



# OWNER'S MANUAL



**YAMAHA  
MUSIC  
LABORATORY  
SYSTEM**  
●  
**MLC-100**

# PRECAUTIONS

## PLEASE READ CAREFULLY BEFORE PROCEEDING

\* Please keep this manual in a safe place for future reference.



### WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

#### Power supply/AC power adaptor

- Only use the voltage specified as correct for the instrument. The required voltage is printed on the name plate of the instrument.
- Use the specified adaptor (PA-6 or an equivalent recommended by Yamaha) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.
- Do not place the AC adaptor cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

#### Do not open

- Do not open the instrument or attempt to disassemble the internal parts or modify them in any way. The instrument contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

#### Water warning

- Do not expose the instrument to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.

#### Fire warning

- Do not put burning items, such as candles, on the unit.  
A burning item may fall over and cause a fire.

#### If you notice any abnormality

- If the AC adaptor cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the instrument, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the adaptor plug from the outlet, and have the instrument inspected by qualified Yamaha service personnel.



### CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the instrument or other property. These precautions include, but are not limited to, the following:

#### Power supply/AC power adaptor

- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord.

- Unplug the AC power adaptor when not using the instrument, or during electrical storms.
- Do not connect the instrument to an electrical outlet using a multiple-connector. Doing so can result in lower sound quality, or possibly cause overheating in the outlet.

#### Location

- Do not expose the instrument to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not use the instrument in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Otherwise, the instrument, TV, or radio may generate noise.
- Do not place the instrument in an unstable position where it might accidentally fall over.
- Before moving the instrument, remove all connected adaptor and other cables.
- When setting up the instrument, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet.

#### Connections

- Before connecting the instrument to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all volume levels to minimum. Also, be sure to set the volumes of all components at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

#### Maintenance

- When cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

#### Handling caution

- Do not place vinyl, plastic or rubber objects on the instrument, since this might discolor the panel or keyboard.
- Do not rest your weight on, or place heavy objects on the instrument, and do not use excessive force on the buttons, switches or connectors.
- Do not operate the instrument for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the instrument, or data that is lost or destroyed.

Always turn the power off when the instrument is not in use.

Even when the power switch is in the "STANDBY" position, electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

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## Features of the MLC-100

The music laboratory enhances classroom music instruction by providing the teacher with effective and time-saving individual, pair and group study techniques.

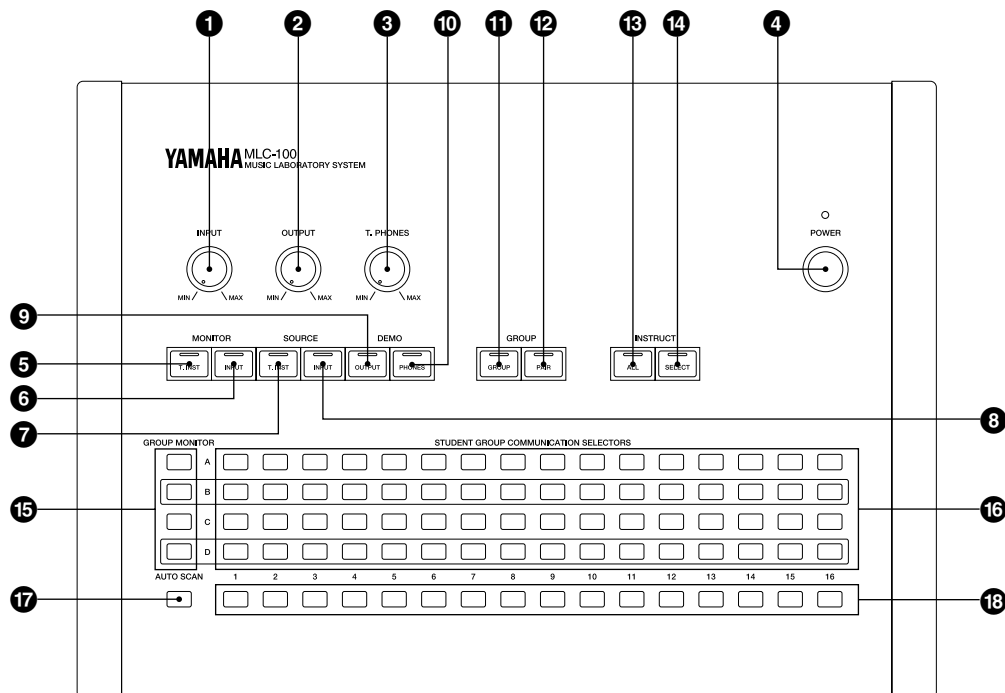
The Yamaha MLC-100 Music Laboratory System is a highly sophisticated music laboratory console, yet is exceptionally compact and easy-to-use, and offers a remarkable range of functions for effective group keyboard teaching.

