

## DM 1000 Mixer

The DM 1000 is capable of storing many patches and you can store a patch for a project should you need to. These patches function as default presets for the mixer and the various speaker routing combinations. These instructions are designed for Studio C, D, and E. Slightly different instruction for the DM1000 are available in the Stage User Guide.

*Check the sample rate – In studios C, D, and E and on the Stage the CCRMA default (and the various clocks) are set to 48KHz.*

### To access a mixer patch –

Press the **SCENE** button a diamond button on the top Left Hand Side of the mixer beside the main LED panel, in the section labeled **DISPLAY ACCESS** (fig. 1).

You may need to press this button a number of times in order to reach the page/menu shown on the LED screen in the photo (fig. 1).

Pressing any of the diamond buttons in the **DISPLAY ACCESS** section multiple times will cycle through the various sub-menus associated with that button/function.

### Now you can select a scene/patch -

If it is your first time using the studio, select a **CCRMA DEFAULT** scene/patch.



*Fig. 1: Location of SCENE button in DISPLAY ACCESS; LED screen showing Scene menu*

In Studio E we will use **No.4 CCRMA Default**. In Studio D we will use **No.2 CCRMA DEFAULT**.

Use the circular dial on the right side of the mixer to move through the number and names (titles) of each scene/patch (fig. 2).

Use the Cursor/Arrow buttons above the circular dial and the **ENTER** button below the dial to navigate around the LED display in order to **RECALL**, **STORE**, **CLEAR**, or to **PROTECT** a scene/patch.

Alternatively, you could also use the section labeled **SCENE MEMORY** to **RECALL** or **STORE** a scene/patch. The small red number LED indicates the current scene/patch number.

**Now you will want to see your signal coming into the mixer.**

The signal path through the mixer is a little curious ... so pay attention!!!

Here are two ways to connect your laptop. You can use the 1/8 inch Jack to 2 Mono 1/4inch Jacks attached to the patch bay (or Rapco 1/8 inch to XLR Laptop Interface). You can also use the Presonus USB multichannel interface if you download their drivers and software on to your laptop.

If you plug in through the **1/8 inch jack** on your laptop to the **two 1/4 inch input jacks (inputs 1 and 2 on the patchbay below mixer – see fig. 3)**, your signal will light the green LED lights below the gain dials of the mixer inputs **9 and 10**, located at the top of the mixer (fig. 4).



*Fig. 2) Circular dial, cursor/arrow buttons (above) and ENTER button (below), SCENE MEMORY section (left), and red LED (farther left).*



Fig. 3) Connection from 1/8 inch laptop jack to 1/4 inch patchbay input jacks 1 and 2



Fig. 4) Gain dials showing laptop input on ch. 9 and 10

Press the **METER** button (a diamond button in the **DISPLAY ACCESS** section of the mixer).

You may need to press it several times until you reach a page on the LED screen that looks like the photos below:

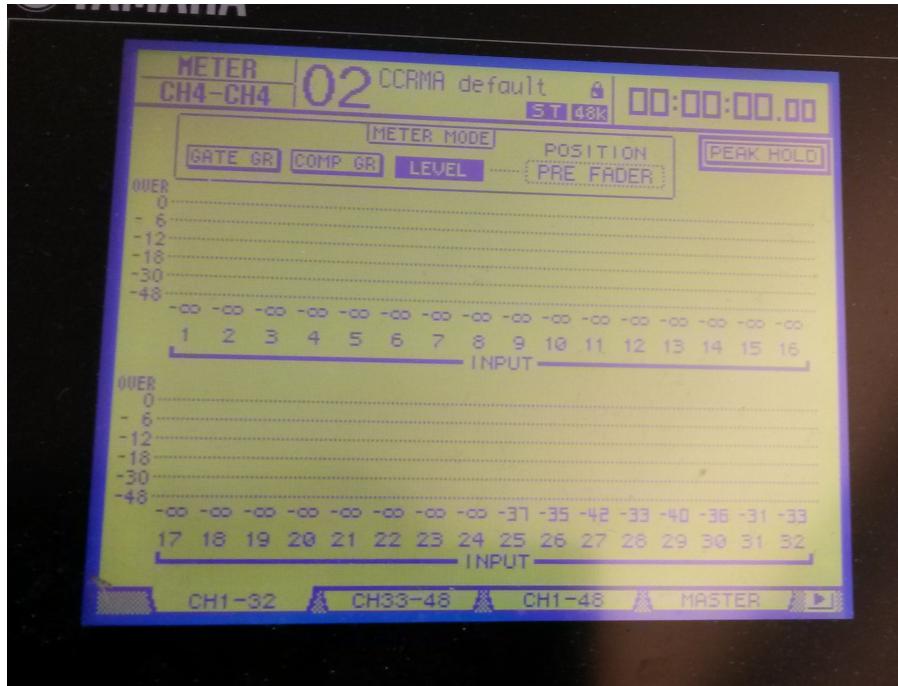


Fig. 5) Meters for channels 1-32

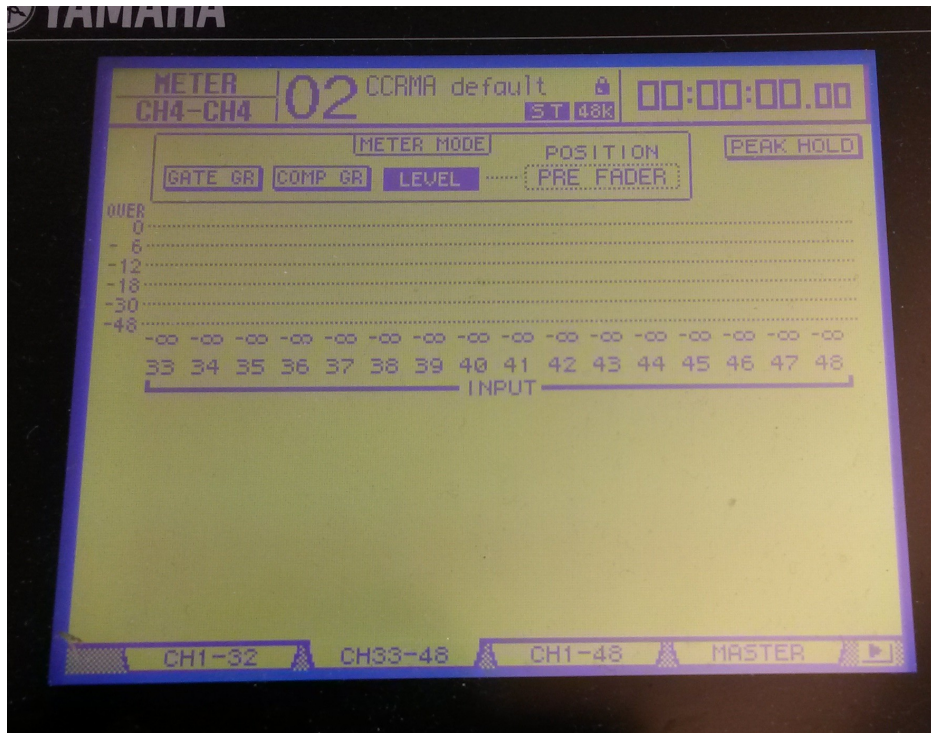


Fig. 6) Meters for channels 33-48

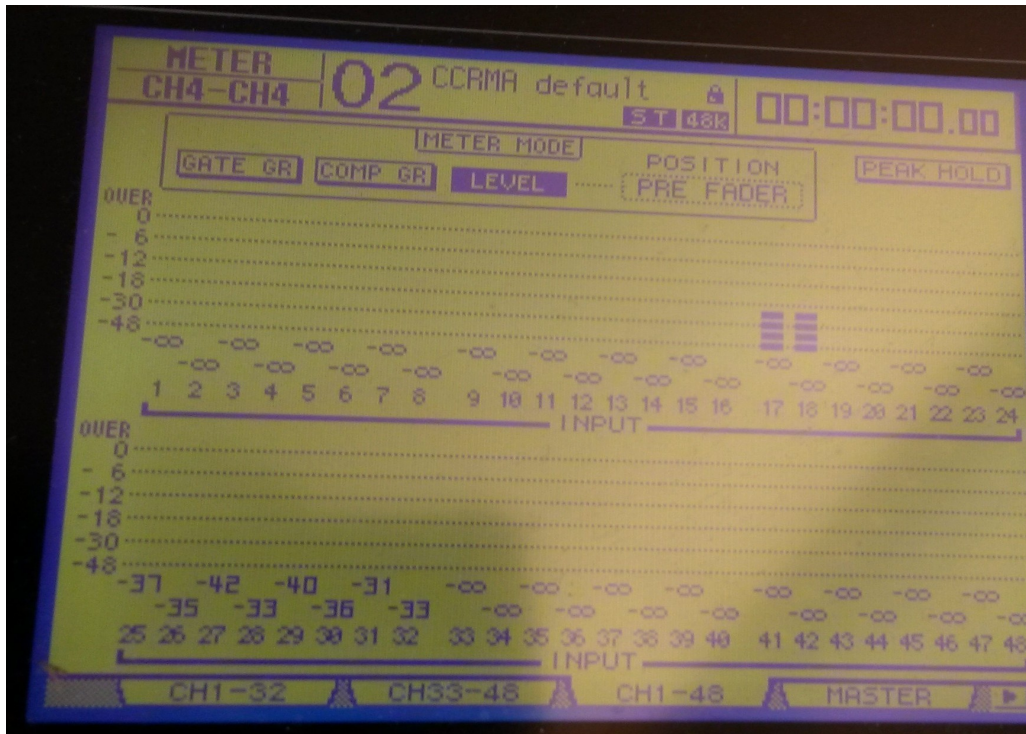


Fig. 7) Meter for all channels (recommended). Notice that channels 17 and 18 are registering signal from a connected laptop.

If you connected via the 1/8 inch jack, your laptop signal will now magically/curiously appear on **Channels 17 and 18** of the main LED screen

## Layers

Note: the DM1000 has only 16 faders. However, the faders do control all of the 48 channels in 3 different **LAYERS** - 1 to 16, 17 to 32, and 33 to 48.

To access any layer press a **LAYER** button below the circular dial in the grey section on the right hand side of the mixer (fig. 8). The faders will adjust automatically/remember their position for each layer until you exit the scene/patch. We'll talk about saving a new scene/patch later - it is unlikely that you'll ever need to do this while using a stereo signal from your laptop.

NOTE: If you are in a studio, make sure that the Fader Mode on the left side



Fig. 8) Layer buttons

(pictured below) is set to “Fader” and not “Aux”. The Aux setting is for use on the Stage.



If you are using the Rapco 1/8inch to XLR interface from your laptop, your stereo out will show up on channels **1 and 2**.

If you are using the **Presonus USB connection** from your laptop, your main stereo out will show up on channels **41 and 42** (*see Presonus setup instructions*).

