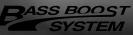


PORTRIONE EZ-ZO

Owner's Manual











SPECIAL MESSAGE SECTION

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

This product should be used only with the components supplied or; a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE:

The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

NOTICE:

Service charges incurred due to a lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES:

Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice:

This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes

necessary, contact a qualified service representative to perform the replacement.

This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix batteries with new, or with batteries of a different type. Batteries MUST be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning:

Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice:

Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact Yamaha directly.

NAME PLATE LOCATION:

The name plate is located on the bottom of the product. The model number, serial number, power requirements, etc., are located on this plate. You should record the model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.

Serial No.

Purchase Date

92-BP (bottom)

PLEASE KEEP THIS MANUAL

FCC INFORMATION (U.S.A.)

- 1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!
 - This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.
- 2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
- 3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not

guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

(class B)

OBSERVERA!

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

ADVARSEL: Netspæendingen til dette apparat er IKKE afbrudt, sálæenge netledningen siddr i en stikkontakt, som er t endt — ogsá selvom der or slukket pá apparatets afbryder.

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

(standby)

^{*} This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

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



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:

- 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.
- 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.
- 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.
- Use the specified adaptor (PA-3B or an equivalent recommended by Yamaha) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Before cleaning the instrument, always remove the electric plug from the outlet. Never insert or remove an electric plug with wet hands.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.



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:

- 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.
- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord.
- 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.
- Unplug the AC power adaptor when not using the instrument, or during electrical storms.
- Always make sure all batteries are inserted in conformity with the +/- polarity markings. Failure to do so might result in overheating, fire, or battery fluid leakage.
- Always replace all batteries at the same time. Do not use new batteries together with old ones. Also, do not mix battery types, such as alkaline batteries with manganese batteries, or batteries from different makers, or different types of batteries from the same maker, since this can cause overheating, fire, or battery fluid leakage.
- Do not dispose of batteries in fire.
- Do not attempt to recharge batteries that are not intended to be charged.
- When the batteries run out, or if the instrument is not to be used for a long time, remove the batteries from the instrument to prevent possible leakage of the battery fluid.
- Keep batteries away from children.
- If the batteries do leak, avoid contact with the leaked fluid. If the battery fluid should come in contact with your eyes, mouth, or skin, wash immediately with water and consult a doctor. Battery fluid is corrosive and may possibly cause loss of sight or chemical burns.
- 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.

- 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 near other electrical products such as televisions, radios, or speakers, since this might cause interference which can affect proper operation of the other products
- 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 cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths. Also, 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.
- Use only the stand specified for the instrument. When attaching the stand, use the provided screws only. Failure to do so could cause damage to the internal components or result in the instrument falling over.
- 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.
- Playing while looking at the lights for a long period of time may cause eye strain and stiff neck/shoulders. For your health and comfort, we recommend that you take a ten-minute break for every hour.

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. Make sure to discard used batteries according to local regulations. Congratulations on your purchase of the Yamaha EZ-20 PortaTone!

You now own a portable keyboard that combines advanced functions, great sound and exceptional ease-of-use in a highly compact package. Its outstanding features also make it a remarkably expressive and versatile instrument.

Read this Owner's Manual carefully while playing your new EZ-20 in order to take full advantage of its various features.

Main Features

The EZ-20 is a sophisticated yet easy-to-use keyboard with the following features and functions:



Yamaha Education Suite

The EZ-20 features the new Yamaha Education Suite - a set of learning tools that utilize the latest technology to make studying and practicing music more fun and fulfilling than ever before!

The Yamaha Education Suite includes:



Portable Grand page 40

The EZ-20 also has a Portable Grand function for realistic piano performance. Pressing the [PORTABLE GRAND] button instantly calls up the stunningly authentic "Stereo Sampled Piano" voice and configures the entire EZ-20 for optimum piano play. Special Pianist styles - with piano-only accompaniment - are also provided.

Other powerful features include:

- ◆ Exceptionally realistic and dynamic sounds with **100 voices**, utilizing digital recordings of actual instruments.
- ◆ 100 dynamic auto accompaniment Styles, each with different Intro, Main A and B, and Ending sections. All styles (except for the Piano styles) also have their own two Fill-in patterns.
- ◆ Large custom LCD gives you easy, at-a-glance confirmation of all important settings, as well as chord and note indications.
- ◆ 100 songs, for your listening enjoyment or for use with the sophisticated learning tools of the Yamaha Education Suite.
- ◆ Convenient control over accompaniment Styles including Tempo, Tap Tempo and independent Accompaniment Volume.
- ◆ Multi Pads, for instantly adding special instrumental breaks, fills, and phrases to your performance.
- ◆ One Touch Setting (OTS), for automatically calling up an appropriate voice for playing with the selected Style and Song.
- ◆ MIDI terminals for interfacing with other MIDI devices.
- ◆ Built-in, high-quality stereo amplifier/speaker system.
 - * The illustrations and LCD screens as shown in this owner's manual are for instructional purposes only, and may be different from the ones on your instrument.