### Features and functions of the MLC-100 include:

- **True stereo sound.**
- **Automatic Scan**, which automatically selects individual students or groups for monitoring. The order in which students are monitored as well as the duration of monitoring can be freely set.
- **Compact footprint**, allowing placement of the console on top of the teacher’s instrument, next to the music stand.
- **Convenient monitoring and communication functions.** The teacher can listen to and talk with students individually, in pairs, or in groups quickly and easily. Moreover, group and individual instruction can be used simultaneously.
- **Flexible student-to-student communication.** Students assigned to pairs or a group can communicate with each other and hear each other’s performance.
- **System expandability.** Two MLC-100s can be connected together, for teaching up to 32 students and still taking advantage of all the MLC-100’s convenient functions.

# Panel Controls and Terminals/Operation Guide

## Top Panel



- 1 INPUT Control**  
For adjusting the overall input level received from the INPUT jacks.
- 2 OUTPUT Control**  
For adjusting the overall output level sent to the OUTPUT jacks.
- 3 T.PHONES (Teacher's Headphones) Control**  
For adjusting the overall level of the teacher's headphones.
- 4 POWER Switch and LED**  
The LED lights when the power is turned on.

**MONITOR Buttons (5, 6)**  
These buttons determine which signals are to be monitored by the teacher: the teacher's instrument or the input received at the INPUT jacks. Pressing both buttons allows both to be monitored simultaneously. The button lamps are lit when monitoring is enabled.

**5 T.INST (Teacher's Instrument)**  
For monitoring the teacher's instrument. Press the button again to turn off monitoring.

**6 INPUT**  
For monitoring the signals received at the INPUT jacks. Press the button again to turn off monitoring.

### ■SOURCE Buttons (7, 8)

These buttons determine which signals are output to the students. (Both can be used simultaneously.)

#### 7 T.INST (Teacher's Instrument)

For selecting the teacher's instrument as the source. Press the switch again to turn it off.

#### 8 INPUT

For selecting the INPUT input signals as the source. Press the button again to turn it off.

### ■DEMO (Demonstration) Button (9, 10)

The Demonstration function allows the teacher to have the whole class listen to a performance of a single student or a group of students that the teacher is currently monitoring. These buttons determine whether the sound is heard over the external speaker system or the headphones.

#### 9 OUTPUT

For monitoring the demonstration performance (or any other signal) over the external speaker system.

#### 10 PHONES

For monitoring the demonstration performance over the headphone system.

### ■GROUP Buttons (11, 12)

These buttons allow the teacher to set the console for group or pair mode. Putting students together in a group or a pair allows them to communicate with each other and hear a mix of what they play. Selecting one switch overrides the other.

#### 11 GROUP

Selects group mode. The Group assignment for each student is made from the STUDENT GROUP COMMUNICATION SELECTORS 16.

#### 12 PAIR

Selects pair mode. The actual pairings are fixed (student 1 is paired with student 2, student 3 with student 4, and so on).

### ■INSTRUCT Buttons (13, 14)

These buttons enable the teacher to determine whether instruction is for either the entire class, or an individual student or group of students. The two buttons cannot be used simultaneously.

#### 13 ALL

Allows the teacher to instruct all students in the class.

#### 14 SELECT

Allows the teacher to communicate with select students in the class, determined either by group (with the GROUP MONITOR selectors 15) or by individual student (with the Individual Student selectors 18).

#### 15 GROUP MONITOR Selectors

Determines the group for monitoring.

#### 16 STUDENT GROUP COMMUNICATION SELECTORS

These buttons determine which group a particular student is assigned to: A, B, C, or D.

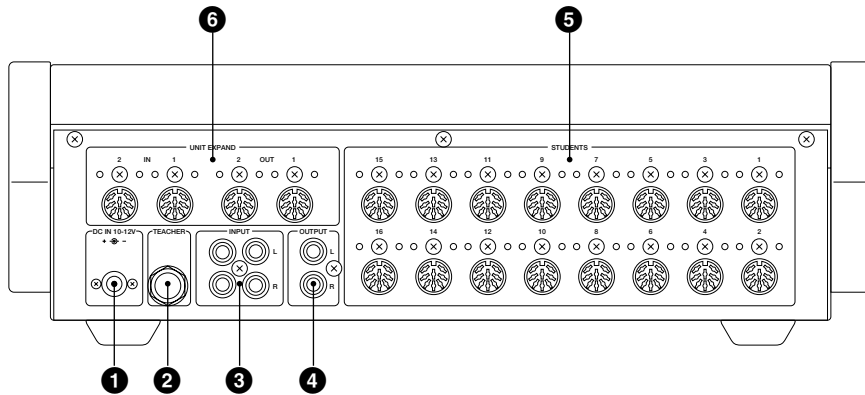
#### 17 AUTO SCAN (Automatic Scan) Button

The Automatic Scan function automatically monitors each student in order from 1 to 16, for roughly three seconds.

#### 18 Individual Student Selectors

These are used to select individual students for monitoring and communication.

## Rear Panel



### 1 DC IN

For connection to the supplied AC power adaptor.

### 2 TEACHER Jack

For input of the teacher's instrument.

