” Symphony sound will continue playing. (When Piano is set to “Off,” the display will show “Piano” in the lower left hand corner.)

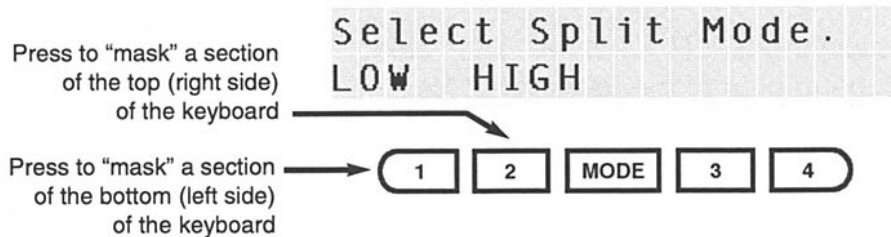


SPLIT



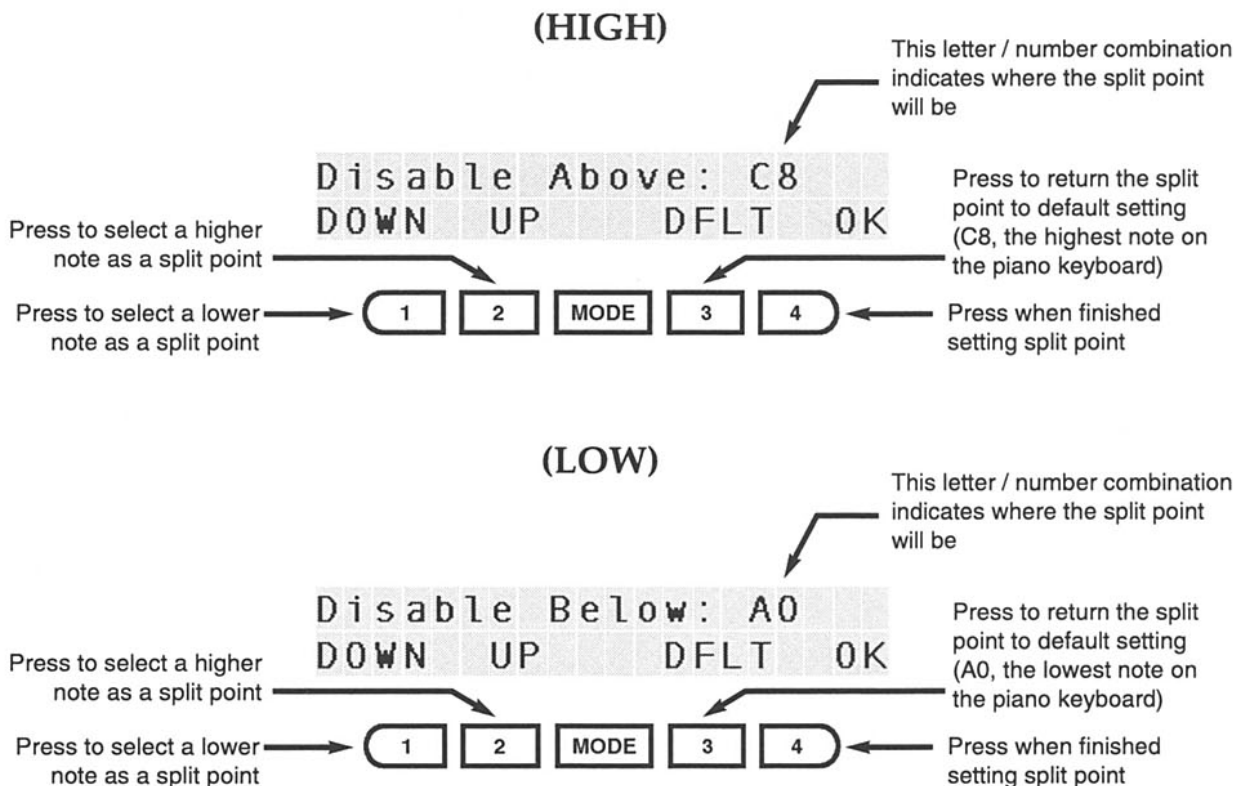
The SPLIT function allows you to mask (or disable) specific portions of the keyboard from playback operation. This makes it possible for the user to silence a particular part of the music while playing the other part manually. However, in PianoDisc systems with the Symphony Pro option, the accompanying orchestral music is unaffected by the SPLIT command.

NOTE: This function is accessible only from the front panel of the PDS-128Plus. It is not accessible through the PDS-128Plus remote control.



Setting The Split Point

After accessing the SPLIT function, select a high or low split by pressing the button under “HIGH” or “LOW”. A new window will display as shown below.



Pressing and holding the button below “DOWN” or “UP” will cause the displayed note to scroll upward/downward, and releasing it will select the displayed pitch as the split point. If you have the PianoDisc Record option on your piano, you may simply press the key above/below which you would like playback to be disabled. The display will immediately change, indicating the note that you pressed.

Undoing A Split

The PianoDisc system will “remember” that you have masked a portion of the keyboard, even if it has been turned off and powered up again.

To undo the split, first access the SPLIT function. Then select “HIGH” for the right hand side or “LOW” for the left hand side of the keyboard. Next, press the numbered button under the word “DFLT” (short for “default”). Pressing “OK” will confirm the selection. If both “HIGH” and “LOW” have been split, you must repeat this procedure for both splits to enable all notes. You may also reset both splits (and other system parameters) by initializing the default settings.

ACCOMPANIMENT

MODE — 2: KBRD — 3: ACMP

The ACCOMPANIMENT mode allows a pianist with the PDS-128Plus system to “accompany” or *chorus* his or her performance with any sound from the Symphony Pro module or from an external tone generator. By selecting ACCOMPANIMENT mode, you can choose from all 128 General MIDI presets available, allowing you to enhance and vary your performances by adding various background sounds. **Note: Only one sound at a time can be selected and used with this feature.**

In order to use ACCOMPANIMENT mode as a performer, you must have the PianoDisc Record option installed on the piano. Since you will also need a source for the Accompaniment mode sounds, we recommend our Symphony Pro Option. (Or, you could use an external tone generator; see sub-section below titled “Using an External Tone Generator”). Finally, a set of amplified speakers must be attached to the PDS-128Plus, or to the external tone generator.

```

Accompaniment Mode
013 Marimba
  
```

Press to scan backward through instruments → [1] [2] [MODE] [3] [4] ← Press to scan forward through instruments

Changing Sounds While in Accompaniment Mode

Once the ACCOMPANIMENT mode window is displayed, sounds from the instrument named on the display will sound simultaneously with (“accompany”) any notes that are played on the piano, whether by a performer or when playing a PianoDisc Music Library diskette. While the ACCOMPANIMENT mode window is displayed, you may select sounds from all 128 General MIDI presets to “accompany” the piano.

There are two simple ways to select instrument sounds:

1. On the front panel, the [1] and [4] mode buttons will scan all the selections in order (backwards and forwards, respectively). Pressing [1] and immediately releasing it will select the previous instrument on the disk; pressing and releasing [4] will select the next instrument. Pressing and holding either the [1] or [4] buttons will cause the display to move rapidly through the instruments in the respective direction. Releasing the held button will select the instrument on display at the moment of release.

If either button is held until instrument number 1 or 128 is reached (first and last instruments of the instrument bank), scrolling will stop. To continue, first release, then press and hold again.

2. To select instruments with the *PDS-128Plus Remote*, hold down the [SHIFT] button (▲) while pressing a scan button (both pressing-releasing and pressing-holding work as with the front panel mode buttons—just be sure to keep the [SHIFT] button depressed!).

You can take a shortcut to instrument selection, if you know the instrument number. (These numbers are called *patch numbers* in MIDI terminology). While in the ACCOMPANIMENT mode window, enter the desired instrument number on the numeric keypad on the PDS-128Plus remote control, then press the SELECT button. The ACCOMPANIMENT mode window will immediately reflect the change to your desired instrument.

Since not all sounds are equally suited for use in ACCOMPANIMENT mode, experiment with different sounds to find those that compliment the piano performance.

Playing Diskettes While In Accompaniment Mode

PianoDisc Music Library diskettes* (see note on following page) can be played while the PDS-128Plus control unit is in ACCOMPANIMENT mode. You may engage (and disengage) the ACCOMPANIMENT mode at any time. Also, you may change the “accompanying” sound, as well as any parameter or function at any time...even while a song is being played.

However, if you leave the PDS-128Plus in ACCOMPANIMENT mode, you will continue to hear the “accompanying” instrument throughout all the songs played, until you exit ACCOMPANIMENT mode.

Advancing Songs While in Accompaniment Mode

You can **switch songs** *while* remaining in ACCOMPANIMENT mode—just use the [SCAN <<] and [SCAN >>] buttons, as for regular playback song selection (Press and release to advance one song at a time; press and hold to scroll through them quickly!)

Exiting Accompaniment Mode

To exit ACCOMPANIMENT mode, press the same buttons used to enable this mode, and press NO at the last screen. Alternately, you can use the stop button (on either the front panel or the remote, press stop, wait for the screen to return to the instrument selection display, then press stop again: pressing the stop button once stops playback, the second time disables ACCOMPANIMENT mode). Or...

You can *toggle* ACCOMPANIMENT mode by pressing ACMP on the remote control.

Using an External Tone Generator

Since the PDS-128Plus is a General MIDI device, another General MIDI tone generator may be used with the PDS-128Plus for ACCOMPANIMENT mode.

To use an external tone generator with the PDS-128Plus you must have a tone generator with its own power supply and a MIDI cable. Plug the MIDI cable into the SYNTH OUT port on the back panel of the PDS-128Plus control unit and into the MIDI IN port of

the external tone generator. The audio outputs from the tone generator are now providing the “accompanying” sounds, so they must be hooked to an amplification system, such as a home stereo or a pair of amplified speakers.

Once everything is connected and ACCOMPANIMENT mode is activated, the system will operate as described in the previous sections. Whenever you want to change the “accompanying” sound, you may still do so by selecting another instrument in the ACCOMPANIMENT mode window of the PDS-128Plus. You may also change sounds directly on the external tone generator.

If you hear no “accompanying” sounds, verify that the external tone generator is not set to ignore messages transmitted on channel 1 (consult its manual). Patch changes and note information are transmitted to the external tone generator on MIDI channel 1.

***NOTE:** Accompaniment mode is not available during playback of Standard MIDI File songs.

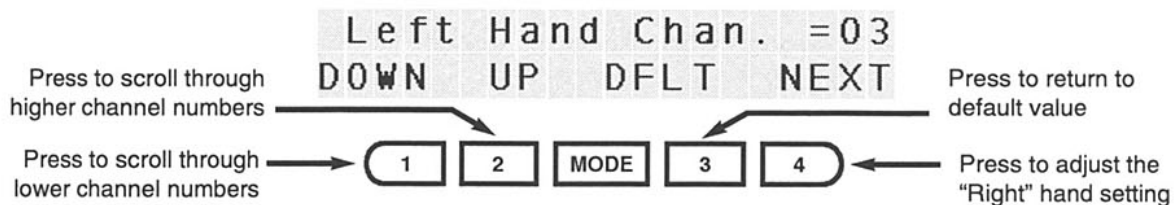
EDUCATION

MODE

2: KBRD

4: EDUC

The EDUCATION function is used to set the MIDI channels for the “Left” and “Right” hand parts with Standard MIDI File software designed for acoustic piano playback. Pressing the PRODUCER button allows the user to choose left and right hand parts while playing a Standard MIDI File diskette. The channels **MUST** be set correctly before using the producer feature. The default is channel 3 for Left Hand Piano part and channel 4 for the Right Hand Piano part. Yamaha® educational type software will automatically work without adjusting these settings. To determine which MIDI channels the education parts are located on, read the manuals and documentation which accompany the purchase of commercial educational software for more information.

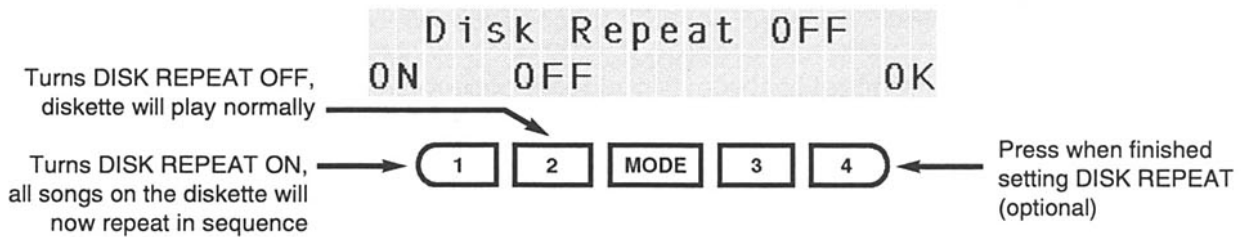


NOTE: Channel 10 is reserved for the drum track and should not be used. Also, do not set the left or right hand part to the same channel. If you wish to toggle the left and right hand piano parts on the same channel, use the piano toggle function.

DISK REPEAT

MODE — 3: REPT — 1: DISK

The DISK REPEAT function allows for the repeating of the entire diskette. After you press the [1] button (DISK), the display will give the option of turning the DISK REPEAT function ON or OFF (press [1] or [2]). Pressing the [4] button is optional: once the selection (ON or OFF) is made, it will be saved and the screen returned to the song title display. When DISK REPEAT is on, "DiskRp" will appear in the lower left corner of the display. DISK REPEAT will continuously repeat a disk until it is turned off.

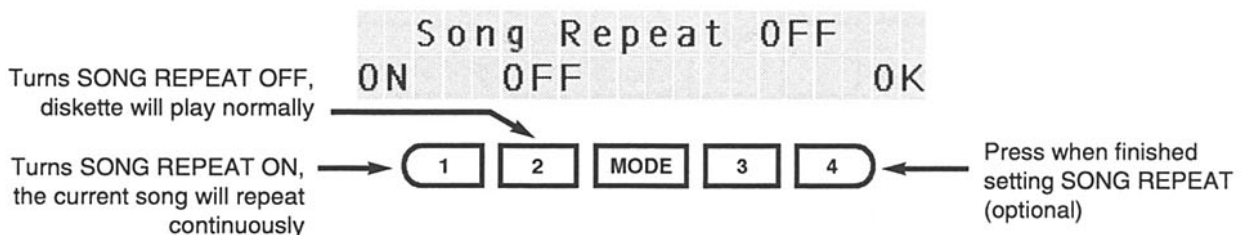


NOTE: When DISK REPEAT is turned "on," SONG REPEAT and SHUFFLE are automatically turned "off."

SONG REPEAT

MODE — 3: REPT — 2: SONG

The SONG REPEAT function allows for the repeating of a single song. After you press the [2] button (SONG), the display will give the option of turning the DISK REPEAT function ON or OFF (press [1] or [2]). Pressing the [4] button is optional: once the selection (ON or OFF) is made, it will be saved and the screen returned to the song title display. When SONG REPEAT is on, "SongRp" will appear in the lower left corner of the display. SONG REPEAT will continuously repeat a song until it is turned off.

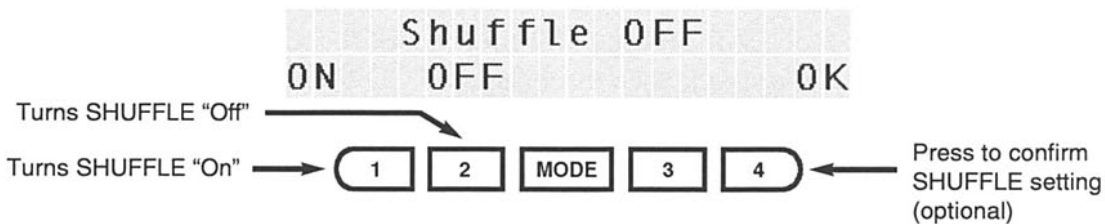


NOTE: When SONG REPEAT is turned "on," DISK REPEAT and SHUFFLE are automatically turned "off."

SHUFFLE



The SHUFFLE function allows the songs on a disk to be played in random order, beginning with the song currently displayed. During SHUFFLE playback, “Shuffl” will appear in the lower left corner of the display. The SHUFFLE function will play the songs continuously at random, until SHUFFLE is turned off. We have designed Shuffle to be affected by both SCOPE and PRODUCER modes. This means that the user can control which set of songs are shuffled! [Consult the SCOPE and PRODUCER sub-sections of this guide for explanations of these functions.]



