MIDI DISK PLAYER

# MDP2

**Owner's Manual**
**Bedienungsanleitung**
**Mode d'emploi**
**Manual de instrucciones**

DISK ORCHESTRA UNIT

# DOU-10

**YAMAHA**

Congratulations and thank you for purchasing the MDP2 MIDI Disk Player / DOU-10 Disk Orchestra Unit!
The MDP2/DOU-10 is a small yet advanced device that combines a high-quality tone generator with versatile disk recording/
playback functions. It features a large selection of instrumental Voices and is compatible with a wide range of music software.

# Precautions

Your MDP2/DOU-10 is a sophisticated device and contains sensitive mechanisms and delicate digital circuitry. To ensure a long
lifetime of reliable service, observe these precautions when installing, moving and using it.

## LOCATION
Keep the instrument away from locations where it is likely to be
exposed to high temperatures (such as direct sunlight) or humid-
ity. Also avoid locations which are subject to excessive dust
accumulation or vibration which could cause mechanical dam-
age.

## USE THE CORRECT POWER SUPPLY
Use the recommended PA-5B (DC12V, 1.5A) Power Adaptor for
supplying power to the instrument. Use of another adaptor may
cause serious damage to the instrument or the adaptor itself.

## MAKE SURE POWER IS OFF WHEN MAKING OR
## REMOVING CONNECTIONS
To prevent damage to the instrument and other connected
equipment, always turn off the power prior to connecting or dis-
connecting cables. Also, turn the power off when the instrument
is not in use, and disconnect the power adaptor during electric
storms.

## HANDLE THE INSTRUMENT WITH CARE
Although the instrument has been constructed to withstand the
normal rigors of stage and studio use for optimum sturdiness and
reliability, avoid subjecting it to strong physical shocks (such as
dropping or hitting it). Since the MDP2/DOU-10 is a precision-
made electronic device, also avoid applying excessive force to
the various controls. When moving the instrument, first unplug
the power adaptor and all other cables to prevent damage to

cords and jacks. Always unplug cables by gripping the plug
firmly, not by pulling on the cable.

## CLEAN WITH A SOFT, DRY CLOTH
Never use solvents such as benzine or thinner to clean the in-
strument, since these will damage the cabinet finish or dull the
keys. Wipe clean with a soft, dry cloth. If necessary, use a soft,
clean cloth slightly moistened with a diluted, mild detergent –
making sure to wipe the case off again with a dry cloth.

## ELECTROMAGNETIC INTERFERENCE
Avoid using the unit near televisions, radios or other equipment
generating electromagnetic fields. Proximity to such equipment
may cause the unit to malfunction, and may generate interfer-
ence noise in the other appliance as well.

## DO NOT OPEN THE CASE OR TRY REPAIRING THE IN-
## STRUMENT YOURSELF
The instrument contains no user-serviceable parts. Never open
the case or tamper with the internal circuitry in any way, since
doing so may result in electrical shock or damage to the instru-
ment. Refer all servicing to qualified Yamaha service personnel.

## MIDI CABLES
When connecting the instrument to other MIDI equipment, be
sure to use only high-quality cables made especially for MIDI
data transmission. Also, avoid using cables longer than 15
meters, since long cables can result in data errors.

## FLOPPY DISKS AND THE DISK DRIVE

### Type of Disk
Use only 3.5-inch 2DD floppy disks.

### Disk Insertion and Removal
● To insert a floppy disk in the disk drive, hold the disk with the
label side facing up and the sliding shutter facing the disk drive
slot, then insert carefully until the disk clicks into place.
● To remove a floppy disk from the disk drive, make sure the
disk drive "in use" light is not lit and press the disk eject button
firmly as far as it will go and then, when the disk is full ejected,
remove it by hand.
    If the eject button is only partially pressed or pressed too
quickly the eject mechanism may not function properly, leaving
the disk stuck halfway. Do not attempt to remove the disk force-
fully if this happens, since excessive force can damage the disk
and/or the drive mechanism. Try either pressing the eject button
carefully again, or push the disk all the way back into the drive
and repeat the eject procedure.
● Never attempt to remove a floppy disk during a record or
playback operation!! This can corrupt the data on the disk, and
actually damage the disk drive!
● Be sure to remove the floppy disk from the disk drive before
turning off the power. A floppy disk left in the drive for extended
periods can easily pick up dust and dirt that may cause data
read/write errors.

### Clean the Read/Write Head Regularly
This instrument employs a precision magnetic read/write head
which, after an extended period of use, will pick up a layer of
magnetic particles from the disks used that will eventually cause
read and write errors. When particle build-up affects perfor-
mance, the MDP2/DOU-10 alerts you to clean the drive with a
"Clean Head!" message. To maintain the disk drive in optimum
working order we recommend that you use a commercially-
available Dry-type Head Cleaning Disk to clean the head about
once a month.

### Floppy Disk Handling and Storage
The actual recording medium inside a floppy disk has a fine
coating of magnetic particles in which the data is "stored". To
protect this coating as well as the disk drive's delicate read-write
head, please observe the following:
● Always keep floppy disks in their plastic case when they are
not in use. Never place heavy objects on a disk or bend the disk
in any way. Also keep disks away from liquids and dust.
● Never open the disk's shutter and touch the exposed surface
of the disk.
● Keep floppy disks away from strong magnetic fields such as
those produced by television sets, speakers, motors, etc.
● Never leave floppy disks in areas exposed to strong direct
sunlight, excessively high or low temperature, or high humidity.
● Never use a floppy disk with a deformed shutter or housing.
● Do not attach anything other than the provided labels to a
floppy disk. Also make sure that labels are attached in the
proper location.

### Protecting Your Data
● To prevent accidental erasure of important data you have
saved to floppy disk, be sure to slide the disk's write-protect tab
to the "write protect" position (the tab window should be open).
When this is done the disk cannot be written to.
● Make regular backup copies of important data to a separate
floppy disk, and keep your backup disks in a separate, safe
place.
● To ensure the safety of your data (and of the disk drive itself)
always use floppy disks from a well-known, reliable manufac-
turer. "No-brand" disks can cause trouble.

Yamaha is not responsible for damage caused by
improper handling or operation.

# The MDP2/DOU-10:
# What It Is and What It Can Do

## Tone Generator

The tone generator of the MDP2/DOU-10 provides a wealth of high-quality instrument Voices — 61 in the Disk Orchestra mode and 128 in the General MIDI mode. You can play any of these Voices from a connected MIDI keyboard, and use them with the sophisticated Song playback and recording functions of the instrument.

## Song Playback

The MDP2/DOU-10 can be used for high-quality playback of recorded performances (or Songs), both for your listening enjoyment and practice purposes. There is a vast selection of pre-recorded Songs by professional artists in many formats. Since the MDP2/DOU-10 is compatible with the Disk Orchestra Collection series and the PianoSoft series for the Disklavier, as well as General MIDI software, you have an incredibly broad variety of recorded material to choose from.

A variety of playback functions give you even more flexibility in playing and practicing with the Songs. For example, Muting and Minus One functions allow you to selectively take out an individual instrument Voice (or Part) and play it yourself — letting you play and practice with full musical accompaniment. You can do this with an acoustic instrument as well, or even connect another electric instrument (such as a guitar) to the rear panel of the MDP2/DOU-10 and play along with a Song on disk.

## Song Recording

The MDP2/DOU-10 is also a powerful creative tool, giving you extensive music production capabilities. It lets you create your own Songs by recording onto independent **Tracks**, each Track capable of playing back a different Voice. This lets you easily build up high-quality, sophisticated compositions and arrangements. In the Disk Orchestra mode, you have up to eleven different Tracks for recording; in the General MIDI mode, there are sixteen Tracks.

## More About Parts and Tracks

Practically speaking, the terms Part and Track refer to basically the same thing — an independent channel for playback and recording. When using the MDP2/DOU-10 as a tone generator and for Song playback, they are called Parts. When using it for recording, they are called Tracks. There are sixteen of these channels, each capable of playing a different Voice and each corresponding to one of the sixteen MIDI channels. (For more about MIDI, see page 20.)

# Table of Contents

## TOP PANEL



## FRONT PANEL



## REAR PANEL
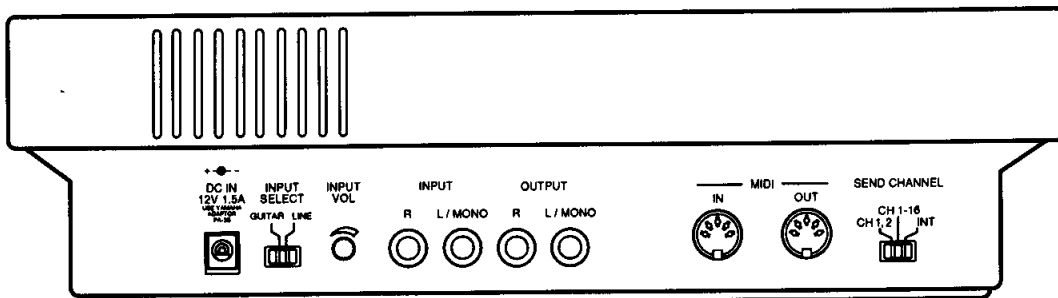
# Guided Tour

In this relatively short but very important section, you'll learn the basics of operating your MDP2/DOU-10. This will show you how to:
● Properly set up the instrument.
● Play back the internal Demo Song.
● Play back Songs on the included Demo Disk.
● Use some of the convenient playback functions.
● Record your own Songs.

Master the basics in this section, and you'll have the experience and know-how necessary to use any of the other more advanced functions covered later in the **Reference** section.

# Setting Up

## ▐1 Connect the PA-5B Power Adaptor.

### ★ CAUTION!
Use only a Yamaha PA-5B (DC12V, 1.5A) Power Adaptor to power your instrument from the AC mains. Use of other adaptors may result in irreparable damage to both the adaptor and the instrument.

## ▐2 Make all MIDI and audio connections.
Connect the MIDI terminals of the MDP2/DOU-10 to those on the MIDI keyboard (or Clavinova), as shown below. Also, make all audio cable connections, if you are using an amplifier/speaker system.
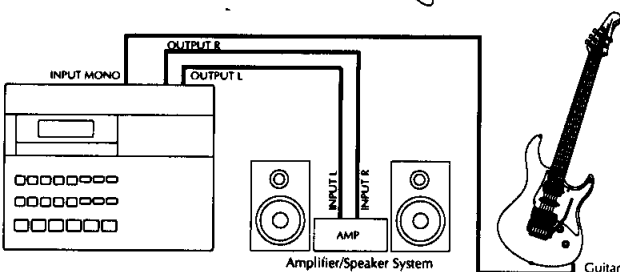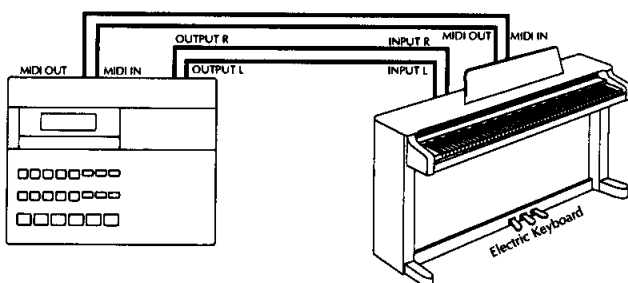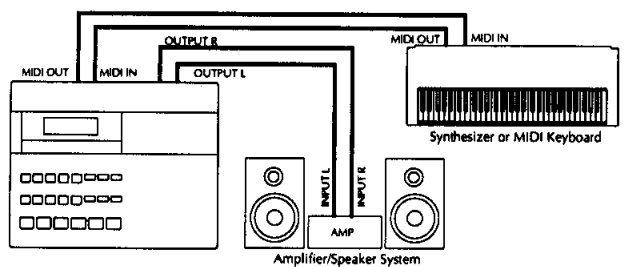
### ♪ NOTE
• If you will not be using the MDP2/DOU-10 to play sounds on the connected Clavinova/MIDI keyboard, there is no need to connect a MIDI cable to the MIDI OUT terminal on the instrument.
• If you are using a set of stereo headphones, simply plug those into the PHONES jack on the front panel.

POWER    VOLUME    PHONES    CONTRAST

• If you are using the MDP2/DOU-10 to only play back disks and will not be using a keyboard, simply make the audio connections described and ignore all instructions concerning the keyboard.

## ▐3 Set the SEND CHANNEL switch on the rear panel.

SEND CHANNEL

CH 1-16
CH 1,2 | INT
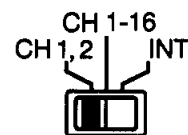
When set to **CH 1, 2** (default):
The performances recorded to channels 1 and 2 will be played on the MIDI keyboard, and those of all other channels will be played with the internal Voices on the instrument. We recommend using this setting for the Clavinova.

When set to **INT**:
All recorded performances will be played with the internal Voices on the instrument.

(For more information on the SEND CHANNEL switch and its uses, see page 21.)

## ▐4 Turn on the MIDI keyboard (or Clavinova), the connected amplifier/speaker system (if you are using one), and finally the MDP2/DOU-10.

**NOTE**
**Turn down all volume controls.**
To avoid damage to your equipment (and your ears!), make sure that the VOLUME control on the MDP2/DOU-10 and volume controls on any connected devices are set at or near the minimum – before you turn on the power.

**5** Bring up the volume controls on the connected audio equipment to a suitable level.

**6** Finally, while playing the connected keyboard, slowly bring up the VOLUME control on the instrument.
If you've followed all the above instructions carefully and correctly, you should hear one of the Voices of the instrument as you play the keyboard. Also, if you have connected an instrument to the INPUT jack(s), adjust the INPUT VOL control on the rear panel if necessary.

Look now at the PART/TRACK row in the display. One of the Part numbers should have a box around it that flashes when you play the connected keyboard:



This flashing box indicates that MIDI data is being received, and that the corresponding Part is being played. (A "Part" basically represents a separate instrument sound. For more information on Parts and how they are used, see page 2.)

## CONTRAST Dial (FRONT PANEL)

This is for adjusting the contrast of the display. Adjust this as necessary for optimum visibility.
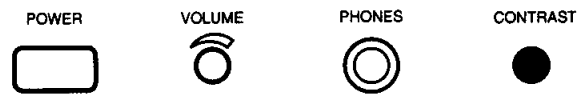


## Power Save Function

The MDP2/DOU-10 has a convenient Power Save function which automatically cuts power consumption when the instrument is on but not used for an extended time. If you leave it unused for about twenty minutes, the message "I'm sleepy" appears in the display, and pressing any button on the panel will restore the previous condition. However, if the instrument continues to remain unused for another minute or so, the message "I'm sleeping" appears, indicating that Power Save is on. Performing any operation in this condition "wakes" the MDP2/DOU-10 and restores the normal power on condition.

# |Playing the Demo Song and Disk

## Playing the Demo Song

Now that you've set everything up and have gotten some sound out of the instrument, try playing the built-in Demo Song.

**1** Making sure no disk is in the disk drive, press the DEMO button. (The Song starts playing back immediately.)
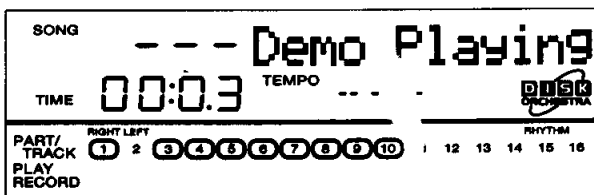




During playback, notice the boxes lighting around some of the Part numbers in the PART/TRACK row. These boxes flash or light to indicate that the corresponding Part number is being played.

**2** To stop the Demo Song, either press the DEMO button again or press the STOP button.



*Press DEMO or STOP to stop playback.*

♪ **NOTE**
• Playback of the Demo Song repeats indefinitely until it is stopped.
• The internal Demo Song is entitled "Lake Louise" and was composed by Yuhki Kuramoto.

# Playing the Demo Disk

Now, let's try playing some songs from the included Demo Disk.

**1 Insert the Demo Disk.**
When you turn the instrument on, the following display appears, prompting you to insert a disk.
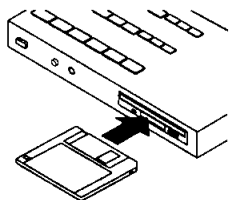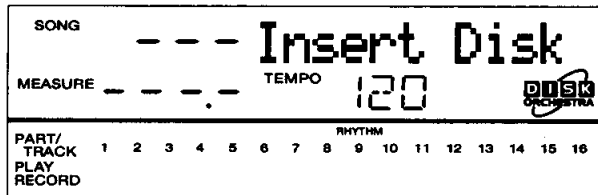




Insert the included Demo Disk slowly, gently pushing it all the way until the disk drive engages the disk. Also, wait briefly as the MDP2/DOU-10 reads data from the disk; dashes appear briefly in the display, followed by the name of the first song on the disk.

**2 Select a song.**
Use the **SONG/VOICE** buttons to select one of the thirty songs on the disk. Look through the song list (on page 31) as you select a song.



Song #1 is automatically selected when you insert the disk. If you want to play this song, skip to the next step.