### 3 INPUT Jacks

For input of an auxiliary sound source, such as a compact disc player, cassette deck, or second instrument. Since the signals at these two sets of inputs are mixed, only one of the sources should be active at a time.

### 4 OUTPUT Jacks

For output of the console sound to an external amplifier/speaker system or tape recorder.

### 5 STUDENTS Terminals

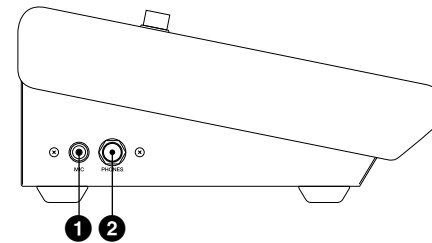
For connection to the MLA-100 Student Attachment units at each student's instrument.

### 6 UNIT EXPAND IN & OUT Terminals

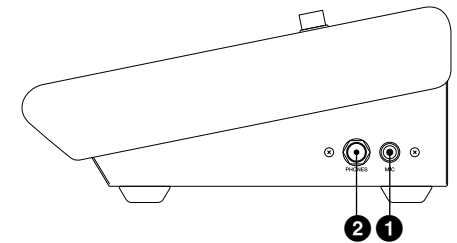
For connection of an additional MLC-100 unit. Connect the OUT terminals of the intended master unit (the unit to be monitored from) with the IN terminals of the slave.

## Side Panels

### Left



### Right



### 1 MIC Jacks

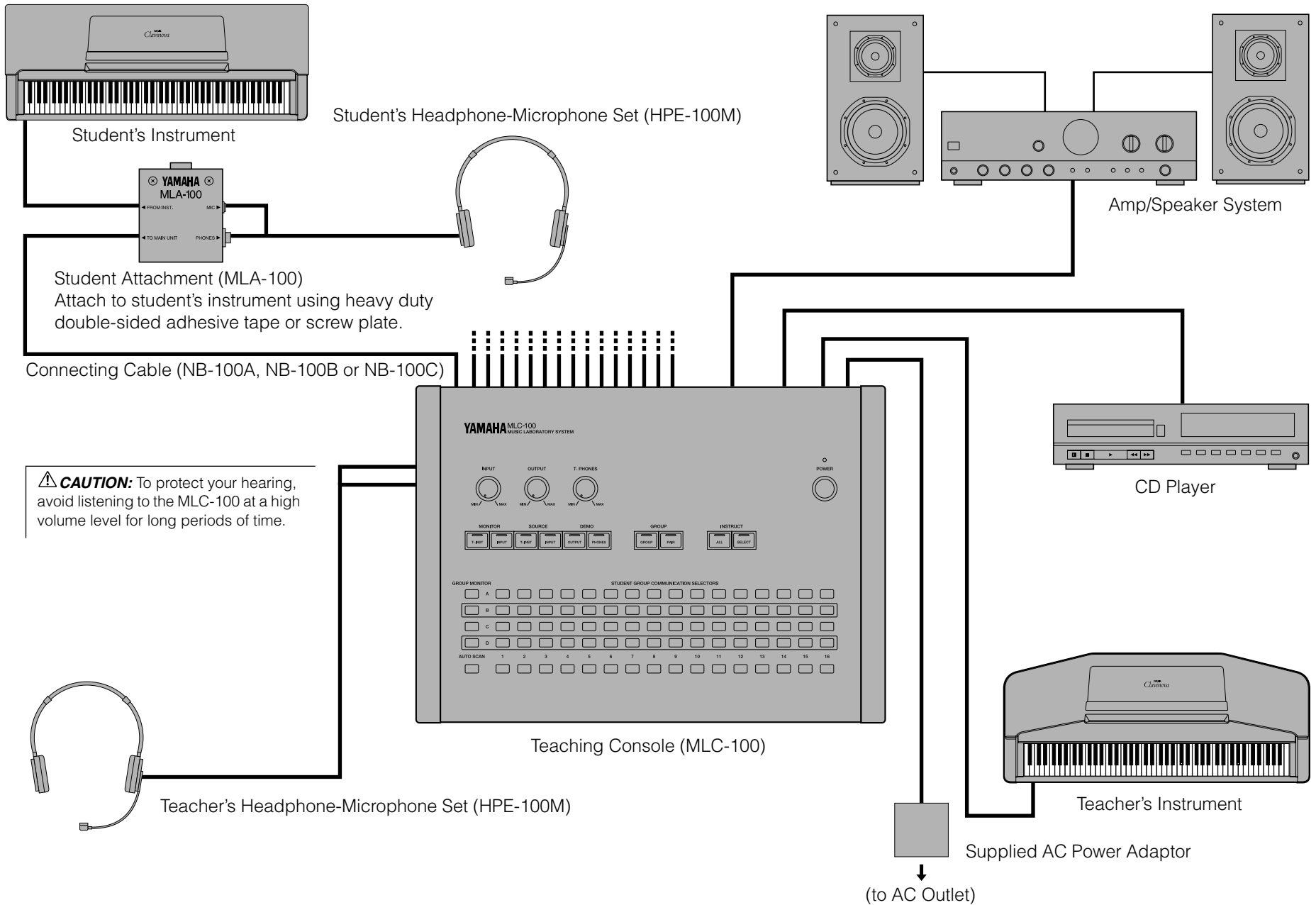
For input of the teacher's microphone. Connect to the MIC plug on the HPE-100M headphone/microphone set.

