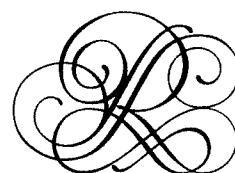


PR-300S

OWNER'S
MANUAL



RODGERS®
Rodgers Instruments LLC
A Member of the Roland Group

**CAUTION**

RISK OF ELECTRIC SHOCK
DO NOT OPEN



ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK,

DO NOT REMOVE COVER.

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, 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 electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

NOTICE TO USERS

Information in this document is subject to change without notice. No part of this manual may be translated into any language, stored in a retrieval system, reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without the express written permission of **Rodgers Instruments LLC**.

RODGERS INSTRUMENTS LLC

1300 NE 25th Avenue
Hillsboro, OR 97124
Telephone: (503) 648-4181

Safety Instructions

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS

WARNING When using this instrument, always follow basic precautions, including the following:

- 1) Read all the instructions before using, adjusting, or repairing this instrument.
- 2) To reduce the risk of injury, supervise children closely when children are around the instrument.
- 3) Use this instrument only in the manner recommended by Rodgers Instrument Corporation.
- 4) Do not use this instrument near water, for example, near a swimming pool, a damp or wet room.
- 5) Use of this instrument, 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.
- 6) Locate the instrument so its position does not interfere with its proper ventilation.
- 7) Locate the instrument away from heat sources such as radiators, heat registers, or other products that radiate heat directly onto the instrument.
- 8) Protect the instrument from dust as much as possible.
- 9) Connect the instrument to a power source only of the type described in the operating instructions or marked on the instrument's AC adaptor. If you are unable to insert the power adaptor into an outlet, contact an electrician to replace the outlet.
- 10) Unplug the AC adaptor of the instrument from the power source when left unused for a long period of time.
- 11) Do not walk on, or place objects on top of the power cord.
- 12) Do not pull the power cord, rather hold the AC adaptor when unplugging the power cord from the power source.
- 13) When setting up with other instruments or peripherals, follow the procedures in accordance with Rodgers' instruction manual.
- 14) Take care so that objects do not fall onto or liquids spill into the instrument.
- 15) Service the instrument with qualified service personnel when:
 - a. The power cord or AC adaptor has been damaged.
 - b. Objects have fallen onto or liquids have spilled into the instrument.
 - c. The instrument has been exposed to rain or other weather damage.
 - d. The instrument does not appear to operate normally, or exhibits a marked change in performance.
 - e. The instrument has been dropped or the enclosure damaged.
- 16) Do not attempt to service the instrument yourself. Refer all servicing to qualified technical service personnel.

S A V E T H E S E I N S T R U C T I O N S

FCC Notice

Radio and Television Interference

The Rodgers PR-300S Digital Sequencer and Sound Module uses and generates small amounts of radio-frequency (RF) energy. The instrument complies with the limits set for Class A and Class B computing devices. FCC Rules, Subpart J, Part 15 define the limits for radio and television interference in a residential installation.

Follow the installation and the use instructions in this manual, or the PR-300S could potentially cause interference with some radio or television reception. In the unlikely event that this occurs, we encourage the user to try the following corrective measures.

- Turn the PR-300S OFF to see if it is the actual source of the interference.
- Disconnect the keyboard instrument and the PR-300S's input/output cables one at a time. If the interference stops, it is caused by the keyboard instrument or its I/O cable.
- Try coiling and uncoiling the PR-300S's power cord in different ways.
- Connect the instrument's power adaptor to a power outlet on a different circuit.
- Move the PR-300S farther away from the radio or television receiver.
- Connect the radio or television receiver to a different power circuit.
- Reorient or move the receiver antenna farther away from the PR-300S. Consider installing a rooftop antenna with coaxial cable lead-in between the antenna and receiver.
- Consult the nearest Rodgers dealer for more information if the above corrective measures don't remove the interference.

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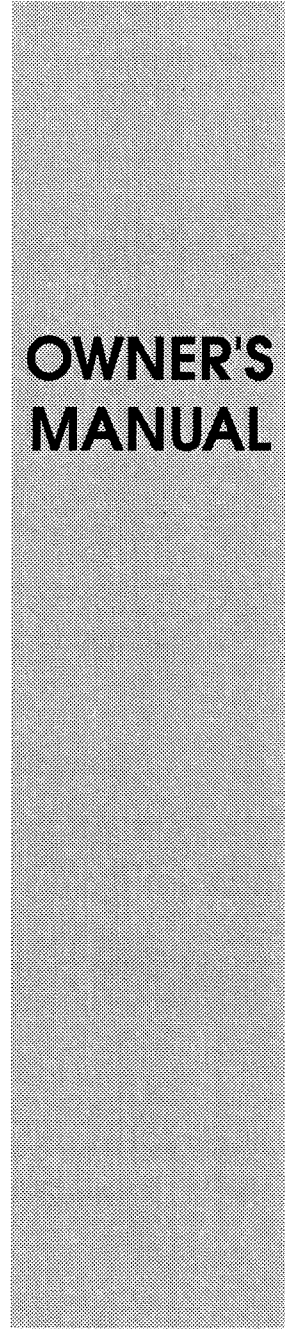
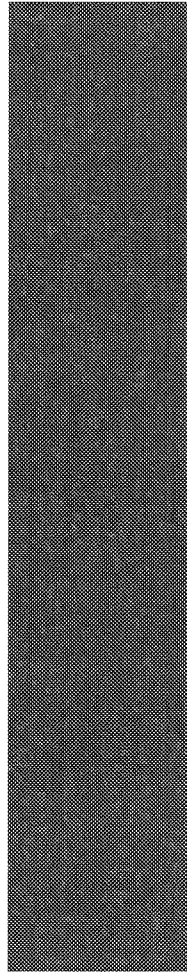
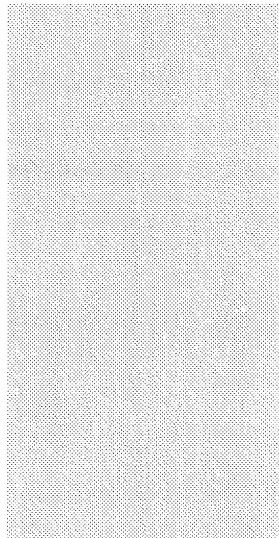
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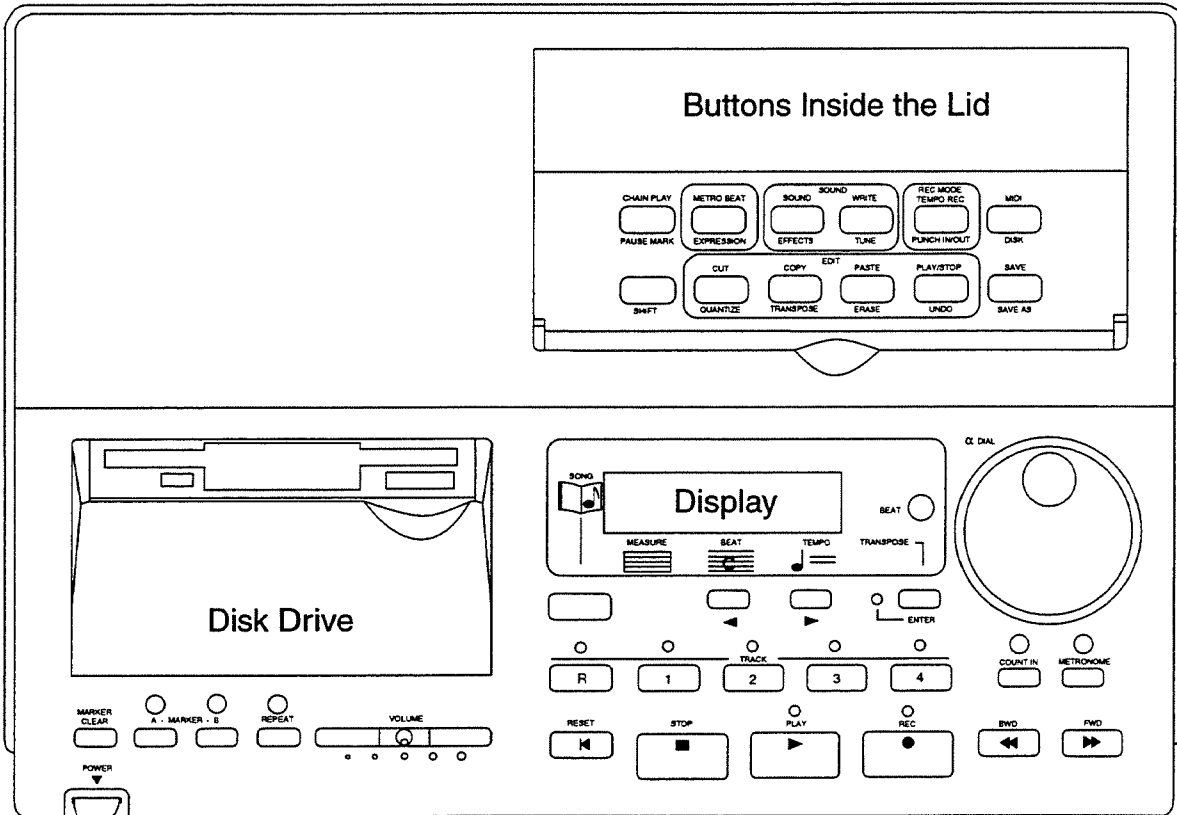
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PR-300S

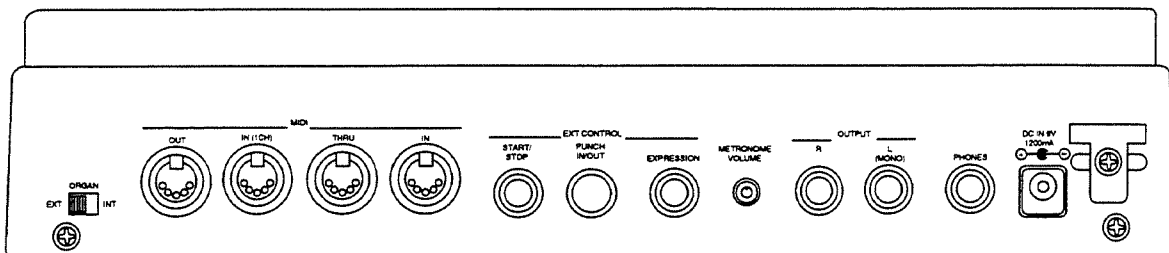
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Top and Front Panel



Rear Panel



Control Functions

TRACK buttons
Use these buttons to select or mute tracks for playback, or select which track will be used during recording.

RESET button
Use this button to reset a song to the beginning.

VOLUME control
Use this slider to adjust the overall volume of the PR-300S.

TEMPO button
Use this button to set the tempo or to move the "[" prompt.

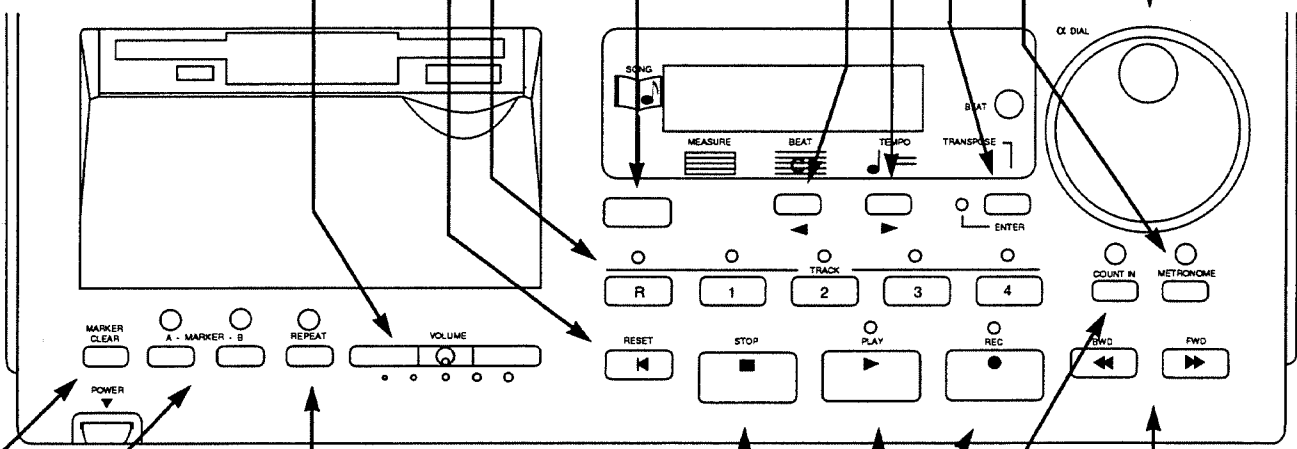
BEAT button
Use this button to set the beats per measure or to move the "[" prompt.

SONG button
Use this button to select a song.

TRANPOSE / ENTER button
Use this button to transpose a performance, or to confirm changes

METRONOME button
Use this button to turn the metronome on and off.

ALPHA dial
Use this control to change a field specified by the "[" prompt.



REPEAT button
Use this button to activate the repeat function.

STOP button
Press to stop playback or record.

BWD button
FWD button
Used to locate a specific measure within a song.

MARKER buttons
Use these buttons to set Markers A & B.

PLAY button
Press to start playback or record.

COUNT IN button
Activates the count in function.

MARKER CLEAR button
Use this button to clear Markers A & B.

REC button
Use this button to put the PR-300S in record mode.

Basic Precautions

Power Supply

- * Be sure to use only the adaptor supplied with the unit. Use of any other power adaptor could result in damage, malfunction, or electrical shock.
- * When making any connections with other devices, always turn off the power to all equipment first; this will help prevent damage or malfunction.
- * Do not use this unit on the same power circuit with any device that will generate line noise, such as a motor or variable lighting system.
- * The power supply required for this unit's adaptor is shown on its nameplate. Ensure that the line voltage of your installation meets this requirement.
- * Avoid damaging the power cord; do not step on it, place heavy objects on it, etc.
- * When disconnecting the AC adaptor from the outlet, grasp the adaptor itself; never pull on the cord.
- * If the unit is to remain unused for a long period of time, unplug the AC Adaptor from the power outlet.

Placement

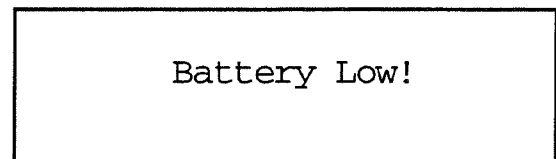
- * Do not subject the unit to temperature extremes (eg. direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas or areas that are subject to high vibration levels.
- * Using the unit near power amplifiers (or other equipment containing large transformers) may induce hum.
- * This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.
- * Observe the following when using the unit's disk drive:
 - Do not place the unit near devices that produce a strong magnetic field (eg. loudspeakers).
 - Do not move the unit or subject it to vibration while it is operating.
 - Install the unit on a solid, level surface in an area free from vibration. If the unit must be installed at an angle, be sure that the angle of installation falls within the tolerance range (upward; 15°: downward; 5°).
 - Avoid using the disk drive in areas of high humidity (eg. condensation). High levels of moisture can adversely affect the operation of the drive and/or damage disks. When the unit has been transported, allow it to warm to room temperature before operating.

Maintenance

- * For everyday cleaning wipe the unit with a soft, dry cloth (or one that has been slightly dampened with water). To remove stubborn dirt, use a mild neutral detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- * Never use benzene, thinners, alcohol or solvents of any kind, to avoid the risk of discoloration and/or deformation.

Memory Backup

- * The unit contains a battery which maintains the contents of memory while the main power is off. The expected life of this battery is 5 years or more. However, to avoid the unexpected loss of memory data, it is strongly recommended that you have the battery changed every 5 years. (Please refer the task to qualified service personnel.)
- * When the battery becomes weak, the following message will appear in the display:



Please have the battery changed as soon as possible to avoid the loss of memory data.

Additional Precautions

- * Protect the unit from strong impact.
- * Do not allow objects of liquid of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
- * Never strike or apply strong pressure to the display.
- * Should a malfunction occur (or if you suspect there is a problem) discontinue use immediately. Contact qualified service personnel as soon as possible.
- * To prevent the risk of electric shock, do not open the unit or its AC adaptor.

Introduction

We'd like to take a moment to thank you for purchasing the Rodgers PR-300S Digital Sequencer and Sound Module.

The PR-300S features an easy-to-use 5-track sequencer for recording and playback, as well as a 16-part multi-timbral GS Format sound source. The PR-300S was specifically designed for use with Rodgers organs and keyboards, although it can be used successfully with many different MIDI devices.

About this Manual

If this is the first time you have used the PR-300S, please be sure to read "Listening to a Song on Disk" thoroughly. It contains information on how to listen to the songs recorded on the demo disk and make use of some of the PR-300S's convenient features.

This section is followed by "Sequencing with the PR-300S" which shows you how to record your own songs. Everything from easy "single-pass" recording to more advanced "multi-track" recording is covered.

The last section of this manual gives descriptions of all remaining PR-300S features and supplies technical information about the PR-300S and MIDI.

PR-300S Features

Easy to Use

The sequencer is set up to operate like a regular tape recorder. This makes recording and playback easy.

Five Track Sequencer

You can record and playback using any of five sequencer tracks.

GS Sound Source

The PR-300S has a built-in sound source that conforms to the GS Format. Essentially what this means is that different sound sources (keyboards or sound modules) that conform to the GS Format will all play the same song data in the same way and respond to the same MIDI messages in a uniform manner.

The GS Sound Source can supply up to 16 different parts; 15 of which can use any of the 354 high-quality instrumental sounds in the PR-300S, one of which can use any of the 10 different drum sets. When used with a Rodgers organ, the PR-300S can supply up to 9 instrumental parts and one drum part.

Convenient Editing Features

It's also easy to put the finishing touches on the songs you have recorded with the PR-300S's Cut, Paste, Quantize and Punch In/Out features.

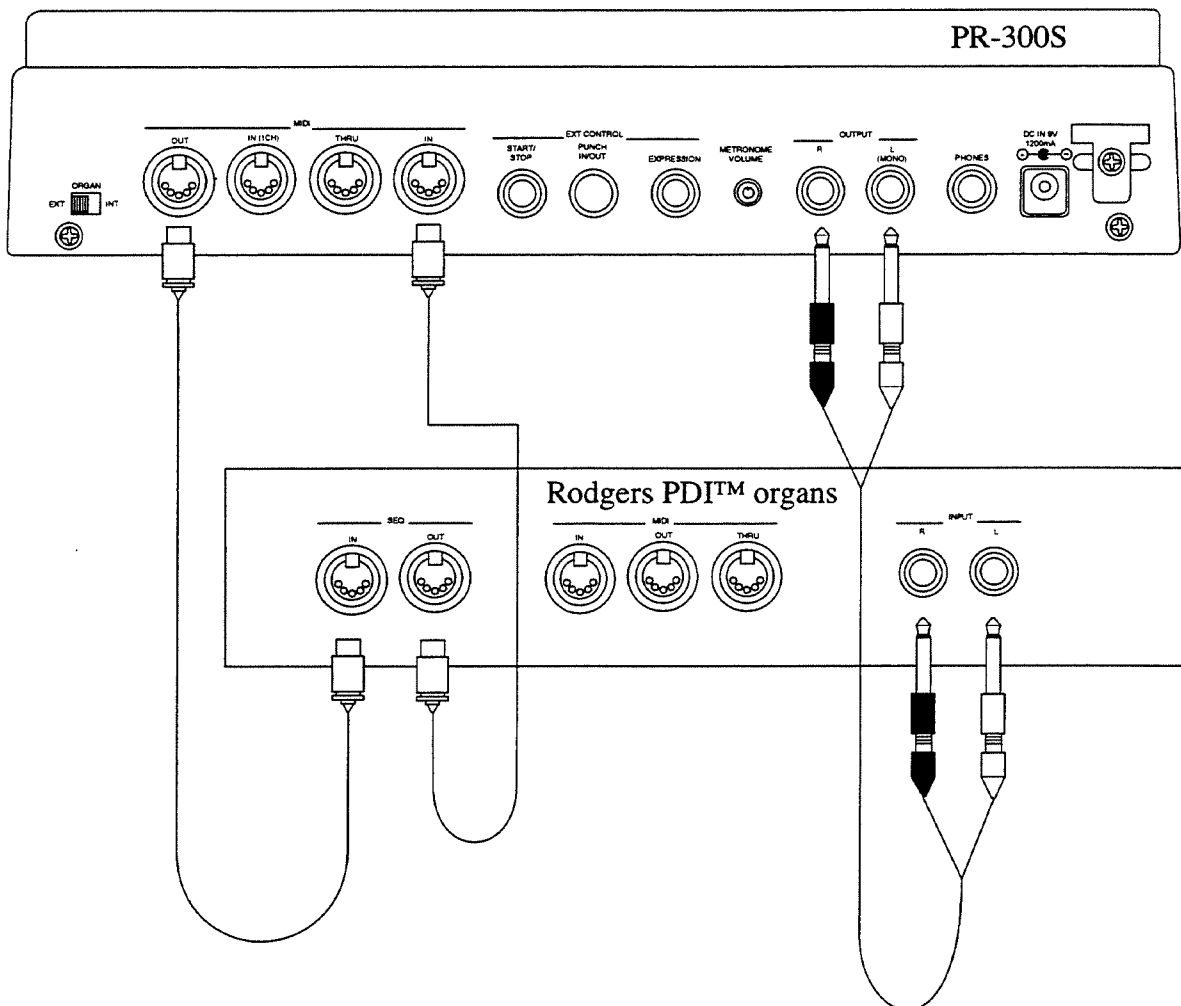
Plays Standard MIDI Files, Too

You can also play Standard MIDI Files that have been written for use with GS or General MIDI (GM) sound sources. This means your PR-300S can make use of a wide variety of music data available.

Making the Connections

In this section, we'll show you how to connect the PR-300S to a Rodgers organ or keyboard. Be sure to use the diagram for your particular situation; the connections for a Rodgers Parallel Digital Imaging™ organ are found on this page, the connections for other Rodgers organs and keyboards are found on the facing page.

Refer to the specific connection instructions at the bottom of this page. Then please read the section at the bottom of the facing page about the AC Adaptor Connection and ORGAN EXT/INT switch.



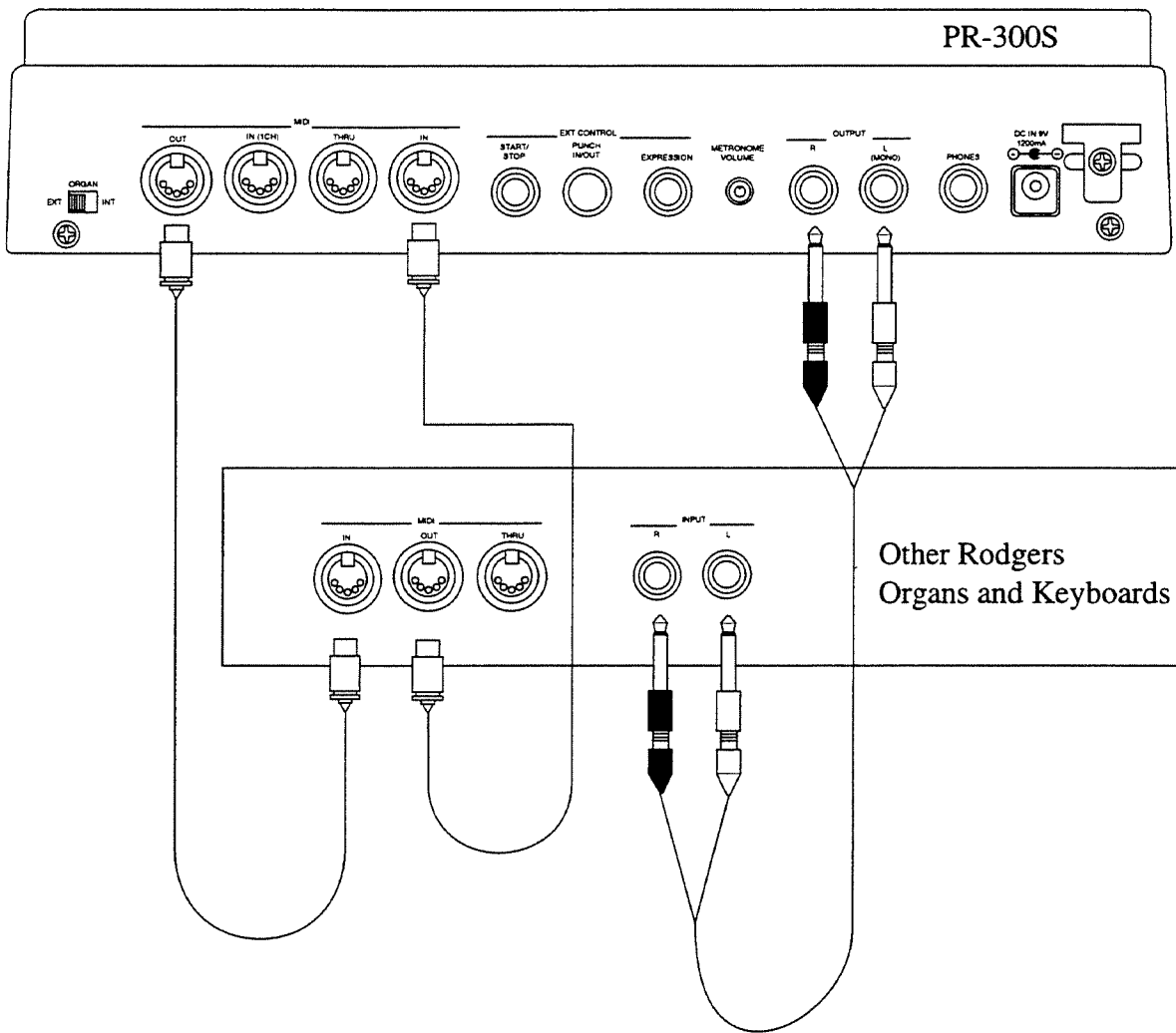
MIDI Cable Connections

Connect the appropriate MIDI OUT of your Rodgers organ to the MIDI IN of the PR-300S (make sure you use the "IN" jack on the back of the PR-300S, not the "IN (1CH)" jack). Then connect the MIDI OUT of the PR-300S to the appropriate MIDI IN of your organ.

Audio Cable Connections

Connect the L and R OUTPUT of the PR-300S to the appropriate L and R INPUT on your Rodgers organ.

If you are using a Rodgers organ without Audio Inputs, connect the output of the PR-300S to the input of a keyboard amplifier or mixer.

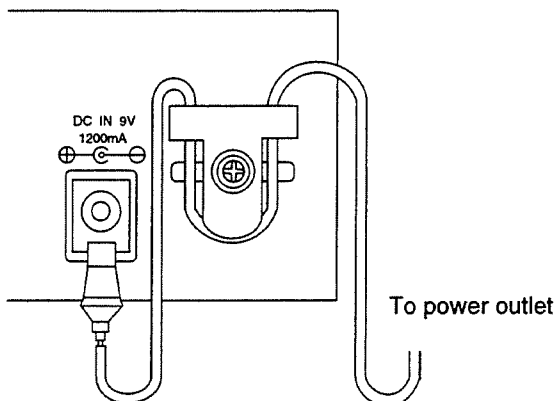


AC Adaptor Connection

Connect the appropriate end of the AC Adaptor to the DC IN 9V jack. Connect the other end to a standard AC outlet.

Loop the power cable around the special cord hook on the back of the PR-300S to help prevent the adaptor from being accidentally unplugged in the middle of a performance.

Cord Hook



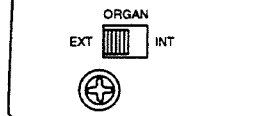
EXT/INT Switch

The PR-300S is equipped with a switch which determines how the MIDI channels are used during SMF (Standard MIDI File) playback.

When this switch is set to "EXT" (Organ) or "INT" (Piano), the MIDI channels are assigned to the PR-300S's Track buttons as follows:

TRACK Button	R	1	2	3	4
EXT (Organ)	10	12	13	14	others
INT (Piano)	10	1	others	3	4

When the PR-300S is connected to a Rodgers organ with sequencing capabilities, this switch should be set to "EXT". When working with other MIDI instruments, set the switch to "INT".



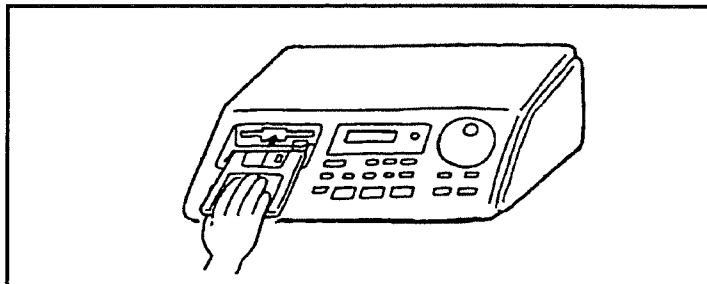
Using Disks

The PR-300S uses 3.5-inch 2HD or 2DD floppy disks (sometimes called "microflops"). They are used to store the songs you record on the PR-300S. Whenever possible, use 2HD disks. They are a little faster than 2DD disks for certain operations.

1. Inserting a Disk

To insert a disk, push it firmly (but gently) into the disk drive; insert the side with the sliding disk cover first with the label side up. The disk will click into place when it is properly inserted.

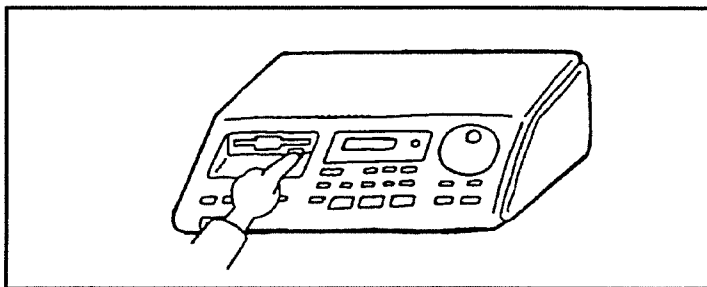
*Make sure disk is correctly inserted before you try to use it.



2. Removing a Disk

To remove a disk, press the EJECT button firmly.

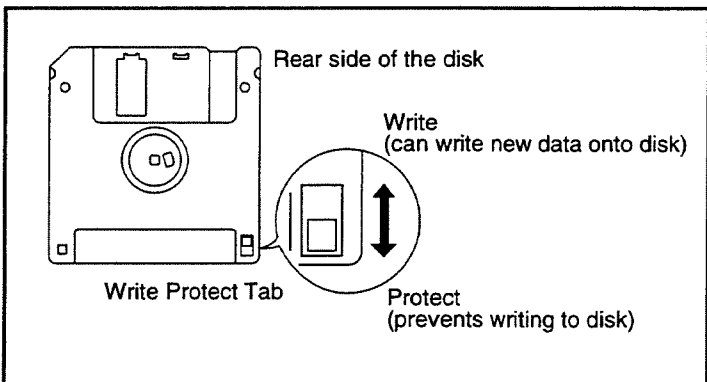
*When the power is on, the disk drive light will alternate between being dimly lit (disk drive ready) and brightly lit (disk drive in operation). In the latter case, do not try to eject the disk or you might damage the magnetic disk surface and make the disk unreadable. Instead, wait for the disk light to become dim before ejecting a disk.



3. Write Protecting your Disks

Floppy disks have a "write protect" tab which can protect the disk from accidental erasure.

It is recommended that the tab be kept in the "protect" position and moved to the "write" position only when you wish to write new data onto the disk.



4. Floppy Disks: Handle with Care

*Floppy disks contain a plastic disc coated with magnetic particles; this is the magnetic storage medium for all data. Observe the following when handling disks:

*Never touch the coated surface of the floppy's internal disk.

*Do not subject floppy disks to temperature extremes (eg., direct sunlight in an enclosed vehicle). Recommended temperature range: 50° to 110°F.

*Do not expose floppy disks to strong magnetic fields, such as those generated by loudspeakers.

*Do not use or store in extremely dusty places.

*Remove disks from the disk drive before turning the PR-300S on or off.

*All important data should be copied onto backup disk(s). This provides a complete duplicate of the data should the original disk(s) be lost or damaged.

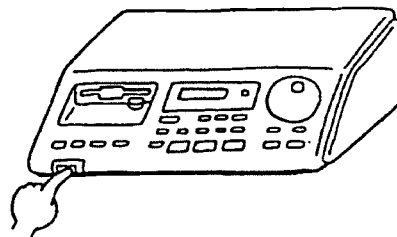
*The identification label should be firmly fixed to the disk. Should the label come loose while the disk is in the drive, it may be difficult to remove the disk.

Turning the Power ON

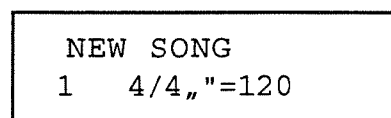
After checking to see that everything is connected correctly;

1. Turn on equipment to be used with the PR-300S.
2. Turn on the PR-300S.

The Power switch is located in the bottom left hand corner of the PR-300S's control panel.



After a brief sign-on message, the PR-300S's display will indicate that a new song is ready to be recorded.



Listening to a Song on Disk

It's easy to listen to a song stored on a disk; just insert the disk into the drive, select the song you want to hear by turning the alpha-dial, and press the PLAY button.

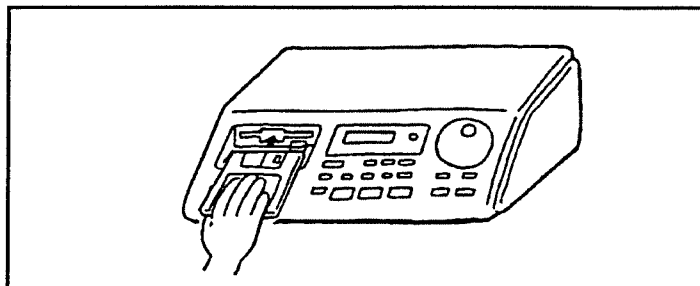
Inserting the Disk

- (1) Insert the disk into the disk drive.

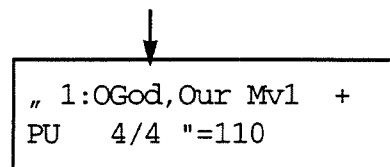
This time around, we'll listen to one of the songs on the Demo Song Disk that came with your PR-300S.

*For information on the eight demo songs on this disk, see the section at the bottom of page 10.

The title of the first song on the disk will appear in the display.



Song Name



This indication is called the "Play Screen"

Selecting a Song

- (2) Rotate the alpha-dial until the display shows the name of the desired song on the disk.

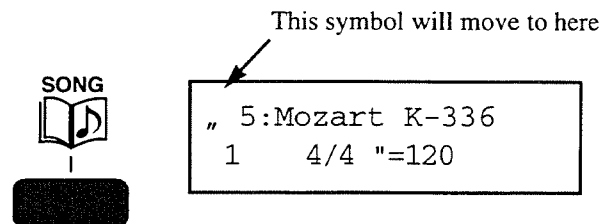
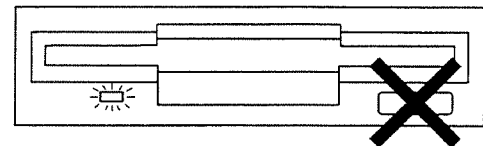
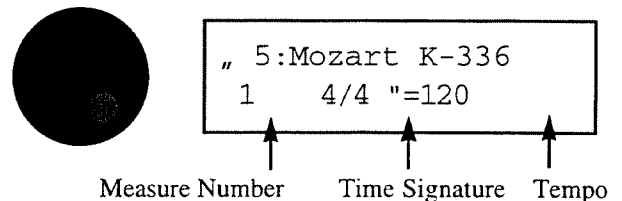
In this example, we'll select the piece called "Mozart K-336".

NOTE!

Never try to remove a disk from the drive while the drive light is brightly lit.

When the power is on, the disk drive light will alternate between being dimly lit (disk drive ready) and brightly lit (disk drive in operation). When the disk drive is in operation and the disk drive light is brightly lit, do not try to eject the disk or you might damage the magnetic disk surface and make the disk unreadable.

*If the „ symbol is not located just to the left of the Song Name, press the [SONG] button (the button just above the TRACK [R] button), and then rotate the alpha-dial to make your selection.



About the Demo Song Data . . .

#	Song	Composer
1	Oh God, our Help in Ages Past, Movement 1	Paul Manz
2	Oh God, our Help in Ages Past, Movement 2	"
3	Oh God, our Help in Ages Past, Movement 3	"
4	Oh God, our Help in Ages Past, Movement 4	"
5	Church Sonata in C Major, K-336	W. A. Mozart
6	"Aurelia"	Samuel S. Wesley
7	"St. Anne"	William Croft
8	"Woodworth"	William B. Bradbury

All songs except #5 arranged by Mark Huth and Tom Hazleton

Song #5 arranged by Christopher Norton

Songs 1-4 are from "Partita on 'St. Anne'" by Paul Manz

Songs 5-8 will play an external Rodgers organ with sequencing capability if the ORGAN switch on the PR-300S is set to "EXT".

Starting Playback

- (3) Press the **PLAY** button to start playback of the song. The light on the [PLAY] button will come on.



" 5:Mozart K-336
3 4/4 "=120

↑
Displays the current measure number

- Adjusting the Volume

Adjust the volume of the PR-300S using the volume control on the PR-300S.



Stopping Playback

- (4) Press the **[STOP]** button to stop playback of the song. The light on the [PLAY] button will go out.

*A "+" sign (located to the left of the measure number in the display) indicates that play was stopped in the middle of a measure.

*You can repeat the song over and over again. Simply press the **[REPEAT]** button so that its light comes on before pressing **[PLAY]**.

" 5:Mozart K-336
+ 9 4/4 "=120

↑
This shows that play was stopped in mid-measure

Starting Playback Again from the Beginning

To return a song to the beginning of the first measure:

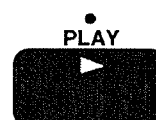
- (1) Press the **[RESET]** button. The measure number will reset to "1".

*For songs that begin with pickup notes, the display will read "PU", indicating that you're starting from the very first note of the song.



" 5:Mozart K-336
1 4/4 "=120

↑
Measure indicator returns to "1" (or "PU" for songs with pickup notes).

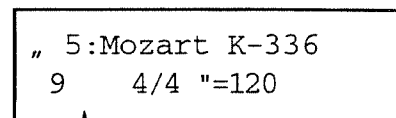


(2) Press [PLAY] again to start playback.



Starting Playback from the Middle of a Song

(1) Press the [BWD] and [FWD] buttons to locate the measure number where you want to start playback.



Playback will start from this measure number

*Holding down either button will cause the measure number to change continuously.

*The buttons will also function during playback.

(2) Press the [PLAY] button.

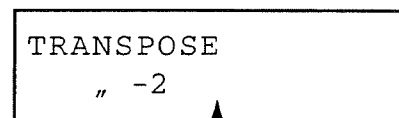


Transposing the Key of a Song

(1) Press the [TRANSCOPE] button.



(2) Rotate the alpha-dial to change the key.



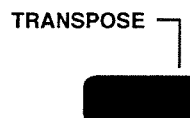
Changes the key signature

*Each unit of the TRANSCOPE function corresponds to an interval of a semi-tone, and you can change the key up or down a maximum of 12 semi-tones (one octave). So, for example, if you wanted a song that was written in the key of D to play in the key of E, set TRANSCOPE to 2 using the alpha-dial.

*If transposed too high or too low (i.e., beyond the range of playable sounds), the song may not play normally.

*The DATA in the Rhythm Track will not be transposed.

(3) Press [TRANSCOPE] again to enter transposition amount. The Play screen will



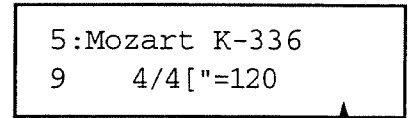
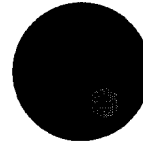
return.

Adjusting the Tempo

You can adjust the tempo of a song played by the PR-300S without affecting the pitch of the music.

To adjust the tempo of a song during playback:

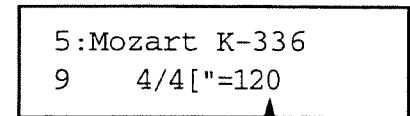
- (1) Rotate the alpha-dial to select desired tempo.



Rotating the alpha-dial during playback will change the tempo.

To adjust the tempo of a song when the PR-300S is at the "Play Screen":

- (1) Press the [TEMPO] button to move the [prompt to the left of the note indicator.
- (2) Rotate the alpha-dial to select desired tempo.



Press the [TEMPO] button to move [prompt to this location; then rotate alpha-dial to change



Hint!

To return a song to its original tempo, hold down the [TEMPO] button and press [RESET].



Activating the Metronome

- (1) To turn on the metronome, press the [METRONOME] button.

The light over the button will come on and the metronome will be heard during playback and record procedures.

The metronome volume can be adjusted with the METRONOME VOLUME control on the back of the PR-300S.



* Press the [METRONOME] button again to stop the metronome.

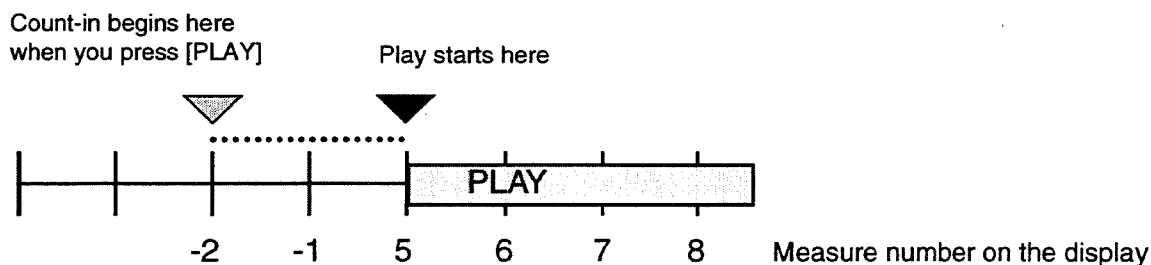
Using the Count-In Feature

If you press the [COUNT IN] button (and the indicator lights), you will hear two bars of Count-In phrase (in the correct tempo) before the music starts.

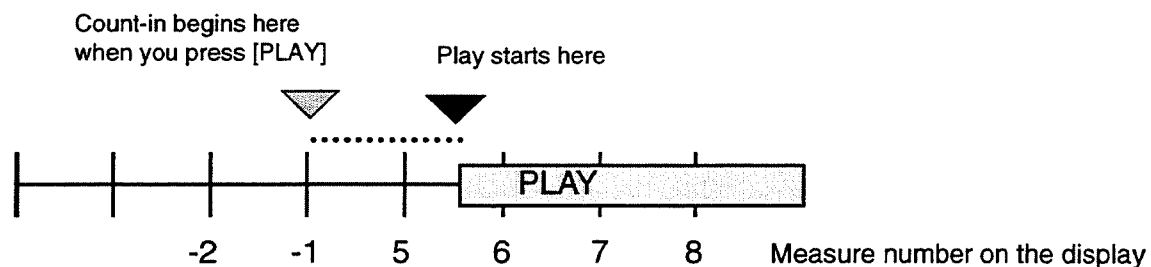


If you start in the middle of a measure, count-in

When started at the beginning of the fifth measure . . .



When started in the middle of the fifth measure . . .



starts at the beginning of the previous measure.

- * Press the [COUNT IN] button again to cancel count-in function.
- * During Count-In, the metronome will not be heard.
- * The Count-In Phrase can be any rhythmic pattern

you desire. For more information, see "Creating Your Own Count-In Phrase".

Activating and Muting Tracks

The PR-300S is equipped with five **tracks**. These tracks store recorded music. The music on one track can be manipulated without affecting the music on other tracks.

Four of the tracks on the PR-300S can be used to store any type of music. These tracks are labeled "1", "2", "3" and "4".

One of the tracks is used to store rhythm or drum parts. It is labeled "R" (for "Rhythm" track).

When music is stored on a track, the light above the track is green. During playback, you can mute a track by pressing its button.

To learn more about tracks, follow this example:

- (1) Select the song "Mozart K-336" on the Demo Song Disk by pressing [SONG] and rotating the alpha-dial.

SMF Data and Track Assignments

As indicated earlier, the PR-300S contains an EXT/INT switch on the back panel. This switch becomes active when you are playing SMF (Standard MIDI File) data. Because SMF data may contain up to 17 tracks, that track data is reorganized and then assigned to the TRACK buttons on the front panel. (The data must be handled this way because the PR-300S only has five TRACK buttons.) By pressing the appropriate TRACK button you can then mute a specific part of the SMF data and play that part in realtime on your keyboard (organ or MIDI instrument). When you are working with a Rodgers organ, set the switch to "EXT". This allows you to mute a particular division of the instrument and play that part in realtime. Or if you're using a MIDI instrument of some type, set the switch to "INT". This selects the more conventional channel map used for SMF data (ie. channel 1 for melody, channels 3, 4 and so on for the other parts).

When this switch is set to "EXT" (Organ) or "INT" (Piano), the MIDI channels are assigned to the PR-300S's Track buttons as follows:

TRACK Button	R	1	2	3	4
EXT (Organ)	10	12	13	14	others
INT (Piano)	10	1	others	3	4

Two track lights will be green; Track 2 (which has the organ part) and Track 4 (which has the orchestra part).

