YAMAHA

MFC10

MIDI FOOT CONTROLLER

Owner's Manual
Bedienungsanleitung
Mode d'emploi

Congratulations!

Thank you for purchasing Yamaha's MFC10 MIDI Foot Controller.
The MFC10 is a versatile MIDI foot control device that can transmit program changes and control changes to control effectors, tone generators, keyboards, MIDI guitars, rhythm machines, etc..
In addition to the onboard foot controller, up to 4 optional external foot controllers or switches can also be connected to the MFC10 for increased control versatility.
In order to make full use of the MFC10's features and functions, we recommend that you read this manual thoroughly and keep it in a safe place for future reference.

Contents

Precautions

■ **Location**

Do not expose the MFC10 to the following conditions to avoid deformation, discoloration, or more serious damage.

- Direct sunlight (e.g. near a window).
- High temperatures (e.g. near a heat source, outside, or in a car during the daytime).
- Excessive humidity.
- Excessive dust.
- Strong vibration.

■ **USE THE CORRECT POWER SUPPLY**

- Power to the MFC10 should be supplied only from the appropriate Yamaha AC adaptor (the PA-3B or another adaptor specifically recommended by Yamaha). Use of another adaptor may cause serious damage to the unit. Also make sure that the adaptor you have is appropriate for the AC mains supply voltage in the area where you intend to use the MFC10. (The correct input voltage is marked on the adaptor.)

■ **Power Supply**

- Turn the power switch OFF when the instrument is not in use.
- The power adaptor should be unplugged from the AC outlet if the MFC10 is not to be used for an extended period of time.
- Unplug the MFC10 during electric storms.
- Avoid plugging the MFC10 into the same AC outlet as appliances with high power consumption, such as electric heaters or ovens. Also avoid using multi-plug adaptors since these can result in reduced sound quality and possibly damage.

■ **Turn Power OFF When Making Connections**

- To avoid damage to the MFC10 and other devices to which it is connected (a sound system, for example), turn the power switches of all related devices OFF prior to connecting or disconnecting audio and MIDI cables.

■ **MIDI Connections**

- When connecting the MFC10 to MIDI equipment, be sure to use high-quality cables made especially for MIDI data transmission.

- Avoid MIDI cables longer than about 15 meters. Longer cables can pick up electrical noise that can causes data errors.

■ **Handling and Transport**

- Never apply excessive force to the controls, connectors or other parts of the instrument.
- Always unplug cables by gripping the plug firmly, not by pulling on the cable.
- Disconnect all cables before moving the instrument.
- Physical shocks caused by dropping, bumping, or placing heavy objects on the instrument can result in scratches and more serious damage.

■ **Cleaning**

- Clean the cabinet and panel with a dry soft cloth.
- A slightly damp cloth may be used to remove stubborn grime and dirt.
- Never use cleaners such as alcohol or thinner.
- Avoid placing vinyl objects on top of the instrument (vinyl can stick to and discolor the surface).

■ **Electrical Interference**

- This instrument contains digital circuitry and may cause interference if placed too close to radio or television receivers. If this occurs, move the instrument further away from the affected equipment.

■ **Data Backup**

- The MFC10 contains a special read-write memory without a battery, that retains the contents of its internal memory even when the power is turned OFF.

■ **Service and Modification**

- The MFC10 contains no user serviceable parts. Opening it or tampering with it in any way can lead to irreparable damage and possibly electric shock. Refer all servicing to qualified YAMAHA personnel.

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

Power Supply

Use the PA-3B power adaptor (or another adaptor recommended by Yamaha) to supply the MFC10 with power from a convenient wall socket.

1 Connect the adaptor's plug into the **[DC IN]** jack on the rear panel.
Wrap the power cord around the cord stopper hook to prevent accidental unplugging during use.

2 Plug the AC adaptor into any convenient AC wall socket.

Power Adaptor

Wall Socket

POWER
ON/ OFF DC IN

Cord Stopper

CAUTION
- **Do not use an AC adaptor other than the PA-3B, or other adoptors recommended by Yamaha. The use of any incompatible adaptor may result in damage, overheating, or fire to the unit.**
- **Be sure to disconnected the power adaptor from the outlet when the MFC10 is not in use.**
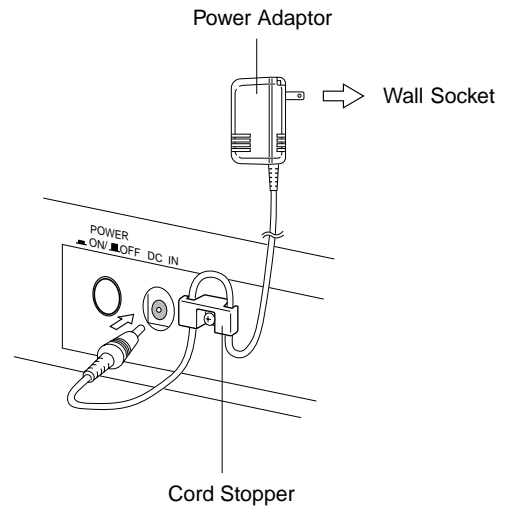
Front Panel
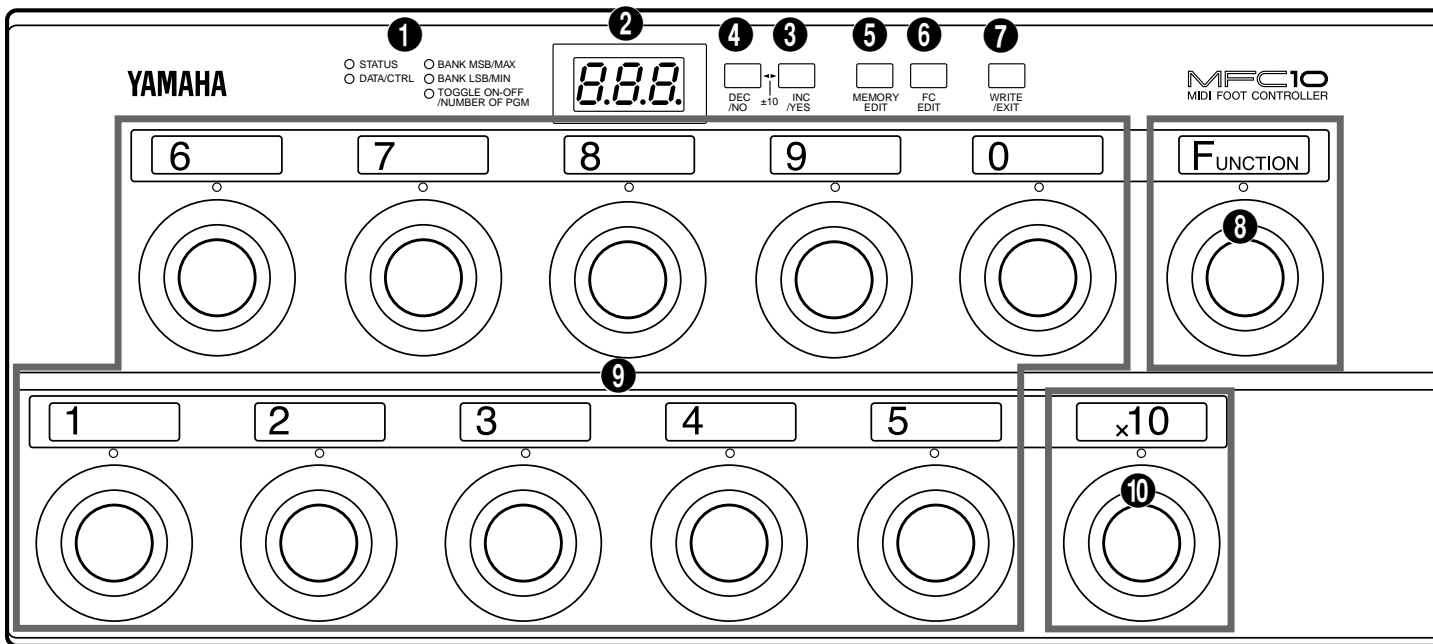
Rear Panel

■ Front Panel

❶ Parameter Lamp (see page 11, 16)
The currently selected parameter lamp will flash when in the edit mode.
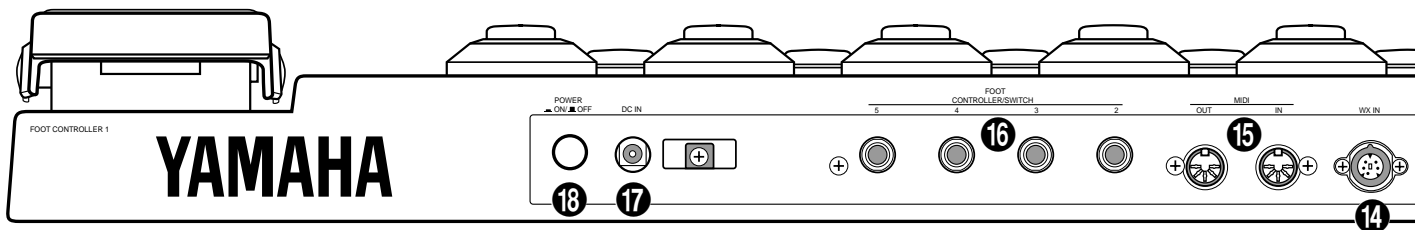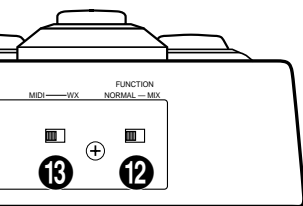
❷ LED Display (see page 6)
Memory numbers, program changes and functions (control changes) saved in memory, parameters, etc., are indicated in the display.

❸ [INC/YES] (see page 11, 17)
Increases (INC) edit number values in the Play mode and parameter data values in the Edit mode, and to save data that has been edited, the YES button is used to confirm the save operation.

❹ [DEC/NO] (see page 11, 17)
Decreases (DEC) edit number values in the Play mode and parameter data values in the Edit mode, and when confirmation of the save operation of edited data is requested, the NO button cancels the save operation.

❺ [MEMORY EDIT] (see page 11, 16)
Enters the Memory Edit mode and selects edit parameters.

❻ [FC EDIT] (see page 22)
Enters the Foot Controller Edit mode and selects edit parameters.

❼ [WRITE/EXIT] (see page 11, 17)
Exits the Edit mode and returns to the Normal control mode. At this time it is necessary to press the [INC/YES] button or [DEC/NO] button to either confirm or cancel the data overwrite operation.

❽ [FUNCTION] Foot switch (see page 6)
Switches between Program Change Memory and Function Memory when in the Normal Mode.
In the Mix Mode, switches between Mix mode and Function Memory.

* **When the lamp above the [FUNCTION] foot switch is lit, the MFC10 is in Function Memory.**

■ **Rear Panel**

⑫ **[FUNCTION NORMAL — MIX] Switch (see page 8, 19)**

Selects the mode that the MFC10 is to be operated in, Normal mode or Mix mode.

⑬ **[MIDI — WX] Switch**

Selects whether MIDI data is received via the WX jack or the MIDI IN jack.

⑭ **[WX IN] Jack**

A Yamaha Wind MIDI Controller WX7/11 can be directly connected to this jack. (The MFC10 supplies electric power to the WX7/11, so the BT-7 Power Box is not needed.)

⑮ **[MIDI IN/OUT] Jacks (see page 27)**

Using a MIDI cable, external MIDI devices can be connect to the MFC10.

⑯ **[FOOT CONTROLLER/SWITCH 2-5] Jacks (see page 22)**

These jacks allow the connection of up to 4 optional foot controllers or foot switches to the MFC10. The connected foot controllers or foot switches can be used to control MIDI data in the same manner as the onboard foot controller.