NOTE: When SHUFFLE is turned “on,” DISK REPEAT and SONG REPEAT are automatically turned “off.”

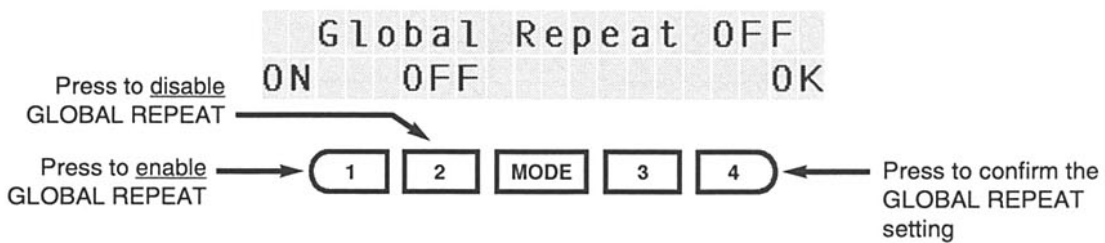
GLOBAL REPEAT



GLOBAL REPEAT offers our users the potential of uninterrupted playback circulating through all of their Input Sources (Diskette, PianoCD, and *MX*).

If you do not own both the PianoCD and the *MX* option, you can still benefit from this function. Locate below your specific device configuration to determine how (and to what extent) you can benefit from GLOBAL REPEAT.

To enable GLOBAL REPEAT, follow “flow diagram” above, then choose “ON” [1] followed by “OK” [4]. To disable, choose “OFF” [2], then “OK” [4].



Note: When GLOBAL REPEAT is engaged, “GlobRp” will appear in the lower left hand corner of the display.

Setup #1: PDS-128Plus, with *MX* option, and *PianoCD* unit in “link mode” (see *PianoCD User’s Guide* for directions for “link mode”).

With this setup, you can enjoy the full benefits of GLOBAL REPEAT. Simply enable GLOBAL REPEAT, then choose whichever source you please to begin your playback “loop.” Press [PLAY], and your PianoDisc system will cycle through the sources beginning with your chosen source...and continue the loop until you [STOP] it.

Setup #2: PDS-128Plus, with *MX* option, and a typical home CD player (connected per *Appendix F*).

After enabling GLOBAL REPEAT, choose CD as your SOURCE, then press the “Play” button on your CD player. Playback will circulate from CD through *MX* and then through Diskette. However, it will stop upon returning to CD Mode.

Setup #3: PDS-128Plus, with *MX* option (no CD source).

After enabling GLOBAL REPEAT, begin playback from within *MX* (SOURCE:MX). Playback will continue through Diskette Mode, stopping at CD Mode.

Setup #4: PDS-128Plus, with *PianoCD* unit in “link mode” (no *MX* option installed).

Enable GLOBAL REPEAT. Start playback in either Diskette Mode or CD Mode. Playback will “loop” until you press [STOP].

Setup #5: PDS-128Plus, with a typical home CD player (connected per *Appendix F*) (no *MX* option installed).

Enable GLOBAL REPEAT. Start playback in CD Mode. Playback will proceed through Diskette Mode, stopping back at CD Mode.

Setup #6: PDS-128Plus, alone.

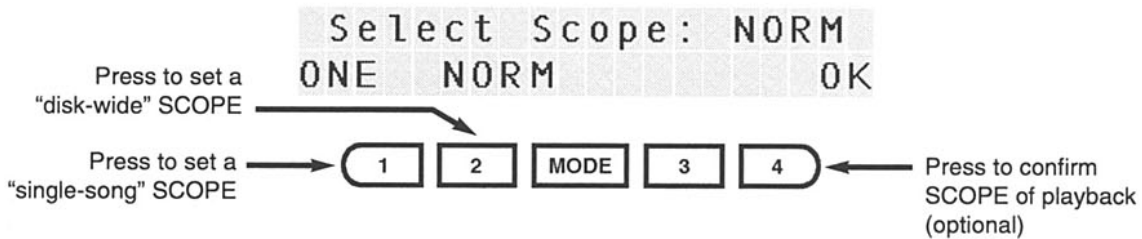
The PDS-128Plus **alone** gains no functionality from GLOBAL REPEAT. To take advantage of GLOBAL REPEAT, attach your external CD player (per *Appendix F*) or the enhanced PianoDisc *PianoCD*.

SCOPE



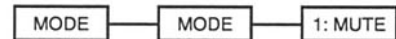
The SCOPE function allows the user to choose the range of playback from a disk. "Norm" is the setting for most common uses (and as such, is the default). Under this setting, playback continues through all songs on a disk, stopping when it reaches the disk's end (unless a REPEAT function is enabled).

To play a single song, then stop (avoiding automatic consecutive playback of all tracks on the disk), set SCOPE to "One." Thus, when any song is finished playing, playback will stop with the next song cued (poised for play, with its title displayed). The user must press [PLAY] for each cued song to resume playback.

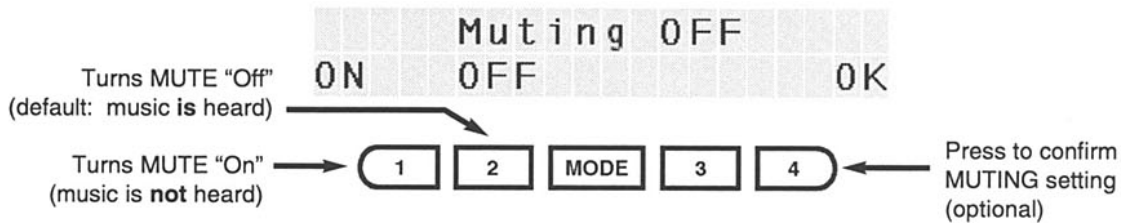


Mode Page #2

MUTE



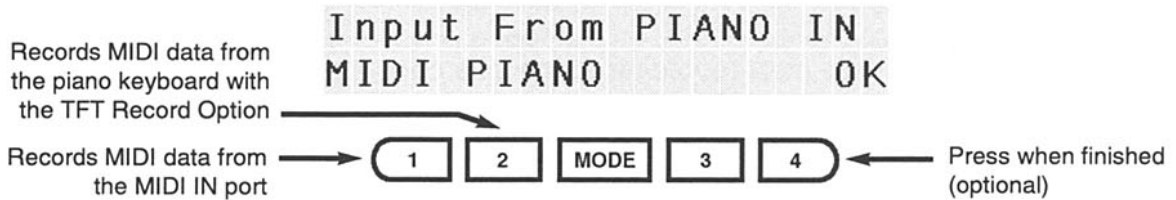
The MUTE function silences all output of the PianoDisc system, both the piano and symphony output. When MUTE has been turned on during playback, "Mute" will appear in the lower left hand corner of the display.



MIDI IN



The MIDI IN function will select either the TFT Record Option (PIANO) or an external source (MIDI). See additional information under the "RECORD" sub-section.

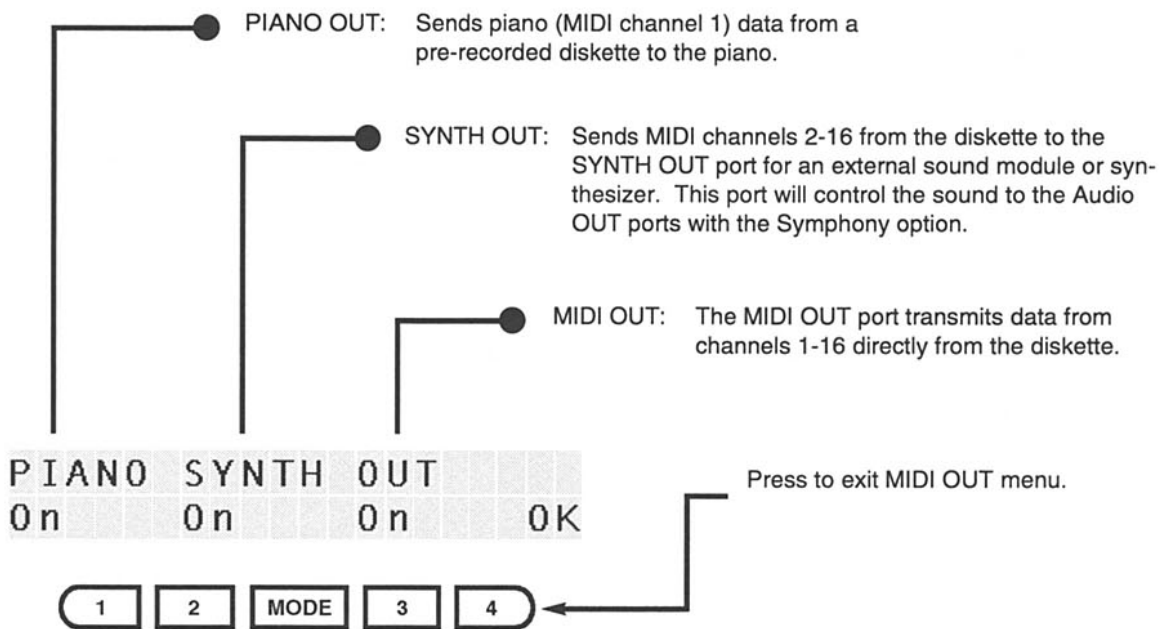


MIDI OUT



The MIDI OUT function allows the user to toggle the PIANO OUT, SYNTH OUT, and MIDI OUT ports On and Off. Toggle the state of the desired port by using the [1], [2], or [3] button. Press the [4] button to OK (optional). The MIDI output configuration will be stored in memory even when the PDS-128Plus is shut off.

NOTE: The normal PDS-128Plus MIDI output mode is PIANO OUT On, SYNTH OUT On, and MIDI OUT On (regardless of whether or not the PDS-128Plus is equipped with the internal synthesizer/instrument module).



REDIRECT

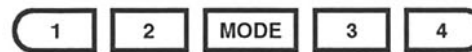
MODE — MODE — 2: MIDI — 3: RDIR

The REDIRECT function is typically used by advanced operators of the PianoDisc system who are integrating their PianoDisc into a MIDI studio setup, or by those who want to listen to the PianoDisc Music Library diskettes on another instrument, such as an electric keyboard.

NOTE: Using this function with an acoustic piano fitted with the PianoDisc system can disable the playback on your piano.

This function allows you to redirect the flow of filtered MIDI information from the “To Piano” port to the MIDI OUT port. (This can be useful if you are attempting to extract MIDI data from a diskette of music you have recorded into another MIDI device, such as a sequencer.)

```
Redirect Piano Out
To MIDI Out? YES NO
```



Press to direct Piano performance back to “To Piano” port

Press to direct Piano performance to MIDI Out port

NOTE: In order for REDIRECT to work, the MIDI OUT port must be turned on. Ensure that it is set to ON by following the instructions in the MIDI OUT sub-section in this guide (under Diskette Mode).

PASSTHROUGH



The PASSTHROUGH function is typically used by advanced operators with a computer sequencer or other external MIDI device. This function permits one to pass MIDI data through the PDS-128Plus MIDI IN port and play it on the PianoDisc system (Piano Ch 1, Synth Ch 2-16). (See *Appendix G* for information on attaching cables to the PDS-128Plus.)

To use the remote control to access PASSTHROUGH, press [BYPASS] (found directly above the [SHIFT] key). To toggle “off,” press [BYPASS] again, or press [STOP].

```

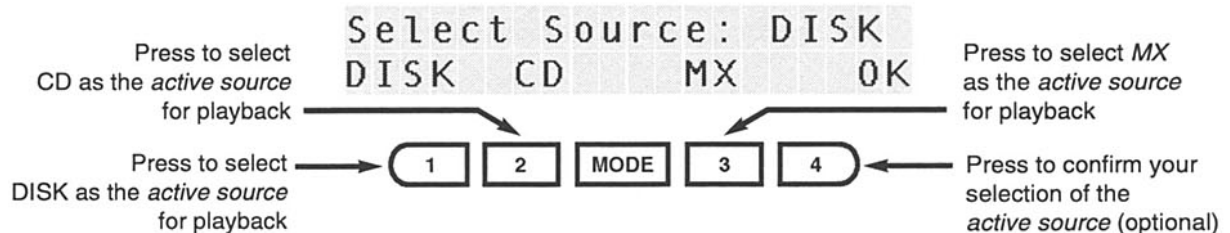
  Passthrough Mode
  (Press STOP To Exit)
  
```



SOURCE



This menu item enables you to choose your playback source. To play from (or record onto) a diskette, go to the SOURCE menu, and select DISK.



DEFAULT

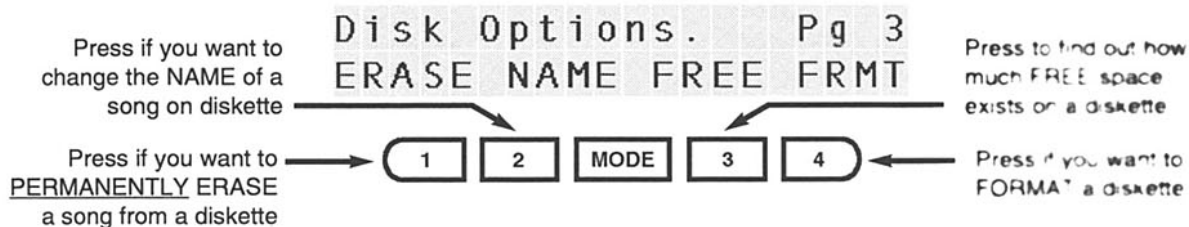


The DEFAULT function will reset ALL diskette mode parameters to their factory settings.

Mode Page #3



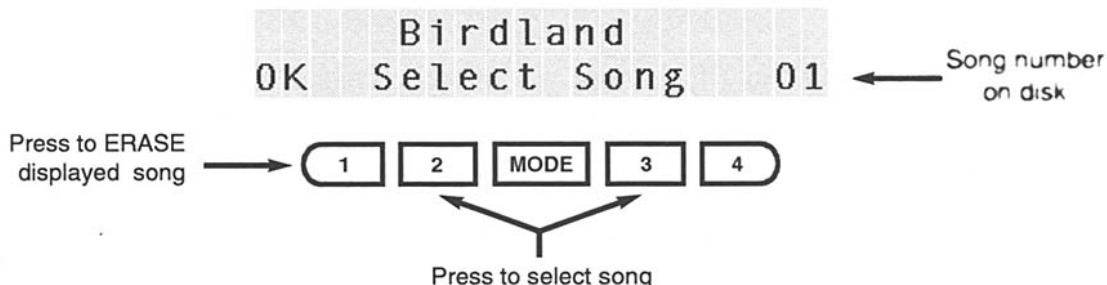
The third Mode page presents a group of disk-related functions: ERASE, NAME, FREE, and FORMAT. These functions are not necessary for normal playback operation of the PDS-128Plus, and should be used only when recording new music and customizing diskettes. NOTE: These disk functions work only with PianoDisc diskettes and are not available for other formats.



ERASE



The ERASE function is used to delete a song permanently from a diskette. To remove a song, select ERASE from the DISK sub-menu. Use the [SCAN] buttons to select the song to be erased; then press OK. The PDS-128Plus will then ask for confirmation of the song to be erased. Choosing YES will permanently erase the song from the diskette, while pressing NO will exit from the ERASE function.*

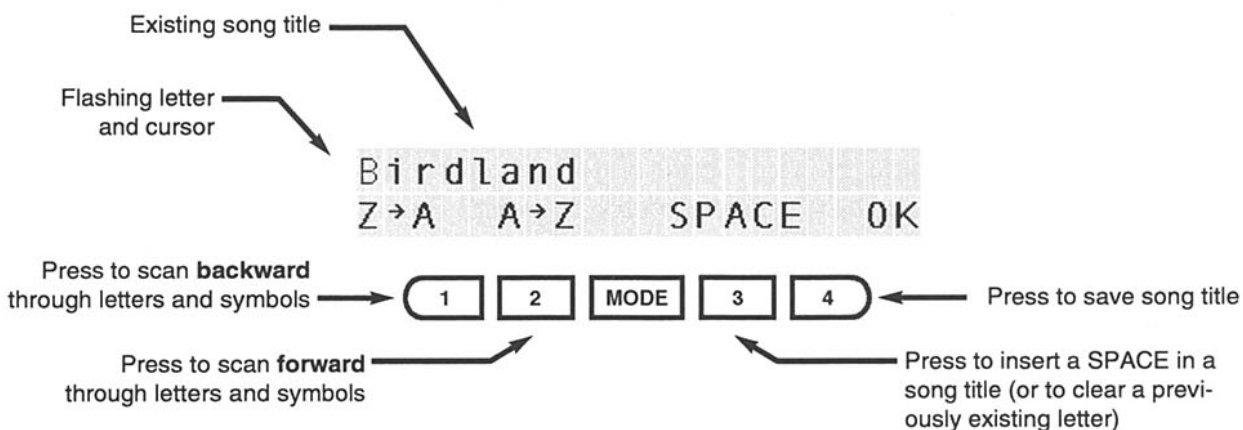


*Press the STOP button to exit from the ERASE function without erasing a song.