🎵 **NOTE**
The Demo Disk includes both Disk Orchestra Collection and General MIDI Songs. When selecting a Song of either type, the corresponding logo appears in the display.

**3 Play the selected song.**
Press the **PLAY** button (▶) to start playback. (The **PLAY** lamp lights.) The selected song will play in its entirety and stop, unless stopped in the next step.



*Indicates current measure and beat. If Time is selected, this indicates the absolute time in minutes and seconds. (See page 16.)*
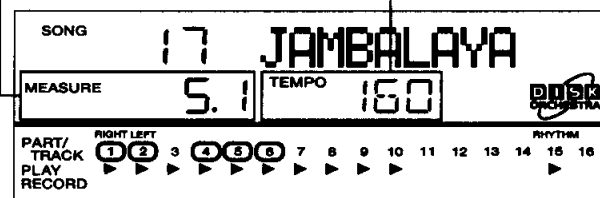
*Indicates current tempo.*



✪ **IMPORTANT**
To ensure that all Parts play back properly, check that the lamps above the **RIGHT**, **LEFT** and **OTHERS** Part buttons are lit. If not, press the corresponding buttons so that they do light. If no data has been recorded to the corresponding Part(s), the button lamp(s) will not light.

🎵 **NOTE**
The BEAT lamp flashes in time with the music. (A red flash indicates the first beat; other beats flash in green.)

**4 Stop the song.**
You can stop the song at any time by pressing the **STOP** button. (The **STOP** lamp lights.)



If you want to play the song again, simply press the **PLAY** button again. If you want to play a different song, go back to step 2 and select the desired song.

For more about playing songs and other playback operations, see **Song Playback** on page 14.

# Song Playback Functions

## Using the PAUSE, REW and FWD Buttons

Controlling the playback operations of the instrument is exceptionally easy, since the playback controls are the same type as found on conventional tape recorders. We've seen how to use the **PLAY** and **STOP** buttons above; now, we'll look at the other playback controls: **PAUSE**, **REW** and **FWD**.



**PAUSE**
**Press this during playback to pause the Song.** (Both the **PAUSE** and **PLAY** lamps light.) You can continue playback from the paused position by pressing **PAUSE** again or **PLAY**.

🎵 **NOTE**
•Pressing this when playback is stopped pauses playback at the beginning of the Song. (Both the **PAUSE** and **PLAY** lamps light.) Press **PAUSE** again or **PLAY** to start playback from the beginning of the Song.
•When pausing playback in the middle of a Song, received Key On messages will be ignored. However, the MDP2/DOU-10 properly responds to such messages when playback is started from the beginning of the Song.

## REW / FWD

● **Hold down REW to rewind continuously to the beginning of the Song.** (The Measure/Time indication in the display changes continuously as well.)

● **Hold down FWD to advance continuously to the end of the Song.** (The Measure/Time indication changes. Also, if you use this during playback, the sound is played back at high speed, allowing you to easily cue up to a desired point in the Song.)

**REW** and **FWD** can be used either during playback or when playback is stopped.

If used during playback, releasing either button causes playback to automatically start from that point. If used in the paused or stopped condition, releasing either button causes playback to automatically pause from that point. (Both the **PAUSE** and **PLAY** lamps light.)

# Muting Parts During Playback

While a Song is playing back, you can selectively take out (or mute) some of the instrument Voices or **Parts** of the Song. For example, this would allow you to mute a solo trumpet Part in a Song so that you could practice playing the solo trumpet instead.

**To mute a Part:**
**During playback, press the appropriate Part button: RIGHT, LEFT or OTHERS.** (The lamp goes out when the Part is muted, and the Play indication for the Part in the display flashes.)

The **RIGHT** button turns Part 1 on and off. The **LEFT** button turns Part 2 on and off. The **OTHERS** button turns all other Parts (3 - 16) on and off.

In the example below, the **RIGHT** button was pressed, muting Part 1.



*RIGHT button lamp is off.*
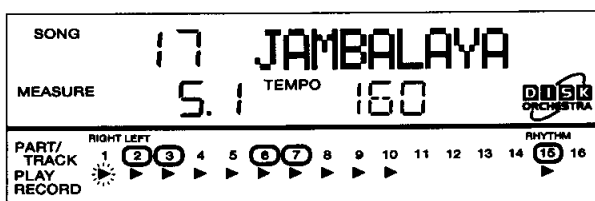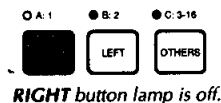


*Play indication for Part 1 flashes.*

🎵 **NOTE**
• Parts 1 and 2 can be independently muted or played, but Parts 3 - 16 can only be muted or played as a group. (However, any of Parts 3 - 16 can be reassigned to Parts 1 and 2; see Part Assign on page 14 for details)
• Many Disk Orchestra Collection and PianoSoft disks have been recorded with separate left- and right-hand Parts. With these disks, you can independently mute or play these Parts by using the coresponding **RIGHT** or **LEFT** Part button.

# Changing the Tempo

You can change the playback speed of a Song, either before playing it or while it is playing, by controlling the tempo. One good use for this is to slow down the tempo of a Song to make it easier to practice or play along with.

**To change the tempo:**

**1** Make sure the Song display is selected. (Press the **DISPLAY** button until "SONG" is shown in the upper left of the display.)
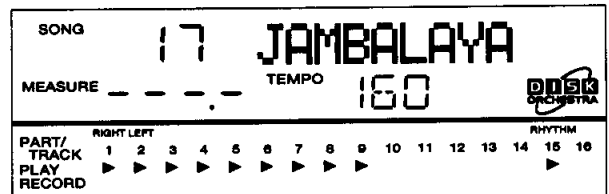


**2** Before or during playback, change the tempo setting by using the TEMPO/VOLUME buttons.



Holding down either button allows you to move rapidly through the values. The tempo range is from 32 - 280 bpm (beats per minute).

**Restoring the Original Tempo Setting**
Stopping the Song automatically restores the original tempo setting. You can also restore the original tempo setting instantly during playback by pressing both **TEMPO/VOLUME** buttons simultaneously.

When there is no recorded Song, the value here becomes 120 bpm.

🎵 **NOTE**
•Some Songs (including the internal Demo Song) have tempo changes within the Songs themselves.
•Also, some Songs may not have any tempo or beat indication.
•Be careful when playing songs having many tempo changes. If you rewind such a song and play it back again, it may not play back at the correct tempo.

# Changing Individual Voices and Their Volume

The MDP2/DOU-10 has a wealth of high-quality instrument Voices — 61 in the Disk Orchestra (**doc**) mode and 128 in the General MIDI mode. But it also gives you enormous flexibility in controlling these Voices. You can take over the role of arranger and orchestrator of the recorded Songs, changing the instrument Voices and adjusting their levels.

## To change a Voice and its Volume setting:

**1** Before or during playback, use the PART/TRACK ◀/▶ buttons to select a Part in the display.
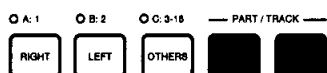
The display automatically changes to the Voice display, and the box indication appears around the selected Part number.
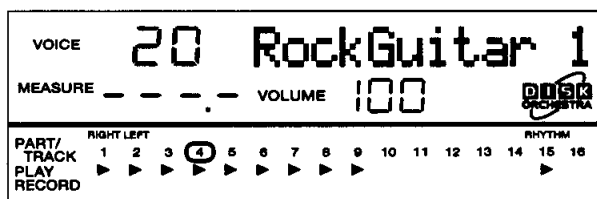
*In this example, Part 4 is selected.*
*The Voice name, number and the current Volume setting are shown.*

**♪ NOTE**
In the **doc** mode, only Parts 1 - 10 and 15 are available (15 is reserved for the Drum Kit). In General MIDI mode, all Parts 1 - 16 can be selected (10 is reserved for the eight Drum Kits).

**2** Change the Voice by using the SONG/VOICE buttons.
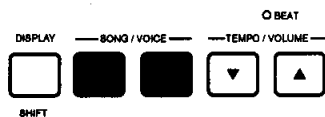
Holding down either button allows you to move rapidly through the Voice numbers. You can also jump through the Voice numbers in steps of ten by simultaneously holding down the **SHIFT** button and pressing the appropriate **SONG/VOICE** button (▼or ▲).

**3** Change the Volume setting by using the TEMPO/VOLUME buttons.

Hold down either button to move rapidly through the Volume settings. You can also jump through the values in steps of ten by simultaneously holding down the **SHIFT** button and pressing the appropriate **TEMPO/VOLUME** button (▼ or ▲). Volume range is from 0 to 127.

**Restoring the Original Voice and Volume Settings**
Stopping the Song automatically restores the original Voice and Volume settings. You can restore the original Voice setting even during playback by pressing both **SONG/VOICE** buttons simultaneously. You can restore the original Volume setting instantly by pressing both **TEMPO/VOLUME** buttons simultaneously.

# Muting a Specific Part — Minus One
# Listening to a Specific Part — Solo

These two convenient operations are different sides of the same coin. Minus One lets you mute a single Part, so that you can hear what the other Parts sound like without it. Solo, on the other hand, lets you listen to a single Part, by muting all other Parts.

Minus One in particular is ideal for practice purposes since it lets you play the Voice of the muted Part. For example, you could use Minus One to mute the melody Part in a Song, and then practice playing that Part yourself. Solo could also be used for practicing, letting you mute all but a certain Part that you want to play along with.

**♪ NOTE**
Minus One and Solo cannot be used at the same time. They also cannot be used during recording or recording standby.

# Minus One

**1** Press the MINUS ONE button. (The MINUS ONE lamp lights, and the display changes to the Voice display.)
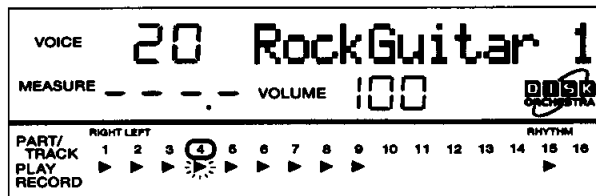
*Currently selected Part and Voice are shown.*
*Part Play indicator flashes, indicating that Part is being muted.*

Minus One is now active for the currently selected Part.

**2** If you wish to mute a different Part, use the PART/TRACK ◀/▶ buttons to select the Part.
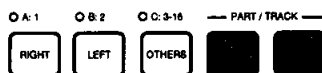
# Solo

**1** **Press the SOLO button.** (The **SOLO** lamp lights, and the display changes to the Voice display.)
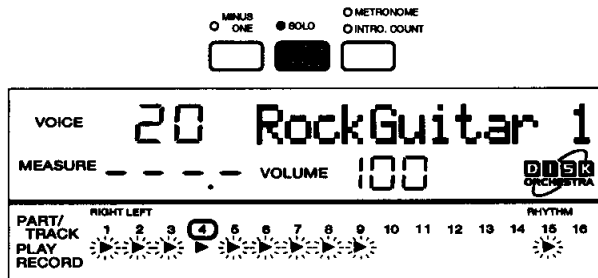




*Currently selected Part and Voice are shown.*
*Play indicator of selected Part is lit. All other Part Play indicators flash, indicating that those Parts are being muted.*

Solo is now active for the currently selected Part.

**2** **If you wish to solo a different Part, use the PART/ TRACK ◀/▶ buttons to select the Part.**
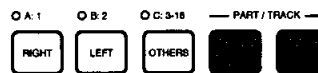


# Song Recording

The sophisticated and convenient recording features make the MDP2/DOU-10 an extremely powerful tool for capturing your own performances and creating your own fully orchestrated, multi-tracked songs.

## Formatting a Blank Disk

Before you can record, you'll need a blank floppy disk on which to save your recorded data. And before you can use a blank disk, it must be properly formatted.

🎵 **NOTE**
Before recording, you can select the Sound Module mode. (For information on selecting the Sound Module mode, see page 16.)

**1** **Insert a blank 2DD floppy disk.**
Disks that can be used are 2DD Double-density disks of 720K (9 sectors). Also make sure that the disk's write-protect tab is set to the "write enable" position. If it isn't, you won't be able to record.



Write Protect tab — Write Protect OFF
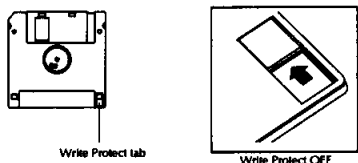
**2** **The Format operation is automatically called up when a blank or incompatible disk is inserted.** (The messages "Unformat Disk" and "Format Disk?" appear consecutively in the display, and the lamps of the **STOP** and **DISK FORMAT** buttons flash to indicate standby .)
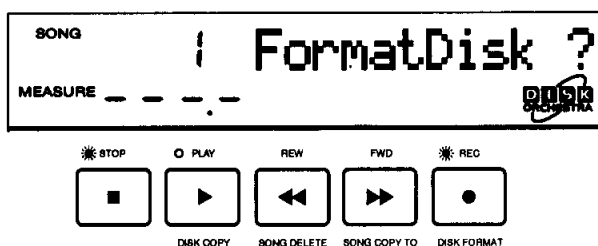




**3** **Press the DISK FORMAT button. When the "Are you sure?" message appears, press the DISK FOR-MAT button again.** (If you wish to cancel formatting, press the **STOP** button and eject the disk.)
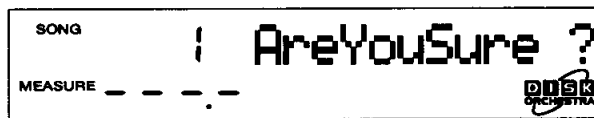


While the disk is being formatted, the display gives a rough indication of the time or disk space remaining, from 80 down to 0.

When 0 is reached, formatting is completed and the display returns to the Song display.

🎵 **NOTE**
For information on re-formatting a disk, see page 18.

## Recording a Song

Now that you have inserted a blank, properly formatted disk, you can begin recording. In the rest of this section, you'll learn how to record a Song.

Step by step, the basic operation is given below:

**1** **Select a Song number and press the REC button.**

**2** **Select the Track and Voice.**

**3** **If necessary, use Metronome or Intro. Count for a rhythmic guide.**

**4** **Set the time signature (Beat) and tempo.**

**5** **Start recording.**

As you record a Song for the first time, take care to follow these instructions carefully and in the order given.

## Measure/Time Display

Before recording you may want to change the Measure/Time display indication. Using Measure for the display is generally more useful when recording a Song. (See page 16 for instructions.)

**1 Select a Song number and press the REC button.**

Selecting a Song number isn't absolutely necessary if you've inserted a blank disk – in that case, Song number 1 will automatically be selected. Once you have some Songs recorded to a disk, though, you'll need to select a Song before recording.

**♪ NOTE**
Each floppy disk has memory space for up to 60 Songs and up to approximately 50,000 notes can be recorded. This number will vary, however, depending on the type of data recorded.

### Operation

1. Use the **SONG/VOICE** buttons to select a Song number.

Indicates selected Song has no recorded data. ─────┐

| SONG | ! |  |
|---|---|---|
| MEASURE | _ _ _._ | TEMPO |
| PART/TRACK | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 |  |
| PLAY |  |  |
| RECORD |  |  |
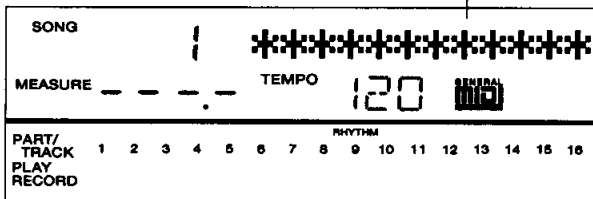
2. Press the **REC** button.
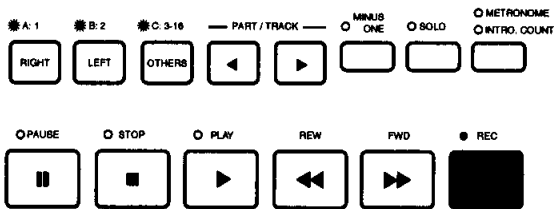
These lamps flash in red, indicating corresponding Tracks can be selected for recording, and the REC lamp lights.

**2 Select the Track and Voice.**

Since there are sixteen independent Tracks (or eleven, in the **doc** mode), you can record different instrument sounds (Voices) to these Tracks to create a complete Song.

### Operation

1. Press the **A**, **B** or **C** button corresponding to the Track you wish to record. For example, to record to Track 1, press **A**. To record to Track 2, press **B**.

| PART/TRACK | ① 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 |
|---|---|
| PLAY |  |
| RECORD | ☀ |
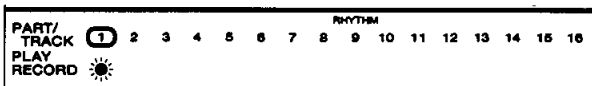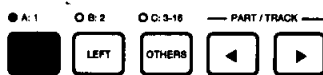
The lamp above the button you pressed lights continuously in red, and the RECORD dot in the display corresponding to the selected Track flashes. The PLAY lamp flashes to indicate recording standby.

Pressing **C** allows you to record to one of Tracks 3 - 16. Select one of these "Other" tracks by using the **PART/TRACK ◄/►** buttons.

