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.

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Precautions

!! PLEASE READ THIS BEFORE PROCEEDING !!

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 cause 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.
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.

**CAUTION**

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

1 Parameter Lamp (see page 11, 16)
The currently selected parameter lamp will flash when in the edit mode.

2 LED Display (see page 6)
Memory numbers, program changes and functions (control changes) saved in memory, parameters, etc., are indicated in the display.

3 [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.

4 [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.

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

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

7 [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.

8 [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

- [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.
Nomenclature

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.

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

[Diagram of Rear Panel]

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

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

- 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.
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.]

  ![NORMAL mode diagram](image_url)
• **MIX mode**

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

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**Function memory (5 types)**

![Function memory](image)

**Upper level foot switches [6]-[0]**

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

![Program change memory](image)

**Lower level foot switches [1]-[5]**

![Lower level foot switches](image)

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**Foot Controller Settings**

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

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**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)

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**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.

<table>
<thead>
<tr>
<th>Program Change Memory</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function Memory</td>
<td>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.</td>
</tr>
</tbody>
</table>

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.

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

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

- **Program Change Memory (128 types)**
  
  001 ~ 128

- **Function Memory (100 types)**
  
  F00 ~ F99
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

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.
Normal Mode

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.

- 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**

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

  | C0 | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
  |----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
  | Channel 1 | Channel 2 | Channel 3 | Channel 4 | Channel 5 | Channel 6 | Channel 7 | Channel 8 | Channel 9 | Channel 10 | Channel 11 | Channel 12 | Channel 13 | Channel 14 | Channel 15 | Channel 16 |

- **DATA/CTRL**

  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)**

  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.

  - 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).

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

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.

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.)

   • 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.

   • 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.

- Press [FUNCTION] to enable 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.
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]**

  | 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.

- **Control Change (b) [STATUS=b0-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) |
### Control Change List (for GM, XG supported devices)

<table>
<thead>
<tr>
<th>Control Number</th>
<th>Function</th>
<th>GM</th>
<th>XG</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Bank Select</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>1</td>
<td>Modulation</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>5</td>
<td>Portamento Time</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Data Entry</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>7</td>
<td>Main Volume</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>10</td>
<td>Pan Pot</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>11</td>
<td>Expression</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>32</td>
<td>Bank Select</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>38</td>
<td>Data Entry</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>64</td>
<td>Hold 1 (Damper Pedal)</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>65</td>
<td>Portamento</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>66</td>
<td>Sostenuto (Chord Hold)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>67</td>
<td>Soft Pedal</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>71</td>
<td>Harmonic Content</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>72</td>
<td>Release Time</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>73</td>
<td>Attack Time</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>74</td>
<td>Brightness</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>84</td>
<td>Portamento Control</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>91</td>
<td>Extensive Use Effect 1 (Reverb)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>93</td>
<td>Extensive Use Effect 3 (Chorus)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>94</td>
<td>Extensive Use Effect 4 (Celeste)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>96</td>
<td>Data-Increment</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>97</td>
<td>Data-Decrement</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>98</td>
<td>NRPN(LSB)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>99</td>
<td>NRPN(MSB)</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>100</td>
<td>RPN(LSB)</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>101</td>
<td>RPN(MSB)</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>120</td>
<td>All Sound Off</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>121</td>
<td>Reset All Controllers</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>122</td>
<td>Local Control</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>123</td>
<td>All Note Off</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>124</td>
<td>Omni Off</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>125</td>
<td>Omni On</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>126</td>
<td>Mono On</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>127</td>
<td>Poly On</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>

**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] is a MIDI format created by Yamaha which significantly improves 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]**
  
  | 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]**
  
  | DATA/CTRL | 000-127 (Song Number) |

- **Start (FA) [STATUS=FA]**
  
  Other parameters cannot be set.
- **Continue (Fb) [STATUS=Fb]**
  Other parameters cannot be set.

- **Stop (FC) [STATUS=FC]**
  Other parameters cannot be set.

- **Section Control (F0) [STATUS=F0]**

<table>
<thead>
<tr>
<th>DATA/CTRL</th>
<th>BANK MSB/MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>c01-c42 (Section Number)</td>
<td>01-16, - - - (Device Number)</td>
</tr>
</tbody>
</table>

  * 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.