⑰ **[DC IN] Jack (see page 3)**

Connect the power adaptor here to supply the MFC10 with power.

⑱ **[POWER ON/OFF] Switch (see page 8)**

Turns the MFC10's power on or off.

⑨ **[1]-[0] Foot switch (see page 9, 12)**
Selects Memory Numbers.

⑩ **[x10] Foot switch (see page 9, 12)**
Select the 100's or 10's digit.

⑪ **Onboard Foot Controller (see page 22)**
The Foot Controller can be used to transmit control changes, after touch, pitch bend, etc., to external MIDI devices.

User Memo Sticker

The supplied User Memo Sticker can be applied next to the number plate above each foot switch to write memos on.

MFC10 Functions

When a foot switch is pressed, MIDI data (program changes/function data) stored in the MFC10's internal memory is transmitted to external MIDI devices.

- **Program Change Data**   Program change data transmitted from the MFC10 can select voices, etc., on other MIDI devices.
Bank select data can be transmitted along with program change data as well.

- **Function Data**   The MFC10 can transmit the following function data to control other MIDI devices.

- NOTE ON/OFF (90-9F)
- CONTROL CHANGE (b0-bF)
- PROGRAM CHANGE (C0-CF)
- SONG SELECT (F3)
- START (FA)

- CONTINUE (Fb)
- STOP (FC)
- SECTION CONTROL (F0)
- TEMPO CONTROL (Ft)

* Values in parentheses are shown in the display.

■ 2 Modes ....

The MFC10's foot switches can be set to operate in one of two modes (Normal Mode/Mix Mode). Use the **[FUNCTION NORMAL — MIX]** switch on the rear panel to set the mode the MFC10 will operate in. (see page 5, 8, 19)

How the foot switches operate in each mode is further explained below.

• NORMAL mode

[In this mode, Program Change Memory and Function Memory are independent of each other.]

FUNCTION
NORMAL — MIX

**Program change memory
(128 types)**

**Function memory
(100 types)**

Switch

Function lamp is off

Function lamp is lit
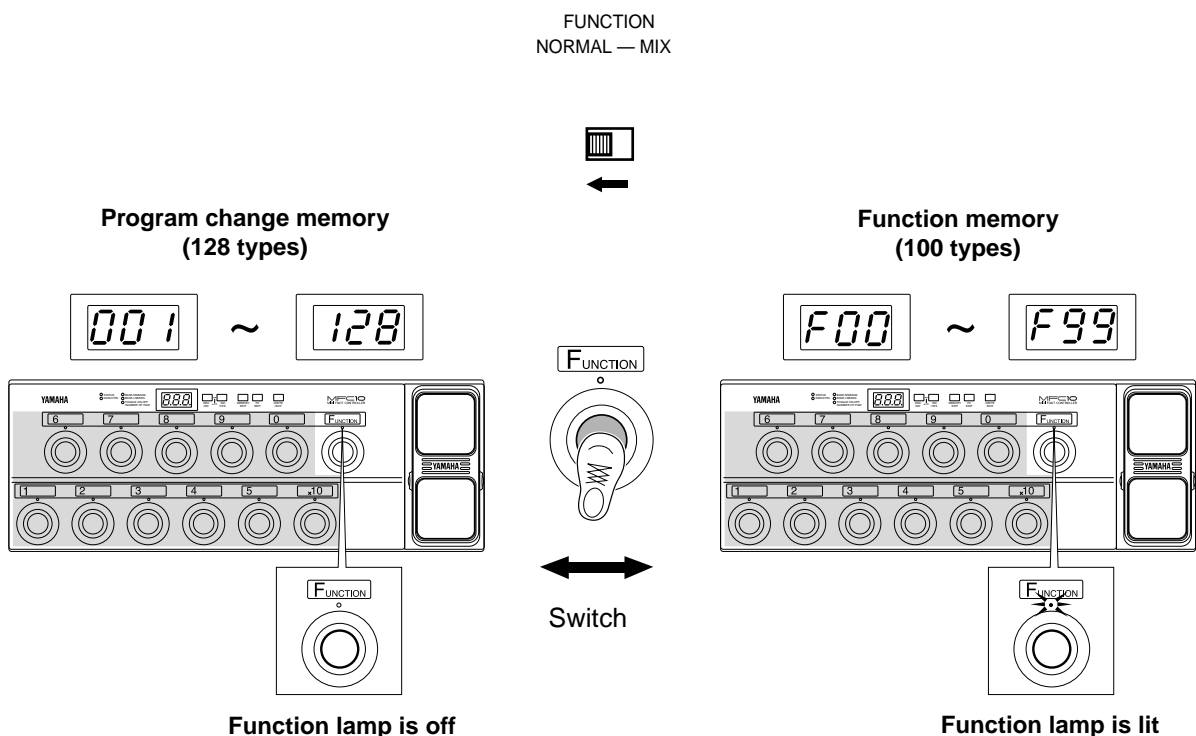
• MIX mode

[In this mode, Program Change Memory and Function Memory are mixed.]

FUNCTION
NORMAL — MIX

Upper level foot switches [6]-[0]

Function memory (5 types)

| F06 | ~ | F00 |

**Program change memory
(5 x 5 types)**

| 11 | ~ | 15 |

Lower level foot switches [1]-[5]

11~15 , 21~25 , 31~35 , 41~45 , 51~55
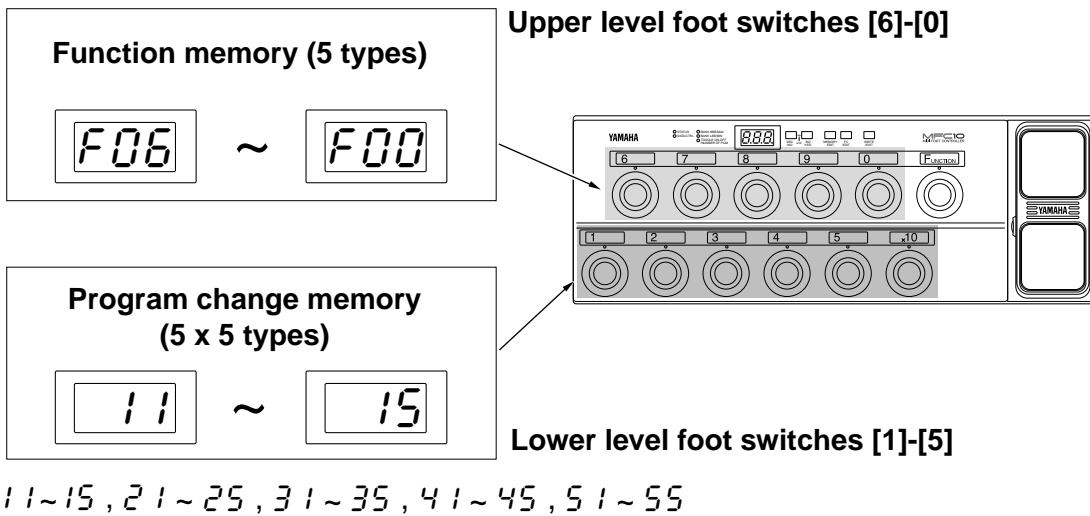
> **MEMO**
> • To access all 100 (F00-F99) Function Memory types, press the [FUNCTION] switch, and it's lamp will light.
> • In the MIX mode, Program Change memory (25 memories) is stored and played independent of Program Change memory in the NORMAL mode.

■ Foot Controller Settings ....

Sets parameters for the onboard Foot Controller and the external Foot Controllers 2-5. (see page 22)

■ All Memory MIDI Channel Number Assign.......................................

The settings for all MIDI channels, in all assigned memories, can be set to the same MIDI channel. (see page 24)

■ Bulk Dump ....

Internal data for the Normal mode Program Change Memory, the Mix mode Program Change Memory, and Function Memory and Foot Controller Memory (1-5) can be transmitted via MIDI OUT. (see page 25)

Normal Mode

Both Program Change Memory and Function Memory can be accessed in the Normal Mode.

Program Change Memory	There are 128 memory allocations for Program Change data. By selecting a memory number, its stored program change is transmitted to external devices via the MIDI OUT terminal.
Function Memory	There are 100 memory allocations for Function data (control change etc.). By selecting a memory number, its stored function data is transmitted to external devices via the MIDI OUT terminal.

Press the [FUNCTION] to switch between Program Change Memory and Function Memory.

1 Press the **[POWER ON/OFF]** switch on the rear panel to turn the power on.

POWER
ON/ OFF

2 Set the **[FUNCTION NORMAL—MIX]** switch on the rear panel to the **[NORMAL]** position.

FUNCTION
NORMAL — MIX

3 Press **[FUNCTION]** to switch between Program Change Memory (see page 9) and Function Memory (see page 12).

F_{UNCTION}

• **Program Change Memory (128 types)**

001 ~ 128

Function lamp is off. — F_{UNCTION}
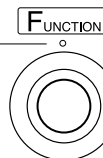
• **Function Memory (100 types)**

F00 ~ F99

Function lamp is lit. — F_{UNCTION}
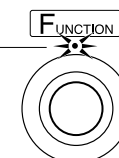
Program Change Memory

If FUNCTION lamp is lit, press **[FUNCTION]**, so that the lamp is off, and Program Change Memory is enabled.

Program Change Memory transmits MIDI channel numbers 1-16 and program change data (001-128) that are stored in memory.

There are 128 memory allocations in which Program Change data can be saved. Also, Bank Select data (00=MSB, 20=LSB) can be transmitted along with Program Change data.

NOTES
• **Press [FUNCTION] to enable Function Memory (the FUNCTION lamp lights).**

■ Program Change Memory Control (Transmit) ....

Program changes and bank select data are transmitted when a memory number is selected with the **[1]**-**[0]** and **[x10]** foot switches. A total of 128 (001-128) memory allocations are available for storing such data.

Select a Memory Number

[1]-[0], [x10] foot switches
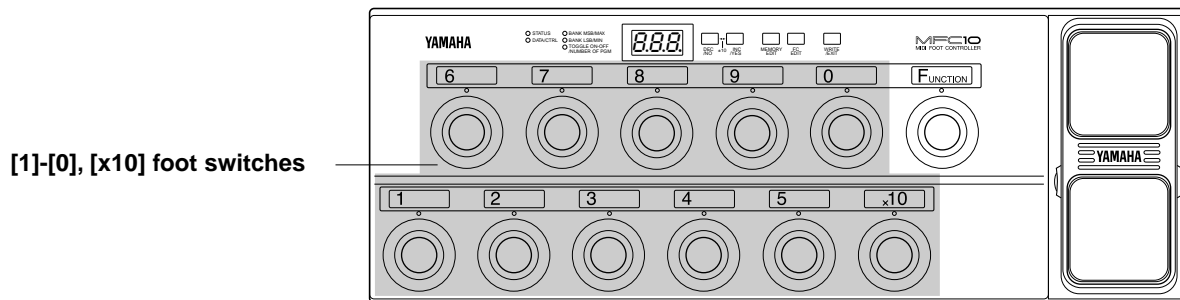
To change or select the 1's digit.

Press one of the **[1]**-**[0]** foot switches.
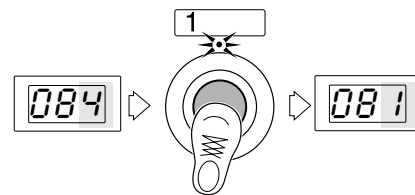
Example: To change the current memory number 084 to 081 press **[1]** once.

To change and select both the 10's and 1's digits.

Press **[x10]**. (The 10's digit of the LED flashes indicating input standby.) Press **[1]**-**[0]**, to select the 10's digit value. (The 1's digit flashes indicating input standby.)