NAME

MODE — MODE — MODE — 2: NAME

The NAME function allows the user to name any song, up to 20 characters long. Select NAME from the third Mode Page, choose the song to be named by pressing the [SCAN <<] and [SCAN >>] buttons, and then press OK. The naming screen will then be displayed.



- Press the [SCAN >>] button to move to the next character in the song title, the [SCAN <<] button to move backwards.

Many characters other than the alphabet are available (scan through these using the [1] and [2] buttons).

- Characters can be “erased” by replacing them with spaces. This is especially useful if the new name is shorter than the old name, or if the new name contains spaces where the old one contained characters. Press [3] to replace a pre-existing character with a SPACE.
- If you wish to cancel (exit without saving any changes to the song title), press the STOP button to exit the NAME function.
- When the new song title has been completed, press OK (the [4] button) to save the new name on the disk. The song title will be saved exactly as it appears on the display.
- Since the new song name will be centered automatically on the main display, do **not** center it manually while creating the NAME.

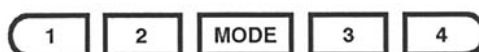
NOTE: For an alternate naming procedure, useful when recording from an external sequencer, see “System Exclusive Messages” (*Appendix B*).

FREE

The FREE function will display how many bytes are free to record songs on a diskette. Low-density diskettes are formatted to allow up to 696K bytes of song data. High-density diskettes are formatted to allow up to 1392K bytes of song data. Before recording a piece, it may be wise to affirm that there is sufficient space with this function.

```

  466K Bytes Free
  Press STOP...
  
```

**FORMAT**

The FORMAT function initializes a 3.5 inch high-density or low-density diskette into PianoDisc format so that it may be used for recording and playback on the PDS-128Plus.

CAUTION Formatting a floppy diskette completely erases any information on the diskette. Be certain that the diskette is the correct density. The write protect notch **MUST** be closed to format.

To Format A Current PianoDisc Diskette:

If the diskette was already formatted for PianoDisc format, insert the disk and access the format function. Select the density of the disk by pressing the appropriate key below the value (High Density: 1.44M, Low Density: 720K). Press the button below "OK" and then "YES" to continue.

To Format A New Diskette (unformatted or pre-formatted):

Insert the new diskette into the floppy drive. A message will appear asking if you want to format the disk. Select "Yes." Select the density of the disk by pressing the appropriate key below the value (High Density: 1.44M, Low Density: 720K). Press the button below "OK" and then "YES" to continue.

To Format Other Disks (such as one "pre-formatted" for DOS or Windows):

Insert a previously formatted PianoDisc diskette. Access the format function. Select the density of the disk by pressing the appropriate key below the value (High Density: 1.44M, Low Density: 720K). Eject the disk and place the disk to be formatted in the floppy drive. Press the button below "OK" and then "YES" to continue.

Front Panel Functions

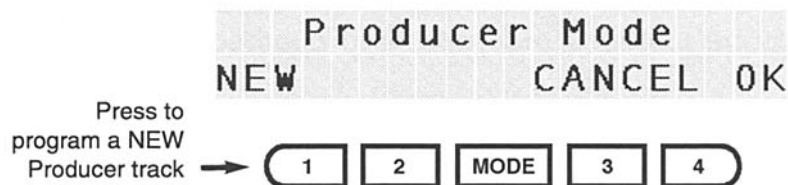
PRODUCER

P

The PRODUCER TRACK function permits one to customize diskettes by specifying which songs are to be played and in what order. Up to 99 songs may be chosen and a song may be repeated as often as desired. Once a PRODUCER TRACK is programmed and saved, it will remain on the diskette.

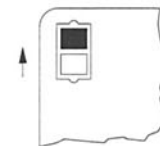
To play a diskette with a PRODUCER TRACK, insert the diskette, press the [PRODUCER] button, and then press PLAY. When the PRODUCER TRACK is controlling playback, the green light next to the PRODUCER button will remain lit.

Pressing the [PRODUCER] button toggles PRODUCER mode—displaying the screen below, with a slight delay, giving you the option of manually overriding (or accelerating) the toggle by turning “off” (CANCEL) or “on” (OK). If you do not override the “toggle,” after a few seconds, the main song display window will re-appear, with PRODUCER toggled from its last state.



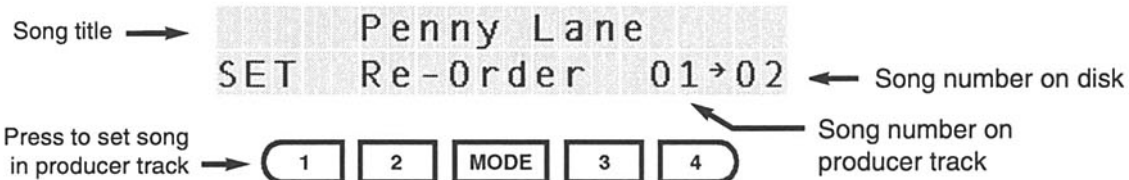
WRITE-ENABLE
(before adding producer track)

To add a new PRODUCER TRACK or to replace a previous one, first write-enable the diskette by sliding the plastic tab toward the center of the diskette. After adding the PRODUCER TRACK, remember to write-protect the diskette by sliding the plastic tab back toward the edge.



WRITE-PROTECT
(after adding producer track)

Use [SCAN] buttons to *select* songs from the disk; press SET to confirm each song's place (*song number*) in the producer track sequence



- To exit the PRODUCER menu without saving, press [STOP].
- To save your new PRODUCER TRACK on its diskette, press PLAY when finished setting up your programming (playback order). Then, eject the diskette to flip the write-protect tab.
- When you wish to activate PRODUCER Mode, press the PRODUCER button—your PRODUCER TRACK is then invoked to command the order of song playback. Just press PLAY to begin!

RECORD

The RECORD function is a one-pass, real time MIDI recorder capable of saving MIDI data on all 16 MIDI channels (if used with an external MIDI Device). Any information (including note info, pitch bends, system exclusive data, etc.) sent to the PDS-128Plus can be recorded and saved on the diskette. Two possible sources of MIDI data for recording on the PDS-128Plus are the piano keyboard (Record Option installed) and an external MIDI device, such as a keyboard or a sequencer. To record a musical performance, first check to make sure that all MIDI cables have been properly connected.

Recording From the Piano Keyboard

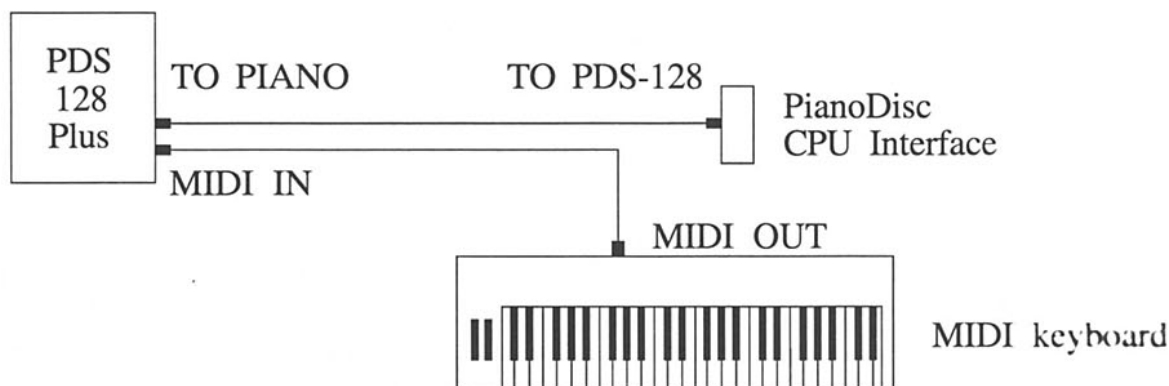
With the Record Option, the piano keyboard becomes a MIDI controller, allowing musical performances to be recorded directly from the acoustic piano and replayed by the PianoDisc system.

Note: MIDI IN must be set to record from PIANO for this type of recording. Also, the piano performance **only** (MIDI channel 1) is saved to disk (*i.e.*, no symphony parts will be saved for playback).

Recording From an External MIDI Device

To record from an external keyboard, computer, or any MIDI-equipped device, connect the MIDI cables as shown below. The PDS-128Plus will record MIDI data received at the MIDI IN port on all 16 MIDI channels.

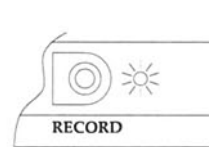
Note: MIDI IN must be set to record from MIDI IN for this type of recording



PDS-128Plus Recording Procedure

1. Insert a diskette into the PDS-128Plus. (The diskette must first be write-enabled). It is not recommended that a pre-recorded diskette, such as one from the PianoDisc Music Library, be used for recording. It is better to record with a new diskette, formatted on the PianoDisc system. (See "FORMAT" sub-section for a description of the formatting process).
2. To prepare the PDS-128Plus for recording, press the [RECORD] button. The display will change as shown below. The red light next to the RECORD button will begin flashing, indicating that the PDS-128Plus is set to begin recording MIDI data onto the diskette (or an *MX* library, with *MX* option) at the next command.

```
Ready To Record
metro SLOWER FASTER
```



Flashing red light indicates PDS-128Plus is prepared to start recording.

3. Now, you have the option of engaging the metronome (for use during recording or simply practicing!). If you do not wish to use the metronome, skip to step 4. To activate the metronome, press [1]. The display will change from "metro" (lower case) to "METRO" (upper case), and you will hear the metronome *bell*. To toggle metronome "off" press [1] again. To adjust the metronome tempo, use the [3] and [4] buttons.

```
Ready To Record
METRO SLOWER FASTER
```

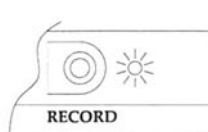
Note: Neither the volume nor the sound of the metronome can be changed.

4. When you are ready to start recording, press the [RECORD] button again. If you have enabled the metronome, you will notice the metronome "bell" change to a standard metronome "tick" upon pressing [RECORD]. After a slight delay, the PDS-128Plus will begin saving incoming data to the diskette. If RECORD is initiated from within *MX*, data will be saved to the *active MX* library.

Tip: You can also press the damper (rightmost) pedal to trigger recording.

When you have finished recording, press [STOP]. The new song and its number on the diskette will appear on the display. For more information on naming the newly recorded song, see the NAME sub-section.

RECORDING
Press STOP To End...



Red light will stay on, indicating that PDS-128Plus is recording MIDI data, if any.

Using Symphony Accompaniment While Recording

If your PDS-128Plus is equipped with the Symphony option, you can accompany your performance with an instrument while recording.*

1. Enable Accompaniment mode (see ACCOMPANIMENT sub-section).
2. Choose your accompanying instrument using the [1] and [4] buttons.
3. To prepare for recording, press [RECORD]. The display will appear as shown below, and the red light adjacent to the [RECORD] button will begin flashing, indicating that the PDS-128Plus is set to begin recording MIDI data onto the diskette (or an *MX* library, with *MX* option) at the next command.

Ready To Record
Accompaniment Active



Flashing red light indicates PDS-128Plus is prepared to start recording.

4. When you are ready to record, press [RECORD] again.
5. When you have finished recording, press [STOP].

***Note:** The accompanying instrument will **not** be recorded. Neither the accompanying instrument nor the volume can be changed.

Section IV

CD Mode

PDS-128Plus “CD Mode”

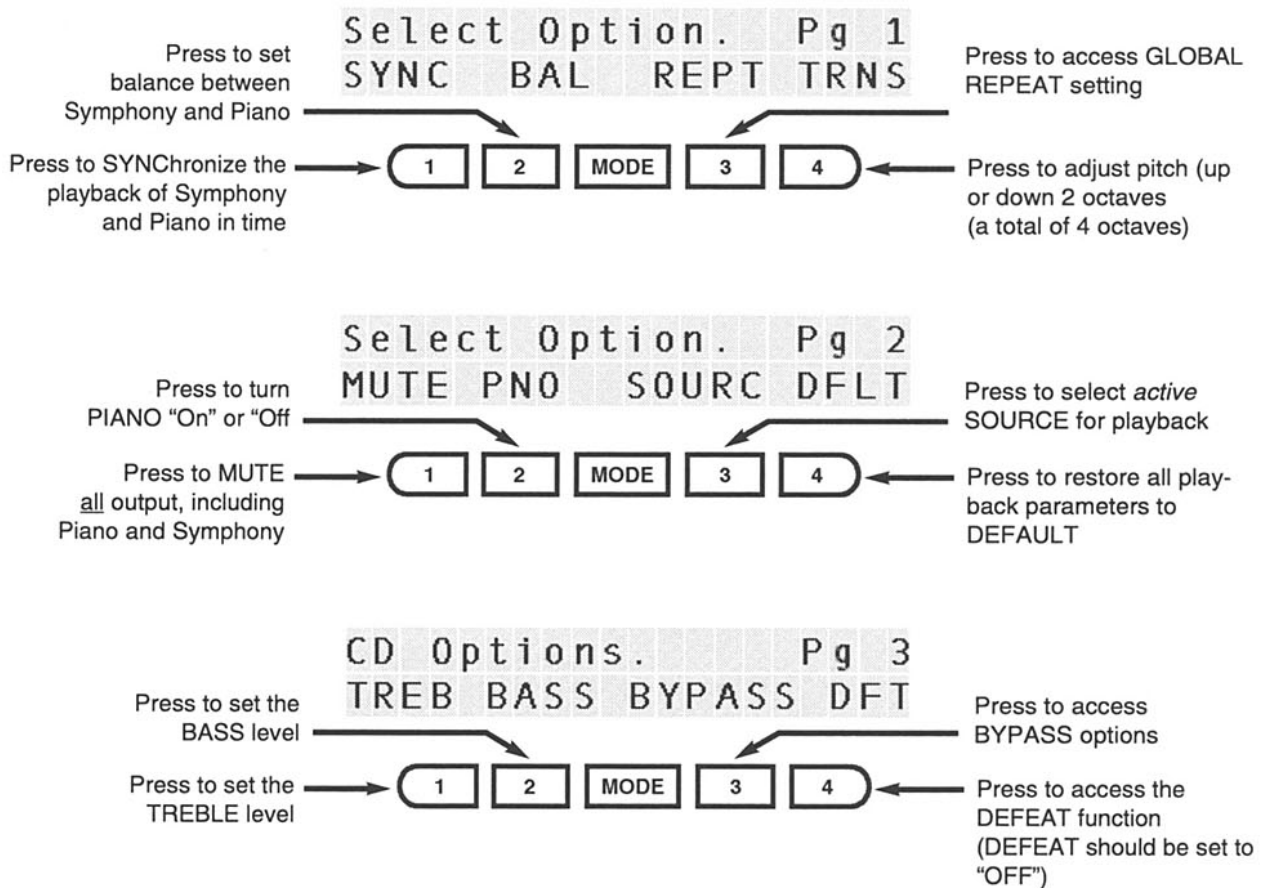
Selecting CD MODE



To play back from CD, go to the SOURCE menu, and select CD.

The Mode Pages

Push the MODE button to display more functions than are immediately available on the PDS-128Plus front panel. The first page of functions (viewed by pressing MODE) contains SYNC, BALANCE, REPEAT and TRANSPOSE. The second page (viewed by pressing MODE again) contains MUTE, PIANO, SOURCE, and DEFAULT. The third page contains TREBLE, BASS, BYPASS, AND DEFEAT.



