Pyramix 5

DIGITAL AUDIO WORKSTATION

HUI Option for DM2000

User Guide

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HUI for DM2000 Guide

Introduction

Overview

This document details the physical and logical connections required to enable the Yamaha DM2000 Digital Mixing Console to control and be controlled by Pyramix Virtual Studio using the optional Remote Control Midi HUI protocol.

Scope

The Pyramix HUI remote control option supports the Mackie HUI control surface and hardware capable of full or partial HUI emulation. E.g. Mackie Baby HUI, Yamaha DM2000, DM1000, 02R96 and 01V96. If present and supported in hardware, **Faders** and **On**, **Solo**, **Select** and **Mute** buttons can address Pyramix parameters on up to 5 layers and 96 channels. **Rotary Encoders** add assignments to 7 global functions, with 8 specific indexes. Any given strip can be cloned to all following strips. **Auto-Mapping**, as can be seen in the spreadsheet **Auto-Mapping Assignments on page 10**, directly addresses up to 13 parameters per strip, along with all transport, track arming, and jog/shuttle functions.

Setup

Requirements:

Components required for operating a HUI or compatible controller with Pyramix:

- A HUI controller or compatible HUI protocol product.
- Pyramix 4.2 or higher with Remote Control MIDI HUI protocol authorized.

DM2000 Specific Setup

Note: Here and in the remainder of this document, the DM2000 is chosen as representative of the Yamaha range of consoles that can act as a HUI compatible controller for Pyramix. The DM1000, 02R96 or 01V96 will work similarly with Pyramix although minor operating variations may appear, due to slight differences in design and the number of available controls of the various models.

DM2000 Software Version

Console must be running Version 1.xx software.

Connections

The Yamaha DM2000 **TO HOST** USB port should be connected to a suitable USB port on the Pyramix workstation.

Note: The USB connection is required for the Yamaha consoles. A conventional MIDI DIN connection will not work.

Driver

Download and install the required USB driver from the Yamaha Pro Audio Web site. For the DM2000, DM1000, 02R96 and 01V96 this can be found at:

http://www.yamahaproaudio.com/

Please see the **readme.txt** file included in the zip file for detailed installation instructions.

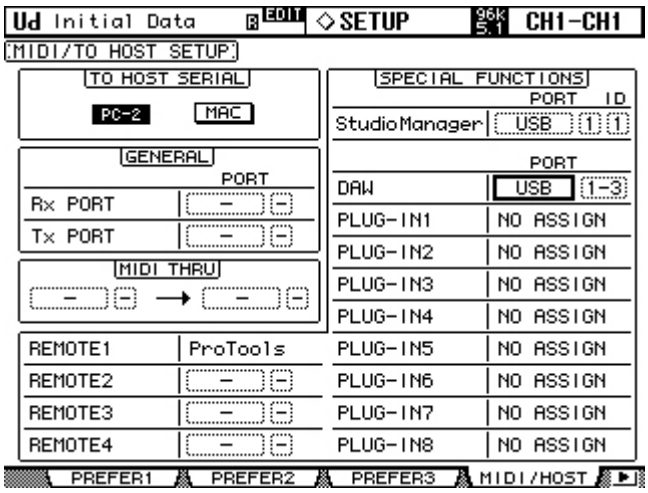
Communication

Pyramix and the DM2000 communicate using the Mackie HUI protocol. Please also refer to the DM2000 manual, section 19, and note that Mackie HUI mode is activated in a DM2000 by selecting a **Remote Layer** and choosing **ProTools** as the target.

DM2000 Settings

Detailed steps for activating this mode in a DM2000 include:

- Press **DISPLAY ACCESS** [**SETUP**], then [**F4**] (below the LCD) to access the **MIDI/HOST** setup page.