### 2 PHONES Jacks

For input of the teacher's headphones. Connect to the PHONES plug on the HPE-100M headphone/microphone set.

**Note:** Use only one set of these jacks at a time.

# System Setup



# Operating Instructions

## Turning On the MLC-100 System

To protect the external speaker system from possible damage (and to avoid an annoying “pop” in any connected headphones), always set the volume controls of all equipment to 0 or minimum and turn on the power of the system components in the following order:

- 1) the MLC-100 console
- 2) all connected instruments
- 3) any connected source (CD player, cassette deck, etc.)
- 4) the external speaker system

**CAUTION:** Even when the instrument is turned off, electricity is still flowing to the instrument at the minimum level. When you are not using the MLC-100 for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

## Setting the Levels

Before conducting a class with the MLC-100, always make sure the three level controls – INPUT, OUTPUT and T.PHONES – are set to the proper levels. Have the students listen on their headphones while you listen on yours, play your instrument and/or any other audio source you will be using, talk into your microphone, and make sure that you and all students can hear everything properly.

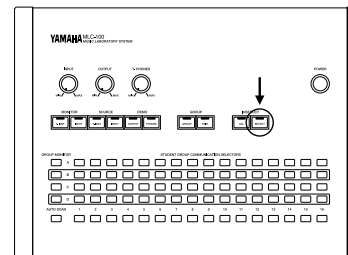
Also, be sure to first set the T.PHONES control to a position around 2 or 3 o'clock before adjusting other levels (such as that of a compact disc player or the teacher's instrument). When the control is set to this position, the teacher will hear the sources at roughly the same level as what the students hear, making it easy to set the proper levels of those sources.

## Setting Up the Console – Enabling specific Student Stations

Before conducting a class, set the MLC-100 for the number of students in the class. This is important when using the Automatic Scan function. If fewer than sixteen students are in the class yet all student stations are enabled on the MLC-100, the Automatic Scan function would needlessly select empty student stations for monitoring. Enabling specific stations here lets you avoid Automatic Scanning of empty student stations. (When the MLC-100 is turned on, all sixteen stations are automatically enabled.)

### To enable specific student stations:

- 1.** Press and hold down the [INSTRUCT] SELECT button for approximately three seconds. (All enabled Individual Student selectors light.)



- 2.** While holding down the [INSTRUCT] SELECT button, press those Individual Student selectors that correspond to the unused student stations. For example, if student stations 11 and 15 are empty, press Individual Student selectors 11 and 15.

It is best to have students fill up the lower numbered stations, if fewer than sixteen students are present. This not only facilitates pair work, but it also lets you use the following alternate method of enabling specific empty student stations:

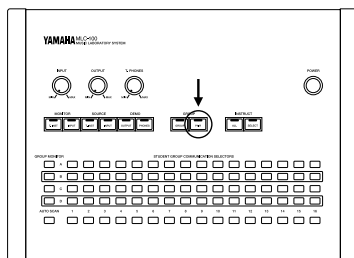
While holding down the [INSTRUCT] SELECT button, press the STUDENT GROUP COMMUNICATION SELECTORS in the D row corresponding to the last occupied student station. All buttons from station 1 to the station selected light.

**Note:** In either of the above methods, you can hold down the [INSTRUCT] SELECT button and immediately use the Individual Student selectors or D row of STUDENT GROUP COMMUNICATION SELECTORS. All enabled Individual Student selectors light. Set them in the same way as described in step #2 above.



## Pair and Group Play

**To have students play together in pairs:**  
Press the [GROUP] PAIR button. (The button lights.)



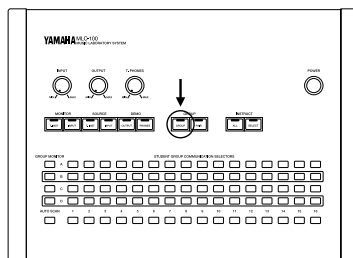
This automatically pairs all of the students – student 1 with student 2, student 3 with student 4, and so on, up to student 15 with student 16. The paired students can hear each other's performances and communicate with each other.

To turn off pair mode, press the PAIR button again.

**Note:** When using Pair mode, make sure that the students fill up adjacent numbered stations as much as possible, to ensure that each student has a partner.

**Note:** If you wish to make nonstandard pair assignments (such as student 2 with student 10), use the group functions to assign the two students to a group.

**To have students play together in groups:**  
Press the [GROUP] GROUP button. (The button lights.)



This sets up the system so that the members of the currently assigned groups can hear each other's performances and communicate with each other. (For information on assigning students to groups, refer to "Assigning Students to Groups".)

To turn off group mode, press the GROUP switch again.