- (2) Press [PLAY] to start playback.
- (3) Press [TRACK 4] so the green light goes off.

The orchestra part stored on track 4 will be silenced.

- (4) Press [TRACK 4] again so the green light is turned back on.

The orchestra part stored on track 4 will play again.

*Any track which has a green indicator light can be muted and activated by following this procedure.

SONG

1

5:Mozart K-336
1 4/4 [=120

PLAY

○

○

● TRACK

○

○

R

1

2

3

4

Track 4 is silenced

○

○

● TRACK

○

●

R

1

2

3

4

Track 4 is reactivated

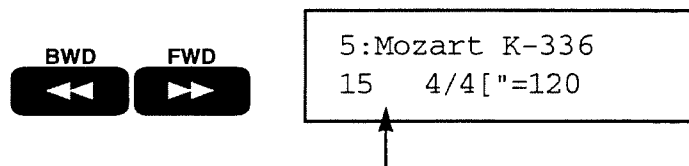
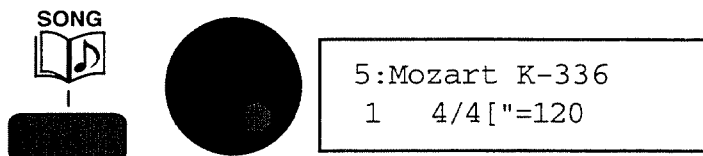
*An indicator which does not turn green when pushed denotes an empty track.

Using the Repeat Play Function

With the Repeat Play function, you can set Markers at the beginning and end of a particular section of music and instruct the PR-300S to repeat that section over and over again.

The PR-300S Markers set the boundaries for the Repeat Play function. The two marker buttons (labeled "MARKER A" and "MARKER B") are located on the left side of the unit near the power switch. Marker A is used to set the beginning boundary of the repeated section; Marker B is used to set the ending boundary.

In this example, we'll use the demo song we've used before, "Mozart K-336". Select this song (if it's not already selected) by pressing the [SONG] button and rotating the alpha-dial.



Select measure 15 in the display

- (1) Use the [FWD] and [BWD] keys to go to measure 15.

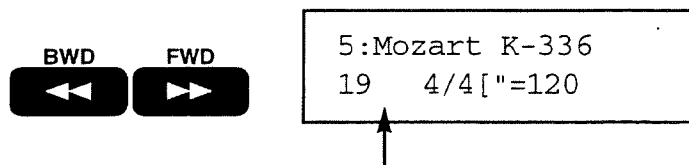
- (2) Press [MARKER A] so that its light comes on.

This sets the beginning boundary of the repeated section at the start of measure 15.



Press [MARKER A] to set beginning of repeated section at the start of measure 15.

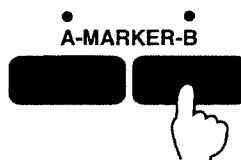
- (3) Use the [FWD] and [BWD] keys to go to measure 19.



Select measure 19 in the display

- (4) Press [MARKER B] so that its light comes on.

This sets the ending boundary of the repeated section at the start of measure 19.



Press [MARKER B] to set end of repeated section at the start of measure 19.

(5) Press [REPEAT] so that its light comes on.

The PR-300S will go back to the beginning of the repeated section - - - in this case, the start of measure 15.

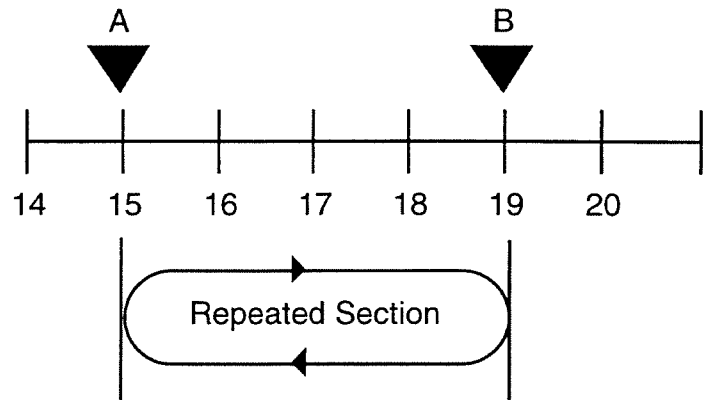


5:Mozart K-336
15 4/4["=120

Pressing [REPEAT] returns the PR-300S to the beginning of the section to be repeated (the location of Marker A). In this case, the PR-300S returns to the start of measure 15.

(6) Press [PLAY].

The PR-300S will play the section you've marked (between the beginning of measure 15 and the beginning of measure 19) over and over again.



*Press [STOP] to stop playback of the repeated section.

*When the Repeat function is activated, you will only be able to select measures within the section specified by Marker A and Marker B. In the example we've been using, you will be able to select only measures 15 - 19 with the [FWD] and [BWD] keys. In addition, pressing [RESET] will return you to the beginning of measure 15, where Marker A is set.

If you cancel the Repeat function by pressing the [REPEAT] button again, you will be able to select any measure within the sequence and pressing the RESET button will return you to the beginning of the sequence.

*Pressing a marker button which has been set will move you to the marker's location in the sequence.

*If Marker A is not set and the Repeat function is activated, the PR-300S will use the beginning of the sequence as the beginning boundary of the repeated section.

*If Marker B is not set and the Repeat function is activated, the PR-300S will use the end of the sequence as the ending boundary of the repeated section.

*If the Repeat function is activated and no markers

are set, the entire sequence will be repeated over and over.

*A marker must be cleared before it can be moved to another location.

To Clear a Marker:

- (1) Hold [MARKER CLEAR], and,



This would clear marker B.

Playing Sounds of the PR-300S

(2) Press marker you wish to clear.

The PR-300S has 354 high quality sounds which can be used to create many different styles of music. In this section, we'll show you how to play PR-300S sounds from another MIDI device, such as a Rodgers organ or MIDI keyboard.

We'll also tell you about the different ways that sounds can be selected.

Playing the PR-300S GS Sound Module

The PR-300S is equipped with a high resolution sound generator which produces many great sounding instruments and effects (you've already heard some of them by listening to the demo disk). This sound generator conforms to both the new General MIDI Specification and the GS Format.

MIDI uses 16 different channels to communicate. Each of these channels can be used to control a different sound.

When the PR-300S is connected to a MIDI synthesizer or keyboard, each of the 16 MIDI channels can be used to control EITHER a PR-300S sound or a sound in the MIDI keyboard.

So that the resources of both the PR-300S and the MIDI keyboard can be utilized, some of the 16 MIDI channels are designated for PR-300S use only, and some of the 16 MIDI channels are designated for MIDI keyboard use only.

For example, when the PR-300S is connected to a Rodgers organ, some MIDI channels are used to control PR-300S sounds and some MIDI channels are used to control the organ's sounds.

To use the resources of both instruments together, the PR-300S must be told which of the 16 MIDI channels will be used to control the PR-300S's internal sounds and which will be used to control sounds in an external MIDI instrument (such as a MIDI keyboard or Rodgers organ).

The default setting for channels 1-10 is 'INTERNAL'. This means channels 1-10 will be used to control the internal sounds of the PR-300S. Channels 11-16 are usually set to 'EXTERNAL', meaning that they will be used to control an external instrument, such as a Rodgers organ. Each MIDI channel can be set to 'INTERNAL (INT)' or 'EXTERNAL' (EXT) independently.



Default MIDI Channel Settings

<u>Channels</u>	<u>Common Use</u>
1-10	Internal sounds
11-16	External keyboard (such as a Rodgers organ)

Setting MIDI Channels to INTERNAL or EXTERNAL

To make the INT/EXT setting for each of the 16 MIDI channels, follow this procedure:

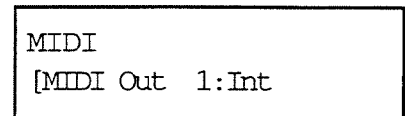
- (1) Press [MIDI].

This button is located under the access panel.

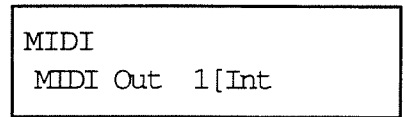


- (2) Rotate the alpha-dial as necessary until the "MIDI Out" screen appears.

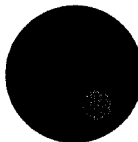
The position of the [prompt determines which field in the display will be changed when the alpha-dial is rotated. The [prompt can be easily moved to the right and left by pressing the [TEMPO] and [BEAT] buttons.



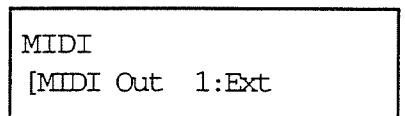
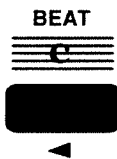
- (3) To change the setting of MIDI channel 1, press the [TEMPO] button to move the [prompt to the right.



- (4) Rotate the alpha-dial to change the setting for MIDI channel 1 to INT or EXT.

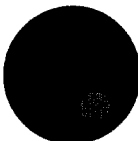


- (5) Press the [BEAT] button to move the [prompt back to the beginning of the line.



- (6) Rotate the alpha-dial to select the next MIDI channel you wish to set or check.

Use the procedure outlined above to set the selected MIDI channel to either INT or EXT.



- (7) When you have set all the MIDI channels, press

[ENTER] to return to the Play screen.

Playing Sounds of the PR-300S

It's time to show how sounds of the PR-300S can be played from an external MIDI keyboard or Rodgers organ. As many of our customers will be using the PR-300S with a Rodgers organ, the following examples will show operating procedures for both the PR-300S and a Rodgers organ.

If you are using something other than a Rodgers organ to control the PR-300S, simply use whatever operating procedures are required for the equipment you are using to achieve the desired result.

In the default settings described above, channels 1-9 can be used to play any of the PR-300S's 354 instruments, and channel 10 can be used to play any of the 10 different drum kits inside the PR-300S.

Let's start by playing a PR-300S instrument on channel 1 from the Rodgers organ. (Please note: LTG MIDI Phase II Organs use MIDI channel 2 instead of MIDI channel 1 in the following situations.

(1) Cancel any organ registrations.

This insures that the organ will not generate sound when keys or pedals are pressed.

(2) Press [MIDI ON GREAT]* on the Rodgers organ.

*This piston is labeled [MIDI GREAT A] on larger Rodgers organs.

This will tell the organ to transmit on channel 1 when notes are played on the Great Manual. LTG MIDI Phase II organs will transmit on MIDI channel 2.

<u>Channel</u>	<u>Use</u>
1-9	PR-300S Instruments
10	PR-300S Drums
11-16	External MIDI devices (Rodgers Organs, other keyboards and sound modules)

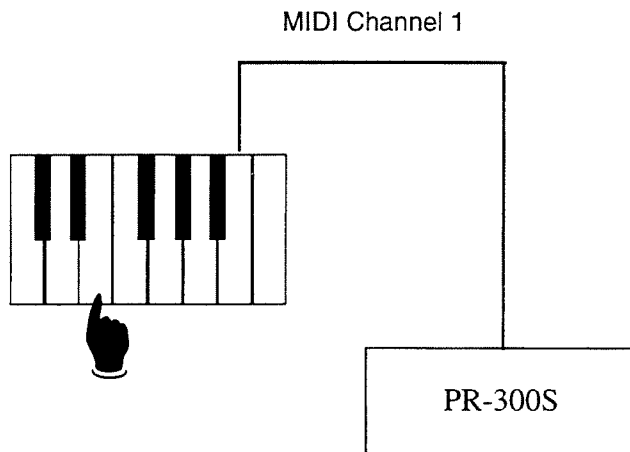


(3) Play notes on the Great manual of the organ.

The Rodgers organ will send MIDI information to the PR-300S and an instrument will play.

*If you are not getting any sound, check the following things:

- Are all cables connected correctly?
- Is the PR-300S turned on?
- Is the [VOLUME] slider of the PR-300S adjusted correctly?



Selecting Sounds on the PR-300S

Obviously, you want to have some control over which sound is played from the Great manual of the organ. There are a few different ways to select the sound which is controlled by the Rodgers organ.

The first way is to use the Sound Function on the PR-300S. The Sound Function assigns a specific sound to a MIDI channel.

As the Great Manual of the Rodgers organ sends on MIDI channel 1, we will use the Sound Function of the PR-300S to assign a sound to MIDI Channel 1. As an example, we will assign "Harpischord" to MIDI Channel 1:

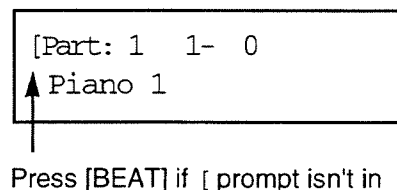
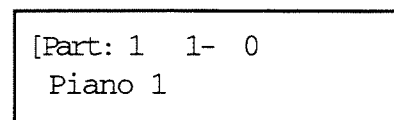
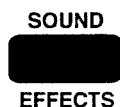
(1) Press [SOUND].

This button is located under the top panel.

Press [BEAT] if [prompt is not located in the top left corner of the display.

(2) Rotate the alpha-dial (if necessary) to select "Part 1".

Each part communicates on its corresponding MIDI



Press [BEAT] if [prompt isn't in

channel. For example, "Part 1" communicates on MIDI channel 1, "Part 2" communicates on MIDI channel 2, "Part 3" communicates on MIDI channel 3, etc.

- (3) Press [TEMPO] to move [prompt to the beginning of the second line.

When the [prompt is at the beginning of the second line, rotating the alpha-dial will select a different instrument for the specified part.

When the [prompt is at the beginning of the first line, rotating the alpha-dial will select a different part.

- (4) Rotate the alpha-dial until "Harpsichord" is selected.

Any of the PR-300S's 354 sounds can be selected by rotating the alpha-dial.

- (5) Press [WRITE] once.

The PR-300S will ask you if you are sure you want to change the sound assigned to Part 1 (or Part 2).

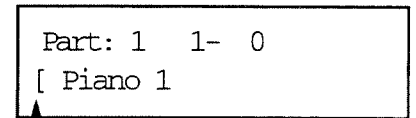
- (6) Press [ENTER] to confirm change.

When notes are pressed on the Great manual of your Rodgers organ, they will play the "Harpsichord" voice of the PR-300S.

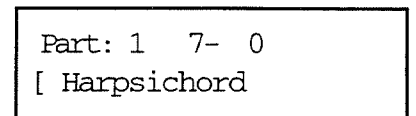
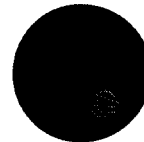
*Any of the 16 parts of the PR-300S which are set to "INT" can have instruments assigned to them using the Sound Function. Parts which are set to "EXT" cannot use the Sound Function.

*Part 10 will use one of the GS sound generator's 10 drum kits. Instruments other than the drum kits may not be assigned to Part 10.

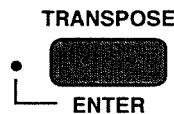
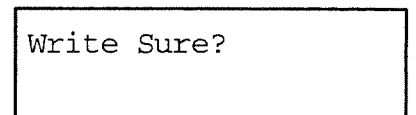
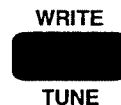
*Writing this change actually stores the sound selections for each MIDI channel into the beginning of the selected song. Therefore, if you want to save your sound selections, you must save the current song to disk (see "Saving a Song to Disk").



Press [TEMPO] to move [



Rotate alpha-dial to select "Harpsichord".



Selecting PR-300S Sounds with Program Changes

The Sound Function, as described earlier, is one way to select PR-300S sounds. There is another way to select PR-300S sounds without even touching the PR-300S through **Program Change** messages.

A Program Change is a MIDI message which can be sent from the Rodgers organ to the PR-300S to select a sound. Each of these messages has a value between 1 and 128. When a program change is sent from the Rodgers organ to the PR-300S, a sound which corresponds to the program change number sent is selected. What's more, Program Changes can be stored in the combination action of the Rodgers organ with organ registrations, allowing both PR-300S sounds and organ registrations to be selected with the press of a combination piston.

Let's start by selecting a sound for MIDI channel 1 by sending a program change from the Rodgers organ to the PR-300S.

Right now, the PR-300S should have "Harpichord" selected for Part 1 (which is controlled from the Great manual when "MIDI ON GREAT" is activated). Let's assume that you would like to use the PR-300S's "Piano 3" voice for Part 1 instead.

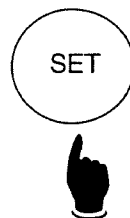
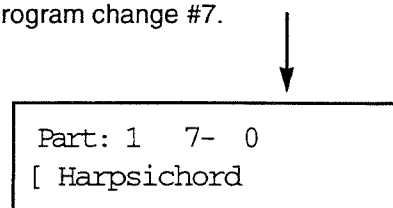
The PR-300S's "Piano 3" voice has been assigned Program Change #3. So, we will send Program Change #3 on MIDI channel 1 to select the "Piano 3" voice for Part 1.

To send a program change from your Rodgers' organ to the PR-300S:

- (1) **Hold [SET] on the Rodgers organ.**
- (2) **Press [MIDI ON GREAT]*, then release both pistons.**

The MIDI coupler will flash, signifying that the

This number in the display denotes the Program Change for each instrument. For example, "Harpichord" can be selected with Program change #7.



organ is ready to send a program change.

*This coupler is called "MIDI GREAT A" on larger Rodgers organs.

- (3) **Press Low D on the bottom manual of the organ to send program change 3 to the PR-300S.**

The PR-300S's "Piano 3" voice will be selected and will play when notes are pressed on the Great manual.

*Pressing Low D while the MIDI ON GREAT piston was flashing sent Program Change #3. If you had pressed Low C, Program Change #1 would have been sent. Low C# would have sent Program Change #2, Low D# would have sent Program Change #4, etc.

To check and make sure "Piano 3" was selected, press [SOUND] and select Part 1. "Piano 3" should appear in the display.

A chart showing all of the program changes which can be sent from your Rodgers organ is included with this manual. This chart has also been cross-referenced to show which sounds in the PR-300S will be selected when each program change is sent.

You can use other MIDI couplers on your Rodgers organ to select and play sounds in the PR-300S. Simply hold [SET] and press the desired MIDI coupler, then press a key which corresponds to the sound you wish to select.

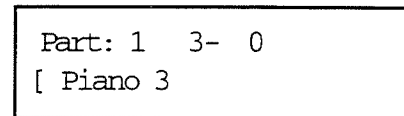
Note: Refer to your organ's user manual for more specific information on using other MIDI couplers.



GREAT (2 manual organs)

CHOIR (3 manual organs)

This number is changed from "7" for "Harpichord" to "3" for "Piano 3"



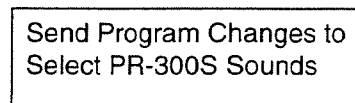
Saving Program Changes

Once you have sent a Program Change to select a PR-300S sound, you can save that Program Change message into the combination action of the organ so that the sound will be selected when you press a piston.

To store a program change into the combination action of the organ, follow these steps:

- (1) **Send program changes for desired MIDI couplers to select sounds on the PR-300S.**

To store Program Changes for PR-300S into organ's combination action



You may send program changes for any MIDI coupler on your organ, as long as it transmits on MIDI channels 1-10. Also, any combination of available couplers can be used.

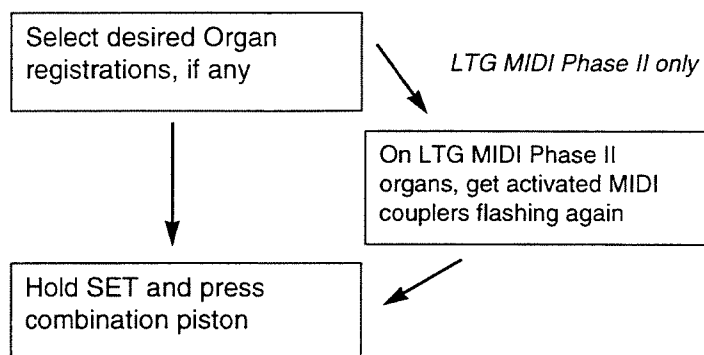
(2) Select the desired organ registrations, if any.

Any available organ stops can be used with PR-300S sounds, if desired. (On LTG MIDI Phase II Organs, get all activated MIDI couplers flashing again).

(3) Hold [SET] and press combination piston on organ to store MIDI program changes and organ registration.

Whenever that piston is pressed, the organ registration and MIDI Program Changes will be recalled and the appropriate PR-300S sounds will be selected.

This important feature allows you to change PR-300S sounds quickly and easily, giving you control of a wide variety of sounds and colors.



Using Program Changes with Variation Select Messages

In the previous pages, you've learned how to select PR-300S sounds using 128 different Program Change messages. You've also learned how to store these Program Changes into the combination action of the organ, making it easy to change sounds quickly.

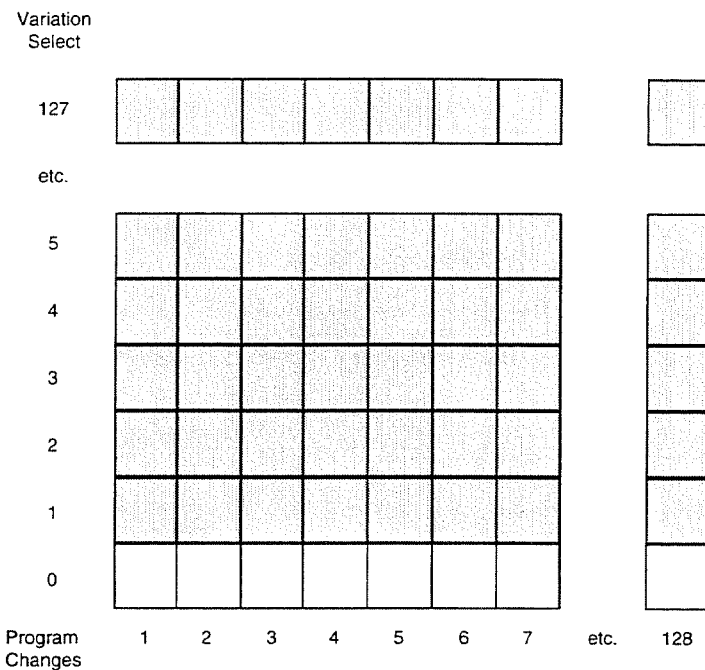
However, the PR-300S has more than 128 sounds in its GS sound generator (in fact, it has 354 different instruments and 10 different drum kits to choose from). You can select any of these instruments using the Sound Function, but Program Changes alone will only allow you access to 128 of the voices in the PR-300S.

For this reason, some Rodgers organs use **Variation Select** messages to allow access to all PR-300S sounds. The combination of Variation Select messages and Program Change messages allows you to select any of the PR-300S sounds from a Rodgers organ.

What's more, Variation Select messages can be stored in the combination action with Program Changes, so both messages can be sent from the organ to the PR-300S with the press of a piston.

How does Variation Select work?

As you've already seen, you can select 128 different sounds using Program Change messages. Variation Select allows you to select any of 128 **variations** of each Program Change message. An illustration showing the relationship of Variation Select messages to Program Change messages is shown.

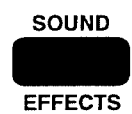


Variation messages have a value between 0 and 127. If you send a Variation Select message of 8, then Variation 8 will be selected.

If no Variation Select message is sent, then Variation 0 (no variation) is assumed. Variation 0 was shown in the previous diagram with no shading.

Let's look at a specific example which will show the relationship of Variation Select messages and Program Change messages.

- (1) Press [SOUND] and rotate the alpha-dial to select Part 1 (if it isn't already selected).



```
[Part: 1  1-  0
↑ Piano 1
```

Press [BEAT] if "[" prompt isn't

If the [prompt isn't at the beginning of the first line, press [BEAT] before rotating the alpha-dial.

- (2) Press [TEMPO] to move the [prompt to the beginning of the second line.



```
Part: 1  1-  0
[ Piano 1
```

- (3) Rotate the alpha-dial to select "E.Piano 1".

Notice the two numbers at the end of the first line. "5 - 0" means that this voice can be selected by sending Program Change 5, Variation Select 0.



```
Part: 1  5-  0
[ E.Piano 1
```

- (4) Rotate the alpha-dial to select "Detuned EP 1".

Notice the two numbers now read "5 - 8", meaning this voice is selected by sending Program Change



```
Part: 1  5-  8
[ Detuned EP 1
```

5, Variation Select 8.

If we send Variation Select 0 and Program Change 5 to the PR-300S, "E. Piano 1" would be selected.
If we send Variation Select 8 and Program Change 5, "Detuned EP 1" would be selected.

Variation
Select

8	Detuned EP 1
7	
6	
5	
4	
3	
2	
1	
0	E. Piano 1

Capitol Tones and Variations

The relationship between these two voices is shown at right. The area without shading contains the "Capitol Tone". There is a different Capitol Tone for every Program Change message. Capitol Tones are located in Variation 0.

The shaded areas contain the Variations of the Capitol Tone. Once a Variation Select message is received, the PR-300S will use that Variation Tone until another Variation Select message is received.

Sending Variation Select Messages with Program Changes

In the previous pages we outlined how to send Program Changes from a Rodgers organ to the PR-300S, and how to store those Program Changes in the combination action so that sound selections can be made quickly.

Many Rodgers organs also allow you to send Variation Select messages to the PR-300S. This means that Variation Select messages can be combined with Program Changes to select available variations of Capitol Tones.

Please check the Owner's Manual for your Rodgers organ to determine if it is equipped with Variation Select messages. If so, the Owner's Manual for the organ will contain information on sending Variation Select messages and storing them into the organ's combination action.

If you are using something other than a Rodgers organ to control the PR-300S, and you want to send a Variation Select message, you will need to use **Controller 0 and Controller 32** messages. See the MIDI Implementation reference at the end of this manual for further details.

Program
Change

5

Sequencing with the PR-300S

Built into the PR-300S is a very powerful but user-friendly sequencer. A sequencer is a MIDI device which records and plays back performances.

After these performances are recorded, they can be edited and changed, allowing you to create great sounding sequences by following a step-by-step procedure.

Two different types of sequencing will be covered in this manual - - - single pass recording and multi-track recording. The following section walks you through single pass recording, in which a performance is recorded by the PR-300S and then played back. This performance can use any combination of organ stops and PR-300S sounds. After the performance is recorded, we'll show you how to save the performance to disk, so that it can be loaded into the PR-300S and played back whenever you want (like you did with the songs on the

demonstration disk).

In a later section, we'll show you how to do a multi-track sequence. Multi-track sequencing allows you to build an arrangement instrument by instrument. By breaking things down into small, manageable pieces, you can easily put together complex arrangements.

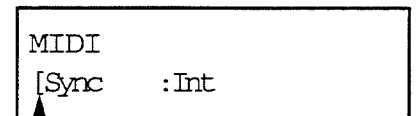
Single Pass Sequencing

The PR-300S's sequencer can record and playback any combination of organ stops and internal GS sound generator instruments.

Each of these recordings (also called "Sequences") can be saved to disk and stored for future performance. Each of these sequences can have up to 40,000 separate MIDI events. A high density disk can save up to 99 different sequences, as long as the total number of MIDI events on the disk doesn't exceed 240,000.

Before we record any sequences, we need to make sure the PR-300S is set to transmit its clock messages. The Rodgers organ uses clock messages from the PR-300S to determine when a recording is being made or when a sequence is being played back.

To check the clock message status of the PR-300S:



Press [BEAT] if the [prompt isn't located here.

- (1) Press [MIDI].

This button is located underneath the access panel.

If the [prompt is not at the beginning of the first line, press [BEAT].

- (2) Rotate the alpha-dial until "MIDI Clock Out" appears in the display.

If the display reads "MIDI Clock Out : On", then the PR-300S is set correctly and you should press [ENTER] to return to the Play Screen.

If the display reads "MIDI Clock Out : Off", then go to step 3.

- (3) Press [TEMPO] to move the [prompt.

- (4) Rotate the alpha-dial to change "Off" to "On".

This will tell the PR-300S to send its clock messages to the Rodgers organ.

- (5) Press [ENTER].

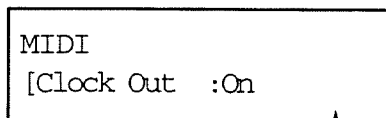
Now that the PR-300S is transmitting clock messages, use the following procedure to record a single pass sequence:

- (1) If not already selected, press [SONG] and rotate alpha-dial so that "NEW SONG" is listed in the display.

This clears any song information which may still be in the PR-300S's memory.

If there is an unsaved performance in the PR-300S's memory, then it will ask you if it is okay to erase the song data. (An unsaved performance is designated with an asterisk ("*").

If you would like to save the song data, press

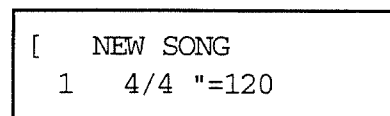
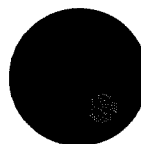


If this field is set to "On", press [ENTER]. If it is set to "Off", press [TEMPO] and rotate the alpha-dial to select "On". Then, press [ENTER].

TEMPO



TRANPOSE



If necessary, press [SONG] and rotate the alpha-dial until "NEW SONG" appears in the display.

[STOP] and save performance (see "Saving a Sequence to Disk").

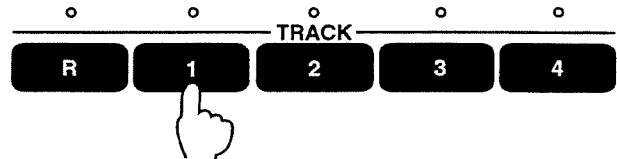
- (2) **Select the desired organ registrations and PR-300S sounds and store them into a combination piston. Press General Cancel on the organ.**



This step allows you to record your registrations into the sequence by pressing a combination piston.

- (3) **Press [REC] on the PR-300S.**

All of the track buttons will flash red. This means the PR-300S is asking you to select a track to record onto.



You can record your song onto any track, however, "Track R" should be used for rhythm (drum) parts.

- (4) **Press [TRACK 1].**

This tells the PR-300S that we want to record onto track 1.

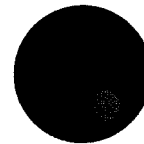
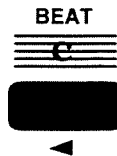
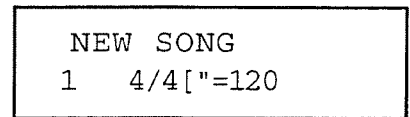
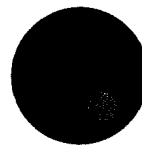
The Track 1 button is red and Play flashes green, signifying it is ready to record.



Press [METRONOME] if you want to record to the sound of the Metronome.

- (5) **Press [METRONOME] if you want to play to the sound of the Metronome.**

The volume of the metronome can be changed by turning the METRONOME VOLUME pot on the back of the PR-300S.



Rotate the alpha-dial to change the tempo, if desired. Then, press [BEAT] and rotate the alpha-dial to change the time signature, if desired.

- (6) **Rotate the alpha-dial if you want to change the tempo.**

- (7) **Press [BEAT] to move the [prompt and rotate the alpha-dial to change the time signature.**

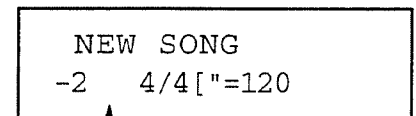
A variety of time signatures is available to you.



Press [PLAY] and press organ combination piston after two countdown measures.

- (8) **Press [PLAY] to start the Record function.**

The measure number in the display will read "-2, -1" to denote two count-down measures, in which nothing can be recorded. During the count-down measures, the REC light will flash red and the



"-2" or "-1" in the display denotes a countdown measure. A number without a minus sign denotes a regular measure.

PLAY button will be solid green.

- (9) After the two count-in measures are over, press the piston on the organ which contains your starting organ registration and/or PR-300S sound selections.

This will send the organ stops and PR-300S sounds to the sequencer so that they will be recorded. Then, the correct organ registration and PR-300S sounds will be recreated every time the sequence is played.

- (10) Play the song you wish to record.

In the event that the song is too long for the PR-300S to record, the display will read "MEMORY FULL - PRESS STOP".



- (11) When you are finished playing, press General Cancel [0] on the organ.

- (12) Press [STOP] on the PR-300S to stop recording.

The light above the TRACK 1 button will be green, indicating that it is storing the song you just recorded.



Press [RESET] then press [PLAY] to hear the sequence you've just recorded.

To playback your sequence:

- (1) Press [RESET] to return the PR-300S to the first measure of the sequence.

- (2) Press [PLAY] to start playback.

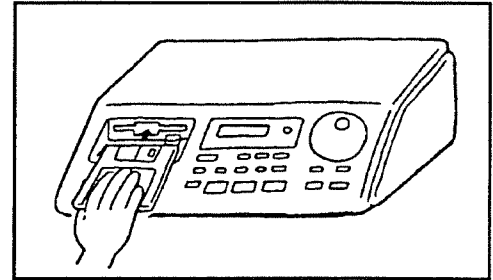
The PR-300S will playback the song you just recorded. Press [STOP] at any time to stop playback.



Saving a Sequence to Disk

The sequence you just recorded is stored in the PR-300S's memory. It can be played back or added at this time.

However, when you turn the PR-300S off, this sequence will be erased. For this reason, you can save sequences to 3.5" floppy disks. Once a sequence has been saved to a disk, it can be recalled and played at any time.



To save a sequence to disk, follow this procedure:

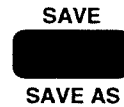
- (1) **Insert a formatted PR-300S disk into the disk drive.**

If you haven't yet formatted the floppy disk you want to use, follow the procedure, "Formatting a Disk", found later in this manual.

- (2) **Press [SAVE].**

This button is located underneath the access panel.

A screen will appear which has a number followed by a blank line, i.e., "1 _____". If the name of a previously recorded song appears, rotate the alpha-dial until you get a screen with nothing other than a number in the upper left hand corner.



After pressing [SAVE], press [TEMPO] to move to the second line. Then use the alpha-dial, TEMPO button and BEAT button to name your sequence.

- (3) **Press [TEMPO] to move the [prompt to the second line.**

The PR-300S is now ready for you to give a name to the song. The name can be up to 12 characters in length and can use any combination of letters, numbers and symbols available.



Changes
Character



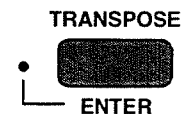
Moves
Right



Moves
Left

- (4) **Use the alpha-dial, BEAT button and TEMPO button to name your song.**

To find a character, rotate the alpha-dial.
To move to the right, press the [TEMPO] button.
To move to the left, press the [BEAT] button.



- (5) **Press [ENTER] once.**

The PR-300S will ask you if you are sure you want to save the song.

- (6) **Press [ENTER] again to save song.**

While the song is saving, the disk light will be brightly illuminated and the display will read "Please Wait . . .".

Do not attempt to eject the disk while the disk light

Multi-Track Sequencing

is bright, or you may damage the disk beyond repair!

When the song is finished saving, the display will return to the Play Screen. You may eject the disk and power off the PR-300S.

To load the disk and listen to the sequence again, follow the instructions in the section titled, "Listening to a Song on Disk".

Although the PR-300S has many useful features, Multi-Track Recording will be the most exciting to many people. The Multi-Track Recording capabilities of the PR-300S allow parts to be layered, so even the most difficult music can be broken down into small pieces and then recorded in easy-to-manage steps.

All Rodgers organs and keyboards equipped with MIDI can be used to create Multi-Track Sequences. You'll want to keep the owner's manual for your particular keyboard handy as you will likely need it for reference.

Single-Track Recording

Anything that can be played at one time is captured in the recording.

What is Multi-Track Recording?

Multi-Track Recording (or "Multi-Track Sequencing") is the process of building a sequence in small, easy-to-manage steps. Complex or difficult music can be broken down into small pieces and recorded a part at a time.

Each of the different sounds used in a Multi-Track Recording will use different MIDI channels. For example, if you wanted to record an arrangement for Harpsichord and Strings, you could first record the Harpsichord part on MIDI channel 1, then record the String part on MIDI channel 2. Using two separate

Multi-Track Recording
allows you to build a musical
arrangement by combining
easier, smaller recordings
(called "tracks") into a larger
more complex recording.

MIDI channels allows you to control two different sounds.

The next few pages will show the operating procedures to build a Multi-Track Recording.

Most MIDI keyboards and organs are able to use any of the 16 MIDI channels to control MIDI devices such as the PR-300S. Because the PR-300S is normally set to receive on channels 1-10, however, these will be the channels used for a Multi-Track Recording.

The sounds of the Rodgers organ can also be sequenced using the following MIDI channels:

<u>MIDI Channel</u>	<u>Division (2 manual)</u>	<u>Division (3-4 manual)</u>
12	Great	Great
13	Swell	Swell
14	Pedal	Pedal
15	Positiv	Choir
16		Solo

Rodgers organs normally send and receive on these channels (called "Master Channels"). For example, if notes are pressed on the Great manual, MIDI information is generated on MIDI channel 12, even if no stops are drawn.

Likewise, if the organ receives MIDI information on these channels, the corresponding division of the organ will play.

A Multi-Track Recording can use a combination of the PR-300S and organ stops; the MIDI channel used will determine which instrument plays.

If you want to build a sequence which uses both the PR-300S and a Rodgers organ, it is best to record the organ part last. The next example will show you how to do this.

If, for some reason, the organ part can't be recorded last, follow the example "When the Organ Can't be Recorded Last". If you're using a MIDI keyboard to make this recording, you can go directly to "Deciding on Channels and Instruments".

Preparing Your Rodgers Organ for Multi-Track Recording

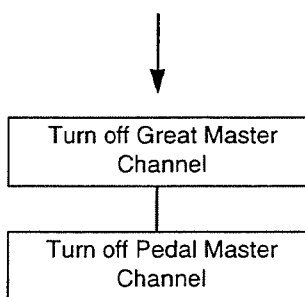
Your Rodgers organ is normally set to perform a single-pass recording, as is covered earlier in this manual. In order to record a Multi-Track Sequence, there are a few things which need to be done on most Rodgers organs before recording can take place.

Please refer to the Owner's Manual for your particular organ if you're not sure how to carry out the following procedures.

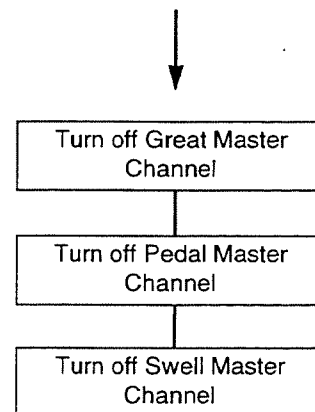
To prepare the organ for Multi-Track recording:

- (1) Turn off the Master Channels for the Great and Pedal divisions of the organ.**

Divided expression organs



Single expression organs



This tells the organ to only send information for the MIDI couplers when notes are pressed or the Great/Pedal expression pedal is moved. This way, only MIDI information for the PR-300S voices will be recorded.

This is called "Enabling/Disabling MIDI Master Channels" in your organ's Owner's Manual.

On Rodgers organs, make sure you disable transmission of MIDI information on the Great and Pedal Master Channels.

If the organ you are using has single expression, you will need to also disable the transmission of MIDI information on the Swell Master Channel.

Preparing the PR-300S for Multi-Track Sequencing

Next, the PR-300S's master clock must be disabled (the "Clock Out" function is used for single-pass record).

To disable the PR-300S's master clock:

- (1) Press [MIDI].

This button is located under the top cover.

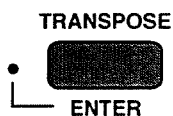
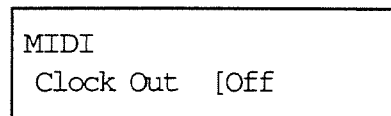
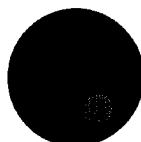
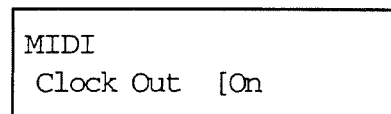
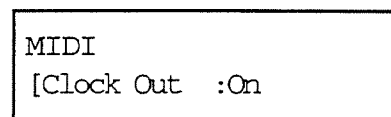
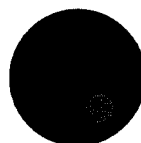
- (2) Rotate the alpha-dial until the screen at right appears in the display.

This is the screen where the master clock is enabled and disabled.

- (3) Press [TEMPO] to move "[]" prompt to the end of the second line.

- (4) Rotate alpha-dial to turn "Clock Out : Off".

- (5) Press [ENTER] to confirm change.



Deciding on Channels and Instruments

The next step in Multi-Track Sequencing is to

determine how many parts will be needed and what MIDI channels each should use.

Remember that channels 1-9 can be used to control any of the 354 instruments on the PR-300S; channel 10 can be used to control any of the 10 drum kits of the PR-300S.

Please note that if you intend to play any of the PR-300S sounds live (in "real-time") while the sequence is playing back, then the MIDI channels needed for the instruments played live cannot be used within the sequence.

For instance, if you wanted to play Orchestral Strings live on channels 1, 2 and 3 (MIDI on Great, MIDI on Swell and MIDI on Pedal, respectively), then channels 1, 2 and 3 couldn't be used in the Multi-Track Sequence.

Once the necessary instruments and MIDI channels have been determined, we can begin inputting the parts. For this example, MIDI channels 1 through 5 will be used.

We will use MIDI channels 1-5 to control PR-300S sounds. The MIDI ON GREAT coupler (or MIDI GREAT A on larger Rodgers consoles) will be used to record all PR-300S sounds as it can send on any of the 16 MIDI channels.

Part 1 (PR-300S Instrument on channel 1)
Part 2 (PR-300S Instrument on channel 2)
Part 3 (PR-300S Instrument on channel 3)
Part 4 (PR-300S Instrument on channel 4)
Part 5 (PR-300S Instrument on channel 5)

Sequencing the First Part

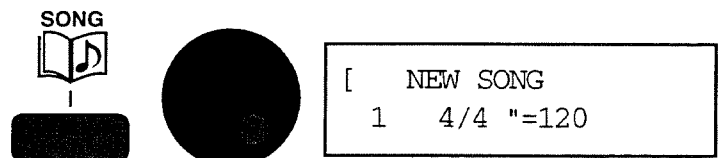
We will begin by sequencing the first part, which, in this example, is the soprano line of a popular hymn.

Before sequencing a new song, however, we need to make sure the PR-300S is ready to accept a new song:

- (1) **If not already selected, press [SONG] and rotate alpha-dial so that "NEW SONG" is listed in the display.**

This clears any song information which may still be in the PR-300S's memory.

If there is an unsaved performance in the PR-300S's memory, then it will ask you if it is okay to erase the song data. An unsaved performance is designated with an asterisk ("*") to the left of the



If necessary, press [SONG] and rotate the alpha-dial until "NEW SONG" appears in the display.

song name (NEW SONG in this case).

If you would like to save the song data, press [STOP] and save performance (see "Saving a Sequence to Disk").

You can save the sequence at any time during the recording process. To save a sequence, follow the instructions in the section, "Saving a Sequence to Disk".

Now it's time to begin recording the sequence:

- (1) **On the Rodgers organ, turn on the MIDI ON GREAT* coupler.**

*This coupler is labeled MIDI GREAT A on larger Rodgers organs.

Make sure no other stops or couplers are selected on your Rodgers organ.

- (2) **Verify that the MIDI ON GREAT coupler is set to send on MIDI channel 1.**

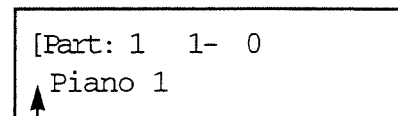
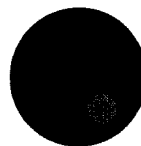
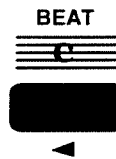
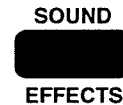
This is the default channel for the MIDI ON GREAT coupler, although the coupler can be set to send on any of the 16 MIDI channels. If the MIDI coupler isn't sending on channel 1, refer "Channel Reassignment" in your organ's Owner's Manual.

- (3) **On the PR-300S, press [SOUND].**

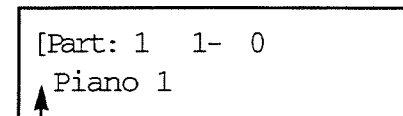
This button is located underneath the top cover.

- (4) **Check to make sure the "[" prompt is located to the left of "Part" in the display, as shown at right.**

If the "[" is not located here, press [BEAT] repeatedly until proper display appears and "[" is located to the left of "Part".



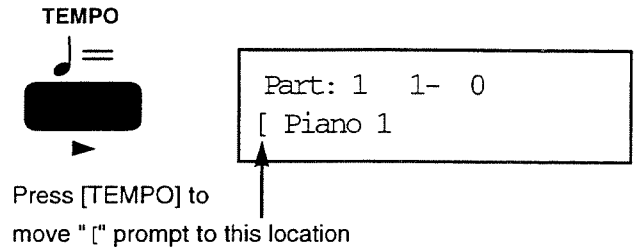
Press [BEAT] repeatedly (if necessary) to make this screen appear in the display and to move the "[" prompt to this location



Rotate the alpha-dial (if necessary) to select Part 1.