DM2000 DISPLAY ACCESS [SETUP] : MIDI/HOST setup page

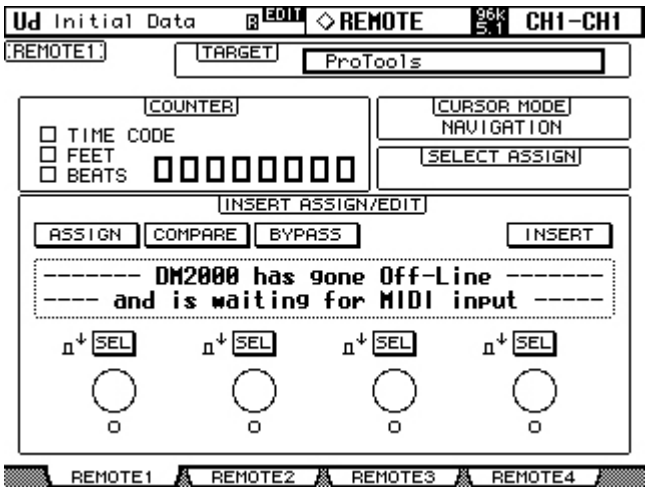
- Check the **TO HOST SERIAL** parameter is set to **PC**.

  Note: If this parameter is set to **MAC** the Pyramix workstation may crash when connected to the DM2000

- Now move the cursor to the port parameters for **DAW**, select **USB** and next to it **1 - 3**.

  Note: DM2000 V2 will require four ports. DM2000 V1 only needs three, and these must be the first three. I.e. ports 1-3

- Press **DISPLAY ACCESS** [**REMOTE**], then [**F1**] (below the LCD) to access **Remote Page 1**.



DM2000 DISPLAY ACCESS [REMOTE] : REMOTE1 page

- Cursor to the **TARGET** parameter and use the **INC / DEC** keys or the **Parameter Wheel** to highlight (choose) **ProTools** from the list. Press **Enter** to confirm.
- Press **LAYER** [**REMOTE 1**].

Pyramix Set up

Connections

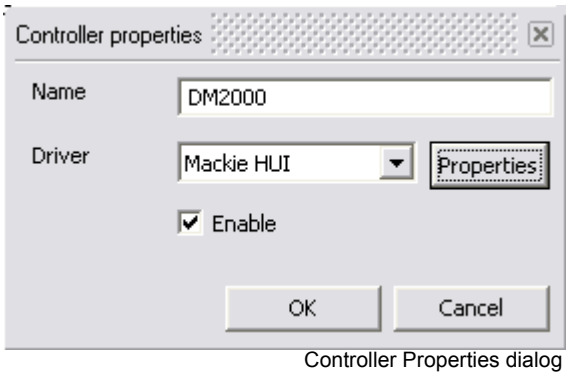
Make sure that the DM2000 is connected to your computer via a USB port and that the MIDI interpreter driver is correctly installed in Windows.

Pyramix Set-up

Adding a Controller

In order to allow Pyramix to communicate with the DM2000 controller, you have to '**Add**' a controller in: **Settings > All Settings > Remote Control > Controllers**

Click on the **Add** button. The **Controller properties** dialog opens:

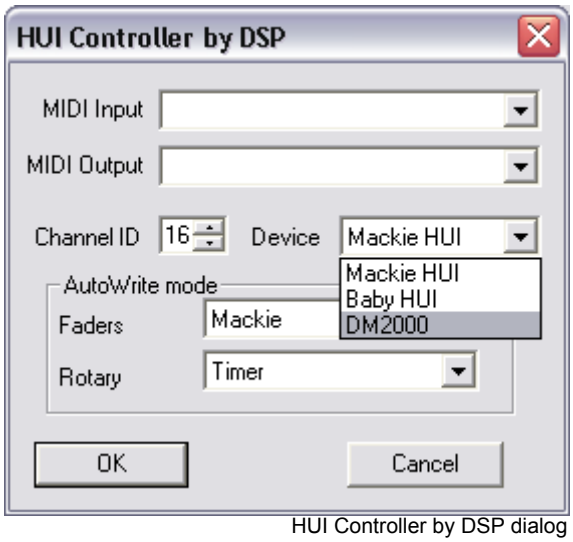


Controller Properties dialog

Type a **Name** for your Yamaha console, e.g. **DM2000** and select the **Mackie HUI** from the **Driver** drop-down list. Make sure the **Enable** box is checked.