### To have all students play together:

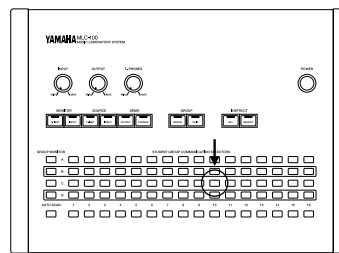
Assigning all active students to one group (group A) can be done in a single keystroke. To do this, simultaneously press [GROUP] GROUP and PAIR. (The GROUP button and all student buttons in the A row will light.) In this condition, students cannot be assigned to any other group.

To turn off this mode and return to the previous Group assignment, press the [GROUP] GROUP button again.

## Assigning Students to Groups

### To assign a student to a particular group:

In the appropriate column of STUDENT GROUP COMMUNICATION SELECTORS, press the one corresponding to the group (A, B, C, D) to which you wish to assign the student. For example, to assign student 10 to group C, press the third STUDENT GROUP COMMUNICATION SELECTORS from the top in the row labeled "10."



Up to four groups can be made with any combination of students.

### To re-assign a student from one group to another:

Press the desired group button for the student.

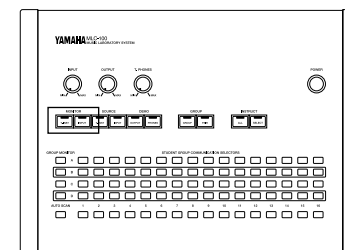
**Note:** Group settings are memorized only for as long as the power is on. When the power is turned off and back on again, all group settings are cancelled and the default setting – that of individual or solo instruction – is recalled.

## Selecting the Teacher's Monitor – Teacher's Instrument or Input

These Monitor controls let only the teacher listen to the sources. This would come in handy, for example, when the teacher needs to check a CD music selection before playing it for the students, or to run through a part before performing it for the class.

### To select the teacher's instrument or INPUT signal for teacher monitoring:

Press the appropriate button, [MONITOR] T.INST (for teacher's instrument) or [MONITOR] INPUT (for the INPUT signal), or both. (The selected button lights.)

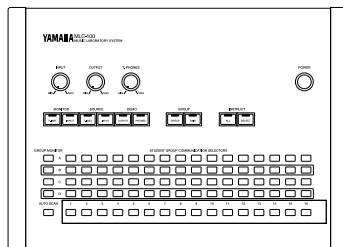


The selected sound source is now output to the teacher's headphones. Press the appropriate button again to turn off monitoring of the source. The teacher's instrument monitor is automatically set to on as a default when the unit is turned on.

## Monitoring Students

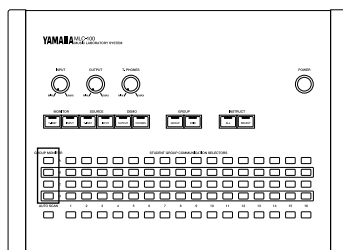
### To monitor an individual student:

Press the appropriate Individual Student selector. (The button lights.) The selected student's voice and performance can be monitored.



### To monitor a group of students:

In the group mode (see page 7), press the appropriate GROUP MONITOR selector. (The button lights.) The voices and performances of the students in the selected group can then be monitored.



To switch monitoring to an individual student of the group, press the appropriate student's Individual Student selector. You can also monitor several different students by simultaneously pressing the appropriate Individual Student selectors.

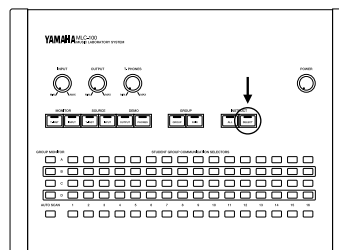
**Note:** To monitor the students in a pair, simultaneously press both of the corresponding Individual Student selectors.

To turn off monitoring of the selected student, press the appropriate Individual Student selector again. To turn off monitoring of the selected group, press the appropriate GROUP MONITOR selector. (The lamp will go out.) Alternatively, you can press one GROUP MONITOR or Individual Student selector to switch monitoring to the newly selected group or student.

## Teacher/Student Communication

### To communicate with a student or group of students:

While a student or group has been selected for monitoring, press the [INSTRUCT] SELECT button. (The button lights.)



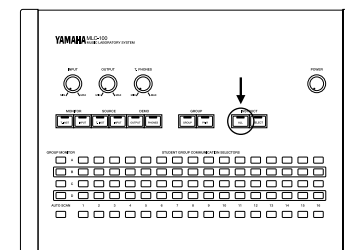
In this condition, the teacher can talk to the selected student or group over the microphone. To turn off communication, press the [INSTRUCT] SELECT button again. You can select another group or student for communication by pressing another GROUP MONITOR button or Individual Student selector.

In this Instruct condition, pressing the [MONITOR] T.INST or INPUT buttons sends the corresponding source (teacher's instrument or cassette/compact disk, for example) only to the selected student or group.

**Note:** To communicate with all present students, simultaneously hold down the [INSTRUCT] SELECT button and press the [INSTRUCT] ALL button. (The [INSTRUCT] SELECT button and the corresponding Individual Student selectors light.)