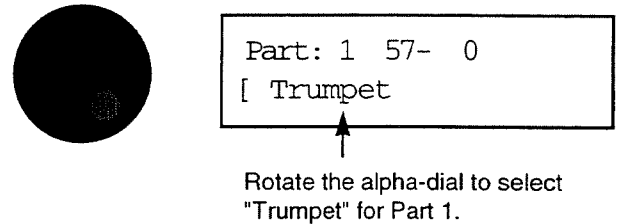
- (5) Rotate the alpha-dial to select "Part 1", if necessary.

Part 1 receives on MIDI channel 1, Part 2 receives on MIDI channel 2, Part 3 receives on MIDI channel 3, etc.



- (6) Press [TEMPO] to move the "[" prompt to the beginning of the second line, as shown at right.

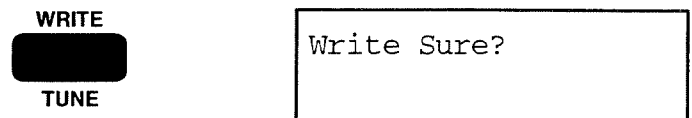
Pressing [TEMPO] and [BEAT] move the cursor through the different fields of the display.



- (7) Rotate the alpha-dial until "Trumpet" is selected.

This assigns the Trumpet voice of the PR-300S to MIDI channel 1.

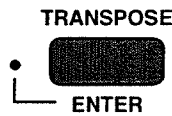
Sounds appearing in the display can be played by pressing notes on the Great. This is a good way to sample the many different sounds of the PR-300S.



- (8) Press [WRITE] to enter the voice selection for MIDI channel 1.

This button is located underneath the top panel.

The PR-300S will ask you to confirm that you want the Trumpet voice assigned to MIDI channel 1 by asking "Write Sure?".



- (9) Press [ENTER] to confirm the voice selection.

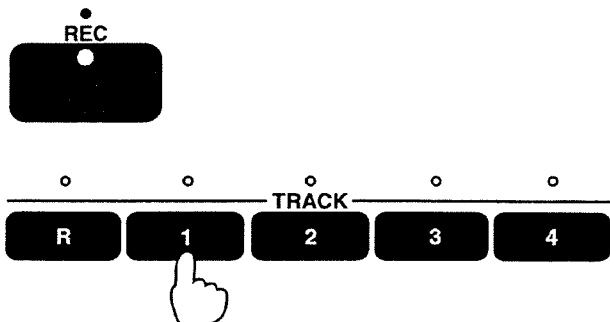
The PR-300S will return to the Play Screen.



- (10) Press [METRONOME] on the PR-300S.

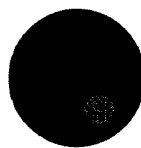
The Metronome will be heard and the light above the METRONOME button will turn red.

You can adjust the volume of the Metronome by rotating the METRONOME VOLUME knob on the back of the PR-300S.



- (11) Press REC to enter record mode.

The light above the REC button will turn red and all of the Track button lights will flash red.



(12) Press [TRACK 1] to select the first track.

The light above the Track 1 button will turn red and the light above the PLAY button will flash green.

(13) Rotate the alpha-dial to select a different tempo, if desired.

If the "[" prompt isn't located next to the tempo indication in the display, press [TEMPO] before rotating alpha-dial.

(14) Press [PLAY]. After two count-in measures, play the music shown at right on the Great manual of the Rodgers organ.

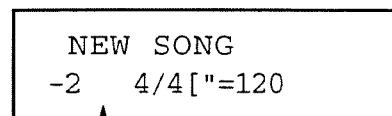
Count-in measures are listed with a minus sign "-" preceding the number ("-2, -1"). Regular measures have no minus sign. Nothing can be recorded in the count-in measures.

The music you play will use the Trumpet voice of the PR-300S. Any movements of the expression pedal will cause the Trumpet to change volume. The expression changes will be recorded and cannot be changed without re-recording the entire part.

There is a way to select an alternate volume for a part; see "Changing the Expression Setting of a Part" for more information.



Press [PLAY] and play music above after two countdown measures.

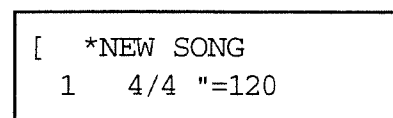


"-2" or "-1" in the display denotes a countdown measure. A number without a minus sign denotes a regular measure.



(15) Press [STOP] when you are finished recording the first part.

If you make a mistake, press [RESET] to return the PR-300S to measure 1 and record the part again using steps 11 through 14.



(16) Press [RESET] to return the PR-300S to measure 1.

You can also use the BWD key to return to measure 1.



(17) Press [PLAY] to listen to the part you just recorded.

Congratulations! You have just recorded the first track of a Multi-Track Sequence!

Recording Parts 2, 3 and 4

By following the instructions above, you were able to record the first part of a multi-track sequence. Now it's time to record Parts 2, 3 and 4.

Go through the procedure above again; once for Part 2, once for Part 3 and once for Part 4, using the following MIDI channels, tracks, and instruments:

Part	Channel	Track	Instrument
Part 2	2	Track 2	French Horn
Part 3	3	Track 3	Clarinet
Part 4	4	Track 4	Cello

For instance, when recording Part 2, you will select MIDI channel 2 (instead of using MIDI Channel 1, as before), assign the "French Horn" voice to Part 2 (instead of Trumpet on Part 1) and use Track 2 (instead of Track 1).

The music for each of these parts is shown at right. Once this has been accomplished, go on to the next section and learn how to merge two tracks together.

Merging Tracks

By the time you get to this section, there should be four separate parts recorded on the PR-300S:

Part 1	Soprano	Track 1	Trumpet
Part 2	Alto	Track 2	French Horn
Part 3	Tenor	Track 3	Clarinet
Part 4	Bass	Track 4	Cello

Let's suppose that we need to add a flute descant

Part 2 Channel 2 Track 2 French Horn



Part 3 Channel 3 Track 3 Clarinet



Part 4 Channel 4 Track 4 Cello



Track 1
Part 1
Channel 1
Trumpet

Track 2
Part 2
Channel 2
French Horn

Track 3
Part 3
Channel 3
Clarinet

Track 4
Part 4
Channel 4
Cello

to what's been recorded. However, all four tracks are currently in use as listed above. (The R track is for rhythm parts, so it should not be used for the descant). If we were to record the flute part on one of the four tracks listed above, we would record over an existing part.

For this reason, the PR-300S is equipped with a **Merge** function. Merge allows you to combine the information of two different tracks onto a single track. By using the Merge function, a free track for the flute descant can be created without losing any of the previously recorded information.

The PR-300S's Merge function takes any and all information on a track and adds it to information on another track. The information merged onto one track can be separate channels (i.e., different instruments) or it can be the same MIDI channel.

The Merge function uses the CUT and PASTE buttons located underneath the top cover.

For this example, Track 4 will be merged with Track 3 so that the flute descant can be recorded.

To merge Track 4 onto Track 3:

- (1) Press [CUT].

This button is located underneath the top cover.

The screen at right will appear in the PR-300S's display.

- (2) Press TRACK 4.

This specifies the Track to be cut.

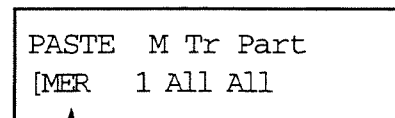
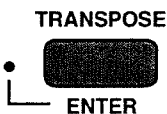
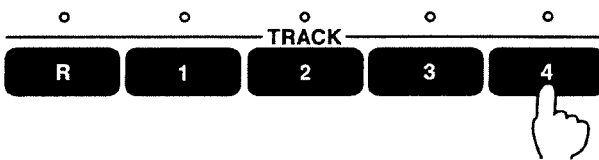
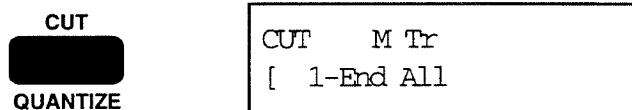
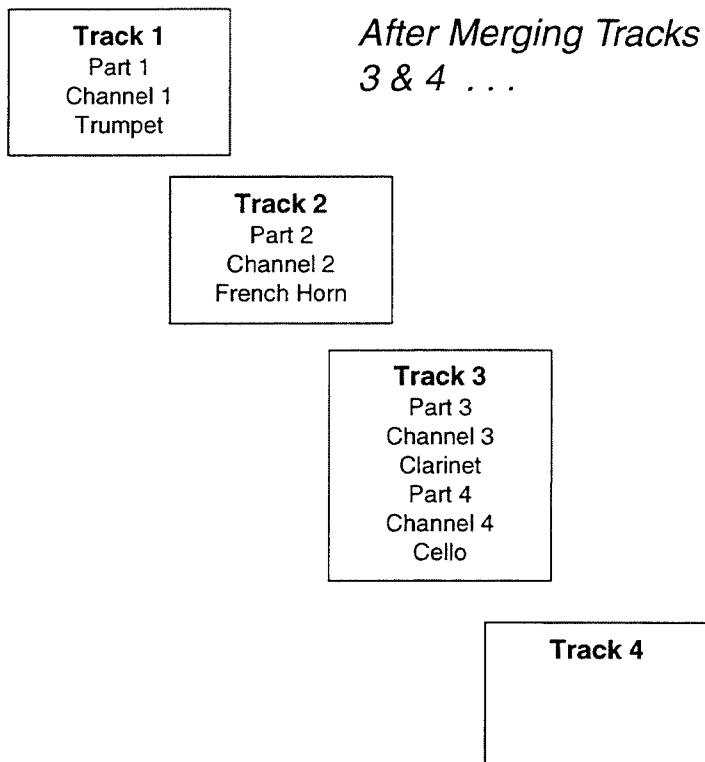
- (3) Press [ENTER] to cut Track 4.

This removes all MIDI information from Track 4.

- (4) Press [PASTE].

This tells the PR-300S what to do with the information removed from Track 4.

There are two different Paste options; "MER"



Make sure this field is set to "MER" (Merge), NOT "INS" (Insert).

(Merge) and "INS" (Insert). If "MER" doesn't appear at the beginning of the second line in the display, press [BEAT] to move the "[" prompt to the beginning of the second line (if necessary) and rotate the alpha-dial to select "MER".

(5) Press TRACK 3.

This specifies the track to be merged to.

(6) Press [ENTER].

The PR-300S will take the information removed from Track 4 and merge it with information on Track 3.

Now that the information previously on Track 4 is merged with information on Track 3, it's possible to sequence the flute descant.

Go ahead and sequence the descant found at right, using steps 1) through 15) on pages 37-39. Use the Flute voice on MIDI Channel 5 (Part 5) and sequence it on Track 4. When finished, the sequence should be set up as follows:

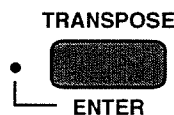
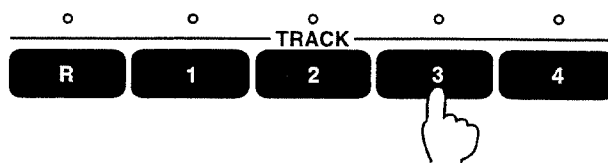
Part 1	Soprano	Track 1	Trumpet
Part 2	Alto	Track 2	French Horn
Part 3	Tenor	Track 3	Clarinet
Part 4	Bass	Track 3	Cello
Part 5	Descant	Track 4	Flute

Adding an Organ Part

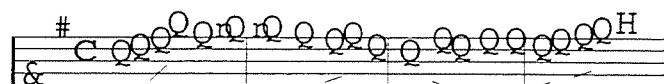
Currently, the Multi-Track sequence you have recorded uses five different PR-300S sounds. It is also possible to add the resources of a Rodgers organ to a sequence.

It is best to record an organ part after all PR-300S sounds have been recorded. However, if you wish to record the organ part at some other time, refer to the section, "When the Organ Can't be Recorded Last" for instruction.

In this section, we'll assume you want to add an organ part to an otherwise complete MIDI sequence.



Part 5 Channel 5 Track 5 Flute



Part 1 (PR-300S Instrument on channel 1)
Part 2 (PR-300S Instrument on channel 2)
Part 3 (PR-300S Instrument on channel 3)
Part 4 (PR-300S Instrument on channel 4)
Part 5 (PR-300S Instrument on channel 5)

To this we can add . . .

Organ Part (Rodgers organ on channels 11-16)
--

In order for the organ to be recorded, all of the Master Channels must be activated and the PR-300S's master clock must be enabled (we disabled the organ's Great and Pedal Master Channels and PR-300S's master clock before recording the five PR-300S instrument parts).

To prepare the organ and PR-300S to record the organ part:

- (1) Enable the Great and Pedal MIDI Master Channels using the procedure outlined in the Owner's Manual for your organ.**

This is found under the "MIDI Master Channels" section of the organ's Owner's Manual.

Rodgers organs: Make sure you re-enable **transmission** of information on the Great and Pedal Master Channels.

If the MIDI Master Channels are not re-enabled, the organ part will not be recorded. If you are using a single-expression organ, make sure to reenable the Swell Master channel also.

- (2) Press [MIDI] on the PR-300S.**

This button is located under the top cover. The screen at right will appear in the display.

- (3) Rotate the alpha-dial until "Clock Out : Off" appears in the display.**

This is the field where the master clock is disabled or enabled.

- (4) Press [TEMPO] to move the "[" prompt to the end of the second line.**

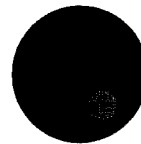
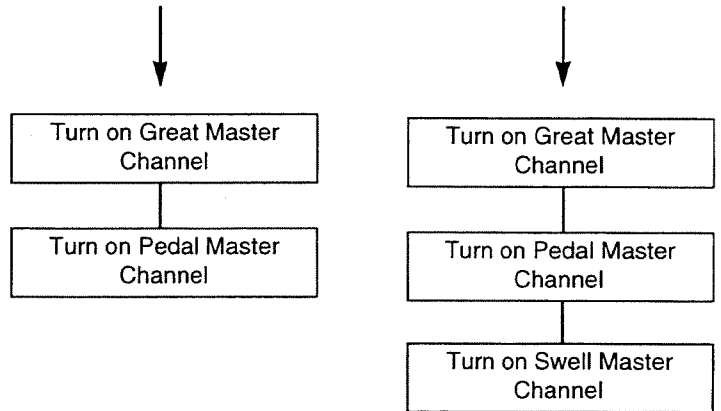
- (5) Rotate the alpha-dial to select "Clock Out: On".**

This enables the PR-300S's master clock.

- (6) Press [ENTER] to confirm change.**

Divided expression organs

Single expression organs

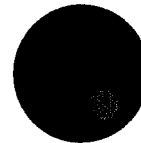


MIDI
 [Clock Out :Off

TEMPO



MIDI
 Clock Out [Off



MIDI
 Clock Out [On

TRANSPOSE



After the MIDI Master Channels and PR-300S master clock have been enabled, you can sequence the organ part on an empty track by following the steps outlined in "Sequencing the First Part" (you may need to use the Merge function again to create a blank track). You can use all manuals and pedal for the organ part. The organ's registrations and expression movements will also be recorded along with all of the notes which are played.

For best results, don't use the MIDI couplers during the recording of the organ part, as information they send may interfere with information you've previously recorded.

The PR-300S will record all activated stops and all expression movements during the recording of the organ part.

Layering Sounds of the Rodgers Organ

If you want to layer the organ sounds (i.e., merge the organ part to another track and add another organ part to the empty track), you will have to use the registrations and expression movements recorded in the first pass. Make sure you don't use another organ registration or move the expression pedals after the first organ track.

Also, the organ normally records the organ's registration and expression status at the beginning of the recording. Once this has been recorded on the first track, it is not necessary to have it recorded again on subsequent tracks.

If you want to layer organ sounds (i.e., record more than one track of organ sounds), record the first track with the MIDI Master Channels and PR-300S master clock enabled. Then, for all subsequent recordings, disable the PR-300S's master clock using the procedure outlined above. This will insure that only one set of registration and expression settings will be recorded. Of course, during the subsequent

Layering Organ Sounds

<u>First pass</u>	<u>All Subsequent passes</u>
Enable PR-300S master clock	Disable PR-300S master clock
Make Stop Changes	Don't Make Stop Changes
Move Expression Pedals	Don't Move Expression Pedals

layers, you should not select a stop or move the expression pedal, or this information will be recorded.

Remember to turn the PR-300S's master clock on after you are finished recording the multi-track organ part.

When the Send Channel Can't Be Changed. . .

Normally the send channel of the keyboard controlling the PR-300S could be changed, making it easy to use different instruments for different parts. As a single MIDI channel can control only one instrument, another MIDI channel must be used whenever you want to add another instrument to your sequence.

Some MIDI devices (such as Rodgers MIDI Phase I instruments) don't allow you to change the send channel used. If the keyboard you are using doesn't allow you to change the send channel, you will need to follow another procedure to use multiple MIDI channels.

One of the most common solutions to this situation is to use a MIDI channel filter. A MIDI channel filter is a MIDI accessory which shifts information from one MIDI channel to another MIDI channel. By inserting the MIDI channel filter between the MIDI OUT jack of the keyboard and the MIDI IN of the PR-300S, you will be able to generate information on multiple channels (even though your controlling keyboard only sends on one channel).

MIDI channel filters should be available from a local music store.

The PR-300S also allows you to shift information from one MIDI channel to another using the Cut and Paste functions. If you have a keyboard which doesn't allow you to change the send channel, you can utilize multiple MIDI channels using the procedure outlined below.

For this example, we'll use MIDI channel 1 as our only send channel. Refer to the previous section if you have any questions about the steps outlined below.

Select an Instrument for Part 1 using Sound Function

- (1) **Using the Sound Function, select the desired instrument for Part 1.**

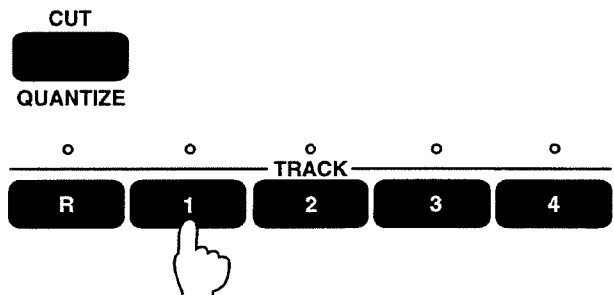
If your keyboard uses a different send channel, use the part for that channel.

Record a part using MIDI channel 1.

- (2) **Record a part on Track 1 using the Sound selected in step 1.**

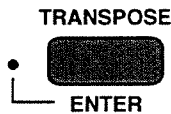
Any empty track could be used.

Now that the first part has been recorded, we will shift it to another channel.



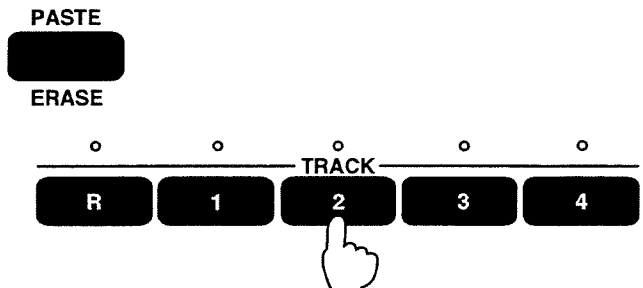
- (3) **Press [CUT].**

This button is located underneath the top cover.



- (4) **Press Track 1.**

- (5) **Press [ENTER] to remove recorded information from Track 1.**



- (6) **Press [PASTE].**

This button is located underneath the top cover.

(7) Press Track 2.

This is the track where the shifted MIDI information will be placed. Any track could be used.

If you are pasting information to a track which already has information stored on it, make sure "MER" (Merge) is selected as the paste mode. If "INS" (Insert) is selected, the new information pasted to the track will displace the information previously stored on the track.

(8) Press [TEMPO] to move the "[" prompt over to the "Part" field in the display (as shown at right).

This is where the information to be pasted can be shifted to another MIDI channel.

(9) Rotate the alpha-dial to select "2".

This specifies that the information to be pasted to Track 2 will be shifted to MIDI channel 2. Any information which was cut in steps 3-5 above will be shifted to MIDI channel 2.

Any of the 16 MIDI channels can be selected in this step.

(10) Press [ENTER].

The information previously recorded on MIDI channel 1 will be shifted to MIDI channel 2 and placed on Track 2.

(11) Use the Sound Function to select the desired sound for Part 2.

In step 1, you selected the sound for Part 1. Now that the recording you made has been shifted to MIDI channel 2, you need to select the appropriate sound for Part 2.

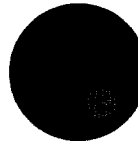
```
PASTE M Tr Part
[MER 1 All All
```

Make sure this field is set to "MER" (Merge), NOT "INS" (Insert).



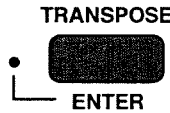
```
PASTE M Tr Part
MER 1 All[All
```

Press [TEMPO] to move the "[" prompt to this location.



```
PASTE M Tr Part
MER 1 All[ 2
```

Rotate alpha-dial to select Part 2.



Select desired Instrument for Part 2 using Sound Function

Other PR-300S Features

You can select the function written above any button under the lid of the PR-300S by pressing the button by itself. By holding down [SHIFT] and pressing a button, you can select any function written underneath the button. To execute the function, press [ENTER]. Use the [STOP] button to cancel a function in progress.

PAUSE MARK

This sets a Pause Mark. Pause Marks cause playback to stop automatically.

SOUND

This selects sounds to be played by each MIDI channel. Also, Volume, Pan, Chorus and Reverb for each Part can be set.

TUNE

This button allows you to tune the PR-300S.

METRO BEAT

This function allows you to select the beat and sound of the metronome.

EFFECTS

This selects the type of Chorus and Reverb used by the PR-300S.

TEMPO REC

This button turns on or off the Tempo record feature.

CHAIN PLAY

This feature plays all songs on disk consecutively.

EXPRESSION

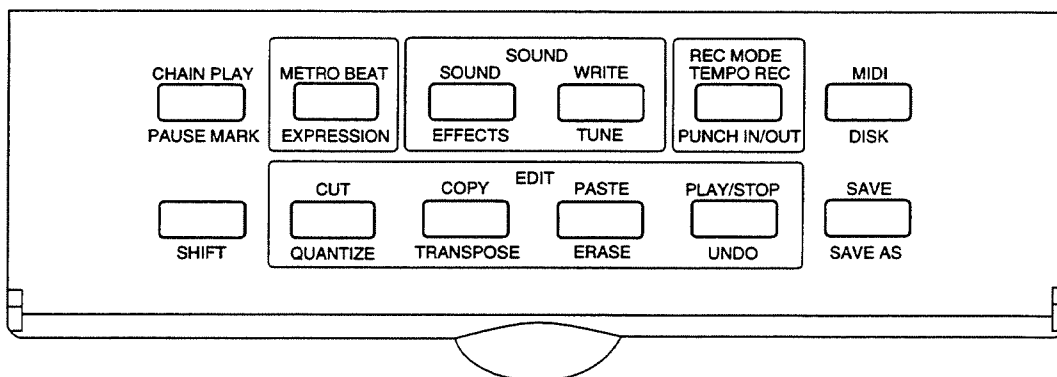
When an Expression Pedal is attached, this selects whether the volume for a Part is controlled.

WRITE

This executes the settings for SOUND and EFFECTS.

PUNCH IN/OUT

This button enables or disables the Punch IN/OUT record feature.



MIDI

This controls the settings for MIDI.

SAVE AS

This saves a new version of a Song without changing the old version.

COPY

This copies Song Data to the scratchpad.

UNDO

This reverses the last CUT, ERASE, PASTE, QUANTIZE or TRANSPOSE function executed.

DISK

This executes disk utilities.

CUT

This cuts Song Data and stores it in the scratchpad.

PASTE

This pastes scratchpad data into the Song Data.

QUANTIZE

This repositions notes in the Song Data according to designated resolution.

SAVE

This saves a Song to disk.

ERASE

This erases Song Data and stores it in the scratchpad. The erased portion is left blank.

PLAY/STOP

This plays Song Data in the scratchpad.

TRANSPOSE

This transposes selected portions of the Song Data up or down.

PR-300S Master Tune

The PR-300S can be tuned to match the pitch of other instruments, such as your Rodgers organ or a piano.

PR-300S Tuning

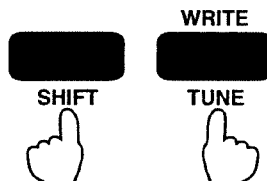
You can change the tuning of the PR-300S using the Master Tune feature.

*The PR-300S's GS Sound source is initially tuned so that A=440.0Hz.

- (1) **Lift the lid on the control panel on the top right hand side of the PR-300S. While holding down the [SHIFT] button, press the [TUNE] button.**

The display will show the frequency of the tuning note "A" (it is factory set to 440.0 Hz).

Press [PLAY] if you'd like to hear this pitch. You can control the volume with the VOLUME slider. Press [STOP] to turn the tone off.

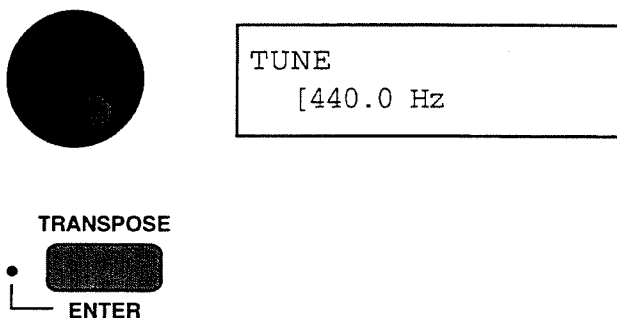


- (2) **Use the alpha-dial to adjust the pitch of the PR-300S (up or down).**

If you pressed the [PLAY] button you'll hear the pitch rise or fall as you rotate the alpha-dial.

- (3) **Press [ENTER] when the PR-300S is tuned to your satisfaction.**

The Play Screen will return.



PR-300S Sound Function

The PR-300S's GS sound source has a wide variety of quality sounds which can be used to create many different styles of music. The PR-300S's Sound Function is an easy way to control these different sounds and use different effects such as Pan, Reverb and Chorus.

Selecting PR-300S Sounds

The sound source of the PR-300S has 16 different parts. Each of these different parts can be controlled by the corresponding MIDI channel (i.e., Part 1 can be controlled by MIDI channel 1, Part 2 can be controlled by MIDI channel 2, etc.)

All parts (except part 10) can use any of the 354 instruments of the PR-300S. Part 10 can use any of the 10 PR-300S drum kits.

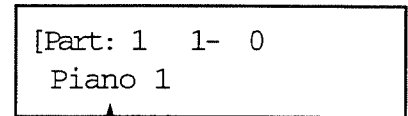
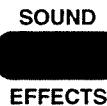
Here's how to use the Sound Function to control PR-300S sounds.

(1) Press the [SOUND] button.

This button is located underneath the top cover of the PR-300S.

The display shows one of the 16 parts and the PR-300S instrument which will play when that part is controlled.

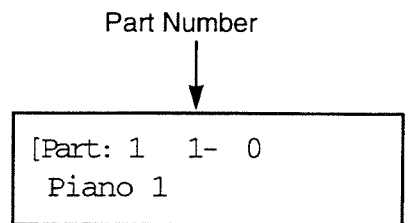
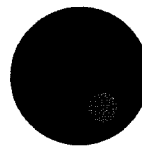
If a part is specified as "External" then "Ext Equipment" will appear in the display.



This field shows an instrument for all parts set to "Internal". If a part is set to "External", then "Ext Equipment" is displayed.

(2) Rotate the alpha-dial, if necessary, to select a Part to control.

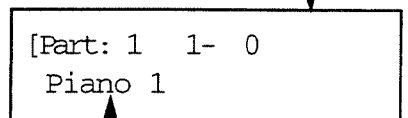
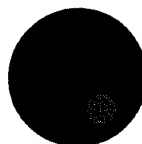
Select a Part which can be controlled from your MIDI device. For instance, if you are sending MIDI information from your Rodgers organ or keyboard on MIDI channel 1, select Part 1. If you are sending on MIDI channel 2, select Part 2.



Tone Number
(Instrument No. - Variation No.)

(3) Press the [>] and the "[cursor will move the tone name. Rotate the alpha-dial to select different instruments and variations.

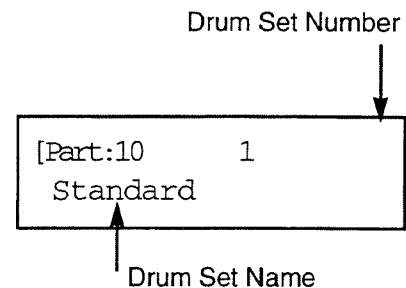
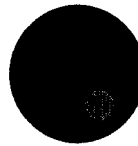
Now when you play notes on your keyboard, you'll hear the sound appearing in the PR-300S's display.



About Part 10 (the Rhythm Part)

Part 10 is used exclusively to control the PR-300S's 10 Drum Sets. This Part is different than the others, because different notes play different sounds of the selected Drum Set.

Any of the 10 Drum Sets of the PR-300S can be selected for this Part.

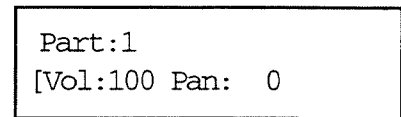
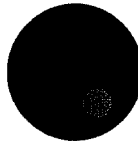


Volume, Pan, Reverb, Chorus and Expression

Changing the Volume of a Part

- (4) Press the [>] button two times and the " [" cursor will move to "Vol:". Rotating the alpha dial will change the volume setting for a part. The range is from "0" (lowest) to "127" (highest).

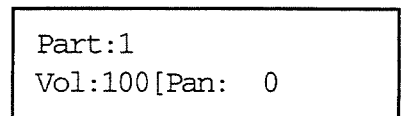
If you have sequenced a part using a volume pedal, then this setting will change during playback to match the volume level which was recorded. If you want to change the overall volume level of a Part so that it isn't overridden during playback, see "Changing the Expression Setting of a Part" below.



Changing the Pan of a Part

- (5) Press the [>] button again to move the " [" cursor to the "Pan:" setting. Rotating the alpha-dial changes the pan setting of the selected part. The range is from "L63" (fully left) to "R63" (fully right). "0" denotes even panning between left and right.

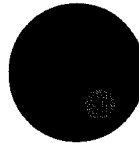
"Panning" or "Pan" is the location of a sound in the stereo field. The larger the left number (L) the more the sound will appear to come from the left speaker; The larger the right number (R), the more the sound will appear to come from the right speaker.



Changing the Reverb of a Part

- (6) Press the [>] button two times and the cursor will move to the "Rev:" setting. Rotate the alpha dial to change the amount of reverb for the selected part. The range is from "0" (no reverb) to "127" (full reverb).

"Reverb" (reverberation) is an electronically produced echo effect that can be added to the sound that is played. There are eight types of Reverb available on the PR-300S, and one can be selected for use with all Parts. See "Selecting Reverb and Chorus Type" for more information.



Part:1 [Rev: 40 Cho: 0

Changing the Chorus of a Part

- (7) Press the [>] button to move the cursor to the "Cho:" setting. Rotating the alpha-dial will change the amount of Chorus that will be added to the selected Part. The range is from "0" (no chorus) to "127" (full chorus).

"Chorus" makes certain instruments sound "thicker" or "fatter". There are eight types of Chorus available on the PR-300S, and one can be selected for use with all Parts. See "Selecting Reverb and Chorus Type" for more information.



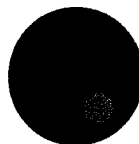
Part:1 Rev: 40 [Cho: 0

Changing the Expression Setting of a Part

- (8) Press the [>] button twice to move the cursor to the "Exp:" setting. Rotating the alpha-dial will change the expression setting for the selected Part. The range is from "0" (lowest) to "127" (highest).

The Expression Setting works with the Volume Setting to determine the volume of a part. Expression pedals used with Rodgers organs and keyboards normally send Volume information (described above). You can use the Expression setting to change the overall level of a part. When this is done, the volume changes received from the organ will operate normally, and the Expression setting will determine the range of volume change which occurs.

In this way, Volume can be used for crescendos and decrescendos and Expression can be used to set the relationship of each part to other parts played.

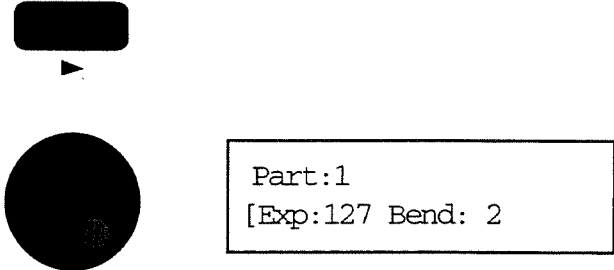


Part:1 [Exp:127 Bend: 2

Changing the Bend Range of a Part

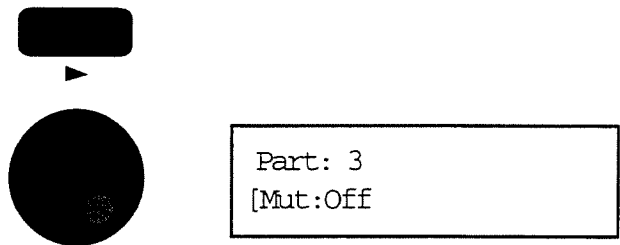
- (9) Press the [>] button to move the cursor to "Bend:". Rotating the alpha-dial will change the amount of pitch bend which can occur for the selected Part. The range is from 0 semitones to 24 semitones.

Many keyboards have pitch bend wheels or other devices which allow you to smoothly change the pitch of a note. This setting allows you to determine the amount of pitch bend which can occur when the pitch bend wheel is at its maximum.



Muting a Part

To mute any part, first press [SOUND] (inside the lid) to select the Sound screen. Press the [>] button as necessary to select the Mute screen. Rotate the alpha-dial to select the part you wish to mute. Press the [>] button once again to select "Mut:". Use the alpha-dial to mute (On) or unmute (Off) the selected part.



Executing the Settings for the Parts

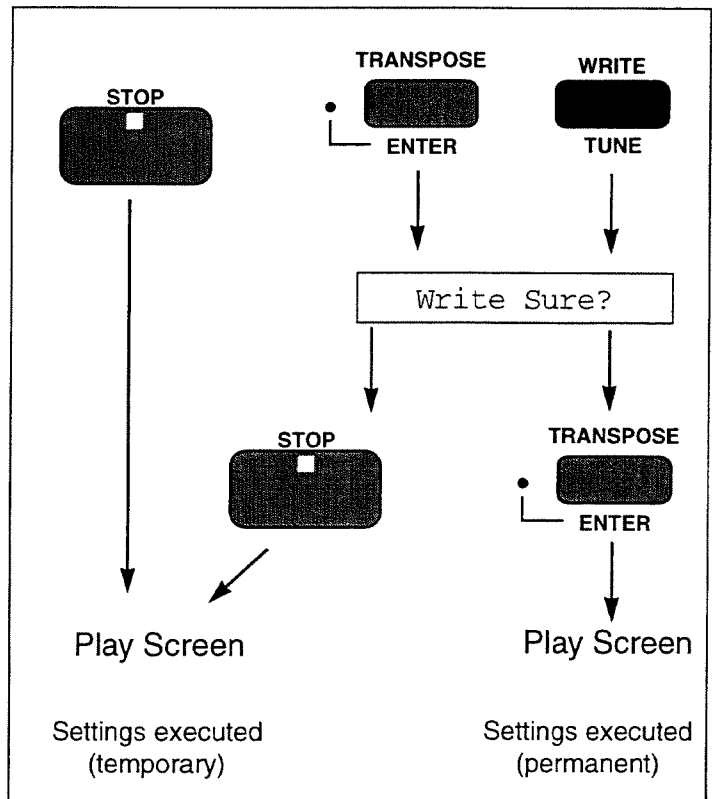
After you've made all desired changes in the Sound Function, you can execute these settings in two different ways.

If you press [STOP] the PR-300S will return to the Play Screen and all changes you've made will be stored temporarily. The temporary settings will not be saved when you save the song to a disk.

Returning to the beginning of a song by pressing [RESET] or [BWD] will cause the original settings to return.

Pressing [WRITE] or [ENTER] then [ENTER] will cause all settings (except for Bend Range) to become permanent. These changes will be retained when the song is saved to disk.

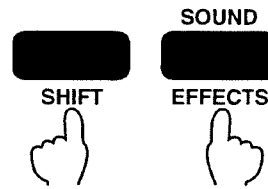
Pressing [WRITE] or [ENTER] then [STOP] will cause all settings to be temporary.



Selecting Reverb and Chorus Type

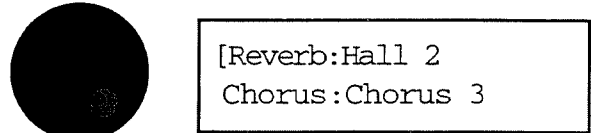
The PR-300S has eight different Reverb and eight different Chorus effects from which you can choose.

- (1) While holding down [SHIFT], press [EFFECTS].



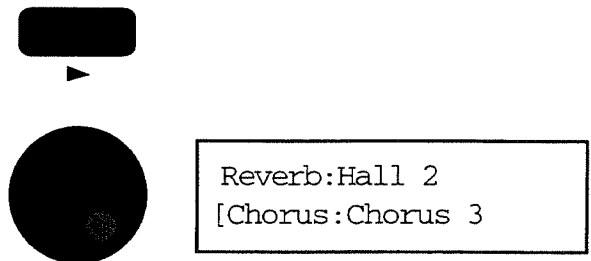
Selecting Reverb

- (2) Rotate the alpha-dial to select the type of Reverb desired.



Selecting Chorus

- (3) Press the [>] button to move the cursor to the "Chorus:" setting. Rotate the alpha-dial to select the type of Chorus desired.



Reverb

Room 1, 2, 3	Three Room Settings
Hall 1, 2	Reverb giving a sense of depth, as within a concert hall
Plate	Plate echo (reverb using vibrations from a metal plate)
Delay	Standard delay (echo effect)
Panning (Panning Delay)	Delay with the sound moving from side to side

Chorus

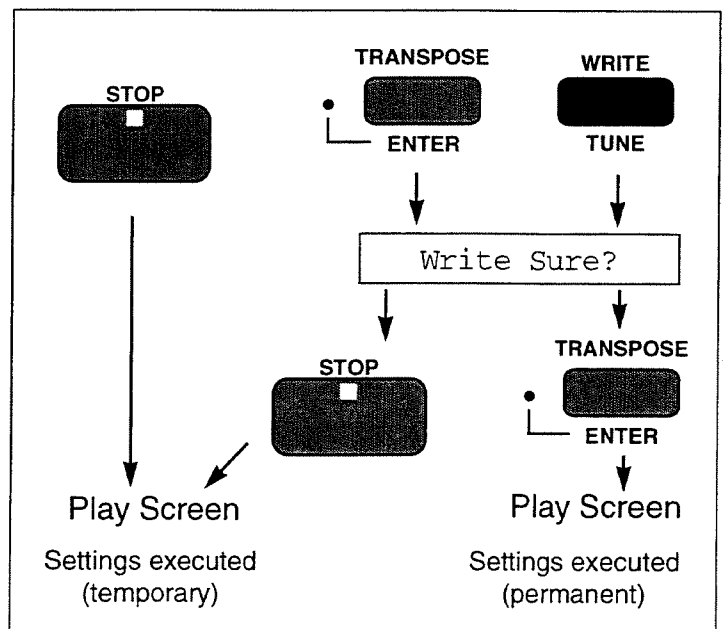
Chorus 1, 2, 3, 4	Chorus adding a slight waver to sounds
Feedback (Feedback Chorus)	Chorus with feedback
Flanger	Echo with the rising and falling sound of a jet engine
S. Delay	Delay with a short delay time
S. D. FB (Short Delay FB)	Short delay with a high repeat frequency

- (4) After you've selected the type of Reverb and Chorus you desire, you can execute these settings in two different ways.

If you press [STOP] the PR-300S will return to the Play Screen and all changes you've made will be stored temporarily. The temporary settings will not be saved when you save the song to a disk. Returning to the beginning of a song by pressing [RESET] or [BWD] will cause the original settings to return.

Pressing [WRITE] or [ENTER] then [ENTER] will cause changes to become permanent. These changes will be retained when the song is saved to disk.

Pressing [WRITE] or [ENTER] then [STOP] will cause all settings to be temporary.



Using a Pedal to Start and Stop the PR-300S

Normally, you'll use the Play and Stop buttons to start and stop playback and recording of the PR-300S. It is possible, however, to use a pedal to start and stop the PR-300S, allowing you control from a remote location.

In order to make use of this feature, you need to have a DP-2 or compatible pedal (sold separately).

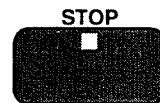
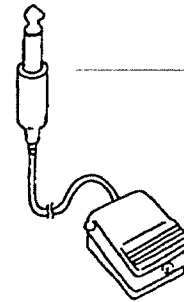
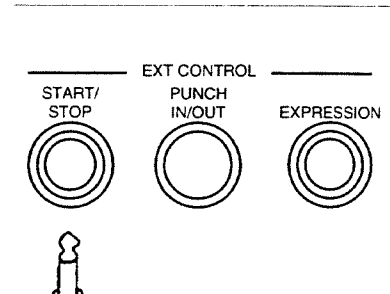
To start or stop the PR-300S using a DP-2 pedal:

- (1) **Connect the DP-2 (or compatible) pedal to the jack labeled "START/STOP" on the back of the PR-300S.**

- (2) **Press the pedal and release to begin playback (or record).**

To start the PR-300S recording, you must first press [REC] and select a track.

- (3) **Press the pedal and release to stop playback or record.**



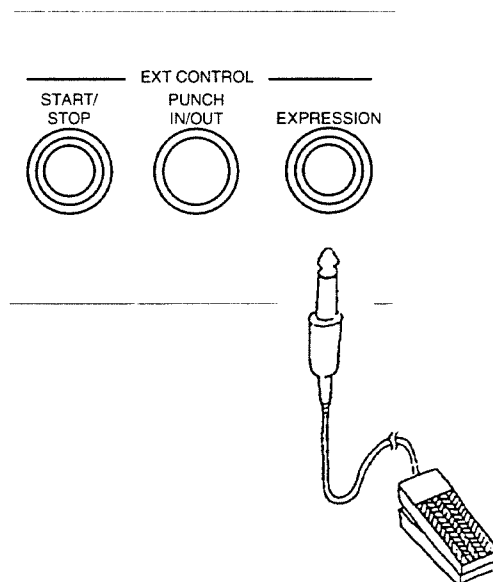
Changing the Volume Using an Expression Pedal

Normally, the volume of Parts is controlled from external MIDI devices, such as a Rodgers organ or a Rodgers keyboard equipped with an expression pedal.

If the device you are using to control the PR-300S doesn't allow you to change the volume of PR-300S parts, you can attach a compatible expression pedal to the PR-300S and change the volume of PR-300S parts by moving the pedal.

Connecting an Expression Pedal

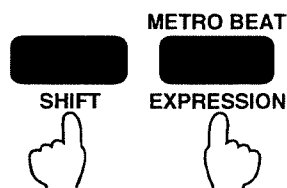
Plug a compatible expression pedal into the jack marked **EXPRESSION** on the back panel of the PR-300S.



Activating the Expression Pedal

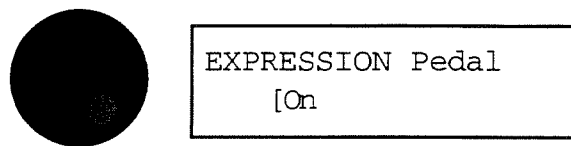
- (1) While holding down the [SHIFT] button, press the [EXPRESSION] button.

These buttons are located under the top cover.

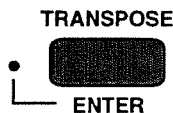


- (2) Rotate the alpha-dial until the display changes to "On".

The expression pedal will now be able to control the volume of PR-300S parts.



- (3) Press [ENTER] to return to the Play screen.



To Change the Volume of PR-300S Parts

By moving the pedal with your foot, you can now control the volume of the Part listed in the screen after pressing the [SOUND] button. Only the Part selected after pressing the [SOUND] will change when the expression pedal is moved.

Any movements of the expression pedal which are made during a recording will also be recorded.

Recording Rhythm Parts

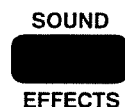
In previous sections we described the procedure for recording ensemble instruments. In this section, we'll show you how to record a Rhythm part using Part 10.

Part 10 is reserved exclusively for Rhythm Parts. The PR-300S has 10 different Drum Sets which can be used for your Rhythm Part.

Selecting the Drum Set

- (1) Press the [SOUND] button.

This button is located underneath the top cover.



- (2) Rotate the alpha-dial to select Part 10.

This is the Part reserved for Rhythm Parts.



- (3) There are 10 different drum sets to choose from on the PR-300S, each of which has different drum sounds to choose from. If you desired another drum set than the one listed in the display, press the [>] button to move the cursor over to the Drum Set Name, and select the desired set with the alpha-dial.

If you select the SFX or CM64/32L set, there will be no audible count-in sound when the Count-In feature is enabled. See "Using the Count-In Feature" for more information.