Controller Properties

Now click the **Properties** button to open the **HUI Controller by DSP** dialog box. The **MIDI Input** and **MIDI Output** ports, **Channel ID**, **Device** type and **AutoWrite** mode must be set here.



HUI Controller by DSP dialog

The available **MIDI Input** and **MIDI Output** settings are related the installed driver(s) and interface(s) installed on your computer. Choose the **USB** MIDI ports which the DM2000 is connected to.

MIDI Input: Determines which MIDI input port will receive the DM2000 commands

Midi Output: Determines which MIDI output port will send commands to the DM2000

Channel ID: (1->16)

Note: the **Channel ID** number must match the Channel ID parameter of the DM2000 you want to use.The correct Channel ID depends on the internal settings of the HUI controller. By default ID 1 is used, but some controllers use several at a time. The Yamaha DM2000 uses 3 dedicated IDs. In this case, only the first Channel ID needs to be set in the corresponding field.

Device: Select **DM2000** as the target device. This enables auto-mapping to be correctly handled

AutoWrite mode: These dialogs allow you to choose between various automated **AutoWrite** switching modes:

- **Mackie**: this is the native mode for the faders. When a fader is 'touched', it sends Pyramix a **Set Auto Writing ON** message. When you release the fader it sends Pyramix a **Set Auto Writing OFF** message.
- **Timer**: When a fader is 'touched' or a Rotary Encoder is turned, it sends Pyramix a **Set Auto Writing ON** message. After 15 ms without any modification/movement the timer sends Pyramix a **Set Auto Writing OFF** message.
- **User Defined**: When a fader is 'touched' or a Rotary Encoder turned, it sends Pyramix a **Set Auto Writing ON** message. The user has to select a control on the DM2000 surface that will send Pyramix a **Set Auto Writing OFF** message. (**Please see: Manual Mapping on page 12**)

DM2000 Auto-Mapping

By default, when you set up a system as described above, an auto-mapping function automatically maps DM2000 control surface items to your current Pyramix mixer as well as to some edit functions. Currently auto and manual mapping are stored within each Pyramix project, while only the basic controller assignment is remembered by Pyramix **Remote Control Settings**. For your convenience, your Mappings can be saved and recalled within a **Template**, by choosing **Save as Template** in the **Project** menu.

Note: We are interested in suggestions to help us further enhance auto-mapping. Please send your suggestion to:

fbaume@merging.com

Auto-Mapping Assignments

Here is the list of auto-mapped controls:

DM2000 Control	Generic HUI	Pyramix Parameters
Matrix Select section		
MATRIX 1	DEFAULT	Toggles buttons between normal and default behavior
MATRIX 2	MUTE	Toggles buttons between normal and muted behavior
MATRIX 3	--	Undefined
MATRIX 4	BYPASS ALL	Toggles buttons between normal and bypassed behavior
Aux Select section		
Aux1	SEND A	Assigns Send A Level to Encoders. The central LCD display shows the current Send A destination assignment
Aux2	SEND B	Assigns Send B Level to Encoders. The central LCD display shows the current Send B destination assignment
Aux3	SEND C	Assigns Send C Level to Encoders. The central LCD display shows the current Send C destination assignment
Aux4	SEND D	Assigns Send D Level to Encoders. The central LCD display shows the current Send D destination assignment
Aux5	SEND E	Assigns Send E Level to Encoders. The central LCD display shows the current Send E destination assignment
Encoder Mode section		
PAN	PAN	Assigns Pan to Encoders.
ASSIGN 1	INPUT	Assigns Track Input to Encoder. The central LCD display shows the current Track Input assignment.
ASSIGN 2	OUTPUT	Assigns Track Output to Encoder. The central LCD display shows the current Track Output assignment.
ASSIGN 3	ASSIGN	When Encoders display a Send level, switch them to get the next assignment index (1 to 8). In mapping dialog it relates to Index2.