Once again press **[1]**-**[0]** to select the 1's digit value.
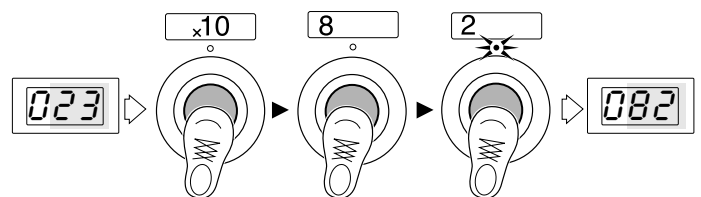
Example: To change the current Memory Number 023 to 082, press **[x10]**, **[8]**, and **[2]** in that order.

To change and select all digits.

Press **[x10]** two times.
If the 100's digit value is 1, it will change to 0, if it is 0 it will change to 1. (The 10's digit flashes indicating input standby.)
Press **[1]**-**[0]**, to select the 10's digit value. (The 1's digit flashes indicating input standby.)
Once again, press **[1]**-**[0]** to select the 1's digit value.
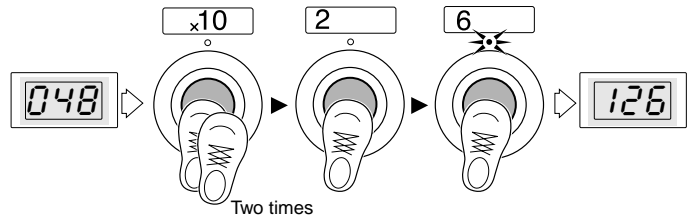
Example: To change the current Memory Number 048 to 126, press **[x10]**, **[X10]**, **[2]**, **[6]** in that order.

NOTES
- When [x10] is pressed twice, the 100's digit value will alternate between 1 and 0.
- Attempting to select the number 000, will result in 001 being selected. Also, inputting any value above 128 will result in 128 being selected.

■ Program Change Memory Edit..

The following 4 types of MIDI data can be transmitted with Program Change Memory.

The transmitting Channel Number and MIDI data can be stored to individual Memory Numbers.

• STATUS

$$\boxed{C0} \sim \boxed{CF}$$

Cn (n=MIDI channel numbers 1-16) assigns the MIDI channel for voice selection. The number is shown in hexadecimal.

C0	Channel 1	C4	Channel 5	C8	Channel 9	CC	Channel 13
C1	Channel 2	C5	Channel 6	C9	Channel 10	Cd	Channel 14
C2	Channel 3	C6	Channel 7	CA	Channel 11	CE	Channel 15
C3	Channel 4	C7	Channel 8	Cb	Channel 12	CF	Channel 16

• DATA/CTRL

$$\boxed{001} \sim \boxed{128}$$

Sets program numbers (voice numbers 001-128) for transmission.
Refer to the owner's manual of the receiving device for details on voice assignments.
Refer to a GM voice map for the 128 voice allocations of GM MIDI devices.

• BANK MSB (Bank Select MSB)
• BANK LSB (Bank Select LSB)

$$\boxed{oFF} , \boxed{000} \sim \boxed{127}$$

Bank select numbers are used to access voices other than the 128 voices normally available in MIDI devices and GM devices. Program change data and bank select data (BANK MSB/ LSB:off, 000-127) must be transmitted together to access these voices.
Refer to the owner's manual of the receiving device for specific information on bank select data.

NOTES
- The default settings for each memory (001-128) is as follows.
STATUS=C0 (Channel Number 1), DATA/CTRL=001-128 (same as the memory number), BANK MSB/MAX=off, BANK LSB/MIN=off.

How to Edit Memory

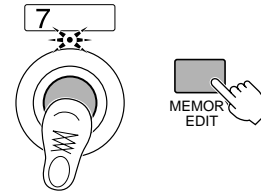If the FUNCTION lamp is lit, press **[FUNCTION]**, so that the lamp is off, and Program Change Memory is enabled.

1 Select the Memory Number to be edited (see page 9). Press **[MEMORY EDIT]** to edit to begin editing that Memory Number. (The lamp above that foot switch and the STATUS lamp will flash.)

2 Press **[MEMORY EDIT]** to cycle through the 4 edit parameters (the selected parameter's light will flash).

> **NOTES** • TOGGLE ON-OFF/NUMBER OF PGM can not be selected from Program Change Memory.

STATUS   STATUS settings
DATA/CTRL   DATA/CONTROL settings
BANK MSB/MAX   BANK MSB settings
BANK LSB/MIN   BANK LSB settings
TOGGLE ON-OFF /NUMBER OF PGM
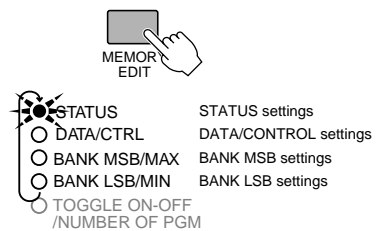
3 Use **[INC/YES]** and **[DEC/NO]** to edit the parameter.

Press **[INC/YES]** to increase the value shown in the LED display by 1, press **[DEC/NO]** to decrease the value by 1. By holding a button, values will continuously increase or decrease.

Hold the **[INC/YES]** button and press the **[DEC/NO]** button and the value shown in the LED display will increase by 10. Repeatedly press **[DEC/NO]** to continue increasing the value by 10.

Hold the **[DEC/NO]** button and press the **[INC/YES]** button and the value shown in the LED display will decrease by 10. Repeatedly press **[INC/YES]** to continue decreasing the value by 10.

$001 \blacktriangleright\blacktriangleright 128$

$128 \blacktriangleright\blacktriangleright 001$

Increase by 10

Decrease by 10
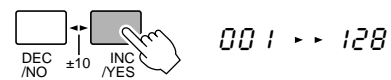
4 After the desired parameters have been edited in steps 2 and 3, press **[WRITE/EXIT]**. The Memory Number shown in the LED display will flash. (The flashing number indicates confirmation is necessary to proceed or cancel saving of the edited data.)

> **NOTES** • If data has not been edited, the Memory Number will not flash and the MFC10 will return to its normal control mode.
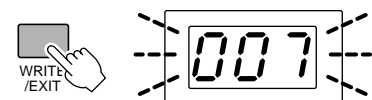
5 Press **[INC/YES]**, to save the edited data to the current Memory Number, The MFC10 will return to its normal control mode.

Press **[DEC/NO]** to cancel the save operation of the edited data. At this time the memory will revert to its pre-edited contents.
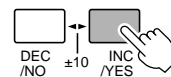
> **NOTES** • Another Memory Number from the same bank (10's digit bank) can be easily edited by pressing [1] - [0] without exiting from the edit mode. You must execute or cancel the save operation for the currently edited data (the current Memory Number will flash) before proceeding to edit the new number. Use [INC/YES] to execute or [DEC/NO] to cancel the save operation. If data has not been edited, the Memory Number will not flash and the newly selected Memory Number will be shown in the display.

```
Function   Memory
```

Press **[FUNCTION]**, the FUNCTION lamp will light, and Function Memory is enabled.

Function Memory stores and transmits MIDI data such as note on/off, control change, program change, song select, start, continue, stop, etc., in its memory.

There are 100 (F00-F99) memory allocations in which Function Data can be saved.

NOTES • **Press [FUNCTION] to enable to Program Change Memory. (The FUNCTION lamp is off.)**

■ Function Memory Control (Transmit) ....

Function data is transmitted when a Memory Number is selected using the **[1]**-**[0]** and **[x10]** foot switches. A total of 100 (F00-F99) memory allocations are available for storing such data.

Select a Memory Number

| To change and select the 1's digit. |

Press one of the **[1]**-**[0]** foot switches.
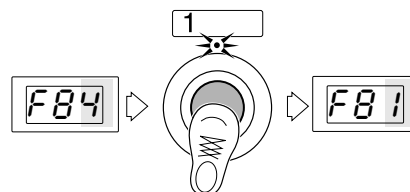
Example: To change the Memory Number "F84" to "F81" press the **[1]** foot switch once.

| To change and select both the 10's and 1's digits. |

Press the **[x10]** foot switch. (The 10's digit of the LED flashes indicating input standby.) Press **[1]**-**[0]**, to select the 10's digit value. (The 1's digit flashes indicating input standby.)

Once again press **[1]**-**[0]** to select the 1's digit value.
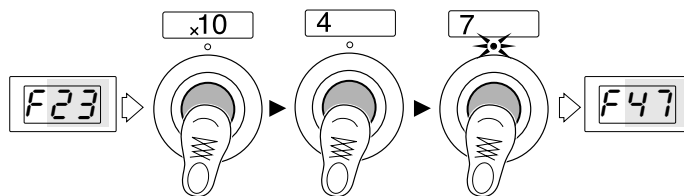
Example: To change the Memory Number "F23" to "F47", press **[x10]**, **[4]**, **[7]** in that order.

■ Edit Function Memory ....

The following 9 types of MIDI data can be transmitted with Function Memory.

The transmitting Channel Number and MIDI data can be stored to individual Memory Numbers.

• **Note On/Off (9) [STATUS=90-9F]** $\boxed{90}$ ~ $\boxed{9F}$
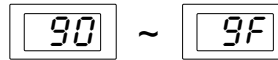
DATA/CTRL	000-127 (Note Number)
BANK MSB/MAX	001-127 (Note On Velocity)
BANK LSB/MIN	001-127 (Note Off Velocity)
TOGGLE ON-OFF /NUMBER OF PGM	Pn1-Pn4 (see page 18)

Transmits keyboard Note On/Off data. If a different note is set to each foot switch, the foot switches can be used to play a scale. Also, if a sampler is connected to the MFC10 the foot switches can be used to trigger samples.

Note Number
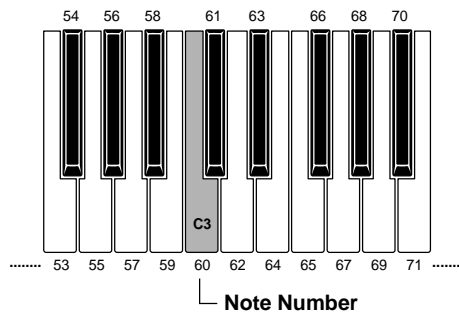
• **Control Change (b) [STATUS=b0-bF]** $\boxed{b0}$ ~ $\boxed{bF}$

DATA/CTRL	000-127 (Control Number)
BANK MSB/MAX	000-127 (Switch On Data)
BANK LSB/MIN	000-127 (Switch Off Data)
TOGGLE ON-OFF /NUMBER OF PGM	off, on, Pn1-Pn4 (see page 18)

13

Control Change List (for GM, XG supported devices)

Control Number	Function	GM	XG
0	Bank Select	N	Y
1	Modulation	Y	Y
5	Portamento Time	N	Y
6	Data Entry	Y	Y
7	Main Volume	Y	Y
10	Pan Pot	Y	Y
11	Expression	Y	Y
32	Bank Select	N	Y
38	Data Entry	Y	Y
64	Hold 1 (Damper Pedal)	Y	Y
65	Portamento	N	Y
66	Sostenuto (Chord Hold)	N	Y
67	Soft Pedal	N	Y
71	Harmonic Content	N	Y
72	Release Time	N	Y
73	Attack Time	N	Y
74	Brightness	N	Y

Control Number	Function	GM	XG
84	Portamento Control	N	Y
91	Extensive Use Effect 1 (Reverb)	N	Y
93	Extensive Use Effect 3 (Chorus)	N	Y
94	Extensive Use Effect 4 (Celeste)	N	Y
96	Data-Increment	N	Y
97	Data-Decrement	N	Y
98	NRPN(LSB)	N	Y
99	NRPN(MSB)	N	Y
100	RPN(LSB)	Y	Y
101	RPN(MSB)	Y	Y
120	All Sound Off	N	Y
121	Reset All Controllers	Y	Y
122	Local Control	N	Y
123	All Note Off	Y	Y
124	Omni Off	N	Y
125	Omni On	N	Y
126	Mono On	N	Y
127	Poly On	N	Y

Y...Yes   N...No

GENERAL MIDI

GM (GM System Level 1)
[GM] (General MIDI is in addition to the MIDI standard which ensures that any GM-compatible music data can be accurately played on any GM-compatible tone generator, regardless of the maker. The GM mark is affixed to all software and hardware products that support the General MIDI standard.