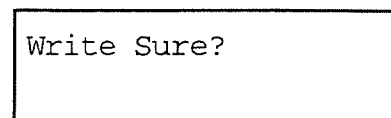
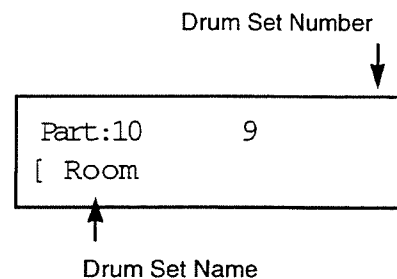
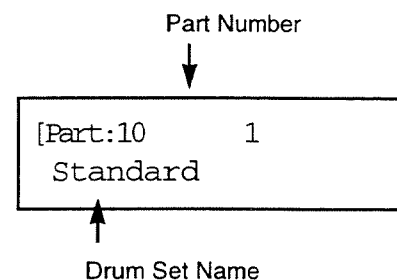
- (4) Press the [WRITE] button to enter drum set selection.



- (5) Press the [ENTER] button to confirm the drum set selection.

The PR-300S will return to the Play Screen.

You can now play the Rhythm sounds of the selected Drum Set by controlling the PR-300S on channel 10. Usually, Rhythm Parts are recorded on the "R" (Rhythm) Track. See the next section for helpful hints in setting up a rhythm pattern.

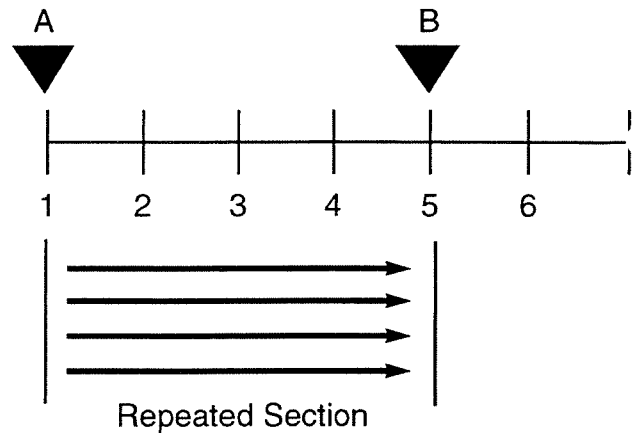


Loop Recording

Loop Recording is a useful way to record a Drum Part, as it lets you layer drum sounds as the pattern plays over and over.

This type of recording process is similar to the recording process used by many professional drum machines.

The size of loop which is repeated is set by using the A and B Markers.

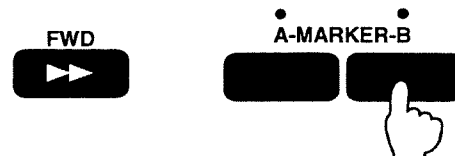


- (1) You can't put a marker at a place in a song which doesn't yet exist, so you may have to record a blank track first to create the necessary measures for the loop recording (i.e., start the PR-300S recording but don't play anything so it creates blank measures).

- (2) Use the [BWD] and [FWD] buttons to move to the point where the loop recording is to start, then press the Marker A button.



- (3) Use the [FWD] button to move to the point where the loop recording is to end and press the Marker B button.



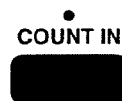
To record four bars from the start of the first bar, set Marker A at the beginning of the first bar and Marker B at the beginning of the fifth bar, as shown above.

- (4) Press [REPEAT] and the indicator above the button will light.



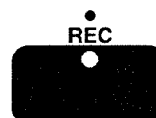
This enables the Repeat function and moves you back to the location of Marker A.

- (5) Press [COUNT IN] and the indicator above the button will light.

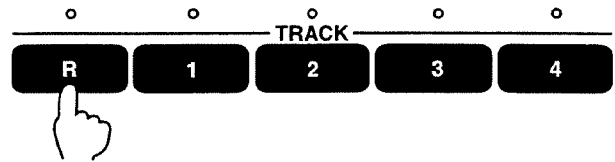


This enables the Count In function.

- (6) Press [REC] to enter the Record Mode.



(7) Press the Track "R" button to select the rhythm track.

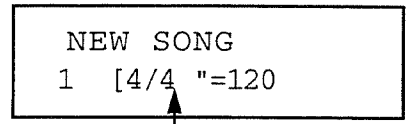


(8) To record along with the Metronome, press [METRONOME] and the indicator will light.



You can adjust the volume of the Metronome by rotating the [METRONOME VOLUME] knob found on the back of the PR-300S.

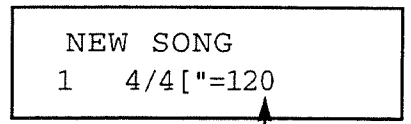
(9) Press the [BEAT] button and select a different Time Signature with the alpha-dial, if desired.



The cursor moves to here

Once you record with a Time Signature, you won't be able to change it later.

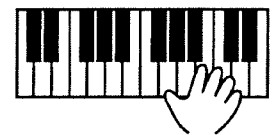
(10) Press the [TEMPO] button and adjust the Tempo with the alpha-dial, if desired.



The cursor moves to here

(11) Press [PLAY].

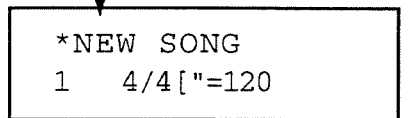
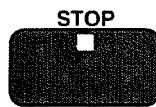
After the two-bar Count-In, the recording begins at the Marker A point. When the recording reaches Marker B, the PR-300S returns to Marker A and repeats.



Everything recorded in previous passes is heard as the pattern cycles, allowing you to select and add different instruments, slowly creating a drum pattern by listening and recording along with it.

The most common way to do this is to start with the Bass Drum, then add snare drum, toms, hi-hat and so on.

An asterisk appears here when recording stops



(12) When you're finished, press [STOP].

If you think you can improve on the pattern, use the Erase function to delete the recorded information and start the process over again.

If you're satisfied with the pattern which has been recorded and want it to continue for additional measures, you can remove the Markers, turn off the Repeat function and copy the pattern using the Copy and Paste functions.

If you want to record another Rhythm pattern, move the markers to another place, and go through this process again.

Variations or additions to a repeated drum pattern can be recorded on other tracks using Part 10. This allows you to experiment and add variety to a drum track without affecting the repeated drum pattern recorded on the "R" track. If you make a mistake recording the variations, you can simply erase them and start over without affecting the repeated drum pattern.

Once the combination of the repeated pattern and variations are acceptable to you, you can merge the variations onto Track "R".

Recording Multiple Time Signatures

Earlier in this manual we showed you how to select a time signature at the beginning of a song. It is also possible to have multiple time signatures within a song.

To have multiple time signatures within a song, it's necessary to first record all of the different time signatures on a blank track. Once this has been accomplished, you can record song information on the blank track without losing the time signature changes.

In this example, we'll show you how to assign a time signature of 3/4 to measures 1 through 8 and 6/8 to measures 9 through 16.

- (1) If necessary, press [SONG] and rotate the alpha-dial to select "NEW SONG".

If there is an unsaved song in memory, the PR-300S will ask "OK to erase data?". If you want to save the song in memory, press [STOP] and perform a Save operation. If you don't want to save the song in memory, press [ENTER].

- (2) Press [REC] to enter record mode.

- (3) Press [TRACK 1].

- (4) Press [BEAT] to move the cursor to the time signature.

- (5) Rotate the alpha-dial to select "3/4".

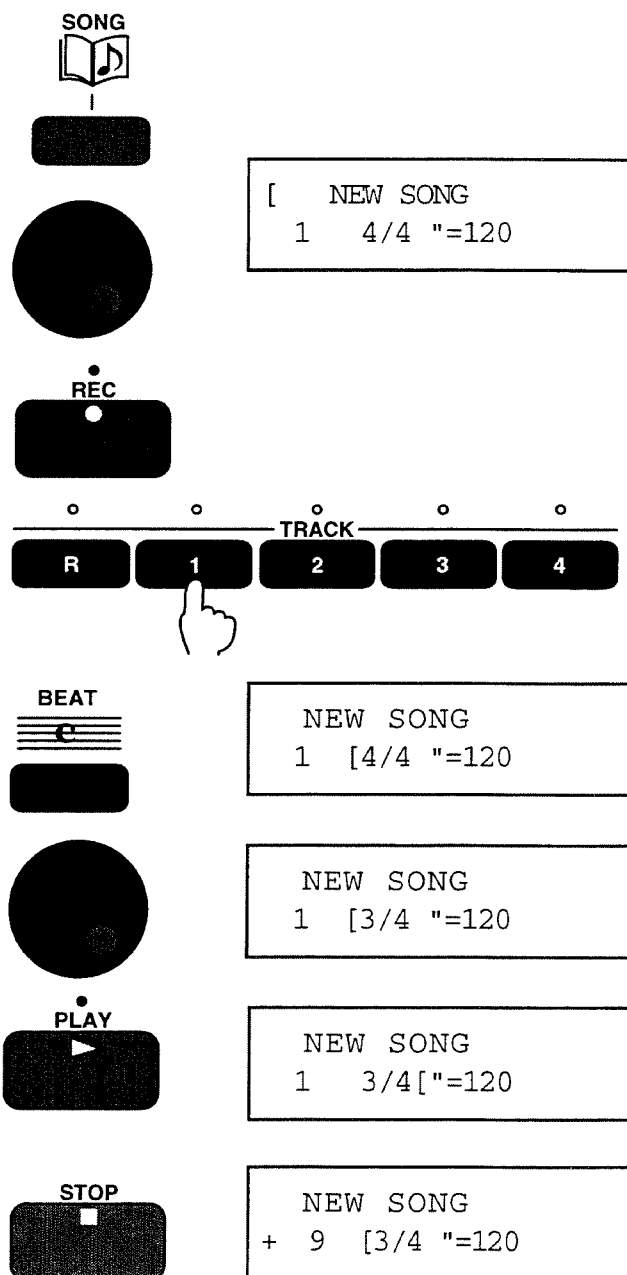
This is the time signature that will be used starting from measure 1.

- (6) Press [PLAY].

The PR-300S will begin recording blank measures from measure 1 using a 3/4 time signature.

- (7) Press [STOP] as soon as measure "9" appears in the display.

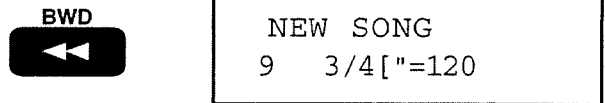
The measure number in the PR-300S's display will most likely be "+ 9", meaning that Record was stopped somewhere in the middle of measure 9.



If you stopped Record too soon (i.e., in the middle of measure 8), you'll need to start the Record process again and stop in the middle of measure 9.

If you stopped Record too late (i.e., in the middle of measure 10), you'll need to select "New Song" again and start over.

(8) Press [BWD] to return the PR-300S to the beginning of measure 9.

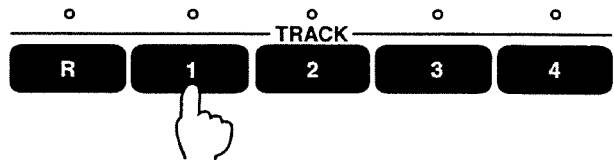


"9" will appear in the display (instead of "9+").

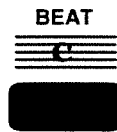
(9) Press [REC] to enter Record Mode.



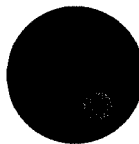
(10) Press [TRACK 1].



(11) Press [BEAT].



(12) Rotate the alpha-dial to select "6/8".



This will select "6/8" as the time signature starting at measure 9.

(13) Press [PLAY].

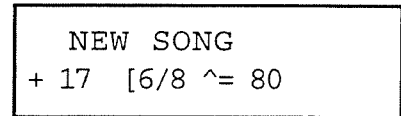
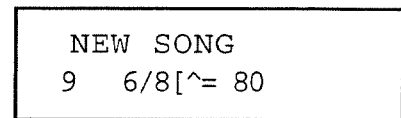
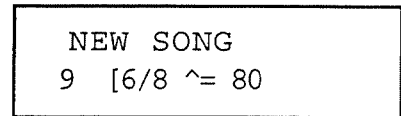
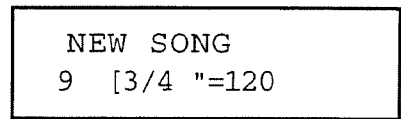
The PR-300S will start give two measures of count-in (measures 7 and 8) which will have a "3/4" time signature. The time signature will change to "6/8" at the start of measure 9.



(14) Press [STOP] once measure "17" appears in the display.



Measures 9 through 16 will now have a time signature of 6/8.



You can use this procedure as many times as you wish within a song. If you record a full measure at one time signature, you cannot change the time signature later.

To change pre-recorded time signatures, you must perform a Cut procedure from the time signature you want to change to the end of the song, then record the new time signature(s) from that point.

Using Chain Play

The PR-300S is equipped with a Chain Play function which repeatedly plays all the songs on a disk. When Chain Play is enabled, the PR-300S will play each song in order, starting with the song you select.

Note that the PR-300S will not stop at any Pause Marks when in the Chain Play mode.

To start Chain Play:

- (1) **Insert the appropriate disk into the disk drive.**
- (2) **Press [SONG], then rotate the alpha dial to select the first song of the chain.**
- (3) **Press [CHAIN PLAY].**

This button is located underneath the top cover.

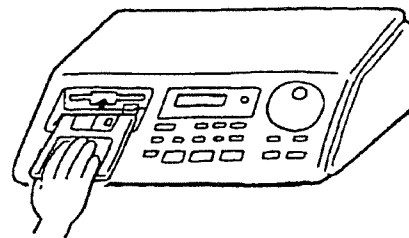
Playback of the chain will begin with the selected song and will continue until you press [STOP].

- If you press [CHAIN PLAY] while recording or after a change has been made (when the “•” mark is displayed), the PR-300S will ask you if you want to delete the song. If you want to erase the song, press [ENTER]. If you want to keep the song, press [STOP] and save the song on disk.

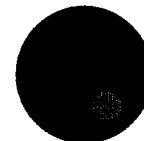
- (4) **Press [STOP] at any time to stop Chain Play.**

The PR-300S will return to the single-play mode.

- If you press [RESET] during Chain Play, playback will stop and the current song will reset to the beginning.



SONG



CHAIN PLAY



PAUSE MARK

Data will be
erased. OK?



STOP



Minus One Play

The Minus One (-1) function of the PR-300S lets you mute one part of your song data so that you may perform that particular part in real time along with the rest of the sequence.

To use the Minus One function:

- (1) Select the song you wish to play along with.
- (2) Hold down the [SHIFT] button (inside the lid) and press [ENTER]. The Minus One screen will appear.

The top part of the screen displays 16 Parts. The Part indicated by "-1" (minus one) is the part for Minus One play (the muted Part). The other Parts are shown by a bar graph, and are numbered from 1-16 starting from the left. The name of the part that is muted (ie. replaced by the -1 symbol) is displayed on the second line of the screen.

If no other buttons are pressed then the bottom line of the display will revert to the familiar Play screen (the bar graph on the top line will remain).

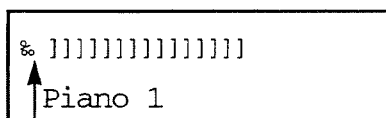
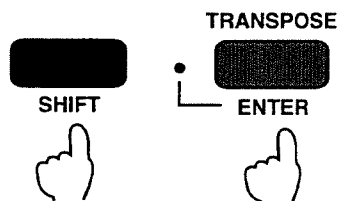
While this screen is displayed you can change the playback tempo by rotating the alpha-dial.

- (3) Use [<] and [>] to move the cursor to select the Part you wish to mute for Minus One play.

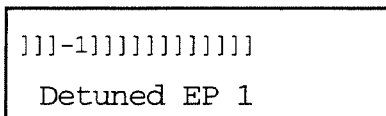
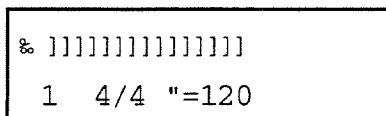
Note that only one Part at a time can be muted for Minus One play.

- (4) Press [PLAY] to start. When the song starts, you can play the part of the electronic piano (in this case) that has been muted.

Pressing [PLAY] again causes the muted part to be played all by itself (Solo function). The letter "S" will appear in the display where the "-1" had been. Press [STOP] to continue with Minus One play. Note that Track Mute does not function in this mode.



Part for Minus One play



- (5) When you're finished playing, press [STOP].

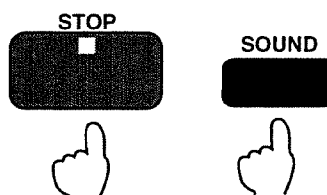


- (6) Hold down [SHIFT] (inside the lid) and press [ENTER] again to cancel the Minus One function and return to the Play screen.

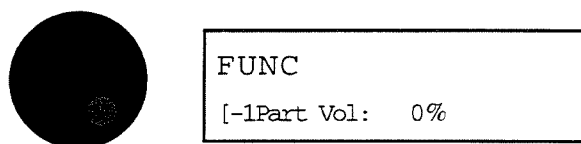
To adjust the volume of the Minus One Part..

Instead of having the Minus One Part muted completely, you can use this procedure to raise the volume to the desired level. Doing so can allow you to use the Part as a guide for your own real time performance.

- (1) Hold down [STOP] and press [SOUND] (inside the lid).

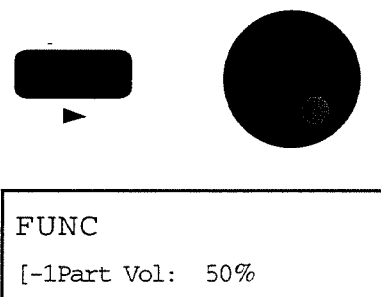


- (2) Use the alpha-dial to select "-1 Part Vol".



- (3) Use [>] to move the cursor and then use the alpha-dial to set the Minus One Part volume.

If you set this level to 50% for example, the Minus One Part will be heard at 50% of its original volume. In the normal Minus One situation, the volume for the selected Part would be 0%.



- (4) Press [ENTER].



The PR-300S will return to the Play screen.

- If you use a connected MIDI instrument to play the PR-300S's internal sound source and try Minus One play, you should set the volume level to 0%. If the Minus One Part is at any setting other than 0%, then the volume of the Part you're playing will change at the same time as the volume level for the muted Part.
- When the Solo function is used after setting the Minus One Part volume, the Solo Part is played at its original volume level, and the other Parts are played at levels proportionate to the Minus One Part volume.

Changing the Metronome Resolution and Tone

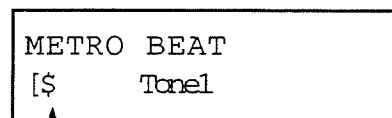
You can change the resolution and tone of the Metronome built into the PR-300S. There are six different resolutions and two different tones to choose from.

To change the Metronome's resolution and/or tone:

- (1) Press [METRO BEAT].



- (2) Rotate the alpha-dial to change the note at the cursor's position in the screen (this note indicates the Metronome's resolution).



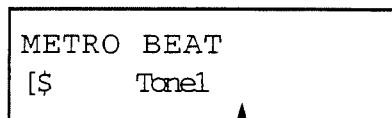
Available resolutions:

@ ^ " & \$ %

For example, if the resolution is set to quarter notes in a 4/4 time signature, you'll hear 4 beats in each bar. If it is set to eighth notes, 8 beats will be heard in each bar.

If you change these settings anytime after you've pressed the [REC] button to start a recording, the changes will be recorded along with other material. A "" mark next to a note indicates the resolution was set at the time the song was recorded.

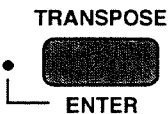
- (3) Move the cursor over to the Tone setting with the [>] button. A choice of TONE 1 (a combination bell and click sound) or TONE 2 (an electronic sound), can be selected with the alpha-dial.



Field for selecting tone

- (4) Press [ENTER] to confirm the changes made.

The Play Screen will return.

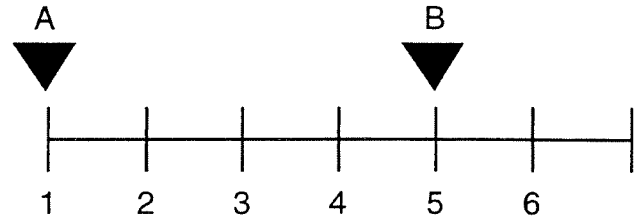


Using Markers

Earlier in this manual we discussed the use of Markers for Repeat Play and Recording Drum Parts. Here is a review of how to set and delete Markers, along with information about other ways they can be used.

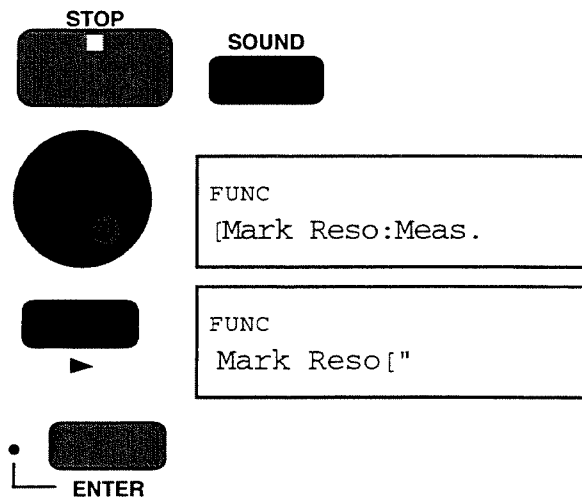
What is a Marker?

A Marker is simply a reference point in a song. You can set up to two such points in a song (Markers A and B). Each of these Markers can occur at the beginning of a measure, or anywhere within a measure. (Marker A, however, must occur before Marker B, and the two Markers must be at least two quarter notes apart). Note also that when the Repeat function is enabled, you cannot set or delete Markers.



Setting Marker Resolution

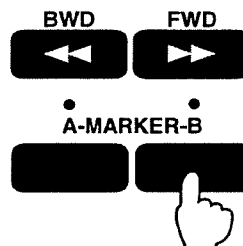
- (1) Hold down [STOP] and press [SOUND].
- (2) Use the alpha-dial to select “Mark Reso:”.
- (3) Use the [>] button to move the cursor to the right, and then use the alpha-dial to select the Marker resolution:
 Meas: Automatically sets the Marker above the nearest bar line.
 * : Automatically sets the Marker at the closest beat.
 Free : Sets the Marker precisely where you press [MARKER].
- (4) Press [ENTER]. (The Play screen will return).



Setting a Marker at the Start of a Measure

Be sure “Mark Reso” is set to “Meas.”:

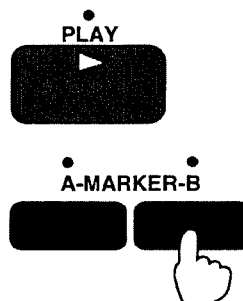
- (1) Press the [BWD] and [FWD] buttons to move to the place you want the marker to be.
- (2) Press [MARKER A] or [MARKER B] to set the marker at the beginning of the measure shown in the display.



Setting a Marker in the middle of a Measure

First set “Mark Reso” to “*”:

- (1) Press [PLAY] to start playback of music.
- (2) Press [MARKER A] or [MARKER B] when the



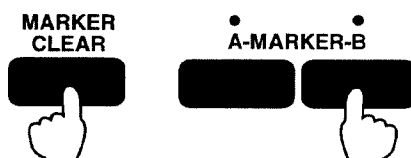
- (3) Press [STOP] after desired marker(s) have been set.



Deleting a Marker

If you want to set a marker at a different position, you must delete it from its old position first. To delete (or "clear") a marker:

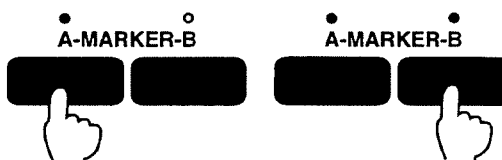
- (1) Hold [MARKER CLEAR] and press the Marker button for the marker you want to clear (Marker A or Marker B).



Ways to Use the Markers

Jumping to a Marker

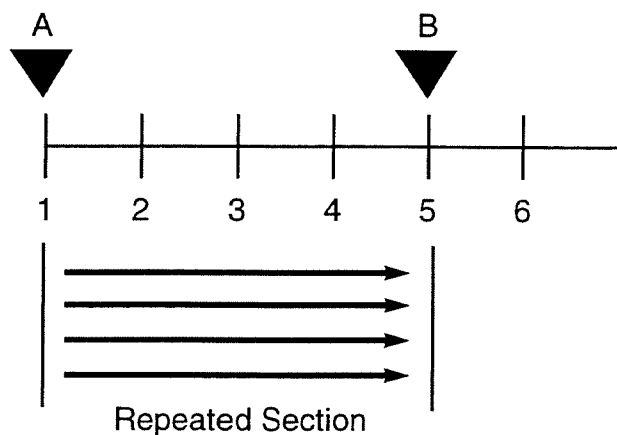
You can move to a Marker's position within a song by pressing the appropriate marker button (A or B). For instance, if Marker A were set at the beginning of measure 5, pressing [MARKER A] would instantly move you to the beginning of measure 5.



Repeat Play and Record

Markers A and B can be used to determine a repeated section during playback or record. Marker A can be the beginning of the repeated section, Marker B can be the end of the repeated section.

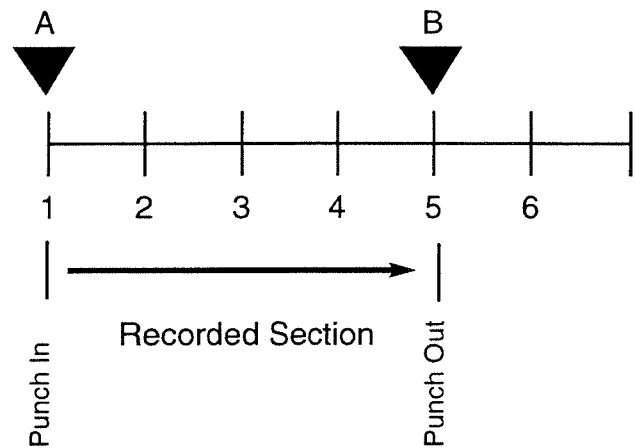
During Repeat Record (as described in the section on recording Drum Parts), sounds recorded in previous passes through the repeated section will play, allowing new parts to be added easily.



Auto Punch-In Record Range

Punch-In Recording (as described later in the manual) is a feature which allows you (as you play through a sequence) to begin recording at a specific point ("Punch In") and stop recording at a specific point ("Punch Out").

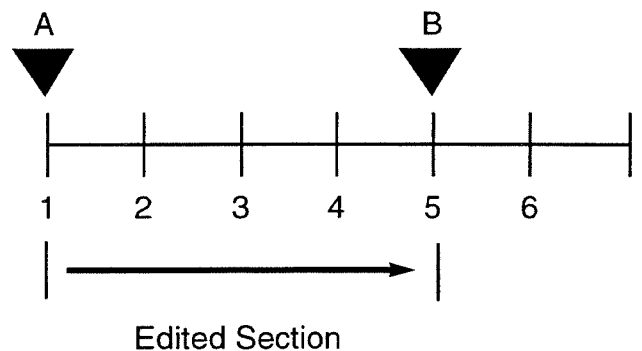
The two PR-300S markers can be used to determine these two points. Marker A can be used to set the "Punch In" point; Marker B can be used to set the "Punch Out" point.



PR-300S Editing Functions

The two markers can be used to set the range of Editing functions such as CUT, COPY, ERASE, QUANTIZE and TRANSPOSE (which are discussed later in the manual).

When markers are used, the functions listed above will only affect information located between Marker A and Marker B. This allows you to manipulate a small portion of a certain track when working with the PR-300S's editing features.



Pause Marks

Sometimes, it is desirable to have the PR-300S stop automatically within a song, when you want to play a solo break or cadenza, or have your choir continue on unaccompanied. This can be done by setting a Pause Mark.

When the PR-300S encounters a Pause Mark, it will stop automatically. When you want it to continue, all you need to do is press the Play button or press the pedal connected to the "Start/Stop" jack.

You can set up to five different Pause Marks in each song. Pause Marks have no effect when you are Recording or are in Repeat Play or Chain Play.

Setting a Pause Mark

- (1) Move to where you want the Pause Mark to be placed.

You can either press [STOP] during playback or use the [BWD] and [FWD] buttons to move to the appropriate point.

- (2) Hold [SHIFT] and press [PAUSE MARK].

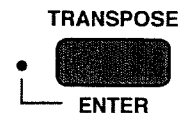
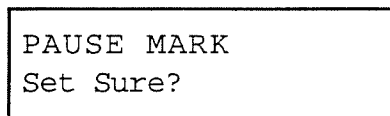
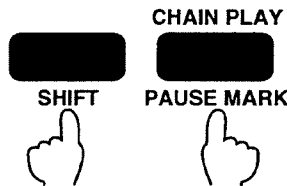
The PR-300S will ask if you are sure you want to set a Pause Mark. If you don't want to set a Pause Mark, press [STOP].

- (3) Press [ENTER] to set the Pause Mark.

The PR-300S will stop when it gets to the Pause Mark you just set.

Jumping to a Pause Mark

While holding down the [STOP] button, press [BWD] to move to the previous Pause Mark or press [FWD] to move to the next Pause Mark.



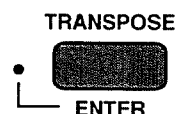
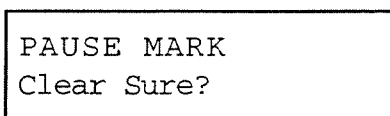
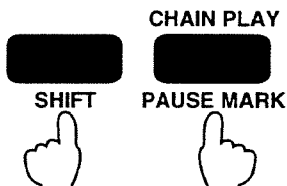
Deleting a Pause Mark

- (1) Jump to the Pause Mark you want to delete.

- (2) While holding down [SHIFT], press the [PAUSE MARK] button.

The PR-300S will ask if you are sure you want to delete a Pause Mark. If you don't want to delete the Pause Mark, press [STOP].

- (3) Press [ENTER] to delete the Pause Mark.



Recording Pickup Notes

Usually, the PR-300S doesn't allow you to record anything before the first measure of a song (the two pickup measures, labeled "-2" and "-1", usually don't record anything).

However, it is possible to record pickup notes in the "-1" measure so that measure numbers are correct for the rest of the song (see example at right).

To record in the last pickup measure ("-1"):



- (1) Press [RESET], if necessary, to return to the beginning of the song.



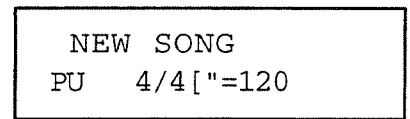
- (2) Press [COUNT IN] so that its indicator lights.



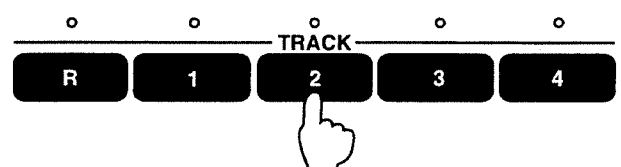
- (3) Press [REC].



- (4) Press [BWD]. The display will change from "1" to "PU" (which stands for "Pick-Up").



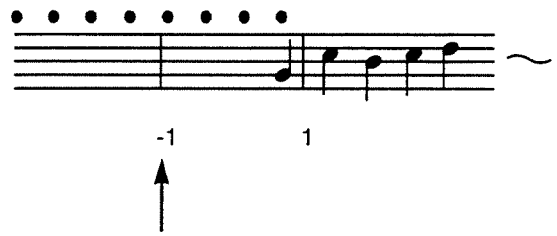
- (5) Select a track to record on by pressing a track button.



- (6) Press [PLAY] and you'll hear the usual two measures of count-in. This time, though, you'll be able to record notes during the "-1" pickup measure.



If you're using Key-On Start (by playing notes after a track is selected rather than pressing [PLAY]) and the [COUNT IN] feature is disabled, the recording will start immediately from the beginning of the "-1" measure.



You can record after the "-1" point

Punch In/Out Recording

Sometimes, there are a few measures of a part which you'd like to record again, but you don't want to re-record the entire part. Punch In/Out Recording allows you to re-record a specific portion of a part without affecting the rest of the sequence.

In Punch In/Out Record, "Punch In" is the point where recording begins and "Punch Out" is the point where recording ends.

Enabling Punch In/Out

- (1) Hold [SHIFT] and press [PUNCH IN/OUT].
- (2) Rotate the alpha-dial to select "On".
- (3) Press [ENTER] to return to the Play Screen.

This turns the Punch In/Out recording mode on. If Tempo Record or Repeat Play were previously selected, they will be automatically turned off.

- (4) If you are going to use a DP-2 pedal to set the Punch In and Punch Out points (as described later in this section), plug it into the "PUNCH IN/OUT" jack on the back of the PR-300S.

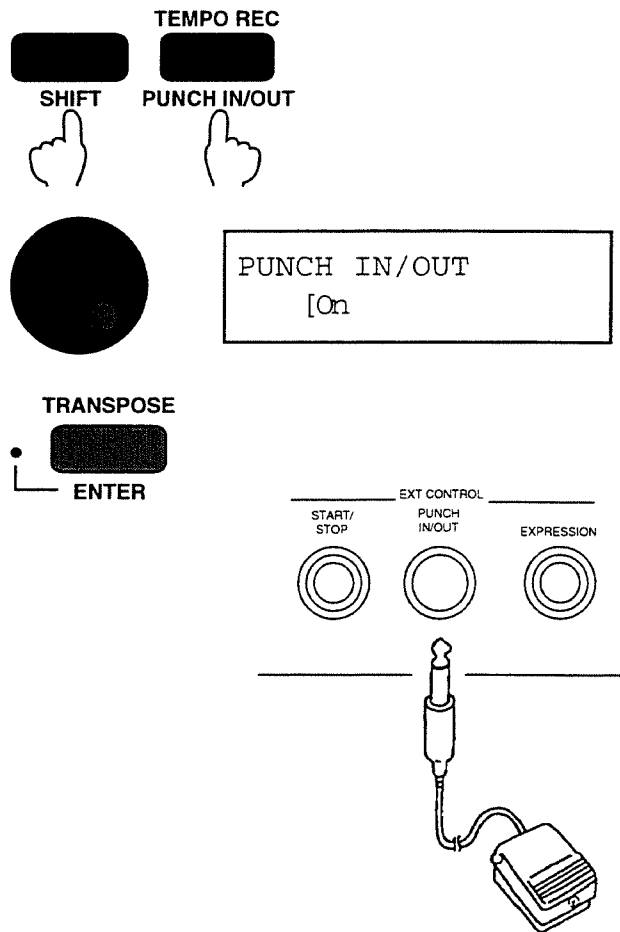
Automatic Punch In/Out

This method is called "Automatic Punch In/Out" because the Punch In and Punch Out points are set in advance.

- (1) Go to the point where Punch In is to occur and set Marker A.

If necessary, refer to the section on using Markers for more information.

- (2) Go to the point where Punch Out is to occur and set Marker B.



(3) Jump to the Punch In point by pressing Marker A.



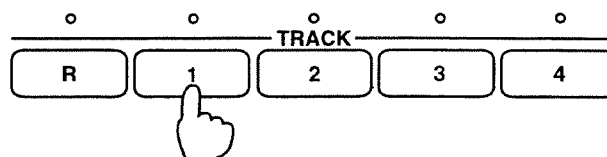
(4) Press [BWD] a few times to back up a few measures.



(5) Press [REC].



(6) Press the Track button for the track you wish to re-record.

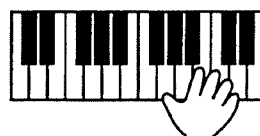


(7) Press [PLAY].

The previously recorded information will play and the light above the [REC] button will blink red. You can play along with the previously recorded information, if you wish, however, nothing you play at this point will be recorded.

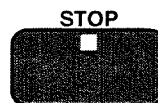


When you reach the Punch In point (Marker A), the previously recorded information will no longer be heard and the information you play will be recorded (you will write over the old information you play). The light above the [REC] button will stay red during this recording process.



When you reach the Punch Out point (Marker B), the PR-300S will stop recording and normal playback will begin again (the light above the [REC] button will start flashing red again).

(8) Press [STOP] when you are finished recording.



Punch In/Out Using the Button or Pedal

This procedure allows you to select the Punch In and Punch Out points during the recording process by pressing the [REC] button or a DP-2 Pedal.

If you want to use a DP-2 Pedal to determine the Punch In and Punch Out points, you must connect it as described earlier in this chapter.

To perform Punch In/Out record with the [REC] button or DP-2 Pedal:

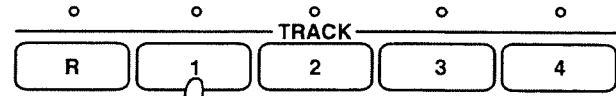
- (1) Go to a place in the music prior to the desired Punch In point using the [BWD] and [FWD] buttons.



- (2) Press [REC].



- (3) Select the track you want to record on.



- (4) Press [PLAY].

You'll hear the previously recorded information and the red light above the [REC] button will blink. You can play along with the previously recorded information, however, nothing you play will be recorded at this point.



- (5) When you arrive at the point where you want to begin recording, press the [REC] button or the DP-2 Pedal.



The red light above the [REC] button will light and the information you play will replace what was previously on the selected track.

- (6) When you want to stop recording new information (and recording over old information), press the [PLAY] button or DP-2 pedal again.



The previously recorded information will begin to play back again.

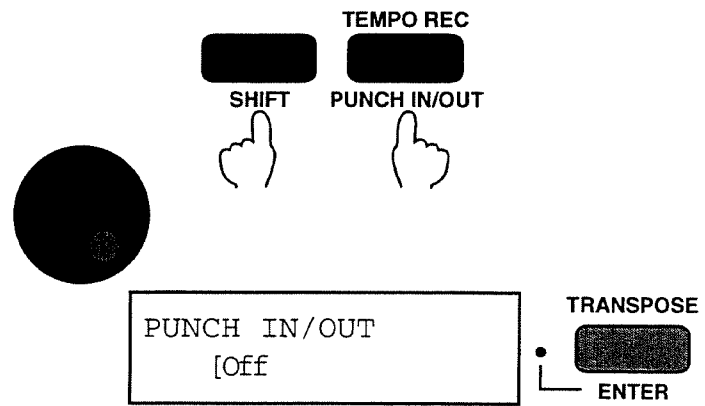
- (7) Press [STOP].



The Punch In/Out techniques described above are quite useful when you want to re-record a small portion of a PR-300S track.

When you are finished, be sure to disable Punch In/Out with the following procedure:

- (1) Hold [SHIFT] and press [PUNCH IN/OUT].
- (2) Rotate the alpha-dial to select "Off".
- (3) Press [ENTER] to the Play Screen.



Tempo Record

Many times, it is desirable to have tempo changes (such as *ritardando*, *accelerando* and *a tempo*) occur within a sequence. This can be done by recording without the Metronome activated, changing tempo as you play.

However, when this is done, the measure numbers listed in the display don't correspond with the actual measure numbers of the music. Also, it is often difficult to keep different parts of a multi-track sequence together, as there is no Metronome sound to synchronize your playing with.

For this reason, the PR-300S is equipped with a Tempo Record mode, in which changes to tempo will be recorded and recreated during playback. This allows you to record parts to the sound of the Metronome (giving you timing accuracy and correct measure numbers), then add tempo changes later to add expression to the music.

Tempo Record can be done before or after parts of the song are recorded. Notes and tempo changes cannot be recorded at the same time.

Activating Tempo Record

To activate Tempo Record:

- (1) Press the [TEMPO REC] button.

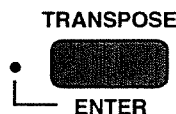
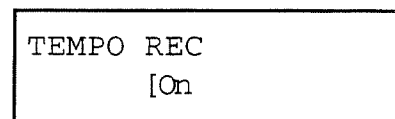
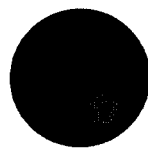
This button is located underneath the top cover.

- (2) Rotate the alpha-dial to select "On".

- (3) Press [ENTER] to confirm selection.

The Play Screen will return.

When Tempo Record is enabled, Punch In/Out Record and Repeat Play features are automatically disabled.



Using Tempo Record

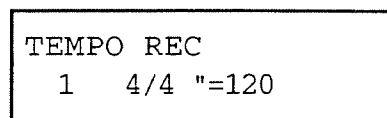
To record tempo changes:

- (1) Use the [RESET], [BWD] and [FWD] buttons to move to a point in the sequence where you want to record tempo changes.

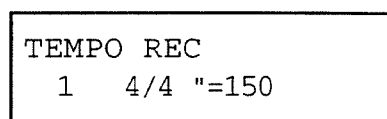


- (2) Press [REC].

The red light above the [REC] button will flash. You cannot select a track in Tempo Record.



- (3) Use the alpha-dial to select a starting tempo.



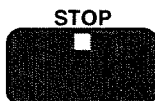
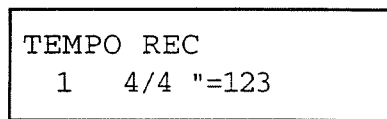
- (4) Press [PLAY] to begin Tempo Record.

The song will be played back. Changes made to the tempo (by rotating the alpha-dial) will be recorded.



- (5) Press [STOP] when you're finished making tempo changes.

The tempo changes made will now occur during playback. If desired, you can go through this process again until proper tempo changes are obtained.



Disabling Tempo Record

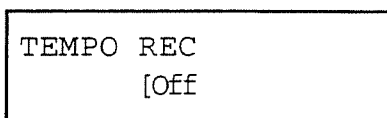
To disable Tempo Record:

- (1) Press [TEMPO REC].

This button is located underneath the top cover.



- (2) Rotate the alpha-dial to select "Off".



- (3) Press [ENTER] to confirm selection.



Playing without Tempo Changes (Tempo Mute)

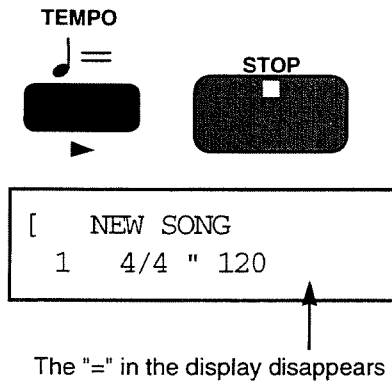
If desired, you can mute tempo changes that have been made, so that the tempo doesn't change in record and playback modes.

This is often useful when you want to add parts to a song after a tempo track is recorded and you want a steady, even tempo to record to.

To Mute the Tempo Changes:

- (1) Hold [TEMPO] and press [STOP].

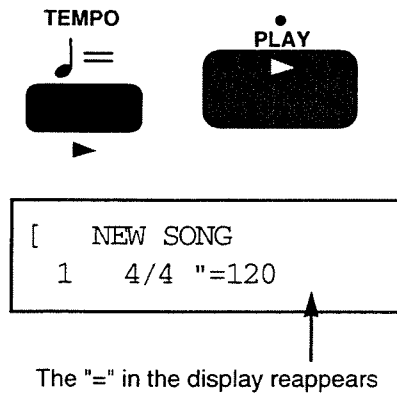
The "=" in the display will disappear and the PR-300S will not change tempo in record and playback modes.



To reactivate the changes in tempo:

- (1) Hold [TEMPO] and press [PLAY].

The "=" in the display will reappear and previously recorded tempo changes will occur.

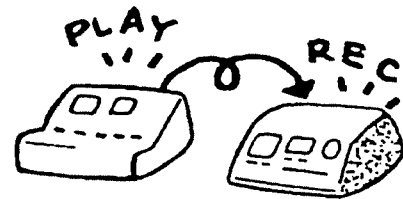


Synchronizing the PR-300S with Other Devices

Sometimes, you may want to transfer music data from other MIDI devices (such as external sequencers) over to your PR-300S. Synchronizing your PR-300S with an external sequencer is a good way to do this. When your PR-300S is synchronized to an external MIDI device, it will start and stop automatically and stay in time with the external device's tempos.

There are two different configurations for synchronizing your PR-300S with an external sequencer: one where the entire performance except

tempo changes is transferred; one where the entire performance including tempo changes is transferred. The configuration used is determined by the status of the **Sync** and **Tempo Rec** modes of the PR-300S (see chart below).



Connecting the PR-300S to an External Sequencer

To connect the PR-300S to an External Sequencer:

- (1) **Connect a MIDI cable from the external sequencer's OUT jack to the PR-300S's IN jack.**
- (2) **Set the external sequencer so that it transmits MIDI clock messages to the PR-300S.**

Setting PR-300S Synchronization

Now, we need to tell the PR-300S to synchronize itself to the external sequencer's clock messages:

- (1) **Press the [MIDI] button and rotate the alpha-dial, if necessary, to select the screen shown at right.**

This button is located underneath the top cover.

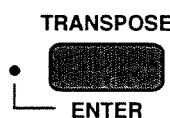
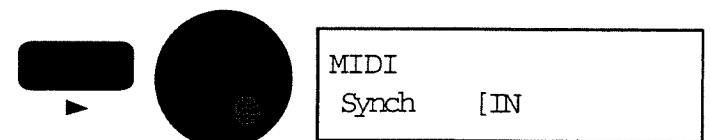
	TEMPO REC Off	TEMPO REC On
SYNC INT	Record music onto a track	Record tempo changes with the alpha-dial
SYNC IN	Record music onto a track in sync with external clock	Record music onto a track and record tempo changes in sync with external clock

- (2) **Use the [>] button to move the cursor to the right and rotate the alpha-dial to select "Sync: IN".**

This tells the PR-300S to listen to the incoming MIDI clock messages.

- (3) **Press [ENTER].**

The Play Screen will return.