<table>
<thead>
<tr>
<th>c01</th>
<th>Intro 1</th>
<th>c17</th>
<th>Fill In AA1</th>
<th>c33</th>
<th>Ending 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>c02</td>
<td>Intro 2</td>
<td>c18</td>
<td>Fill In AA2</td>
<td>c34</td>
<td>Ending 2</td>
</tr>
<tr>
<td>c03</td>
<td>Intro 3</td>
<td>c19</td>
<td>Fill In AA3</td>
<td>c35</td>
<td>Ending 3</td>
</tr>
<tr>
<td>c04</td>
<td>Intro 4</td>
<td>c20</td>
<td>Fill In AA4</td>
<td>c36</td>
<td>Ending 4</td>
</tr>
<tr>
<td>c05</td>
<td>Intro 5</td>
<td>c21</td>
<td>Fill In AA5</td>
<td>c37</td>
<td>Ending 5</td>
</tr>
<tr>
<td>c06</td>
<td>Intro 6</td>
<td>c22</td>
<td>Fill In AA6</td>
<td>c38</td>
<td>Ending 6</td>
</tr>
<tr>
<td>c07</td>
<td>Intro 7</td>
<td>c23</td>
<td>Fill In AA7</td>
<td>c39</td>
<td>Ending 7</td>
</tr>
<tr>
<td>c08</td>
<td>Intro 8</td>
<td>c24</td>
<td>Fill In AA8</td>
<td>c40</td>
<td>Ending 8</td>
</tr>
<tr>
<td>c09</td>
<td>Main 1</td>
<td>c25</td>
<td>Fill In AB1</td>
<td>c41</td>
<td>Reset Start</td>
</tr>
<tr>
<td>c10</td>
<td>Main 2</td>
<td>c26</td>
<td>Fill In AB2</td>
<td>c42</td>
<td>Stop &amp; Rewind</td>
</tr>
<tr>
<td>c11</td>
<td>Main 3</td>
<td>c27</td>
<td>Fill In AB3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c12</td>
<td>Main 4</td>
<td>c28</td>
<td>Fill In AB4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c13</td>
<td>Main 5</td>
<td>c29</td>
<td>Fill In AB5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c14</td>
<td>Main 6</td>
<td>c30</td>
<td>Fill In AB6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c15</td>
<td>Main 7</td>
<td>c31</td>
<td>Fill In AB7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c16</td>
<td>Main 8</td>
<td>c32</td>
<td>Fill In AB8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Tempo Control (Ft) [STATUS=Ft]**

<table>
<thead>
<tr>
<th>DATA/CTRL</th>
<th>030-250 (Tempo Value)</th>
</tr>
</thead>
</table>

  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)

3. Press [MEMORY EDIT] to select the parameters set in the procedures above for editing (the lamp will flash).

<table>
<thead>
<tr>
<th>STATUS</th>
<th>Note On/Off</th>
<th>Control Change</th>
<th>Program Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0-F indicates MIDI channel numbers)</td>
<td>90-9F</td>
<td>b0-bF</td>
<td>C0-CF</td>
</tr>
<tr>
<td>DATA/CTRL</td>
<td>Note Number</td>
<td>Control Number</td>
<td>Program Number</td>
</tr>
<tr>
<td>BANK MSB/MAX</td>
<td>Note On Velocity</td>
<td>Switch On Data</td>
<td>Bank MSB</td>
</tr>
<tr>
<td>BANK LSB/MIN</td>
<td>Note Off Velocity</td>
<td>Switch Off Data</td>
<td>Bank LSB</td>
</tr>
<tr>
<td>TOGGLE ON-OFF/NUMBER OF PGM</td>
<td>Pn1-Pn4</td>
<td>Toggle On/Off Pn1-Pn4</td>
<td>Pn1-Pn4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATUS</th>
<th>Song Select</th>
<th>Start</th>
<th>Continue</th>
<th>Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATA/CTRL</td>
<td>F3</td>
<td>FA</td>
<td>Fb</td>
<td>FC</td>
</tr>
<tr>
<td>BANK MSB/MAX</td>
<td>0-127</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>BANK LSB/MIN</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>TOGGLE ON-OFF/NUMBER OF PGM</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
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.

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.

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.

Within Function Memories F00-F49, 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.
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.