XG

XG
[XG] is a MIDI format created by Yamaha which significantly imporves and expands upon the General MIDI standard by providing a greater variety of high-quality Voices plus considerably enhanced effect operations—while being fully compatible with GM.

• Program Change (C) [STATUS=C0-CF]   `C0` ~ `CF`

DATA/CTRL	001-128 (Program Number)
BANK MSB/MAX	off, 000~127
BANK LSB/MIN	off, 000~127
TOGGLE ON-OFF /NUMBER OF PGM	Pn1-Pn4 (see page 18)

• Song Select (F3) [STATUS=F3]   `F3`
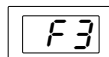
DATA/CTRL	000-127 (Song Number)

• Start (FA) [STATUS=FA]   `FA`
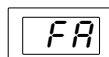
Other parameters cannot be set.

• **Continue (Fb) [STATUS=Fb]**

Other parameters cannot be set.

```
Fb
```
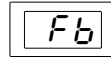
• **Stop (FC) [STATUS=FC]**

Other parameters cannot be set.

```
FC
```
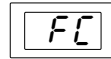
• **Section Control (F0) [STATUS=F0]**

```
F0
```
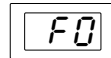
DATA/CTRL	c01-c42 (Section Number)
BANK MSB/MAX	01-16, - - - (Device Number)

* When c41 or c42 is selected, the device number must be set in BANK MSB/MAX.

Data for section types that can be transmitted are listed below.

c01	Intro 1
c02	Intro 2
c03	Intro 3
c04	Intro 4
c05	Intro 5
c06	Intro 6
c07	Intro 7
c08	Intro 8
c09	Main 1
c10	Main 2
c11	Main 3
c12	Main 4
c13	Main 5
c14	Main 6
c15	Main 7
c16	Main 8

c17	Fill In AA1
c18	Fill In AA2
c19	Fill In AA3
c20	Fill In AA4
c21	Fill In AA5
c22	Fill In AA6
c23	Fill In AA7
c24	Fill In AA8
c25	Fill In AB1
c26	Fill In AB2
c27	Fill In AB3
c28	Fill In AB4
c29	Fill In AB5
c30	Fill In AB6
c31	Fill In AB7
c32	Fill In AB8

c33	Ending 1
c34	Ending 2
c35	Ending 3
c36	Ending 4
c37	Ending 5
c38	Ending 6
c39	Ending 7
c40	Ending 8
c41	Reset Start
c42	Stop & Rewind

• **Tempo Control (Ft) [STATUS=Ft]**

```
Ft
```
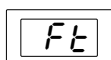
DATA/CTRL	030~250 (Tempo Value)

The tempo of external devices can be controlled within a range of 30-250 beats per minute.

How to Edit Memory

1 Select the Function Memory to be edited, press **[MEMORY EDIT]**, to begin editing that memory number. (The lamp above the foot switch and the STATUS lamp will flash.)
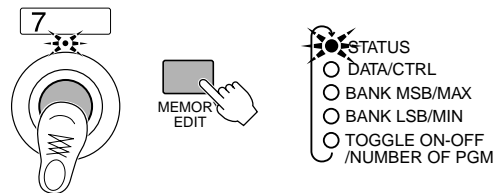
2 Press **[INC/YES]** and **[DEC/NO]** to select the Status (transmit MIDI data and MIDI channel number) (the STATUS lamp will flash).
The 1's digit (MIDI channel number 1-16) of Status is shown in hexadecimal. (see page 10)

Channel number
MIDI data
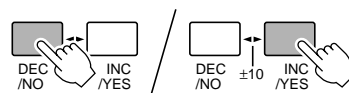
90...9F	Transmit Note On/Off
b0...bF	Transmit Control Change
C0...CF	Transmit Program Change
F3	Transmit Song Select
FA	Transmit Start
Fb	Transmit Continue
FC	Transmit Stop
F0	Transmit Section Control
Ft	Transmit Tempo Control
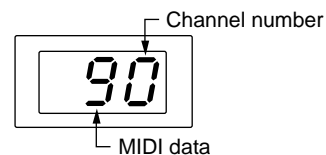
3 Press **[MEMORY EDIT]** to select the parameters set in the procedures above for editing (the lamp will flash).
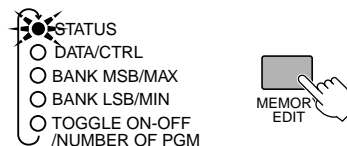
	Note On/Note Off	Control Change	Program Change
STATUS (0-F indicates MIDI channel numbers)	90-9F	b0-bF	C0-CF
DATA/CTRL	Note Number	Control Number	Program Number
BANK MSB/MAX	Note On Velocity	Switch On Data	Bank MSB
BANK LSB/MIN	Note Off Velocity	Switch Off Data	Bank LSB
TOGGLE ON-OFF /NUMBER OF PGM	Pn1-Pn4	Toggle On/Off Pn1-Pn4	Pn1-Pn4

	Song Select	Start	Continue	Stop
STATUS	F3	FA	Fb	FC
DATA/CTRL	0-127	–	–	–
BANK MSB/MAX	–	–	–	–
BANK LSB/MIN	–	–	–	–
TOGGLE ON-OFF /NUMBER OF PGM	–	–	–	–

	Section Control	Tempo Control
STATUS	F0	Ft
DATA/CTRL	c01 - c42	030- 250
BANK MSB/MAX	Channel Number (if c41, c42 is used)	–
BANK LSB/MIN	–	–
TOGGLE ON-OFF /NUMBER OF PGM	–	–

*(—) is displayed to indicate parameters that cannot be selected.

4 Press **[INC/YES]** or **[DEC/NO]** to edit parameter values.

Press **[INC/YES]** to increase the value shown in the LED display by 1, press **[DEC/NO]** to decrease the value by 1. By holding a button, values will continuously increase or decrease.

Hold the **[INC/YES]** button and press the **[DEC/NO]** button and the value shown in the LED display will increase by 10. Repeatedly press **[DEC/NO]** to continue increasing the value by 10.

Hold the **[DEC/NO]** button and press the **[INC/YES]** button and the value shown in the LED display will decrease by 10. Repeatedly press **[INC/YES]** to continue decreasing the value by 10.

`001 ▸▸ 128`

`128 ▸▸ 001`

Increase by 10

Decrease by 10
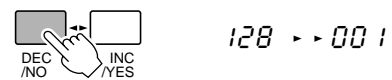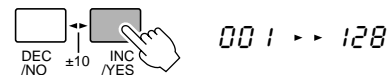
5 After the desired parameters have been edited in steps 3 and 4, press **[WRITE/EXIT]**. The Memory Number shown in the LED display will flash.

`F07`

> **NOTES**
> • If data has not been edited, the Memory Number will not flash and the MFC10 will return to its normal control mode.
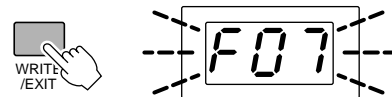
6 Press **[INC/YES]**, to save the edited data to the current Memory Number, The MFC10 will return to its normal control mode.
Press **[DEC/NO]** to cancel the save operation of the edited data. At this time the memory will revert to its pre-edited condition.
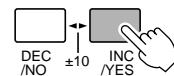
> **NOTES**
> • Another Memory Number from the same bank (10's digit bank) can be easily edited by pressing [1] - [0] without exiting from the edit mode. You must execute or cancel the save operation for the currently edited data (the current Memory Number will flash) before proceeding to edit the new number. Use [INC/YES] to execute or [DEC/NO] to cancel the save operation. If data has not been edited, the Memory Number will not flash and the newly selected Memory Number will be shown in the display.

About the TOGGLE ON-OFF/NUMBER OF PGM settings.

TOGGLE ON-OFF/NUMBER OF PGM contains the settings for "on, off, Pn1, Pn2, Pn3, Pn4". According to the setting, you can use the foot switch to operate as a toggle on-off, or simultaneously transmit several MIDI data.

TOGGLE ON-OFF settings

TOGGLE ON-OFF settings can be used in Function Memory that are saved with control change data.

- **[on]**...... Press the foot switch and the MAX value (switch on data) is continuously transmitted. Press the foot switch once again and the MIN value (switch off data) is transmitted. The foot switch's lamp will flash from the time the MAX value is transmitted, until the MIN value is transmitted. Even if another foot switch is pressed, the lamp will remain flashing. (The flashing lamp indicates continuous transmission of the MAX value.)

- **[oFF]**.... Hold the foot switch and the MAX value (switch on data) is transmitted. Release the foot switch and the MIN value (switch off data) is transmitted.

MIDI Data Simultaneous Transmission (Pn1-Pn4)

Pn1-Pn4 settings can be used in Function Memory that are saved with Note ON/OFF, control change, and program change data.

<u>Within Function Memories F00-F49</u>, up to 4 of the same type of MIDI data (one of the following— Note On/Off, Control Change, Program Change) can be simultaneously transmitted.
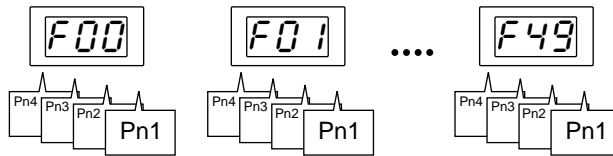
For example, you can transmit several note on/off data over the same MIDI channel to play chords, or transmit control change data over several MIDI channels to simultaneously control external effectors. Also, you can simultaneously change the voices of several devices by transmitting Program Change Data over several MIDI channels.

■ Pn1-Pn4 Settings

① Select the memory number to be set.

② Press **[MEMORY EDIT]** and select "TOGGLE ON-OFF/NUMBER OF PGM".

③ Press **[INC/YES]** or **[DEC/NO]** and select "Pn1" ("Pn1" is automatically selected when the edit operation is entered).

④ Select each parameter (STATUS, DATA/CTRL, etc.) using **[MEMORY EDIT]**, and set as required using **[INC/YES]** and **[DEC/NO]**.

⑤ After setting all parameters for "Pn1", repeat steps ② and ③ to select "Pn2". Repeat step ④ to select and set each parameter as required.

⑥ In the same manner as "Pn2", set parameters for "Pn3", and "Pn4" if necessary.
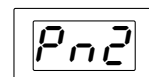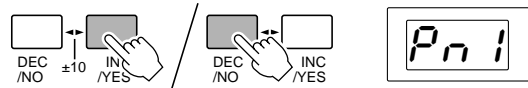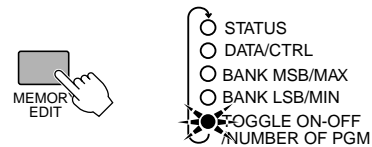
NOTES
- **When "Pn1-Pn4" is set, the toggle setting will automatically be set to ON.**
- **If data is stored in Memory Numbers F00-F49, "Pn1" will automatically be selected when the Memory Number is edited again.**

MIX Mode

In the MIX mode, both Program Change data and Function data can be accessed at the same time without having to change between modes with the [FUNCTION] switch. This mode provides quick transmission of Program Change data and Function data.