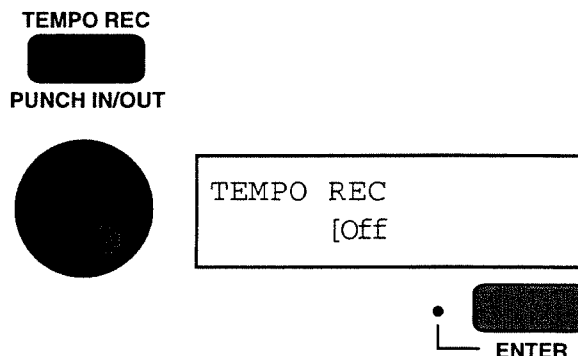
Setting Tempo Record

If you want the PR-300S to record the tempo changes of the external MIDI device, then you need to turn the PR-300S's Tempo Record function on.

If you want the PR-300S to ignore tempo changes of the external MIDI device, turn the PR-300S's Tempo Record function off.

To turn the PR-300S's Tempo Record function on or off:

- (1) Press [TEMPO REC].
- (2) Rotate the alpha-dial to select either "On" or "Off", then press [ENTER].



Sync Recording

Once everything is connected and set correctly, all that is left is to record the information on the PR-300S.

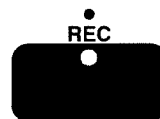
To Sync Record:

- (1) Press the [RESET] button, if necessary, to move to the first measure of the recording.



- (2) Press the [REC] button.

The red light above the [REC] button will blink.



- (3) Press the [BEAT] button and rotate the alpha-dial to match the Time Signature with that of the song being recorded.

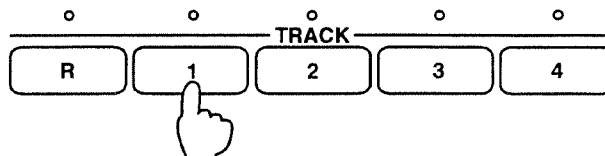


If you don't match the Time Signature with that of the song being recorded, the measure numbers on the PR-300S will not match up.

- (4) Press the track button you wish to record on.

- (5) On the external sequencer, start playback of the song to be recorded.

The PR-300S will start recording when the external sequencer starts playback.



- (6) Stop the external sequencer (if necessary) at the end of the recording.

The PR-300S will stop when the external sequencer stops.

When you are finished, return Sync and Tempo Record to their normal settings.

PR-300S Editing Features (Cut, Copy, Paste, Erase)

The Editing Features of the PR-300S allow you to work with recorded information in many different ways. For example, with the PR-300S's Editing Features, you can easily erase, move or copy a portion of a song. This means you can delete portions of a song which you don't want, copy something you want to repeat (such as a drum part) or move a portion of a song to another place.

What the Buttons do

Following is an explanation of the various functions of the CUT, COPY, ERASE and PASTE buttons.

The "scratchpad" referred to below is a temporary storage area used by the PR-300S during different editing features. The scratchpad holds information to be copied or moved to other places. Please note that the scratchpad only stores the last information placed there (i.e., every time you place something in the scratchpad, it erases information placed there previously).

COPY---makes a copy of the song data you specify and stores it temporarily in the scratchpad. The data in the song which is copied is left unaffected. You can specify the measure, part(s) and track(s) to be copied.

ERASE---deletes the song data you specify and puts it in the scratchpad. Blank measures will replace the song data you erase and any song information which occurs after the erased information will not move.

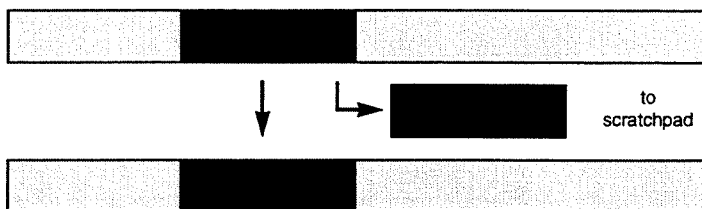
You can specify the measure, part(s) and track(s) to be erased.

CUT---also deletes the song data you specify and puts it in the scratchpad. However, blank measures will **not** replace erased information and any song information which occurs after the cut information will move and close up the gap.

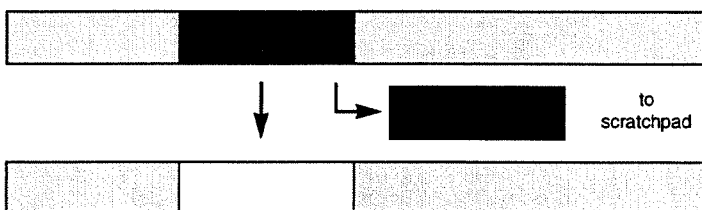
If all tracks in a section are cut, then all tempo changes will also be deleted, and

Hint! You can undo any Editing function (such as Cut, Copy, Paste or Erase). See "Undo" for more information.

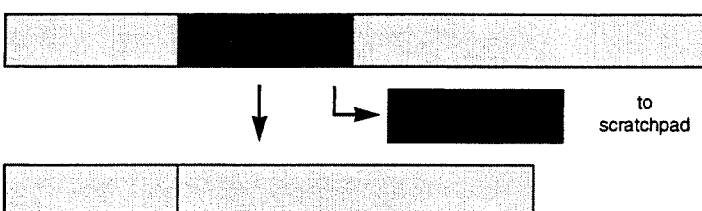
COPY



ERASE



CUT

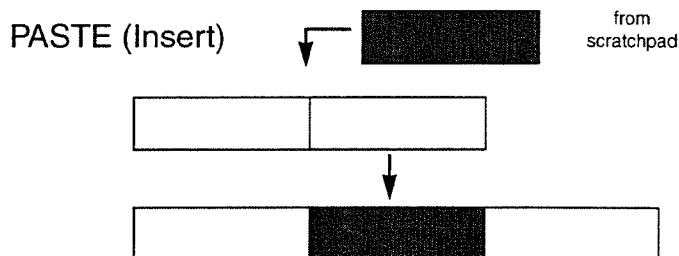
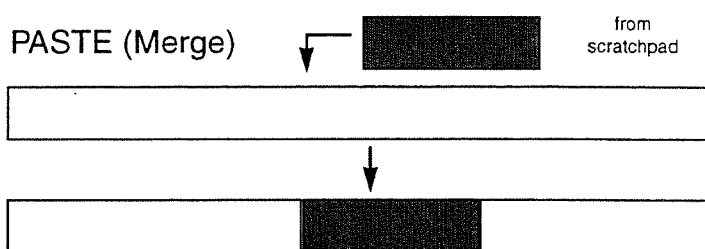


Pause Marks and markers located after the cut point will move with the data.

You can specify the measure, and track(s) to be cut.

PASTE---takes the data placed on the scratchpad by Copy, Erase, and Cut functions and places it at the location you specify.

You can select whether to have the data "Merged" (combined with existing data) or "Inserted" (moving existing data to make room) at the Paste-In point.



Copy, Erase or Cut, then Paste

- (1) To Copy or Cut, press the [COPY] or the [CUT] button. To Erase, hold [SHIFT] and press the [ERASE] button.
- (2) Specify the portion of the song to be Copied, Cut, or Erased (and thereby copied to the scratchpad) using the [<] button, [>] button, and alpha-dial.

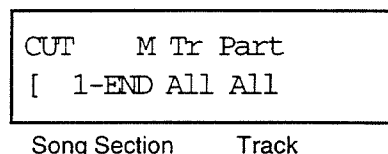
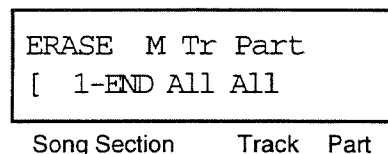
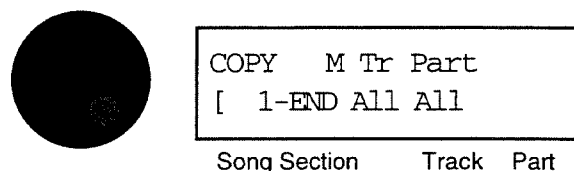


Song Section---this field specifies the number of measures affected by the Copy, Cut or Erase function. For instance, if you set this to "1 - 9", then measures 1 through 8 would be affected.

You can set the start and end points with the alpha-dial (as mentioned above), or you can use the [MARKER A] and [MARKER B] buttons. Please note that, if a marker is placed in the middle of a measure and you press its button to specify the start or end point, the PR-300S will use the beginning of the measure which contains the marker as the start or end point of the operation.

You can select 1 (or PU if a Pick-Up measure exists) to specify the beginning of the song. You can select "END" to specify the end of the song.

Track---This lets you specify which track(s) will be affected by the Copy, Cut or Erase operation. You can select a single track by rotating the alpha-dial (or simply pressing the appropriate track button) or select all tracks by rotating the alpha-dial until "ALL" is selected.



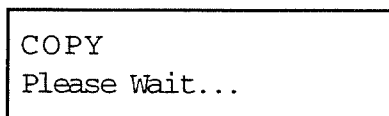
Part---lets you specify which Part(s) will be affected by the Copy or Erase operation. A number can be selected by rotating the alpha-dial (or all Parts can be selected by specifying "ALL").

You cannot use the Part Screen when performing a Cut operation.

- (3) **When the Song Section, Track and Part (for Copy and Erase) have been set correctly, press [ENTER].**



The PR-300S's display may read "Please wait . . ." for a few seconds while the PR-300S carries out the operation. The information specified will be placed in the scratchpad, where it will stay until it is either replaced by other song data or the PR-300S is powered off.



The section of song data you specified will either stay the same (Copy), be replaced with blank measures (Erase) or be replaced with song data which follows it (Cut), depending on the operation you chose.

Pasting the Scratchpad Information into the Song

The information put in the scratchpad during the Copy, Cut or Paste operation described above can be placed into the song, if desired.

You have a number of options when pasting data from the scratchpad. To paste data stored in the scratchpad:

- (1) **Press the [PASTE] button.**

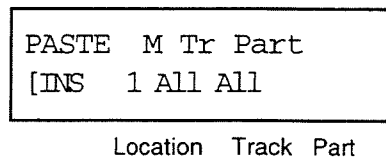
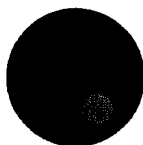


The Paste Screen appears.

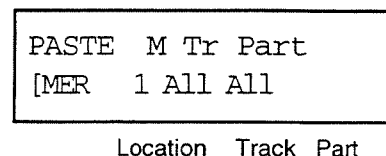
- (2) **Use the [<] button, [>] button and alpha-dial to select desired Paste options:**



Merge or Insert---specifies whether the information to be pasted will be combined with existing song information at that location (Merge) or whether existing song information at that location will be moved to make room for the pasted information (Insert). Use the alpha-dial to select either "MER" (Merge) or "INS" (Insert).



Location---determines where the pasted information will be located within the song. For instance, if you select measure 7, the first measure of pasted song information will be placed at measure 7.



Track---specifies the track to be pasted to. If you select an individual track by pressing the appropriate track button, then the pasted information will be placed on that track. If you select "All" by rotating the alpha-dial, the scratchpad information will be pasted onto the track(s) it came from.

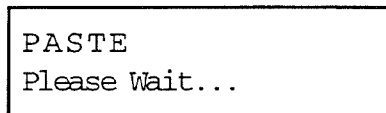
Part---lets you specify the Part of the pasted information. If you select "All", then the Part(s) of the pasted information will be the same as when it was placed in the scratchpad. That is, the MIDI channel(s) used by the information which is pasted will not change.

If you want to change the Part of the pasted information, you can specify a Part by rotating the alpha-dial. For instance, if you specified Part 3, then all information which is pasted would be changed to Part 3 (MIDI channel 3).

This is an excellent way to copy information from one MIDI channel to another MIDI channel, so that two different instruments play the same music. Simply record an instrument using Part 1, for example, then perform a Copy function and paste the copied information to Part 2. The information which plays Part 2 will be exactly like that which plays Part 1, but you will be able to specify two different instruments (one for Part 1, one for Part 2).

- (3) Press [ENTER] when the Paste screen is set to your satisfaction.

The PR-300S may say "Please Wait" for a few seconds, after which the Play Screen will return.



Listening to Information Stored in the Scratchpad

Sometimes, you'll want to check the data stored in the scratchpad before you paste it into your song. For this reason, it's possible to play the information stored in the scratchpad to make sure it's what you want to paste.

To play the information stored in the scratchpad:

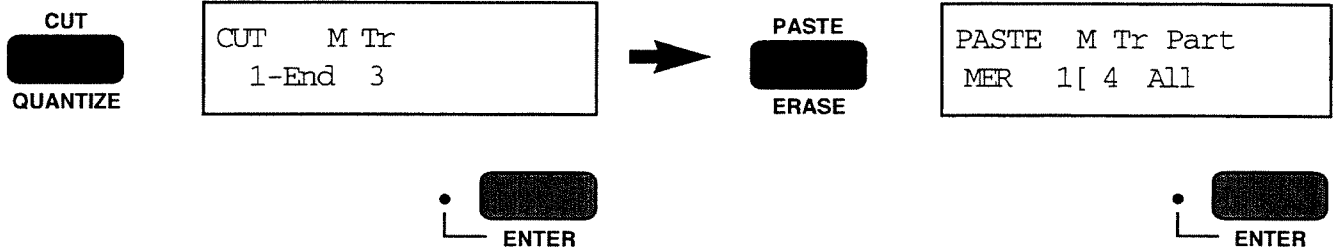
- (1) Press the [PLAY/STOP] button located under the top cover.



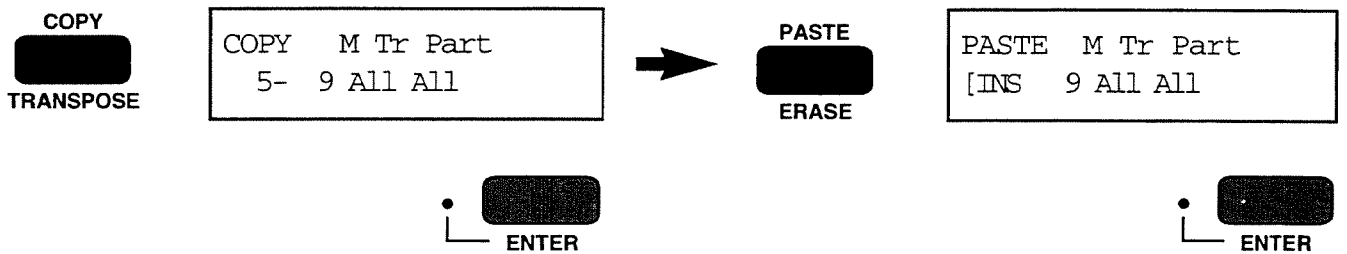
The scratchpad information will be heard. If you want to stop playback, press [PLAY/STOP] again.

Editing Examples

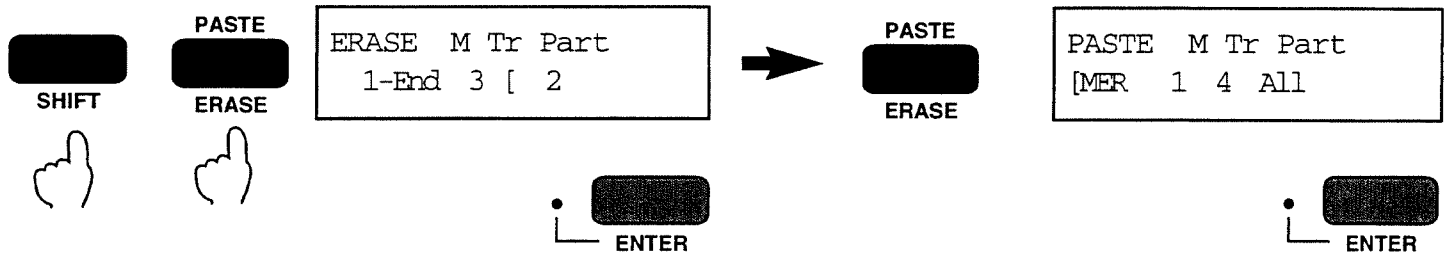
To Merge Track 3 data into Track 4



To Insert Measures 5-8 (all tracks) into Measures 9-12 (keeping same tracks as before)



To Extract only Track 3, Part 2 (MIDI channel 2) and paste it into Track 4.



Quantize

Even if you record along with the Metronome, you'll find that sometimes your timing will stray a little. This is especially noticeable if you are building a Multi-Track Sequence and there are many different parts sounding together.

The PR-300S has a Quantize function which can correct small timing errors and line notes up directly on the beat.

Be aware, that the PR-300S can only correct small timing errors. If there are some notes which are far off the beat, they may not line up correctly. Also, "perfect timing" can sometimes make music sound mechanical.

With practice, however, the Quantize function can be a valuable tool in the creation of music.

To use the PR-300S Quantize feature:

- (1) Hold [SHIFT] and press [QUANTIZE].
- (2) Indicate which part of the song you want to quantize (in the same way as the Cut, Copy and Erase functions).
- (3) Press the [>] button until the screen at right appears in the display.
- (4) Rotate the alpha-dial to select the resolution of Quantization desired.

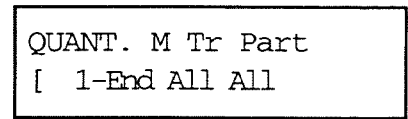
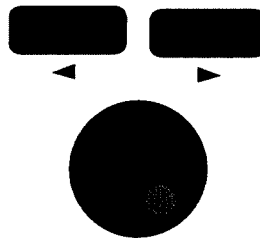
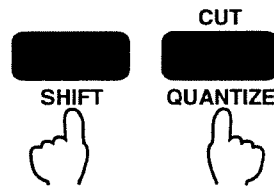
The resolution determines how many divisions per beat the quantize function will use. For instance, if you select a sixteenth-note (¶), the quantize function will use four divisions per quarter note.

Make sure you select a note value which is as small as the smallest note value which occurs in the section to be quantized. Otherwise, notes may be run together.

- (5) Press [ENTER].

The PR-300S may display "Please Wait . . .", after which the Play Screen will return.

You can reverse a Quantize function using the Undo command (see "Undo" for more information).

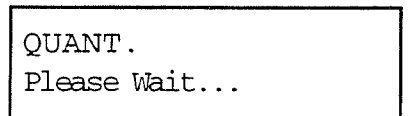
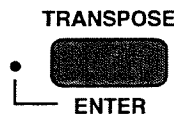
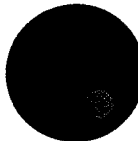


Song Section Track Part



You can select half, quarter, triplet quarter, eighth, triplet eighth, sixteenth, triplet sixteenth or thirty-second note resolution.

(§₃ = one triplet eighth note)



Transposition

In the early part of this manual, you learned how to transpose a song. This transposition function, though quick and easy, is only temporary and can only be done for the entire song.

For this reason, the PR-300S is equipped with another transposition function which allows you to transpose a selected portion of a song (rather than the entire song). Because this transposition actually changes the note numbers in the selected section, it will be permanent.

To transpose a portion of a song:

- (1) Hold [SHIFT] and press [TRANSPPOSE].

These buttons are located underneath the top panel.

- (2) A screen much like the Erase or Copy screen will appear. Use the [<] button, [>] button and alpha-dial to select the portion of the song you wish to transpose.

You cannot select Track R in this step (i.e., transpose the rhythm track), as transposing the rhythm track would change the drum sounds which play. Even when selecting "All", the rhythm track will be exempted from all transpose functions.

- (3) When everything has been set correctly, press the [>] button until the screen at right appears in the display.

This is the screen where you select the amount of transposition which will take place.

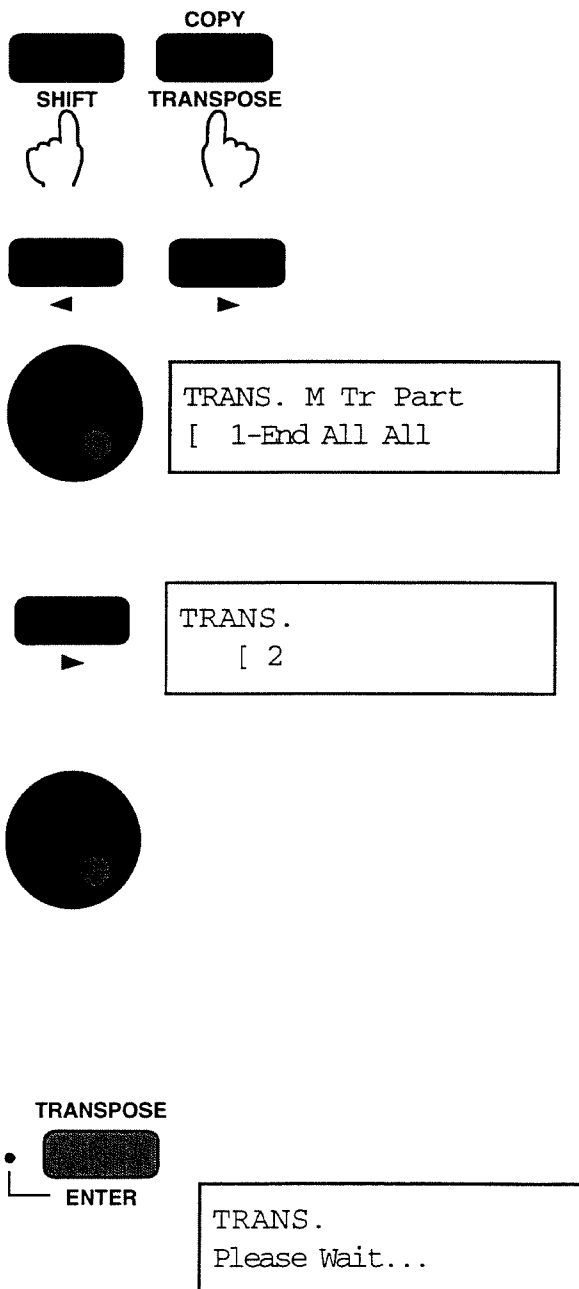
- (4) Rotate the alpha-dial to select the number of semitones the music will be transposed. The range is from "-24" (down two octaves) to "24" (up two octaves).

For example, if you wanted to transpose the selected music from the key of B to the key of E, you would rotate the dial until "5" appears in the display. If you wanted to transpose the music down one octave (for a lower sounding bass line), you would select "-12".

- (5) Press [ENTER].

The PR-300S may say "Please Wait" for a few seconds, after which the Play Screen will return.

Hint! You can undo any Transposition function. See "Undo" for more details.



Creating your Own Count-In Phrase

When the Count-In feature is activated, the PR-300S will give you two measures of introduction. If the Count-In feature is not activated, you will either hear the music in the two measures preceding the start of the recording or two measures of silence, if no music exists in the two measures before the record point. (The Metronome click will be heard if the Metronome feature is activated).

If desired, you can change the two measure introduction which is used by the Count-In feature. The new Count-In Phrase can be up to two measures in length and will be saved along with the song.

To change the Count-In phrase:

- (1) Record a two-measure drum pattern anywhere on any track.

For more information, see "Recording Rhythm Parts".

- (2) Store the two measure rhythm pattern in the scratchpad using the Erase, Cut or Copy functions.

For more information, see "PR-300S Editing Features".

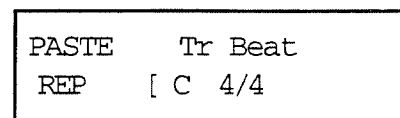
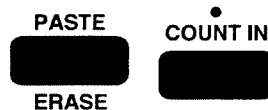
- (3) Press the [PASTE] button, then press [COUNT IN].

The screen at right will appear in the display.

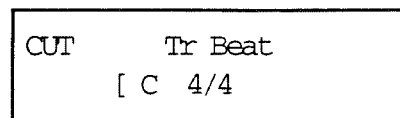
- (4) Press [ENTER] to Paste in the new Count-In Phrase. The Play Screen will return.

The two-measure phrase which was pasted in will be used whenever the Count-In feature is enabled.

If you Erase or Cut the custom Count-In phrase (by pressing [ERASE] or [CUT] then [COUNT IN] and [ENTER]), then the default Count-In phrase will again be used.



Replace . Count-In Current
Time
Signature



Undo

Sometimes, after listening to the results of a Quantize operation, or after erasing the wrong measures of a song or pasting scratchpad information into the wrong measures of a song, you'll wish you could reverse what you've just done.

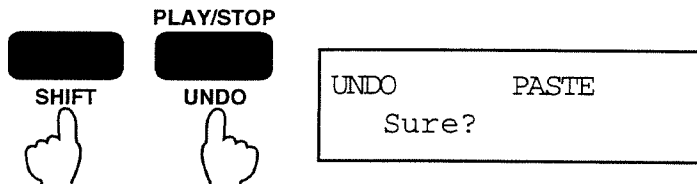
The PR-300S's Undo feature lets you do just that. The Undo function reverses the last Cut, Erase, Paste Quantize or Transpose operation you performed.

Please note: You can only Undo the last function performed, and, you can't Undo an operation once you've entered the Record mode.

Also, sometimes, when you are performing a Cut, Erase, Paste or Transpose function, the PR-300S will display "Memory Low, Continue Without Undo". What this means is that the operation you are performing takes up so much memory that the PR-300S will not be able to "Undo" afterwards. If you press [ENTER] at this point, you will be unable to perform an "Undo" operation to reverse the procedure.

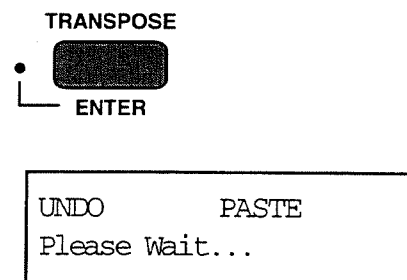
To Undo the last Cut, Erase, Paste, Quantize or Paste operation:

- (1) Hold [SHIFT] and press [UNDO].



- (2) Press [ENTER].

The last Cut, Erase, Paste, Quantize or Paste operation is reversed and you will return to the Play Screen.



PR-300S Disk Functions

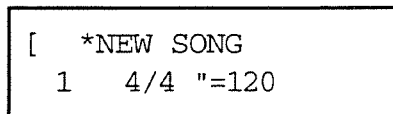
The PR-300S has a number of disk functions which allow you to save songs to disk, copy one or more songs on a disk, delete songs off a disk or format disks for PR-300S use.

The PR-300S uses standard 3.5" computer ("floppy") disks, either HD (High Density) or DD (Double Density). If possible, it's best to use HD disks, because they have more storage space, and some disk functions will be a little quicker than with DD disks.

Saving a Song to Disk (SAVE)

When the PR-300S displays an asterisk (*) in front of the Song Name, this means that the song currently in memory has been changed and needs to be saved if you want to retain the current version.

If you turn the PR-300S off with the asterisk showing, any changes made since the last Save to disk will be lost. If the song has never been saved and the PR-300S is turned off, the entire song will be lost.



To save a song to disk:

- (1) **Insert a formatted 3.5" disk into the disk drive.**

Make sure the disk's Write Protect Tab is set to "Write". If you haven't formatted the disk yet, see "Formatting a Disk" later in this section.

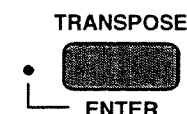
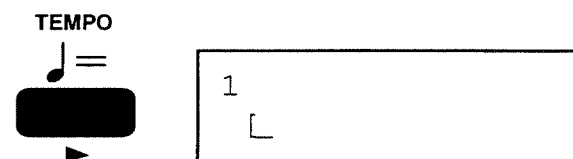
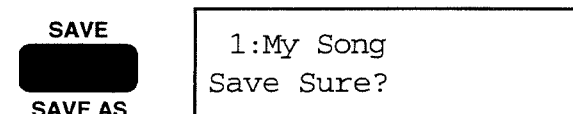
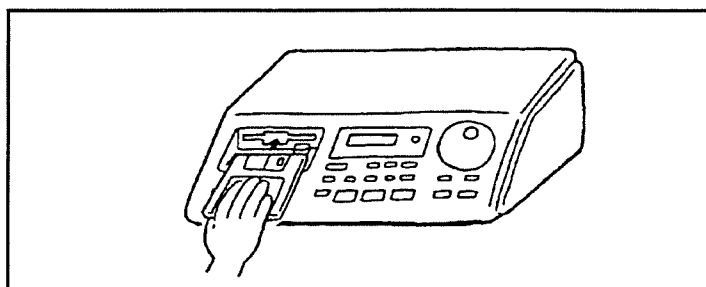
- (2) **Press [SAVE].**

If the song has been saved before, the PR-300S will display the Song Name and ask "Save Sure?".

If the song has not been saved before, you'll have the opportunity to do so. You don't have to name the song if you don't want to (if you don't, the song will be represented by the number listed at the beginning of the first line).

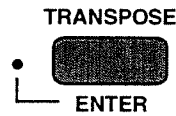
If you want to name the song, press [TEMPO] to move the cursor to the second line and then use the [<] and [>] buttons and alpha-dial to name your song. The name can be up to 12 characters in length and can use any combination of upper case, lower case and special characters available. Press [ENTER] to enter the name of the song.

NOTE: To save your song as an SMF, press and hold the [STOP] button and then press the [SAVE] button. Saving your song as a Standard MIDI File gives your song data a greater degree of compatibility with other MIDI devices and sequencers. Note also that SMFs cannot be saved on a disk that already contains ISM data, or data in native PR-300S format (the message "Disk not for SMF Can Not Save" will appear).



- (3) Press [ENTER] to save the song.

The PR-300S will save the song to the disk. To stop the save procedure, press [STOP].



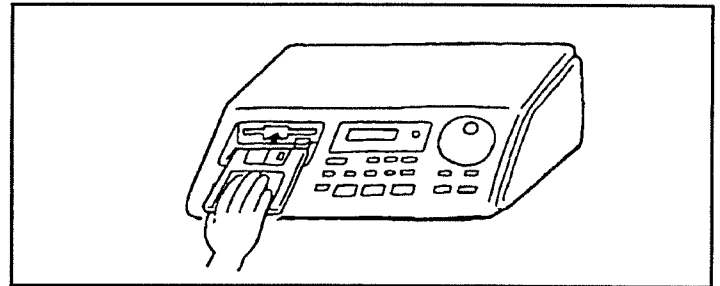
Saving a Song to a Different Name (SAVE AS)

You can use the Save As function to save a version of a song to another song number (and different name, if you wish).

To perform a Save As:

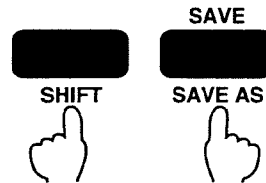
- (1) Insert a formatted 3.5" disk into the PR-300S's disk drive.

Make sure the disk's Write Protect Tab is set to "Write", not "Locked". If you haven't formatted your disk on the PR-300S yet, see "Formatting a Disk" later in this section.



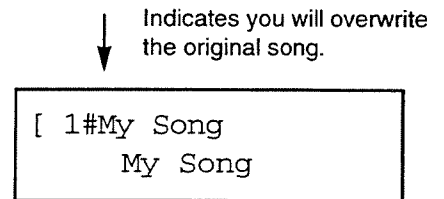
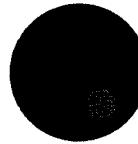
- (2) Hold [SHIFT] and press [SAVE AS].

This button is located underneath the top cover.



- (3) Rotate the alpha-dial to select the desired song number.

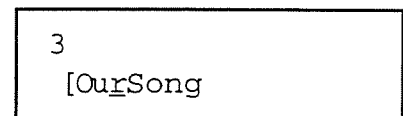
If you select the song number of an existing song, then the song you are saving will replace the existing song. A "#" after the song number indicates that the selected song is the original version of the song you are saving.



If you don't want to erase anything on disk by writing over it, rotate the alpha dial and select a song number which has no song saved to it. Any song number between 1 and 99 can be selected.

- (4) Press the [>] button to move the cursor to the second line, and name the song, if desired.

You don't have to name the song if you don't want to. If you don't name the song to be saved, then it will be represented by the song number only.



If you do want to name the song, use the [<] button, [>] button and alpha-dial to name your song. The name can be up to 12 characters in length and can use any combination of upper case, lower case and special characters available.



Changes Character



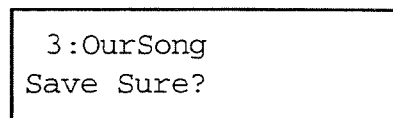
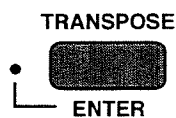
Moves Right



Moves Left

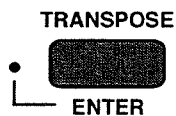
- (5) Press [ENTER] once you've finished naming the song.

The PR-300S will ask if you're sure you want to save the song.



- (6) Press [ENTER] to save the song. Press [STOP] to cancel.

The PR-300S will say "Please Wait" for a few seconds, after which time the Play Screen will return.

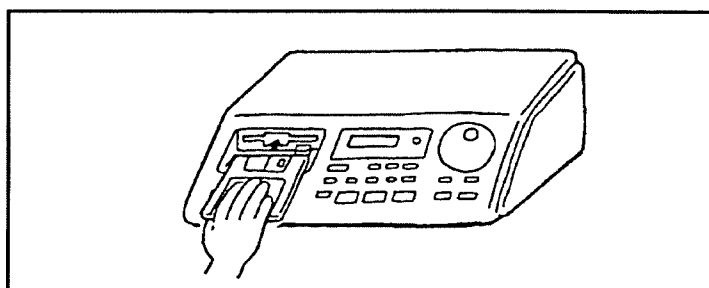


Copying a Song on the Disk

Use this procedure to copy a song to a different disk (or to another song number on the same disk).

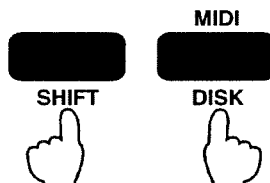
To copy a song:

- (1) Insert the disk you want to copy from into the PR-300S's disk drive.



- (2) Hold [SHIFT] and press [DISK].

The screen at right should be seen in the display. If it doesn't, rotate the alpha-dial until it appears.



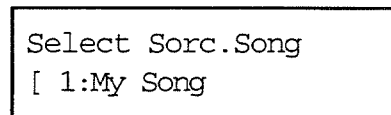
- (3) Press [ENTER].

If you have not saved a new song or saved changes to an existing song, the PR-300S will ask, "Data will be erased. Ok?", (asking if you want to save the song you were working on). If you press [ENTER], all work done since the last Save will be lost. If you don't want to lose this work, press [STOP], save the song and start this procedure again.



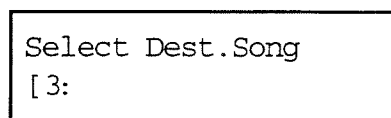
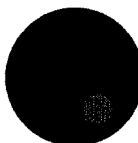
- (4) Select the song you want to copy by rotating the alpha-dial, then press [ENTER].

This is called the "Source Song", or the song you are copying from.



- (5) Select the number of the song you want to copy the Source Song to by rotating the alpha-dial.

This is called the "Destination Song", or the song you are copying to. If you select the number of an existing song, you will write over that song with the song you are copying.

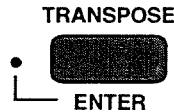


If you don't want to write over an existing song, select a song number which doesn't already have a song assigned to it. Any number between 1 and 99 can be selected.

If you want to copy the song to another disk, eject the Source Disk (the one you copied from), insert the disk to be copied to, then rotate the alpha-dial to select the desired song number.

- (6) Press [ENTER] to start the Song Copy process (or press [STOP] to cancel).

The Play Screen will return.



Copying All the Songs on a Disk

It is also possible to copy all songs on a disk to another disk. This is a good way to make "backup" copies of your work or to make copies of your songs for distribution.

Please note that any songs which exist on the disk to be copied to will be erased with this procedure. Also, if you are copying from an HD (High Density) disk to a DD (Double Density) disk, all of the information to be copied may not fit, as HD disks have more storage space than DD disks.

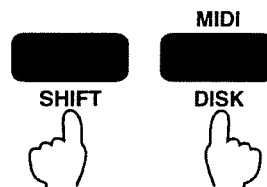
To copy all songs on a disk to another disk:

- (1) Make sure the disk to be copied to has been formatted on the PR-300S and that it contains no information which you want to save.

If the disk has not been formatted, see "Formatting a Disk" later in this section. If there is information on the disk to be copied to that you wish to save, use a different disk.

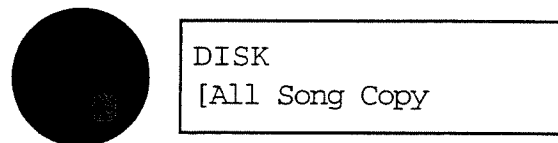
- (2) Hold [SHIFT] and press the [DISK] button.

These buttons are located underneath the top cover.



- (3) Rotate the alpha-dial until "All Song Copy" appears in the display, then press [ENTER].

If you have not saved a new song or saved changes to an existing song, the PR-300S will ask, "Data will be erased. Ok?", (asking if you want to save the song you were working on). If you press [ENTER], all work done since the last Save will be lost. If you don't want to lose this work, press [STOP], save the song and start this procedure again.



- (4) The PR-300S will ask you to insert the Source Disk (if you haven't already done so). Insert the disk you want to copy into the disk drive.

Insert Sorc.Disk

If a disk is already in the disk drive, the PR-300S will skip this step.

If the disk in the disk drive is not the disk you want to copy, eject the disk, press [STOP] and start this procedure again.

- (5) After a short time, the PR-300S ask you to "Insert Destination Disk". Eject the disk currently in the disk drive and insert the disk you want the songs copied to (the destination disk).

Insert Dest.Disk

The PR-300S will tell you that it is "Copying", or writing the song information from the Source Disk onto the Destination Disk.

Copying...

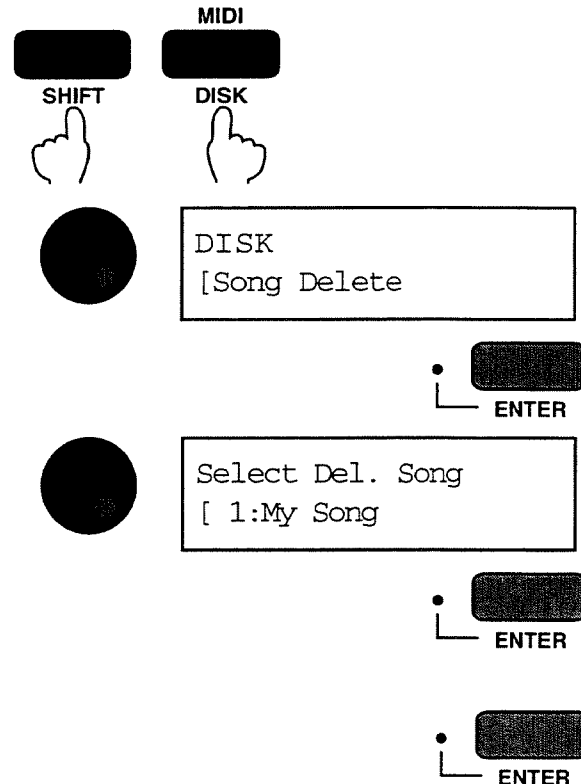
If it cannot copy all of the song information at once, it will ask you to insert the Source Disk again. If this happens, repeat steps 4 and 5 as many times as necessary until the Copy procedure is finished and the Play Screen returns.

Song Delete

This procedure removes a single song from a disk. Be careful, though, because once a song has been deleted, there is no way to recover it!

To delete a song from a disk:

- Make sure the Write Protect tab is set to "Write" on the disk containing the song to be deleted. Insert the disk into the PR-300S's disk drive.
- Hold [SHIFT] and press [DISK].
- Rotate the alpha-dial to select "Song Delete", then press [ENTER].
- Rotate the alpha-dial to select the song you want to delete.
- Press [ENTER].



The PR-300S will ask you if you're sure you want to select the selected song. To cancel the delete procedure, press [STOP].

- (6) Press [ENTER] to delete the song.

The Play Screen will return.

Formatting a Disk

You must format a disk before it can be used on the PR-300S. The PR-300S can format either HD (High Density) or DD (Double Density).

Formatting disks erases all information stored on them. Make sure there is no information on the disk which you want to save before you format it. It is impossible to retrieve any information lost by formatting a disk.

To format a disk:

- (1) Remove any disks from the PR-300S's drive.

- (2) Hold [SHIFT] and press [DISK].

These buttons are located underneath the top cover.

- (3) Rotate the alpha-dial to select "Disk Format".

- (4) Press [ENTER].

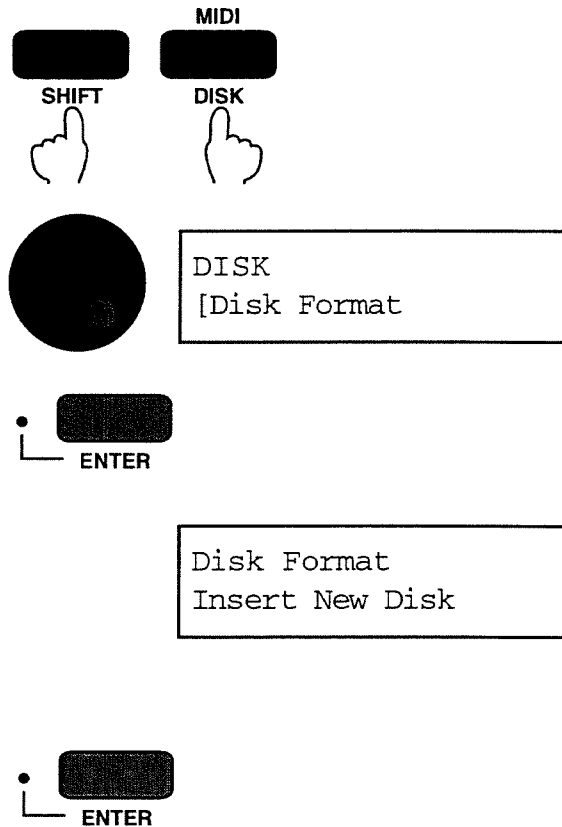
The PR-300S will ask you to insert a new disk (you can also insert a previously used disk that you want to erase and re-format).

- (5) Insert the disk to be formatted.

The PR-300S will ask you if it is okay to erase any disk data which may exist. If you decide that you don't want to format the disk, press [STOP].

- (6) Press [ENTER] to start formatting process.

The PR-300S will take a few minutes to format the disk. When it is finished, the Play Screen will return.



About MIDI

We've referred to MIDI many times in this manual. Some of you are probably asking, "Just what is 'MIDI'"?

MIDI stands for "Musical Instrument Digital Interface" and it serves as a uniform standard for exchanging information between musical instruments and computers. When instruments are connected with a MIDI cable, information about performances can be sent back and forth.

MIDI is now an essential part of electronic musical instruments, and your PR-300S is no exception. Without MIDI, the PR-300S would not be able to record and play back performances using both internal sounds and sounds of your keyboard or organ, nor would it be possible to control the PR-300S's sounds from an external MIDI device.

The PR-300S is designed so that it can be used easily without an in-depth knowledge of MIDI. If, however, you want to get maximum benefit from MIDI and the capabilities of the PR-300S, you should read this chapter, which gives a simple explanation of MIDI and the PR-300S.

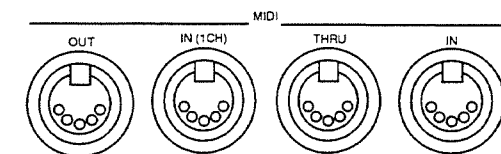
The Four MIDI connectors of the PR-300S

Normally, MIDI instruments are equipped with three MIDI connectors: IN, OUT and THRU. IN is the connector where a MIDI instrument receives information from other MIDI instruments. In this way, the IN jack serves as an instruments "ears".

OUT is the connector where a MIDI instrument sends MIDI information to other MIDI devices. In this way, the OUT jack serves as an instruments "mouth".

THRU is much like OUT, except that it passes an exact copy of information received at the IN jack on to other MIDI devices. This allows the information from one MIDI device to be transmitted to many other MIDI devices.

The PR-300S is actually equipped with two MIDI IN connectors, the IN jack (which is normally used) and the IN (CH 1) jack (which is normally not used).



The PR-300S's Sequencer

What's a Sequencer?

A sequencer is a device which uses computer hardware and software to record and playback performances. However, there is a fundamental difference between the way that a sequencer records a performance and the way a tape player records a performance.

A tape player records the actual sound which occurs and then allows you to play back a copy of those sounds.

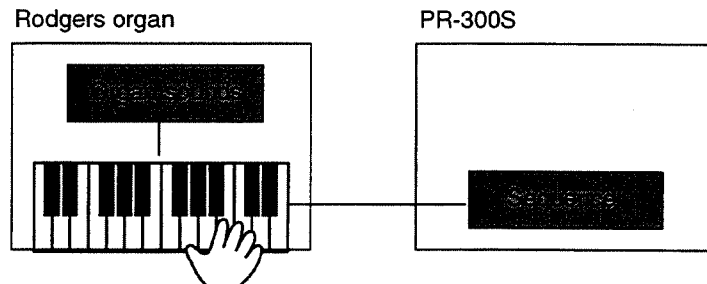
A sequencer records the MIDI information which occurs, such as what notes were played and in what order (or sequence), how long each note was held, how hard each note was played, how each expression pedal was set (and moved), what sounds were used, etc.