Track Arming section

Track Arming 1 to 24	REC/RDY N	Toggles Record Ready

Automix section

OFF	OFF	Set Automation to Off
READ	READ	Set Automation to Play mode
WRITE	WRITE	Set Automation to Write mode

Locate Memory section

Loop	LOOP	Toggles Loop mode

Channel strips

Encoder	V-POT	Adjust parameter selected in the AUX SELECT section
Encoder Push-Switch	V-SEL	Set the selected strip to On/Off
SOLO	SOLO	Toggles Solo
ON	MUTE	Toggles Mute
Channel strip display		Display track name or Send In or Out assignment
Fader	FADER	Adjust Gain

Transport section

Right Arrow	CURSOR RIGHT	Nudge cursor to right
INC + Right Arrow	CURSOR RIGHT + ZOOM	Zoom in
Left Arrow	CURSOR LEFT	Nudge cursor to left
INC + Left Arrow	CURSOR LEFT + ZOOM	Zoom out
Start	PLAY	Playback
Stop	STOP	Stop
Rewind	REWIND	Scan rewind
AUX/MTRX + Rewind	REWIND + SHIFT	Fast rewind
Forward	FORWARD	Scan forward
AUX/MTRX + Rewind	FORWARD + SHIFT	Fast forward

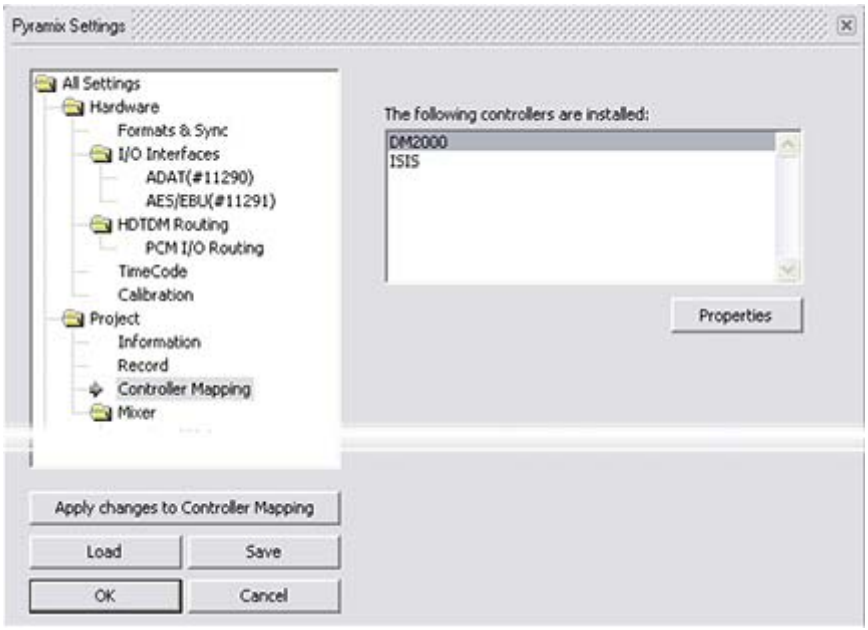
Locator section

RTZ	RTZ	Goes to Mark Out locator
AUX/MTRX + RTZ	RTZ	Set Mark Out locator to cursor
END	END	Goes to Mark In locator
AUX/MTRX + END	END	Set Mark In locator to cursor