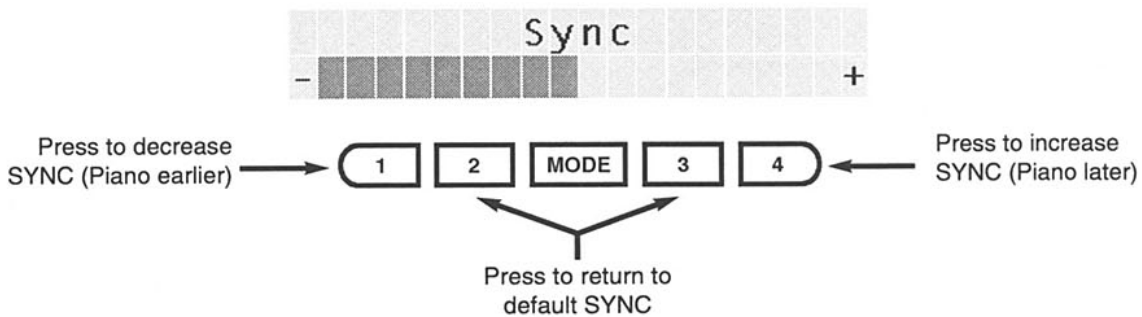
Mode Page #1

MODE

SYNC

MODE — 1: SYNC

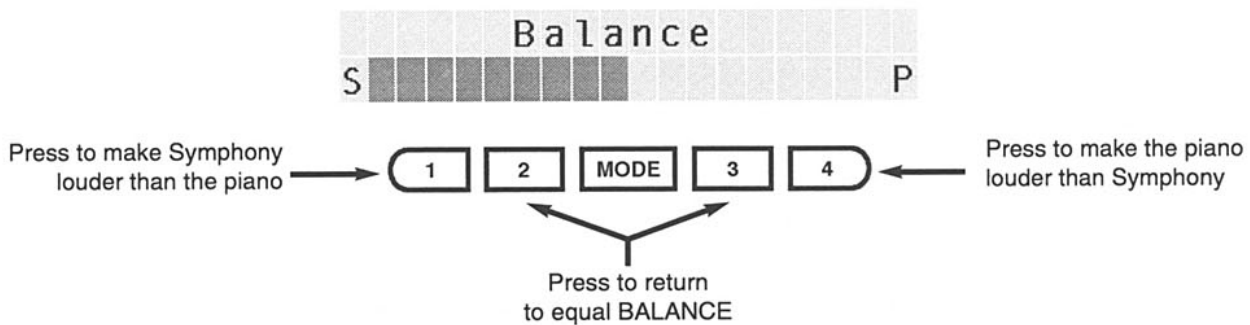
The SYNC function permits adjustments in timing so that the tones of the piano coincide with those of the accompaniment. This allows the listener to make minor adjustments to achieve good synchronization of the music. Decreasing the SYNC, by pressing the [1] button, will move the piano forward in time (makes the piano play earlier relative to the accompanying music). Increasing the SYNC, by pressing the [4] button, will move the piano backward in time (makes the piano play later relative to the accompanying music).



BALANCE

MODE — 2: BAL

The BALANCE function controls the mix, or relative volumes, between the symphony and piano outputs of the PianoDisc system. Moving the bar display toward the “S” (by pressing the [1] button) raises the volume of the symphony portion of the music relative to the piano (*i.e.*, by decreasing the piano volume, the PDS-128Plus effectively makes the symphony louder than the piano). Moving the bar display toward P (pressing the [4] button) raises the volume of the piano relative to the symphony (*i.e.*, by decreasing the symphony volume).



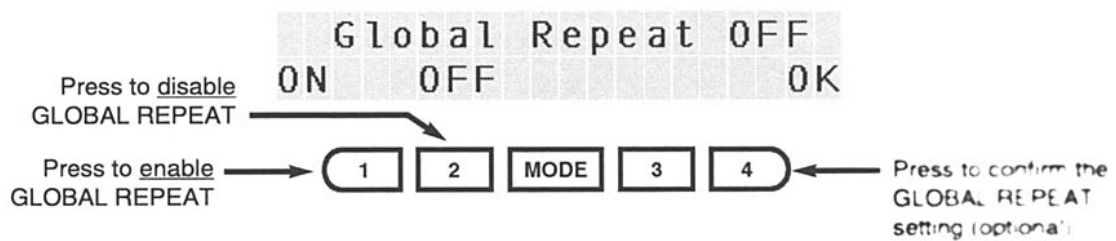
GLOBAL REPEAT

MODE — 3: REPT

GLOBAL REPEAT offers our users the potential of uninterrupted playback circulating through all of their Input Sources (Diskette, PianoCD, and *MX*).

If you do not own both the PianoCD and the *MX* option, you likely can still benefit somewhat from this function. Locate below your specific device configuration to determine how you can benefit from GLOBAL REPEAT.

To enable GLOBAL REPEAT, follow “flow diagram” above, then choose “ON” [1] followed by “OK” [4]. To disable, choose “OFF” [2], then “OK” [4].



Note: When GLOBAL REPEAT is engaged, “GlobRp” will appear in the lower left hand corner of the display.

Setup #1: PDS-128Plus, with *MX* option, and *PianoCD* unit in “link mode” (see *PianoCD User’s Guide* for “link mode” directions).

With this setup, you can enjoy the full benefits of GLOBAL REPEAT. Simply enable GLOBAL REPEAT, then choose whichever source you please to begin your playback “loop.” Press [PLAY], and your PianoDisc system will cycle through the sources beginning with your chosen source...and continue the loop until you [STOP] it.

Setup #2: PDS-128Plus, with *MX* option, and a typical home CD player (connected per *Appendix F*).

After enabling GLOBAL REPEAT, choose CD as your SOURCE, then press the “Play” button on your CD player. Playback will circulate from CD through *MX* and then through Diskette. However, it will stop upon returning to CD Mode.

Setup #3: PDS-128Plus, with *MX* option (no CD source).

After enabling GLOBAL REPEAT, begin playback from within *MX* (SOURCE:MX). Playback will continue through Diskette Mode, stopping at CD Mode.

Setup #4: PDS-128Plus, with PianoCD unit in “link mode” (no *MX* option installed).

Enable GLOBAL REPEAT. Start playback in either Diskette Mode or CD Mode. Playback will “loop” until you press [STOP].

Setup #5: PDS-128Plus, with a typical home CD player (connected per *Appendix F*) (no *MX* option installed).

Enable GLOBAL REPEAT. Start playback in CD Mode. Playback will proceed through Diskette Mode, stopping back at CD Mode.

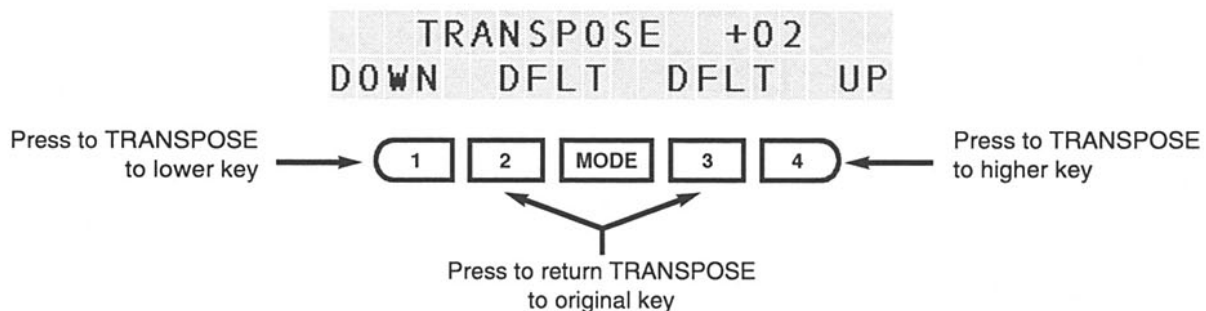
Setup #6: PDS-128Plus, alone.

The PDS-128Plus **alone** gains no functionality from GLOBAL REPEAT. To take advantage of GLOBAL REPEAT, attach your external CD player (per *Appendix F*) or the enhanced PianoDisc *PianoCD*.

TRANSCOPE

MODE — 4: TRNS

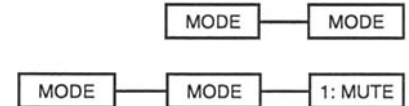
This TRANSCOPE function enables the user to lower the key of a PianoDisc CD performance. You can change the pitch in half-step increments...up to two octaves in each direction (“up” and “down”), for a range of 4 octaves! Go to the TRANSCOPE screen, then use [1] and [4] to move the key “up” or “down” (respectively). Pressing either [2] or [3] will restore playback to the original pitch.



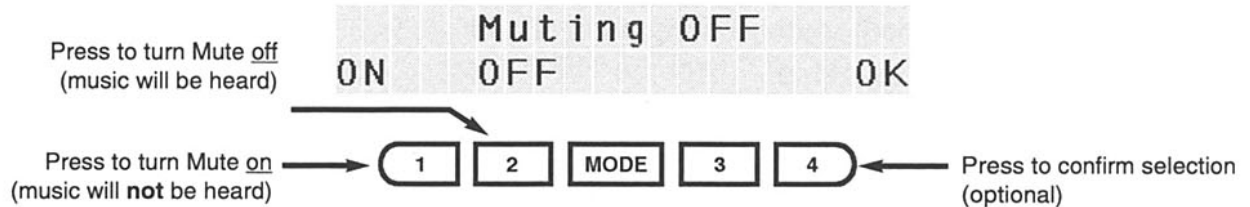
Note: If the CD being played contains a *Live!* audio accompaniment, it will automatically be muted as you transpose “up” or “down.” When you reach *octave points* (-24, -12, 0, 12, 24), audio playback will resume, matching the transposed key. When the audio is muted, “TrMute” will be shown on the lower left corner of the display.

Mode Page #2

MUTE



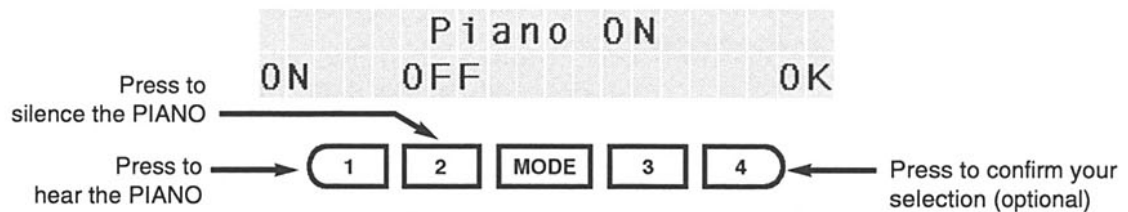
The MUTE function silences all output of the PianoDisc system, both piano and accompanying music. After selecting MUTE, choose ON or OFF ([1] or [2]), then OK ([4]). The display will show "Mute" when MUTE is ON.



PIANO



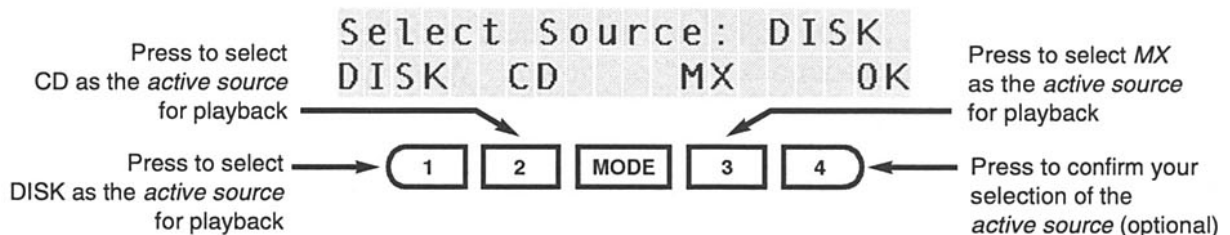
The PIANO function engages and dis-engages output to the piano. Regardless of the setting, accompanying music will continue to be heard. If PIANO is set to OFF, the piano output will be silenced; therefore, set PIANO to ON for normal operation.



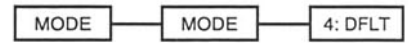
SOURCE



This menu item enables you to choose your playback source. To play from a CD, go to the SOURCE menu, and select CD.



DEFAULT



The DEFAULT function will reset ALL CD mode parameters to their factory settings.

Mode Page #3

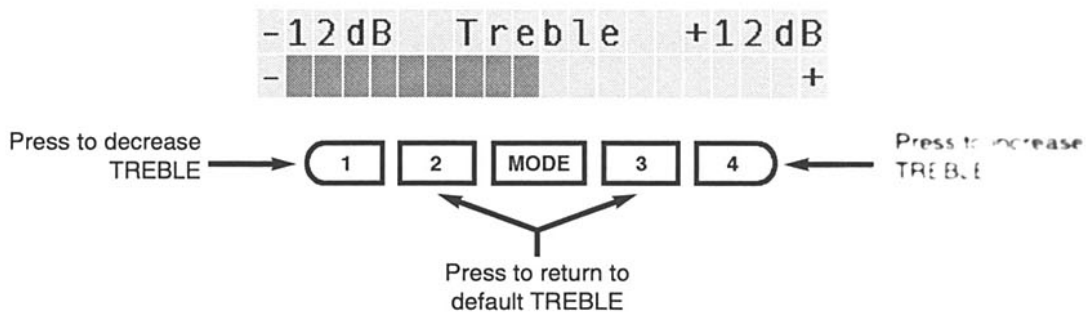


Note: The Menu items listed below are specific to CD Mode.

TREBLE



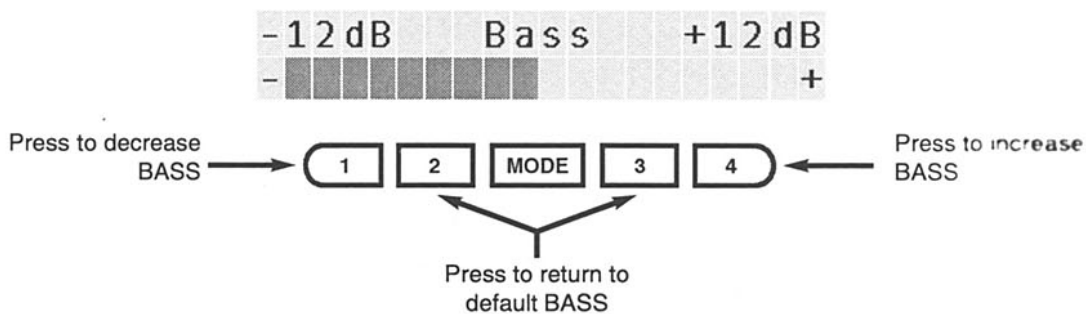
The TREBLE function adjusts accompanying music from the CD. The TREBLE may be decreased (by pressing the [1] button) down to -12dB. The TREBLE may be increased (by pressing the [4] button) up to +12dB.



BASS



The BASS function adjusts accompanying music from the CD. The BASS may be decreased (by pressing the [1] button) down to -12dB. The BASS may be increased (by pressing the [4] button) up to +12dB.

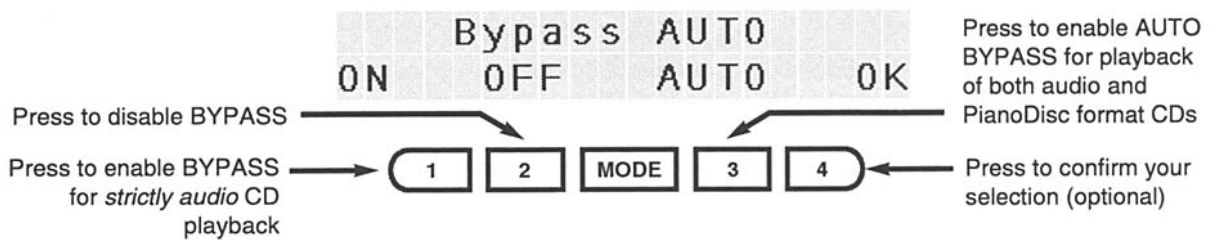


BYPASS

MODE — MODE — MODE — 3: BYPASS

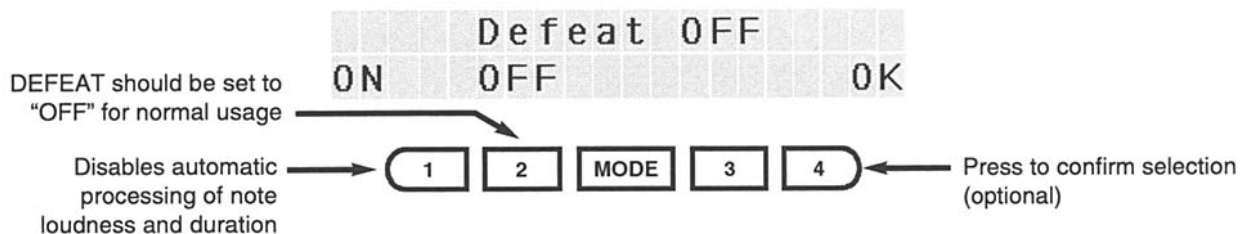
The BYPASS function allows both the left and right music channels of standard Compact Discs (CDs) to be passed directly through the PDS-128Plus system to the stereo speakers. When BYPASS is ON, the piano will not play. (When BYPASS is “On,” the indicator “Bypass” will appear in the lower left hand of the display.) BYPASS should never be engaged while playing a PianoDisc Format (PDS) compact disc, because doing so will send a high level data signal to the right channel of the stereo speakers. (This may be very objectionable to the listener!) Set BYPASS to OFF during normal operation.