In this mode, up to 25 different Program memories (independent of the NORMAL mode) can be saved and accessed from the lower level of foot switches [1]-[5], and up to 5 different Function memories can be saved and accessed from the upper level of foot switches [6]-[0]. Each of those memories can be selected and transmitted with the [1]-[0] and [x10] foot switches.

1 Set the **[FUNCTION NORMAL-MIX]** switch on the rear panel to the **[MIX]** position.

FUNCTION
NORMAL — MIX

2 Press **[FUNCTION]** and turn off the FUNCTION lamp.
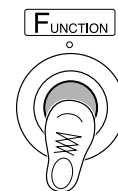
F<small>UNCTION</small>

If **[FUNCTION]** is pressed while in the MIX mode (the FUNCTION lamp lights), the MIX mode's FUNCTION memory (see page 21) will be enabled. All foot switches can access the MFC10's 100 FUNCTION memories.

The 10's digit setting is valid when the MFC10 is returned to the MIX mode. Press **[FUNCTION]** once again, the FUNCTION lamp turns off, and the MFC10 is returned to MIX mode.

---

* The contents of each Function Memory number is same data between NORMAL mode and MIX mode. Program Change Memory exists independently in each mode.

* Default setting for Program Change Memory in the MIX mode.
11[C0, 00], 12[C0, 01], 13[C0, 02], 14[C0, 03], 15[C0, 04], 21[C0, 05], 22[C0, 06], ...

■ MIX Mode Memory Control (Transmit) ....

In the MIX mode, a maximum of 25 Program Change memories (independent in this mode) and 5 Function memories can be stored in memory and later transmitted via MIDI.

• Use the upper level foot switches [6]-[0] to transmit Function data.

$$\boxed{F\ 16} \sim \boxed{F\ 10}$$

Pressing **[6]**-**[0]** transmits Function data.
To select the Function number's 10's digit, press **[FUNCTION]**, and the MIX mode will switch to the MIX mode's Function Memory (see page 21). In this state, all foot switches (**[0]**-**[9]**) will transmit Function Memory.
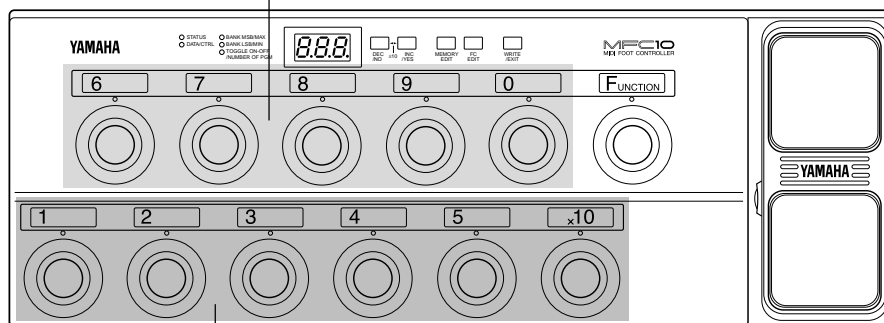
• Use the lower level foot switches [1]-[5] to transmit Program Change data.

$$\boxed{\ 11} \sim \boxed{\ 15}$$

$1 1 \sim 15, 2 1 \sim 25, 3 1 \sim 35, 4 1 \sim 45, 5 1 \sim 55$

Press **[1]**-**[5]** to access the 25 (5 x 5) Program Change Memories.
To select the Program Change Memory number's 10's digit, press **[x10]**, next press **[1]**-**[5]** to enter a value of 1-5.
Program Memory data can be edited in the same manner as the Normal mode, press **[MEMORY EDIT]** to begin editing.

NOTES

• Only 2 digits (10's digit and 1's digit) are displayed for Program Change memory numbers in the MIX mode.

■ Editing MIX mode ....

With the MFC10 in MIX mode control status, press the **[MEMORY EDIT]** button.

• Editing Program Change Memory

To edit the data in the 25 memory types (independent in this mode) for foot switches **[1]** - **[5]**, can be edited using the same procedure to edit Program Change Memory when in the Normal mode. (see page 10)

• Editing Function Memory

To edit the data in the 5 memory types for foot switches **[6]** - **[0]**, can be edited using the same procedure to edit Function Memory when in the Normal mode. (see page 13)

The MIX mode's Function Memory

In the MIX mode, press **[FUNCTION]**, the FUNCTION lamp lights, and the MFC10 is switched to the MIX mode's function memory. It is also possible to select the Function memory number's 10 value.

Press **[FUNCTION]**, the lamp turns off, and the MFC10 returns to the MIX mode.

**Function Memory
(5 types)**

$F06$ ~ $F00$

**Function Memory
(10 x 10 types)**

$F00$ ~ $F99$

Switch

**Program Change Memory
(5 x 5 types)**

11 ~ 15
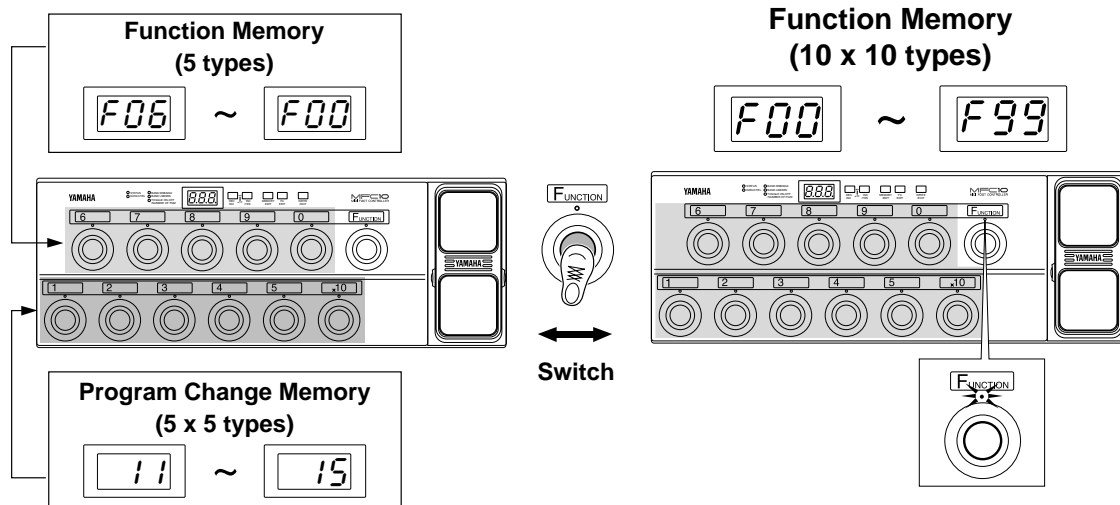
• Function Memory Control in the MIX mode

Function Memory Control in the MIX mode is the same operation as in the Normal Mode (see page 12).

• Editing Function Memory in the MIX mode

Editing Function Memory in the MIX mode is the same operation as in the Normal Mode (see page 13).

Foot Controller

> The MFC10's onboard foot controller (1) and external foot controllers (2-5) can be independently set to transmit MIDI data.
> Select the type of data to be transmitted by each foot controller and edit those parameters.
> Foot controllers can transmit Control Change, After Touch, and Pitch Bend data.
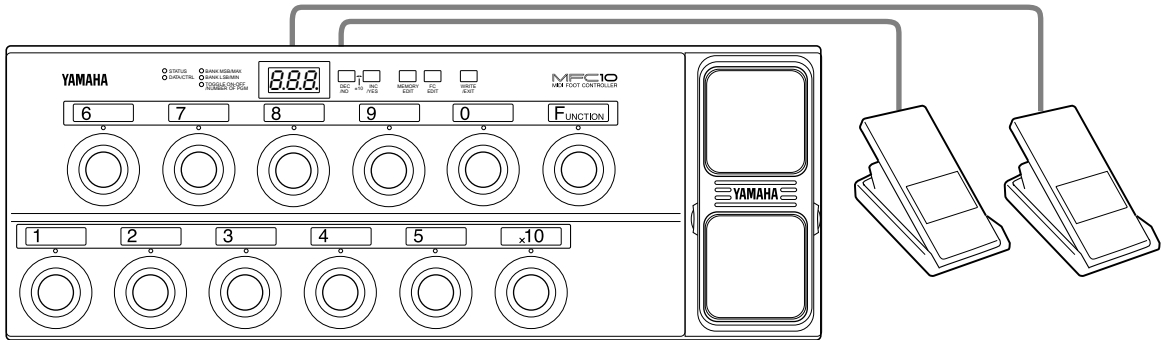
■ Editing FC (Foot Controller) data ....

1 Press **[FC EDIT]**, one of the lamps above the **[1]**-**[5]** foot switches and the STATUS lamp will flash.

2 Press **[1]**-**[5]** to select the foot controller to be edited (the lamp above the selected foot switch will flash).

Onboard	External	External
Foot Controller 1	Foot Controller 3	Foot Controller 5
External	External	
Foot Controller 2	Foot Controller 4	
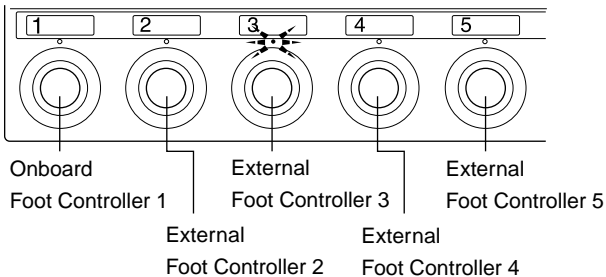
3 Press **[INC/YES]** or **[DEC/NO]** to assign STATUS data (transmit MIDI STATUS and MIDI channel number)(the lamp will flash).
The 1's digit (MIDI channel number 1-16) of Status is shown in hexadecimal. (see page 10)

Channel Number

MIDI STATUS
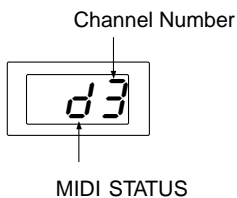
● STATUS

$b0$ ~ bF		**Transmit Control Change**
$d0$ ~ dF		**Transmit After Touch**
$E0$ ~ EF		**Transmit Pitch Bend**

4 Press **[FC EDIT]**, to edit the selected data type (the lamp flashes) of the parameters set in the above procedure. It is possible to edit the following types of data.

○ STATUS   ○ BANK MSB/MAX
☀ DATA/CTRL ○ BANK LSB/MIN
             ○ TOGGLE ON-OFF
               /NUMBER OF PGM

FC EDIT
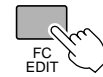
• **Control Change (b) [STATUS=b0-bF]**

DATA/CTRL	001-031, 033-120 Control Number
BANK MSB/MAX	000-127 MAX Value
BANK LSB/MIN	000-127 MIN Value

b0	~	bF

• **After Touch (d) [STATUS=d0-dF]**

DATA/CTRL	– – –
BANK MSB/MAX	000-127 MAX Value
BANK LSB/MIN	000-127 MIN Value

d0	~	dF
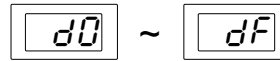
• **Pitch Bend (E) STATUS=E0-EF]**

DATA/CTRL	– – –
BANK MSB/MAX	000-127 Pitch Bend MAX
BANK LSB/MIN	000-127 Pitch Bend MIN*

E0	~	EF
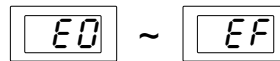
* The value of the Pitch Bend's center pitch is 64.

5 Edit the parameters using the **[INC/YES]** or **[DEC/NO]** buttons.

DEC/NO ±10 INC/YES / DEC/NO INC/YES

FC 1
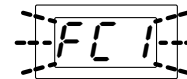
6 After the desired parameters have been edited in steps 4 and 5, press **[WRITE/EXIT]**. The Foot Controller's number will flash in the LED display.