Manual Mapping

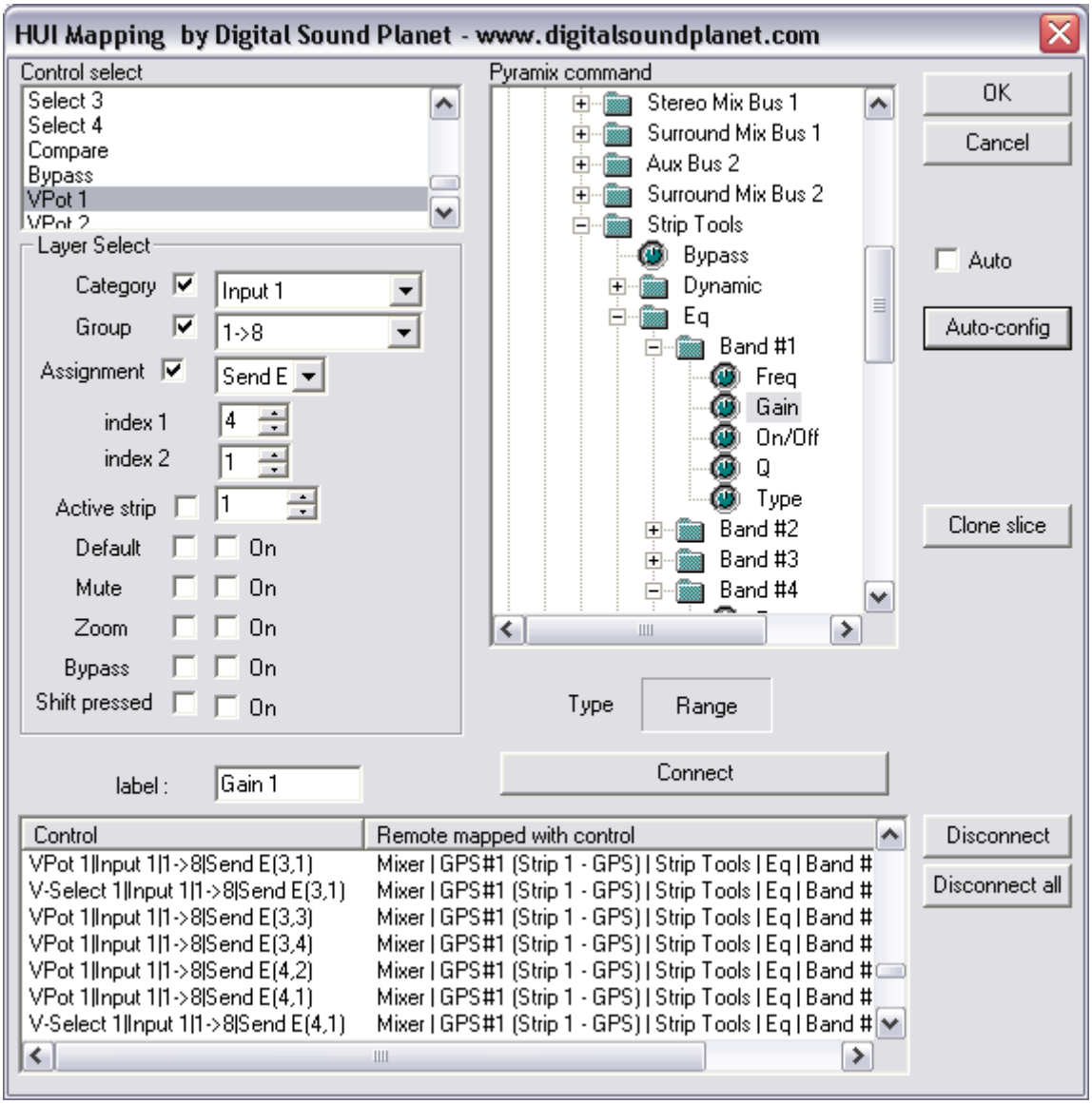
In Pyramix, manual controller mapping is made in the:

All Settings > Settings > Project > Controller Mapping page.