Then, during playback, the sequencer "plays" the performance back the same way it was recorded. Because the PR-300S records an actual performance (and not sound), there are many benefits over tape recorders, including:

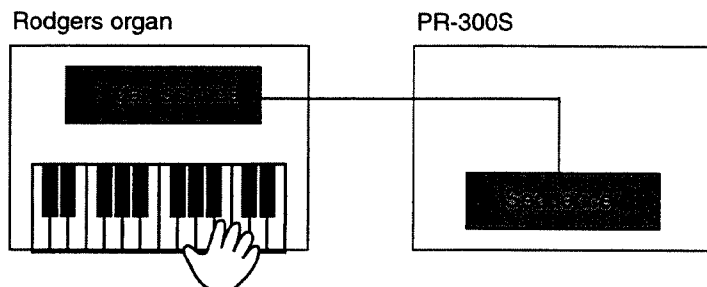
- (1) You can change the tempo of playback without affecting the pitch of the music.
- (2) You can easily modify or add more music data after the recording is done.
- (3) You can easily change the sounds used (without having to re-record anything).
- (4) Rewind and Fast-Forward are almost instantaneous.
- (5) You can transpose a song (or part of a song) quickly and easily.

The recorded information we've been discussing is commonly called "MIDI data" or "song data". The PR-300S can use its internal sound source (or the sound sources in external MIDI devices) to create MIDI data.

Record



Playback

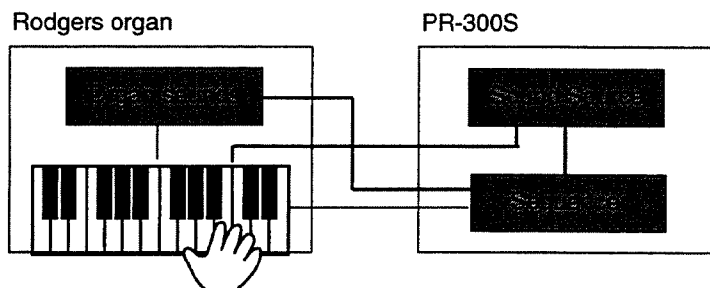


The PR-300S's Sound Source

What's a Sound Source?

A "sound source" is, simply, where sounds come from. It can also be defined as a device which generates sounds when asked to do so through MIDI. The PR-300S has a sound source built in which has 354 different instruments and 10 different drum kits. Any of these sounds can be controlled through MIDI.

If you are using your PR-300S with another MIDI device, such as a Rodgers organ or keyboard, it may also have a sound source that can be controlled through MIDI. If so, you can use the sound source in the PR-300S and in your organ or keyboard when making MIDI data with the PR-300S's sequencer.



General MIDI System

The sound source of the PR-300S conforms to the General MIDI System Level 1 specifications. This means that, any music data created for General MIDI Level 1 specifications can be played using the PR-300S's sound source, allowing you to use an even wider range of commercially available music data.



The PR-300S's Sound Source

The "GS" logo appears on the panel of the PR-300S. This indicates that the PR-300S is also equipped with a GS Format sound source.

The GS Format, developed by the Roland Corporation, is a standard set of sounds which will respond in a standardized way whenever music is played via MIDI.

Thanks to GS Format, any song data created for any GS Format sound source can be reproduced identically on any other unit which carries the GS Format logo. This means you can use a wide variety of music data in your PR-300S, not just music data made specifically for PR-300S.

See the end of this manual for detailed information about the main types of MIDI data controlling the PR-300S's sound source.



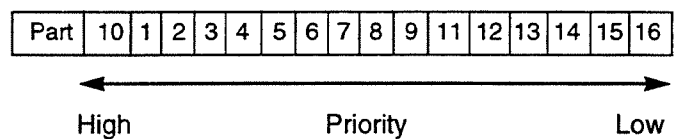
The PR-300S's Multi-Timbral Sound Source

The PR-300S's sound source allows you to use up to 15 different sounds and one drum kit simultaneously (each of these sounds and drum kit is controlled from a separate MIDI channel). This type of arrangement is called "Multi-Timbral" because it allows you to play multiple sounds at the same time.

About the Number of Notes that can be Played Simultaneously

The PR-300S's sound source can play 28 sounds at the same time. A single note playing an instrument on a MIDI channel is usually considered "one sound", although some instruments in the PR-300S's sound source use "two sounds" per note.

When the maximum number of sounds (28) has been exceeded, some sounds will be omitted. The GS sound source gives priority to Parts as shown at right. This Part priority determines which sounds will be omitted when the song data calls for more notes than are currently available. Sounds from Parts with the lowest priority are omitted first. Make sure to use Parts with a high priority for sounds which you don't want to drop out. See the "Tone List" for more information on how many sounds are used by each instrument.



About Starting MIDI messages

When you make a song on the PR-300S, a GS Reset message is automatically inserted at the beginning of the sequence. This Reset message is a SysEx message which tells the internal GS sound source (and the sound source of any connected GS equipment) to reset itself to initial (default) values.

Other song settings, such as Program Changes (to select sounds for each Part), volume, panning, amount of reverb and chorus are sent to the internal GS sound source of the PR-300S based on the settings made in the Sound Function.

MIDI Messages Used to Control the GS Sound Source

There are many different types of MIDI messages. Those described below are used to control a GS sound source. All of them except for System Exclusive messages affect a specific MIDI channel (and, therefore, a specific Part).

Note On Messages

These messages tell the PR-300S which key has been played and how hard it has been struck (at what velocity). When a Note On message is received, the appropriate note in the sound source plays. If, however, the key played is outside the recommended sound range (as shown in the "Tone List" found at the end of this manual), the note may not sound or may sound at a pitch other than the pitch of the key played.

Note Off Messages

These messages tell the PR-300S when a note has been released. When a note off message is received, the corresponding note played by the GS sound source is stopped.

Pitch Bend Messages

Pitch Bend Messages cause smooth changes in pitch to occur. Pitch Bend Messages are usually sent by a pitch bend wheel or level on a keyboard.

You can select the amount of pitch change which occurs when a Pitch Bend message is received by the GS Sound Source.

After Touch Messages

These messages are controlled by the amount of pressure exerted on keys after notes have been played. There are two types of After Touch: Channel After Touch, which affects the entire Part, and Polyphonic After Touch which affects each individual key. Normally, the GS Sound Source does not respond to After Touch, however, Pitch Bend can be created using the Exclusive Message specified for the GS Format (see the PR-300S MIDI Implementation for further details).

Program Change Messages

These messages are used to select sounds for the 16 Parts of the GS Sound Source. When a Program Change message is received by the GS Sound Source, the corresponding sound is assigned to the appropriate Part.

Variation Select Messages (Control Change 0)

Variation Select Messages (sometimes called "Bank Select") are used to assign variations of a capitol tone to one of the 16 Parts in the GS Sound Source. Variation Select messages must be used with Program Change messages. To select a sound which has a different variation number than the sound currently assigned to a Part, send a Variation Select message first, then a Program Change message. This combination of Variation Select and Program Change messages allows the selection of 16,384 different sounds.

Modulation (Control Change 1)

Normally, when this message is received, the pitch of the sound being played is modulated (cyclical pitch variation is added to the sound). This effect is usually controlled from the modulation wheel on a keyboard.

You can change the type and application of the effect controlled by these messages by using the Exclusive Message specified for the GS Format (see the PR-300S MIDI Implementation for further details).

Volume (Control Change 7)

Normally, this message causes a change in the volume of the Part controlled. These messages can be used in conjunction with Expression messages (below).

Panpot (Control Change 10)

These messages are used to move the perceived "position" of a sound in the stereo field.

Expression (Control Change 11)

Normally, this message causes a change in the volume of the Part controlled. These messages can be used in conjunction with Expression messages (above).

Hold 1 (Control Change 64)

Normally, this message allows you to sustain notes (much the same as a sustain pedal on a piano). When a "Hold On" message is received, all notes played will be sustained. When a "Hold Off" message is received, all sustained notes will be released.

A "Hold On" message has a value between 64 and 127; a "Hold Off" message has a value between 0 and 63.

Sostenuto (Control Change 66)

Normally, this message allows you to sustain notes like the sostenuto pedal of a piano (notes played when the "Sostenuto On" message is received will be sustained; notes played after the "Sostenuto On" message is received will not be sustained). A "Sostenuto Off" message will release all notes sustained by the sostenuto function.

A "Sostenuto On" message has a value between 64 and 127; a "Sostenuto Off" message has a value between 0 and 63.

Effect 1 - Reverb Amount (Control Change 91)

This message allows you to change the amount of reverb for a specific Part.

Effect 2 - Chorus Amount (Control Change 93)

This message allows you to change the amount of chorus for a specific Part.

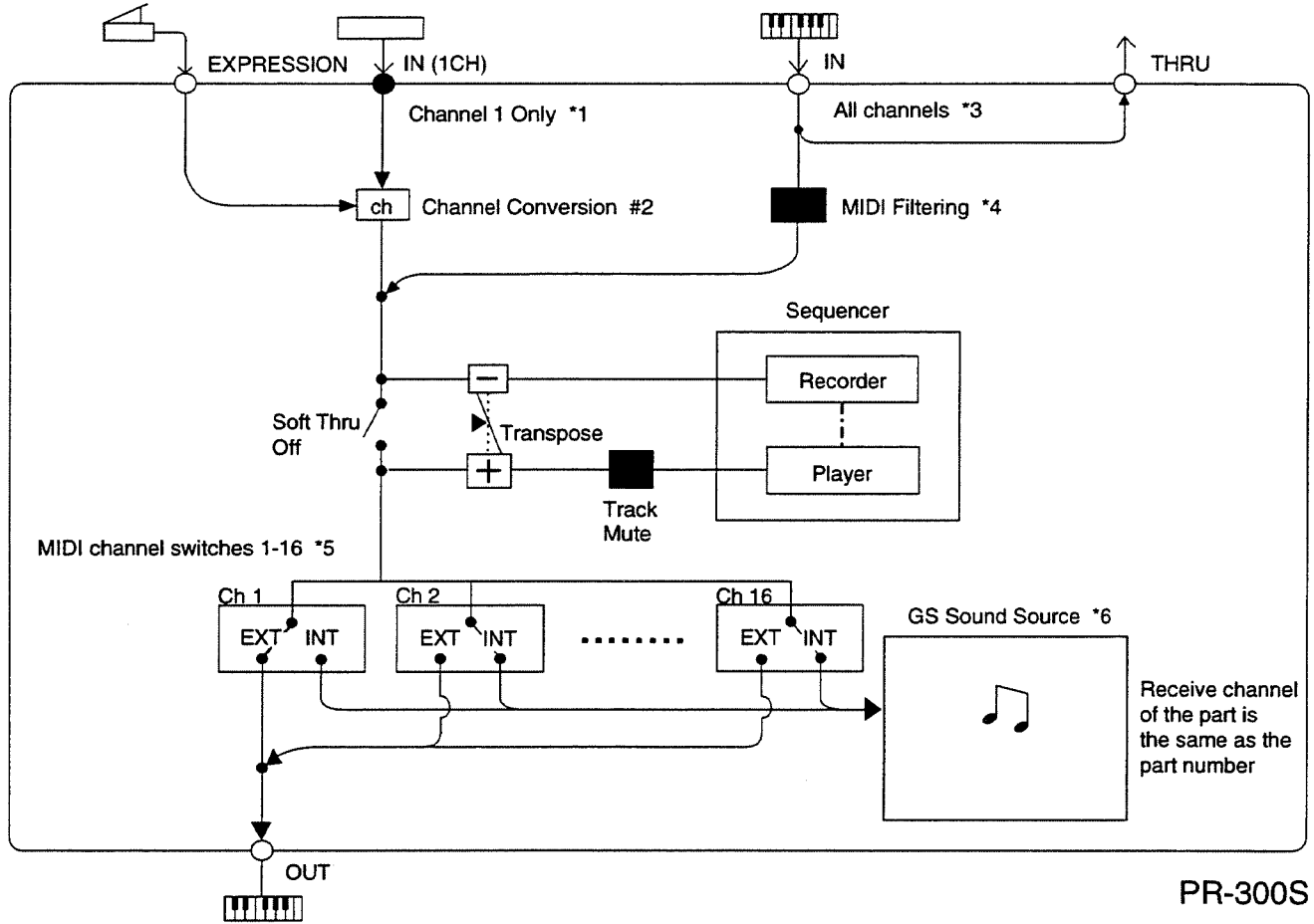
NRPN and RPN Messages

There are other parameters of the GS Sound Source which can be changed using Control Change messages. Please refer to the PR-300S MIDI Implementation for more information.

System Exclusive (SysEx) Messages

System Exclusive Messages allow certain parameters of your PR-300S to be changed for specific uses. Please refer to the PR-300S MIDI Implementation for more information. The GS Format Sound Source of the PR-300S will respond to all GS Format SysEx messages.

PR-300S MIDI Diagram



PR-300S

*1 Only MIDI Channel 1 messages are received via this connector. The only types of information which the PR-300S responds to at this connector are:

- Note On/Off Messages
- Program Change Messages
- Bank Select Messages (Control Change 0, 32)
- Expression Messages (Control Change 11)
- Hold 1 Messages (Control Change 64)
- Sostenuto Messages (Control Change 66)
- Soft Messages (Control Change 67)
- Pitch Bend Messages

*2 When you press the [SOUND] button and select a Part, the incoming Channel 1 messages are rerouted to play the selected Part.

*3 The MIDI IN port receives all MIDI messages.

*4 You can filter out certain kinds of MIDI messages here; press the [MIDI] button and set the parameters.

*5 By pressing the [MIDI] button and rotating the alpha-dial you can access the MIDI Out function. This allows you to determine whether each of the 16 MIDI channels will be directed to the MIDI OUT jack ("Ext") or to the PR-300S's internal sound source. (The ORGAN switch on the back of the PR-300S (EXT/INT) selects one of two MIDI channel default maps. (See page 7.)

*6 The MIDI receive channel for each Part is the same as its part number. Part 10 (Channel 10) is reserved for drum sounds, and Program Change messages on Part 10 will select from among the various drum sets.

PR-300S MIDI Switches

The PR-300S has a number of MIDI switches which determine how MIDI messages are received and transmitted. Normally, you won't need to change any of these parameters.

Following is the procedure to change one of these parameters (should it ever be necessary) and a description of the parameter controlled by each MIDI switch.

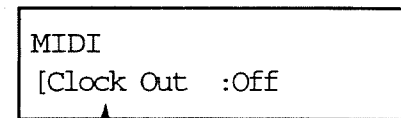
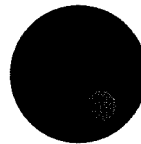
To change a MIDI switch:

- (1) Press [MIDI].

This button is located underneath the top cover.

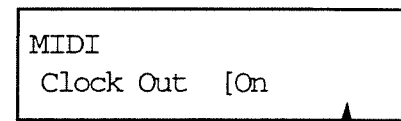
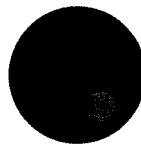


- (2) Rotate the alpha-dial until the parameter you want to change appears in the display.



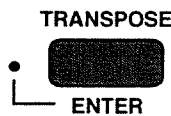
Parameter

- (3) Press the [>] button to move the cursor to the end of the second line, and change the setting by rotating the alpha-dial.



Setting

- (4) Press [ENTER] to confirm the change.



Switch Options

Sync: Auto/Int/IN/Remote

This switch selects how the performance and recording operations of the PR-300S are to be carried out. For instance, you can make settings so that a connected sequencer plays at the same tempo as the PR-300S, or set it so the PR-300S is in sync with MIDI information received through MIDI IN (1 CH). Normally this switch should be set to "AUTO".

When set to "AUTO," you can use the alpha-dial to vary the tempo when you use the PR-300S on its own, but if MIDI IN (1 CH) is connected to a sequencer and receives MIDI start data, then the PR-300S functions according to the data from that external sequencer.

When set to "Int," use the alpha-dial to adjust the tempo.

With the switch set to "IN," operation is synchronized to external MIDI clock data.

When set to "Remote," you can use the alpha-dial to adjust the tempo. However, starting and stopping play of the PR-300S is controlled by any sequencer connected to MIDI IN (1 CH).

Clock Out: On/Off

This switch determines whether MIDI clock messages will be transmitted out the PR-300S's MIDI OUT port. These messages allow other MIDI devices to synchronize themselves to the PR-300S.

Normally, this switch is set to "Off".

IN AFT: On/Off (Aftertouch)

This switch determines whether or not the PR-300S responds to Aftertouch messages received at the MIDI IN jack.

Aftertouch messages are generated based on how hard keys are pressed after they are played, and can be used to change the volume, tone or vibrato of an outputted sound.

Normally, this switch is set to "On".

IN BEND: On/Off (Pitch Bend)

This switch determines whether or not the PR-300S responds to Pitch Bend messages received at the MIDI IN jack.

Pitch Bend messages are generated by moving Pitch Bend Wheels or Levers on controlling keyboards, and allow you to smoothly change the pitch of notes played.

Normally, this switch is set to "On".

IN CTRL: On/Off (Control Change)

This switch determines whether or not the PR-300S responds to Control Change messages received at the MIDI IN jack.

Control Change messages control effects like Vibrato, Sustain, Volume, Expression and Pan.

Normally, this switch is set to "On".

IN PROG: On/Off (Program Change)

This switch determines whether or not the PR-300S will respond to Program Change or Bank Select messages received at the MIDI IN jack. These messages are used to select sounds.

Normally, this switch is set to "On".

IN EXCL: On/Off (System Exclusive)

This switch determines whether or not the PR-300S will respond to System Exclusive messages received at the MIDI IN jack. SysEx messages are used to change certain parameters of the PR-300S's GS Sound Source.

Normally, this switch is set to "On".

Update: On/Off

This switch determines whether or not the PR-300S's Update Function is activated. When you jump from one point in a song to another with the Update feature "On", the Update function scans the section that was passed over, and sends out certain commands to update the PR-300S's GS Sound Source.

When you jump from one point in a song to another with the Update feature "Off," the PR-300S scans the two measures prior to the jump point and updates the GS Sound Source accordingly.

Normally, this switch is set to "Off".

Soft Thru: On/Off

This determines whether or not MIDI messages received at the MIDI IN jack are re-transmitted out the MIDI OUT jack. Please note that only channels which are set to "EXT" will be re-transmitted when Soft-Thru is set to "On". When the switch is set to "Off" the PR-300S will not re-transmit any messages it receives.

MIDI Out 1-16: Int/Ext

These switches determine whether MIDI messages on channels 1-16 are used to control the PR-300S's GS Sound Source (INT), or whether they will be used to control external equipment (EXT). The PR-300S's sequencer will always record and playback this information, so this switch simply determines where the information is used.

Normally this switch is set to "Int" for each MIDI channel.

A Word About ISM and Standard MIDI Files

ISM (Intelligent System of Music)

As your PR-300S is equipped with a GS Sound Source, it is compatible with ISM software (available from Rodgers dealers).

ISM software (whether in PR-300S native or SMF format) provides sample performances and background accompaniments to make practice and performance more enjoyable and beneficial. With ISM, you have the ability to mute (silence) certain parts of the performance and play along. This allows you to practice one part along with the software's sequenced performance.

In addition, ISM software allows you to edit the performances to suit your particular needs. This means you can modify or delete parts of the performances or add additional instruments as you wish, and save the changes you make.

Standard MIDI Files (SMF)

The PR-300S can play (and save data as) Standard MIDI Files (SMFs), giving you access to a wide variety of available music data. SMF is a standard disk format which allows song data to be recognized by products from many different manufacturers. (Be sure that the SMF data you purchase is designed for use with a GS or GM Sound Source. This insures that the MIDI information on the SMF disk will play the correct sounds and effects on the PR-300S.)

When playing SMFs not sequenced for a Rodgers Organ, be sure the PR-300S's ORGAN switch is set to "INT" and that all the MIDI channels are set to "Int".

Performance and Recording

Your PR-300S can play back Roland's SMF Music Data and any other SMF data designed to work with a GS/GM Sound Source. When you do this, the SMF data is automatically converted into the PR-300S's native data format. This means that the data can now be edited and saved as any other PR-300S data.

- * Depending on the data, Part 1 may not contain the Piano sound.
When you play an SMF, set the ORGAN switch on the back of the PR-300S to "INT".
- * SMFs that are very large may not be playable on the PR-300S.
- * Depending on the data, the message "PU" (Pick Up) may appear, or the measure numbering may change. If this happens, it simply means that the PR-300S is optimizing the data for playback. Don't worry!

Saving Your Music

Your PR-300S can save song data in native format or in SMF format. To save a song as an SMF, press and hold [STOP] and then press [SAVE]. (The song can be named as you would any other song. Note that data in native format and SMF format cannot be saved on the same disk. Once data has been saved in PR-300S native format it cannot be played as SMF data on other devices.

Music data cannot be saved on an original (Merchandise Music) disk by the PR-300S ("SMF Disk Can Not Save" will

appear in the LCD). Instead, save the data on a disk formatted by the PR-300S.

- * The following functions are not available when an SMF disk is in the disk drive: Song Copy, All Song Copy, Song Delete and Disk Format.
- * Depending on the data, there may be a long pause before operations such as playback, record or save begin. When this occurs, the message "Please Wait..." will be displayed.

Working with Standard MIDI Files

Roland SMF Music Song data and data created on the Roland MC-50, MC-500mkII, MC-300 and MC-500 (and then converted to SMF format with the MRM-500 Conversion software available from Roland) can be played on the PR-300S.

Standard MIDI Files written on a variety of other sequencers and computers (e.g. Atari, NEC, Macintosh) can also be played if they are saved onto a 3.5" disk formatted by the PR-300S. However, keep the following general rules in mind:

- * Do not save SMFs on disks containing native PR-300S data. If you do save both types of data on the same disk, the SMFs will not be displayed and cannot be played.
- * For Atari & NEC computers, format 2DD disks on the PR-300S.
- * You can only play SMFs which are displayed in a disk's root directory and which have an ".MID" extension. The song order which appears in the display will be the same as the order of songs appearing in the root directory.
- * Song names for SMFs will only appear in the PR-300S's display if they have been recorded as meta-events.
- * Whenever possible, save converted files in Format 0. If you use Format 1, the following restrictions apply:
 - Only data with up to 17 Tracks can be handled.
 - Some large data files will not play.
 - When Playback begins, "Please Wait..." will appear for a time.
- * Some data may not playback perfectly every time.
- * You should save SMFs created on a Macintosh computer onto a disk formatted by the PR-300S using the Apple File Exchange program. You will need the Dayna File Disk Driver if you are using a Macintosh SE, II or Plus.
 - * Macintosh is a registered trademark of Apple Computer, Inc.
 - * Dayna File is a registered trademark of Dayna Communications, Inc.
 - * MC-50/500mkII/300/500 are registered trademarks of Roland Corporation.

Serial Copy Management System (SCMS)

In order to help protect copyrighted material, the PR-300S employs the Serial Copy Management System (SCMS):

- Copyrighted SMF data can be saved on a different disk as protected ISM data.
- Copyrighted ISM data (commercially available data for listening, data copied from original disk and data converted from an SMF) can be saved and edited repeatedly *only on the same disk*.
- Copyrighted educational ISM data (teaching materials) can be saved on a different disk as protected ISM data.
- Copyrighted demo or promotional data can be edited and saved repeatedly between disks. This data cannot, however, be saved as SMF data.
- SMF and ISM data you create yourself can be converted, copied and

Data List

edited without restriction.

1. Song Dependent Settings

Settings Saved with the Song

Parameters	Values	Default
Marker A/B	Various points in song	
Tempo *1	quarter note = 20 - 250 bpm	120
Beat *1	1/2 - 4/2, 1/4 - 8/4, 1/8 - 16/8, 1/16 - 32/16 4/4	
Metronome Beat *1	half note, dotted quarter note, quarter note, dotted eighth note, eighth note, sixteenth note, quarter note	
Effects *2		
Chorus	Chorus 1 - 4, Feedback, Flanger, S. Delay, S.D. FB	Chorus 3
Reverb	Room 1 - 3, Hall 1 - 2, Plate Delay, Panning	Hall 2
Sound *2		
Part 1 Tone	See Tone List	Piano1
Part 2 Tone	See Tone List	Acoustic Bs
Part 3 Tone	See Tone List	Strings
Part 4 Tone	See Tone List	Alto Sax
Part 5 Tone	See Tone List	Nylon_StrGt.
Part 6 Tone	See Tone List	Flute
Part 7 Tone	See Tone List	Brass 1
Part 8 Tone	See Tone List	Church Org. 1
Part 9 Tone	See Tone List	Fantasia
Part 10 Tone	See Drum Set List	Standard
Part 11 Tone	See Tone List	Timpani
Part 12 Tone	See Tone List	Glockenspiel
Part 13 Tone	See Tone List	Syn. Calliope
Part 14 Tone	See Tone List	Star Theme
Part 15 Tone	See Tone List	Sitar
Part 16 Tone	See Tone List	Bird
Volume (all parts)	0 - 127	100
Pan (all parts)	L63 - R63	0
Reverb (all parts)	0 - 127	40
Chorus (all parts)	0 - 127	0
Expression (all parts)	0 - 127	127
Bend (all parts)	0 - 24	2
Pause Mark	Various points in song	None
R, 1 - 4 Track data		None
Count-in data		None
Tempo Track data		None

Revert to Default if a Song is Reloaded Without Being Saved

Parameters	Values	Default
R, 1-4 Track Mute	On/Off	Off
Tempo Track Mute	On/Off	Off
Punch-In Record	On/Off	Off

2. Song Independent Settings

Retained Even if Power is Turned Off

Parameters	Values	Default
MIDI		
Sync	Int/IN	Int
Clock Out	On/Off	On
IN AFT	On/Off	On
IN BEND	On/Off	On
IN CTRL	On/Off	On
IN PROG	On/Off	On
IN EXCL	On/Off	On
Update	On/Off	Off
Soft Thru	On/Off	Off
MIDI ch 1-16	Int/Ext	Int
TUNE	415.4 - 466.1 Hz	440.0 Hz
Metronome Tone	Tone 1/Tone 2	Tone 1
Expression	On/Off	On

Revert to Default when the Power is Turned On

Parameters	Values	Default
Metronome	On/Off	Off
Count In	On/Off	Off
Punch IN/OUT	On/Off	Off
Repeat	On/Off	Off
Transpose	24 - 24	0
Tempo Recording	On/Off	Off

*1 This value is saved only if the change is made after pressing the [REC] button. If changes are made before you press the [REC] button, this value reverts to its original setting when the song is recalled.

*2 This value is saved only if a Write operation is performed after the change is made. If a Write operation is not performed, then this value will revert to its original setting when you play back from the beginning of measure 1.

Tone List (Updated)

PC#	Var#	Tone Name	Sounds	PC#	Var#	Tone Name	Sounds
Piano/Keyboard				31	8	Feedback Gt.	2
1	0	Piano 1	1	32	0	Gt.Harmonics	1
1	8	Piano 1w	2	32	8	Gt. Feedback	1
1	16	Piano 1d	1	Bass			
2	0	Piano 2	1	33	0	Acoustic Bs.	1
2	8	Piano 2w	2	34	0	Fingered Bs.	1
3	0	Piano 3	1	35	0	Picked Bs.	1
3	8	Piano 3w	2	36	0	Fretless Bs.	1
4	0	Honky-tonk	2	37	0	Slap Bass 1	1
4	8	Honky-tonk w	2	38	0	Slap Bass 2	1
5	0	E.Piano 1	1	39	0	Synth Bass 1	1
5	8	Detuned EP 1	2	39	1	SynthBass101	1
5	16	E.Piano 1v	2	39	8	Synth Bass 3	1
5	24	60's E.Piano	1	40	0	Synth Bass 2	2
6	0	E.Piano 2	1	40	8	Synth Bass 4	2
6	8	Detuned EP 2	2	40	16	Rubber Bass	2
6	16	E.Piano 2v	2	Strings & Orchestral			
7	0	Harpichord	1	41	0	Violin	1
7	8	Coupled Hps.	2	41	8	Slow Violin	1
7	16	Harpsi.w	2	42	0	Viola	1
7	24	Harpsi.o	2	43	0	Cello	1
8	0	Clav.	1	44	0	Contrabass	1
Chromatic Percussion				45	0	Tremolo Str	1
9	0	Celesta	1	46	0	PizzicatoStr	1
10	0	Glockenspiel	1	47	0	Harp	1
11	0	Music Box	1	48	0	Timpani	1
12	0	Vibraphone	1	Ensemble			
12	8	Vib.w	2	49	0	Strings	1
13	0	Marimba	1	49	8	Orchestra	2
13	8	Marimba w	2	50	0	Slow Strings	1
14	0	Xylophone	1	51	0	Syn.Strings1	1
15	0	Tubular-bell	1	51	8	Syn.Strings3	2
15	8	Church Bell	1	52	0	Syn.Strings2	2
15	9	Carillon	1	53	0	Choir Aahs	1
16	0	Santur	1	53	32	Choir Aahs 2	1
Organ				54	0	Voice Oohs	1
17	0	Organ 1	1	55	0	SynVox	1
17	8	Detuned Or.1	2	56	0	OrchestraHit	2
17	16	60's Organ 1	1	Brass			
17	32	Organ 4	2	57	0	Trumpet	1
18	0	Organ 2	1	58	0	Trombone	1
18	8	Detuned Or.2	2	58	1	Trombone 2	2
18	32	Organ 5	2	59	0	Tuba	1
19	0	Organ 3	2	60	0	MutedTrumpet	1
20	0	Church Org.1	1	61	0	French Horn	2
20	8	Church Org.2	2	61	1	French Horn2	2
20	16	Church Org.3	2	62	0	Brass 1	1
21	0	Reed Organ	1	62	8	Brass 2	2
22	0	Accordion Fr	2	63	0	Synth Brass1	2
22	8	Accordion It	2	63	8	Synth Brass3	2
23	0	Hamonica	1	63	16	AnalogBrass1	2
24	0	Bandoneon	2	64	0	Synth Brass2	2
Guitar				64	8	Synth Brass4	1
25	0	Nylon-str.Gt	1	64	16	AnalogBrass2	2
25	8	Ukulele	1	Reed			
25	16	Nylon Gt.o	2	65	0	Soprano Sax	1
25	32	Nylon Gt.2	1	66	0	Alto Sax	1
26	0	Steel-str.Gt	1	67	0	Tenor Sax	1
26	8	12-str.Gt	2	68	0	Baritone Sax	1
26	16	Mandolin	1	69	0	Oboe	1
27	0	Jazz Gt.	1	70	0	English Horn	1
27	8	Hawaiian Gt.	1	71	0	Bassoon	1
28	0	Clean Gt.	1	72	0	Clarinet	1
28	8	Chorus Gt.	2	Pipe			
29	0	Muted Gt.	1	73	0	Piccolo	1
29	8	Funk Gt.	1				
29	16	Funk Gt.2	1				
30	0	Overdrive Gt	1				
31	0	DistortionGt	1				

Tone List (Updated), cont.

PC#	Var#	Tone Name	Sounds	PC#	Var#	Tone Name	Sounds
74	0	Flute	1				
75	0	Recorder	1				
76	0	Pan Flute	1				
77	0	Bottle Blow	2				
78	0	Shakuhachi	2				
79	0	Whistle	1				
80	0	Ocarina	1				
Synth Lead							
81	0	Square Wave	2				
81	1	Square	1				
81	8	Sine Wave	1				
82	0	Saw Wave	1				
82	1	Saw	1				
82	8	Doctor Solo	2				
83	0	Syn.Calliope	2				
84	0	Chiffer Lead	2				
85	0	Charang	2				
86	0	Solo Vox	2				
87	0	5th Saw Wave	2				
88	0	Bass & Lead	2				
Synth Pad							
89	0	Fantasia	2				
90	0	Warm Pad	2				
91	0	PolySynth	2				
92	0	Space Voice	1				
93	0	Bowed Glass	2				
94	0	Metal Pad	2				
95	0	Halo Pad	2				
96	0	Sweep Pad	1				
Synth SFX							
97	0	Ice Rain	2				
98	0	Soundtrack	2				
99	0	Crystal	2				
99	1	Syn Mallet	1				
100	0	Atmosphere	2				
101	0	Brightness	2				
102	0	Goblin	2				
103	0	Echo Drops	1				
103	1	Echo Bell	2				
103	2	Echo Pan	2				
104	0	Star Theme	2				
Ethnic/Misc							
105	0	Sitar	1				
105	1	Sitar 2	2				
106	0	Banjo	1				
107	0	Shamisen	1				
108	0	Koto	1				
108	8	Taisho Koto	2				
109	0	Kalimba	1				
110	0	Bag Pipe	1				
111	0	Fiddle	1				
112	0	Shanai	1				
Percussive							
113	0	Tinkle Bell	1				
114	0	Agogo	1				
115	0	Steel Drums	1				
116	0	Woodblock	1*				
116	8	Castanets	1*				
117	0	Taiko	1*				
117	8	Concert BD	1*				
118	0	Melo. Tom 1	1*				
118	8	Melo. Tom 2	1*				
119	0	Synth Drum	1*				
119	8	808 Tom	1*				
119	9	Elec Perc	1*				
120	0	Reverse Cym.	2*				
				SFX			
				121	0	Gt.FretNoise	1*
				121	1	Gt.Cut Noise	1*
				121	2	String Slap	1*
				122	0	Breath Noise	2
				122	1	Fl.Key Click	1*
				123	0	Seashore	1*
				123	1	Rain	2*
				123	2	Thunder	1*
				123	3	Wind	1*
				123	4	Stream	2*
				123	5	Bubble	2*
				124	0	Bird	2*
				124	1	Dog	1*
				124	2	Horse-Gallop	1*
				124	3	Bird 2	1*
				125	0	Telephone 1	1*
				125	1	Telephone 2	1*
				125	2	DoorCreaking	1*
				125	3	Door	1*
				125	4	Scratch	1*
				125	5	Windchime	2*
				126	0	Helicopter	1*
				126	1	Car-Engine	1*
				126	2	Car-Stop	1*
				126	3	Car-Pass	1*
				126	4	Car-Crash	2*
				126	5	Siren	1*
				126	6	Train	1*
				126	7	Jetplane	2*
				126	8	Starship	2*
				126	9	Burst Noise	2*
				127	0	Applause	2*
				127	1	Laughing	1*
				127	2	Screaming	1*
				127	3	Punch	1*
				127	4	Heart Beat	1*
				127	5	Footsteps	1*
				128	0	Gun Shot	1*
				128	1	Machine Gun	1*
				128	2	Lasergun	1*
				128	3	Explosion	2*
				MT-32 Set			
				1	127	Acou Piano 1	1
				2	127	Acou Piano 2	1
				3	127	Acou Piano 3	1
				4	127	Elec Piano 1	1
				5	127	Elec Piano 2	1
				6	127	Elec Piano 3	1
				7	127	Elec Piano 4	1
				8	127	Honkytonk	2
				9	127	Elec Org 1	1
				10	127	Elec Org 2	2
				11	127	Elec Org 3	1
				12	127	Elec Org 4	1
				13	127	Pipe Org 1	2
				14	127	Pipe Org 2	2
				15	127	Pipe Org 3	2
				16	127	Accordion	2
				17	127	Harpsi 1	1
				18	127	Harpsi 2	2
				19	127	Harpsi 3	1
				20	127	Clavi 1	1
				21	127	Clavi 2	1
				22	127	Clavi 3	1
				23	127	Celesta 1	1
				24	127	Celesta 2	1
				25	127	Syn Brass 1	2
				26	127	Syn Brass 2	2

Tone List (Updated)

PC#	Var#	Tone Name	Sounds	PC#	Var#	Tone Name	Sounds
27	127	Syn Brass 3	2	98	127	Vibe 1	1
28	127	Syn Brass 4	2	99	127	Vibe 2	1
29	127	Syn Bass 1	1	100	127	Syn Mallet	1
30	127	Syn Bass 2	2	101	127	Windbell	2
31	127	Syn Bass 3	2	102	127	Glock	1
32	127	Syn Bass 4	1	103	127	Tube Bell	1
33	127	Fantasy	2	104	127	Xylophone	1
34	127	Harmo Pan	2	105	127	Marimba	1
35	127	Chorale	1	106	127	Koto	1
36	127	Glasses	2	107	127	Sho	2
37	127	Soundtrack	2	108	127	Shakuhachi	2
38	127	Atmosphere	2	109	127,	Whistle 1	2
39	127	Warm Bell	2	110	127	Whistle 2	1
40	127	Funny Vox	1	111	127	Bottleblow	2
41	127	Echo Bell	2	112	127	Breathpipe	1
42	127	Ice Rain	2	113	127	Timpani	1
43	127	Oboe 2001	2	114	127	Melodic Tom	1
44	127	Echo Pan	2	115	127	Deep Snare	1
45	127	Doctor Solo	2	116	127	Elec Perc 1	1
46	127	School Daze	1	117	127	Elec Perc 2	1
47	127	Bellsinger	1	118	127	Taiko	1
48	127	Square Wave	2	119	127	Taiko Rim	1
49	127	Str Sect 1	1	120	127	Cymbal	1
50	127	Str Sect 2	1	121	127	Castanets	1
51	127	Str Sect 3	1	122	127	Triangle	1
52	127	Pizzicato	1	123	127	Orche Hit	1
53	127	Violin 1	1	124	127	Telephone	1
54	127	Violin 2	1	125	127	Bird Tweet	1
55	127	Cello 1	1	126	127	One Note Jam	1
56	127	Cello 2	1	127	127	Water Bell	2
57	127	Contrabass	1	128	127	Jungle Tune	2
58	127	Harp 1	1				
59	127	Harp 2	1				
60	127	Guitar 1	1				
61	127	Guitar 2	1				
62	127	Elec Gtr 1	1				
63	127	Elec Gtr 2	1				
64	127	Sitar	2				
65	127	Acou Bass 1	1				
66	127	Acou Bass 2	1				
67	127	Elec Bass 1	1				
68	127	Elec Bass 2	1				
69	127	Slap Bass 1	1				
70	127	Slap Bass 2	1				
71	127	Fretless 1	1				
72	127	Fretless 2	1				
73	127	Flute 1	1				
74	127	Flute 2	1				
75	127	Piccolo 1	1				
76	127	Piccolo 2	2				
77	127	Recorder	1				
78	127	Pan Pipes	1				
79	127	Sax 1	1				
80	127	Sax 2	1				
81	127	Sax 3	1				
82	127	Sax 4	1				
83	127	Clarinet 1	1				
84	127	Clarinet 2	1				
85	127	Oboe	1				
86	127	Engl Horn	1				
87	127	Bassoon	1				
88	127	Harmonica	1				
89	127	Trumpet 1	1				
90	127	Trumpet 2	1				
91	127	Trombone 1	2				
92	127	Trombone 2	2				
93	127	Fr Horn 1	2				
94	127	Fr Horn 2	2				
95	127	Tuba	1				
96	127	Brs Sect 1	1				
97	127	Brs Sect 2	2				

PC# : Program Change Number
 Var# : Variation Tone number
 Sounds : Number of Sounds used per note

Drum Set List, cont.

Note Number	PC#57: SFX Set
39	High Q
40	Slap
41	Scratch Push
42	Scratch Pull
43	Sticks
44	Square Click
45	Metronome Click
46	Metronome Bell
47	Guitar sliding finger
48	Guitar cutting noise (down)
49	Guitar cutting noise (up)
50	String slap of double bass
51	Fl. Key Click
52	Laughing
53	Screaming
54	Punch
55	Heart Beat
56	Footsteps1
57	Footsteps2
58	Applause *
59	Door Creaking
60	Door
61	Scratch
62	Windchime *
63	Car-Engine
64	Car-Stop
65	Car-Pass
66	Car-Crash *
67	Siren
68	Train
69	Jetplane *
70	Helicopter
71	Starship *
72	Gun Shot
73	Machine Gun
74	Lasergun
75	Explosion *
76	Dog
77	Horse-Gallop
78	Birds *
79	Rain *
80	Thunder
81	Wind
82	Seashore
83	Stream *
84	Bubble *

PC# : Program Change number

---- : No instrument sounds when key is played

* : Drum instruments which use two sounds (all other instruments use one sound)

(EXC) : Percussion sounds with the same "EXC"number will not sound simultaneously.

Note Number	PC#128: CM-64/32L Set
34	----
35	Acoustic Bass Drum
36	Acoustic Bass Drum
37	Rim Shot
38	Acoustic Snare Drum
39	Hand Clap
40	Electronic Snare Drum
41	Acoustic Low Tom
42	Closed Hi-Hat (EXC1)
43	Acoustic Low Tom
44	Open High Hat 2
45	Acoustic Middle Tom
46	Open High Hat 1 (EXC1)
47	Acoustic Middle Tom
48	Acoustic High Tom
49	Crash Cymbal
50	Acoustic High Tom
51	Ride Cymbal
52	----
53	----
54	Tambourine
55	----
56	Cowbell
57	----
58	----
59	----
60	High Bongo
61	Low Bongo
62	Mute High Conga
63	High Conga
64	Low Conga
65	High Timbale
66	Low Timbale
67	High Agogo
68	Low Agogo
69	Cabasa
70	Maracas
71	Short Whistle
72	Long Whistle
73	Quijada
74	----
75	Claves
76	Laughing
77	Screaming
78	Punch
79	Heartbeat
80	Footsteps1
81	Footsteps2
82	Applause *
83	Creaking
84	Door
85	Scratch
86	Windchime *
87	Engine
88	Car-Stop
89	Car-Pass
90	Crash *
91	Siren
92	Train
93	Jet *
94	Helicopter
95	Starship *
96	Pistol
97	Machine Gun
98	Lasergun
99	Explosion
100	Dog
101	Horse-Gallop
102	Birds *
103	Rain *
104	Thunder
105	Wind
106	Waves
107	Stream *
108	Bubble *

Messages

Disk NOT
PR-300S READABLE

Cause: The PR-300S can't read the disk that was inserted into the disk drive.
What to do: Press [STOP].

Disk Read Error

Cause: Data can't be read from the disk, perhaps because it is damaged.
What to do: Press [STOP].

Disk Write Error
Save Failed

Save/Delete/Format/Copy

Cause: A Save, Delete, Format or Copy operation can't be performed, perhaps because the disk is damaged.
What to do: Press [STOP].

W. Protect Disk
Can Not Save

Save/Delete/Format/Copy

Cause: A Save, Delete, Format or Copy operation can't be performed, probably because the write protect tab on the disk is set to PROTECT.
What to do: Press [STOP]. Remove the disk from the disk drive and slide the write protect tab to the WRITE position. Try procedure again.

Master Disk
Can Not Save

Save/Delete/Format/Copy

Cause: The Demo Disk that came with your PR-300S, the ISM Music Data and SMF Music Data disks (which are sold separately), are Master Disks. This means they are write protected, and you will be unable to alter their contents in any way.
What to do: Press [STOP].

SMF Disk
Can Not Save

Save/Delete/Copy

Cause: The disk you are trying to Save or Copy is a Standard MIDI File disk.
What to do: Press [STOP], insert a disk formatted specifically for the PR-300S and try the operation again.

Disk Full
Can Not Save

Save/Copy

Cause: There is no more room in the disk's memory, so you can't Save or Copy anything more to it.
What to do: Press [STOP].

Not User Disk
Can Not Save

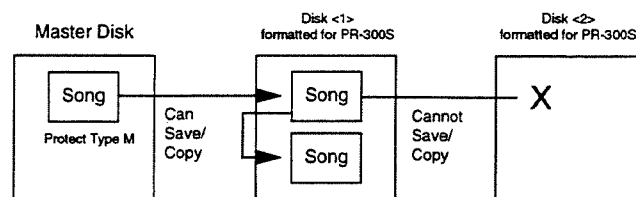
Save/Delete/Copy

Cause: A Save can't be performed because the disk you are trying to Save or Copy to has not been formatted for the PR-300S.
What to do: Press [STOP]. Insert a disk formatted specifically for the PR-300S and try the operation again.

Different Disk
Can Not Save

Save/Copy

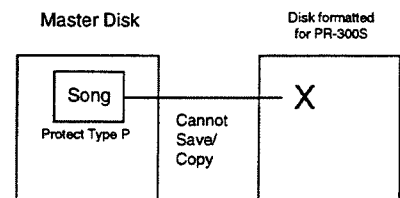
Cause: The Songs on the Demo Disk are Protect Type M songs, and some songs on ISM Music Data disks (sold separately) are also Protect Type M. This message appears when, after Saving a song from a Protect Type M disk onto a PR-300S disk (marked <1>, below), you try to Save or Copy that song to a different disk (marked <2>, below). (Note that it is possible to Copy or Save the song anywhere withing disk <1> itself).



Protected Song
Can Not Save

Save/Copy

What to do: Press [STOP].
Cause: You are trying to Save or Copy a Protect Type P ISM Music Data song onto another disk (Protect P data cannot be Copied or Saved).



What to do: Press [STOP].

Read Only Song
Can Not Save

Save/Delete/Copy

Cause: You can't Save, Delete or Copy this song because it has been made Read Only by MS-DOS.

What to do: Press [STOP].

Memory Full
Can Not Play

Cause: The Standard MIDI File Format 1 data that you are trying to play is too large to fit in memory.

What to do: Press [STOP].

Data will be
erased. OK?