If you frequently switch between playing PianoDisc CDs and standard audio CDs—or, if you load a multiple “CD changer” with a combination of PianoDisc CDs and standard audio CDs—set BYPASS to AUTO ([3]). Set thus, the PDS-128Plus will dynamically “sense” the kind of CD which is playing, and will automatically switch to and from BYPASS mode according to the requirements of each disk!

**DEFEAT**

MODE — MODE — MODE — 4: DFT

The DEFEAT function disables the normal operation of the CD mode. DEFEAT OFF allows the PDS-128Plus to process the loudness and duration of the notes to insure the best possible performance on the piano. Turning DEFEAT ON disables this adjustment, and should not be done for normal usage. Set DEFEAT to OFF for normal operation.



Section V

MX Mode

MX (Music eXpansion) Option

If you own this option, you can enjoy many benefits others do not. Read a sampling below:

- 25 hours of free music are pre-installed for our customers.
- Large memory capacity can store...
...music copied from diskettes.
...your own recorded performances, if you have the **RECORD** option.
- Completely silent operation! The PianoDisc *MX* memory system has no moving parts; thus, it is **incapable** of suffering electro-mechanical failure.
- *MX* contains 12 standard libraries, which can be renamed and/or their content entirely customized.
- You can create the playback scheme you want and play as much or as little music as you like in a sitting, from any library or combination of libraries! Select or exclude songs or libraries, and even set your own playback order.
- Also, mix and match multiple formats, *e.g.*, store PianoDisc, Standard MIDI Files Type 0 (see *Appendix C*), and PianoSoft songs side-by-side, within the same libraries (see *Appendix C* for important notes regarding other formats).

MX Improvements in Functionality

When the 128Plus is in *MX mode*, the first two MODE pages, their sub-menus, and functions are nearly identical to those in DISK MODE. Use them for the same purposes. (For an explanation of these, see entire "Diskette Mode" section.)

Some functions are adapted to give you more control in conjunction with your *MX*. These cases are spelled out below, and, due to our user-friendly focus, are readily accessible from the menus.

PDS-128Plus “MX Mode”

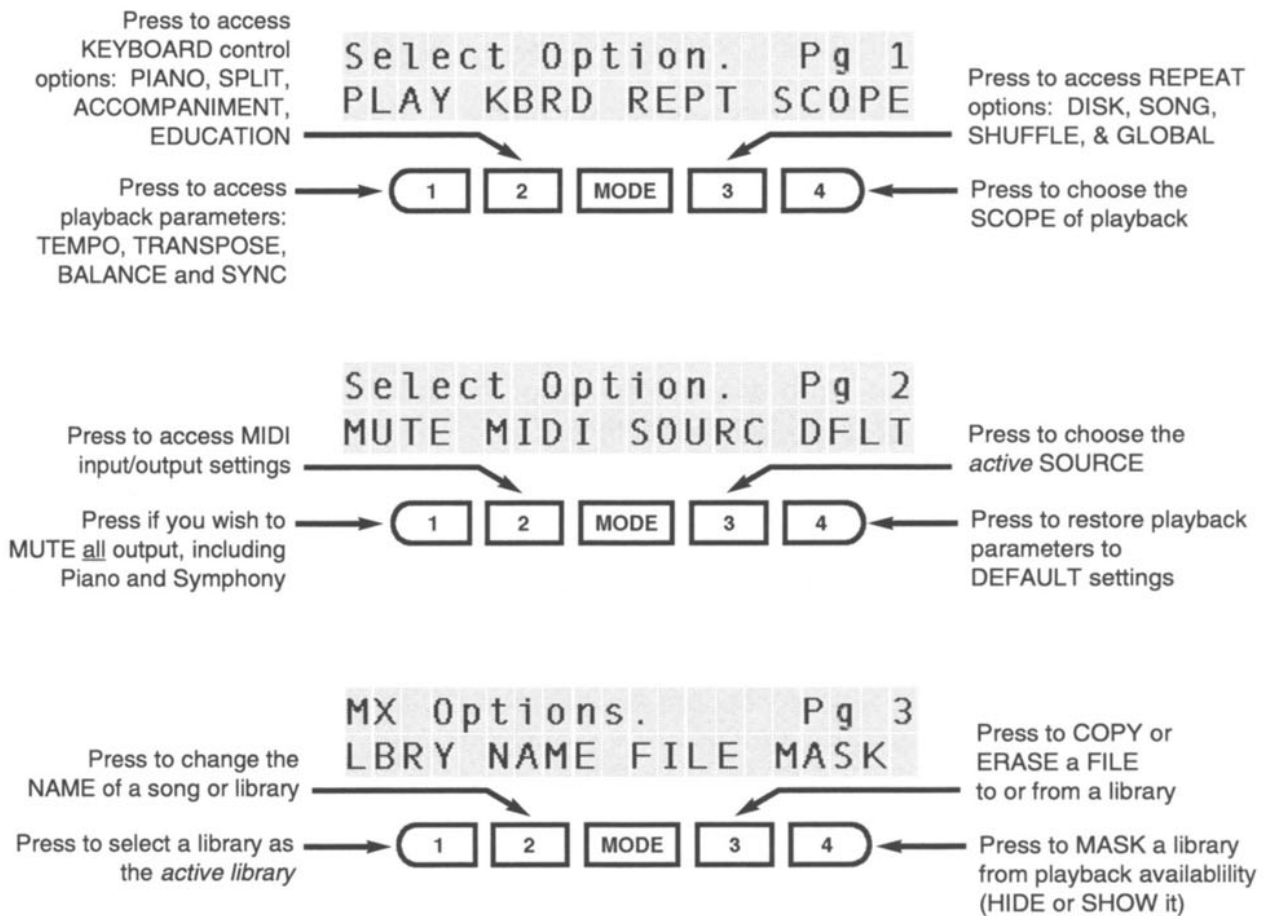
Selecting MX MODE



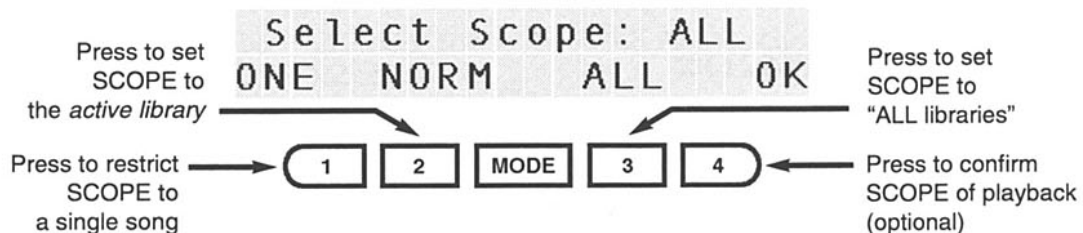
To play back from (or record onto) *MX*, go to the SOURCE menu, and select *MX*.

The Mode Pages

Push the MODE button to display more functions than are immediately available on the PDS-128Plus front panel. The first page of functions (viewed by pressing MODE) contains PLAY, KEYBOARD, REPEAT and SCOPE. The second page (viewed by pressing MODE again) contains MUTE, MIDI, SOURCE, and DEFAULT. The third page contains LIBRARY, NAME, FILE, and MASK.



MX Expands Pre-existing options to Offer Increased Functionality



SCOPE [Mode Page #1] is adapted in *MX* Mode to give you the ability to limit playback to either one song (ONE), the active library (NORM), or all libraries (ALL). See sub-section "How to Use *MX* for Comprehensive Control of Your Music Playback" below for examples of the power this gives you in customizing your music playback!

GLOBAL REPEAT



GLOBAL REPEAT offers our users the potential of uninterrupted playback circulating through all of their Input Sources (Diskette, PianoCD, and *MX*).

If you do not own both the PianoCD and the *MX* option, you likely can still benefit somewhat from this function. Locate below your specific device configuration to determine how you can benefit from GLOBAL REPEAT.

To enable GLOBAL REPEAT, follow "flow diagram" above, then choose "ON" [1] followed by "OK" [4]. To disable, choose "OFF" [2], then "OK" [4].

Setup #1: PDS-128Plus, with *MX* option, and *PianoCD* unit in "link mode" (see *PianoCD User's Guide* for "link mode" directions).

With this setup, you can enjoy the full benefits of GLOBAL REPEAT. Simply enable GLOBAL REPEAT, then choose whichever source you please to begin your playback "loop." Press [PLAY], and your PianoDisc system will cycle through the sources beginning with your chosen source...and continue the loop until you [STOP] it.

Setup #2: PDS-128Plus, with *MX* option, and a home CD player (see *Appendix F*).

After enabling GLOBAL REPEAT, choose CD as your SOURCE, then press the "Play" button on your CD player. Playback will circulate from CD through *MX* and then through Diskette. However, it will stop upon returning to CD Mode.

Setup #3: PDS-128Plus, with *MX* option (no CD source).

After enabling GLOBAL REPEAT, begin playback from within *MX* (SOURCE:MX). Playback will continue through Diskette Mode, stopping at CD Mode.

Setup #4: PDS-128Plus, with PianoCD unit in “link mode” (no *MX* option installed).

Enable GLOBAL REPEAT. Start playback in either Diskette Mode or CD Mode. Playback will “loop” until you press [STOP].

Setup #5: PDS-128Plus, with a typical home CD player (connected per *Appendix F*) (no *MX* option installed).

Enable GLOBAL REPEAT. Start playback in CD Mode. Playback will proceed through Diskette Mode, stopping back at CD Mode.

Setup #6: PDS-128Plus, alone.

The PDS-128Plus **alone** gains no functionality from GLOBAL REPEAT. To take advantage of GLOBAL REPEAT, attach your external CD player (per *Appendix F*) or the enhanced PianoDisc *PianoCD*.

Mode Page #3

All the functions accessed through the third mode page are unique to the *MX*. Immediately below we will show you how to access and use them in basic ways. Then, we will show you how to combine them with those from the two general mode pages—to harness the full capabilities of your *Music eXpansion* option!

LIBRARY



This option lets you choose the active library. This is where your playback will start. Use the [SCAN] buttons to scroll through the libraries. When you find the one you want, press [1] (OK) to make it the active library.

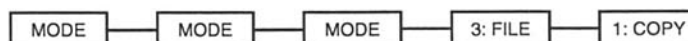
Remember: If SCOPE is set to NORM, the PDS-128Plus will treat the active library as a disk, and your playback will be restricted to the active library; if SCOPE is set to ALL, playback will begin within the active library and continue through the available libraries.

NAME



To NAME (or rename) a SONG, choose the [2] button. To NAME a LIBRARY, press [1]. Whether you are renaming a SONG or a LIBRARY, the remaining steps of this procedure are identical to using the NAME function in Diskette Mode.

FILE COPY

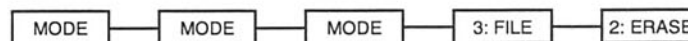


First, go to FILE:COPY (see flow diagram above). To COPY one song at a time, choose SONG [2]. Use the familiar [SCAN] buttons to select the library you wish to COPY to, then select “OK” [1]. Next, select the song you wish to copy (again, use the [SCAN] buttons), and “OK” [1]. Finally, press [4] to OK the copying process.

Or, you can copy an entire disk in one simple process. Choose FILE:COPY:DISK. Using the [SCAN] buttons, select the library you intend to COPY to, then “OK” [1]. Finally, answer “OK” to the confirmation question.

Note: COPYing an entire diskette may require a few minutes.
DO NOT interrupt this process!

FILE ERASE



If you find a song in *MX* that you would rather omit from occasional playback, use the PRODUCER function, described in the PRODUCER sub-section.

If, however, you want to delete the song entirely, follow the steps below.

First, select the library containing the song you despise (see the LIBRARY function for details on how to choose a library as the “active library”). Then, go to FILE:ERASE (see flow diagram above). Choose SONG [2] to ERASE one song at a time. Using the [SCAN] buttons, find the song you wish to ERASE, then OK [1]. You will see a warning message, and—if you’re sure you want to remove the selected song entirely from its library—answer OK [4]. If not, press [STOP], and your song will remain untouched.

Note: ERASing an individual song may require a few minutes.
DO NOT interrupt this process!

Or, you can empty an entire library. First, select the library whose contents you wish to delete. Next, choose FILE:ERASE:LBRY. Warning: Be sure you are ready to **delete** (permanently) all contents of the Active Library before you answer YES [4]. When in doubt, press NO [3]. Or, to be safe, press [STOP]! (Thus you avoid risking the slipping of a finger to button [4].)

MASK

MODE — MODE — MODE — 4: MASK

This option allows you to exclude certain libraries from playback programming. Hiding a library causes the *MX* to treat it as if it doesn't exist!

To (temporarily) disable a library from playback, choose HIDE [1] (As typical, use the [SCAN] buttons to find the library you wish to forget or feature.). To re-enable the library, choose SHOW [2]. Voila! It is now ready for playback. To reset all libraries to SHOW, simply choose RESET [4] from the MASK menu options.

Important Qualification: When disabling libraries, *MX* protects you from “losing your way” by preserving the availability of the first library (it cannot be masked).

How to Use the *MX* for Comprehensive Control of Your Music Playback

REPEAT Options

MODE — 3: REPT

These options accomplish the same purpose as in Diskette Mode, except that REPEAT:DISK in *MX* mode gains functionality from the SCOPE setting. If SCOPE is set to NORM, REPEAT:DISK amounts to “repeat current library”; if SCOPE is set to ALL, REPEAT:DISK amounts to “repeat all libraries.”

SHUFFLE

MODE — 3: REPT — 3: SHFL

This option gains flexibility from the other custom playback features highlighted in this section. For instance, when SCOPE is set to NORM (current library), SHUFFLE will randomly play only the songs within the current library. However, if SCOPE is set to ALL, SHUFFLE will randomly play songs while advancing through all libraries.

PRODUCER

P

To master the basic capabilities of our PRODUCER function, refer to the PRODUCER sub-section of Diskette Mode (Section III) for step-by-step instructions.

The *MX* PRODUCER function differs from that of Diskette Mode, by...

1. Allowing you to program non-PianoDisc songs in your PRODUCER Track.
2. Enabling you to create an independent PRODUCER Track for each library.

Transform Your Listening Experience by Combining Functions!

Here is where the true power of *MX* emerges! Since each library is allowed its own PRODUCER TRACK, you can program songlists (independent PRODUCER Tracks) for various libraries, and play back **only** those songs on your songlists. You can, of course, restrict playback to a single library's songlist [SCOPE:NORM], OR you can play back from all libraries' songlists [SCOPE:ALL]. Add some REPEAT:SHUFFLE, and PianoDisc's *MX* will randomly play through **only** the selections you prescribed on your songlist(s) (from either a single library or all libraries, depending on SCOPE setting).