**♪ NOTE**
In the **doc** mode, Tracks 11 - 14 and 16 cannot be selected for recording. (The RECORD dots of those Tracks in the display do not flash.)

You can cancel the Track selection here by pressing the **STOP** button. This also cancels recording standby, so if you want to re-select a Track for recording, you'll have press the **REC** button again first.

2. Now that you've selected a Track, select the Voice that will be recorded to it with the **SONG/VOICE** buttons.
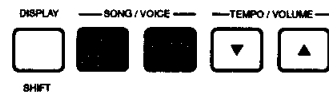
The newly selected Voice number and name are shown in the display.

**3 Use Metronome or Intro. Count for a rhythmic guide.**

The built-in Metronome and Intro. Count functions provide a rhythmic guide for you as you record. Intro. Count provides two measures of a click sound, leading in to the start of the recording. Metronome, on the other hand, provides a constant click, whether you're recording or not – making it also ideal for hearing the time signature and tempo settings you make in the next step.

The click is accented on the first beat of each measure so that you can easily hear the "one" (or the top of the measure). If you need to, you can also change the volume of the Metronome or Intro. Count click; see page 18.

### Operation
**To use Metronome:**
Press the **METRONOME/INTRO. COUNT** button so that the **METRONOME** lamp lights.

The click starts immediately, and continues throughout recording.

**To use Intro. Count:**
Press the **METRONOME/INTRO. COUNT** button so that the **INTRO. COUNT** lamp lights.

```
  MINUS        O METRONOME
O  ONE  O SOLO  ● INTRO. COUNT
┌───┐ ┌───┐ ┌───┐
│   │ │   │ │ ■ │
└───┘ └───┘ └───┘
```

The click starts as soon as you press the **PLAY** button to start recording (see "Start Recording" below). The click continues for two measures and continues throughout recording.
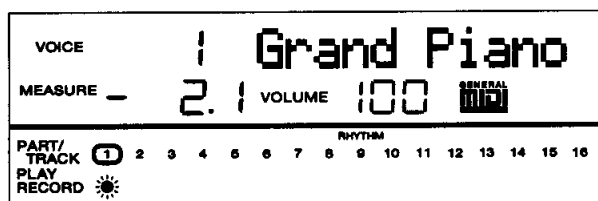
```
┌──────────────────────────────────────────┐
│ VOICE      ¦ Grand Piano                  │
│                                           │
│ MEASURE _    C.l  VOLUME ¦□□  ▓▓▓▓        │
│                                           │
│ PART/      ①  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
│ TRACK                      RHYTHM         │
│ PLAY                                      │
│ RECORD ☀                                  │
└──────────────────────────────────────────┘
```
*The Measure indication in the display counts down from -2.1 to the start of the Song.*

**To turn either Metronome or Intro. Count off:**
Press the **METRONOME/INTRO. COUNT** button so that both lamps are off.

🎵 **NOTE**
• If the Time display is selected, Intro. Count is not available.
• When Intro. Count is on, recording can only be started by pressing the **PLAY** button (and not by pressing a key on the connected keyboard).

**4 Set the time signature (Beat) and tempo.**
These settings are made just once, before you actually record. The default time signature is 4/4. If you plan on recording in 4/4, there is no need to set the time signature here.

❗ **HINT**
For ease in making the time signature and tempo settings, turn on the Metronome. It outputs a steady click (even when playback and recording are stopped) so that you can hear the settings you make. (See section above.)

**Operation**
1. While in recording standby, press and hold down the **DISPLAY** button for about three seconds, until the following display appears:

```
DISPLAY  ──SONG/VOICE──  ──TEMPO/VOLUME──
┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐
│ ■ │ │ ▼ │ │ ▲ │ │ ▼ │ │ ▲ │
└───┘ └───┘ └───┘ └───┘ └───┘
SHIFT
```

```
┌──────────────────────────────────────────┐
│ FUNCTION    ¦ Beat Setting                │
│                                           │
│ MEASURE _ _ _ _        Ч/Ч  ▓▓▓▓          │
│                DATA                       │
│ PART/      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
│ TRACK                      RHYTHM         │
│ PLAY                                      │
│ RECORD ☀                                  │
└──────────────────────────────────────────┘
```
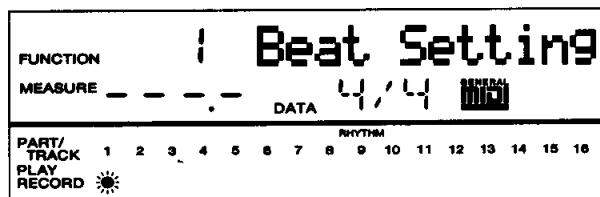
🎵 **NOTE**
If the "Quantizing" display appears instead, use the **SONG/VOICE** buttons to change it to "Beat Setting."

2. Use the **TEMPO/VOLUME** buttons to select the desired time signature.

```
DISPLAY  ──SONG/VOICE──  ──TEMPO/VOLUME──
┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐
│   │ │ ▼ │ │ ▲ │ │ ■ │ │ ■ │
└───┘ └───┘ └───┘ └───┘ └───┘
SHIFT
```

**Available time signatures:**
In General MIDI mode – 2/2, 1/4, 2/4, 3/4, 4/4, 5/4, 6/8, 9/8, 12/8
In **doc** mode – 2/4, 3/4, 4/4

🎵 **NOTE**
The time signature cannot be changed once a Track has been recorded.

3. Press the **DISPLAY** button to return to the Song display. From here, you can set the tempo by using the **TEMPO/VOLUME** buttons.

```
DISPLAY  ──SONG/VOICE──  ──TEMPO/VOLUME──
┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐
│ ■ │ │ ▼ │ │ ▲ │ │ ■ │ │ ■ │
└───┘ └───┘ └───┘ └───┘ └───┘
SHIFT
```

```
┌──────────────────────────────────────────┐
│ SONG       ¦  ♪♪♪♪♪♪♪♪♪♪♪♪♪             │
│                                           │
│ MEASURE _ _ _ _  TEMPO ¦C□  ▓▓▓▓          │
│                •                          │
│ PART/      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
│ TRACK                      RHYTHM         │
│ PLAY                                      │
│ RECORD ☀                                  │
└──────────────────────────────────────────┘
```
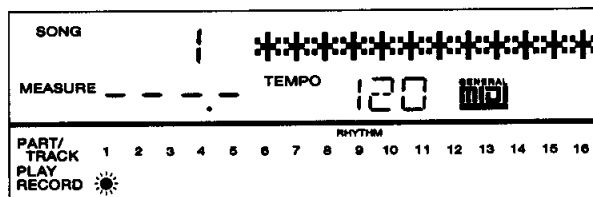
Tempo range: 32 - 280 beats per minute

**Set the Quantize value. (Optional)**
Quantize is an very useful and powerful function that helps you make rhythmically "tight" recordings — even if your playing isn't very tight. It automatically aligns notes to the nearest beat as you record.

You can also specify the beat resolution for this function. For example, you can set Quantize so that all the notes you play will be exactly on eighth-note beats.
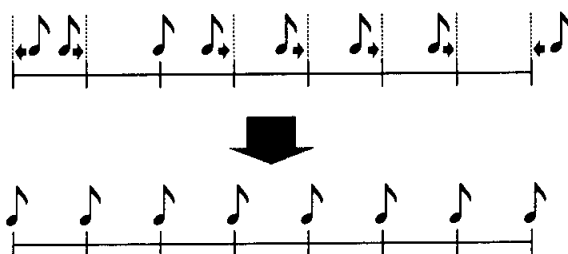


✴ **CAUTION!**
Keep in mind that the Quantize operation permanently and irretrievably alters your recorded performance. If you are not satisfied with the results of Quantizing, the only solution is to record the Track again, preferably without Quantizing. If needed, you can then use the Post-recording Quantize function that lets you Quantize a track **after** you've recorded it. (See page 20 for more information.)

## Operation

1. While in recording standby, press and hold down the **DISPLAY** button for about three seconds, until the following display appears:

```
FUNCTION        I Beat Setting
MEASURE _ _ _._    DATA  4/4  [GENERAL MIDI]

PART/
TRACK   1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16   RHYTHM
PLAY
RECORD ☀
```
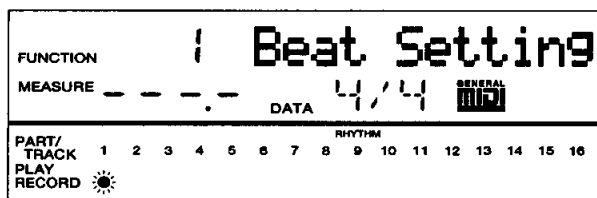
2. Use the **SONG/VOICE** buttons to select the "Quantizing" display.

```
FUNCTION        2 Quantizing
MEASURE _ _ _._    DATA  OFF  [GENERAL MIDI]

PART/
TRACK   1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16   RHYTHM
PLAY
RECORD ☀
```
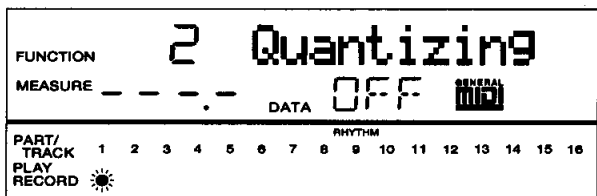
3. Use the **TEMPO/VOLUME** buttons to select the desired Quantize value.

### Quantize Values:
OFF: No quantization
1/4: Quarter-note
1/8: Eighth-note
1/12: Eighth-note triplets
1/16: Sixteenth-note
1/24: Sixteenth-note triplets
1/32: Thirty-second-note

🟠 **HINT**
Always use a Quantize value that is at least as short as the shortest notes you will be recording. For example, if you set the Quantize value to 8th notes but actually record 16th notes, some of the 16th notes will be aligned with the 8th note beats, thus ruining the recording.

🎵 **NOTE**
When recording is stopped, the Quantize value returns to the default setting of OFF.

### ⑤ Start recording.
Start recording by pressing the **PLAY** button. (Both the **PLAY** and **REC** lamps light continuously during recording.)

From recording standby, you can also start recording by playing a key on the keyboard. Recording starts immediately and automatically when you play the first note (or when the MDP2/DOU-10 receives any MIDI data).

Stop recording by pressing the **STOP** button.

Now that you've recorded your first track, press the **PLAY** button to hear it. You can go on and record additional Tracks to your new Song, while listening to the previously recorded Track(s). Do this by: 1) pressing the **REC** button 2) selecting the Track and Voice, and 3) starting recording by pressing the **PLAY** button.

Tracks with previously recorded data are indicated by triangles in the PLAY row of the display. (Other tracks are empty.) Try also using a different Voice for each Track to "fill out" the sound and create multi-instrument arrangements.

```
VOICE           35 Picked Bass
MEASURE _ _ _._    VOLUME  100  [GENERAL MIDI]

PART/   RIGHT LEFT                                  RHYTHM
TRACK   1 (2) 3  4  5  6  7  8  9  10 11 12 13 14 15 16
PLAY    ▶
RECORD  ●
```
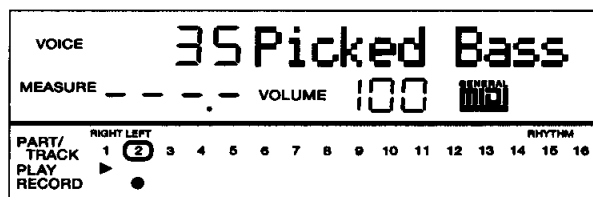
🔴 **CAUTION!**
Be careful in recording when one or more Tracks have already been recorded. If you select a previously recorded Track for recording, the previous data will be completely erased and replaced by the new material. (For more on recording and other recording methods, see page 17.)

🟠 **HINT**
You can also use the **PAUSE** button during recording. Press it once while recording a Track to pause recording, and press it again (or play a key on the keyboard) to resume recording from where you left off.

🎵 **NOTE**
The performance you've recorded is automatically given a Song name: "Song No. ##" (## = number of Song). If you wish, you can assign a different name to the Song; see page 16.)

# Reference

The Reference section is a comprehensive guide to all the functions of the MDP2/DOU-10. You won't need or want to read all of it at once, but it is there for you to refer to when you need information about a certain feature or function.

## Song Playback

For instructions on basic Song playback operations, refer to the section **Playing the Demo Disk** on page 7.

**Compatible disks** include: Clavinova Disk Orchestra Collection (**doc**) disks, General MIDI (**GM**) disks, and PianoSoft disks for the Disklavier piano. When the Songs on disk are of the General MIDI or PianoSoft type, the General MIDI logo appears in the display and the General MIDI mode is automatically selected. When the Song type is Clavinova Disk Orchestra Collection (**doc**), the display shows the Disk Orchestra logo and the **doc** mode is automatically selected. Compatible file types include Standard MIDI File (format 0) and ESEQ (MS-DOS format, 720 K, 9 sectors). (However, Songs of the last two types may not be correctly played back if "GM on" or "doc on" messages have not been recorded with the files.)

When the disk has no recorded songs, the following display appears:
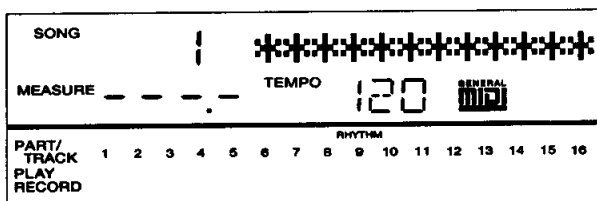


When a song is selected, the following data is reset, according to the song's settings:
- Track on/off
- Part on/off
- Voices
- Tempo
- Minus One and Solo are automatically set to off

## Part Assign

This operation lets you override the default Part assignments (shown below), and assign whichever Parts you like to the **A**, **B** and **C** buttons. Re-assigning Parts according to your own preferences allows you quickly to mute and un-mute those Parts you use most often.

**Part Assign Default Settings**
Part 1: **A**
Part 2: **B**
Parts 3 - 16: **C**
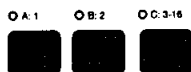


⊘ **CAUTION!**
You should keep notes on the Part Assign settings you make, to avoid confusion and inadvertent erasing of Parts during recording.

🌢 **NOTE**
Part Assign can also be used in Multi-track recording. (See page 18 for details.)

**Operation**
First, select the Part you wish to re-assign by using the **PART/TRACK** buttons. Then, while playback is stopped, simulta-

neously hold down the **SHIFT** button and press the appropriate Part button, **A**, **B** or **C**. (The lamp of the selected Part button lights.)

**To check the current Part Assign settings:**
Select the desired Part, then hold down the **SHIFT** button; the lamp of the assigned Part button lights.

To assign additional Parts to the same button, repeat the operation.

## Repeat Playback Functions

The Repeat Playback functions allow you to repeat specific sections of a Song, an entire Song, or all Songs on a disk. These functions are:
- A-B Repeat
- Phrase Repeat
- Song Repeat



🌢 **NOTE**
The A-B Repeat, Phrase Repeat and Song Repeat functions cannot be used simultaneously.

### ■ A-B Repeat
A-B Repeat lets you specify a certain section in a Song, and repeatedly play it back. This is especially useful for practicing, allowing you to concentrate on a certain passage until you "get it right."

**Operation**
1. During playback or while playback is paused at the desired start point, press the **A-B REPEAT** button to mark the "A" position. (The **A-B REPEAT** lamp flashes.)

2. When playback reaches the desired end point, press the **A-B REPEAT** button again to mark the "B" position. (The **A-B REPEAT** lamp lights continuously.) Repeat playback of the marked section begins immediately. You can use the transport buttons to control playback.

The "A" and "B" points can only be set at measure boundaries, and not in the middle of a measure.

🌢 **NOTE**
As long as the **A-B REPEAT** lamp is lit, A-B Repeat is active, and all transport buttons (except **REC**) can be used. However, you cannot move to positions in the song before point "A" or beyond point "B."

3. You can cancel A-B Repeat by pressing the **A-B REPEAT** button again while playback is stopped or paused. (The **A-B REPEAT** lamp goes out.) Pressing the button **during** playback also cancels A-B Repeat; however, normal playback continues. A-B Repeat can also be canceled automatically by changing the Song.

**Marking Only the "A" Point**
In a variation of A-B Repeat, you can mark only the "A" point in a Song. This provides a convenient "memory return" function, as found on many tape decks.

To do this, simply set the "A" point as described in step 1, without setting the "B" point. (The **A-B REPEAT** lamp should stay flashing.) During playback, you can instantly return to "A" and start playback from that point by pressing the **STOP** button and then **PLAY**.

## ■ Phrase Repeat

Phrase Repeat, like A-B Repeat, allows you to repeat specified sections of a Song. This function is designed for use with the Clavinova Disk Orchestra Collection disks, and can only be used with Songs which have pre-programmed Phrase Marks. (Phrase Marks cannot be set on the MDP2/DOU-10 itself.)

### Operation

1. With playback stopped (and the **A-B REPEAT** lamp off), press the **PHRASE REPEAT** button. (The lamp lights.) Then, select the desired Phrase Number by using the **TEMPO/VOLUME** buttons.