Cause: You are trying to load a new song (or Copy a song from disk) without having saved the results of a previous Record or Edit for the song currently in memory. This message asks if you're sure you want to erase the song currently in memory.

What to do: If you want to save the current song (or changes to the current song), press [STOP] and perform a Save operation. Otherwise, press [ENTER] and the current song will be erased.

Memory Full
Recording Stop

Cause: The PR-300S's internal memory is full, and anything recorded after this point is lost. (The memory capacity of the PR-300S is around 21,000 notes).

What to do: Press [STOP].

Low Memory
CUT Continue?

CUT/ERASE/COPY/
PASTE/TRANS./QUANT.

Cause: There may not be enough memory left to perform the editing operation.

What to do: First, as a precaution, press [STOP] and save the song to disk. Then repeated the edit operation and if you get this message again, press [ENTER]. If you are returned to the Play Screen, the edit was successful (although you will be unable to Undo the operation).

Memory Full
CUT Failed

CUT/ERASE/COPY/
PASTE/TRANS./QUANT.

If, however, you see the screen to the left, your edit operation exceeded available memory and failed. Press [STOP], and then reload the song version you just saved. In this case, you will have to either make the song you are editing smaller or reduce the range over which you are editing and try the operation again.

Memory Full
Can Not CUT

CUT/ERASE/COPY/
PASTE/TRANS./QUANT.

Cause: The PR-300S's memory is already full, so the edit cannot be performed.

What to do: Press [STOP]. Either make the song you are editing smaller, or reduce the range over which you are editing and try the operation again.

Memory Full
Can Not Write

Cause: SOUND and EFFECTS settings cannot be saved because the PR-300S's memory is already full.

What to do: Press [STOP]. Make the song smaller.

Battery Low!

Cause: The battery which maintains the contents of memory while the power is off needs to be replaced.

What to do: To avoid memory loss, take your PR-300S to an authorized service center to have the battery replaced.

Check Sum Error

Cause: The Checksum in a System Exclusive message was incorrect, possibly due to a transmission error.

What to do: Press [STOP] and start recording over (or start recording again from that point). If this message appears regularly, contact your local Rodgers dealer for more information.

Alphabetical List of Instruments

INSTRUMENT	PC	VAR
12-Str. Gt.	26	8
5th Saw Wave	87	0
60's E.Piano	5	24
60's Organ 1	17	16
808 Tom	119	8
Accordion	16	127
Accordion Fr	22	0
Accordion It	22	8
Acou Bass 1	65	127
Acou Bass 2	66	127
Acou Piano 1	1	127
Acou Piano 2	2	127
Acou Piano 3	3	127
Acoustic Bs.	33	0
Agogo	114	0
Alto Sax	66	0
AnalogBrass1	63	16
Analog Brass2	64	16
Applause	127	0
Atmosphere	100	0
Atmosphere	38	127
Bag Pipe	110	0
Bandneon	24	0
Banjo	106	0
Baritone Sax	68	0
Bass & Lead	88	0
Bassoon	71	0
Bassoon	87	127
Bell Singer	47	127
Bird	124	0
Bird 2	124	3
Bird Tweet	125	127
Bottle Blow	77	0
Bottle Blow	111	127
Bowed Glass	93	0
Brass 1	62	0
Brass 2	62	8
Breath Noise	122	0
Breathpipe	112	127
Brightness	101	0
Brs Sect 1	96	127
Brs Sect 2	97	127
Bubble	123	5
Burst Noise	126	9
Car-Crash	126	4
Car-Engine	126	1
Car-Pass	126	3
Car-Stop	126	2
Carillon	15	9
Castanets	116	8
Castanets	121	127
Celesta	9	0
Celesta 1	23	127
Celesta 2	24	127
Cello	43	0
Cello 1	55	127
Cello 2	56	127
Charang	85	0
Chiffer Lead	84	0
Choir Aahs	53	0

INSTRUMENT	PC	VAR
Choir Aahs 2	53	32
Chorale	35	127
Chorus Gt.	28	8
Church Bell	15	8
Church Org. 1	20	0
Church Org. 2	20	8
Church Org. 3	20	16
Clarinet	72	0
Clarinet 1	83	127
Clarinet 2	84	127
Clav.	8	0
Clavi 1	20	127
Clavi 2	21	127
Clavi 3	22	127
Clean Guitar	28	0
Concert BD	117	8
Contrabass	44	0
Contrabass	57	127
Coupled Hps.	7	8
Crystal	99	0
Cymbal	120	127
Deep Snare	115	127
Detuned EP 1	5	8
Detuned EP 2	6	8
Detuned Or. 1	17	8
Detuned Or. 2	18	8
Distortion Gt.	31	0
Doctor Solo	82	8
Doctor Solo	45	127
Dog	124	1
Door	125	3
Door Creaking	125	2
E. Piano 1	5	0
E. Piano 1v	5	16
E. Piano 2	6	0
E. Piano 2v	6	16
Echo Bell	103	1
Echo Bell	41	127
Echo Drops	103	0
Echo Pan	103	2
Echo Pan	44	127
Elec Bass 1	67	127
Elec Bass 2	68	127
Elec Gtr 1	62	127
Elec Gtr 2	63	127
Elec Org 1	9	127
Elec Org 2	10	127
Elec Org 3	11	127
Elec Org 4	12	127
Elec Perc	119	9
Elec Perc 1	116	127
Elec Perc 2	117	127
Elec Piano 1	4	127
Elec Piano 2	5	127
Elec Piano 3	6	127
Elec Piano 4	7	127
Engl Horn	86	127
English Horn	70	0
Explosion	128	3
Fantasia	89	0

INSTRUMENT	PC	VAR
Fantasy	33	127
Feedback Gt.	31	8
Fiddle	111	0
Fingered Bs.	34	0
Fl. Key Click	122	1
Flute	74	0
Flute 1	73	127
Flute 2	74	127
Footsteps	127	5
Fr Horn 1	93	127
Fr Horn 2	94	127
French Horn	61	0
French Horn 2	61	1
Fretless 1	71	127
Fretless 2	72	127
Fretless Bs.	36	0
Funk Gt.	29	8
Funk Gt. 2	29	16
Funny Vox	40	127
Glasses	36	127
Glock	102	127
Glockenspiel	10	0
Goblin	102	0
Gt. Cut Noise	121	1
Gt. Feedback	32	8
Gt. Fret Noise	121	0
Gt. Harmonics	32	0
Guitar 1	60	127
Guitar 2	61	127
Gun Shot	128	0
Halo Pad	95	0
Harmo Pan	34	127
Harmonica	23	0
Harmonica	88	127
Harp	47	0
Harp 1	58	127
Harp 2	59	127
Harpsi.o	7	24
Harpsi.w	7	16
Harpsi 1	17	127
Harpsi 2	18	127
Harpsi 3	19	127
Harpsichord	7	0
Heart Beat	127	4
Helicopter	126	0
Honky Tonk	4	0
Honky Tonk	8	127
Honky Tonk w	4	8
Horse-Gallop	124	2
Ice Rain	97	0
Ice Rain	42	127
Hawaiian Gt.	27	8
Jazz Gt.	27	0
Jetplane	126	7
Jungle Tune	128	127
Kalimba	109	0
Koto	108	0
Koto	106	127
Lasergun	128	2
Laughing	127	1

INSTRUMENT	PC	VAR
Machine Gun	128	1
Mandolin	26	16
Marimba	13	0
Marimba	105	127
Marimba w	13	8
Melo. Tom 1	118	0
Melo. Tom 2	118	8
Melodic Tom	114	127
Metal Pad	94	0
Music Box	11	0
Muted Gt.	29	0
Muted Trumpet	60	0
Nylon Gt.2	25	32
Nylon Gt.o	25	16
Nylon-Str. Gt.	25	0
Oboe	69	0
Oboe	85	127
Oboe 2001	43	127
Ocarina	80	0
One Note Jam	126	127
Orche Hit	123	127
Orchestra	49	8
Orchestra Hit	56	0
Organ 1	17	0
Organ 2	18	0
Organ 3	19	0
Organ 4	17	32
Organ 5	18	32
Overdrive Gt.	30	0
Pan Flute	76	0
Pan Pipes	78	127
Piano 1	1	0
Piano 1d	1	16
Piano 1w	1	8
Piano 2	2	0
Piano 2w	2	8
Piano 3	3	0
Piano 3w	3	8
Piccolo	73	0
Piccolo 1	75	127
Piccolo 2	76	127
Picked Bs.	35	0
Pipe Org 1	13	127
Pipe Org 2	14	127
Pipe Org 3	15	127
Pizzicato	52	127
Pizzicato Str	46	0
Polysynth	91	0
Punch	127	3
Rain	123	1
Recorder	75	0
Recorder	77	127
Reed Organ	21	0
Reverse Cym.	120	0
Rubber Bass	40	16
Santur	16	0
Saw	82	1
Saw Wave	82	0
Sax 1	79	127
Sax 2	80	127
Sax 3	81	127

INSTRUMENT	PC	VAR
Sax 4	82	127
School Daze	46	127
Scratch	125	4
Screaming	127	2
Seashore	123	0
Shakuhachi	78	0
Shakuhachi	108	127
Shamisen	107	0
Shannai	112	0
Sho	107	127
Sine Wave	81	8
Siren	126	5
Sitar	105	0
Sitar	64	127
Sitar 2	105	1
Slap Bass 1	37	0
Slap Bass 1	69	127
Slap Bass 2	38	0
Slap Bass 2	70	127
Slow Strings	50	0
Slow Violin	41	8
Solo Vox	86	0
Soprano Sax	65	0
Soundtrack	98	0
Soundtrack	37	127
Space Voice	92	0
Square	81	1
Square Wave	81	0
Square Wave	48	127
Star Theme	104	0
Starship	126	8
Steel Drums	115	0
Steel-str. Gt	26	0
Str Sect 1	49	127
Str Sect 2	50	127
Str Sect 3	51	127
Stream	123	4
String Slap	121	2
Strings	49	0
Sweep Pad	96	0
Syn Bass 1	29	127
Syn Bass 2	30	127
Syn Bass 3	31	127
Syn Bass 4	32	127
Syn Brass 1	25	127
Syn Brass 2	26	127
Syn Brass 3	27	127
Syn Brass 4	28	127
Syn Mallet	99	1
Syn Mallet	100	127
Syn Vox	55	0
Syn. Calliope	83	0
Syn. Strings 1	51	0
Syn. Strings 2	52	0
Syn. Strings 3	51	8
Synth Bass 1	39	0
Synth Bass 101	39	1
Synth Bass 2	40	0
Synth Bass 3	39	8
Synth Bass 4	40	8

INSTRUMENT	PC	VAR
Synth Brass 1	63	0
Synth Brass 2	64	0
Synth Brass 3	63	8
Synth Brass 4	64	8
Synth Drum	119	0
Taiko	117	0
Taiko	118	127
Taiko Rim	119	127
Taisho Koto	108	8
Telephone	124	127
Telephone 1	125	0
Telephone 2	125	1
Tenor Sax	67	0
Thunder	123	2
Timpani	48	0
Timpani	113	127
Tinkle Bell	113	0
Train	126	6
Tremolo Str	45	0
Triangle	122	127
Trombone	58	0
Trombone 1	91	127
Trombone 2	58	1
Trombone 2	92	127
Trumpet	57	0
Trumpet 1	89	127
Trumpet 2	90	127
Tuba	59	0
Tuba	95	127
Tube Bell	103	127
Tubular-bell	15	0
Ukulele	25	8
Vib.w	12	8
Vibe 1	98	127
Vibe 2	99	127
Vibraphone	12	0
Viola	42	0
Violin	41	0
Violin 1	53	127
Violin 2	54	127
Voice Oohs	54	0
Warm Bell	38	127
Warm Pad	90	0
Water Bell	127	127
Whistle	79	0
Whistle 1	109	127
Whistle 2	110	127
Windbell	101	127
Wind	123	3
Windchime	125	5
Woodblock	116	0
Xylophone	14	0
Xylophone	104	127

DIGITAL SEQUENCER AND SOUND MODULE
 Model PR-300S
 (Sound Module Section)

Date: January 1, 1993
 Version 1.13

MIDI Implementation Chart

Function...		Transmitted (OUT)	Recognized IN (CH. 1) (IN)		Remarks
Basic Channel	Default	x	1	1-16	
	Changed	x	1-16	1-16	
Mode	Default Messages	x	Mode 3	Mode 3	*2
	Altered	x *****	Mode 3,4(M=1)	Mode 3,4(M=1)	
Note Number	True Voice	x *****	0-127 0-127	0-127 0-127	
Velocity	Note ON	x	o	o	
	Note OFF	x	x	x	
After Touch	Key's	x	x	*1	
	Ch's	x	x	*1	
Pitch Bender		x	o	*1	
Control Change	0,32	x	o	*4 (MSB only)	Bank Select
	1	x	x	*3	Modulation
	5	x	x	*3	Portamento Time
	6, 38	x	x	*3	Data Entry
	7	x	x	*3	Volume
	10	x	x	*3	Pan-pot
	11	x	o	*3	Expression
	64	x	o	*3	Hold-1
	65	x	x	*3	Portamento
	66	x	o	*3	Sostenuto
	67	x	o	*3	Soft
	91	x	x	*3 (Reverb)	Effect 1
	93	x	x	*3 (Chorus)	Effect 3
	98, 99	x	x	*3	NRPS LSB, MSB
	100, 101	x	x	*3	RPN LSB, MSB
other (2-119)	x	x	x		
120	x	o	o	All Sound Off	
121	x	o	o	Reset All Controllers	
Program Change	True #	x *****	o 0-127	*4 0-127	
System Exclusive		x	x	*1	
Sysem Common	Song Pos	x	x	x	
	Song Sel	x	x	x	
Common	Tune	x	x	x	
System Real Time	Clock	x	x	x	
	Commands	x	x	x	
Aux Messages	Local ON/OFF	x	x	x	
	All Notes OFF	x	o (123-125)	o (123-125)	
	Active Sense	x	o	o	
	Reset	x	x	x	
Notes		*1 Able to choose between o and x. *2 Recognized as M=1 even if M≠1. *3 Able to choose between o and x by IN CTRL (On/Off) *4 Able to choose between o and x by IN PROG (On/Off)			

Mode 1: OMNI ON, POLY
 Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
 Mode 4: OMNI OFF, MONO

o: YES
 X: NO

DIGITAL SEQUENCER AND SOUND MODULE
 Model PR-300S
 (Sequencer Section)

Date: January 1, 1993
 Version 1.13

MIDI Implementation Chart

Function...		Transmitted (OUT)	Recognized IN (CH. 1) (IN)		Remarks
Basic Channel	Default Changed	1-10, x, 11-16, 1-16 x	1 x	1-16 x	No basic channel. Can be stored.
Mode	Default Messages Altered	Mode 3 *1 Mode 3 *****	x x	x x	
Note Number	True Voice	0-127 *****	0-127 0-127	0-127 0-127	
Velocity	Note ON Note OFF	o o	o o	o o	
After Touch	Key's Ch's	o o	x x	*2 *2	
Pitch Bender		o	o	*2	
Control Change	0,32 1 5 6, 38 7 10 11 64 65 66 67 91 93 98, 99 100, 101 other (2-119) 120 121	o o o o o o o o o o o o o o o o o o o o	o x x x x o o x o o x x x x o o o	*4 *3 *3 *3 *3 *3 *3 *3 *3 *3 *3 (Reverb) *3 (Chorus) *3 *3 *3 *3 o o	Bank Select Modulation Portamento Time Data Entry Volume Pan-pot Expression Hold-1 Portamento Sostenuto Soft Effect 1 Effect 3 NRPS LSB, MSB RPN LSB, MSB All Sound Off Reset All Controllers
Program Change	True #	0-127 *****	o 0-127	*4 0-127	
System Exclusive		o	x	*2	
Sysem Common	Song Pos Song Sel Tune	*5 *5 x	x x x	o (SYNC=IN) x x	
System Real Time	Clock Commands	*5 *5	x x	o (SYNC=IN) o (SYNC=IN)	
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	*1 x o x	x o (123-127) o x	x o (123-127) o x	
Notes	*1 When the power is turned on, the OMNI OFF, POLY ON and LOCAL OFF messages are sent on channel 1. *2 Able to choose between o and x. *3 Able to choose between o and x by IN CTRL (On/Off). *4 Able to choose between o and x by IN PROG (On/Off). *5 Able to choose between o and x by CLOCK OUT (On/Off).				

Mode 1: OMNI ON, POLY
 Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
 Mode 4: OMNI OFF, MONO

o: YES
 X: NO

1. Received Data**■Channel Voice Messages****●Note off**

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n=MIDI channel number :0H - FH (ch. 1 - ch. 16)
 kk=Note number :00H - 7FH (0 - 127)
 vv=Velocity :00H - 7FH (0 - 127)

*In the drum part, recognized when "Rx.Note off=ON" is set for each instrument.
 *Velocity is ignored.

●Note on

Status	Second	Third
9nH	kkH	vvH

n=MIDI channel number :0H - FH (ch. 1 - ch. 16)
 kk=Note number :00H - 7FH (0 - 127)
 vv=Velocity :00H - 7FH (0 - 127)

*Ignored when "Rx.Note message = OFF".
 *In the drum part, ignored when "Rx.Note on = OFF" is set for each instrument.

●Polyphonic key pressure

Status	Second	Third
AnH	kkH	vvH

n=MIDI channel number :0H - FH (ch. 1 - ch. 16)
 kk=Note number :00H - 7FH (0 - 127)
 vv=Velocity :00H - 7FH (0 - 127)

*Ignored when "Rx.Polyphonic key pressure = OFF".
 *Effect to the parameter set on "PAf controller function".
 The default setting has no effect.

●Control change

*Ignored all control change messages other than channel mode messages when "Rx.Control change = OFF".
 *The values set by Control change messages won't reset by receiving new Program change numbers.

○Bank Select

Status	Second	Third
BnH	00H	mmH
BnH	20H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
 mm, ll=Bank number :00H, 00H - 7FH, 7FH (bank 1 - bank 16384) Default value = 00 00H (bank 1)

*Ignored when "Rx.Bank Select = OFF".
 "Rx.Bank Select" is set to OFF by "Turn General MIDI System On", and set to ON by "GS RESET". (Power on default value is "ON".)
 *The LSB 7-bits are ignored (always regarded as llH=00H) in the PR-300S.
 *"Bank Select" is suspended until "Program Change" is received.
 To select a Tone of another bank, you have to send Bank select (mm, ll) before sending Program change.
 *The "Variation number" of GS Form at is define as the decimal expression of the MSB value (Control change number 00H) of the Bank Select.

○Modulation

Status	Second	Third
BnH	01H	vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Modulation depth :00H - 7FH (0 - 127)

*Ignored when "Rx. Modulation = Off".

*Effect to the parameter set on "MOD controller function".
The default setting is pitch modulation depth.

○Portamento time

Status	Second	Third
BnH	05H	vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Portamento time :00H - 7FH (0 - 127)

*The Portamento time value changes the rate of pitch change when Portamento is ON or when using portamento control messages.
Value 0 is the fastest.

○Data entry

Status	Second	Third
BnH	06H	mmH
BnH	26H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm, ll=Value of the parameter specified with RPN and/or NRPN

○Volume

Status	Second	Third
BnH	07H	vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Volume :00H - 7FH (0 - 127)

○Panpot

Status	Second	Third
BnH	0AH	vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Panpot :00H - 40H - 7FH (Left - Center - Right)

*127 steps from Left to Center to Right.

*Within the Drum Part, the panpot provides overall control of the stereophonic image.

*Ignored when "Rx.Panpot = OFF".

○Expression

Status	Second	Third
BnH	0BH	vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Expression :00H - 7FH (0 - 127)

*Expression and Volume messages are cumulative, and the result of both will control the overall volume.

Use Expression messages for an expression pedal, or creating expressive effects, such as crescendo and decrescendo, while playing.

*Ignored when "RX.Expression = OFF".

○Hold1

Status Second Third
BnH 40H vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Control value :00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON

*Ignored when "Rx.Hold1 = OFF".

○Portamento

Status Second Third
BnH 41H vvH

n=MIDI channel number :0H (ch.1 - ch.16)
vv=Control value :00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON

*Ignored when "Rx.Portamento = OFF".

○Sostenuto

Status Second Third
BnH 42H vvH

n=MIDI channel number :0H (ch.1 - ch.16)
vv=Control value :00H - 7FH (0 - 127) 0 - 63 = OFF 64 - 127 = ON

Ignored when "Rx.Sostenuto = OFF".

○Soft

Status Second Third
BnH 43H vvH

n=MIDI channel number :0H (ch.1 - ch.16)
vv=Control value :00H - 7FH (0 - 127)

*Ignored when "Rx.Soft = OFF".

○Portamento Control

Status Second Third
BnH 54H kkH

n=MIDI channel number :0H (ch.1 - ch.16)
kk=source note number for pitch reference :00H - 7FH (0 - 127)

*When a Note On message is received after a Portamento Control message, the voice's pitch will glide from the pitch specified by the source note number of the Portamento Control message at the rate set by the portamento time controller (regardless portamento on/off.)

If there is a currently sounding voice whose note number is coincident with the source note number, the voice's pitch will glide to the new Note On's pitch according to the portamento time without re-triggering (played legato). Then no new voice should be assigned.

Example 1.

<u>In MIDI</u>	<u>Description</u>	<u>Result</u>
90 3C 40	Note on C4	C4 on
B0 54 3C	Portamento control from C4	no change (C4 still sounding)
90 40 40	Note on E4	glide from C4 to E4
80 3C 40	Note off C4	no change
80 40 40	Note off E4	E4 off

Example 2.

<u>In MIDI</u>	<u>Description</u>	<u>Result</u>
B0 54 3C	Portamento Control from E4	no change
90 40 40	Note on E4	#4 is played with glide from C4 to E4
80 40 40	Note off E4	E4 off

○Effect 1 depth (Reverb send level)

Status	Second	Third
BnH	5BH	vvH

n=MIDI channel number :0H (ch.1 - ch.16)
 vv=Reverb send level :00H - 7FH (0 - 127)

*Effect1 depth messages control the Send Level of th specified channel (part) to the internal Reverb unit.

○Effect3 depth (Chorus send level)

Status	Second	Third
BnH	63H	vvH

n=MIDI channel number :0H (ch.1 - ch.16)
 vv=Chorus send level :00H - 7FH (0 - 127)

*Effect3 depth messages control the Send Level of the specified channel (part) to the internal Chorus unit.

○NRPN MSB/LSB

Status	Second	Third
BnH	63H	mmH
BnH	62H	llH

n=MIDI channel number :0H (ch.1 - ch.16)
 mm=MSB of the NRPN
 ll=LSB of the NRPN

*Recognized when "Rx.NRPN = ON". "Rx.NRPN" is set to OFF by power-on reset or by receiving "Turn General MIDI System On", and it is set to ON by "GS RESET".

*The values set by NRPN won't reset by receiving new Program Change messages or Reset All Controllers.

NRPN

An NRPN (Non Registered Parameter Number) is an expanded control change message.

Each function of an NRPN is described by the individual manufacturer.

To an NRPN, set NRPN number (MSB/LSB) before sending data. Then send data by Data entry message (Control Change 6/38). Then, it is recommended that you send RPN null (RPN number = 7FH/7FH) to prevent the data from being changed unexpectedly.

You can change the following parameters using NRPN.

<u>NRPN</u>	<u>Data entry</u>	<u>Description</u>
<u>MSB</u> <u>LSB</u>	<u>MSB</u>	
01H 08H	mmH	Vibrato rate relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 09H	mmH	Vibrato depth relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)

01H 0AH	mmH	Vibrato delay relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 20H	mmH	TVF cutoff frequency relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 21H	mmH	TVF resonance relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 63H	mmH	TVF&TVA Envelope attack time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 64H	mmH	TVF&TVA Envelope delay time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 66H	mmH	TVF&TVA Envelope release time relative change on specified channel mm: 0EH - 40H - 72H (-50 - 0 - +50)
18H rrH	mmH	Pitch coarse of drum instrument relative change on specified drum instrument rr: key number of drum instrument mm: 00H - 40H - 7FH (-64 - 0 - +63 semitones)
1AH rrH	mmH	TVA level of drum instrument absolute change on specified drum instrument rr: key number of drum instrument mm: 00H - 7FH (zero - maximum)
1CH rrH	mmH	Panpot of drum instrument absolute change on specified drum instrument rr: key number of drum instrument mm: 00H, 01H - 40H - 7FH (Random, Left - Center - Right)
1DH rrH	mmH	Reverb send level of drum instrument absolute change on specified drum instrument rr: key number of drum instrument mm: 00H - 7FH (zero - maximum)
1EH rrH	mmH	Chorus send level of drum instrument absolute change on specified drum instrument rr: key number of drum instrument mm: 00H - 7FH (zero - maximum)

*Data entry LSB is ignored.

*The relative change means that the parameter value (e.g., -50 - 0 - +50) will be added to the preset value.

*The absolute change means that the parameter value will be replaced by the received value.

ORPN MSB/LSB

Status	Second	Third
BnH	65H	mmH
BnH	64H	llH

n=MIDI channel number :0H - FH (ch.1 - ch.16)

mm=MSB of the RPN

ll=LSB of the RPN

*Ignored when "Rx.RPN = OFF".

*The values set by an RPN won't be reset by receiving new Program Change messages or Reset All Controllers.

RPN

An RPN (Registered Parameter Number) is an expanded control change message.

Each function of an RPN is described by the MIDI Standard.

To use RPN, set RPN number (MSB/LSB) before sending data. Then send data by Data entry message (Control Change 6/38). Then it is recommended to send RPN null (RPN number = 7FH/7FH) to prevent the data from being changed unexpectedly.

You can change the following parameters using RPN:

<u>RPN</u> <u>MSB</u> <u>LSB</u>	<u>Data entry</u> <u>MSB</u> <u>LSB</u>	<u>Description</u>
00H 00H	mmH ----	Pitch bend sensitivity mm: 00H - 18H (0 - 24 semitones) Default value = 02H (two semitones) ll: ignored value (value = 00H) (Up to two octaves)
00H 01H	mmH llH	Master fine tuning mm, ll: 00 00H - 40 00H - 7F 7FH (-8192 x 100/8192 - 0 - +8191 x 100/8192 cents)
00H 02H	mmH ----	Master coarse tuning mm: 28H - 40H - 58H (-24 - 0 - +24 semitones) ll: ignored (value = 00H)
7FH 7FH	---- ----	RPN null Return to the disable condition. The parameter already set retains its value. mm, ll: ignored

●Program Change

Status Second

CnH ppH

n=MIDI channel number :0H - FH (ch. 1 - ch. 16)

pp=Program Change number :00H - 7FH (Program change 1 - Program Change 128)

*The Tone of voices already ON before program change message is received isn't affected. The Tone will be changed by a new Note-on message after the program change is received.

*Ignored when "Rx.Program change = OFF".

*In the drum part, Program change messages are ignored when the Bank is set at 129 - 16384 (i.e., the value of the control change number 0 is note 00H).

●Channel Pressure

Status Second

DnH vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)

vv=Value :00H - 7FH (0 - 127)

*Affects the parameter set on "MOD controller function".

The default setting has no effect.

*Ignored when "Rx.Channel pressure = OFF".

●Pitch bend change

Status Second Third
EnH 11H mmH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
mm,ll=Value :00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

*Affects the parameter set on "MOD controller function". The default setting is pitch bend.
*Ignored when "Rx.Pitch bend change = OFF".

■Channel Mode Messages

●All sounds off

Status Second Third
BnH 78H 00H

n=MIDI channel number :0H - 7H (ch.1 - ch. 16)

*When "All sounds off" is received, all sounds on a specified channel turn off immediately.
However, the state of channel messages down note change. You must not use "All sounds off" messages in place of "Note off" messages.

●Reset all controllers

Status Second Third
BnH 79H 00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

*When "reset all controllers" is received, the controller values of a specified channel return to the default values listed below:

<u>Controller</u>	<u>Default value</u>
Pitch bend change	+/-0 (Center)
Polyphonic key pressure	0 (off)
Channel pressure	0 (off)
Modulation	0 (off)
Expression	127 (maximum)
Hold1	0 (off)
Portamento	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
RPN	disabled. The parameter already set retains its old value.
NRPN	disabled. The parameter already set retains its old value.

●All notes off

Status Second Third
BnH 7BH 00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

*When "All notes off" is received, all notes are turned off in the specified channel. However, sound continues while hold1 and/or sostenuto is on.

●OMNI OFF

Status Second Third
BnH 7CH 00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

*OMNI OFF is only recognized as "all notes off". Mode doesn't change.

●OMNI ON

Status	Second	Third
BnH	7DH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

*OMNI ON is only recognized as "all notes off". Mode doesn't change (OMNI OFF remains).

●MONO

Status	Second	Third
BnH	7EH	mmH

n=MIDI channel number :0H - FH (ch.1 - ch.16)

mm=number of mono channels :00H - 10H (0 - 16)

*MONO is recognized as "all sounds off". The specified channel turns to Mode4 (M=1), even if mm is note equal to 1 (mm is ignored).

●POLY

Status	Second	Third
BnH	7FH	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

*POLY is recognized as "all sounds off". The specified channel turns to Mode3.

■System Realtime Messages

●Active sensing

Status
FEH

*Having received and "active sensing" message, GS expects to receive additional active sensing messages at 300ms intervals. If the interval is greater than 420ms, GS executes "All sounds off", "All notes off" and "Reset all controllers", and returns to normal operation. (Monitoring of active sensing messages will terminate).

■System Exclusive Messages

Status	Data	Status
F0H	iiH, ddH,, eeH	F7H

F0H :System exclusive

ii=ID number :The ID number identifies the manufacturer of a MIDI device that triggers an exclusive messages. Values 7EH and 7FH are reserved for use as universal messages which are used as an extension of the MIDI Standard.

41H : Roland's Manufacturer ID

7EH : Universal Non-Realtime Message

7FH : Universal Realtime Message

dd,, ee=data :00H-7FH (0 - 127)

F7H :EOX (End of Exclusive/System common)

●System Exclusive Messages of Mode Change

System Exclusive Messages of Mode Change are the messages used to initialize the internal parameters of the device to General MIDI mode or GS default mode. "GS Reset" uses a form of Roland Exclusive Message. "Turn General MIDI System On" and "Turn General MIDI System Off" use a form of Universal Non-Real Time message.

OGS Reset

Status	Data Byte	Status
F0H	41H, \$\$\$\$dev\$\$\$\$, 42H, 12H, 40H, 00H, 7FH, 00H, 41H	F7H

Byte	Description
F0H	Exclusive status
41H	ID number (Roland)
10H	Device ID (10H)
42H	Model ID (GS)
12H	Command ID (DT1)
40H	Address MSB
00H	:
7FH	Address LSB
00H	Data (GS Reset)
41H	Checksum
F7H	EOX (End of Exclusive)

*Upon receiving this message, all the internal parameters are set to the default settings of the GS Format. (Rx.NRPN SW will be turned OFF by this message).

*If PR-300S's "Rx.Sys.Ex.SW = OFF", it won't recognize this message.

*It takes about 50ms to execute this message.

OTurn General MIDI System On

Status	Data Byte	Status
F0H	7EH, 7FH, 09H, 01H	F7H

Byte	Description
F0H	Exclusive status
7EH	ID number (Universal non-realtime message)
7FH	ID of target device (Broadcast)
09H	sub-ID#1 (General MIDI message)
01H	sub-ID#2 (General MIDI On)
F7H	EOX (End of exclusive)

*Upon receiving this message, all the internal parameters are set to the default settings of General MIDI System Level 1. (Rx. NRPN SW will be turned OFF by this message.)

*If the PR-300S's "Rx.Sys.Ex.SW = OFF", it won't recognize this message.

*It takes about 50ms to execute this message.

OTurn General MIDI System Off

Status	Data Byte	Status
F0H	7EH, 7FH, 09H, 02H	F7H

Byte	Description
F0H	Exclusive status
7EH	ID number (Universal non-realtime message)
7FH	ID of target device (Broadcast)
09H	sub-ID#1 (General MIDI message)
02H	sub-ID#2 (General MIDI Off)
F7H	EOX (End of Exclusive)

*Upon receiving this message, the unit changes from General MIDI mode to its own default mode (which is GS Mode).

*If the PR-300S's "Rx.Sys.Ex.SW = OFF", it won't recognize this message.

*It takes about 50ms to execute this message.

●Universal Realtime System Exclusive Messages

○Master Volume

Status	Data Byte	Status
F0H	7FH, 7FH, 04H, 01H, llH, mmH	7FH

Byte	Description	
F0H	Exclusive status	
7FH	ID number	(Universal Realtime message)
7FH	ID of target device	(Broadcast)
04H	sub-ID#1	(Device control message)
01H	sub-ID#2	(Master Volume)
mm, ll	Master Volume	00 00H - 7F 7FH (0 - 16383)
F7H	EOX	(End of Exclusive)

*The LSB (llH) is ignored (value=0)

*Devices whose "Rx.Sys.Ex.SW = OFF won't recognize this message.

●Data Transfer

The PR-300S can receive the various parameters using System Exclusive messages of the following data format. Also, it will transmit the messages shown below if there were previously recorded.

GS Common Exclusive messages using Model ID = 42H and Device ID = 17 (10H).

○Request data 1 RQ1

This message is sent out to request the remote device to send back the required data.

It contains data for the address and size that specify designation and length, respectively.

On receiving a proper RQ1 message for the device, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data.

Otherwise, the device will not send anything.

Status	Data Byte	Status
F0H	41H, 10H, 42H, 11H, aaH, bbH, cch, ssH, ttH, uuH, sum	F7H

Byte	Description	
F0H	Exclusive status	
41H	Manufacturer's ID	(Roland)
10H	Device ID	(10H)
42H	Model ID	(GS)
11H	Command ID	(RQ1)
aaH	Address MSB	
bbH	:	
cch	Address LSB	
ssH	Size MSB	
ttH	:	
uuH	Size LSB	
sum	Checksum	
F7H	EOX	(End of Exclusive)

*The PR-300S only recognizes the RQ1 messages whose address and size match the Parameter Address Map.

*The error checking process uses a Checksum.

○Data set 1 DT1

This message corresponds to the actual data transfer process.

On receiving a DT1 message, the device writes the data to internal memory according to the address.

Status	Data Byte	Status
F0H	41H, 10H, 42H, 12H, aaH, bbH, ccH, ddH, eeH, sum	F7H

Byte	Description	
F0H	Exclusive status	
41H	Manufacturer's ID	(Roland)
10H	Device ID	(dev: 00H - 1FH (1-32) The default value is 10H (17).)
42H	Model ID	(GS)

12H	Command ID	(DT1)
aaH	Address MSB	
bbH	:	
ccH	Address LSB	
ddH	Data	
:	:	
eeH	Data	
sum	Checksum	
F7H	EOX	(End of exclusive)

*The PR-300S only recognizes the DT1 messages whose address and size match the Parameter Address Map.
 *To send large DT1 messages at a time, insert intervals at least 40ms in size between each packet.
 *The error checking process uses a Checksum.

2. Transmitted data

■System Realtime Messages

●Active Sensing

Status
FEH

*Transmits at about 250ms intervals.

■System Exclusive Messages

●Data Transfer

The PR-300S transmits "Data set 1 (DT1)" messages when receiving a proper "Request Data 1(RQ1)" message. Refer to Section 1 (System Exclusive Messages).

○Data set 1	DT1	(12H)	
Status	Data Byte		Status
F0H	41H, 10H, 42H, 12H, aaH, bbH, ccH, ddH, eeH, sum		F7H

Byte	Description	
F0H	Exclusive status	
41H	Manufacturer's ID	(Roland)
10H	Device ID	(dev: 00H - 1FH (1 - 32) The default value is 10H (17).)
42H	Model ID	(GS)
12H	Command ID	(DT1)
aaH	Address MSB	
bbH	Address	
ccH	Address LSB	
ddH	Data	
:	:	
eeH	Data	
sum	Checksum	
F7H	EOX	(End of exclusive)

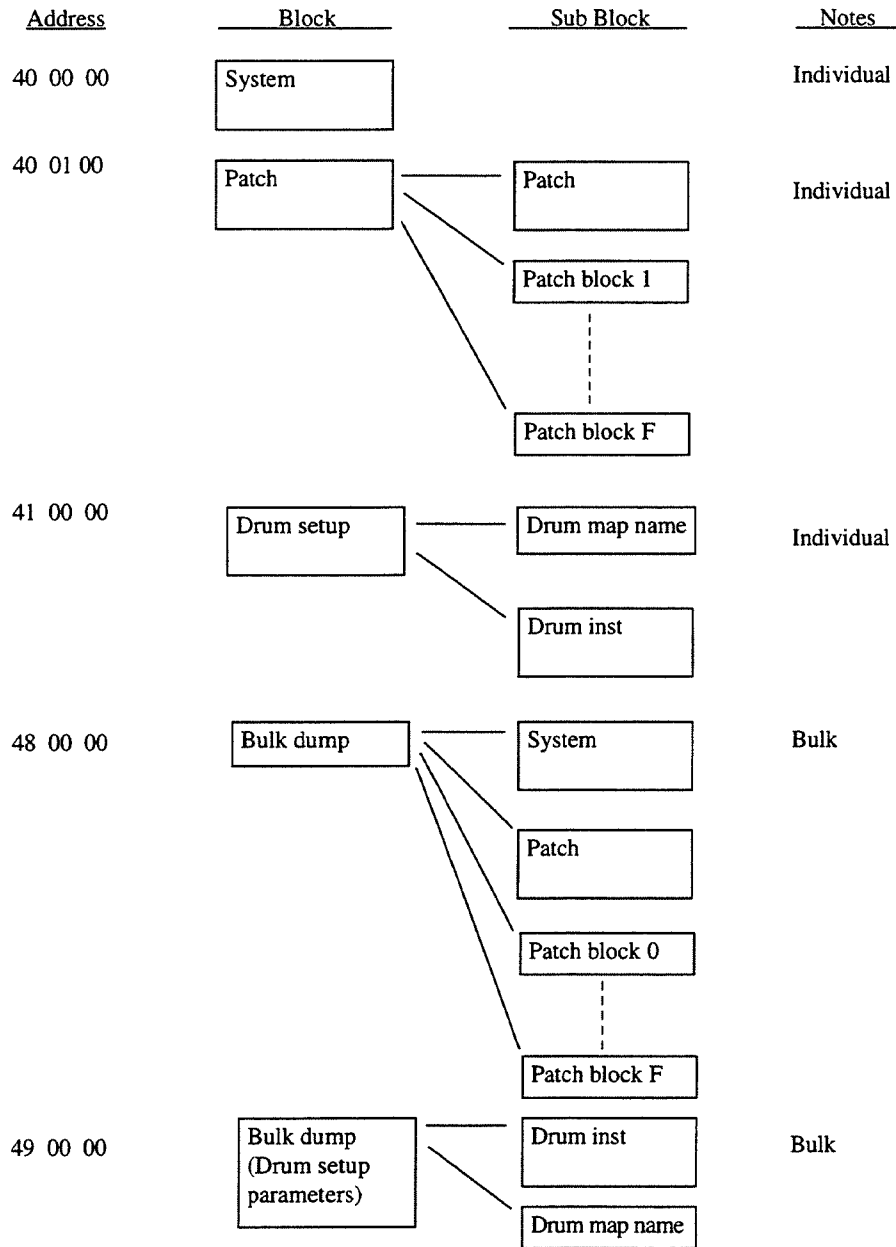
*The PR-300S only sends the DT1 messages whose address and size match the Parameter Address Map (Section 3).
 *If the data to send is large (more than 128 bytes), then the data will be sent out in separate packets.
 *Refer to section 4 to calculate a Checksum.

3. Parameter address map (Model ID = 42H)

This map indicates address, size, Data (range), Parameter, Description and Default Value of parameters which can be transferred using "Request data 1 (RQ1)" and "Data set 1 (DT1)". All the numbers of address, size, data and Default Value are indicated in 7-bit Hexadecimal form.

■Address Block Map

There are two types of GS Exclusive messages. One is an individual parameter communication, the other is a bulk dump communication. An outlined address map of the Exclusive Communication is shown below:



●Individual parameter

You can use individual parameter communication to send or request an individual parameter value.

One packet of System Exclusive messages "F0 F7" can only have one parameter (which may contain several bytes).

You cannot use any address having "#" for the top address in a system Exclusive message.

○System Parameters

<u>Address (H)</u>	<u>Size</u>	<u>Data</u>	<u>Parameter</u>	<u>Description</u>	<u>Default Value (H)</u>
40 00 00	00 00 04	0018 -- 07E8	MASTER TUNE	-100.00 - +100.0 (cents)	00 04 00 00
40 00 01#			Use nibblized data.		
40 00 02#					
40 00 03#					
40 00 04	00 00 01	00 - 7F	MASTER VOLUME	0 - 127	7F
40 00 05	00 00 01	28 - 58	MASTER KEY-SHIFT	-24 - +24 semitones	40
40 00 06	00 00 01	01 - 7F	MASTER PAN	-63 (LEFT) - +63 (RIGHT)	40
40 00 7F	00 00 01	00, 7F	MODE SET (Rx Only)	00 = GS Reset 127 = Exit GS	

Refer to "System Exclusive Message of Mode Change"

○Patch Parameters

The PR-300S has 16 parts. The parameters of each part are called PATCH PARAMETERS. To send or request a PATCH PARAMETER, use the BLOCK NUMBER in the message (not the Part number or MIDI channel number). Normally, each Part (MIDI channel) has one block and the assignment of Blocks to MIDI Channels are as described below.

*x BLOCK NUMBER (0 - F),	Part 1 (default MIDIch = 1) x=1
	Part 2 (default MIDIch = 2) x=2
	: :
	Part 9 (default MIDIch = 9) x=9
	Part 10 (default MIDIch = 10) x=0 (Drums)
	Part 11 (default MIDIch = 11) x=A
	Part 12 (default MIDIch = 12) x=B
	: :
	Part 16 (default MIDIch = 16) x=F

NOTE: MIDI channels are 1-16 whereas Block numbers are 0-15.

<u>Address</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>	<u>Default Value (H)</u>
40 01 00	00 00 10	20 - 7F	PATCH NAME	16 ASCII Characters	
40 01 :#					
40 01 0F#					
40 01 10	00 00 10	00 - 18	VOICE RESERVE	Part 10 (Drum Part)	02
40 01 11#				Part 1	06
40 01 12#				Part 2	02
40 01 13#				Part 3	02
40 01 14#				Part 4	02
40 01 15#				Part 5	02
40 01 16#				Part 6	02
40 01 17#				Part 7	02
40 01 18#				Part 8	02
40 01 19#				Part 9	02
40 01 1A#				Part 11	02
40 01 :#				:	00
40 01 1F#				Part 16	00

The sum total of voices in the voice reserve function must be equal to or less than the maximum polyphony (the PR-300S has a maximum polyphony of 24 notes).

For compatibility to other GS modules, it is recommended to use a polyphony of 24 notes or less.

<u>Address</u> <u>Value (H)</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>	<u>Default</u>
40 01 30	00 00 01	00 - 07	REVERB MACRO	00: Room 1 01: Room 2 02: Room 3 03: Hall 1 04: Hall 2 05: Plate 06: Delay 07: Panning Delay	04
40 01 31	00 00 01	00 - 07	REVERB CHARACTER		04
40 01 32	00 00 01	00 - 07	REVERB PRE-LPF		00
40 01 33	00 00 01	00 - 7F	REVERB LEVEL		40
40 01 34	00 00 01	00 - 7F	REVERB TIME		40
40 01 35	00 00 01	00 - 7F	REVERB DELAY FEEDBACK		00
40 01 36	00 00 01	00 - 7F	REVERB SEND LEVEL TO CHORUS		00

REVERB MACRO is the parameter used to select the preset type of Reverb effect.

When set to another REVERB MACRO, all other reverb parameters will reset to the values set for each type of REVERB MACRO.

40 01 38	00 00 01	00 - 07	CHORUS MACRO	00: Chorus 1 01: Chorus 2 02: Chorus 3 03: Chorus 4 04: Feedback Chorus 05: Flanger 06: Short Delay 07: Short Delay (FB)	02
40 01 39	00 00 01	00 - 07	CHORUS PRE-LPF		00
40 01 3A	00 00 01	00 - 7F	CHORUS LEVEL		40
40 01 3B	00 00 01	00 - 7F	CHORUS FEEDBACK		08
40 01 3C	00 00 01	00 - 7F	CHORUS DELAY		50
40 01 3D	00 00 01	00 - 7F	CHORUS RATE		03
40 01 3E	00 00 01	00 - 7F	CHORUS DEPTH		13
40 01 3F	00 00 01	00 - 7F	CHORUS SEND LEVEL TO REVERB		00

CHORUS MACRO is the parameter used to select the preset type of Chorus effect.

When set to another CHORUS MACRO, then all other chorus parameters will reset to the values set each type of CHORUS MACRO.