2. Press [FUNCTION] and turn off the FUNCTION lamp.

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.**

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.**

Press [1]-[5] to access the 25 (5 × 5) Program Change Memories. To select the Program Change Memory number’s 10’s digit, press [×10], 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 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).
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).

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)

- Transmit Control Change
- Transmit After Touch
- Transmit Pitch Bend

**MIDI STATUS**

- Channel Number: `d3`
- Transmit Control Change: `bo` to `bf`
- Transmit After Touch: `d0` to `df`
- Transmit Pitch Bend: `e0` to `ef`
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.

- **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

- **After Touch (d) [STATUS=d0-dF]**
  - DATA/CTRL: --
  - BANK MSB/MAX: 000-127 MAX Value
  - BANK LSB/MIN: 000-127 MIN Value

- **Pitch Bend (E) [STATUS=E0-EF]**
  - DATA/CTRL: --
  - BANK MSB/MAX: 000-127 Pitch Bend MAX
  - BANK LSB/MIN: 000-127 Pitch Bend MIN

* The value of the Pitch Bend’s center pitch is 64.

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

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.

---

### 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.
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.

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.

• Pressing [INC/YES] in the operation will change all memory MIDI channel assignments!
Bulk Dump

The MFC10’s internal settings can be transmitted to an external MIDI data storage device. Using a device such as 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.

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

- 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.

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

3. “FA” will appear in the LED display once the initialize operation is completed. The MFC10 will return to normal control status.
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.
Connect the MFC10 to a MIDI keyboard (Yamaha Synthesizer VL1/VL7, W5/W7, QS300, EOS, Portable Keyboard, Clavinova, 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 effectors (Yamaha SPX990, etc.) connected to the MFC10 can receive MIDI program changes.

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.
• 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.

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.

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].
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.)

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Er1</td>
<td>MIDI Receive Error. An error has occurred during reception of data.</td>
<td>Check the transmitting device and try again.</td>
</tr>
<tr>
<td>Er2</td>
<td>MIDI Bulk Data Error. An error has been detected in the MIDI data received.</td>
<td>Check the transmitting device and try again.</td>
</tr>
<tr>
<td>Er3</td>
<td>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.</td>
<td>Check the cable and the condition of the transmitting device.</td>
</tr>
<tr>
<td>Er4</td>
<td>MIDI IN Buffer Error. A MIDI buffer overflow has occurred.</td>
<td>Reduce the volume of data being transmitted or transmit the data in smaller blocks.</td>
</tr>
<tr>
<td>Er5</td>
<td>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.</td>
<td>Take the device to your nearest Yamaha dealer for further evaluation.</td>
</tr>
</tbody>
</table>

**Trouble Shooting**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause/Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program changes do not transmit.</td>
<td>Check the mode, is it in NORMAL mode or MIX mode? (see page 6,7)</td>
</tr>
<tr>
<td>Foot Controller data does not transmit.</td>
<td>Check the MAX and MIN setting. (see page 23)</td>
</tr>
<tr>
<td>Cannot set TOGGLE ON-OFF.</td>
<td>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.</td>
</tr>
<tr>
<td>The MFC10 does not receive MIDI data and/or Bulk data.</td>
<td>Check the [MIDI—WX] switch on the rear panel. It should be set to the MIDI position.</td>
</tr>
</tbody>
</table>
## MIDI Implementation Chart

### Yamaha MFC10 MIDI Implementation Chart

**Model:** MFC10
**Version:** 1.00

### Function...  
**Transmitted:**  
**Recognized:**  
**Remarks:**

<table>
<thead>
<tr>
<th>Function</th>
<th>Transmitted</th>
<th>Recognized</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>1-16</td>
<td>1-16</td>
<td>memorized</td>
</tr>
<tr>
<td>Channel</td>
<td>1-16</td>
<td>1-16</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note</td>
<td>0-127</td>
<td>0-127</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>True voice:</td>
<td>***********</td>
<td></td>
</tr>
<tr>
<td>Velocity</td>
<td>Note ON:</td>
<td>o 9nH, v=1-127</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Note OFF:</td>
<td>o 8nH, v=1-127</td>
<td>o</td>
</tr>
<tr>
<td>After</td>
<td>Key’s</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td>Touch</td>
<td>Ch’s</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Pitch Bender</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Prog</td>
<td>o 0-127</td>
<td>o 0-127</td>
<td></td>
</tr>
<tr>
<td>Change</td>
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<tr>
<td>Control</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Song Pos.</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Song Sel.</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Common</td>
<td>Tune</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td>System</td>
<td>Clock</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td>Real Time</td>
<td>Commands</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Aux</td>
<td>Local ON/OFF</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>All Notes OFF</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Mes-</td>
<td>Active Sense</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>sages:</td>
<td>Reset</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td>Note</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Received messages from MIDI IN are only bypassed to MIDI OUT.