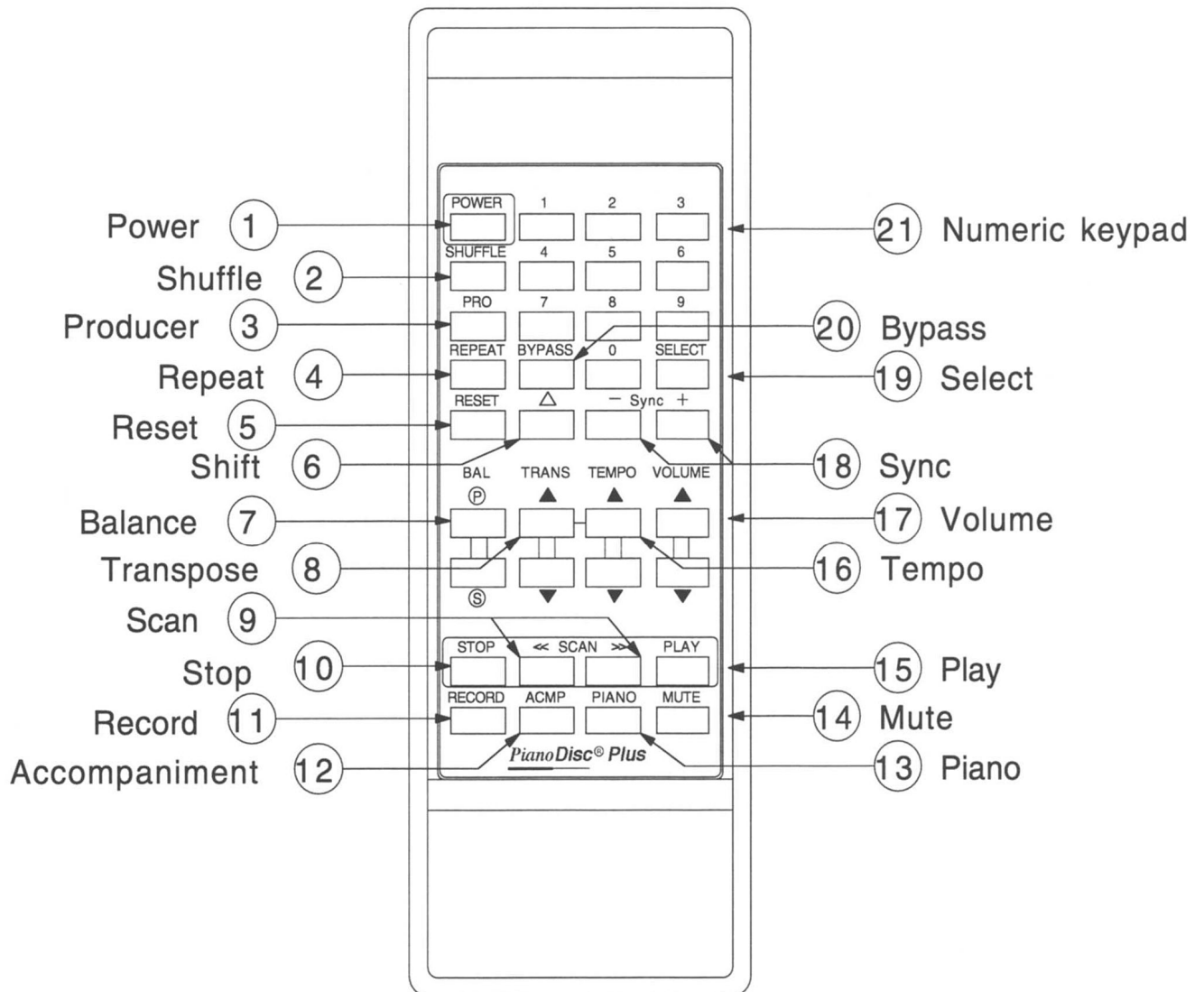
And that's not all! You can actually MASK out any libraries whose songlists you want to exclude from playback (when in SCOPE: ALL). MASK:HIDE removes a library (or as many as you wish) from the menus and temporarily disables it from playback consideration. Voila! you have the ability to play back **only** the songs you want from **only** the libraries you choose!

Consider the following example: Perhaps you have a library of "Christmas" music, which you wish to exclude from ALL playback after December 25. Simply MASK:HIDE it and forget about it until next season; then, choose MASK:SHOW, and select "Christmas" to reveal it and make it available for playback. Its PRODUCER TRACK remains intact, so you are ready to play the music you want!

Section VI

Remote Control

Remote Control



1. **POWER:** Power on, off. Shift Power will toggle the remote type (from Disk Mode or MX Mode: unavailable from CD Mode).
2. **SHUFFLE:** Plays back songs in random order. To turn the SHUFFLE mode off, simply press the button again.
3. **PRODUCER:** Used for advanced playback customization.

4. **REPEAT:** Accesses repeat menu for song or disk repeat playback. Use the numeric keypad to make selections.
5. **RESET:** The RESET button returns an individual parameter (such as VOLUME, BALANCE, etc.) to its default value. First select the function to change, then press the reset button.
6. **SHIFT:** Used in conjunction with the numeric keypad to access advanced functions. For instance: Access the Source menu options by pressing and holding shift while pressing [1] (to select Diskette Mode); [2] (CD Mode); or [3] (MX Mode).
7. **BALANCE:** Controls the relative loudness between the piano and the accompaniment.
8. **TRANSPOSE:** Raises or lowers the pitch of the song in half-step increments, up to two full octaves (24 keys) in either direction.
9. **SCAN:** Forward SCAN (>>) steps through song selections. During playback it will fast-forward if held down, and it will advance to next song if pressed quickly. Reverse SCAN (<<) steps through song selections in the reverse order. If pressed quickly during playback, it will return to the beginning of the song being played.

These buttons can also be used to with [Shift] to select accompaniment instruments.

10. **STOP:** Stops playback or exits the current mode.
11. **RECORD:** Records song data onto the diskette or into an MX library.
12. **ACCOMPANIMENT:** Accesses the Accompaniment Mode for use with the Symphony module or external tone generator.
13. **PIANO:** Toggles piano playback.
14. **MUTE :** Silences both the piano and Symphony output. To turn on output, simply press the button again.
15. **PLAY:** Begins playback. If playback is in progress, this button toggles the pause feature.
16. **TEMPO:** Changes the speed of song playback.
17. **VOLUME:** Increases or decreases the volume.

18. **SYNC:** SYNC allows you to align the piano notes with the Symphony or CD music.
19. **SELECT:** Used in conjunction with the numeric keypad to select numeric entries. This includes directly selecting songs or selecting sounds in Accompaniment Mode.
20. **BYPASS:** When in CD mode, this function cycles through BYPASS options (see sub-section on “BYPASS” under “CD Mode” Section).

When in Disk mode, it engages PASSTHROUGH, enabling external MIDI equipment to pass MIDI data through the PDS-128Plus MIDI IN port and play it on the PianoDisc system (Piano Ch 1, Synth Ch 2-16). (See *Appendix G* for information on attaching cables to the PDS-128Plus.)

21. **NUMERIC KEYPAD:** Used to enter numeric information.

Direct Song Access

When a song title is showing on the PDS-128Plus front panel display, you may go directly to the song of your choice by pressing the number of the song and then pressing the SELECT button. For example, if you would like to listen to song number 12, press button [1], then button [2] and then press SELECT. Song number 12 will then appear on the display.

Remote Control Type

Information

The original PDS-128 remote control was equipped to function with the PDS-128 control box. The PDS-128Plus remote control is an enhanced design which includes the functionality of the previous remote control in addition to the controls for the CD mode of the PDS-128Plus.

It is not necessary to use the **Remote Control Type** function unless the user has misplaced the new remote and has one for the PDS-128, or for some other reason would use the PDS-128 remote. In any case, it is best to use the remote that corresponds to your control box.

If there is a problem with your remote, make sure fresh batteries are installed. To determine your remote type, compare the remote to the picture at the beginning of this section ("Remote Control"), which is the PDS-128Plus Remote Control.

To ensure your remote is working, insert a PianoDisc diskette and press the "1" button on the remote control. If a "1" is displayed on the display, then you have the correct remote control type setting. If the number "4" is displayed, you have an old PDS-128 remote, and need to change the remote type as described below.

Changing Remote Type

By pressing the shift (▲) button and the power button at the same time, the remote type will toggle and the display will indicate the remote type to which you have changed. Press these two buttons together again to set the type back to the previous setting, and the display should indicate this change. The remote type can only be changed from diskette or *MX* mode.

Section VII

Appendices

Appendix A

Accompaniment Mode Instrument List

Listed below are all the “accompanying” sounds available for use on the PDS-128Plus when accessing the ACCOMPANIMENT mode. You may select any one of these sounds to “accompany” your piano performance.

01	Acoustic Grand Piano	44	Contrabass	87	Lead 7 (fifths)
02	Bright Acoustic Piano	45	Tremolo Strings	88	Lead 8 (bass+lead)
03	Electric Grand Piano	46	Pizzicato Strings	89	Pad 1 (new age)
04	Honky-Tonk Piano	47	Orchestral Harp	90	Pad 2 (warm)
05	Electric Piano 1	48	Tympani	91	Pad 3 (polysynth)
06	Electric Piano 2	49	String Ensemble 1	92	Pad 4 (choir)
07	Harpsichord	50	String Ensemble 2	93	Pad 5 (bowed)
08	Clavinet	51	Synth Strings 1	94	Pad 6 (metallic)
09	Celesta	52	Synth Strings 2	95	Pad 7 (halo)
10	Glockenspiel	53	Choir Aahs	96	Pad 8 (sweep)
11	Music Box	54	Voice Ooohs	97	FX 1 (rain)
12	Vibraphone	55	Synth Voice	98	FX 2 (soundtrack)
13	Marimba	56	Orchestra Hit	99	FX 3 (crystal)
14	Xylophone	57	Trumpet	100	FX 4 (atmosphere)
15	Tubular Bells	58	Trombone	101	FX 5 (brightness)
16	Dulcimer	59	Tuba	102	FX 6 (goblins)
17	DrawBar Organ	60	Muted Trumpet	103	FX 7 (echoes)
18	Percussive Organ	61	French Horn	104	FX 8 (sci-fi)
19	Rock Organ	62	Brass Section	105	Sitar
20	Church Organ	63	Synth Brass 1	106	Banjo
21	Reed Organ	64	Synth Brass 2	107	Shamisen
22	Accordion	65	Soprano Sax	108	Koto
23	Harmonica	66	Alto Sax	109	Kalimba
24	Tango Accordion	67	Tenor Sax	110	Bag Pipe
25	Acoustic Guitar (nylon)	68	Baritone Sax	111	Fiddle
26	Acoustic Guitar (steel)	69	Oboe	112	Shanai
27	Electric Guitar (jazz)	70	English Horn	113	Tinkle Bell
28	Electric Guitar (clean)	71	Bassoon	114	Agogo Bells
29	Electric Guitar (muted)	72	Clarinet	115	Steel Drums
30	Overdriven Guitar	73	Piccolo	116	Woodblock
31	Distortion Guitar	74	Flute	117	Taiko Drum
32	Guitar Harmonics	75	Recorder	118	Melodic Tom
33	Acoustic Bass	76	Pan Flute	119	Synth Drum
34	Electric Bass (finger)	77	Blown Bottle	120	Reverse Cymbal
35	Electric Bass (pick)	78	Shakuhachi	121	Guitar Fret Noise
36	Fretless Bass	79	Whistle	122	Breath Noise
37	Slap Bass 1	80	Ocarina	123	Seashore
38	Slap Bass 2	81	Lead 1 (square)	124	Bird Tweet
39	Synth Bass 1	82	Lead 2 (sawtooth)	125	Telephone Ring
40	Synth Bass 2	83	Lead 3 (calliope)	126	Helicopter
41	Violin	84	Lead 4 (chiff)	127	Applause
42	Viola	85	Lead 5 (charang)	128	Gunshot
43	Cello	86	Lead 6 (voice)		

Appendix B

System Exclusive Messages

When using the PDS-128Plus to record music from an external sequencer, such as a computer, it is possible to include system exclusive messages in the MIDI data that will specifically address the PDS-128Plus. Two such system exclusive messages are the song-naming message and the transpose-masking message.

Song-Naming

In Disk Mode, a convenient alternative to manually naming recorded songs is to send a system exclusive message containing the song title along with the song's MIDI data. The song title will then appear automatically when recording is stopped. The format for the song-naming system exclusive message is as follows:

F0	Start of system exclusive
00 00 2A	PianoDisc ID bytes
00	PDS-128Plus product ID byte
01	PDS-128Plus device ID byte
01	Song-naming command byte
...	20 character bytes (song title)
00	End-of-name byte
F7	End of system exclusive

The characters of the title must be converted to hexadecimal (base 16 equivalents of the decimal ASCII values) using the conversion table provided on the following page. Any unused character bytes, such as those left over when a title length is less than the maximum amount of 20 characters, should be "00". It is important that the system exclusive message remains the proper length of 29. For example, to name a song (or change its name to) "Moonlight Sonata," the following system exclusive message should be recorded at the beginning of the song:

F0	00	00	2A	00	01	01	4D
6F	6F	6E	6C	69	67	68	74
20	53	6F	6E	61	74	61	00
00	00	00	00	F7			

NOTE: The song title is centered automatically on the PDS-128Plus display. Do not place any "00" or "20" bytes before the song title character bytes

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2	Blank Space	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[¥]	^	_
6	'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z					

Table 1. CHARACTER CONVERSION.

To convert a character in a song title, locate the character in the table, and then read the first half of the character byte from the left column and the second half from the top row. For example, the letter "M" would be represented by the byte "4D."

Transpose-Masking

The following procedure is NOT NECESSARY if you are playing PianoDisc Music Library diskettes. It may be useful if you are recording your own piano and symphony music using an external sequencer. If you use the PianoDisc system only to play PianoDisc Music Library diskettes or to record piano performances on a PianoDisc with the Record option, you may skip the "Transpose-Masking" sub-section.

The TRANSPOSE function of the PDS-128Plus is a useful function, but can cause problems with drum tracks (or any unpitched instruments, percussion, or special effects) where MIDI notes should stay constant even if the song is played in a different key. Before recording a song, decide which MIDI channels should be masked so that they will not be affected by transposition. The transpose-masking system exclusive message for the PDS-128Plus should be sent (while recording the song) in the following format:

```

F0      Start of system exclusive
00 00 2A  PianoDisc ID bytes
00      PDS-128Plus product ID byte
01      PDS-128Plus device ID byte
02      Transpose-masking command byte
...     16 character bytes
F7      End of system exclusive

```

The 16 channel bytes correspond to MIDI channels 1 through 16 (the first byte refers to MIDI channel 1, the second to channel 2, etc.) If the channel is to be masked, the byte should be "01," while unmasked channel bytes should be "00." For example, to record a song with MIDI channels 4, 10, and 11 remaining unchanged by the TRANSPOSE function, the following system exclusive message would be used

```
F0 00 00 2A 00 01 02 00
00 00 01 00 00 00 00 00
01 01 00 00 00 00 00 F7
```

The transpose-masking map defaults to all channels unmasked for each song if no system exclusive message is sent along with the song data. The transpose masking will affect only the song with which it is recorded. It will have no effect on any following songs.

NOTE: Channel 10 is automatically masked for transpose since it is the standard percussion channel.

Appendix C

Music Software Formats

The PDS-128Plus has the ability to play the following music libraries:

- PianoDisc®
- PianoDisc® Symphony
- PianoDisc® PianoCD®

- Yamaha® PianoSoft® for the Disklavier®
- Yamaha® PianoSoft® Plus (for the TG100, DOM30, and XG*)
- Yamaha® Alfred's Educational Series (for the Disklavier®)
- Other minor software providers of Disklavier® music software

It can also play General MIDI Standard MIDI Files by...

- Tune 1000 Corporation
- Turbo Music
- Other GM commercial software diskette (make sure they are "Type 0")
- Standard MIDI Files you make at home or download from the Internet ("Type 0" **only**)

Standard MIDI Files

A Standard MIDI File (SMF) uses a file format which contains the necessary data to reproduce music on equipment capable of reading and processing the data. Most commercial General MIDI (GM) MIDI files are released as "Type 0" Standard MIDI Files. "Type 0" is simply a single track file with all the data on one track. This is the most readable and accurate way of playing back a MIDI file. The PDS-128Plus is capable of playing the piano when a piano part or patch change for an acoustic piano exists on any MIDI channel. You must have the Symphony Option or an external tone module for the PDS-128Plus to play any additional sounds which are usually included on GM SMF disks. There are "educational" GM disks available which allow PDS-128Plus users to learn to play the piano. See *Appendix D* for information on setting the left and right hand piano parts for this type of disk

WARNING

PianoDisc has done everything possible to assure that diskettes made by other manufacturers are compatible with the PianoDisc System. However, we CANNOT GUARANTEE that software diskettes produced by other manufacturers will play back satisfactorily on the PianoDisc system. In many cases, the music on these other diskettes was not produced with the intent of being played on a reproducing piano system as sophisticated as the PianoDisc, and the results can be disappointing. Please consult your PianoDisc dealer before purchasing other manufacturer's diskettes to make sure that they are compatible.

*Because the XG format uses slightly different instrument selections than General MIDI, the PDS-128Plus will make educating instrument substitutions to obtain the most satisfactory playback of such files.