40 1x 00	00 00 02	00 - 7F	TONE NUMBER	CC#00 VALUE	00
40 1x 01#		00 - 7F		P.C. VALUE	00
40 1x 02	00 00 01	00 - 10	Rx. CHANNEL	1-16, OFF	same as the Part#
40 1x 03	00 00 01	00 - 01	Rx. PITCH BEND	OFF / ON	01
40 1x 04	00 00 01	00 - 01	Rx. CH PRESSURE (CAf)	OFF / ON	01
40 1x 05	00 00 01	00 - 01	Rx. PROGRAM CHANGE	OFF / ON	01
40 1x 06	00 00 01	00 - 01	Rx. CONTROL CHANGE	OFF / ON	01
40 1x 07	00 00 01	00 - 01	Rx. POLY PRESSURE (PAf)	OFF / ON	01
40 1x 08	00 00 01	00 - 01	Rx. NOTE MESSAGE	OFF / ON	01
40 1x 09	00 00 01	00 - 01	Rx. RPN	OFF / ON	01
40 1x 0A	00 00 01	00 - 01	Rx. NRPN	OFF / ON	00 (01*)

*Rx. NRPN is set to OFF by power-on reset or by "General MIDI mode On", and it is set to ON by "GS RESET".

<u>Address</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>	<u>Default Value (H)</u>
40 1x 0B	00 00 01	00 - 01	Rx. MODULATION	OFF / ON	01
40 1x 0C	00 00 01	00 - 01	Rx. VOLUME	OFF / ON	01
40 1x 0D	00 00 01	00 - 01	Rx. PANPOT	OFF / ON	01
40 1x 0E	00 00 01	00 - 01	Rx. EXPRESSION	OFF / ON	01
40 1x 0F	00 00 01	00 - 01	Rx. HOLD1	OFF / ON	01
40 1x 10	00 00 01	00 - 01	Rx. PORTAMENTO	OFF / ON	01
40 1x 11	00 00 01	00 - 01	Rx. SOSTENUTO	OFF / ON	01
40 1x 12	00 00 01	00 - 01	Rx. SOFT	OFF / ON	01

40 1x 13	00 00 01	00 - 01	MONO/POLY MODE	Mono/Poly (-Bn 7E 01 / Bn 7F 00)	01
40 1x 14	00 00 01	00 - 02	ASSIGN MODE	0 = SINGLE 1 = LIMITED - MULTI 01 at x=0 2 = FULL - MULTI	00 at x=0

ASSIGN MODE is the parameter used to select the voice assign manner when "multiple Note Ons" occur (the same note number on the same channel at the same time).

The best assign modes (SINGLE (0) for the Drum part and LIMITED - MULTI (1) for the other parts) are selected automatically, so you need not reset this parameter.

40 1x 15	00 00 01	00 - 02	USE FOR RHYTHM PART	0 = OFF 1 = MAP1 2 = MAP2	00 at x=0 01 at x=0
----------	----------	---------	---------------------	---------------------------------	------------------------

USE FOR RHYTHM PART is the parameter to define the part to be used as an ordinary part OFF (0), as a drum part using MAP 1 (1), or a drum part using MAP 2 (2). The default is MAP1 (1) for Part 10 (MIDI CH=10, x=0), and all other parts are set to ordinary parts (OFF (0)). This can be changed to set up a normal block to act as another drum part.

40 1x 16	00 00 01	28 - 58	PITCH KEY SHIFT	-24 - +24 [semitone]	40
40 1x 17	00 00 02	08 - F8	PITCH OFFSET FINE	-12.0 - +12.0 [Hz]	08 00
40 1x 18#			Use nibblized data.		
40 1x 19	00 00 01	00 - 7F	PART LEVEL (=Bn 07 vv)	0 - 127	64
40 1x 1A	00 00 01	00 - 7F	VELOCITY SENSE DEPTH	0 - 127	40
40 1x 1B	00 00 01	00 - 7F	VELOCITY SENSE OFFSET	0 - 127	40
40 1x 1C	00 00 01	00 - 7F	PART PANPOT (=Bn 0A vv, except random)	Random, -63 (LEFT) - +63 (RIGHT)	40
40 1x 1D	00 00 01	00 - 7F	KEY RANGE LOW	C1 - G9	00
40 1x 1E	00 00 01	00 - 7F	KEY RANGE HIGH	C1 - G9	7F
40 1x 1F	00 00 01	00 - 5F	CC1 CONTROLLER NUMBER	0 - 95	10
40 1x 20	00 00 01	00 - 5F	CC2 CONTROLLER NUMBER	0 - 95	11
40 1x 21	00 00 01	00 - 7F	CHORUS SEND LEVEL (=Bn 5D vv)	0 - 127	00
40 1x 22	00 00 01	00 - 7F	REVERB SEND LEVEL (=Bn 5B vv)	0 - 127	28
40 1x 23	00 00 01	00 - 01	Rx. Bank Select	OFF / ON	01

Rx. Bank Select is set to ON by power-on reset or by "GS RESET" and set to OFF by "Turn General MIDI System ON".

40 1x 30	00 00 01	0E - 72	TONE MODIFY 1 Vibrato rate	-50 - +50 (=Bn 63 01 62 08 06 vv)	40
40 1x 31	00 00 01	0E - 72	TONE MODIFY 2 Vibrato depth	-50 - +50 (=Bn 63 01 62 09 06 vv)	40
40 1x 32	00 00 01	0E - 72	TONE MODIFY 3 TVF cutoff freq.	-50 - +50 (=Bn 63 01 62 20 06 vv)	40
40 1x 33	00 00 01	0E - 72	TONE MODIFY 4 TVF resonance	-50 - +50 (=Bn 63 01 62 21 06 vv)	40

<u>Address</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>	<u>Default Value (H)</u>
40 1x 34	00 00 01	0E - 72	TONE MODIFY 5	-50 - +50	40
			TVF&TVA Env. attack	(=Bn 63 01 62 63 06 vv)	
40 1x 35	00 00 01	0E - 72	TONE MODIFY 6	-50 - +50	40
			TVF&TVA Env. delay	(=Bn 63 01 62 64 06 vv)	
40 1x 36	00 00 01	0E - 72	TONE MODIFY 7	-50 - +50	40
			TVF&TVA Env. release	(=Bn 63 01 62 66 06 vv)	
40 1x 37	00 00 01	0E - 72	TONE MODIFY 8	-50 - +50	40
			Vibrato delay	(=Bn 63 01 62 0A 06 vv)	
40 1x 40	00 00 0C	00 - 7F	SCALE TUNING C	-64 - +63 [cent]	40
40 1x 41#		00 - 7F	SCALE TUNING C#	-64 - +63 [cent]	40
40 1x 42#		00 - 7F	SCALE TUNING D	-64 - +63 [cent]	40
40 1x 43#		00 - 7F	SCALE TUNING D#	-64 - +63 [cent]	40
40 1x 44#		00 - 7F	SCALE TUNING E	-64 - +63 [cent]	40
40 1x 45#		00 - 7F	SCALE TUNING F	-64 - +63 [cent]	40
40 1x 46#		00 - 7F	SCALE TUNING F#	-64 - +63 [cent]	40
40 1x 47#		00 - 7F	SCALE TUNING G	-64 - +63 [cent]	40
40 1x 48#		00 - 7F	SCALE TUNING G#	-64 - +63 [cent]	40
40 1x 49#		00 - 7F	SCALE TUNING A	-64 - +63 [cent]	40
40 1x 4A#		00 - 7F	SCALE TUNING A#	-64 - +63 [cent]	40
40 1x 4B#		00 - 7F	SCALE TUNING B	-64 - +63 [cent]	40
40 2x 00	00 00 01	28 - 58	MOD PITCH CONTROL	-24 -- +24 [semitone]	40
40 2x 01	00 00 01	00 - 7F	MOD TVFCUTOFFCONTROL	-9600 - +9600 [cent]	40
40 2x 02	00 00 01	00 - 7F	MOD AMPLITUDECONTROL	-100.0 - +100.0 [%]	40
40 2x 03	00 00 01	00 - 7F	MOD LF01 RATECONTROL	-10.0 - +10.0 [Hz]	40
40 2x 04	00 00 01	00 - 7F	MOD LF01 PITCH DEPTH	0 - 60 [cent]	0A
40 2x 05	00 00 01	00 - 7F	MOD LF01 TVF DEPTH	0 - 2400 [cent]	00
40 2x 06	00 00 01	00 - 7F	MOD LF01 TVA DEPTH	0 - 100.00 [%]	00
40 2x 07	00 00 01	00 - 7F	MOD LF02 RATECONTROL	-10.00 - +10.0 [Hz]	40
40 2x 08	00 00 01	00 - 7F	MOD LF02 PITCH DEPTH	0 - 60 [cent]	00
40 2x 09	00 00 01	00 - 7F	MOD LF02 TVF DEPTH	0 - 2400 [cent]	00
40 2x 0A	00 00 01	00 - 7F	MOD LF02 TVA DEPTH	0 - 100.00 [%]	00
40 2x 10	00 00 01	40 - 58	BEND PITCH CONTROL	0 - 24 [semitone]	42
40 2x 11	00 00 01	00 - 7F	BEND TVFCUTOFFCONTROL	-9600 - +9600 [cent]	40
40 2x 12	00 00 01	00 - 7F	BEND AMPLITUDECONTROL	-100.0 - +100.0 [%]	40
40 2x 13	00 00 01	00 - 7F	BEND LF01 RATECONTROL	-10.0 - +10.0 [Hz]	40
40 2x 14	00 00 01	00 - 7F	BEND LF01 PITCH DEPTH	0 - 600 [cent]	00
40 2x 15	00 00 01	00 - 7F	BEND LF01 TVF DEPTH	0 - 2400 [cent]	00
40 2x 16	00 00 01	00 - 7F	BEND LF01 TVA DEPTH	0 - 100.0 [%]	00
40 2x 17	00 00 01	00 - 7F	BEND LF02 RATECONTROL	-10.0 - +10.0 [Hz]	40
40 2x 18	00 00 01	00 - 7F	BEND LF02 PITCH DEPTH	0 - 600 [cent]	00
40 2x 19	00 00 01	00 - 7F	BEND LF02 TVF DEPTH	0 - 2400 [cent]	00
40 2x 1A	00 00 01	00 - 7F	BEND LF02 TVA DEPTH	0 - 100.0 [%]	00
40 2x 20	00 00 01	28 - 58	CAf PITCH CONTROL	-24 - +24 [semitone]	40
40 2x 21	00 00 01	00 - 7F	CAf TVFCUTOFFCONTROL	-9600 - +9600 [cent]	40
40 2x 22	00 00 01	00 - 7F	CAf AMPLITUDECONTROL	-100.0 - +100.0 [%]	40
40 2x 23	00 00 01	00 - 7F	CAf LF01 RATECONTROL	-10.0 - +10.0 [Hz]	40
40 2x 24	00 00 01	00 - 7F	CAf PITCH DEPTH	0 - 600 [cent]	00
40 2x 25	00 00 01	00 - 7F	CAf LF01 TVF DEPTH	0 - 2400 [cent]	00
40 2x 26	00 00 01	00 - 7F	CAf LF01 TVA DEPTH	0 - 100.00 [%]	00
40 2x 27	00 00 01	00 - 7F	CAf LF02 RATECONTROL	-10.0 - +10.0 [Hz]	40
40 2x 28	00 00 01	00 - 7F	CAf LF02 PITCH DEPTH	0 - 600 [cent]	00
40 2x 29	00 00 01	00 - 7F	CAf LF02 TVF DEPTH	0 - 2400 [cent]	00
40 2x 2A	00 00 01	00 - 7F	CAf LF02 TVA DEPTH	0 - 100.0 [%]	00

<u>Address</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>	<u>Default Value (H)</u>
40 2x 30	00 00 01	28 - 58	PAf PITCH CONTROL	-24 - +24 [semitone]	40
40 2x 31	00 00 01	00 - 7F	PAfTVFCUTOFFCONTROL	-9600 - +9600 [cent]	40
40 2x 32	00 00 01	00 - 7F	PAfAMPLITUDECONTROL	-100.0 - +100.0 [%]	40
40 2x 33	00 00 01	00 - 7F	PAfLF01 RATE CONTROL	-10.0 - +10.0 [Hz]	40
40 2x 34	00 00 01	00 - 7F	PAf LF01 PITCH DEPTH	0 - 600 [cent]	00
40 2x 35	00 00 01	00 - 7F	PAf LF01 TVF DEPTH	0 - 2400 [cent]	00
40 2x 36	00 00 01	00 - 7F	PAf LF01 TVA DEPTH	0 - 100.0 [%]	00
40 2x 37	00 00 01	00 - 7F	PAfLF02 RATE CONTROL	-10.0 - +10.0 [Hz]	40
40 2x 38	00 00 01	00 - 7F	PAf LF02 PITCH DEPTH	0 - 600 [cent]	00
40 2x 39	00 00 01	00 - 7F	PAf LF02 TVF DEPTH	0 - 2400 [cent]	00
40 2x 3A	00 00 01	00 - 7F	PAf LF02 TVA DEPTH	0 - 100.0 [%]	00
40 2x 40	00 00 01	28 - 58	CC1 PITCH CONTROL	-24 - +24 [semitone]	40
40 2x 41	00 00 01	00 - 7F	CC1 TVFCUTOFFCONTROL	-9600 - +9600 [cent]	40
40 2x 42	00 00 01	00 - 7F	CC1 AMPLITUDECONTROL	-100.0 - +100.0 [%]	40
40 2x 43	00 00 01	00 - 7F	CC1 LF01 RATE CONTROL	-10.0 - +10.0 [Hz]	40
40 2x 44	00 00 01	00 - 7F	CC1 LF01 PITCH DEPTH	0 - 600 [cent]	00
40 2x 45	00 00 01	00 - 7F	CC1 LF01 TVF DEPTH	0 - 2400 [cent]	00
40 2x 46	00 00 01	00 - 7F	CC1 LF01 TVA DEPTH	0 - 100.0 [%]	00
40 2x 47	00 00 01	00 - 7F	CC1 LF02 RATE CONTROL	-10.0 - +10.0 [Hz]	40
40 2x 48	00 00 01	00 - 7F	CC1 LF02 PITCH DEPTH	0 - 600 [cent]	00
40 2x 49	00 00 01	00 - 7F	CC1 LF02 TVF DEPTH	0 - 2400 [cent]	00
40 2x 4A	00 00 01	00 - 7F	CC1 LF02 TVA DEPTH	0 - 100.0 [%]	00
40 2x 50	00 00 01	28 - 58	CC2 PITCH CONTROL	-24 - +24 [semitone]	40
40 2x 51	00 00 01	00 - 7F	CC2 TVFCUTOFFCONTROL	-9600 - +9600 [cent]	40
40 2x 52	00 00 01	00 - 7F	CC2 AMPLITUDECONTROL	-100.0 - +100.0 [%]	40
40 2x 53	00 00 01	00 - 7F	CC2 LF01 RATE CONTROL	-10.0 - +10.0 [Hz]	40
40 2x 54	00 00 01	00 - 7F	CC2 LF01 PITCH DEPTH	0 - 600 [cent]	00
40 2x 55	00 00 01	00 - 7F	CC2 LF01 TVF DEPTH	0 - 2400 [cent]	00
40 2x 56	00 00 01	00 - 7F	CC2 LF01 TVA DEPTH	0 - 100.0 [%]	00
40 2x 57	00 00 01	00 - 7F	CC2 LF02 RATE CONTROL	-10.0 - +10.0 [Hz]	40
40 2x 58	00 00 01	00 - 7F	CC2 LF02 PITCH DEPTH	0 - 600 [cent]	00
40 2x 59	00 00 01	00 - 7F	CC2 LF02 TVF DEPTH	0 - 2400 [cent]	00
40 2x 5A	00 00 01	00 - 7F	CC2 LF02 TVA DEPTH	0 - 100.0 [%]	00

ODRUM SETUP PARAMETERS

*m:Map number (0 = MAP1, 1 = MAP2)

*rr:drum part note number (00H - 7FH)

<u>Address</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>
41 m0 00 : # 41 m0 0B#	00 00 0C	20 - 7F	DRUM MAP NAME	ASCII Character
41 m1 rr	00 00 01	00 - 7F	PLAY NOTE NUMBER	Pitch coarse
41 m2 rr	00 00 01	00 - 7F	LEVEL	TVA level
41 m3 rr	00 00 01	00 - 7F	(=Bn 63 1A 62 rr 06 vv) ASSIGN GROUP NUMBER	Non, 1 - 127
41 m4 rr	00 00 01	00 - 7F	PANPOT	Random, -63(LEFT) - +63(RIGHT)
41 m5 rr	00 00 01	00 - 7F	(=Bn 63 1C 62 rr 06 vv) REVERB SEND LEVEL Multiplicand of the part reverb depth (=Bn 63 1D 62 rr 06 vv)	0.0 - 1.0

<u>Address</u>	<u>Size (H)</u>	<u>Data (H)</u>	<u>Parameter</u>	<u>Description</u>
41 m6 rr	00 00 01	00 - 7F	CHORUS SEND LEVEL Multiplicand of the part chorus depth (=Bn 63 1E 62 rr 06 vv)	0.0 - 1.0
41 m7 rr	00 00 01	00 - 01	Rx. NOTE OFF	OFF/ON
41 m8 rr	00 00 01	00 - 01	Rx. NOTE ON	OFF/ON

When you change Drum Sets, all values of the DRUM SETUP PARAMETERS will be initialized.

●Bulk Dump

You can send or request bulk data which contains a large amount of parameter data by using Bulk Dump communication. It is used for storing bulk data in a sequencer or a computer.

To send or request bulk data, use the Address and Size indicated in the following map.

You cannot use any address having "#" for the top address in a System Exclusive message except in the following case: If you send messages which include large amounts of data (more than 128 bytes) and you send them out in separate packets, then, the top address of the following messages may have an address marked "#".

When sending several packets of large DT1 messages, insert intervals of at least 40ms in between each packet.

○All Parameters (System Parameters and all Patch Parameters)

<u>Address (H)</u>	<u>Size (H)</u>	<u>Description</u>	<u>Number of packets</u>
48 00 00 : # 48 1D 0F#	00 1D 10	ALL	30 packets

○System Parameters

<u>Address (H)</u>	<u>Size (H)</u>	<u>Description</u>	<u>Number of packets</u>
48 00 00 : # 48 00 0F#	00 00 10	SYSTEM PARAMETERS	1 packet

○Patch Parameters

<u>Address (H)</u>	<u>Size (H)</u>	<u>Description</u>	<u>Number of packets</u>
48 00 10 : # 48 01 0F#	00 10 00	PATCH COMMON	1 packet
48 01 10 : # 48 02 6F#	00 01 60	BLOCK 0	2 packets
48 02 70 : # 48 04 4F#	00 01 60	BLOCK 1	2 packets
48 04 50 : # 48 06 2F#	00 01 60	BLOCK 2	
48 06 30 : # 48 08 0F#	00 01 60	BLOCK 3	2 packets

<u>Address (H)</u>	<u>Size (H)</u>	<u>Description</u>	<u>Number of packets</u>
48 08 10 : # 48 09 6F#	00 01 60	BLOCK 4	2 packets
48 09 70 : # 48 0B 4F#	00 01 60	BLOCK 5	2 packets
48 0B 50 : # 48 0D 2F#	00 01 60	BLOCK 6	2 packets
48 0D 30 : # 48 0F 0F#	00 01 60	BLOCK 7	2 packets
48 0F 10 : # 48 10 6F#	00 01 60	BLOCK 8	2 packets
48 10 70 : # 48 12 4F#	00 01 60	BLOCK 9	2 packets
48 12 50 : # 48 14 2F#	00 10 60	BLOCK A	2 packets
48 14 30 : # 48 16 0F#	00 01 60	BLOCK B	2 packets
48 16 10 : # 48 17 6F#	00 10 60	BLOCK C	2 packets
48 17 70 : # 48 19 4F#	00 10 60	BLOCK D	2 packets
48 19 50 : # 48 1B 2F#	00 01 60	BLOCK E	2 packets
48 1B 30 : # 48 1D 0F#	00 01 60	BLOCK F	2 packets

○ DRUM SETUP PARAMETERS

*m: map number (0 = MAP1, 1 = MAP2)

<u>Address (H)</u>	<u>Size (H)</u>	<u>Description</u>	<u>Number of packets</u>
49 m0 00	00 02 00	PLAY NOTE NUMBER	2 packets
:			
49 m1 7F			
<u>Address (H)</u>	<u>Size (H)</u>	<u>Description</u>	<u>Number of packets</u>
49 m2 00	00 02 00	LEVEL	2 packets
:			
49 m3 7F			
49 m4 00	00 02 00	ASSIGN GROUP NUMBER	2 packets
:			
49 m5 7F			
49 m6 00	00 02 00	PANPOT	2 packets
:			
49 m7 7F			
49 m8 00	00 02 00	REVERB SEND LEVEL	2 packets
:			
49 m9 7F			
49 mA 00	00 02 00	CHORUS SEND LEVEL	2 packets
:			
49 mB 7F			
49 mC 00	00 02 00	Rx. NOTE ON/OFF	2 packets
:			
49 MD 7F			
49 ME 00	00 00 18	DRUM MAP NAME	1 packet
:			
49 ME 17			

4. Useful Information

■Decimal and Hexadecimal

It is common to use 7-bit Hexadecimal number in MIDI communication.

The following is a conversion table between decimal numbers and 7-bit Hexadecimal numbers.

Decimal	Hexa-decimal	Decimal	Hexa-decimal	Decimal	Hexa-decimal	Decimal	Hexa-decimal
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	71	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

*To indicate a decimal number for the MIDI channel, Bank number, and Program number, add one to the values in the table.

*The resolution of 7-bit Hexadecimal numbers is 128. Use several bytes for values which require more resolution.

For example, the number "ad bbH" in 7-bit Hexadecimal is "ad x 128 + bb" in decimal form.

*In Roland GS, a signed 7-bit number is an "offset binary" number. In other words, there are 7-bits (0... 127) to represent -64... +63. Therefore, -64 is represented as 0, 0 is represented as 64 (40H) and +63 is represented as 127 (7FH). In this way, 64 is added to a value to obtain the "offset binary" representation.

Two bytes in the Roland GS format is really two 7-bit values, or 14 bits (16384 values), not 16 bits (65536 values). So, the signed values we need to represent are -8192 through +8191. Again, this is represented as "offset binary" in Roland GS. So, -8192 is represent as 0, 0 is represented as 8192, and +8191 is represented as 16383. Since these numbers are written as two 7-bit bytes, -8192 is represented as 00H 00H, 0 is represented as 40H 00H, and +8191 is represented as 7FH 7FH.

*The data indicated as "nibbled" is a 4-bit Hexadecimal number.

i. e. "0 0bH" is "a x 16 + b".

<Example 1> Convert "5AH" in Hexadecimal to a Decimal number.

(By using the table) 5AH = 90

<Example 2> Convert "12 34H" in 7-bit Hexadecimal to a Decimal number.

(By using the table) 12H = 18, 34H = 52

So, 18 x 128 + 52 = 2356

<Example 3> Convert 0A 03 09 0D" in nibblized form to a Decimal number.
 (By using the table) 0AH = 3, 09H = 9, 0DH = 13
 So, [(10 x 16 + 3) x 16 + 9] x 16 + 13 = 41885

■Examples of actual MIDI messages

<Example 1> 92 3E 5F

"9n" is a status of a Note On message, with "n" being the MIDI channel number.

The second byte is the Note number, and the third is Velocity.

2H = 2, 3EH = 62, 5FH = 95

So, this is a Note On message of MIDI channel 3, Note number 62 (D4), with a Velocity of 95.

<Example 2> CE 49

"Cn" is a status of a Program change message, with "n" being the MIDI channel number.

EH = 14, 49H = 73

So, this is a Program change message of MIDI channel 15, Program number 74 (Flute in GS).

<Example 3> EA 00 28

"EnH" is a status of a Pitch bend change message, with "n" being MIDI channel number.

The second byte (00H) is an LSB and the third (28H) is an MSB of a Pitch bend value (%signed).

The Pitch Bend value is : 28 00H - 40 00H = 40 x 128 + 0 - (64 x 128 + 0) = 5120 - 8192 = -3072

So, this is a Pitch bend change message on MIDI channel 11 with a Pitch bend value of -3072.

If the Pitch bend sensitivity is set to 2 semitones, and the Pitch bend value -8192 (00 00H) is defined as -200 cents, the actual pitch bend value of this message is :

-200 x (-3072) % (-8192) = -75 cents

<Example 4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F

"Bn" is a status of a Control change message, and "n" is a MIDI channel number.

The second byte is a Control number and the third is the value.

This packet uses the running status rule, that is, when you send a series of messages with the same status, you can omit the following status bytes.

This message contains :

B3	64	00	MIDI CH = 4	LSB of RPN parameter number	: 00H
(B3)	65	00	MIDI CH = 4	MSB of RPN parameter number	: 00H
(B3)	06	0C	MIDI CH = 4	MSB of Data entry	: 0CH
(B3)	26	00	MIDI CH = 4	LSB of Data entry	: 00H
(B3)	64	7F	MIDI CH = 4	LSB of RPN parameter number	: 7FH
(B3)	65	7F	MIDI CH = 4	MSB of RPN parameter number	: 7FH

This message string means 'send data "0C 00H" to RPN parameter number "00 00H", after that, set RPN parameter number to "7F 7F"'.

RPN parameter number "00 00H" is Pitch Bend sensitivity and the unit of the MSB value is a semitone, so 0CH = 12 is a value to set the Pitch bend sensitivity to 12 semitones (one octave). GS devices ignore the LSB value of Pitch bend sensitivity. However, it is best to send both MSB and LSB (=00H) to maintain data compatibility.

Once an RPN or NRPN is set, all the Data entry messages sent after it are effective.

Sometime this rule may cause a problem if the MIDI data is played by a sequencer and it is operated in fast forward or backward mode. It is recommended, therefore, to set the RPN or NRPN number to 7F 7FH after sending the Data entry messages.

*Using running-status for several MIDI events (like <Example 4>) in song data (e.g. Standard MIDI File data) is not recommended, as some sequencers may not be able to handle this data in fast forward or backward operations. Put a status byte before every event to achieve the most reliable data.

*The parameter number and value of the RPN or NRPN must be sent in correct order. As some sequencers may send the recorded data in a different order when events are too close together, it is recommended to place each event in a different tick. (1 - CLK for TPQN = 92, or 5 - CLK for TPQN = 480 is recommended).

The send order may be different for each sequencer if events appear in the same clock within the sequence data.

■Checksum of Roland System Exclusive messages

Roland System Exclusive messages (RQ1 and DT1) have a Checksum at the end of the data (just before the EOX) to check for communication errors.

The Checksum is determined by values of address and data (or size) included in the message.

<How to calculate Checksums> ("H" indicates Hexadecimal.)

The error checking process employs a sum-check error detection. It provides binary bit figures whose lower 7 bits are zero when values for an address, data (or size) and the Checksum are summed.

One practical equation to determine a Checksum is:

If the address is "ad bb ccH" and the data (or the size) is "dd ee ffH"

$$ad + bb + cc + dd + ee + ff = \text{sum}$$

$$\text{sum} \% 128 = \text{quotient} \% \text{remainder}$$

$$128 - \text{remainder} = \text{checksum}$$

<Example 1> Set "REVERB MACRO" to "ROOM 3"

According to the Parameter Address Map, the Address of REVERB MACRO is 40 01 30H, and the Value corresponding to ROOM 3 is 02H. So, the message should be:

<u>F0</u>	<u>41</u>	<u>10</u>	<u>42</u>	<u>12</u>	<u>40</u>	<u>01</u>	<u>30</u>	<u>02</u>	<u>??</u>	<u>F7</u>	(1) Exclusive Status	(4) Model ID (GS)
(1)	(2)	(3)	(4)	(5)	address			data	checksum	(6)	(2) ID (Roland)	(5) Command ID (DT1)
											(3) Device ID (16)	(6) End of Exclusive

The Checksum is:

$$40H + 01H + 30H + 02H = 64 + 1 + 48 + 2 = 115 \text{ (sum)}$$

$$115 \text{ (sum)} \% 128 = 0 \text{ (quotient)} \% 115 \text{ (remainder)}$$

$$\text{checksum} = 128 - 115 \text{ (remainder)} = 13 = 0DH$$

Therefore, the message to send is : F0 41 10 42 12 40 01 30 02 0D F7

<Example 2> To request LEVEL of NOTE NUMBER 75 (D#5; Claves) in DRUM MAP 1

NOTE NUMBER 75 (D#5) is 4BH in Hexadecimal.

The Address of "LEVEL of NOTE NUMBER 75 (D#5; Claves) in DRUM MAP 1" is 41 02 4BH, and the size is 00 00 01H.

So, the message should be:

<u>F0</u>	<u>41</u>	<u>10</u>	<u>42</u>	<u>11</u>	<u>41</u>	<u>02</u>	<u>4B</u>	<u>00</u>	<u>00</u>	<u>01</u>	<u>??</u>	<u>F7</u>	(1) Exclusive Status	(4) Model ID (GS)
(1)	(2)	(3)	(4)	(5)	address			size	checksum	(6)	(2) ID (Roland)	(5) Command ID (RQ1)	(3) Device ID (16)	(6) End of Exclusive

The Checksum is:

$$41H + 02H + 4BH + 00H + 00H + 01H = 65 + 2 + 75 + 0 + 0 + 1 = 143 \text{ (sum)}$$

$$143 \text{ (sum)} \% 128 = 1 \text{ (quotient)} \% 15 \text{ (remainder)}$$

$$\text{checksum} = 128 - 15 \text{ (remainder)} = 113 = 71H$$

Therefore, the message to send is : F0 41 10 42 11 41 02 4B 00 00 01 71 F7

<Example 3> Set "MASTER TUNE" to +23.4 cents by System Exclusive.

The address of "MASTER TUNE" is 40 00 00H, and the Size is 00 00 04H.

The Value should be nibblized data whose resolution is 0.1 cents, and which is a signed value (00 04 00 00H (= 1024) = %0).

+23.4 [cents] = 234 + 1024 = 1258 = (hexadecimal)=> 04 EAH =(nibblized)=> 00 04 0E 0AH

So, the message should be:

<u>F0</u>	<u>41</u>	<u>10</u>	<u>42</u>	<u>12</u>	<u>41</u>	<u>00</u>	<u>00</u>	<u>00</u>	<u>04</u>	<u>0E</u>	<u>0A</u>	<u>??</u>	<u>F7</u>	(1) Exclusive Status	(4) Model ID (GS)
(1)	(2)	(3)	(4)	(5)	address			data	checksum	(6)	(2) ID (Roland)	(5) Command ID (DT1)	(3) Device ID (16)	(6) End of Exclusive	

The Checksum is :

$$41H + 00H + 00H + 00H + 04H + 0EH + 0AH = 65 + 0 + 0 + 0 + 4 + 14 + 10 = 93 \text{ (sum)}$$

$$93 \text{ (sum)} \% 128 = 0 \text{ (quotient)} \% 93 \text{ (remainder)}$$

$$\text{checksum} = 128 - 93 \text{ (remainder)} = 35 = 23H$$

Therefore, the message to send is : F0 41 10 42 11 41 00 00 00 04 0E 0A 23 F7

Specifications

PR-300S

Sequencer Section

Song Data:

- Internal Memory:
1 Song, Approx. 42,000 notes
- Disk:
99 Songs, Approx. 240,000 notes (2HD/1.44Mb)

Disk Drive:

3.5 inch micro floppy disk drive
(2DD/720Kb; 2HD/1.44Mb)

Tracks: 5 (4 + Rhythm)

Song Length: 999 measures

Maximum simultaneous input notes (during recording): 32

Maximum simultaneous output notes (during playback): 60

Resolution: 120 TPQN (ticks per quarter note)

Tempo: Quarter note = 20 to 250 bpm (beats per minute)

Sync: MIDI

Sound Source

(GS Format/General MIDI System Level 1 Response)

Maximum Polyphony: 24 voices

Number of Parts: 16

Number of Tones: 354

Number of Drum Sets: 10 (9 + SFX Set)

Effects: Digital Reverb + Chorus

Hardware

Display: 15 characters; 2 lines (Backlit LCD)

Connectors:

Four MIDI connectors
MIDI IN/OUT
IN(1CH)/THRU
Two Output Jacks (L/R)
Phones Jack (Stereo)
Start/Stop Control Jack
Punch In/Out Control Jack
Expression Control Jack
AC Adaptor Jack (DC9V)

Power Supply:

DC9V: AC Adaptor

Current Draw (Power Consumption):

1,200mA

Dimensions:

305 (W) x 246 (D) x 65 (H) mm
12 - 1/16" (W) x 9 - 11/16" (D) x 2 - 9/16" (H)

Weight (excluding the AC Adaptor):

2.1 Kg
4.5 lbs

Accessories

Owner's Manual
Demo Song Disk
Blank Disk (MF2-HD)
Two MIDI cables
Audio Cable
AC Adaptor

The specifications and/or appearance of this product are subject to change without prior notice.

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Service Information

Your PR-300S is designed and manufactured to provide years of trouble-free operation. However, should you ever require servicing in the U.S.A., please contact the dealer from whom you purchased your unit. If you bought your PR-300S outside the U.S.A., please contact the appropriate company for servicing information:

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PT Citrarama Belantika
Kompleks Perkantoran Duta Merlin,
Blok E No. 6-7
J1 Gajah Mada No. 3-5
Jakarta 10130, INDONESIA
Tel:(021) 385-0073

KOREA

Cosmos Corporation
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Swangjin-ku
Seoul, KOREA
Tel: (02) 466-0021

NIGERIA

Orpheus Music
29 Association AJE
Ilubeju, Lagos 9
NIGERIA
Tel: (34) 196-2790

PHILLIPPINES

G. A. Yupangco & Co., Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila, 1200
PHILLIPPINES
Tel: (02) 899-9595

VENEZUELA/COLOMBIA

Musicland Digital, Inc.
345 Costanera Road
Coral Gables, FL 33143 U.S.A.
Tel: (305) 665-5671

JAMAICA

Dwight A. McBean
P.O. Box 426
Stony Hill, Kingston 9, JAMAICA
Tel: (809) 942-9394

WEST INDIES

Rodgers Organs of Barbados
P.O. Box 1165
Bridgetown, Barbados
WEST INDIES
Tel: (809) 429-0245

The Treasure Cove Ltd.

P.O. Box 173 Long Street
St. John's Antigua, WEST INDIES
Tel: (809) 462-0185 (local)
Tel: (809) 461-0478 (outside area)

PR-300S Program Change Guide — Variation 127

Use the guide below to find the instrument you wish to use and then send the appropriate Variation Select and Program Change message for that instrument.

Note: This chart only applies to organs and keyboards which support GS Variation Select (Controller 0) messages.

CHOIR

GREAT

SWELL

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GREAT

SWELL

PEDAL

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Acou Piano		1
Acou Piano 3	Acou. Piano 2	2
Elec Piano 2	Elec Piano 1	3
Elec Piano 3		4
Honky Tonk	Elec Piano 4	5
Elec Org 2	Elec Org 1	6
Elec Org 4	Elec Org 3	7
Pipe Org 1		8
Pipe Org 3	Pipe Org 2	9
Harpsi 1	Accordion	10
Harpsi 2		11
Clav 1	Harpsi 3	12
Clav 3	Clav 2	13
Celesta 2	Celesta 1	14
Syn Brass 1		15
Syn Brass 3	Syn Brass 2	16
Syn Bass 1	Syn Brass 4	17
Syn Bass 2		18
Syn Bass 4	Syn Brass 3	19
Harmo Pan	Fantasy	20
Glasses	Chorale	21
Soundtrack		22
Warm Bell	Atmosphere	23
Echo Bell	Funny Vox	24
Ice Rain		25
Echo Pan	Oboe 2001	26
School Daze	Doctor Solo	27
Square Wave	Bellsinger	28
String Section 1		29
String Section 3	String Section 2	30
Violin 1	Pizzicato	31
Violin 2		32
Cello 2	Cello 1	33
Harp 1	Contrabass	34
Guitar 1	Harp 2	35
Guitar 2		36

Elec Gtr 1		62
Sitar	Elec Gtr 2	63
Acou Bass 2	Acou Bass 1	64
Elec Bass 1		65
Slap Bass 1	Elec Bass 2	66
Fretless 1	Slap Bass 2	67
Flute 1	Fretless 2	68
Flute 2		69
Piccolo 2	Piccolo 1	70
Pan Pipes	Recorder	71
Sax 1		72
Sax 3	Sax 2	73
Clarinet 1	Sax 4	74
Oboe	Clarinet 2	75
English Horn		76
Harmonica	Bassoon	77
Trumpet 2	Trumpet 1	78
Trombone 1		79
French Horn	Trombone 2	80
Tuba	French Horn 2	81
Brass Section 2	Brass Section 1	82
Vibe 1		83
Syn Mallet	Vibe 2	84
Glock	Windbell	85
Tube Bell		86
Marimba	Xylophone	87
Sho	Koto	88
Whistle 1	Shakuhachi	89
Whistle 2		90
Breathpipe	Bottle Blow	91
Melodic Tom	Timpani	92
Deep Snare		93
Elec Perc 2	Elec Perc 1	94
Taiko Rim	Taiko	95
Castanets	Cymbal	96
Triangle		97

Orche Hit		123
Bird Tweet	Telephone	124
Water Bell	One Note Jam	125
Jungle Tune		126

PR-300S Variation and Sound Effects Chart

This chart lists the PR-300S's sound variations which are not shown on the other Program Change guides. Also listed are all of the sound effects and drum kits of the PR-300S. To select a sound or effect listed here, send the appropriate Program Change and Variation Select message to the PR-300S. To select a drum kit, send the appropriate Program Change on MIDI channel 10.

INSTRUMENT	PROGRAM CHANGE	VARIATION SELECT
SynthBass101	39	1
Trombone 2	58	1
French Horn 2	61	1
Square	81	1
Saw	82	1
Syn Mallet	99	1
Echo Bell	103	1
Sitar 2	105	1
Carillon	15	9
Elec Perc	119	9
Piano 1d	1	16
E. Piano 1v	5	16
E. Piano 2v	6	16
Harpsi. w	7	16
60's Organ 1	17	16
Church Org. 3	20	16
Nylon Gt.o	25	16
Mandolin	26	16
Funk Gt. 2	29	16
Rubber Bass	40	16
Analog Brass 1	63	16
Analog Brass 2	64	16
60's E. Piano	5	24
Harpsi.o	7	24
Organ 4	17	32
Organ 5	18	32
Nylon Gt. 2	25	32
Choir Aahs 2	53	32

SOUND EFFECT	PROGRAM CHANGE	VARIATION SELECT
Reverse Cymbal	120	0
Gt. FretNoise	121	0
Gt.Cut Noise	121	1
String Slap	121	2
Breath Noise	122	0
Fl.Key Click	122	1
Seashore	123	0
Rain	123	1
Thunder	123	2
Wind	123	3
Stream	123	4
Bubble	123	5
Bird	124	0
Dog	124	1
Horse-Gallop	124	2
Bird 2	124	3
Telephone 1	125	0
Telephone 2	125	1
Door Creaking	125	2
Door	125	3
Scratch	125	4
Windchime	125	5

SOUND	PROGRAM CHANGE	VARIATION SELECT
Helicopter	126	0
Car Engine	126	1
Car Stop	126	2
Car Pass	126	3
Car Crash	126	4
Siren	126	5
Train	126	6
Jetplane	126	7
Starship	126	8
Burst Noise	126	9
Applause	127	0
Laughing	127	1
Screaming	127	2
Punch	127	3
Heartbeat	127	4
Footsteps	127	5
Gun Shot	128	0
Machine Gun	128	1
Laser Gun	128	2
Explosion	128	3

DRUM KIT	PROGRAM CHANGE
Standard	1
Room	9
Power	17
Electronic	25
TR-808	26
Jazz	33
Brush	41
Orchestra	49
SFX	57
CM-64/32L	128

Note: These drum kits are selected and controlled on MIDI channel 10.

PR-300S Program Change Guide — Capitol Tones (Variation 0)

Use the guide below to find the instrument you wish to use and then send the appropriate Variation Select and Program Change message for that instrument.

To send a program change from a Rodgers Classic Organ™, hold [SET] and press the MIDI piston you wish to program. As the piston flashes, press the key or pedal which corresponds to the voice you wish to select. If the organ you are using sends GS Variation Select messages, you must also send a Variation 0 message to select the sounds listed in the chart.

CHOIR

GREAT

SWELL

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GREAT

SWELL

PEDAL

2 Manual

Piano 1	Piano 2	1
Piano 3	Honky-Tonk	2
E. Piano 1	Harpichord	3
E. Piano 2	Celesta	4
Clavinet	Music Box	5
Glockenspiel	Xylophone	6
Vibraphone	Santur	7
Marimba	Organ 3	8
Tubular Bell	Reed Organ	9
Organ 1	Harmonica	10
Organ 2	Steel String Gt.	11
Church Organ	Clean Guitar	12
Accordion Fr.	Distortion Guitar	13
Bandneon	Acoustic Bass	14
Nylon String Gt.	Picked Bass	15
Jazz Guitar	Slap Bass 1	16
Muted Guitar	Slap Bass 2	17
Overdrive Gt.	Synth Bass 1	18
Gt. Harmonics	Synth Bass 2	19
Fingered Bass	Violin	20
Fretless Bass	Viola	21
Slap Bass 1	Cello	22
Synth Bass 1	Contrabass	23
Violin	Tremolo Strings	24
Viola	Harp	25
Contrabass	Strings	26
Pizzicato Str.	Slow Strings	27
Timpani	Synth Strings 1	28
Strings	Synth Strings 2	29
Synth Strings 1	Choir Aahs	30
Choir Aahs	Choir Oohs	31
Choir Oohs	SynVox	32
Orchestra Hit	Trumpet	33
Trombone	Tuba	34
Muted Trumpet		35
French Horn		36

Brass 1	Synth Brass 1	62
Synth Bass 2	Soprano Sax	63
Alto Sax	Tenor Sax	64
Tenor Sax	Baritone Sax	65
Oboe	English Horn	66
Bassoon	Clarinet	67
Piccolo	Flute	68
Flute	Recorder	69
Pan Flute	Shakuhachi	70
Shakuhachi	Bottle Blow	71
Whistle	Ocarina	72
Square Wave	Saw Wave	73
Syn. Calliope	Chiffer Lead	74
Charang	Solo Vox	75
Solo Vox	5th Saw Wave	76
Bass & Lead	Fantasia	77
Warm Pad	Polysynth	78
Polysynth	Bowed Glass	79
Bowed Glass	Halo Pad	80
Halo Pad	Ice Rain	81
Ice Rain	Soundtrack	82
Soundtrack	Atmosphere	83
Atmosphere	Goblin	84
Goblin	Echo Drops	85
Echo Drops	Sitar	86
Sitar	Shamisen	87
Shamisen	Kalimba	88
Kalimba	Bad Pipe	89
Bad Pipe	Shanai	90
Shanai	Agogo	91
Agogo	Steel Drums	92
Steel Drums	Taiko	93
Taiko	Synth Drum	94
Synth Drum	Gt. Fretnoise	95
Gt. Fretnoise	Breath Noise	96

Seashore	Bird	123
Telephone 1	Helicopter	124
Applause		125
Gun Shot		126

PR-300S Program Change Guide — Variation 8

Use the guide below to find the instrument you wish to use and then send the appropriate Variation Select and Program Change message for that instrument.

Note: This chart only applies to organs and keyboards which support GS Variation Select (Controller 0) messages.

CHOIR

GREAT

SWELL

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GREAT

SWELL

PEDAL

2 Manual

Piano 1W		1
	Piano 2W	2
Piano 3W		3
	Honky Tonk W	4
Detuned EP 1		5
Detuned EP 2		6
	Coupled Hps.	7
		8
		9
		10
Vibraphone W		11
Marimba W		12
		13
Church Bell		14
		15
Detuned Org. 1		16
		17
Detuned Org. 2		18
		19
Church Org. 2		20
		21
Accordion It.		22
		23
		24
Ukulele		25
	12 String Guitar	26
Hawaiian Gt.		27
	Chorus Gt.	28
Funk Gt.		29
		30
	Feedback Guitar	31
Gt. Feedback		32
		33
		34
		35
		36
		37
		38
Synth Bass 3		39
	Synth Bass 4	40
Slow Violin		41
		42
		43
		44
		45
		46
		47
		48
Orchestra		49
		50
Synth Strings 3		51
		52
		53
		54
		55
		56
		57
		58
		59
		60
		61

Brass 2		62
	Synth Bass 3	63
Synth Bass 4		64
		65
		66
		67
		68
		69
		70
		71
		72
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		75
		76
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		80
Sine Wave		81
		82
Doctor Solo		83
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	Taisho Koto	108
		109
		110
		111
		112
		113
		114
		115
	Castanets	116
Concert BD		117
	Melodic Tom 2	118
808 Tom		119
		120
		121
		122

		123
		124
		125
	Starship	126
		127
		128

For the UK

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in this mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

For Nordic Countries

Apparatus Containing Lithium Batteries

ADVARSEL!

Lithiumbatteri — Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VARNING!

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri — Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaiha paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Europe



This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

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 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

Unauthorized changes or modifications to this system can void the user's authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC Class B Limits.

For Canada

CLASS B

NOTICE

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Department of Communications.

CLASSE B

AVIS

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le Ministère Canadien des Communications.

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