> **♪ NOTE**
> If the disk has no Phrase Marks, the message "No Phrase Mark" appears in the display when the **PHRASE REPEAT** button is held down.

2. Press the **PLAY** button to start playback. The selected Phrase will play back repeatedly.

> **♪ NOTE**
> As long as the **PHRASE REPEAT** lamp is lit, Phrase Repeat is active, and all transport buttons (except **REC**) can be used. However, you cannot move to positions in the song before or after the selected Phrase Marks.

3. You can cancel Phrase Repeat by pressing the **PHRASE REPEAT** button again while playback is stopped or paused. (The **PHRASE REPEAT** lamp goes out.) Pressing the button **during** playback also cancels Phrase Repeat; however, normal playback continues. Phrase Repeat can also be canceled automatically by changing the Song.

## ■ Song Repeat

Song Repeat allows you to easily repeat playback of the selected Song or Songs.

### Operation

1. Make sure a disk is in the disk drive, and press the **SONG REPEAT** button. (One of the Repeat modes is called up and the **SONG REPEAT** lamp lights.) Select the desired mode of Repeat Playback with the **TEMPO/VOLUME** buttons.

| | |
|---|---|
| **All Repeat –** | Repeatedly plays back all Songs on disk in original order. |
| **Single Repeat –** | Repeatedly plays back the currently selected Song. |
| **Random Repeat –** | Repeatedly plays back all Songs on disk in a random order. (The order changes with each repetition.) |

2. Start playback by pressing the **PLAY** button. The Songs (or Song) repeat indefinitely until the **STOP** button is pressed.

> **♪ NOTE**
> • The Part Muting, Minus One and Solo functions can all be used during Song Repeat.
> • Pressing the **SONG REPEAT** button has no effect during recording or recording standby.

3. Cancel Song Repeat by pressing the **SONG REPEAT** button again. (If you cancel during playback, the lamp goes out and the current Song continues to play back normally.)

## Using the INPUT Jacks

The stereo INPUT jacks on the rear panel allow you to mix the audio output of another instrument with the sound of the MDP2/DOU-10. For example, you can play an electric guitar while a Song is playing back, and hear everything from the outputs of the MDP2/DOU-10. In another application, you could connect a CD player or cassette deck to the inputs and play the Voices of the instrument along with your favorite recorded music.

### Operation

1. With all relevant volume/level controls turned down, connect the external instrument to the INPUT jack(s). If the instrument only has one output, connect it to the L/MONO jack.

2. Set the INPUT SELECT switch to the appropriate position (GUITAR for guitars and low level signals, LINE for line level signals, such as keyboards). Play the instrument and slowly turn all volume/level controls (including INPUT VOL on the rear panel) up to an appropriate listening level.

## Playback Functions

The Playback functions of the instrument allow you to set various functions, such as key transposition (as recorded to disk), tuning, Reverb type, Song name, amount of playback delay, and others. Among these, Reverb, Sound Module mode and Song name can be saved independently for each Song on a disk.

### Operation

1. Call up the Playback function pages (during playback or when playback is stopped) by pressing and holding down the **DISPLAY** button for about three seconds. (The display changes to the Function display.)

2. Select the desired Playback function (1 - 8) by using the **SONG/VOICE** buttons.

**Playback Functions**
1: Disk Transpose
2: Tuning
3: Reverb
4: Key Delay
5: Touch Change
6: Measure/Time Display
7: Sound Module Mode
8: Song Name

> **♪ NOTE**
> Functions 6, 7 and 8 can only be changed when playback is stopped. Function 7 can only be selected for Song numbers having no data.

3. Make the desired setting (shown next to "DATA" in the display) for the selected function by using the **TEMPO/VOLUME** buttons.

4. To exit from the Playback function pages, press either the **DISPLAY** button or the **STOP** button.

### ■ 1 – Disk Transpose
**Settings: +/- 6 semitones**
**Default: 0**

This determines the playback key (pitch) of all tracks (excepting those using the drum kits). The most common use of Disk Transpose is to change the key of recorded tracks to match a vocalist or another instrument.

Disk Transpose has no effect on the internal Voices when simply using a MIDI keyboard to play the MDP2/DOU-10 as a sound module. However, it does change the key of incoming MIDI data being recorded to disk – by the same amount but in the opposite direction of the Disk Transpose setting (see below). In this way, the transposed tracks will playback in the same key that you played them when recording.

**MIDI**
IN  OUT

-3  +3

Sequencer    Sound Module
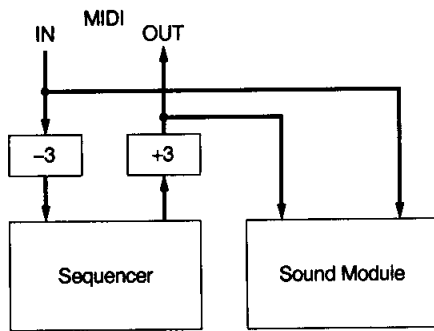
> **NOTE**
> The Disk Transpose setting has no effect on Parts using any of the drum kits.

## ■ 2 – Tuning
**Range: 415 - 466 Hz (+/- 100 cents)**
**Default: A3 = 440 Hz**

This determines the fine pitch setting of the internal Voices. The total adjustable range is 100 cents, or one semitone. When the power is turned on, this is automatically set to the default of A3 = 440. You can also restore the default setting by simultaneously pressing both **TEMPO/VOLUME** buttons.

## ■3 – Reverb
**Settings: 1 (Off), 2 (Room), 3 (Hall 1), 4 (Hall 2), 5 (Cosmic)**
**Default: 4 (Hall 2)**

This determines the type of Reverb effect applied to the internal Voices. Reverb reproduces the characteristic ambient sound of several different performance environments and adds depth and warmth to the sound.

**Off** – No Reverb effect.
**Room** – Simulation of a medium-size room.
**Hall 1** – Simulation of a medium-size concert hall.
**Hall 2** – Simulation of a large concert hall.
**Cosmic** – Special reverb/delay effect.

> **NOTE**
> When a Song on disk has a recorded Reverb setting, that takes priority over any setting made on the instrument itself.

## ■ 4 – Key Delay
**Range: OFF, 5 - 500 ms (adjustable in 5-millisecond steps)**
**Default: OFF**

This allows you to delay the internal Voice output of the instrument. Key Delay is specifically designed for use with acoustic/MIDI instruments that have a slight playback delay, such as the Yamaha Disklavier Piano. Adjusting the Key Delay to an appropriate value allows you to synchronize playback of the internal Voices with such instruments.

> **NOTE**
> When a delay is set here, the measure display and the flashing of the beat lamp will be out of synchronization with the playback sound.

## ■ 5 – Touch Change
**Settings: ON, OFF**
**Default: OFF**

This is a special function which modifies the note velocity values of data played back from Disk Orchestra Collection and

PianoSoft disks to match the velocity response of certain Clavinova models. Touch Change should be set to ON when using such disks with the following models: CLP-20, CLP-30, CLP-50, CLP-100, CLP-200, CLP-300, CLP-500, CVP-3, CVP-5, CVP-6, CVP-7, CVP-8 and CVP-10.

Touch Change is automatically set to OFF when the power is turned on.

## ■ 6 – Measure/Time Display
**Settings: 1 (Measure), 2 (Time)**
**Default: 1 (Measure)**

This determines how elapsed time of a Song is displayed: in beats and measures, or in absolute time. This can only be changed when playback is stopped.

## ■ 7 – Sound Module Mode
**Settings: doc, GM**
**Default: GM**

This determines which mode of the internal Voices is used in recording. The modes are:

**doc – Disk Orchestra Collection**
   • Voices and Drum Kit are set to Disk Orchestra Collection (see pages 25 and 26)
   • Available Parts: 1 - 10, 15 (15 is reserved for drums)
**GM – General MIDI**
This mode is compatible with General MIDI system level 1.
   • Voices and Drum Kit are set to General MIDI (see pages 25 and 26)
   • Available Parts: 1 - 16 (10 is reserved for drums)

> **NOTE**
> The Sound Module mode can only be set for Songs having no recorded data, and only when playback is stopped.

If no disk has been inserted, General MIDI (GM) is automatically selected when power is turned on. However, this automatically changes to Disk Orchestra Collection (**doc**) when playing the internal Demo Song.

## ■ 8 – Song Name
This function allows you to assign a name to a Song, of up to eight characters in length.

**Operation**
1. From the "Input Name ?" or "Rename ?" display, press one of the **TEMPO/VOLUME** buttons. (When the selected Song has no name, the "Input Name ?" display appears; when the selected Song already has a name, the "Rename ?" display appears.)

2. The display changes to allow input of the name. Use the **SONG/VOICE** buttons to move the cursor to the desired character position.

**DETAIL**
If the Song has no previously assigned name, it is displayed as "Song No. ##" (## = actual number).

3. Use the **TEMPO/VOLUME** buttons to select a character at the current cursor position. (Changing a character causes the **REC** and **STOP** lamps to flash.)

The available characters are listed below:

```
0123456789
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
!"#$%&'()*+,-./:;<=>?[¥]^_`{|}←→
アイウエオカキクケコサシスセソタチツテトナニ
ヌネノハヒフヘホマミムメモヤユヨラリルレロワン゛゜
ー。「」、・ワアイウエオヤユヨツ
```

4. Repeat steps 2 and 3 above until the entire Song name has been entered. Press the **REC** button to save your new Song name, or press the **STOP** button to cancel.

🎵 **NOTE**
Song Name can only be used when the inserted disk is set to write enable, and when playback is stopped.

# Song Recording

For instructions on basic recording operations, refer to the section **Recording a Song** on page 10.

## Additional Recording Operations

In addition to the basic recording operation, there are other methods of re-recording performances on existing Tracks: Overwrite, Punch-in, Overdub. A Multi-track recording function is also available for simultaneously recording to more than one Track.

🎵 **NOTE**
Re-recording (or editing) can only be done to Song data actually recorded on a MDP2/DOU-10 or data copied from a doc disk. Also, to record there must be enough remaining space on the disk (equal to the amount of data of the Song itself). Check the remaining disk capacity (page 20) before re-recording or editing.

## Overwrite Recording

Overwrite recording completely replaces any performance on the selected Track with the newly recorded performance.



Recording started    Recording stopped
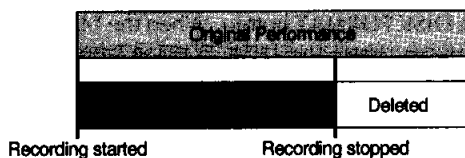
### Operation
Set recording to standby (in the stopped condition) by pressing the **REC** button and select the Track you wish to overwrite. Then press the **PLAY** button (or a key on the keyboard) to start recording, and record the new performance. Press the **STOP** button to stop recording.

✪ **CAUTION!**
Keep in mind that all recorded data that was originally in the Track is completely replaced with the newly recorded performance. This means that even if you stop recording midway through a Track, even the original data after the point you stopped recording is erased.

❶ **HINT**
Overwrite recording can also be used to quickly erase all data from a Track. To do this, simply start recording as described above and press the **STOP** button without playing any notes on the connected keyboard.

## Punch-in Recording

Punch-in recording lets you record over a specific section of a recorded Track – without erasing other sections of the Track.



Recording started    Recording stopped
(punch-in point)    (punch-out point)

Newly recorded performance after Punch-in
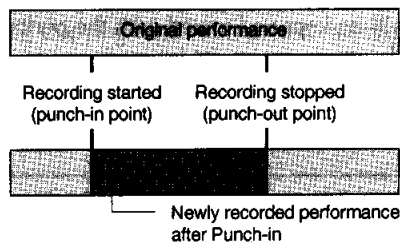
Punch-in recording is handy, for example, when you need to fix a small mistake in a Track that is otherwise fine, or when you want to change just a couple of measures of a Track without having to record the whole Track over again.

### Operation
1. Cue up (locate) the point in the Song at which you want to start Punch-in recording and pause playback at that point.

You can do this by playing back the Song normally and pressing the **PAUSE** button at the proper point, or by using the **REW** and **FWD** buttons (which automatically set operation to pause when released, when used in the paused or stopped condition).

2. Set recording to standby (in the paused condition) by pressing the **REC** button and select the Track for recording. Then, press **PLAY** or **PAUSE** (or a key on the keyboard) to start recording, and record the new performance. Press the **STOP** button at the point you wish to "punch out" or stop recording.

✪ **CAUTION**
Keep in mind that Punch-in recording erases all previous notes of a performance that occur between the punch-in and punch-out points. Notes which start outside these points are kept.

## Overdub Recording

Overdub recording allows you to record to a Track without erasing the previously recorded performance. Overdub is particularly useful for recording rhythm parts, since it lets you record additional drum and percussion sounds "over" previous ones, allowing you to easily build up complex rhythm patterns.



Previously recorded performance

Overdubbed performance

Resulting Track
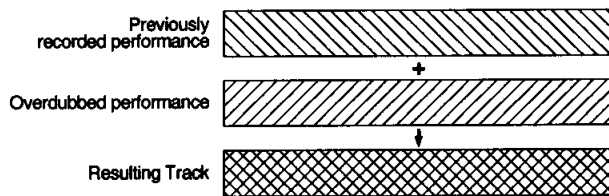
### Operation
1. Set recording to standby (in the stopped condition) by pressing the **REC** button and select the Track for Overdub recording. (The Track must have previously recorded data.)

The PLAY and RECORD indicators for the selected Track in the display alternately flash, indicating the Overwrite recording mode.
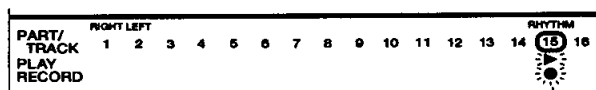


These both flash to indicate Overwrite recording.

2. Press the **REC** button again to enable Overdub recording.

The PLAY indicator is now lit continuously while the RECORD indicator flashes, indicating that the previously recorded performance will be kept and mixed with the performance to be overdubbed.
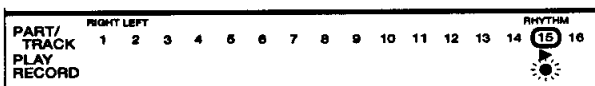


*PLAY indicator lights continuously and RECORD indicator flashes to indicate Overdub recording.*

3. Press the **PLAY** button (or a key on the keyboard) to start recording, and record the new performance. Press the **STOP** button to stop recording.

**🎵 NOTE**
• Only note on/off data can be recorded in Overdub recording. Other data such as program changes and volume data cannot be overdubbed, except at the very beginning of the overdub point. To replace that data, press the **REC** button again a third time after step 2 above.
• For **doc** Songs, if you set a new tempo value for the start of the Song, all tempo changes within the Song will be automatically reset relative to the starting tempo value (relative tempo). For General MIDI Songs, the tempo changes within the Song remain as they were recorded (absolute tempo).

**✪ CAUTION!**
You should try to avoid overdubbing the same note (key) at around the same time; the original note durations may change as a result.

## Multi-track Recording

Multi-track recording allows you to simultaneously record performances to more than one Track. For example, with a properly equipped MIDI keyboard, you can simultaneously record your left hand's performance to one Track and your right hand's to a separate Track. Or you could record the same keyboard performance to several different Tracks at once, for a unison layer of several different Voices. This feature also lets you record rhythm styles from keyboards such as the Yamaha PSR-series in a single pass.

In Multi-track recording all Tracks are recorded according to the corresponding MIDI channels of the incoming data. In other words, data received from the connected keyboard on MIDI channel 1 is recorded to Track 1, data received on channel 2 is recorded to Track 2, and so on.

Multi-track recording can be done in two different ways. Use Operation A below when you want to assign a specific number of Tracks for recording. Operation B is for simultaneous recording to all sixteen Tracks (or eleven tracks, in the case of **doc** mode).

**✪ CAUTION!**
Keep in mind that all previously recorded data in the selected Tracks will be replaced with the newly recorded performance. Be especially careful when using Operation B below, since this erases previously recorded data on all sixteen (or eleven) Tracks.

**Operation A**
1. Assign the Tracks to be recorded by pressing one of these buttons: **A:1**, **B:2** or **C:3-16** (default). (Refer to **Part Assign** on page 14 for instructions on assigning Tracks.) Press the **REC** button. Then, press the appropriate button to which the Tracks have been assigned, to select those Tracks.

2. Simultaneously press both **PART/TRACK ◄/►** buttons. All assigned Tracks are now selected for recording. The lamps of the assigned buttons light in orange to indicate Multi-track recording.

3. Press the **PLAY** button (or a key on the keyboard) to start recording, and record the new performance. Press the **STOP** button to stop recording.

**Operation B**
1. Press the **REC** button.

2. Simultaneously press both **PART/TRACK ◄/►** buttons. All Tracks are now selected for recording.

3. Press the **PLAY** button (or a key on the keyboard) to start recording, and record the new performance. Press the **STOP** button to stop recording.