Project Information & Settings dialog

A list of currently enabled controllers is displayed and should include the controller previously created. Click on **DM2000** (or whatever you named it earlier) to select it, then click on **Properties** to open the **HUI Mapping by Digital Sound Planet** dialog. (See next page)

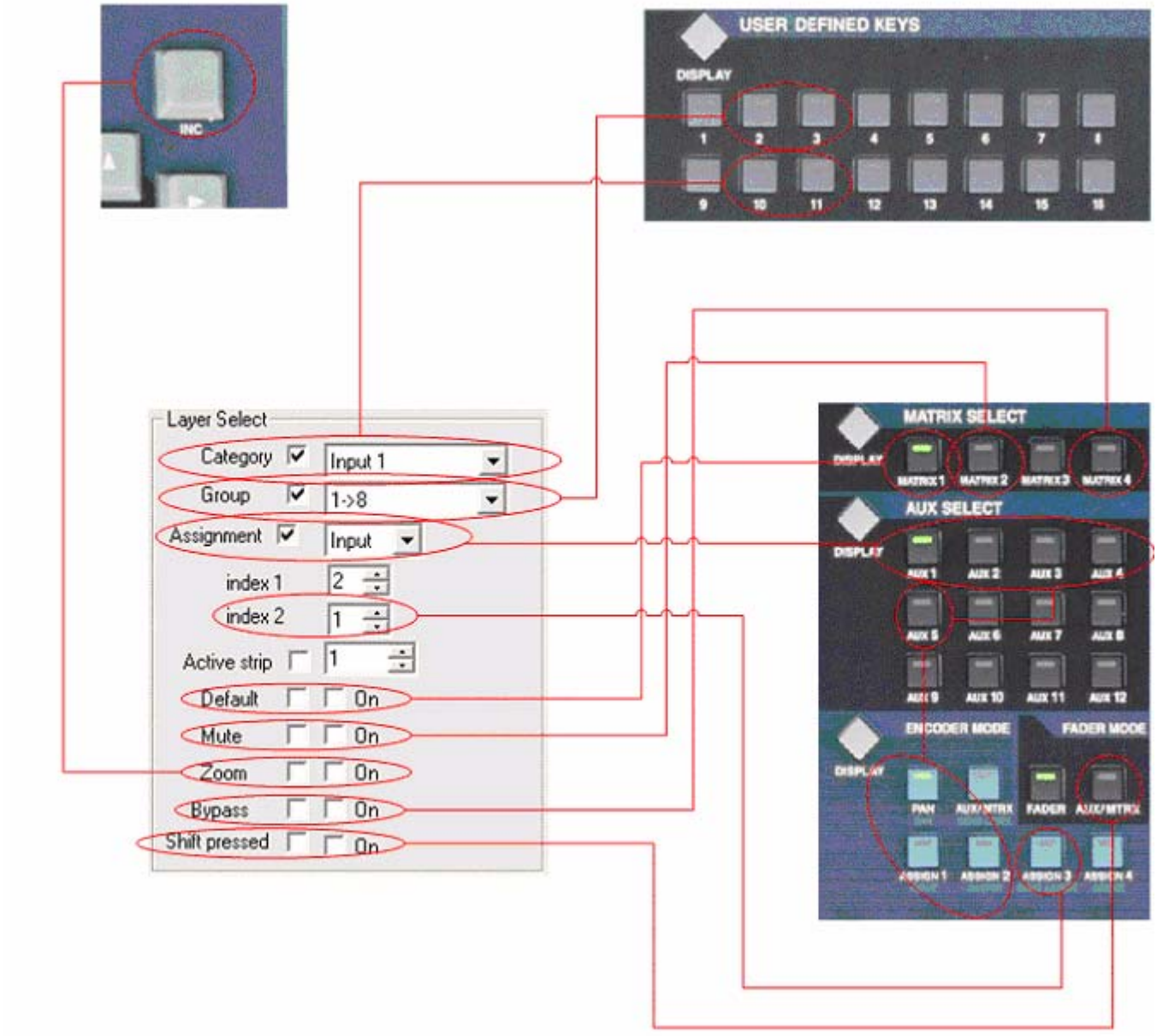


HUI Mapping by Digital Sound Planet dialog

Control Select

All controls typically available with the HUI protocol are listed here. These commands are mostly referenced on the DM2000 front panel and are directly accessible, while some can be addressed by key combinations with layers, as described below (E.g. with the **SHIFT** button).

Layer Select

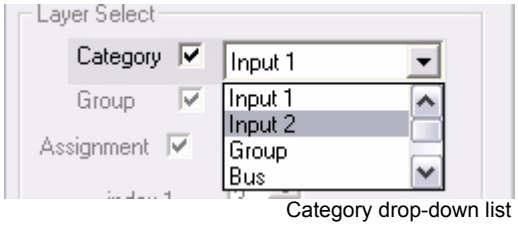


Correspondence between Layer Select assignment dialog and DM2000 surface

Each item in this section relates to a physical button on the DM2000 surface. When multiple layers are available, access is obtained by successive presses on DM2000 user-defined buttons (An exception is made for Assignment).

Category and **Group** check boxes determine if the corresponding layers are in use for a selected command. Please note that some layer/items combinations make no sense. For example transport buttons cannot be checked for multi-layer in **Category**.

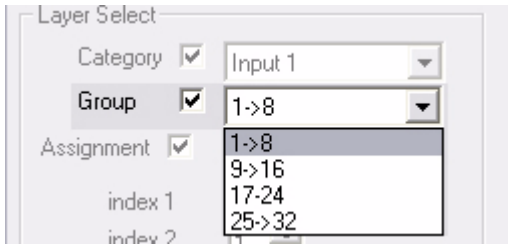
In the **Category** drop-down list, these choices are available: **Input1**, **Input2**, **Group**, **Bus**, and **Monitor**.



Category drop-down list