### To instruct all students:

Press the [INSTRUCT] ALL button. (The button lights.)



The students can now hear only the teacher's voice.

**Note:** While [MONITOR] T.INST and/or INPUT are on, the teacher's performance and/or input signal can also be heard.

To turn off instruction for all students, press the button again. Doing this returns to the previous console condition or function, with the exception of the indication of a student's call.

**Note:** If the teacher answers a student's call while [INSTRUCT] ALL is enabled, the entire class will be able to hear the teacher/student conversation.

The [INSTRUCT] ALL button can also be used for instructing an appropriate group. To do this, hold down [INSTRUCT] ALL and press the desired GROUP MONITOR button. In this condition the members of the group can hear only the teacher's voice.

**Note:** When the [INSTRUCT] ALL button is lit, all other panel buttons are disabled (with the exception of the [MONITOR] T.INST and INPUT buttons).

## Student Call

A student can call the teacher by pressing the call button on his or her MLA-100 Student Attachment. The corresponding Individual Student selector on the console flashes to alert the teacher as to who is calling.

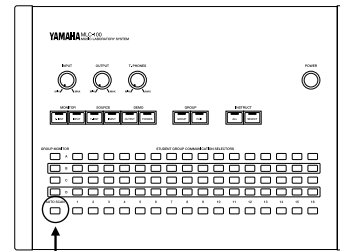
### To answer a student's call:

Press the flashing Individual Student selector. The selector will now light continuously and [INSTRUCT] SELECT will turn on automatically. The teacher can then talk with the student.

**Note:** When several calls are received at a time, all callers' selectors flash; the selector of the earliest student caller flashes faster than the others. Press the same student's button again to automatically answer the next caller.

## Automatic Scan

**To use the Automatic Scan function:**  
Press the AUTO SCAN button. (The button lights.)



Each student is automatically monitored for three seconds in turn, from 1 to 16. (Fewer student stations may be monitored if some have been disabled; see "Setting Up the Console – Enabling specific Student Stations" on page 6.)

The order and duration of monitoring is fixed to their default values each time the power is turned on. However, these can be changed; instructions are given below.

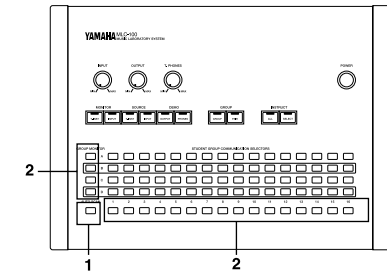
The Automatic Scan function repeats indefinitely until the AUTO SCAN button or one of the DEMO button is pressed.

**Note:** The Automatic Scan function is interrupted when pressing the following buttons:

- An Individual Student selector (for morning a selected student continuously).
- The [INSTRUCT] SELECT button.
- The [INSTRUCT] ALL button.

### To change the order of Automatic Scan:

While holding down AUTO SCAN (the button lights), press the GROUP MONITOR selectors or Individual Student selectors in the order you wish to have them automatically monitored. You can also select several different students for a single monitoring scan by simultaneously pressing the appropriate Individual Student selectors.



- 1) Hold this down...
- 2) ...and press desired GROUP MONITOR or Individual Student selectors.

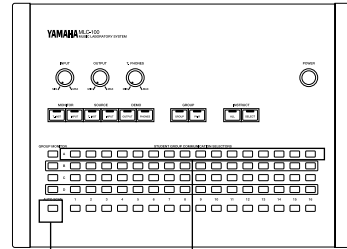
You can also limit the number of students or groups selected by simply holding down the AUTO SCAN button and pressing the desired button in the D row of the STUDENT GROUP COMMUNICATION SELECTORS. For example, by holding down the AUTO SCAN button and pressing STUDENT GROUP COMMUNICATION SELECTOR 5 in the D row, you can automatically monitor students 1 through 5.

**Note:** A single student or group cannot be selected for Automatic Scan. If you press only one button for the Automatic Scan order (for example, 5 or A), the MLC-100 automatically returns to the default Automatic Scan order. (Remember that this default order also depends on what student stations have been enabled; see “Setting Up the Console – Enabling Specific Student Stations” on page 6.) The setting made is memorized until the unit is turned off or another setting is made.

**Note:** If you change your mind about the order as you are setting it (while holding down the AUTO SCAN button), and press the same Individual Student selector again to cancel, the Automatic Scan order returns to the default setting (1 →16).

#### To change the monitoring duration of Automatic Scan:

Simultaneously hold down the AUTO SCAN button (the button lights) and press the STUDENT GROUP COMMUNICATION SELECTORS in the A row corresponding to the amount of seconds you wish to monitor each student or group. For example, if you wish to automatically monitor each successive student for eight seconds, press of the STUDENT GROUP COMMUNICATION SELECTORS labeled “8” in the A row.