**❶ HINT**
Punch-in and Overdub recording can also be used with Multi-track recording, after step 2 above. (Follow the instructions in those respective sections, on page 17.)

## Changing the Level of Metronome and Intro. Count

The click level of the Metronome and Intro. Count functions (explained on page 11) can be adjusted. To do this, first simultaneously hold down the **SHIFT** button and press the **METRONOME/INTRO. COUNT** button, then adjust the level by using the **TEMPO/VOLUME** buttons. The range is 0 - 127. Press the **SHIFT** button again or the **STOP** button to return to the previous display.

## Disk/Song Operations

The disk- and song-related operations of the instrument are:
• Disk Format (Re-formatting)
• Disk Copy
• Song Copy
• Song Delete
• Post-recording Quantize

**■ Disk Format**
This operation allows you to re-format a MDP2/DOU-10 formatted disk.

**Operation**
1. Insert a previously formatted disk. (Blank or incompatible disks automatically call up the Format operation.) Then, simultaneously hold down the **SHIFT** button and press the **DISK FORMAT** button. (The "Format Disk?" message appears and the lamps of the **STOP** and **DISK FORMAT** buttons flash to indicate standby.)

2. Press the **DISK FORMAT** button. When the "Are You Sure?" message appears, press the **DISK FORMAT** button again to start formatting or press the **STOP** button to cancel.

While the disk is being formatted, the display gives a rough indication of the time or disk space remaining, from 80 down to 0.
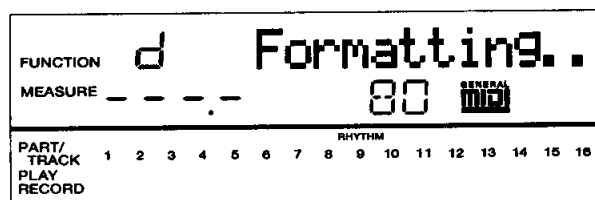


When 0 is reached, formatting is completed and the display returns to the Song display.

**Disks that can be formatted:**
Use only 2DD Double-density disks of 720K (9 sectors). Also, make sure that the write-protect tab is set to the "Write Protect" or "Write Enable" position.

## ■ Disk Copy

This operation allows you to copy all the data on one disk to another disk. Make sure that the destination disk has been properly formatted (see **Disk Format**, page 18) and that the disk has no data you wish to keep. (All data on the destination disk is erased and replaced with the source disk's data.)

### Operation

1. Set the write-protect tab of the source disk (the one with the data to be copied; referred to as "Disk A") to the "Write Protect" position.

2. Insert the source disk (Disk A). Keep the destination disk (Disk B) handy; you'll be alternately inserting it and disk A later.

3. Simultaneously hold down the **SHIFT** button and press the **DISK COPY** button. (The "Disk Copy A to B" message appears and the lamps of the **STOP** and **REC** buttons flash to indicate standby.)

4. Press the **REC** button to start copying, or the **STOP** button to cancel.

5. For the remainder of the operation, follow the prompts on the display. You should:
a. Eject Disk A after a portion of the data is read.
b. Insert Disk B to copy the data.
c. Eject Disk B after the data has been copied.
d. Reinsert Disk A to start the process again for the next portion of data.

> ✪ **CAUTION!**
> Be extremely careful not to confuse Disk A with Disk B in the above process. You may inadvertently erase or corrupt important data by mixing up the two disks. To avoid erasing data on the source disk (Disk A), we recommend that you first set the write-protect tab of that disk to the "Write Protect" position (in step 1 above).

6. Repeat the process (a. - d.) in step 4 several times, until all data has been copied from Disk A to Disk B. (A "Completed" message appears and the display returns to the Song display.

> ♪ **NOTE**
> •Depending on the amount of data to be copied, the floppy disks may have to be changed ten or more times before all data is copied. Carefully follow the instructions in the display during the operation.
> • Disk Copy does not function when the destination disk (Disk B) is write-protected. Set the write-protect tab on the disk to the "Write Enable" position, then try the operation again.
> • During the copying operation, a number is shown in the display, counting down from 80 to 0.
> • To cancel the copy operation, press the **STOP** button. (A "Copy Canceled" message appears in the display.)

## ■ Song Copy

This operation allows you to copy the data of a selected song to another song number on the same disk, or one on another disk. The destination song number must be empty (no recorded data).

### Operation

1. With an appropriate disk in the drive, select the source Song number (the Song whose data you wish to copy), using the **SONG/VOICE** buttons.

2. Simultaneously hold down the **SHIFT** button and press the **SONG COPY TO** button. (The "Song Copy To ##" message appears and the lamps of the **STOP** and **REC** buttons flash to indicate standby.)

3. Select the destination Song number with either the **TEMPO/VOLUME** buttons.

4. Press the **REC** button to start copying, or the **STOP** button to cancel. ("Song Copying" and "Completed" messages will appear in the display during and after the operation.)

When the operation is completed, the display returns to the Song display.

> ♪ **NOTE**
> If you attempt to copy a Song to a disk which already has data for all 60 Songs, a "No Empty Song" message appears in the display. Copy the Song to another disk (see below).

### Copying to Another Disk (Optional)

If you are copying to another disk, go through steps 1 and 2 above, then follow these instructions:
1. Eject the disk with the source Song (Disk A).
2. Insert the destination disk (Disk B), and select the destination Song number.
3. Press the **REC** button to start copying. (or **STOP** to cancel).
4. Eject Disk B (as prompted in the display).
5. Insert Disk A, then eject it (as prompted) after a portion of the data is read.
6. Insert Disk B to copy the data, then eject it (as prompted) after the data has been copied.
7. If necessary, reinsert Disk A to start the process again for the next portion of data.
8. Follow the prompts on the display, repeating the process (steps 5 - 7) as many times as necessary, until a "Completed" message appears.

> ♪ **NOTE**
> •Song Copy does not function when the disk is write-protected. Set the write-protect tab on the disk to the "Write Enable" position, then try the operation again.
> •When attempting to copy Songs from Disk Orchestra Collection disks, Parts 1 and 2 cannot be copied. Also, "third generation" copies cannot be made; in other words, a copy can be made of the original disk, but a copy cannot be made of the copied disk.

## ■ Song Delete

This operation allows you to delete the recorded data of a selected song. (The selected song number must have recorded data in order for the operation to function.)

### Operation

1. With an appropriate disk in the drive, select the song number you wish to delete, using the **SONG/VOICE** buttons.

2. Simultaneously hold down the **SHIFT** button and press the **SONG DELETE** button. (The "Delete Song?" message appears and the lamps of the **STOP** and **REC** buttons flash to indicate standby.)

3. Press the **REC** button to start deleting the song, or the **STOP** button to cancel. (A "Deleting..." message appears in the display during the operation. When the operation is completed, the display returns to the Song display.)

> ♪ **NOTE**
> Song Delete does not function when the disk is write-protected. Set the write-protect tab on the disk to the "write-enabled" position, then try the operation again.

## ■ Quantize (Post-recording)

This operation lets you quantize recorded data for a selected Track. It differs from the Quantize operation (on page 12) in that it quantizes "after the fact," or after you've recorded the Track.

Quantize effectively "cleans up" a recorded Track, shifting all notes in time so that they align to a specified beat pattern. (Quantize only affects the note on data of a Track.)

### Operation

1. Simultaneously hold down the **SHIFT** button and press the **STOP** button. (The "Quantizing" message appears and the lamps of the **STOP** and **REC** buttons flash to indicate standby.)

2. Select the Track in the song that you wish to quantize by using the **PART/TRACK** buttons.

3. Select the Quantize resolution by using the **TEMPO/VOL-UME** buttons.

### Quantize Values:

    1/4: Quarter-note
    1/8: Eighth-note
    1/12: Eighth-note triplets
    1/16: Sixteenth-note
    1/24: Sixteenth-note triplets
    1/32: Thirty-second-note

4. Press the **REC** button again to start quantizing the Track, or the **STOP** button to cancel. (A "Quantizing..." message appears in the display during the operation. When the operation is completed, the display returns to the Song display.)

> ⊗ **CAUTION!**
> The Quantize operation is permanent and irreversible! Make sure that you absolutely want to Quantize a Track before doing so.

> ♪ **NOTE**
> To quantize after recording, there must be enough remaining space on the disk (equal to the amount of data of the Song itself). Check the remaining disk capacity (see below) before quantizing.

## ■ Checking Remaining Disk Capacity

This function lets you check how much free memory space is left on a floppy disk. A formatted, blank floppy disk has 713 kilobytes of memory space. When the remaining disk capacity reaches 0, no further recording can be done (unless some Song data is deleted).

### Operation

While playback is stopped, hold down the **STOP** button.

> ♪ **NOTE**
> Remaining disk capacity is not displayed when a disk is not inserted.

## Bulk Data Operations

These convenient features allow you to record/store data from other MIDI devices to a floppy disk on the MDP2/DOU-10. For example, you could save the various settings on a MIDI synthesizer or effect device to disk for backup purposes and future recall.

## ■ Recording Bulk Data

### Operation

1. Select the Song number for recording bulk data.

2. While playback is stopped, press the **REC** button. (The **REC** lamp lights and Part/Track lamps all flash.) Then, press the **PLAY** button to start recording. (The Measure/Time display advances as in normal recording.)

3. Start transmitting bulk data from the connected device. (Refer to the owner's manual of that device for instructions.) The disk drive lamp lights when data is being recorded. No buttons or controls (other than **STOP**) can be used during bulk data recording.

4. When all data has been transmitted (the display on the connected device should indicate this), press the **STOP** button to stop data recording.

> ⚈ **NOTE**
> If you press the **STOP** button while the bulk dump operation is in progress (before an F7H message has been received), the **STOP** lamp flashes to indicate the operation is not completed. To stop the bulk dump in this case, press the **STOP** button again.

## ■ Sending Bulk Data

Once bulk data has been recorded to a disk on the MDP2/DOU-10, you can transmit it back to the appropriate MIDI device.

### Operation

1. Connect the MIDI OUT terminal of the MDP2/DOU-10 to the MIDI IN terminal on the MIDI device and set the MIDI device to receive bulk data. (Refer to the owner's manual of that device for instructions.)

2. Press the **PLAY** button. The recorded bulk data is output before Song playback starts.

# MIDI

This section provides a short introduction to MIDI and explains the various MIDI functions of the MDP2/DOU-10.

## What is MIDI?

**MIDI** (Musical Instrument Digital Interface) is a worldwide standard that is built into most electronic musical instruments and other digital music related devices, allowing them to be connected to and "communicate" with each other.

For two MIDI instruments to communicate with each other, they must be connected by MIDI cables. In this basic example, the MIDI IN and MIDI OUT terminals of the MDP2/DOU-10 are connected, respectively, to the MIDI OUT and MIDI IN terminals of another MIDI keyboard.



MDP2/DOU-10
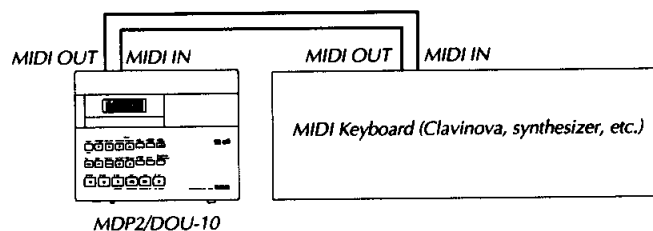
The instruments communicate with each other by sending "**messages**" or **MIDI data**. The sending instrument usually assigns the data to one of sixteen different **MIDI channels**, then transmits it over the MIDI cable. The cable itself, however, is not divided up into sixteen channels. Just as with a television set that receives programs on various different channels, it is up to the receiving instrument to "tune into" the proper MIDI channel. If the sending and receiving channels on the respective instruments do not match, the receiving instrument may not understand or respond to the one sending.

## How Can MIDI Be Used?

One of the most important and common applications of MIDI "communication" is in using the keyboard of one instrument to play the sounds of another instrument. For example, a connected keyboard can be used to play Voices on the MDP2/DOU-10. Each time you play and release a key on the keyboard, various messages are sent via MIDI (including note number, note on, velocity and note off) which "tell" the instrument how to play your performance. You can even select different Voices on the instrument from the connected keyboard. Naturally, this performance data can also be recorded and edited, giving you powerful and convenient tools for creating your own music.

## Setting the MIDI Transmit Channel

In order to properly playback Songs on a connected MIDI sound module, the MIDI Transmit channel must be properly set. This is done from the rear panel SEND CHANNEL switch. The settings are:

**CH 1, 2** – This is the factory default setting, and is the recommended setting for use with the Clavinova. Song data is sent to the connected instrument over channels 1 and 2. Data on channels 3 - 16 is sent to the internal sound source of the MDP2/DOU-10.

**CH 1 - 16** – Song data is sent only to the connected instrument over all channels 1 - 16. No data is sent to the internal sound source.

**INT** – Song data is sent only to the internal sound source. No data is sent to the connected instrument.
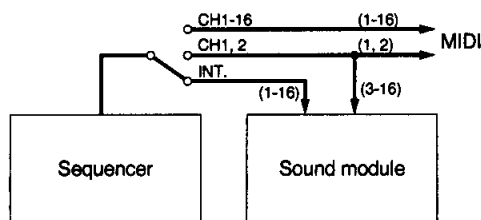


**NOTE**
The MIDI Transmit setting does not affect transmission of System Exclusive or System Realtime data. However, when this is set to INT, System Exclusive data is affected by this setting.

## Other MIDI Functions

The MIDI functions give you extensive control over the MIDI transmission/reception status of the MDP2/DOU-10, for optimum integration into virtually any MIDI system.

**Operation**
1. Call up the MIDI function pages by simultaneously holding down the **SHIFT** button and pressing the **PAUSE** button. (The MIDI function pages can only be called up when playback is stopped.)

2. Select the desired MIDI function (1 - 15) by using the **SONG/VOICE** buttons.

**MIDI Functions**
    1: Sync Clock (internal/external)
    2: Remote In (reception of start/continue/stop)
    3: Remote Out (transmission of start/continue/stop)
    4: MIDI Thru
    5: Modulation Filter
    6: Volume Filter
    7: Expression Filter
    8: Pedal Filter

    9: Other Control Change Filter
    10: Mode Message Filter
    11: Program Change Filter
    12: Pitch Bend Filter
    13: After Touch Filter
    14: Exclusive Filter
    15: MIDI Transpose
    16: Omni Mode

3. Make the desired setting (shown next to "DATA" in the display) for the selected function by using the **TEMPO/VOLUME** buttons.

4. To exit from the MIDI function pages, press either the **SHIFT** button or the **STOP** button.

### ■ 1 – Sync Clock
**Settings: INT (Internal), EXT (External)**
**Default: INT**
This determines whether playback/recording will be synchronized to the instrument's internal clock or the clock of an external device (such as a rhythm machine or sequencer). The setting you should use for normal operation is "Internal." However, if you are synchronizing another device with the MDP2/DOU-10, and the MDP2/DOU-10 is the slave, set this to "External." (When set to External, "EXT" appears instead of the Tempo value in the Song display.)

### ■ 2 – Remote In / 3 – Remote Out
**Settings: ON, OFF**
**Default: ON**
Remote In should be set to ON when controlling playback of the MDP2/DOU-10 from an external device (such as a rhythm machine or sequencer). Remote Out should be set to ON when controlling playback of an external rhythm or sequencer from the MDP2/DOU-10.

These functions determine whether Start, Continue and Stop messages are received (Remote In) or transmitted (Remote Out). When Remote In is set to ON, the instrument responds to Start, Continue and Stop messages received via MIDI IN, and accordingly starts, pauses/resumes and stops playback. When Remote Out is set to ON, the instrument transmits Start, Continue and Stop messages via MIDI OUT upon pressing of the **PLAY, PAUSE** and **STOP** buttons.

### ■ 4 – MIDI Thru
**Settings: ON, OFF**
**Default: OFF**
This function determines whether the MIDI data received via MIDI IN is output through the MIDI OUT terminal. Since there is no dedicated MIDI THRU terminal on the rear panel, this function should be set to ON when connecting several MIDI devices to the instrument.

**NOTE**
Be careful when the MIDI IN and MIDI OUT terminals of the MDP2/DOU-10 are both connected to the same external MIDI instrument (such as a keyboard) and MIDI Thru is set to ON. When you play that instrument, it will be playing its own voices twice – once from the keyboard, and after a very brief delay, again from the MIDI data routed through the MDP2/DOU-10. This not only cuts down on the available polyphony of the external instrument, but also creates an undesirable flanging sound. To remedy the problem, set the Local (or Local Switch) parameter on the external instrument to OFF. (Refer to the owner's manual of that device for details.)

**NOTE**
Data transfers (e.g., bulk dump) of larger than 32 bytes may not be transmitted correctly.

## ■ 5 - 14 - Filters
**Settings: ON, OFF**
**Default: ON (except 13 - After Touch: OFF)**
The various Filters determine whether the corresponding MIDI data is transmitted and received. When set to ON, the corresponding MIDI data can be transmitted and received. When OFF, both transmission and reception are disabled.