7 Press **[INC/YES]** to execute the save operation or **[DEC/NO]** to cancel.

DEC/NO ±10 INC/YES / DEC/NO INC/YES

NOTES
• **Another Memory Number can be easily edited by pressing [1]-[5] without exiting from the edit mode. You must execute or cancel the save operation for the currently edited data (the current Memory Number will flash) before proceeding to edit the new number. Use [INC/YES] to execute or [DEC/NO] to cancel the save operation. If data has not been edited, the Memory Number will not flash and the newly selected Memory Number will be shown in the display.**

■ About Foot Switch Use

Foot switches can also be connected to the **[FOOT CONTROLLER/SWITCH 2-5]** jacks located on the rear panel of the MFC10.

If a foot switch is connected, the set BANK MSB/MAX value will be transmitted via MIDI when the foot switch is pressed. When the foot switch is released, the set BANK LSB/MIN value will be transmitted via MIDI.

YAMAHA
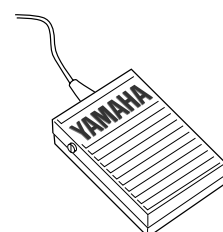
All Memory MIDI Channel Assign

The MIDI channel settings for all assigned memories can be set to the same MIDI channel, setting all MIDI channels to the same channel can be convenient in some situations.

CAUTION

• Pressing [INC/YES] in the operation will change <u>all</u> memory MIDI channel assignments!

1 For both Normal and MIX mode operation, simultaneously press both **[MEMORY EDIT]** and **[FC EDIT]**.
The MIDI channel number will be shown in the LED display
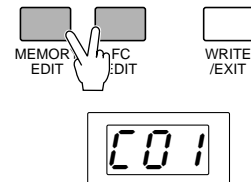
2 Press **[INC/YES]** or **[DEC/NO]** to select the new channel number (C01-C16) for all memories.
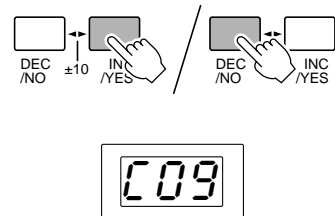
3 Press **[WRITE/EXIT]**.
The channel number in the LED display will flash.

4 Press **[INC/YES]** to confirm the setting of all channels, or **[DEC/NO]** to cancel the operation.
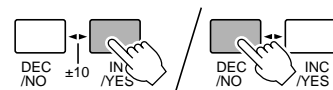
Bulk Dump

The MFC10's internal settings can be transmitted to an external MIDI data storage device.
Using a device such a Yamaha's MIDI Data Filer MDF2, the MFC10's data can be saved to, as well as loaded from such a device. The bulk dump operation is convenient for keeping important data.

Bulk Dump (Transmission)

1 For both Normal and MIX mode operation, simultaneously press both **[MEMORY EDIT]** and **[WRITE/EXIT]**.
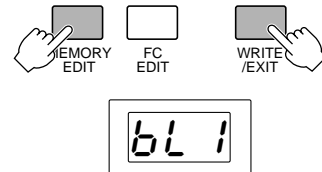
2 Press the corresponding foot switch to select one of the 5 bulk dump types listed below.
The selected bulk dump type will flash in the LED display.
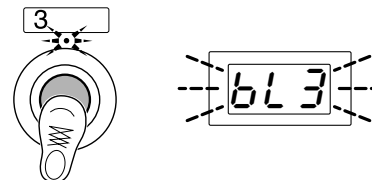
- **Foot switch [1]**
  All data listed the 4 bulk dump types that follow will be transmitted.

- **Foot switch [2]**
  All data for Program Change Memory in the NORMAL mode will be transmitted.

- **Foot switch [3]**
  All data for Function Memory will be transmitted.

- **Foot switch [4]**
  Set data for the onboard Foot Controller 1 and External Foot Controllers 2-5 will be transmitted.

- **Foot switch [5]**
  All data for Program Change Memory in the MIX mode will be transmitted.

3 Press **[INC/YES]** and the selected data will be immediately transmitted via MIDI to the external device. Once the operation is complete, "End" will appear in the display, and the MFC10 will return to step 2.
Press **[WRITE/EXIT]** to cancel the Bulk Dump operation.
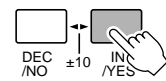
4 Press **[WRITE/EXIT]** to return the MFC10 to normal control status.

Bulk Dump (Receive)

In the normal control status or edit status, the MFC10 can receive bulk dump transmissions from an external device.

CAUTION
- **Make sure the [MIDI — WX] switch on the rear panel is set to the MIDI position.**
- **Normal operation of the MFC10 is not possible during bulk dump operations.**

Initialize

The initialize operation restores the MFC10's settings to their original factory condition.

CAUTION
• **Using the initialize operation will erase whatever settings you have made on the MFC10. If you have important settings you wish to keep, store them to a MIDI data storage device with the Bulk Dump operation (see page 25)**

1 Press **[POWER ON/OFF]** and switch off the power.

POWER
ON/OFF

2 While holding both **[MEMORY EDIT]** and **[FC EDIT]**, press **[POWER ON/OFF]** to switch on power to the MFC10.

MEMORY   FC
EDIT   EDIT
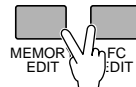
POWER
ON/OFF

3 "FA" will appear in the LED display once the initialize operation is completed. The MFC10 will return to normal control status.

FA

MFC10 Sample Setups
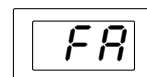
Using the MFC10, it is possible to transmit Program Change data and Function data without using your hands. Also, external devices can be cued or controlled smoothly without the loss of a beat.

MIDI Guitar System

A guitar synthesizer system (Yamaha G50+G1D etc.) and MIDI tone generator connected to the MFC10.
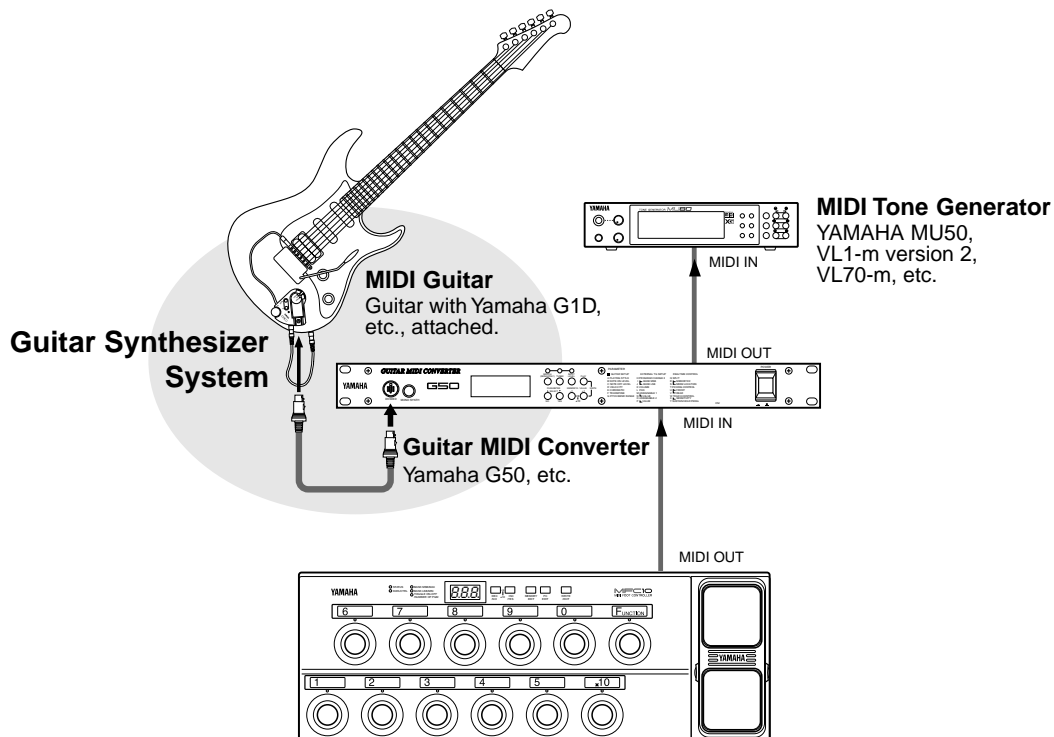
Program changes transmitted by the MFC10 can be used to select voices (MIDI tone generator voices) that are currently set in the guitar MIDI converter.

Also, Function data transmitted by the MFC10 can be used to manipulate control change data that are currently set in the guitar MIDI converter.

Setting Both the MIDI converter's receive channel number and the MFC10's Program Change Memory Status (MIDI channel number) should be set to the same MIDI channel number.

MIDI Keyboard System

Connect the MFC10 to a MIDI keyboard (Yamaha Synthesizer VL1/VL7, W5/W7, QS300, EOS, Portable Keyboard, Clavinova, etc.).

MIDI OUT   MIDI IN

Keyboard
Yamaha VL1/VL7, W5/W7, etc.
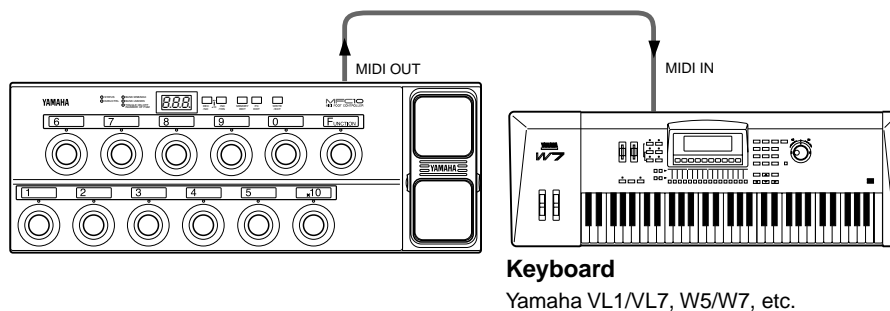
The currently set keyboard voices (MIDI tone generator voices) can be changed, according to the type of Program Change data transmitted from the MFC10.

Also, control change data, etc., set in the keyboard can be controlled according to the type Function data transmitted from the MFC10. Rhythm or song start/stop, continue, etc., can also be controlled depending on the type of instrument.

Setting   Both the MIDI keyboard's receive channel number and the MFC10's Program Change Memory Status (MIDI channel number) should be set to the same MIDI channel number.

MIDI Effector System

MIDI effectors (Yamaha SPX990, etc.) connected to the MFC10 can receive MIDI program changes.

MIDI OUT

MIDI IN

Effector
Yamaha SPX990, etc.
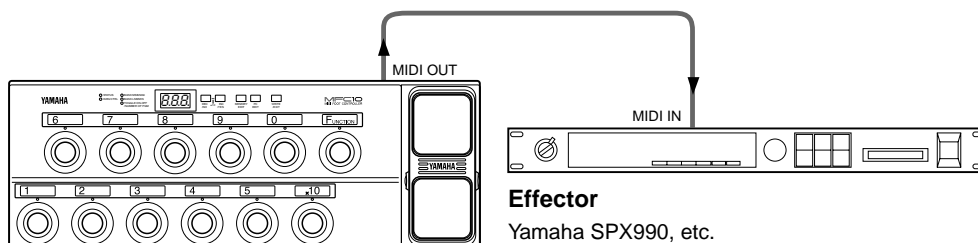
According to the Program Change data transmitted from the MFC10, set Program Change numbers with the corresponding effect program (type) to select that effect. Of course you can select effects with the effector itself, but using the MFC10 leaves your hands free to play yet, provides the ability to select effects quickly and easily.

Setting   Both the MIDI effector's receive channel number and the MFC10's Program Change Memory Status (MIDI channel number) should be set to the same MIDI channel number.