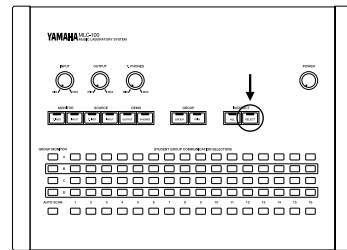


1) Hold this button... 2) ...and press one of these.

The default duration time of three seconds is automatically set when the unit is turned on.

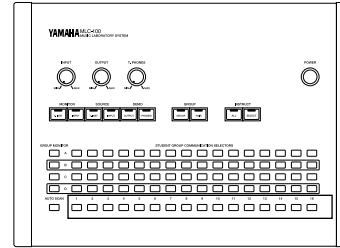
#### To temporarily interrupt Automatic Scan to instruct an individual student or group:

1. While the desired student's or group's indicator is lit, press the [INSTRUCT] SELECT button. (The button lights.)



2. Automatic Scan is interrupted, and the student being monitored when SELECT was pressed is selected for instruction. Only that student can now hear the teacher's voice.

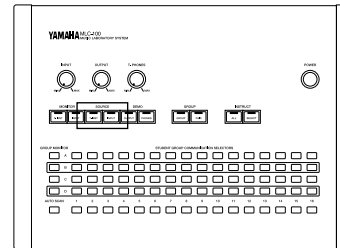
3. To return to the Automatic Scan function at the point it was interrupted, press that same student's Individual Student selector. Automatic Scan resumes from the next student in the order.



Press the same Individual Student selector.

## Selecting the Sound Source – Teacher's Instrument or Input

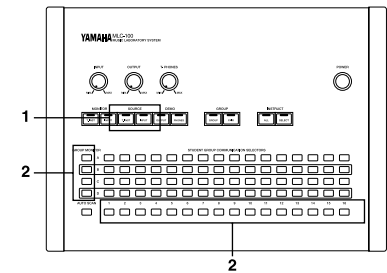
**To select the teacher's instrument or INPUT signal as the sound source:** Press the appropriate button, [SOURCE] T.INST (for teacher's instrument) and/or [SOURCE] INPUT (for the INPUT signal). (The selected button lights.)



The selected sound source(s) is now output to all students. Press the appropriate button again to turn off the source.

You can also direct the sound source to a particular student or group. To do this, simultaneously hold down the appropriate SOURCE button (T.INST or INPUT) and press the GROUP MONITOR or Individual Student selector corresponding to the group or student you wish to have hear the source.

**Note:** Note: The setting you make here is lost when you turn off the SOURCE button, and the default setting is restored (the source is sent to all students).



1) Hold down one of these...  
2) ...and press the desired GROUP MONITOR or Individual Student selector.

The two different sound sources can be routed to independent students or groups. This means, for example, that you can have one group hear the teacher's instrument while another is listening to a music selection from a CD.

**Note:** The output is cancelled in the following situations:

- Changing the group assignment the group mode.
- Selecting pair or group mode from individual instruction.
- Switching between pair and group mode.

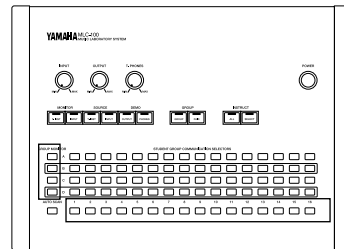
**Note:** You may in the course of a session need to check which student or group is receiving the source sound. To check which student or group is receiving the teacher's instrument, first hold down [SOURCE] T.INST, then press [SOURCE] INPUT. To check which student or group is receiving the INPUT signal, hold down [SOURCE] INPUT, then press [SOURCE] T.INST. The appropriate GROUP MONITOR and/or Individual Student Selectors light in indication.

## Demo Performance

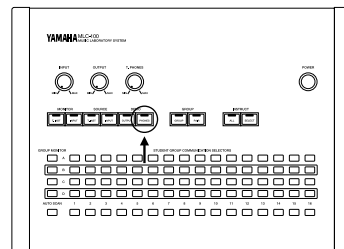
The Demo function allows all students to hear an individual or group performance that the teacher is currently monitoring, either over their headphones or the room speakers.

**To have all students hear the selected student or group performance over the headphones:**

1. First, select monitoring for the individual student or group whose performance you wish to demonstrate, by pressing the appropriate GROUP MONITOR or Individual Student selector.



2. Press the [DEMO] PHONES button. (The button lights.)



All students can now hear the performance of the student or group over their headphones. To turn off the Demo function and enable normal teacher-only monitoring, press the [DEMO] PHONES button again.

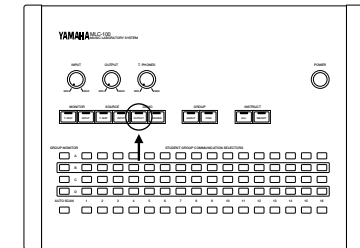
Students that are not actually involved in the performance can play along on their instrument and hear themselves in a mix with the performance.

**CAUTION:** Answering a student call in this condition (monitoring over the headphones) allows all students to hear the teacher/student conversation.

**To have all students hear the selected student or group performance over the room speakers:**

1. First, select monitoring for the individual student or group whose performance you wish to demonstrate, by pressing the appropriate GROUP MONITOR or Individual Student selector.