You can also connect to the mixer with the studio computers: if you are using the **Linux machine**, the first 8 outputs will show up on channels **33 to 40** (*see basic Jack and Ardour instructions*). If you are using the **MAC** – for example with Logic Audio – the main stereo out will show up on channels **41 and 48** (*see Apollo setup instructions*). **MAKE SURE TO HAVE THE HDSPMIXER APPLICATION RUNNING AS YOU TURN ON JACK AND ARDOUR.**

To review:

COMPUTER	CONNECTION	GAIN DIALS	CHANNELS
Laptop	1/8 → patchbay 1 & 2	9 & 10	17 & 18
Laptop	USB → Presonus	NA	41 & 42
Laptop	Rapco 1/8 inch to XLR interface	1 & 2	1 & 2
Linux	Hammerfall/Jack Audio	NA	33 - 40 (first 8 outputs)
Mac	Apollo	NA	41 & 48

You should now see your signal registering on the main LED Display.

### **Routing**

Once you see your signal registering on the main LED display, you can pick what speaker(s) to listen through. Speaker routing is often assigned by default, but if it is *not* (or if you wish to do something different) follow these steps:

Touch the fader you wish to assign to a speaker, then press a speaker number in the **ROUTING** section on the right hand side of the main LED display (see fig. 9). Speakers in D, and E are numbered and labeled for this purpose. In Studio C you can only route signals to 1 - Left Front, 2 - Right Front, 3 - Left Rear, 4 - Right Rear, 5 - Front Center. The Sub work in the same manner as studio's D and E.



Fig. 9) Assigning a fader to a speaker

As you raise the fader, the signal will come out the corresponding speaker (i.e. the one you assigned it to).

If you also press the **Stereo** button at the bottom of the **ROUTING** section (as shown in photo above), everything below 80HZ in the signal will be sent to the studio sub.



The level of the sub is controlled by the master fader.