Appendix D

Using Educational Software

The PDS-128Plus offers the user the opportunity to learn how to play the piano. With such software as the Yamaha Alfred's Educational Series (for the Disklavier) or GM Educational software (like Turbo Music's "You're the Star"), you can even customize the lesson and piano playback. Make sure you read the materials carefully before you use them.

The PDS-128Plus user must understand on which "channel" the left and right hand parts are located. The music materials which come with the diskettes should have this information included. To get started, read the section which describes the type of educational software you are using.

Using Yamaha® Educational Software

(Yamaha® Alfred's or the Yamaha® "You Are the Artist" series)

To use Yamaha® educational software **in Disk Mode**, place the Yamaha® educational diskette into the floppy drive.* Press the PRODUCER button on the remote control or front panel of the control box. This feature allows the user to toggle the left and right hand parts as desired. When "RESET" is "OFF," the PDS-128Plus will play the Yamaha® Diskette while keeping the "Left" and "Right" hand parts "ON" or "OFF" (as specified on the display) throughout disk playback. When "RESET" is "ON", the PDS-128Plus will reset the left and right parts to "ON" at the beginning of the next song. Press the button below "OK" and then "Play" to get started. It's that simple! Give it a try and see how much you can learn.

*To use Yamaha® educational software files copied into **MX**: First, go to the library where the file(s) have been saved. Then—using the [SCAN << >>] buttons—scroll through the titles to find the one you wish to use. Next, press [PRODUCER]. Finally, choose EDUC. (This instructs **MX** Mode to treat the file as an educational type.) Now, you can toggle the left and right hand parts and RESET as per the above instructions.

Using Turbo Music General MIDI SMF Disks

To use Turbo Music's "You're the Star" or other educational GM SMF disks, you will need to set the channels for the "Left" and "Right" hand parts. The documentation which comes with the educational software will tell you what the educational instrument is and what channel it is on. Only use educational songs which use the acoustic piano as the educational instrument (or "Feature Performer Part" for Turbo Music diskette). You will notice that Turbo Music uses channel 1 for the "Left" hand part and channel 4 for the "Right" hand part. The default values for the PDS-128Plus are channel 3 for the "Left" and channel 4 for the "Right". You must change the "Left" part for Turbo Music. This is explained in the "EDUCATION" sub-section (under the "Diskette Mode" section).

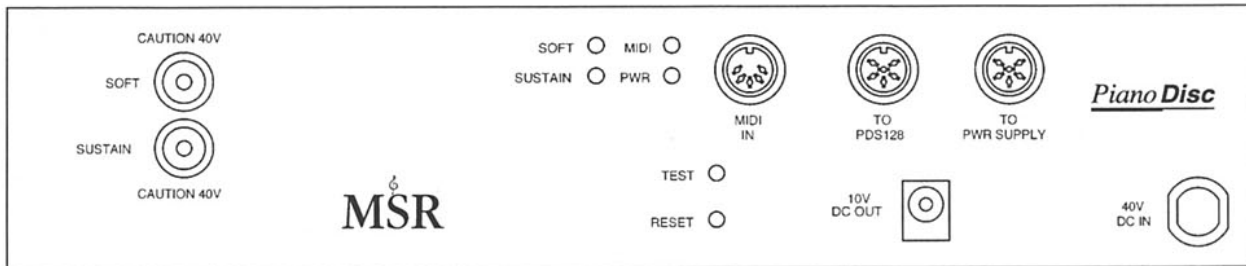
Once the channels are set correctly, then you can get started. *If you are accessing educational files in **Disk Mode****: First, insert the disk, then press the PRODUCER button on the remote control or front panel of the control box. This feature allows the user to toggle the left and right hand parts as desired. When "RESET" is "OFF," the PDS-128Plus will play the GM educational diskette and keep the "Left" and "Right" hand parts "ON" or "OFF" throughout disk playback. When "RESET" is "ON", the PDS-128Plus will reset the left and right parts to "ON" at the beginning of the next song. Press the button below "OK" and then "Play" to get started. It's that simple! Give it a try and see how much you can learn.

If you are accessing educational files in **MX*: First, go to the library where the file has been saved. Then—using the [SCAN << >>] buttons—scroll through the titles to find the one you wish to use. Next, press [PRODUCER]. Finally, choose EDUC. (This instructs *MX* Mode to treat the file as an educational type.) Now, you can toggle the left and right hand parts and RESET as per the above instructions.

Appendix E

PianoDisc CPU Interface

The picture below is of the PianoDisc CPU Interface. This interface integrates the PianoDisc *SilentDrive* player system.



1. INDICATOR LIGHTS:

- POWER** - Indicates power is on.
- MIDI** - Flashes when MIDI data is being received.
- SOFT** - Indicates the soft pedal is on. (This feature is not available at the time of this printing)
- SUSTAIN** - Indicates the sustain pedal is on.

2. MIDI PORTS:

- TO POWER SUPPLY** - This is a 6-pin DIN cable to be connected to the power supply only.
- TO PDS-128** - Sends and receives MIDI and CD data from the control box. This cable also supplies power to a control box.
- MIDI IN** - Receives MIDI data to be played on the piano without using the control box. *For more consistent playback, use a control box in "Passthrough" mode.*

Appendix F

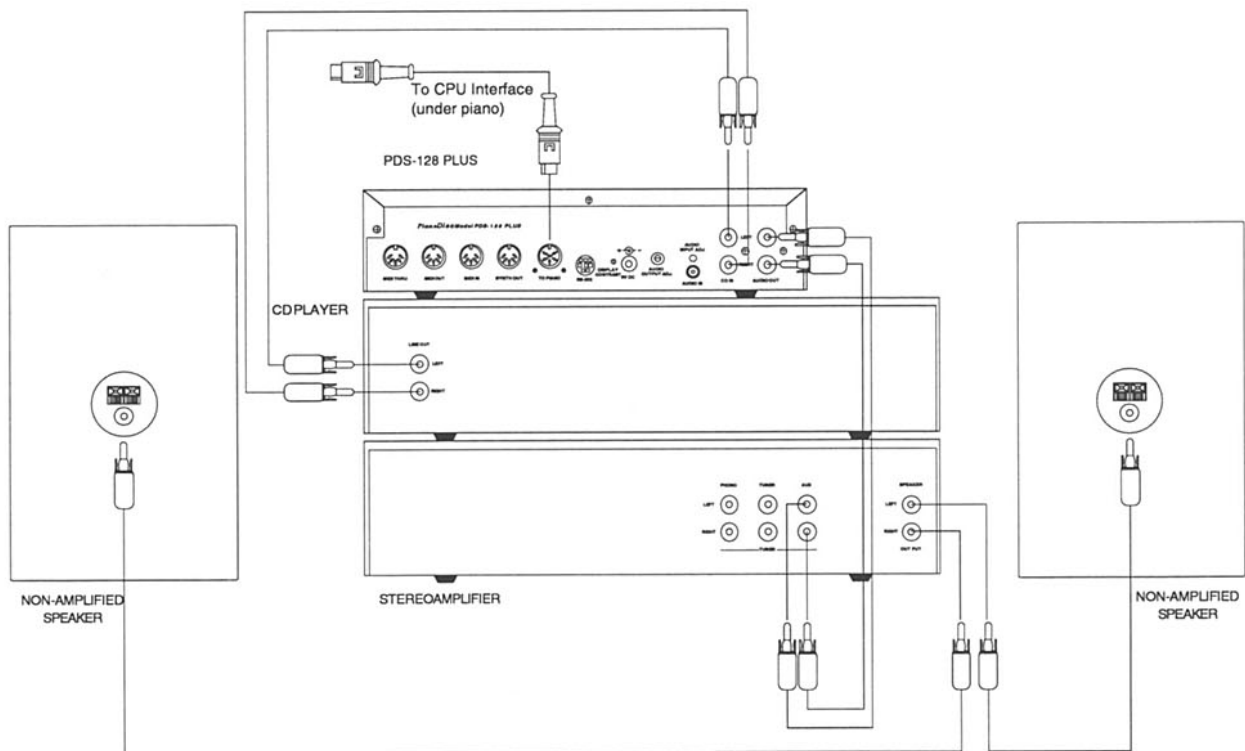
Connecting a PDS-128Plus to a Stereo

Make sure all power is turned off before connecting any electrical cables.

Hooking up the PDS-128Plus to a speaker system requires two audio cables. Shielded cables are preferred and should have RCA-type connectors. RCA cables are available at most electronic stores and come with some powered speakers. The PDS-128Plus rear panel includes a set of RCA stereo output jacks for use with powered speakers or a stereo amplifier system.

All audio sounds, which could include Symphony, Audio IN (if attached to a microphone or other audio device), and CD IN (from a CD player or other audio device), are mixed to the Audio OUT signal.

Attach Audio OUT to either powered speakers or to a stereo amplifier by connecting one RCA cable for each channel, left and right. For a stereo amplifier, connect one end of the cable to Audio OUT Left and the other end to the AUX IN Left (or other line level input). Repeat for the right channel. Once the connections have been made, select the corresponding input on the front panel of the stereo amplifier (usually Aux.). Consult your stereo's user manual for additional information. See diagram below.



Appendix G

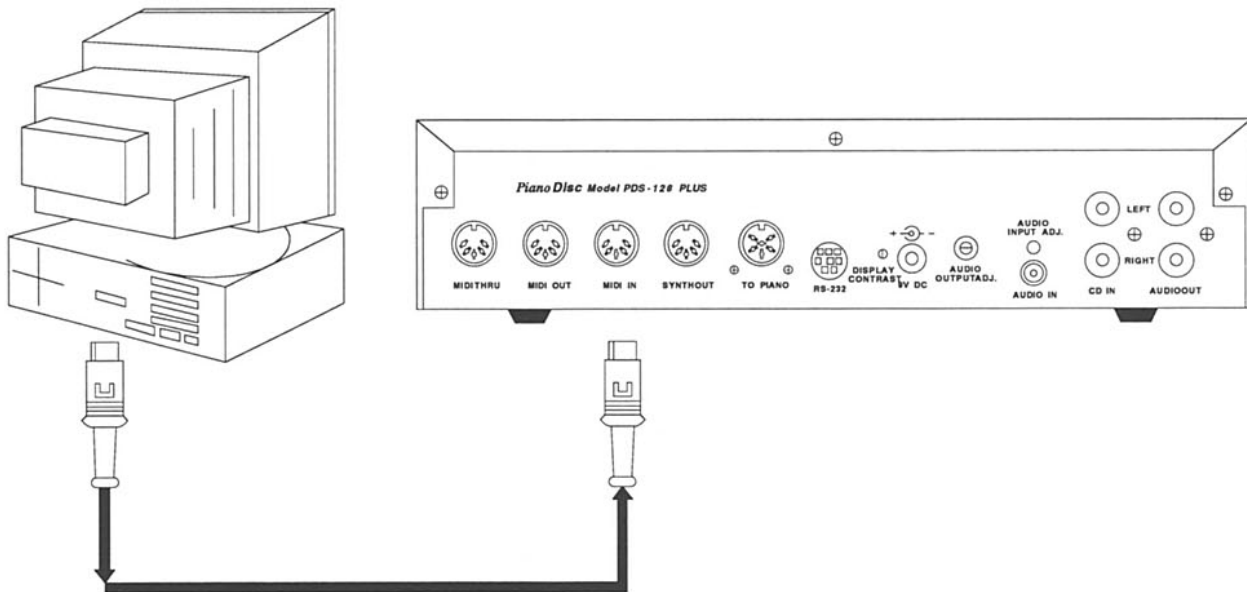
Connecting the PDS-128Plus to a Computer

Make sure all power is turned off before connecting any electrical cables.

To connect the PDS-128Plus to a computer, extra hardware and additional knowledge on the part of the user is required. The PDS-128Plus may be used with commercial sequencers, music software and devices which communicate through MIDI.

A sequencer can be used to edit, write, and play music on musical instruments that support MIDI – like the PDS-128Plus. Assuming that the MIDI ports have been configured properly for your computer, almost any musical piece can be patched or performed through the PDS-128Plus PASSTHROUGH mode. (Please consult your computer hardware and software user's manuals and test your MIDI setup before connecting the PDS-128Plus.) Review the PASSTHROUGH function described in this manual.

The diagram below illustrates a basic setup of the PASSTHROUGH function.



NOTE: Hardware and software required include: computer, music software, MIDI port, 5-PIN MIDI cable, and the PDS-128Plus System. Also, PianoDisc CANNOT GUARANTEE that external software computer programs and MIDI devices will be compatible with the PianoDisc system. Please consult all equipment user's manuals and your PianoDisc dealer for more information. Results may vary.

Appendix H

Software Upgrade Information

The PDS-128Plus is equipped with memory technology that allows changes in the system software to be made by inserting a software update diskette and following the update procedure. This eliminates the need for inconvenient handling of the unit to upgrade the internal programs, and assures the user of state-of-the-art performance for years to come. **For information regarding the latest in PianoDisc updates, please contact your PianoDisc dealer or visit our web site at www.pianodisc.com.**

To update the PDS-128Plus control unit:

1. Turn off the power to the PDS-128Plus by pressing the POWER button on the front panel of the PDS-128Plus.
2. Hold down the PRODUCER button while turning on the power. The display should look like this:

```
READY FOR UPDATE
Insert Program Disk
```

3. Insert the PianoDisc program diskette. The display will then show the version number of the program software on the diskette:

```
PDS/OS 4.0 14JUL1999
Press PLAY to load
```

4. Press PLAY to load the software into the PDS-128Plus. DO NOT EJECT THE DISKETTE DURING PROGRAM LOADING. When the program has been loaded successfully, the display will read as follows:

```
PROGRAM UPDATE DONE
Please eject disk
```

5. Eject the program diskette. The unit will shut itself off. Turn it on by pressing the POWER button on the front panel. The PDS-128Plus will now operate with its updated software.

Appendix I

Troubleshooting

Problem	Possible Causes	Remedies
Unit will not turn on.	Main power switch is off.	Turn on power switch under piano.
	Unit is not plugged in properly.	Check all power cord connections.
The piano does not play, even though the front display indicates playback. (Playback is indicated by the display counting real time – if the counter has stopped, playback may have PAUSED; read about PLAY/PAUSE under sub-section “PDS-128Plus Front Panel.”)	MIDI cables are not connected properly.	Make sure a cable connects TO PIANO on the control unit to PDS-128Plus on the CPU interface.
	The MUTE function has been turned on (indicated on display).	Turn off the muting OR engage the DEFAULT settings.
	PIANO OUT has been switched off.	Make sure PIANO OUT is on. (See MIDI sub-section.)
	The song has no piano part or the piano was not recorded on MIDI channel 1 (not possible with PianoDisc Music Library diskettes).	Play a PianoDisc Music Library diskette; re-record the song with the piano on MIDI channel 1.
Some notes do not play properly on piano.	Keys move but no sound is generated.	Piano may need to be calibrated by a PianoDisc technician.
Piano part is too loud or too soft compared to symphony background	BALANCE needs adjusting.	Adjust the BALANCE setting.

Problem	Possible Causes	Remedies
No change in loudness (symphony or piano) when VOLUME is adjusted.	The BALANCE setting is too far toward symphony (S) or piano (P).	Bring the BALANCE back toward 50%.
Song is in the wrong key or the tempo is incorrect.	TRANSCOPE or TEMPO settings have been altered.	Set TRANSCOPE to zero and TEMPO to the default value.
Not all of the songs on the disk are being played.	The songs are being played according to the diskette's producer track. (See subsection on PRODUCER.)	Press PRODUCER, and then press PLAY to play the disk normally.
	SHUFFLE mode had been selected (all the songs will be played in SHUFFLE mode, but because of the random selection, some songs may not be played immediately).	Turn the SHUFFLE mode off.
Songs appear "out of order" when using [SCAN] buttons.	PRODUCER mode is active and is controlling the song order.	Turn PRODUCER Off (press the [P] button, or review the PRODUCER section of this user's guide.
The piano and symphony parts sound out of sync.	The parts need to be aligned.	Adjust SYNC until the parts line up. Generally the lower the VOLUME is set, the higher the SYNC should be set.