2. Press the DEMO OUTPUT button. (The button lights.)



All students can now hear the performance of the student or group over the room speakers. To turn off the Demo function, press the [DEMO] OUTPUT button again.

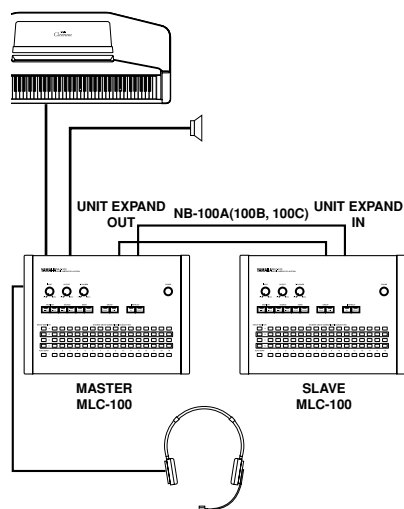
**Note:** All microphones are automatically disabled when [DEMO] OUTPUT is selected.

**Note:** An amplifier must be connected to the room speakers, since the MLC-100 cannot power the speakers by itself.

**Note:** In this condition (monitoring over the room speakers), the [INSTRUCT] ALL and SELECT buttons are automatically disabled. Also, the Student Call function is disabled.

## Using Two MLC-100s

Two MLC-100s can be connected together in daisy-chain fashion, for classes exceeding 16 students. Teacher monitoring, as well as input of the teacher's instrument and INPUT signal, can be done from the master MLC-100 (the first unit in the chain; see connection illustration below). Though the groups on each unit are separate (for example, the A group on one units is separate from the A group on another), the slave unit can be monitored from the master. Be sure to use only NB-100A, NB-100B or NB-100C cables. The [INSTRUCT] ALL, [DEMO] OUTPUT and [DEMO] PHONES buttons on the master also affect the slave instrument as well. Other controls and functions must be executed from each unit.



## Specifications

### Panel Controls and Terminals

POWER Switch and LED, Level Controls (INPUT, OUTPUT, T.PHONES), MONITOR Buttons (T.INST, INPUT), SOURCE Buttons (T.INST, INPUT), DEMO Buttons (OUTPUT, PHONES), GROUP Buttons (GROUP, PAIR), INSTRUCT Buttons (ALL, SELECT), GROUP MONITOR Selectors (A, B, C, D), Individual Student Selectors (1-16), STUDENT GROUP COMMUNICATION SELECTORS (A, B, C, D; × 16), AUTO SCAN

### Input/Output Jacks

DC IN, TEACHER Instrument, INPUT × 2, OUTPUT, STUDENTS Instruments (1-16), UNIT EXPAND IN, UNIT EXPAND OUT, Teacher Headset (MIC, PHONES)

### Dimensions (W × D × H)

369 × 260 × 115mm  
(14-1/2" × 10-1/4" × 4-1/2")

### Weight

4.5kg (9 lbs., 15oz.)

### Included Accessories

AC Power Adaptor, MLC-100 to Teacher Instrument Cable (× 1)

### Optional Accessories

MLA-100 Student Attachment, HPE-100M Headset, Cables: NB-100A (5m), NB-100B (10m), NB-100C (15m)

\* Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

**Note:** If there is a humming noise in the system, check the cables and connections. First make sure that all connections are secure and unwind any cables that have been coiled. If the cable is too long and needs to be gathered, bundle and tie it. (Do not wind it in a coil.)



## MAINTENANCE

### Location

Do not expose the instrument 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).
- Excessive humidity.
- Excessive dust.
- Strong vibration.

### Power Supply

- Use the supplied AC Power Adaptor only. The use of other adaptors may result in irreparable damage to both the adaptor and the MLC-100.
- Turn the power switch OFF when the instrument is not in use.
- The power adaptor should be unplugged from the AC outlet if the instrument is not to be used for an extended period of time.
- Unplug the power adaptor during electric storms.
- Avoid plugging the power adaptor into the same AC outlet as appliances with high power consumption.

### Turn Power OFF When Making Connections

- To avoid damage to the instrument 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 cables.

### 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.

### Service and Modification

- The MLC-100 contains no user serviceable parts. Opening it or tampering with it in anyway 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.

The serial number of this product may be found on the bottom of the unit. You should note this serial number in the space provided below and retain this manual as a permanent record of your purchase to aid identification in the event of theft.

**Model No.**

---

**Serial No.**

---

(bottom)

**OBSERVERA!**

Apparaten kopplas inte ur växelströmskällan (nätet) så länge som den är ansluten till vägguttaget, även om själva apparaten har stängts av.

**ADVARSEL:** Netspændingen til dette apparat er IKKE afbrudt, så længe netledningen sidder i en stikkontakt, som er t endt — også selvom der er slukket på apparatets afbryder.

**VAROITUS:** Laitteen toisiopiiriin kytketty käyttökytkin ei irroita koko laitetta verkosta.

(standby)

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