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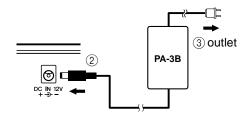
Setting Up

Power Requirements

Although the EZ-20 will run either from an optional AC adaptor or batteries, Yamaha recommends use of an AC adaptor whenever possible. An AC adaptor is more environmentally friendly than batteries and does not deplete resources.

■ Using an AC Power Adaptor Use of an AC power adaptor is recommended, especially when you use the EZ-20 for a long period of time.

- ① Make sure that the [**STANDBY/ON**] switch of the EZ-20 is set to STANDBY.
- ② Connect one end of the adaptor to the DC IN 12V jack on the rear panel of your EZ-20.
- ③ Connect the other end to a suitable electrical outlet.



MARNING

Use ONLY a Yamaha PA-3B AC Power Adaptor (or other adaptor specifically recommended by Yamaha) to power your instrument from the AC mains.

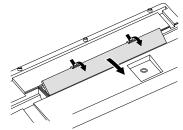
The use of other adaptors may result in irreparable damage to both the adaptor and the EZ-20.

A CAUTION

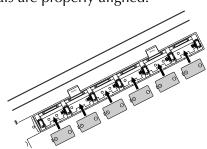
Unplug the AC Power Adaptor when not using the EZ-20, or during electrical storms.

■ Using Batteries

1) Turn the instrument upside-down and remove the battery compartment lid.



② Insert six 1.5-volt "D" size, R20P (LR20) or equivalent batteries as shown in the illustration, making sure that the positive and negative terminals are properly aligned.



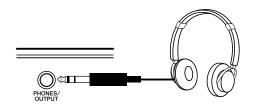
③ Replace the lid.

When the batteries run low and the battery voltage drops below a certain level, the EZ-20 may not sound or function properly. As soon as this happens, replace them with a complete set of six new batteries, heeding the cautions described below.

A CAUTION

- Insert the batteries in the correct direction, making sure that the positive and negative terminals of the batteries match the label. If the orientation does not match the label, the batteries may generate heat, cause a fire, or leak.
- Never mix old and new batteries or different types of batteries (e.g., alkaline and manganese).
- To prevent possible damage from battery leakage, remove the batteries from the instrument if it is not to be used for a long time.
- Even when the switch is in the "STANDBY"
 position, electricity is still flowing to the
 instrument at the minimum level.
 When you plan not to use the EZ-20 for a long
 period of time, make sure you unplug the AC
 power adaptor from the wall AC outlet, and/
 or remove the batteries from the instrument.

Using Headphones



For private practicing and playing without disturbing others, connect a set of stereo headphones to the rear panel PHONES/OUT-PUT jack. Sound from the built-in speaker system is automatically cut off when you insert a headphone plug into this jack.



Do not use headphones for a long time at high volume levels. Otherwise, you may damage your hearing.

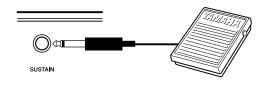
Connecting a Keyboard Amplifier or Stereo System

Though the EZ-20 is equipped with a built-in speaker system, you can also play it through an external amplifier/speaker system. First, make sure the EZ-20 and any external devices are turned off, then connect one end of a stereo audio cable to the LINE IN or AUX IN jack(s) of the other device and the other end to the rear panel PHONES/OUTPUT jack on the EZ-20.

A CAUTION

To prevent damage to the speakers, set the volume of the external devices at the minimum setting before connecting them. Failure to observe these cautions may result in electric shock or equipment damage. Also, be sure to set the volumes of all devices at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

Using a Footswitch

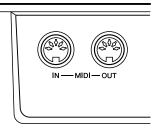


This feature lets you use an optional footswitch (Yamaha FC4 or FC5) to sustain the sound of the voices. The footswitch functions the same way as a damper pedal on an acoustic piano - press and hold down the footswitch as you play the keyboard to sustain the sound.



- Make sure that the footswitch plug is properly connected to the SUS-TAIN jack before you turn on the power.
- Do not press the footswitch while turning the power on. Doing this changes the recognized polarity of the footswitch, resulting in reversed footswitch operation.