Appendix J

MIDI Implementation Chart

Function		Transmitted			Recognized	Remarks
		To Piano	Synth Out	MIDI Out	MIDI In	
Basic Channels	Default	1	2-16 ¹	1-16	1-16	
Mode	Default	3	3	1 ²	1 ³	
	Messages	X	X	X	X	
Note Number	True Voice	21-108 21-108	0-127	0-127	0-127	
Velocity	Note On	0, V = 0-127	0, V = 0-127	0, V = 0-127	0, V = 0-127	
	Note Off	X, V = 64	X, V = 64	X, V = 64	X	
Aftertouch	Keys	X	X	X	X	
	Channel	X	0	0	0	
Pitch Bend		X	0	0	0	
Control Change	0-63, 65	X	0	0	0	Misc. Ctrls.
	64, 66, 67	0	0	0	0	Pedals
	68-127	X	0	0	0	Misc. Ctrls.
Program Change		X	0, 0-127	0, 0-127	0, 0-127	
System Exclusive		0	0	0	0	
System Common	Song Pos.	X	X	X	X	
	Song Sel.	X	X	X	X	
	Tune Req.	X	X	X	X	
System Real Time	Clock	X	X	X	X	
	Commands	X	X	X	X	
Aux Messages	Local On/Off	X	X	X	X	
	All Notes Off	0	0	0	0	
	Active Sense	X	X	X	X	
	Sys. Reset	X	X	X	X	
Notes:	¹ Synth Out is capable of transmitting on channel 1 when in Accompaniment or Passthrough Modes, or while playing SMF disks. ² In Redirect Mode, MIDI Out does not transmit on channels 2-16. ³ When "MIDI In from Piano", channel 1 is recognized. When in Passthrough Mode or "MIDI in from MIDI", channels 1-16 are recognized.					

Appendix K

MX Song List (Alphabetical within Library)

Song Title	Category	Song #
<u>Classical</u>		
Adagio (Sonata K 576)		.54
Aeolian Harp Etude		.47
Aida Selections		.46
Alegretto (Sonata K 576)		.18
Allelujah!		.10
Andante Cantabile (Sonata K 333)		.25
Anime (Sonatine)		.9
Arabesque In Etude Form		.55
Arabesque No. 1		.24
Arabesque Op. 18		.31
Ballade In F Minor		.61
Butterfly Etude		.43
Clair De Lune		.1
Concerto In A Minor Mvmt 1		.27
Concerto In A Minor Mvmts 2 & 3		.28
Cujus Animam		.44
Dance Of The Polovetsian Maidens		.33
Danse Des Elfes		.38
Danse Macabre		.14
Etude Op. 10, No. 3		.26
Etude Op. 104, No. 1		.56
Excerpts From Rigoletto		.35
Fur Elise		.15
Gavotte Op. 2 No. 2		.48
Gigue (French Suite)		.52
Habanera		.4
Hungarian Rhapsody No. 12		.53
Hut Of The Baba-Yaga, Great Gate Of Kiev		.21
Islamey		.60
Jesu, Joy Of Man's Desiring		.16
La Chasse (Grand Etudes)		.37
Loure (French Suite)		.12
Minute Waltz		.6
Modere (Sonatine)		.7
Moonlight Sonata		.5

Movement De Minuet (Sonatine) . . . . .	.8
New World 2nd Mvmt. . . . .	.11
Nocturne In F Sharp Major . . . . .	.39
Nocturne Op. 62 . . . . .	.36
Op. 32 No. 10 . . . . .	.57
Pastoral Variations . . . . .	.34
Peter And The Wolf . . . . .	.2
Pierrot . . . . .	.49
Prelude And Fugue In G Minor . . . . .	.63
Reflets Dans L'Eau . . . . .	.40
Ritual Fire Dance . . . . .	.58
Romance Sans Paroles . . . . .	.32
Scherzo Op. 16 No. 2 . . . . .	.41
Sevillanas (Suite Espagnole) . . . . .	.23
Sonata In C Major, K501 . . . . .	.22
Sonata K332 . . . . .	.45
Sonata K488 . . . . .	.42
Souvenir De Porto Rico . . . . .	.19
Spinning Song . . . . .	.3
Staccato Caprice . . . . .	.29
To Spring . . . . .	.59
Troika . . . . .	.62
Trois Ecossaises . . . . .	.20
Un Sospiro . . . . .	.17
Valse A La Maniere De Borodin . . . . .	.13
Valse In C Sharp Minor . . . . .	.30
Waltz Op. 64 No. 2 . . . . .	.50
Waltz Op. 64 No. 3 . . . . .	.51

Jazz

All The Things You Are . . . . .	.10
As Time Goes By . . . . .	.22
C Jam Blues . . . . .	.9
Darn That Dream . . . . .	.15
Do Nothing Till You Hear From Me . . . . .	.13
Emily . . . . .	.4
How Deep Is The Ocean . . . . .	.17
In My Highest Place . . . . .	.26
It Don't Mean A Thing . . . . .	.20
Lady Is A Tramp . . . . .	.18
Makin' Whoopee . . . . .	.25
Misty . . . . .	.6
More Than You Know . . . . .	.8
My Blue Heaven . . . . .	.24

My Funny Valentine . . . . .	.14
Night In Tunisia . . . . .	.11
On Green Dolphin Street . . . . .	.1
Pensativa . . . . .	.12
Pick Yourself Up . . . . .	.3
Prelude To A Kiss . . . . .	.19
Pretty Women . . . . .	.2
Return Of The Red Baron . . . . .	.7
Sheik Of Araby . . . . .	.28
Star Eyes . . . . .	.27
Stonewall Blues . . . . .	.5
Stormy Weather . . . . .	.23
Threnody . . . . .	.21
Younger Than Springtime . . . . .	.16

Musicals

A Wonderful Guy . . . . .	.8
All I Ask Of You . . . . .	.15
At The End Of The Day . . . . .	.6
Can't Help Lovin' Dat Man . . . . .	.14
Climb Every Mountain . . . . .	.18
Do You Hear The People Sing . . . . .	.17
Edelweiss . . . . .	.5
I Feel Pretty . . . . .	.10
If Ever I Would Leave You . . . . .	.9
If I Were A Rich Man . . . . .	.2
I'm Gonna Wash That Man Right Outta My Hair . . . . .	.12
I've Grown Accustomed To Her Face . . . . .	.11
Ol' Man River . . . . .	.3
Overture (Showboat) . . . . .	.1
Summertime . . . . .	.7
Sunrise, Sunset . . . . .	.13
Tomorrow . . . . .	.4
Try To Remember . . . . .	.16

Popular

Aja . . . . .	.29
Baby Grand . . . . .	.20
Back In The High Life . . . . .	.7
Back In The USSR . . . . .	.18
Blackbird . . . . .	.24
California Dreamin' . . . . .	.8
Classical Gas . . . . .	.23

Come Sail Away	16
Daniel	2
Day After Day	25
Don't It Make My Brown Eyes Blue	33
Dust In The Wind	13
Fire And Rain	5
Georgie Girl	14
Good Vibrations	34
Greensleeves	35
I Heard It Through The Grapevine	10
Isn't She Lovely	1
Jamaica Farewell	38
Layla	9
Loves Me Like A Rock	31
Maybe I'm Amazed	11
Moondance	3
New York State Of Mind	36
Nights In White Satin	27
Roundabout	6
Scarborough Fair	32
Slow Hand	22
So Bad	30
Songbird	12
Sweet Love	26
The Rose	19
The Way It Is	21
Tuscany	17
Vincent	15
When I'm 64	28
While My Guitar Gently Weeps	37
You've Got To Hide Your Love Away	4

Sacred

A Mighty Fortress Is Our God	14
Abide With Me	18
All Creatures Of Our God And King	34
Amazing Grace	10
And Can It Be	37
Blessed Assurance	27
Brethren We Have Met To Worship	3
Come Thou Fount Of Every Blessing	35
God Be With You Till We Meet Again	39
Guide Me, O Thou Great Jehovah	6
He Hideth My Soul	12

He Leadeth Me	.11
Hiding In Thee	.9
I Am His And He Is Mine	.25
I Need Thee Ever Hour	.31
I Will Sing Of My Redeemer	.30
If Thou But Suffer God To Guide Thee	.17
Immortal, Invisible God Only Wise	.26
In The Garden	.7
It Is Well With My Soul	.5
Jesus I Am Resting, Resting	.23
Jesus The Very Thought Of Thee	.36
Leaning On The Everlasting Arms	.13
Nothing But The Blood Of Jesus	.33
O Could I Speak The Matchless Worth	.2
O Love That Will Not Let Me Go	.38
O Sacred Head Now Wounded	.15
Our God Our Help In Ages Past	.28
Praise My Soul The King Of Glory	.22
Rock Of Ages	.4
Soon We'll Be Done With The Troubles Of The World	.19
Sweet Hour Of Prayer	.24
The Church's One Foundation	.29
There Is A Balm In Gilead	.1
There Is A Wideness In God's Mercy	.32
There's A Song In The Air	.20
This Is My Father's World	.21
To God Be The Glory	.40
Were You There	.8
When Morning Gilds The Skies	.16

Country

A Long And Lasting Love	.15
Always On My Mind	.3
Blue Eyes Cryin' In The Rain	.18
Chattanooga Choo Choo	.25
Don't It Make My Brown Eyes Blue	.5
Faded Love	.9
Friends And Lovers	.7
God Bless The USA	.16
Grandpa Tell Me About The Good Old Days	.10
Green, Green Grass Of Home	.6
Help Me Make It Through The Night	.14
I Believe In Music	.19
I Can't Stop Loving You	.23

Last Date	1
Love Me Tender	13
Mountain Music	4
New Fool At An Old Game	11
Put Your Hand In The Hand	12
Root Beer Rag	21
She Keeps The Home Fires Burning	25
Southern Nights	8
Stand By Your Man	24
The Homecoming	20
The Most Beautiful Girl In The World	2
We've Got Tonight	22
Your Cheatin' Heart	17

Vintage

3 O'Clock In The Morning	61
After The Gold Rush	11
Anything Can Happen	41
As Time Goes By	34
Begin The Beguine	40
Berceuse	30
Bess, You Is My Woman Now	43
Beyond The Blue Horizon	15
Black Orpheus	59
Blue Monday	32
Blue Velvet	36
Body And Soul	17
Bumble Boogie	9
Cheek To Cheek	58
Close To You	12
Cottage For Sale	37
Did You Ever See A Dream Walking?	46
Edelweiss	47
Embraceable You	2
Fire And Rain	8
Fly Me To The Moon	26
Full Moon And Empty Arms	4
Go Away From My Window	20
Here I'll Stay	49
I Didn't Know About You	16
I Get A Kick Out Of You	42
I Got Rhythm	3
I've Got You Under My Skin	57
Idilio	50

It Ain't Necessarily So	.19
It's De-Lovely	.14
Japanese Sandman	.33
Jilted	.45
Just Like A Gypsy	.29
Love Is A Many-Splendored Thing	.25
Love, Here Is My Heart	.6
Lullaby	.10
Lush Life	.52
Meadow Serenade	.7
Moon River	.5
Nice Work If You Can Get It	.28
Over The Rainbow	.31
Picnic	.60
Prelude I	.53
Prelude II	.54
Prelude III	.55
Rains Of April	.22
Red Roses For A Blue Lady	.24
Say It Isn't So	.13
Skylark	.48
Sleepless Night	.35
Someone To Watch Over Me	.18
Summertime	.27
Teddy Bears' Picnic	.44
This Could Be The Start Of Something Big	.1
This Masquerade	.38
Till We Meet Again	.56
Unchained Melody	.51
Unforgettable	.39
What A Difference A Day Makes	.21
When I Fall In Love	.62
Yoo Hoo	.23

Ragtime

Ain't Misbehavin'	.6
Ain't She Sweet	.3
Alabama Dream	.66
Beat Me, Daddy (Eight To The Bar)	.29
Ben Hur Chariot Race	.56
Black Beauty	.23
Blue Turning Gray Over You	.59
Blues In The Night	.12
Cascades	.67

Charleston	16
Cow Cow Boogie	8
Cuban Love Song	39
Death Ray Boogie	65
Deep Elm Blues	60
Dude	32
Easy Winners	35
Ecuadorian Memories	10
Elephant	21
Entertainer	31
Entry Of The Gladiators	13
Glow Worm	44
Great Scott Rag	25
Haitian Blues	51
Hello Love	26
Honeysuckle Rose	57
Honky Tonk Train Blues	7
Hot Chocolate Rag	42
How Long Blues	64
I Ain't Got Nobody	53
If I Could Be With You One Hour Tonight	24
I'm Crazy 'Bout My Baby	11
Ja-Da	18
Jailhouse Blues	34
Judy	9
Kansas City	55
Kitten On The Keys	28
Lazy River	40
Let Me Call You Sweetheart	5
Lonesome Mama Blues	54
Love Is Just Around The Corner	45
Maple Leaf Rag	1
Mr. Jelly Lord	46
Muscle Shoals Blues	48
Neapolitan Nights Waltz	2
Oh Lady, Be Good	14
Pacific Coast Blues	61
Papa Better Watch Yo' Step	63
Pennies From Heaven	38
PianoDisc Boogie	52
Pinetop's Boogie	33
Railroad Blues	58
Rialto Ripples	15
Rollin' The Boogie	70
Rosetta	69
Rubies And Pearls	68

Scott Joplin's New Rag	49
Something Doing	4
Spanish Venus	36
St. Louis Blues	37
Stars And Stripes	47
Stormy Weather	17
Tain't Nobody's Bizness (If I Do)	41
Take Me Out To The Ball Game	19
Tia Juana	27
Vicksburg Blues	22
Washington Post March	20
Weeping Willow	50
What'd I Say	2
When I Take My Sugar To Tea	30
Working Man Blues	43

Theme

A Spoonful Of Sugar	9
America	41
An Affair To Remember	32
Anchors Aweigh	12
Auld Lang Syne	15
Bare Necessities	36
Beer Barrel Polka	16
Brahms' Lullaby	22
Chim Chim Cher-ee	11
Danny Boy	29
Gentle Rain	23
God Bless America	30
Godfather Theme	37
Happy Birthday	8
Happy Trails	43
Havah Nagilah	4
Hi-Lilli Hi-Lo	18
I Found Love	40
I'm Looking Over A Four Leaf Clover	17
Inolvidable	27
Invitation	25
Laura	28
Let's Go Fly A Kite	26
Love Story	1
Marine's Hymn	20
Mendelssohn Wedding March	2
Mickey Mouse March	34

My Dad Can't Be Crazy...Can He?	14
My Wild Irish Rose	9
Once Upon A Time	5
Pink Panther	35
Right From The Heart	10
Sabor A Mi	31
Sin Ti	13
So This Is Love	6
Someday My Prince Will Come	33
Spellbound	42
Stella By Starlight	38
Too-Ra-Loo-Ra-Loo-Ral	3
Under The Sea	21
We're In The Money	7
When You Wish Upon A Star	39
Whiskey In The Jar	24

Christmas

A Cradle For A Lamb	2
Angels We Have Heard On High	37
Ave Maria	12
Away In A Manger	17
Bells Of Joy	5
Carol Of The Bells	11
Charlie Brown Christmas	24
Christmas Eve Fantasy	15
Christmas Meditation	20
Coventry Carol	7
Deck The Halls	26
Fairest Lord Jesus	36
For Unto Us A Child Is Born	22
Frosty The Snowman	19
Gesu Bambino	38
Go Tell It On The Mountain	10
God Rest You Merry, Gentlemen	31
Good King Wenceslas	25
Hard Candy Christmas	18
Hark The Herald Angels Sing	1
Have Yourself A Merry Little Christmas	44
I Wonder As I Wander	4
It Came Upon A Midnight Clear	39
It's Beginning To Look A Lot Like Christmas	35
Jesu, Joy Of Man's Desiring	9
Jingle Bells	32

Joy To The World . . . . .	.41
Lo, How A Rose E'er Blooming . . . . .	.30
Masters In This Hall . . . . .	.27
O Come All Ye Faithful . . . . .	.16
O Come, O Come Emmanuel . . . . .	.40
O Holy Night . . . . .	.34
Rudolph The Red-Nosed Reindeer . . . . .	.29
Silent Night . . . . .	.14
Silver And Gold . . . . .	.33
Silver Bells . . . . .	.2
Still, Still, Still . . . . .	.8
The Christmas Song (Chestnuts Roasting On An Open Fire) . . . . .	.13
The First Noel . . . . .	.43
We Three Kings Of Orient Are . . . . .	.21
What Child Is This? . . . . .	.28
While Shepherds Watched Their Flocks By Night23
White Christmas3
Winter Holiday6

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