The most common use for these is to filter out data that is unnecessary or irrelevant to your recording. This may come in handy when you have limited disk space for a song, and want to make sure that only the data necessary for the song is recorded.

🜋 **NOTE**
These Filters have no effect when using song data on a disk to play the internal Voices.

## ■ 5 - Modulation
For filtering out modulation data. This corresponds to MIDI Control Change 1.

## ■ 6 - Volume
For filtering out MIDI volume data. This corresponds to MIDI Control Change 7.

## ■ 7 - Expression
For filtering out expression data. This corresponds to MIDI Control Change 11.

## ■ 8 - Pedal
For filtering out pedal-related data. This corresponds to three Control Change numbers: 64 – Damper or Sustain, 66 – Sostenuto, and 67 – Soft.

## ■ 9 - Other Control Change
For filtering out control change data other than those in Modulation, Volume, Expression and Pedal above.

## ■ 10 - Mode Message
For filtering out mode messages (e.g., mono, poly).

## ■ 11 - Program Change
For filtering out program change messages. Program change messages are used to change Voices (or programs) on the receiving device.

## ■ 12 - Pitch Bend
For filtering out pitch bend messages.

## ■ 13 - After Touch
For filtering out after touch messages.

## ■ 14 - Exclusive
For filtering out system exclusive data.

## ■ 15 - MIDI Transpose
**Settings: +/- 6 semitones**
**Default: 0**

This determines the amount by which i. ming MIDI data is transposed. Unlike the Disk Transpose fu    ion (page 15), this transposes only the data coming via the M.  ! IN terminal, and is used to transpose the Voices when using the instrument as a sound module or tone generator.

## ■ 16 - Omni Mode
**Settings: ON, OFF**
**Default: ON**
This determines the omni receive mode for the instrument. When set to ON, all currently selected Parts respond to incoming MIDI data on all of the 16 MIDI channels. During recording, all incoming MIDI data is recorded to the currently selected Tracks. When set to OFF, each Part responds to incoming data only on the corresponding channel. For example, if Part 6 is selected, only MIDI data on channel 6 will affect that Part. During recording, the incoming data on the selected MIDI channel is recorded to the corresponding Track.

# Initialization

This operation restores all default factory settings (listed below) for the instrument.

**Operation**
Turn the power off, then simultaneously hold down the **SHIFT** button and turn the power back on.

The list below shows the default factory settings. Changes made to these settings are retained for up to roughly one week, even with the power off.

Measure/Time display
Part assignments
MIDI settings:
    Sync
    Remote in/out
    MIDI Thru
    Filters (5 - 14)
    Omni mode
Song Repeat mode
DOU mode/MDP mode

# Setting the DOU Mode / MDP Mode

The MDP2/DOU-10 has two basic operating modes: DOU and MDP. The modes determine how the instrument responds to sustain off messages. In the DOU mode, the sound naturally decays after the key or sustain pedal is released. In the MDP mode, for continuous non-decaying Voices, even after the key is released, the sound stays at the same level until the sustain pedal is released. For decaying Voices, the sound naturally decays after the key or sustain pedal is released. Also, when the Sound Module mode is set to **doc** (even with the **MDP** mode), the sound naturally decays after the key or sustain pedal is released.

**DOU Mode**

Key On        Key Off

Sustain Rate

**MDP Mode**

Key On        Key Off     Sustain Off
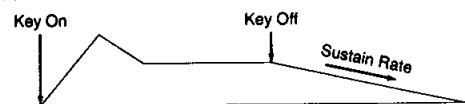
Sustain Rate
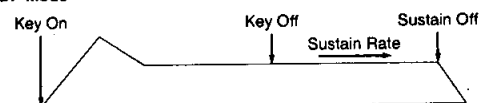
**To set the mode:**
**DOU mode** (default) — Simultaneously hold down the **RIGHT** button and turn the power on.
**MDP mode** — Simultaneously hold down the **LEFT** button and turn the power on.

The mode setting is memorized (for up to roughly one week) even with the power off.

# Troubleshooting

Even though the MDP2/DOU-10 is exceptionally easy to use, it may occasionally not function as you expect it to. If that happens, check the possible problems and solutions below before assuming that the instrument is faulty.

| Problem | Possible Cause and Solution |
|---|---|
| No power. | Check that the AC adaptor is properly connected, both to the AC outlet and the MDP2/DOU-10. |
| No sound. | • Check that the VOLUME dial is set to appropriate level.<br>• If you are using an external sound system, check all audio connections and make sure that the cables are not at fault. Also make sure that all volume controls on the connected equipment are set to appropriate levels. (See pages 5 and 6.)<br>• Check that none of the Parts are muted. (See page 8.)<br>• Check that the volume settings of the Parts are set to appropriate levels. (See page 9.) |
| No sound (when playing the Voices with a MIDI keyboard). | • Check all MIDI connections, making sure that the MIDI OUT of the keyboard is connected to the MIDI IN of the MDP2/DOU-10. (See page 5.)<br>• Check that the volume setting of the Part played is set to an appropriate level. (See page 9.)<br>• Make sure that the SEND CHANNEL switch on the rear panel is set to INT. (This can be set to CH 1, 2 if the MIDI keyboard is transmitting on one of the channels 3 - 16.) (See page 21.) |
| Wrong pitch. | Check the Disk Transpose and Tuning settings. (See pages 15 and 16.) |
| Cannot record. | • Check that the write-protect tab of the disk is set to the "Write Enable" position. (See page 10.)<br>• Check that there is enough remaining space on the disk. (See page 20.) |
| Cannot select some Parts. | If the **doc** mode is selected, only Parts 1 - 10 and 15 are available (15 is reserved for the Drum Kit). In General MIDI mode, all Parts 1 - 16 can be selected. (See page 9.) |
| Cannot hear the click sound of the Metronome or Intro. Count. | • Make sure that the volume of the click is set to an appropriate level.<br>• If the Time display is selected, Intro. Count is not available. (See pages 12 and 16.) |
| After recording, playback of Tracks sounds different than originally played. | • Make sure that the Quantize function is turned off. Quantizing a Track as you are recording may markedly alter the recorded performance. (See page 12.)<br>• If you are using Punch-in recording, notes between the punch-in and punch-out points will be erased. (See page 17.)<br>• If you are using Overdub recording, the original note durations may change. (See page 18.)<br>• Check the MIDI Filter settings. You may be inadvertently filtering out certain types of MIDI data as you record. (See page 22.) |
| A previously recorded Track seems to have been erased. | You may have recorded over the previous Track. Unless you want to record over a Track, always make sure the Track is empty before recording. (See page 13.) |
| Not all simultaneously played notes sound. | You may be exceeding the maximum polyphony of the MDP2/DOU-10. The MDP2/DOU-10 can sound up 32 notes at the same time. |

# Error Messages

**Clean Head!**    When magnetic particle build-up on the disk drive head affects performance, this message appears to alert you to clean the drive. If this message continues to appear even after cleaning the drive, the disk itself may be defective. Use another floppy disk and try the operation again.

**🌙 NOTE**
The STOP lamp also flashes when the messages below appear. You can press the STOP button to cancel the message; keep in mind, however, that this does not remedy the original problem/error.

**CopyProtect**    This appears when the disk used is copy protected. For such disks, the data cannot be copied.

**BufferFull!!**    This appears during recording, when too much data is handled at one time. Reduce the amount of data (e.g., by deleting data of unnecessary Tracks).

**ReadWriteErr**    This appears when the MDP2/DOU-10 has trouble reading from or writing to the disk. In most cases this can be remedied by cleaning the disk drive head.

**DiskFull**    This appears when there is no remaining space on the disk. Delete data from the disk or use a blank, formatted disk.

**FDC Busy**    This appears when too much data is handled at one time. Reduce the amount of data (e.g., by deleting data of unnecessary Parts).

**SystemError**    This appears when there is some problem or trouble in the system of the MDP2/DOU-10. Turning the power off and on again will usually remedy the problem.

**MIDIInFull**    This appears when too much MIDI data is handled at one time. Reduce the amount of data (e.g., by using the MIDI Filters; see page 22).

**WriteProtect**    This appears when trying to record or copy data to a disk or Song that is write protected. Set the write-protect tab of the disk to the "Write Enable" position and try the operation again. (Keep in mind that the current data on the disk will be erased by doing this.) Also, re-recording can only be done to Song data actually recorded on a MDP2/DOU-10 or data copied from a doc disk.

**PlayProtect**    This appears when the disk or Song used is play protected. In such cases, the data cannot be played back. This includes:
• Play-protected Songs (e.g., doc Songs that can only be played back on a Clavinova).
• Data other than Song data.
• Incompatible file formats (e.g., Standard MIDI File format 1).

**No Disk**    This appears when the disk is ejected during playback. Do not eject the disk during playback.

# Voice List Klangfarbenliste/Liste des sonorités/Lista de voces

## DOC voice list

| No. | MIDI prog.No. | Voice name | Timb # |
|---|---|---|---|
| 1 | 12 | Piano | 1 |
| 2 | 48 | Piano-Mild | 1 |
| 3 | 51 | Piano-Brite | 1 |
| 4 | 13 | E.Piano 1 | 1 |
| 5 | 50 | E.Piano 2 | 1 |
| 6 | 14 | Harpsichord | 1 |
| 7 | 15 | Celesta | 1 |
| 8 | 16 | Vibes | 1 |
| 9 | 17 | Marimba | 1 |
| 10 | 11 | Jazz Organ 1 | 1 |
| 11 | 82 | Jazz Organ 2 | 1 |
| 12 | 10 | Full Organ | 1 |
| 13 | 76 | Pipe Organ | 1 |
| 14 | 7 | Accordion | 1 |
| 15 | 41 | Harmonica | 1 |
| 16 | 24 | Gut Guitar | 1 |
| 17 | 53 | Folk Guitar | 1 |
| 18 | 25 | Jazz Guitar 1 | 1 |
| 19 | 72 | Jazz Guitar 2 | 1 |
| 20 | 26 | Rock Guitar 1 | 1 |
| 21 | 69 | Rock Guitar 2 | 1 |
| 22 | 70 | Mute Guitar | 1 |
| 23 | 88 | Distortion Guitar | 1 |
| 24 | 55 | Banjo | 1 |
| 25 | 28 | Upright Bass | 1 |
| 26 | 71 | Upright Bass-Mild | 1 |
| 27 | 29 | E.Bass | 2 |
| 28 | 30 | E.Bass with Slap | 1 |
| 29 | 78 | E.Bass-Heavy | 1 |
| 30 | 31 | Synth Bass | 1 |
| 31 | 9 | Violin | 1 |
| 32 | 75 | Violin-Hard | 1 |
| 33 | 8 | Strings | 1 |
| 34 | 74 | Strings-Mild | 1 |
| 35 | 81 | Chamber Strings | 1 |
| 36 | 45 | Synth Strings | 1 |
| 37 | 56 | Pizzicato | 1 |
| 38 | 57 | Harp | 1 |
| 39 | 23 | Timpani | 1 |
| 40 | 42 | Choir | 1 |
| 41 | 46 | Synth Choir | 1 |
| 42 | 92 | Orchestra Hit | 1 |
| 43 | 1 | Trumpet | 1 |
| 44 | 40 | Mute Trumpet | 1 |
| 45 | 2 | French Horn | 1 |
| 46 | 0 | Brass | 1 |
| 47 | 73 | Pop Brass | 1 |
| 48 | 20 | Synth Brass | 1 |
| 49 | 3 | Sax | 1 |
| 50 | 77 | Sax-Mild | 1 |
| 51 | 5 | Oboe | 1 |
| 52 | 80 | Bassoon | 1 |
| 53 | 4 | Clarinet | 1 |
| 54 | 6 | Flute 1 | 1 |
| 55 | 79 | Flute 2 | 1 |
| 56 | 44 | Synth Wood | 2 |
| 57 | 22 | Synth Crystal | 1 |
| 58 | 89 | Cosmic 1 | 2 |
| 59 | 90 | Cosmic 2 | 1 |
| 60 | 91 | Cosmic 3 | 2 |
| 61 | 68 | Clavinova Tone | 1 |
| - | 126 | Drums | |

## GM voice list

| No. | MIDI prog.No. | Voice name | Timb # |
|---|---|---|---|
| **Piano** | | | |
| 01 | 0 | Acoustic Grand Piano | 1 |
| 02 | 1 | Bright Acoustic Piano | 1 |
| 03 | 2 | Electric Grand Piano | 1 |
| 04 | 3 | Honky-tonk Piano | 2 |
| 05 | 4 | Electric Piano 1 | 2 |
| 06 | 5 | Electric Piano 2 | 2 |
| 07 | 6 | Harpsichord | 1 |
| 08 | 7 | Clavi | 1 |
| **Chromatic** | | | |
| 09 | 8 | Celesta | 1 |
| **Percussion** | | | |
| 10 | 9 | Glockenspiel | 1 |
| 11 | 10 | Music Box | 2 |
| 12 | 11 | Vibraphone | 1 |
| 13 | 12 | Marimba | 1 |
| 14 | 13 | Xylophone | 1 |
| 15 | 14 | Tubular Bells | 1 |
| 16 | 15 | Dulcimer | 2 |
| **Organ** | | | |
| 17 | 16 | Drawbar Organ | 2 |
| 18 | 17 | Percussive Organ | 2 |
| 19 | 18 | Rock Organ | 2 |
| 20 | 19 | Church Organ | 2 |
| 21 | 20 | Reed Organ | 1 |
| 22 | 21 | Accordion | 2 |
| 23 | 22 | Harmonica | 1 |
| 24 | 23 | Tango Accordion | 2 |
| **Guitar** | | | |
| 25 | 24 | Acoustic Guitar (nylon) | 1 |
| 26 | 25 | Acoustic Guitar (steel) | 1 |
| 27 | 26 | Electric Guitar (jazz) | 1 |
| 28 | 27 | Electric Guitar (clean) | 1 |
| 29 | 28 | Electric Guitar (muted) | 1 |
| 30 | 29 | Overdriven Guitar | 1 |
| 31 | 30 | Distortion Guitar | 1 |
| 32 | 31 | Guitar Harmonics | 1 |
| **Bass** | | | |
| 33 | 32 | Acoustic Bass | 1 |
| 34 | 33 | Electric Bass (finger) | 1 |
| 35 | 34 | Electric Bass (pick) | 1 |
| 36 | 35 | Fretless Bass | 1 |
| 37 | 36 | Slap Bass 1 | 1 |
| 38 | 37 | Slap Bass 2 | 1 |
| 39 | 38 | Synth Bass 1 | 1 |
| 40 | 39 | Synth Bass 2 | 1 |
| **Strings** | | | |
| 41 | 40 | Violin | 1 |
| 42 | 41 | Viola | 1 |
| 43 | 42 | Cello | 1 |
| 44 | 43 | Contrabass | 1 |
| 45 | 44 | Tremolo Strings | 1 |
| 46 | 45 | Pizzicato Strings | 1 |
| 47 | 46 | Orchestral Harp | 1 |
| 48 | 47 | Timpani | 1 |
| **Ensemble** | | | |
| 49 | 48 | Strings Ensemble 1 | 1 |
| 50 | 49 | Strings Ensemble 2 | 1 |
| 51 | 50 | Synth Strings 1 | 2 |
| 52 | 51 | Synth Strings 2 | 2 |
| 53 | 52 | Choir Aahs | 1 |
| 54 | 53 | Voice Oohs | 1 |
| 55 | 54 | Synth Voice | 1 |
| 56 | 55 | Orchestra Hit | 1 |
| **Brass** | | | |
| 57 | 56 | Trumpet | 1 |
| 58 | 57 | Trombone | 1 |
| 59 | 58 | Tuba | 1 |
| 60 | 59 | Muted Trumpet | 1 |
| 61 | 60 | French Horn | 1 |
| 62 | 61 | Brass Section | 1 |
| 63 | 62 | Synth Brass 1 | 2 |
| 64 | 63 | Synth Brass 2 | 2 |