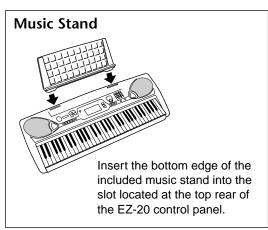
Using the MIDI Terminals



The EZ-20 also features MIDI terminals, allowing you to interface the EZ-20 with other MIDI instruments and devices. (For more information, see page 58.)



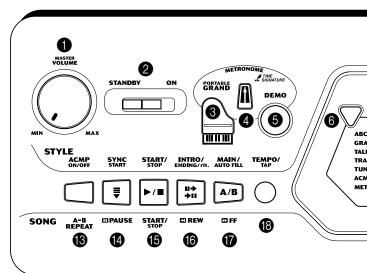
- Special MIDI cables (sold separately) must be used for connecting to MIDI devices. They can be bought at music stores, etc.
- Never use MIDI cables longer than about 15 meters. Cables longer than this can pick up noise which can cause data errors.

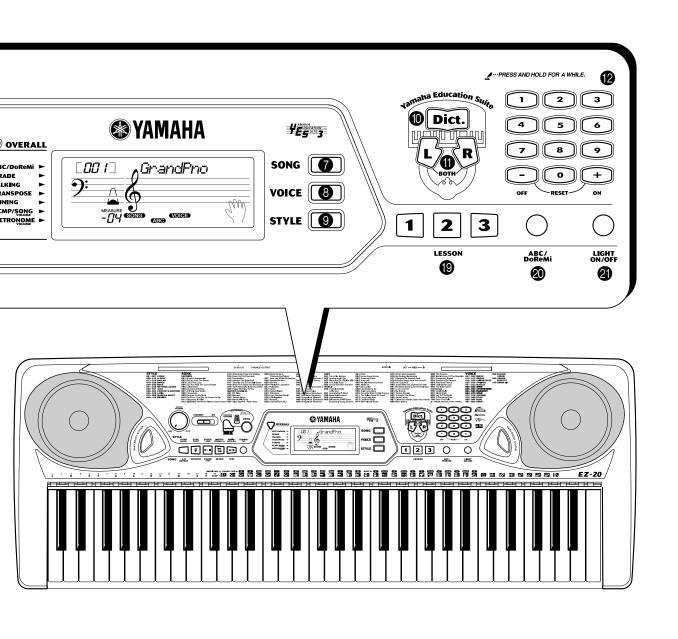


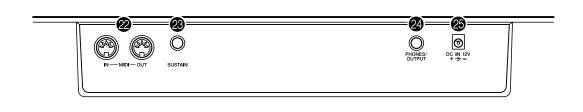
Panel Controls and Terminals

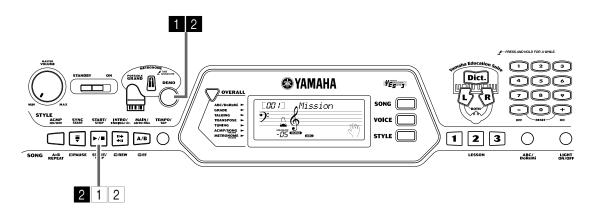
Front Panel

0	[MASTER VOLUME] dial22
2	Power switch ([STANDBY/ON])22
8	[PORTABLE GRAND] button 40
4	[METRONOME] button
6	[DEMO] button
6	[OVERALL] buttons
0	[SONG] button
8	[VOICE] button
9	[STYLE] button
1	[Dict.] (DICTIONARY) button 52
0	LESSON~[L] (Left) and $[R]$ (Right) buttons . 35
ø	Numeric keypad, [+/ON] and [-/OFF]
	buttons
₿	[ACMP ON/OFF] / [A-B REPEAT]
_	button
4	[SYNC START] / [PAUSE] button 47, 29
ø	[START/STOP] button29
1	[INTRO/ENDING/rit.] / [REW]
	button 56, 29
Ø	[MAIN/AUTO FILL] / [FF] button 57, 29
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®	LESSON [1]-[3] button35
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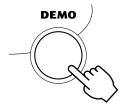


Playing the Demo Songs

Demo songs (001–100) showcase the sophisticated features and stunning sound of the EZ-20. Let's play the Demo songs now, starting with 001...

1 Press the [DEMO] button.

Demo song 001 starts playing. When the song is complete, the subsequent songs (002, 003...) start playing sequentially.





2 Stop the Demo song.



* Want to find out more? See page 28.