MIDI Sequencer or Rhythm Programmer System

• **Connect the MFC10 to a sequencer (Yamaha QY300, QY22, QY8, etc.) or rhythm programmer (Yamaha RY20, RY8, etc.).**

The sequencer/rhythm programmer's start/continue/stop, etc., can be controlled according to Function data transmitted from the MFC10.

MIDI OUT

MIDI IN
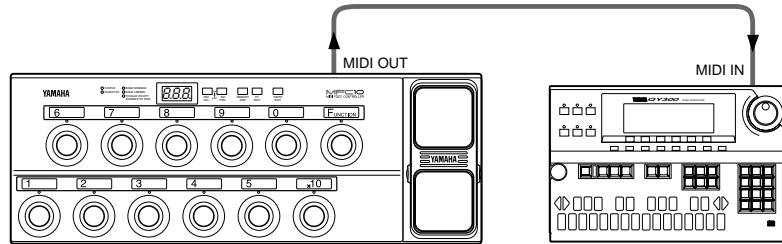
Sequencer/rhythm programmer
Yamaha QY300, RY20, etc.

Setting Both the MIDI sequencer or rhythm programmer's receive channel number and the MFC10's Memory Status (MIDI channel number) should be set to the same MIDI channel number.
Also, the MFC10 does not transmit a timing clock so the sequencer or rhythm programmer's clock should be set to [Internal].

• **Connect a keyboard and the MFC10, the MFC10 and a sequencer or rhythm programmer.**

As the keyboard's MIDI signal runs through the MFC10, the MFC10 can add function data (section control data, etc.). The MFC10's data is then merged with keyboard data and transmitted to the sequencer or rhythm programmer.
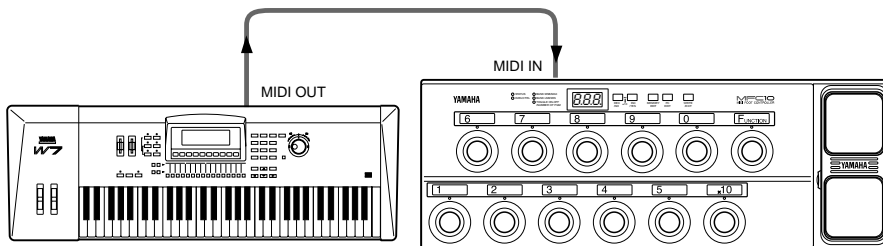
MIDI IN

MIDI OUT

Keyboard
Yamaha VL1/VL7, W5/W7, etc.

MIDI OUT

MIDI IN

Sequencer/ Rhythm Programmer
Yamaha QY300, RY20, etc.

Setting Both the MIDI keyboard's transmit channel number and the MFC10's Program Change Memory Status (MIDI channel number) and the sequencer/rhythm programmer's receive channel number should be set to the same MIDI channel number.
Also, the MFC10 does not transmit a timing clock (MIDI signals received by the MFC10 will be sent directly to the MIDI OUT terminal) so the keyboard's clock should be set to [Internal] and the sequencer/rhythm programmer's clock should be set to [External].

Error Message List

Should an error occur while using the MFC10, one of the following messages will appear in the LED display. Press [WRITE/EXIT] to return the MFC10 to its normal play mode. (In the case of error message 5, the internal memory may have some MISS, pressing [WRITE/EXIT] will automatically initialize the internal memory.)

Er 1	MIDI Receive Error. An error has occurred during reception of data. **–>Check the transmitting device and try again.**
Er 2	MIDI Bulk Data Error. An error has been detected in the MIDI data received. **–>Check the transmitting device and try again.**
Er 3	MIDI Line Error. After FE has been received, Note On data has been received but, no MIDI data was received within a 350 msec interval. **–>Check the cable and the condition of the transmitting device.**
Er 4	MIDI IN Buffer Error. A MIDI buffer overflow has occurred. **–>Reduce the volume of data being transmitted or transmit the data in smaller blocks.**
Er 5	Try pressing [WRITE/EXIT] button. If "Er5" appear again, Memory Data Error. An error has occurred in the internal memory. The device may need repair. **–>Take the device to your nearest Yamaha dealer for further evaluation.**

Trouble Shooting

Problem	Cause/Solution
Program changes do not transmit.	Check the mode, is it in NORMAL mode or MIX mode? (see page 6,7)
Foot Controller data does not transmit.	Check the MAX and MIN setting. (see page 23)
Cannot set TOGGLE ON-OFF.	Is Program Change Memory active? TOGGLE ON-OFF cannot be set in Program Change Memory. Also, TOGGLE ON-OFF can only be set in the Function Memory's control change.
The MFC10 does not receive MIDI data and/or Bulk data.	Check the [MIDI—WX] switch on the rear panel. It should be set to the MIDI position.

MIDI Implementation Chart / MIDI-Implementierungstabelle / Table d'implémentation MIDI

```
 YAMAHA  [MIDI Foot Controller]                Date:31-MAY-1996
         Model MFC10 MIDI Implementation Chart  Version : 1.00
+-------------------+---------------+---------------+----------------+
:                   : Transmitted   : Recognized    : Remarks        :
:     Function ...  :               :               :                :
:-------------------+---------------+---------------+----------------:
:Basic    Default   : 1-16          : 1-16          : memorized      :
:Channel  Changed   : 1-16          : 1-16          :                :
:-------------------+---------------+---------------+----------------:
:         Default   : x             : x             :                :
:Mode     Messages  : o             : OMNIon,OMNIoff :                :
:                   :               : POLY,MONO     :                :
:-------------------+---------------+---------------+----------------:
:Note               : 0-127         : 0-127         :                :
:Number : True voice: ************** :               :                :
:-------------------+---------------+---------------+----------------:
:Velocity Note ON   : o 9nH,v=1-127 : o             :                :
:         Note OFF  : o 8nH,v=1-127 : o             :                :
:-------------------+---------------+---------------+----------------:
:After    Key's     : x             : o             :                :
:Touch    Ch's      : o             : o             :                :
:-------------------+---------------+---------------+----------------:
:Pitch Bender       : o             : o             :                :
:-------------------+---------------+---------------+----------------:
:           0-121   : o             : o             :                :
:                   :               :               :                :
:                   :               :               :                :
:                   :               :               :                :
: Control           :               :               :                :
:                   :               :               :                :
: Change            :               :               :                :
:                   :               :               :                :
:                   :               :               :                :
:                   :               :               :                :
:                   :               :               :                :
:                   :               :               :                :
:-------------------+---------------+---------------+----------------:
:Prog               : o 0-127       : o 0-127       :                :
:Change : True #    :               :               :                :
:-------------------+---------------+---------------+----------------:
:System Exclusive   : o             : o             :                :
:-------------------+---------------+---------------+----------------:
:System : Song Pos. : x             : o             :                :
:       : Song Sel. : o             : o             :                :
:Common : Tune      : x             : o             :                :
:-------------------+---------------+---------------+----------------:
:System    :Clock   : x             : o             :                :
:Real Time :Commands: o             : o             :                :
:-------------------+---------------+---------------+----------------:
:Aux  :Local ON/OFF : o             : o             :                :
:     :All Notes OFF: x             : x             :                :
:Mes- :Active Sense : o             : o             :                :
:sages:Reset        : x             : o             :                :
:-------------------+---------------+---------------+----------------:
:Note               : Received messages from MIDI IN are only bypassed :
:                   : to MIDI OUT.  :               :                :
+-------------------+---------------+---------------+----------------+
   Mode 1 : OMNI ON,  POLY   Mode 2 : OMNI ON,  MONO       o : Yes
   Mode 3 : OMNI OFF, POLY   Mode 4 : OMNI OFF, MONO       x : No
```

MIDI data format / MIDI-Datenformat / Format des donées MIDI

1 MIDI Receive/Send
1.1 Receive/Send conditions

<MIDI Receive conditions>

Following MIDI data is transmitted via the MIDI OUT
exception for "FE".

```
MIDI IN
    ├──── $8n (Note Off)
    ├──── $9n (Note On)
    ├──── $An
    │     (Poly Key Pressure/After Touch)
    ├──── $Bn (Control Change)
    ├──── $Cn (Program Change)
    ├──── $Dn (Chnnel Pressure/After Touch)
    ├──── $En (Pitch Bend)
    ├──── $F0 (System Exclusive)
    ├── $F0 43 00 7A bb bb LM__0271PG
    │   (Program Change Memory Bulk)
    ├── $F0 43 00 7A bb bb LM__0271FN
    │   (FUNCTION Memory Bulk)
    ├── $F0 43 00 7A bb bb LM__0271FC
    │   (FC Memory Bulk)
    ├── $F0 43 00 7A bb bb LM__0271AL
    │   (All Memory Bulk)
    └── $F0 43 00 7A bb bb LM__0271MX
    │   (MIX Program Change Bulk)
    ├──── $F1 (MIMI Time Code Quater Frame)
    ├──── $F2 (Song Position Pointer)
    ├──── $F3 (Song Select)
    ├──── $F6 (Tune Request)
    ├──── $F7 (EOX)
    ├──── $F8 (Timing Clock)
    ├──── $FA (Start)
    ├──── $FB (Continue)
    ├──── $FC (Stop)
    ├──── $FE (Active Sensing)
    └──── $FF (System Reset)
```

<MIDI Transmit>

```
$8n (Note Off)                      ────
$9n (Note On)                       ────
$Bn (Control Change)                ────
$Cn (Program Change)                ────
$Dn (After Touch)                   ────
$En (Pitch Bend)                    ────
$F0 43 00 7A bb bb LM__0271PG       ────
(Program Change Memory Bulk)
$F0 43 00 7A bb bb LM__0271FN       ────
(FUNCTION Memory Bulk)
$F0 43 00 7A bb bb LM__0271FC       ────
(FC Memory Bulk)
$F0 43 00 7A bb bb LM__0271AL       ────
(All Memory Bulk)
$F0 43 00 7A bb bb LM__0271MX       ────
(MIX Program Change Bulk)
$F0 43 7E 00 ss dd                  ────
(Section Control)
$F0 43 6n 7A (Reset Start)          ────
$F0 43 6n 7D (Stop & Rewind)        ────
$F0 43 7E 01 t4 t3 t2 t1            ────
(Tempo Control)
$F7 (EOX)                           ────
$FA (Start)                         ────
$FB (Continue)                      ────
$FC (Stop)                          ────
$FE (Active Sensing)                ────
                                        MIDI OUT
```

1.2 Channel Message

1.2.1 Note On/Off

Following stored data in the Function memory can be
transmitted by pressing the Foot Switch.

data:	Note On	= $9n, 0-127, 1-127
	Note Off	= $8n, 0-127, 1-127

Received data is also transmitted via the MIDI OUT.

1.2.2 Control Change

Following data in the Function memory can be transmitted
by pressing the Foot Switch or Foot Controller.

data:	Foot Switch	=$Bn, 0-127, 0-127
	Foot Controller	=$Bn, 0-120, 0-127

Received data is also transmitted via the MIDI OUT.

1.2.3 Program Change

Stored data in the Program Change Memory or Function
Memory (following data) can be transmitted by pressing
Foot Switch or Foot Controller.

data:	Foot Switch	=$Cn, 0-127
	Foot Controller	=$Cn, 0-120

Received data is also transmitted via the MIDI OUT.

1.2.4 After Touch .Pitch Bend

Can be transmitted by using Foot Controller

data:	After Touch	=$Dn, 0-127
	Pitch Bend	=$En, 0-127, 0-127

Received data is also transmitted via the MIDI OUT.

1.3 Exclusive

1.3.1 Section Control

Section control data (stored in the Function Memory) can
be transmitted by using Foot Switch.