| No. | MIDI prog.No. | Voice name | Timb # |
|---|---|---|---|
| **Reed** | | | |
| 65 | 64 | Soprano Sax | 1 |
| 66 | 65 | Alto Sax | 1 |
| 67 | 66 | Tenor Sax | 1 |
| 68 | 67 | Baritone Sax | 1 |
| 69 | 68 | Oboe | 1 |
| 70 | 69 | English Horn | 1 |
| 71 | 70 | Bassoon | 1 |
| 72 | 71 | Clarinet | 1 |
| **Pipe** | | | |
| 73 | 72 | Piccolo | 1 |
| 74 | 73 | Flute | 1 |
| 75 | 74 | Recorder | 1 |
| 76 | 75 | Pan Flute | 1 |
| 77 | 76 | Blown Bottle | 2 |
| 78 | 77 | Shakuhachi | 1 |
| 79 | 78 | Whistle | 1 |
| 80 | 79 | Ocarina | 1 |
| **Synth Lead** | | | |
| 81 | 80 | Lead 1 (square) | 2 |
| 82 | 81 | Lead 2 (sawtooth) | 2 |
| 83 | 82 | Lead 3 (calliope) | 2 |
| 84 | 83 | Lead 4 (chiff) | 2 |
| 85 | 84 | Lead 5 (charang) | 2 |
| 86 | 85 | Lead 6 (voice) | 2 |
| 87 | 86 | Lead 7 (fifths) | 2 |
| 88 | 87 | Lead 8 (bass+lead) | 2 |
| **Synth Pad** | | | |
| 89 | 88 | Pad 1 (new age) | 2 |
| 90 | 89 | Pad 2 (warm) | 2 |
| 91 | 90 | Pad 3 (polysynth) | 2 |
| 92 | 91 | Pad 4 (choir) | 2 |
| 93 | 92 | Pad 5 (bowed) | 2 |
| 94 | 93 | Pad 6 (metallic) | 2 |
| 95 | 94 | Pad 7 (halo) | 2 |
| 96 | 95 | Pad 8 (sweep) | 2 |
| **Synth Effect** | | | |
| 97 | 96 | FX 1 (rain) | 2 |
| 98 | 97 | FX 2 (soundbox) | 2 |
| 99 | 98 | FX 3 (crystal) | 2 |
| 100 | 99 | FX 4 (atmosphere) | 2 |
| 101 | 100 | FX 5 (brightness) | 2 |
| 102 | 101 | FX 6 (goblins) | 2 |
| 103 | 102 | FX 7 (echoes) | 2 |
| 104 | 103 | FX 8 (sci-fi) | 2 |
| **Ethnic** | | | |
| 105 | 104 | Sitar | 1 |
| 106 | 105 | Banjo | 1 |
| 107 | 106 | Shamisen | 1 |
| 108 | 107 | Koto | 1 |
| 109 | 108 | Kalimba | 1 |
| 110 | 109 | Bagpipe | 1 |
| 111 | 110 | Fiddle | 1 |
| 112 | 111 | Shanai | 1 |
| **Percussive** | | | |
| 113 | 112 | Tinkle Bell | 2 |
| 114 | 113 | Agogo | 1 |
| 115 | 114 | Steel Drums | 1 |
| 116 | 115 | Woodblock | 1 |
| 117 | 116 | Taiko Drum | 1 |
| 118 | 117 | Melodic Tom | 1 |
| 119 | 118 | Synth Drum | 1 |
| 120 | 119 | Reverse Cymbal | 1 |
| **Sound Effect** | | | |
| 121 | 120 | Guitar Fret Noise | 1 |
| 122 | 121 | Breath Noise | 1 |
| 123 | 122 | Seashore | 2 |
| 124 | 123 | Bird Tweet | 2 |
| 125 | 124 | Telephone Ring | 1 |
| 126 | 125 | Helicopter | 2 |
| 127 | 126 | Applause | 2 |
| 128 | 127 | Gunshot | 1 |

# DOC/GM Drum Kit

DOC/GM Schlagzeugsätze, Percussions DOC/GM, Kits de batería y DOC/GM

| Note # | DOC | GM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | DOC Kit | Standard Kit | Room Kit | Rock Kit | Electronic Kit | Analog Kit | Jazz Kit | Brush Kit | Classic Kit |
| 21 A -1 | Cymbal Mute | | | | | | | | |
| 22 A#-1 | | | | | | | | | |
| 23 B -1 | | | | | | | | | |
| 24 C 0 | | Square Click | ← | ← | ← | ← | ← | ← | ← |
| 25 C# 0 | | Brush Tap | ← | ← | ← | ← | ← | ← | ← |
| 26 D 0 | | Brush Swirl | ← | ← | ← | ← | ← | ← | ← |
| 27 D# 0 | | Brush Slap | ← | ← | ← | ← | ← | ← | ← |
| 28 E 0 | | Brush Swirl w. Atk. | ← | ← | Reverse Cymbal | Reverse Cymbal | ← | ← | ← |
| 29 F 0 | | SD Roll | ← | ← | ← | ← | ← | ← | ← |
| 30 F# 0 | Brush Roll | Castanets | ← | ← | Hi-Q | Hi-Q | ← | ← | ← |
| 31 G 0 | | SD Hi Soft | Room SD Lo | Rock SD Lo | Gated SD Lo | A. SD Lo | ← | Brush Slap Lo | Marching SD Lo |
| 32 G# 0 | HH Closed Heavy | Sticks | ← | ← | ← | ← | ← | ← | ← |
| 33 A 0 | | BD Hi Soft | Room BD Lo | Rock BD Lo | Gated BD Lo | A. BD Lo | ← | ← | Gran Cassa Lo |
| 34 A# 0 | Crash Cym. Light | Open Rim Shot | ← | ← | ← | ← | ← | ← | ← |
| 35 B 0 | BD Light | BD Lo | Room BD Mid | Rock BD Mid | Gated BD Mid | A. BD Mid | ← | ← | Gran Cassa Mid |
| 36 C 1 | SD Rim Heavy | BD Hi Hard | Room BD Hi | Rock BD Hi | Gated BD Hi | A. BD Hi | ← | ← | Gran Cassa Hi |
| 37 C# 1 | Ride Cym. Cup | Closed Rim Shot | ← | ← | ← | A. Closed Rim | ← | ← | ← |
| 38 D 1 | SD Rim Light | SD Lo | Room SD Mid | Rock SD Mid | Gated SD Mid | A. SD Mid | ← | Brush Slap Hi | Marching SD Mid |
| 39 D# 1 | | Hand Clap | ← | ← | ← | ← | ← | ← | ← |
| 40 E 1 | | SD Hi Hard | Room SD Hi | Rock SD Hi | Gated SD Hi | A. SD Hi | ← | Brush Tap | Marching SD Hi |
| 41 F 1 | BD Normal | Floor Tom Lo | Room Tom 1 (Lo) | Rock Tom 1 (Lo) | E. Tom 1 (Lo) | A. Tom 1 (Lo) | Jazz Tom 1 (Lo) | Brush Tom 1 (Lo) | Jazz Tom 1 (Lo) |
| 42 F# 1 | Closed Rim Shot | Hi-hat Closed | ← | ← | ← | A. Hi-hat Closed Hi | Dark Hi-hat Closed | Dark Hi-hat Closed | Dark Hi-hat Closed |
| 43 G 1 | SD Heavy | Floor Tom Hi | Room Tom 2 | Rock Tom 2 | E. Tom 2 | A. Tom 2 | Jazz Tom 2 | Brush Tom 2 | Jazz Tom 2 |
| 44 G# 1 | Brush Shot | Hi-hat Pedal | ← | ← | ← | A. Hi-hat Closed Lo | Dark Hi-hat Pedal | Dark Hi-hat Pedal | Dark Hi-hat Pedal |
| 45 A 1 | SD Light | Tom Lo | Room Tom 3 | Rock Tom 3 | E. Tom 3 | A. Tom 3 | Jazz Tom 3 | Brush Tom 3 | Jazz Tom 3 |
| 46 A# 1 | HH Pedal | Hi-hat Open | ← | ← | ← | A. Hi-hat Open | Dark Hi-hat Open | Dark Hi-hat Open | Dark Hi-hat Open |
| 47 B 1 | SD Echo | Tom Lo Mid | Room Tom 4 | Rock Tom 4 | E. Tom 4 | A. Tom 4 | Jazz Tom 4 | Brush Tom 4 | Jazz Tom 4 |
| 48 C 2 | Tom 4 (Lo) | Tom Hi Mid | Room Tom 5 | Rock Tom 5 | E. Tom 5 | A. Tom 5 | Jazz Tom 5 | Brush Tom 5 | Jazz Tom 5 |
| 49 C# 2 | HH Closed Normal | Crash Cym. 1 | ← | ← | ← | A. Cym. | ← | ← | Hand Cy. Long Lo |
| 50 D 2 | Tom 3 | Tom Hi | Room Tom 6 (HI) | Rock Tom 6 (HI) | E. Tom 6 (HI) | A. Tom 6 (HI) | Jazz Tom 6 (HI) | Brush Tom 6 (HI) | Jazz Tom 6 (HI) |
| 51 D# 2 | HH Open | Ride Cym. 1 | ← | ← | ← | ← | ← | ← | Hand Cy. Short Lo |
| 52 E 2 | Tom 2 | Chinese Cym. | ← | ← | ← | ← | ← | ← | ← |
| 53 F 2 | Tom 1 (HI) | Ride Cym. Cup | ← | ← | ← | ← | ← | ← | ← |
| 54 F# 2 | Ride Cym. Normal | Tambourine | ← | ← | ← | ← | ← | ← | ← |
| 55 G 2 | E. Tom 3 (Lo) | Splash Cym. | ← | ← | ← | ← | ← | ← | ← |
| 56 G# 2 | Crash Cym. Normal | Cowbell | ← | ← | ← | A. Cowbell | ← | ← | ← |
| 57 A 2 | E. Tom 2 | Crash Cym. 2 | ← | ← | ← | ← | ← | ← | Hand Cy. Long Hi |
| 58 A# 2 | (Crash Cym. Soft) | Vibraslap | ← | ← | ← | ← | ← | ← | ← |
| 59 B 2 | E. Tom 1 (HI) | Ride Cym. 2 | ← | ← | ← | ← | ← | ← | Hand Cy. Short Hi |
| 60 C 3 | Conga Lo | Bongo Hi | ← | ← | ← | ← | ← | ← | ← |
| 61 C# 3 | Cabasa | Bongo Lo | ← | ← | ← | ← | ← | ← | ← |
| 62 D 3 | Conga Hi | Conga Hi Mute | ← | ← | ← | A. Conga Hi | ← | ← | ← |
| 63 D# 3 | Metronome | Conga Hi Open | ← | ← | ← | A. Conga Mid | ← | ← | ← |
| 64 E 3 | Bongo Hi | Conga Lo | ← | ← | ← | A. Conga Lo | ← | ← | ← |
| 65 F 3 | Timbale Lo | Timbale Hi | ← | ← | ← | ← | ← | ← | ← |
| 66 F# 3 | Claves | Timbale Lo | ← | ← | ← | ← | ← | ← | ← |
| 67 G 3 | Timbale Hi | Agogo Hi | ← | ← | ← | ← | ← | ← | ← |
| 68 G# 3 | Castanets | Agogo Lo | ← | ← | ← | ← | ← | ← | ← |
| 69 A 3 | Cuica Lo | Cabasa | ← | ← | ← | ← | ← | ← | ← |
| 70 A# 3 | Cowbell | Maracas | ← | ← | ← | A. Maracas | ← | ← | ← |
| 71 B 3 | Cuica Hi | Samba Whistle Hi | ← | ← | ← | ← | ← | ← | ← |
| 72 C 4 | Hand Clap | Samba Whistle Lo | ← | ← | ← | ← | ← | ← | ← |
| 73 C# 4 | Agogo Lo | Guiro Short | ← | ← | ← | ← | ← | ← | ← |
| 74 D 4 | | Guiro Long | ← | ← | ← | ← | ← | ← | ← |
| 75 D# 4 | Agogo Hi | Claves | ← | ← | ← | A. Claves | ← | ← | ← |
| 76 E 4 | Bongo Lo | Wood Block Hi | ← | ← | ← | ← | ← | ← | ← |
| 77 F 4 | (Cuica Lo) | Wood Block Lo | ← | ← | ← | ← | ← | ← | ← |
| 78 F# 4 | Tambourine | Cuica Hi (Mute) | ← | ← | Scratch Hi | Scratch Hi | ← | ← | ← |
| 79 G 4 | (Crash Cym. Soft) | Cuica Lo (Open) | ← | ← | Scratch Lo | Scratch Lo | ← | ← | ← |
| 80 G# 4 | Triangle Close | Triangle Mute | ← | ← | ← | ← | ← | ← | ← |
| 81 A 4 | (Brush Roll) | Triangle Open | ← | ← | ← | ← | ← | ← | ← |
| 82 A# 4 | Triangle Open | Shaker | ← | ← | ← | ← | ← | ← | ← |
| 83 B 4 | | Jingle Bell | ← | ← | ← | ← | ← | ← | ← |
| 84 C 5 | | Bell Tree | ← | ← | ← | ← | ← | ← | ← |
| 81 C# 5 | | | | | | | | | |
| 82 D 5 | | | | | | | | | |
| 83 D# 5 | | | | | | | | | |
| 84 E 5 | | | | | | | | | |

\* "←" indicates the content is the same as that of Standard Kit.
\* "←" bedeutet, daß der Inhalt derselbe ist Wie der des Standard-Stazes.
\* La flèche "←" indique que le contenu est le même que celui du Standard Kit.
\* "←" indica que el contenido es igual al del Standard Kit (kit estándar).

## 1.Tone Generator—Data Reception

### 1.1 Channel Voice Messages

#### 1) Note Off

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| 8nH | kkH | vvH |
| 9nH | kkH | 00H |

n =MIDI channel : 0H-FH (ch 1.-ch.16 )
kk=Note number : 00H-7FH (0-127 )
vv=Velocity : 00H-7FH (0-127 )
(Velocity value is ignored.)

#### 2) Note On

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| 9nH | kkH | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16 )
kk=Note number :00H-7FH (0-127 )
vv=Velocity :01H-7FH (1-127 )

#### 3) Control Change

##### (1)Bank Select MSB

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 00H | mmH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
mm=Bank number MSB :00H-7FH (1-127)

Not received in the doc mode.
Data on channel 10 is not received in the GM mode.
Processing of bank select messages is paused until program change messages are received.
Channel 10 is initialized to 7FH and other channels are initialized to 00H when a "GM on" message is received.

| | GM mode |
|---|---|
| 00H | :GM Melody Voice |
| 01H-7EH | :No sound |
| 7FH | :GM Rhythm Voice |

##### (2) Modulation

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 01H | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Modulation depth :00H-7FH (1-127)
Initial value [00H]

Pitch modulation is used in the GM mode.

In the doc mode:
*Programs 6, 9, 61, 82 and 126 do not respond to modulation.
*Programs 16 and 19 use amplitude modulation, while all other programs use pitch modulation.

##### (3) Data Entry

| Status byte | 2nd byte | 3rd byte | |
|---|---|---|---|
| BnH | 06H | mmH | MSB |
| BnH | 26H | llH | LSB |
| BnH | 60H | xxH | Increment |
| BnH | 61H | xxH | Decrement |

n =MIDI channel : 0H-FH (ch 1.-ch.16)
mm=Upper byte of NRPN/RPN parameter
ll =Lower byte of NRPN/RPN parameter
xx =Not recognized

##### (4) Volume

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 07H | vvH |

n =MIDI channel :0H-FH (1ch.-16ch.)
vv=Volume :F00H-7FH (0-127)
GM Initial value [64H]
DOC Initial value [7FH]

##### (5) Panpot

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 0AH | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Panpot :00H-7FH (0-127)
GM Initial value [40H]
DOC Initial value [48H](15ch.only 40H)

##### (6) Expression

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 0BH | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Expression :00H-7FH (0-127)
Initial value [7FH]

##### (7) Sustain

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 40H | vvH |

n =MIDI channel: 0H-FH (ch 1.-ch.16)
vv=Control Value: 00H-7FH (0-127)
Initial value [00H]

00H( SHORT)-7FH(Long): Continuous change
However, in the MDP mode (for GM mode only):
00H-3FH: OFF
40H-7FH: ON

##### (8) Sostenuto

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 42H | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Control Value :00H-7FH(0-127)
Initial value [00H]

00H-3FH :OFF
40H-7FH :ON

##### (9) Soft

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 43H | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Control Value :00H-7FH(0-127)
Initial value [00H]

00H-3FH :OFF
40H-7FH :ON

Not received in GM mode.

##### (10) Portament Control

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 54H | kkH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
kk=Source note number :00H-7FH(0-127)

##### (11) Dry Send Level

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5AH | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Control value :00H-7FH(0-127)
Initial value [7FH]

Not received in doc mode.

##### (12) Reverb Send Level

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5BH | vvH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
vv=Control value :00H-7FH(0-127)
Initial value [40H]

Always effective in the GM mode.
The reverb send level of channel 16 affects all channels after a "doc on" message is received.
For all doc channels, after a "reverb depth on" message is received, reverb send level becomes effective for the channels.

##### (13) Chorus Send Level

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5DH | vvH |

n =MIDI channel: 0H-FH (ch 1.-ch.16)
vv=Control value: 00H-7FH(0-127)
Initial value [00H]

For DOC mode 00H-3FH:OFF, 40H-7FH:ON

##### (14) NRPN MSB

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 63H | mmH |

n =MIDI channel : 0H-FH (1ch.-16ch.)
mm=Upper byte of NRPN parameter number. : 00H-7FH(0-127)

##### (15) NRPN LSB

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 62H | llH |

n=MIDI channel :0H-FH (ch 1.-ch.16)
ll=Lower byte of NRPN parameter number :00H-7FH(0-127)
Initial value [7FH]

##### (16) RPN MSB

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 64H | mmH |

n =MIDI channel :0H-FH (ch 1.-ch.16)
mm=Upper byte of RPN parameter number :00H-7FH(0-127)
Initial value [7FH]

##### (17) RPN LSB

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 65H | llH |

n=MIDI channel :0H-FH (ch 1.-ch.16)
ll=Lower byte of RPN parameter number :00H-7FH(0-127)
Initial value [7FH]

##### (18) Drum Pitch Coarse

| NRPN | | Data entry | |
|---|---|---|---|
| MSB | LSB | MSB | LSB |
| 18H | rrH | mmH | xxH |

rr =Drum instrument number
mm=Control value
xx =Not recognized.
Initial value[40H,00H]

Not received in doc mode.