**Mode 1:** OMNI ON, POLY  
**Mode 2:** OMNI ON, MONO  
**Mode 3:** OMNI OFF, POLY  
**Mode 4:** OMNI OFF, MONO

**o:** Yes  
**x:** No
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 (Channel Pressure/After Touch)
- $Dn (Program Change)
- $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 (MIDI Time Code Quarter Frame)
- $F2 (Song Position Pointer)
- $F3 (Song Select)
- $F6 (Tune Request)
- $F7 (EOX)
- $FB (Timing Clock)
- $FA (Start)
- $FB (Continue)
- $FC (Stop)
- $FE (Active Sensing)
- $FF (System Reset)

<MIDI Transmit>
- $8n (Note Off)
- $9n (Note On)
- $An (Control Change)
- $Bn (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)

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.
1.5.3 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

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11110000</td>
<td>F0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>01000011</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>00000000</td>
<td>00= Device Number(Fixed)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>01111010</td>
<td>7A</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0bbbbbbb</td>
<td>BB= Byte Count</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0bbbbbbb</td>
<td>BB</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>01001100</td>
<td>4C(ascii”L”)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>01001101</td>
<td>4D(ascii”M”)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>00100000</td>
<td>20(ascii” ”)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>00100000</td>
<td>20(ascii” ”)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>00110000</td>
<td>30(ascii“0”)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>00110010</td>
<td>32(ascii“2”)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>00110111</td>
<td>37(ascii“7”)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>00110001</td>
<td>31(ascii“1”)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>01000001</td>
<td>41(ascii“A”)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>01001100</td>
<td>4C(ascii“L”)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>00000000</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>:</td>
<td>:</td>
<td>:</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>00000000</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>0ddddddd</td>
<td>DD= Data</td>
<td></td>
</tr>
<tr>
<td>:</td>
<td>:</td>
<td>:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0ssssss</td>
<td>SS= Check Sum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11110111</td>
<td>F7</td>
<td></td>
</tr>
</tbody>
</table>

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

2.2 Normal Mode Program memory data bulk dump

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11110000</td>
<td>F0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>01000011</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>00000000</td>
<td>00= DeviceNumber(Fixed)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>01111010</td>
<td>7A</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0bbbbbbb</td>
<td>BB= Byte Count</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0bbbbbbb</td>
<td>BB</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>01001100</td>
<td>4C(ascii“L”)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>01001101</td>
<td>4D(ascii“M”)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>00100000</td>
<td>20(ascii” ”)</td>
<td></td>
</tr>
</tbody>
</table>
2.3 Function memory data bulk dump

Overwrites to the Function memory when data is received.

2.4 Foot Controller memory data bulk dump

Overwrites to the Foot Controller memory when data is received.

2.5 Mix Mode Program memory data bulk dump

Overwrites to the Program Change memory when data is received.
NORMAL mode

Program Change Memory

**FUNCTION**
Function lamp is off

**MEMORY EDIT**

**EDIT**

Function Memory

**FUNCTION**
Function lamp is lit

**MEMORY EDIT**

**EDIT**

MIX mode

Function Memory

**FUNCTION**
Function lamp is lit

**MEMORY EDIT**

**EDIT**

**FUNCTION**
Program Change Memory

**MEMORY EDIT**

**EDIT**

Others

All memory MIDI channel Assign

**MEMORY EDIT** + **FC EDIT**

Bulk Dump

**MEMORY EDIT** + **WRITE /EXIT**

Initia Lize

**MEMORY EDIT** + **POWER ON /OFF**
NORMAL mode

DATA:

NAME:

- **Program Change**

  Program Number: \[ \begin{array}{c|c|c|c|c|c|c} \hline \text{STATUS} & 6 & 7 & 8 & 9 & 0 \\ \hline \text{DATA/CTRL} & & & & & \\ \hline \text{BANK MSB} & & & & & \\ \hline \text{BANK LSB} & & & & & \\ \hline \end{array} \]

- **Function**

  Function Number: \[ \begin{array}{c|c|c|c|c|c|c} \hline \text{NUMBER OF PGM} & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 \\ \hline \text{STATUS} & & & & & \\ \hline \text{DATA/CTRL} & & & & & \\ \hline \text{MAX} & & & & & \\ \hline \text{MIN} & & & & & \\ \hline \text{TOGGLE ON-OFF} & & & & & \\ \hline \end{array} \]

- **Foot Controller**

  \[ \begin{array}{c|c|c|c|c|c} \hline \text{STATUS} & 1 & 2 & 3 & 4 & 5 \\ \hline \text{DATA/CTRL} & & & & & \\ \hline \text{MAX} & & & & & \\ \hline \text{MIN} & & & & & \\ \hline \end{array} \]
### MIX mode

**DATA:**

**NAME:**

Function Number: F 6 ~ F 0

<table>
<thead>
<tr>
<th>NUMBER OF PGM</th>
<th>STATUS</th>
<th>DATA/CTRL</th>
<th>MAX</th>
<th>MIN</th>
<th>TOGGLE ON-OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 7 8 9 0</td>
<td></td>
<td></td>
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</tbody>
</table>

Program Number: 1 ~ 0

<table>
<thead>
<tr>
<th>STATUS</th>
<th>DATA/CTRL</th>
<th>BANK MSB</th>
<th>BANK LSB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

**Foot Controller**

<table>
<thead>
<tr>
<th>STATUS</th>
<th>DATA/CTRL</th>
<th>MAX</th>
<th>MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

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NORMAL mode

DATA: _________________________________

NAME: ________________________________

● Program Change

Program Number: □□1 ~ □□0

<table>
<thead>
<tr>
<th>STATUS</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>DATA/CTRL</td>
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</tr>
<tr>
<td>BANK MSB</td>
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<td></td>
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<tr>
<td>BANK LSB</td>
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<th>3</th>
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<td></td>
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<tr>
<td>BANK MSB</td>
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</tr>
<tr>
<td>BANK LSB</td>
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</table>

● Function

Function Number: F □ □ 1 ~ F □ □ 0

<table>
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<tr>
<th>NUMBER OF PGM</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tr>
<td>MIN</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>TOGGLE ON-OFF</td>
<td></td>
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</table>

<table>
<thead>
<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
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</tr>
<tr>
<td>MAX</td>
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<td></td>
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<tr>
<td>MIN</td>
<td></td>
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</tr>
<tr>
<td>TOGGLE ON-OFF</td>
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● Foot Controller

<table>
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<tr>
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<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>DATA/CTRL</td>
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<tr>
<td>MAX</td>
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<tr>
<td>MIN</td>
<td></td>
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</tr>
</tbody>
</table>
## MIX mode

**DATA:**

**NAME:**

**Function Number:** F 6 ~ F 0

| NUMBER OF PGM | 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

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>STATUS</td>
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<td></td>
</tr>
<tr>
<td>DATA/CTRL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BANK MSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BANK LSB</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

### Foot Controller

<table>
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<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>STATUS</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DATA/CTRL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAX</td>
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</tr>
<tr>
<td>MIN</td>
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</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Specifications / Technische Daten / Spécifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Change Memory</strong></td>
</tr>
<tr>
<td><strong>Function Memory</strong></td>
</tr>
<tr>
<td><strong>Mode</strong></td>
</tr>
<tr>
<td><strong>Foot Controllers1 (Onboard Foot Controller)</strong></td>
</tr>
<tr>
<td><strong>Other</strong></td>
</tr>
<tr>
<td><strong>Control</strong></td>
</tr>
<tr>
<td><strong>Connectors External</strong></td>
</tr>
<tr>
<td><strong>Supplied Accessories</strong></td>
</tr>
<tr>
<td><strong>Dimensions (mm)</strong></td>
</tr>
<tr>
<td><strong>Weight (kg)</strong></td>
</tr>
</tbody>
</table>