Fig. 10) Master fader

## Sample rate

To change your sample rate, go to the Input/Output settings menu by pressing the DIO button under DISPLAY ACCESS (fig. 11).



Fig. 11) DIO button

On the top of the main LED screen, the current sample rate is indicated by an icon next to the patch title (fig 12). In most CCRMA studios, the default sample rate is 48k, as shown here.

A small padlock icon indicates that the patch scene stroke is locked. This means that you may make any changes you'd like, but they will not be saved after you exit. We will discuss saving scenes later, but – generally speaking – if you are working in stereo, you shouldn't need to do so.

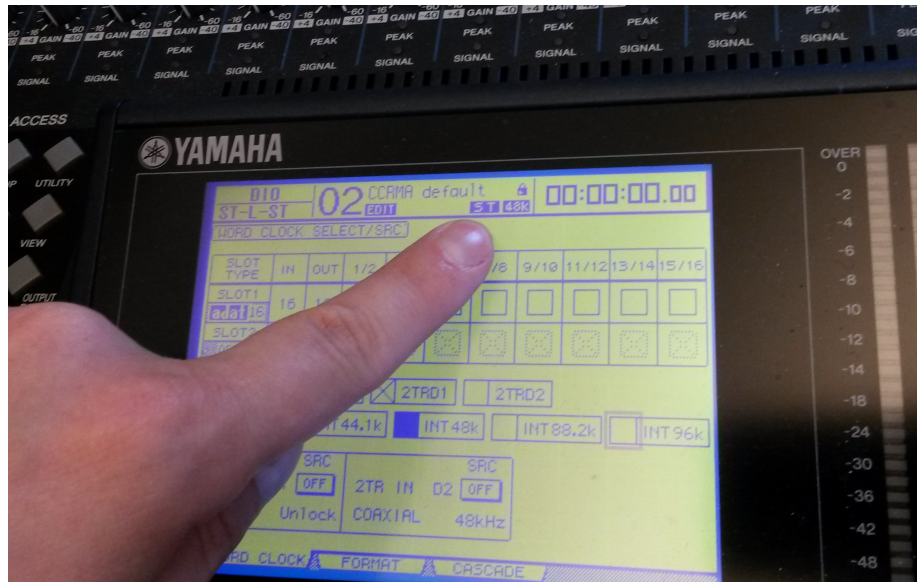


Fig. 12) Sample rate and padlock icons on LED screen. Note the sample rate options mid-screen: the box next to INT 48k is selected, indicating the current sample rate (48kHz).

To change the sample rate, use the circular dial to select a new sample rate from the options shown (44.1kHz, 48kHz, 88.2kHz, or 96kHz). When your desired sample rate is highlighted in blue (as shown in fig. 12), press **ENTER** to apply the change.

Note: to avoid error messages, keep your sample rate consistent between all programs you are using. To avoid saddling the next studio user with error messages, please RESET SAMPLING RATE TO 48K WHEN YOU ARE DONE!

### Using DM1000 on the Stage (For Multichannel, not Ambisonics)

The main difference between using the DM1000 in studio C, D, and E and the DM1000 on the Stage is that you can route signals to the upper ring of 8 speakers by using the auxiliaries.

First select **AUX** in the **FADER MODE** section of the desk, which is beside the bottom left corner of the main LED display. Next, in the **AUX SELECT** section select an AUX 1-8:

- Left Upper From Speaker AUX 1
- Right Upper Front Speaker AUX 2
- Mid-Side Left Speaker AUX 3
- Mid-Side Left Speaker AUX 4
- Rear Left Speaker AUX 5
- Rear Right Speaker AUX 6
- Central Speaker Front (Between Ceiling Rafters 3 and 4) AUX7
- Central Speaker Rear (Between Ceiling Rafters 4 and 5) AUX8

If you now raise any fader any signal on the corresponding channel will be sent through whatever AUX you have selected ie. Upperspeaker 1-8.

Remember to set the **FADER MODE** button back to **FADER** to work with the lower ring of 8 speakers. The most common DM1000 question at CCRMA of “why is there no sound?” is directly proportional to the fact that somebody forgot to select a speaker in the **ROUTING** section of the mixer and/or forgot to set the **FADER** in the **FADER MODE**. This question knows no boundaries between the Students, Staff, and Faculty hierarchy!



**To name and store a new patch in any of the studios or on the stage, please ask tech staff.**