Each of these each give DM2000 front panel items, such as faders, switches and Rotary Encoders, access to a different logical layer.

In the **Group** drop-down list, the following choices are available: **1->8**, **8->16**, **17->24**, **25->32**;

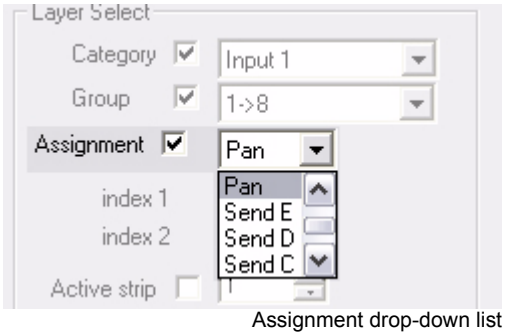


Group drop-down list

these are part of the standard HUI commands. In the DM2000 it should be understood as being: **1->24**, **25->48**, **49->72**, and, **unused**, (**73->96**). These logical groups are a means for a HUI controller to address more audio channels than the effective physical strip count available. This gives the DM2000 access to 72 channels, over 5 categories.

Assignment

The following choices are available in the **Assignment** drop-down list: **Output**, **Input**, **Pan**, **Send E**, **Send D**, **Send C**, **Send B**, and **Send A**. Each of these global rotary layer states is directly accessible by a defined



Assignment drop-down list

button on DM2000 surface. E.g. **AUX1**, **PAN** etc. The diagram on the previous page shows the relationships between control surface items and assignment options.

Index 1

Has no direct correspondence with a specific button but scrolls the index of any Rotary Encoder that has been mapped to a parameter with an **Index** Assignment. In operation, assigned Indexes are accessed by successive presses on the channel strip's Rotary Encoder knob. In the case of EQ, you pass from Band#1 to Band#2 and so on. This will be made clearer if you open the Mapping dialog and do an Auto-Config with a parametric EQ in the mixer, then look at the assignments.