Transmit data: F0, 43, 7E, 00, SS, DD, F7
  SS: Section Number 00-27 [Hex]
  DD: ON/OFF (ON=7F, OFF=00)

Received data is also transmitted via the MIDI OUT.

1.3.2 Start/Stop Control

Start/Stop control data (stored in the Function Memory) can be transmitted by using Foot Switch.

data: Reset Start   =F0, 43, 6n, 7A, F7
            Stop & Rewind =F0, 43, 6n, 7D, F7

Received data is also transmitted via the MIDI OUT.

1.3.3 Tempo Control

Tempo data (stored in the Function Memory) can be transmitted by using Foot Switch.

Transmit data=F0, 43, 7E, 01, t4, t3, t2, t1, F7

Received data is also transmitted via the MIDI OUT.

1.4 System Common Message

1.4.1 Status byte F1, F2, F3, F6

F1, F2, F3 and F6 can only be received
        F1:   Time Chord
        F2:   Song Position pointer
        F3:   Song Select
        F6:   Tune Request

Received data is also transmitted via the MIDI OUT.

1.5 System Realtime Message

1.5.1 Status byte F8, FF

F8 or FF Status can only be received
        F8:   Timing Clock
        FF: System Reset

Received data is also transmitted via the MIDI OUT.

1.5.2 Status byte FA, FB, FC

Stored data FA, FB or FC in the Function memory can be transmitted by pressing the Foot Switch.
        FA: Start
        FB: Continue
        FC: Stop

Received data is also transmitted via the MIDI OUT.

1.5.3 Status byte FE

FE (active sensing) is transmitted in 255 msec steps.

If no data is received within 350 msec from the first reception of FE, the MFC10 will stop FE data transmission within 500 msec.

2 Bulk dump

Bulk dump can be received in the both Play and Edit mode.
The contents of the Program memory, Function memory or Foot Controller can be transmitted.
Dump request does not receive.

2.1 All memory data bulk dump

```
0     11110000   F0
1     01000011   43
2     00000000   00= Device Number(Fixed)
3     01111010   7A
4     0bbbbbbb   BB= Byte Count
5     0bbbbbbb   BB
6     01001100   4C(ascii"L")
7     01001101   4D(ascii"M")
8     00100000   20(ascii" ")
9     00100000   20(ascii" ")
10    00110000   30(ascii"0")
11    00110010   32(ascii"2")
12    00110111   37(ascii"7")
13    00110001   31(ascii"1")
14    01000001   41(ascii"A")
15    01001100   4C(ascii"L")
16    00000000   00
:         :          :
31    00000000   00
32    0ddddddd   DD= Data
:         :          :
      0sssssss   SS= Check Sum
      11110111   F7
```

Overwrites to the Program Change, Function, Foot Controller memory when data is received.

2.2 Normal Mode Program memory data bulk dump

```
0     11110000   F0
1     01000011   43
2     00000000   00= DeviceNumber(Fixed)
3     01111010   7A
4     0bbbbbbb   BB= Byte Count
5     0bbbbbbb   BB
6     01001100   4C(ascii"L")
7     01001101   4D(ascii"M")
8     00100000   20(ascii" ")
```

```
9     00100000   20(ascii" ")
10    00110000   30(ascii"0")
11    00110010   32(ascii"2")
12    00110111   37(ascii"7")
13    00110001   31(ascii"1")
14    01010000   50(ascii"P")
15    01000111   47(ascii"G")
16    00000000   00
:     :          :
31    00000000   00
32    0ddddddd   DD= Data
:     :          :
      0sssssss   SS= Check Sum
      11110111   F7
```

Overwrites to the Program Change memory when data is received.

2.3 Function memory data bulk dump

```
0     11110000   F0
1     01000011   43
2     00000000   00= Device Number(Fixed)
3     01111010   7A
4     0bbbbbbb   BB= Byte Count
5     0bbbbbbb   BB
6     01001100   4C(ascii"L")
7     01001101   4D(ascii"M")
8     00100000   20(ascii" ")
9     00100000   20(ascii" ")
10    00110000   30(ascii"0")
11    00110010   32(ascii"2")
12    00110111   37(ascii"7")
13    00110001   31(ascii"1")
14    01000110   46(ascii"F")
15    01001110   4E(ascii"N")
16    00000000   00
:     :          :
31    00000000   00
32    0ddddddd   DD= Data
:     :          :
      0sssssss   SS= Check Sum
      11110111   F7
```

Overwrites to the Function memory when data is received.

2.4 Foot Controller memory data bulk dump

```
0     11110000   F0
1     01000011   43
2     00000000   00= Device Number(Fixed)
3     01111010   7A
4     0bbbbbbb   BB= Byte Count
5     0bbbbbbb   BB
6     01001100   4C(ascii"L")
7     01001101   4D(ascii"M")
```

```
8     00100000   20(ascii" ")
9     00100000   20(ascii" ")
10    00110000   30(ascii"0")
11    00110010   32(ascii"2")
12    00110111   37(ascii"7")
13    00110001   31(ascii"1")
14    01000110   46(ascii"F")
15    01000011   43(ascii"C")
16    00000000   00
:     :          :
31    00000000   00
32    0ddddddd   DD= Data
:     :          :
      0sssssss   SS= Check Sum
      11110111   F7
```

Overwrites to the Foot Controller memory when data is received.

2.5 Mix Mode Program memory data bulk dump

```
0     11110000   F0
1     01000011   43
2     00000000   00= DeviceNumber(Fixed)
3     01111010   7A
4     0bbbbbbb   BB= Byte Count
5     0bbbbbbb   BB
6     01001100   4C(ascii"L")
7     01001101   4D(ascii"M")
8     00100000   20(ascii" ")
9     00100000   20(ascii" ")
10    00110000   30(ascii"0")
11    00110010   32(ascii"2")
12    00110111   37(ascii"7")
13    00110001   31(ascii"1")
14    01001101   4D(ascii"M")
15    01011000   58(ascii"X")
16    00000000   00
:     :          :
31    00000000   00
32    0ddddddd   DD= Data
:     :          :
      0sssssss   SS= Check Sum
      11110111   F7
```

Overwrites to the Program Change memory when data is received.

NORMAL mode

FUNCTION
NORMAL — MIX

FUNCTION

Program Chamge Memory

FUNCTION

Function lamp is off

MEMORY
EDIT → **EDIT**

Function Memory

FUNCTION

Function lamp is lit
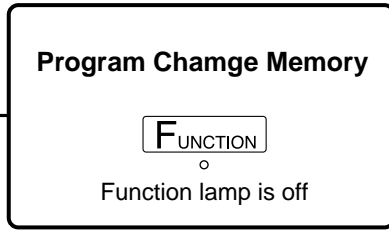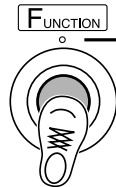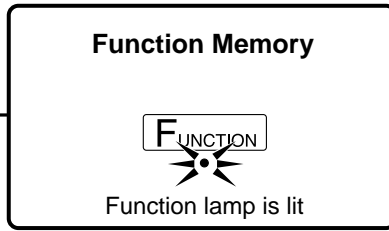
MEMORY
EDIT → **EDIT**

MIX mode

FUNCTION
NORMAL — MIX

FUNCTION

Function Memory
+
Program Chanege Memory

FUNCTION

Function lamp is off

MEMORY
EDIT → **EDIT**

Function Memory

FUNCTION

Function lamp is lit

MEMORY
EDIT → **EDIT**

Others

MEMORY
EDIT + FC
EDIT → **All memory MIDI channel Assign**

MEMORY
EDIT + WRITE
/EXIT → **Bulk Dunp**

POWER
ON/ OFF

MEMORY
EDIT + FC
EDIT + → **Initia Lize**

35

NORMAL mode

DATA: _____

NAME: _____

●Program Change

Program Number: ☐☐1 ~ ☐☐0

	6	7	8	9	0
STATUS					
DATA/CTRL					
BANK MSB					
BANK LSB					

	1	2	3	4	5
STATUS					
DATA/CTRL					
BANK MSB					
BANK LSB					

●Function

Function Number: F☐1 ~ F☐0

	6				7				8				9				0			
NUMBER OF PGM	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STATUS																				
DATA/CTRL																				
MAX																				
MIN																				
TOGGLE ON-OFF																				

	1				2				3				4				5			
NUMBER OF PGM	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STATUS																				
DATA/CTRL																				
MAX																				
MIN																				
TOGGLE ON-OFF																				

●Foot Controller

	1	2	3	4	5
STATUS					
DATA/CTRL					
MAX					
MIN					

MIX mode

DATA: _____

NAME: _____

Function Number: F ☐ 6 ~ F ☐ 0

	6				7				8				9				0			
NUMBER OF PGM	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STATUS																				
DATA/CTRL																				
MAX																				
MIN																				
TOGGLE ON-OFF																				

Program Number: ☐☐ 1 ~ ☐☐ 0

	1	2	3	4	5
STATUS					
DATA/CTRL					
BANK MSB					
BANK LSB					

●Foot Controller

	1	2	3	4	5
STATUS					
DATA/CTRL					
MAX					
MIN					

* Make copies of sheet to keep records of your MFC10 settings.

* Machen Sie sich zum Eintragen der MFC10-Einstellungen Kopien von diesem Blatt.

* Faites des copies de ces feuilles pour conserver les réglages de votre MFC10.

Program Table / Programmübersicht / Tableau de programmes

NORMAL mode

DATA: _____

NAME: _____

●Program Change

Program Number: ☐ ☐ 1 ~ ☐ ☐ 0

	6	7	8	9	0
STATUS					
DATA/CTRL					
BANK MSB					
BANK LSB					

	1	2	3	4	5
STATUS					
DATA/CTRL					
BANK MSB					
BANK LSB					

●Function

Function Number: F ☐ 1 ~ F ☐ 0

	6				7				8				9				0			
NUMBER OF PGM	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STATUS																				
DATA/CTRL																				
MAX																				
MIN																				
TOGGLE ON-OFF																				

	1				2				3				4				5			
NUMBER OF PGM	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STATUS																				
DATA/CTRL																				
MAX																				
MIN																				
TOGGLE ON-OFF																				

●Foot Controller

	1	2	3	4	5
STATUS					
DATA/CTRL					
MAX					
MIN					

MIX mode

DATA: _____

NAME: _____

Function Number: F ☐ 6 ~ F ☐ 0

	6				7				8				9				0			
NUMBER OF PGM	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STATUS																				
DATA/CTRL																				
MAX																				
MIN																				
TOGGLE ON-OFF																				

Program Number: ☐ ☐ 1 ~ ☐ ☐ 0

	1	2	3	4	5
STATUS					
DATA/CTRL					
BANK MSB					
BANK LSB					

●**Foot Controller**

	1	2	3	4	5
STATUS					
DATA/CTRL					
MAX					
MIN					

* Make copies of sheet to keep records of your MFC10 settings.

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Specifications / Technische Daten / Spécifications

Program Change Memory	Normal:128, Mix:25
Function Memory	100
Mode	Normal, Mix
Foot Controllers1 (Onboard Foot Controller)	2-5 (External Foot Controllers)
Other	MIDI IN -> MIDI OUT (MERGE Transmit) WX11 etc., Controller Connection MIDI Bulk Dump (Transmit and Receive)
Control	Foot Switch x12, Onboard Foot Controller x1, Panel Switch x5, LED Display, Power Switch, MIDI IN/WX IN Switch, Function Normal/Mix Switch
ConnectorsExternal	Foot Controller Jacks x4, MIDI IN/OUT Terminals, WX IN Terminal, DC IN Jack
Supplied Accessories	Owner's Manual, User Memo Sticker
Dimensions (mm)	608 (23-15/16") x 215 (8-1/2") x 153 (6")
Weight (kg)	3.52 (7lbs 12oz)