## (19) Pitch Bend Sensitivity

| RPN | | Data entry | |
|---|---|---|---|
| MSB | LSB | MSB | LSB |
| 00H | 00H | mmH | xxH: 00H, 00H-18H, 00H |

mm=Control value
xx =Not recognized
Initial value[02H-00H]

## (20) Fine Tuning

| RPN | | Data entry | |
|---|---|---|---|
| MSB | LSB | MSB | LSB |
| 00H | 01H | mmH | llH: 00H, 00H-7FH, 7FH |

mm=Upper byte of control value
ll =Lower byte of control value
Initial value[40H,00H]

## (21) Coarse Tuning

| RPN | | Data entry | |
|---|---|---|---|
| MSB | LSB | MSB | LSB |
| 00H | 02H | mmH | xxH:28H, 00H-58H, 00H |

mm=Control value
xx =Not recognized
Initial value[40H, 00H]

## 5) Program Change

| Status byte | 2nd byte |
|---|---|
| CnH | ppH |

n =MIDI channel          :0H-FH (ch 1.-ch.16)
pp=Program number      :00H-7FH(0-127)
Initial value  [00H]

## 6) Channel Pressure

| Status byte | 2nd byte |
|---|---|
| DnH | vvH |

n =MIDI Channel          :0H-FH (ch 1.-ch.16)
vv=Channel pressure      :00H-7FH(0-127)
Initial value [00H]
This controls modulation in the GM mode.
Not received in the doc mode.

## 7) Pitch Bend

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| EnH | llH | mmH |

n =MIDI Channel          :0H-FH (ch 1.-ch.16)
mm=Pitch bend MSB      :00H-7FH (0-127)
ll =Pitch bend LSB        :00H-7FH (0-127)
Initial value [40H,00H]

## 1. 2 Channel Mode Messages

### (1) All Sound Off

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 78H | xxH |

n =MIDI Channel          :0H-FH (ch 1.-ch.16)
xx =Not recognized

### (2) Reset All Controllers

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 79H | xxH |

n =MIDI Channel:0H-FH (ch 1.-ch.16)
xx=Not recognized

The settings of the controllers below change when this message is received.

| Controller | Value |
|---|---|
| Pitch bend | [40H,00H] |
| Channel pressure | [00H] |
| Modulation | [00H] |
| Expression | [7FH] |
| Sustain | [00H] |
| Sostenuto | [00H] |
| Soft(In Doc mode) | [00H] |
| NRPN | [7FH,7FH] |
| RPN | [7FH,7FH] |

Resets legato control setting.

### (3) All Note Off

| Status byte | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 78H | xxH |

n=MIDI Channel: 0H-FH (ch 1.-ch.16)
xx=Not recognized

## 1.3 System Exclusive Messages

### 1) DOC on

F0H, 43H, 73H, 01H, 14H, F7H

### 2) Reverb Type

F0H, 43H, 73H, 01H, 11H, 0FH, 59H, nnH, F7H

| nn=Reverb type: | 00H=off |
|---|---|
| | 01H=Room |
| | 02H=Hall1 |
| | 03H=Hall2 |
| | 04H=Cosmic |

### 3) Reverb Depth On (for each channel)

F0H, 43H, 73H, 01H, 18H, F7H

Not received in GM mode.

## 4) Master Tuning

F0H, 43H, 1xH, 27H, 30H, 00H, 00H, xmH, xlH,
xxH, F7H

x, xx =Not recognized
m  =Tuning MSB
l   =Tuning LSB

## 5) GM System On

F0H, 7EH, 7FH, 09H, 01H, F7H

## 6) Master Volume

F0H, 7FH, 7FH, 04H, 01H, ll, xx, mm, F7H

mm=Master volume
xx =Not recognized

Not received in doc mode.

# 2. Sequencer-Data Reception/Transmission

## 2.1 Channel Messages

All channel messages are recorded and played back.

| 8nH, kkH, vvH | Note off |
|---|---|
| 9nH, kkH, vvH | Note on |
| AnH, kkH, vvH | Polyphonic key pressure |
| BnH, nnH, vvH | Control change |
| CnH, ppH | Program change |
| DnH, vvH | Channel pressure |
| EnH, llH, mmH | Pitch bend |

## 2.2 System Exclusive Messages

All System Exclusive messages are recorded

F0H, ..............., F7H

## 2.3 System Common Messages

### 1) MIDI Time Code

F1H, ndH

Not received

### 2) Song Position Pointer

F2H, llH, hhH  Song Position Pointer

When Remote In Setting is on, under the condition of STOP or Play Pause, it will receive messages properly and become paused condition.

### 3) Song Select

F3H, ssH    Song select

Not received

### 4) Tune Request

F6H            Tune request

Not received

## 2.4 Real Time Messages

### 1) Timing Clock

F8H

Received when set to external synchronization.
While it playing back or recording, it will send messages.

### 2) Start/Continue/Stop

FAH Start
FBH Continue
FCH Stop

When Remote Out Setting is on, it will send messages.
When FA, FB Remote In Setting is on while using STOP or Play Pause function it will receive messages.
When FC Remote In Setting is on while it playing back, it will receive messages.

### 3) Active Sensing

FEH

Received and transmitted.
This message is transmitted automatically every 250 ms.If not received for 500 ms (after receiving an FEH message), "All note off" and "Reset all controllers" messages are sent to the internal tone generator.

# MIDI Implementation Chart

**MIDI-Implementierungstabelle/ChartTableau de mise en oeuvre MIDI/Cuadro de implementación MIDI**

YAMAHA [DISK ORCHESTRA UNIT/MIDI DISK PLAYER]Model DOU-10/MDP2  
[Sequencer] MIDI Implementation Chart

Date: 14-JUN-1994  
Version: 1.0

| Function ... | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| Basic Channel | Default | 1-16 | 1-16 | |
| | Changed | x | x | |
| Mode | Default | Mode 3 | Mode 3 | |
| | Messages | x | x | |
| | Altered | ********** | x | |
| Note Number | | *1 0-127 | 0-127 | |
| | :True voice | ********** | 0-127 | |
| Velocity | Note ON | O | O 9nH, v=1-127 | |
| | Note OFF | x | x 9nH, v=0 or 8nH | |
| After Touch | Key's | *1 *2 | *2 | |
| | Ch's | *1 *2 | *2 | |
| Pitch Bender | | *1 *3 | *3 | |
| Control Change | 1 | *1 *4 | *4 | Modulation |
| | 7 | *1 *5 | *5 | Volume |
| | 11 | *1 *6 | *6 | Expression |
| | 64 | *1 *7 | *7 | Sustain |
| | 66 | *1 *7 | *7 | Sostenuto |
| | 67 | *1 *7 | *7 | Soft |
| | 120-127 | *1 *8 | *8 | |
| | Others | *1 *9 | *9 | |
| Prog Change | | *1 *10 | *10 | |
| | :True # | ********** | | |
| System Exclucive | | *1 *11 | *11 | |
| System Common | :Song Pos | *12 | *12 | |
| | :Song Sel | x | x | |
| | :Tune | x | x | |
| System Real Time | :Clock | O | *14 | |
| | :Commands | *12 | *13 | |
| Aux Messages | :Local ON/OFF | *1 *8 | *8 | |
| | :All Notes OFF | *1 *8 | *8 | |
| | :Active Sense | O | O | |
| | :Reset | x | x | |

## Notes

*1 According to Send Channel Setting: Available and Not available  
*2 When MIDI Function After Touch Filter is OFF: Not available  
*3 When MIDI Function Pitch Bend Filter is OFF: Not available  
*4 When MIDI Function Modulation Filter is OFF: Not available  
*5 When MIDI Function Volume Filter is OFF: Not available  
*6 When MIDI Function Expression Filter is OFF: Not available  
*7 When MIDI Function Pedals Filter is OFF: Not available  

*8 When MIDI Function ModeMessage Filter is OFF: Not available  
*9 When MIDI Function Other Control Change Filter is OFF: Not available  
*10 When MIDI Function Program Change Filter is OFF: Not available  
*11 When MIDI Function Exclusive Filter is OFF: Not available  
*12 When Remote Out is ON: Available  
*13 When Remote In is OFF: Not available  
*14 When Sync is External: Not available  

Mode 1: OMNI ON, POLY     Mode 2: OMNI ON, MONO     O: Yes  
Mode 3: OMNI OFF, POLY     Mode 4: OMNI OFF, MONO     x: No

| Function ... | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| Basic | Default | x | 1-16 | |
| Channel | Changed | x | 1-16 | . |
| Mode | Default | x | Mode 3 | |
| | Messages | x | x | |
| | Altered | ********** | x | |
| Note | | x | 0-127 | |
| Number | :True voice | ********** | 0-127 | |
| Velocity | Note ON | x | O 9nH, v=1-127 | |
| | Note OFF | x | x 9nH, v=0 or 8nH | |
| After | Key's | x | x | |
| Touch | Ch's | x | O | |
| Pitch Bender | | x | O | |
| Control | 0 | x | O | BankSelect MSB |
| Change | 1 | x | O | Modulation |
| | 6, 38 | x | O | Data Entry |
| | 7 | x | O | Volume |
| | 10 | x | O | Pan |
| | 11 | x | O | Expression |
| | 64 | x | O | Sustain |
| | 66 | x | O | Sostenuto |
| | 67 | x | O | Soft |
| | 84 | x | O | Portament Control |
| | 90 | x | O | Dry send level |
| | 91 | x | O | Reverb |
| | 93 | x | O | Chorus |
| | 96 | x | O | RPN data inc. |
| | 97 | x | O | RPN data dec. |
| | 98, 99 | x | O | NRPN MSB LSB |
| | 100, 101 | x | O | RPN MSB LSB |
| | 120 | x | O | All Sound Off |
| | 121 | x | O | Reset All Cntrls |
| Prog | | x | O 0-127 | |
| Change | :True # | ********** | 0-127 | |
| System Exclucive | | x | O | |
| System | :Song Pos | x | x | |
| Common | :Song Sel | x | x | |
| | :Tune | x | x | |
| System | :Clock | x | x | |
| Real Time | :Commands | x | x | |
| Aux | :Local ON/OFF | x | x | |
| Messages | :All Notes OFF | x | O (123-125) | |
| | :Active Sense | x | O | |
| | :Reset | x | x | |

Notes

Mode 1: OMNI ON, POLY    Mode 2: OMNI ON, MONO    O: Yes
Mode 3: OMNI OFF, POLY   Mode 4: OMNI OFF, MONO   x: No

# Demo Song List

| Song No. | Song Title | Original Source | | Type |
|---|---|---|---|---|
| 1 | Little Overture (Tchaikovsky) | DOC DO-114 | The Nutcracker | DOC |
| 2 | Symponie No. 40 1st mov. (Mozart) | DOC DO-109 | Classic Themes 7 | DOC |
| 3 | Golliwog's Cakewalk (Debussy) | DOCDO-113 | Classic Themes 9 | DOC |
| 4 | Piano Concerto No.1 3rd mov. (Chopin) | DOC DO-106D | Piano Concertos | DOC |
| 5 | My Funny Valentine | DOC DO-225 | Jazz Piano 2 | DOC |
| 6 | The Days Of Wine And Roses | DOC DO-210 | Jazz Pino Trio 1 | DOC |
| 7 | Alone Together | DOC DO-226 | Jazz Piano Trio 2 | DOC |
| 8 | Moonlight Serenade | DOC DO-221 | Swing Jazz Favorites | DOC |
| 9 | Autumn Leaves (advanced level) | DOC DO-211 | Clavinova Jazz Lesson | DOC |
| 10 | A Hard Day's Night | DOC DO-203 | Beatles Best 2 | DOC |
| 11 | Penny Lane | DOC DO-231 | Beatles Best 3 | DOC |
| 12 | Love Letters | DOC DO-204 | Screen Themes 1 | DOC |
| 13 | Chariots Of Fire | DOC DO-205 | Screen Themes 2 | DOC |
| 14 | Far From Over | DOC DO-217 | Screen Themes 3 | DOC |
| 15 | Do-Re-Mi from (The Sound Of Music) | DOC DO-207 | Broadway Musical 1 | DOC |
| 16 | Mas Que Nada | DOC DO-206 | Latin Favorites 1 | DOC |
| 17 | Jambalaya | DOC DO-208 | Country Hits | DOC |
| 18 | Mickey Mouse March | DOC DO-201 | Disney Favorites | DOC |
| 19 | Deck The Halls | DOC DO-215 | Christmas Melodies | DOC |
| 20 | Michael, Row The Boat Ashore | DOC DO-213 | Singalong Favorites | DOC |
| 21 | Ballade Pour Adeline | DOC DO-245D | Ballade Pour Adeline | DOC |
| 22 | Lake Louise | DOC DO-250 | Lake Louise | DOC |
| 23 | Czerny No.73 | DOC DO-307 | Czerny 100 For Clavinova | DOC |
| 24 | Minuet from L'Arlesienne (Bizet) | Not available | | DOC |
| 25 | Happy Xmas (War Is Over) | Not available | | DOC |
| 26 | Purple Haze | Not available | | GM |
| 27 | When A Man Loves A Woman | Not available | | GM |
| 28 | Birdland | Not available | | GM |
| 29 | Back To The Future | Not available | | GM |
| 30 | Yellow Submarine | Not available | | GM |

●Please consult your Yamaha Clavinova dealer for the DOC software. All the songs are short excerpts. ●Bitte Setzen Sie sich mit Ihrem Yamaha Clavinova-Händler in Verbindung, der Sie über die DOC-Software berät. Alle Songs sind kurze Ausschnitte. ●Le distributeur de Clavinova Yamaha vous renseignera utilement sur les enregistrements Disk Orchestra Collection. Les oeuvres enregistrées sont des extraits. ●Para más información sobre software DOC, consulte a su concesionario Yamaha Clavinova. Todas las canciones son extractos de corta duración.

# Specifications /Technische Daten/Caractéristiques/Especificationes

| Tone Generator | AWM (Advanced Wave Memory) GM / DOC 16 Parts |
|---|---|
| | **Voices** Disk Orchestra Collection mode: 61 Voices & 1 drum kit set General MIDI mode: 128 Voices & 8 drum kit sets |
| | **Polyphony** 32 notes |
| Sequencer | **Recording Media** 3.5" microfloppy disks (2DD) **Memory Capacity** 1 disk (713 Kb) / 16 Tracks / 60 Songs / approx. 50,000 notes |
| Panel Controls/Terminals | **Display** (73 × 23mm) **Top panel buttons:** DISPLAY/SHIFT, SONG/VOICE ▼/▲, TEMPO/VOLUME ▼/▲, A-B REPEAT, PHRASE REPEAT, SONG REPEAT, RIGHT/A:1, LEFT/B:2, OTHERS/C:3-16, PART/TRACK ◄/►, MINUS ONE, SOLO, METRONOME/INTRO. COUNT, PAUSE, STOP, PLAY/DISK COPY, REW/SONG DELETE, FWD/SONG COPY TO, REC/DISK FORMAT **Front panel controls/terminals:** POWER switch, VOLUME dial, PHONES jack, CONTRAST dial, disk drive, eject button **Rear panel controls/terminals:** DC IN, INPUT SELECT switch, INPUT VOL dial, INPUT jacks (L/MONO, R), OUTPUT jacks (L/MONO, R), MIDI IN, MIDI OUT, SEND CHANNEL switch |
| Power Supply | DC 12 V, 1.5 A (with PA-5B Power Adaptor) |
| Power Consumption | 15 W |
| Impedance | Output: 500 Ω Input: 500 KΩ (L, R) 250 KΩ (mono) |
| Dimensions (W × D × H) | 310 × 245 × 87 mm (12-1/4" × 9-5/8" × 3-3/8") |
| Weight | 2.1 kg (4 lbs., 10 oz.) |
| Supplied Accessories | Demo Disk, Owner's Manual, 2 MIDI cables, 2 audio cables w/RCA-phone adaptors |
| Optional Accessories | PA-5B Power Adaptor (The PA-5B is an included accessory for the U.S. and Canadian markets; for all other areas, it is an optional accessory.) |

*Specifications subject to change without notice.*
*Änderung der Technischen Daten ohne vorherige Ankündigung vorbehalten.*
*Les caractéristiques et la présentation peuvent être modifiées sans avis préalable.*
*Especificaciones sujetas a cambios sin aviso previo.*

# Index

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