Index 2

(**ASSIGN3**) Scrolls all indexed channel strip Rotary Encoders successively to 8 different states, addressing 8 different HUI commands / Pyramix parameters in turn. In operation, each press on **Assign3** shifts all indexed Rotary Encoders to their next state.

Active Strip

For each of the following selections when the first box is checked you use the optional key pressed feature (like a shift press). When second box is checked, the selected mapping is accessible only when you press the corresponding surface control of the DM2000. Please see the correspondence between dialog and surface above.

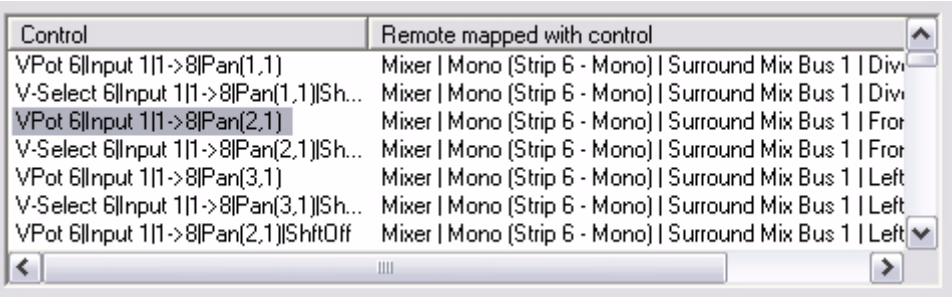
Default

Mute

Zoom

Bypass

Control - Remote mapped with control section



Control - Remote mapped with control list

Shows the current mappings between the HUI controller, I.e. DM2000 and Pyramix Virtual Studio Mixer controls.

Pyramix command section

There are three top level folders in the control view. The **Editor** folder contains the edit commands which can be found in the Pyramix menus. The **Machines** folder refers to transport controls of Pyramix internal and external machines. The **Mixer** folder contains all the elements which control the Virtual Studio Mixer as well as sub-folders for each channel strip.

Type field

The **Type** field shows the type of the currently selected control in the Pyramix command control view. Possible entries are **Event** types for switch controls and **Range**s for faders or knobs.

OK button

Accepts all changes made to mappings since the dialog was opened and closes the dialog.

Cancel button

Rejects all changes made to mappings since the dialog was opened and closes the dialog.

Auto check box

This is the default setting when a new controller is created. The auto-mapping selected here is identical to that which is made by the **Auto-Config** button described below.

Auto-Config button

Auto-Config automatically creates a mapping for all available Pyramix mixer strips, directly addressing several parameters per controller channel, including **Strip Tools** and **Parametric EQ** when inserted, along with all **Transport**, **Track Arming**, and **Jog/Shuttle** functions.

Examining the Auto configuration can also help understand how mappings can be created. Double clicking on an item in the **Control - Remote Mapped with Control** section (lower part of **HUI Mapping** dialog), brings up all the existing settings for the assignment in the other sections of the dialog. Thus it shows which Controller's item is linked to what HUI Control and Layer and goes on to show the associated item in the Pyramix parameter tree.

Clone slice button

Clone Slice duplicates mapping of a Pyramix Mixer Strip to ALL strips of the same type with a HIGHER rank number.

Caution: Clone slice only duplicates to EXACTLY the same type of strips (Mono to Mono, Stereo to Stereo, etc.).

Label field

Displays the labeling of the selected parameters, exactly as it will be shown in the DM2000 central LCD display.

Connect button

Connects a selected Pyramix command item with a selected control item. It also lists the connections in the **Control - Remote Mapped with Control** window.

Disconnect button

Disconnects a selected item in the **Control - Remote Mapped with Control** window.

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