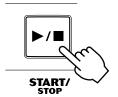
If you do not wish to play the Demo songs when you press the [DEMO] button, turn Note on the power to the EZ-20 while pressing and holding down the [DEMO] button. To activate the Demo playback function, turn on the power to the EZ-20 in the normal manner.

Playing a Single Song

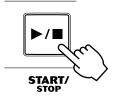
Naturally, you can also individually select and play back any of the EZ-20's songs (#001–#100). Also, simply by pressing the [START/STOP] button, you can start playback.

1 Start the Song.

When the power of the EZ-20 is turned on, the song of "003: Linus And Lucy" is selected. For instructions on selecting songs, see page 28.



2 Stop the song.



* Want to find out more? See page 28.

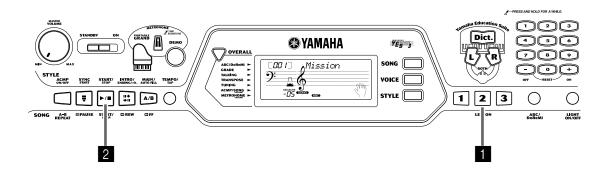
[Song List]

No.	Song Name	No.	So
	Favorite	25	Valse Op.64-
1	Mission:Impossible	26	Etude Op.10
2	Beauty And The Beast		L'adieu"
3	Linus And Lucy		Jesu, Joy Of I
4	Can You Feel The Love Tonight		Symphonie l
5	5 Celebration 29 Gavotte		
6	Unchained Melody 30 Fröhlicher		
7	A Whole New World	31	Polonaise
8	Chopsticks 32 Canon		
9	Georgia On My Mind	33	Heidenröslei
	Don't Let The Sun Go Down		Träumerei
10	On Me	35	From The N
11	Rhapsody In Blue	36	Frühlingslied
12	Bill Bailey (Won't You Please	37	Menuett (J. I
	Come Home)	38	Liebesträum
	When Irish Eyes Are Smiling	39	Blumenlied
	Down By The Riverside Valsa Dos		Valse Des Fle
15	Fascination	40	Nutcracker")
16	America The Beautiful	41	Air On The O
17	Take Me Out To The Ball Game	42	Die Forelle
18	When The Saints Go Marching In		Marche (Fro Nutcracker")
19	Tain't Nobody's Business If I	44	Humoreske
	Do	45	Pizzicato Pol
20	Happy Birthday To You	46	Ave Maria (F
	Piano/Classical		Ave Maria (C
21	Für Elise	48	Wiegenlied (
	Menuett (J.S. Bach)	49	Wiegenlied (
23	Turkish March	50	Wiegenlied (
24	Marcia Alla Turca		,

No.	Song Name
25	Valse Op.64-1 "Petit chien"
26	Etude Op.10-3 "Chanson De L'adieu"
27	Jesu, Joy Of Man's Desiring
28	Symphonie Nr.9
29	Gavotte
30	Fröhlicher Landmann
31	Polonaise
32	Canon
33	Heidenröslein
34	Träumerei
35	From The New World
36	Frühlingslied
37	Menuett (J. Krieqer)
38	Liebesträume Nr.3
39	Blumenlied
40	Valse Des Fleurs (From "The Nutcracker")
41	Air On The G String
42	Die Forelle
43	Marche (From "The Nutcracker")
44	Humoreske
45	Pizzicato Polka
46	Ave Maria (F. Schubert)
47	Ave Maria (C. Gounod)
48	Wiegenlied (B. Flies)
49	Wiegenlied (F. Schubert)
50	Wiegenlied (J. Brahms)

No.	Song Name	No.	Song Name	
	Duet	76	My Darling Clementine	
51	Ten Little Indians		Souvenir De Moscou Op.6	
52	Scarborough Fair	78	If You're Happy And You Know	
53	Wenn Ich Ein Vöglein Wär?		It	
54	To A Wild Rose		Oh! Susanna	
55	Air De Toréador "Carmen"	80	Jeanie With The Light Brown	
	World	l	I've Been Working On The	
56	Twinkle Twinkle Little Star	81	Railroad	
57	Grandfather's Clock	82	Loch Lomond	
58	Beautiful Dreamer	83	My Bonnie	
59	Greensleeves	84	Yankee Doodle	
	Believe Me, If All Those		Turkey In The Straw	
	Endearing Young Charms		Annie Laurie	
	Dixie Home Sweet Home	87	Close Your Hands, Open Your Hands	
63	Amazing Grace	88	Muss I Denn	
	Aura Lee	89	The Cuckoo	
65	My Old Kentucky Home	90	Battle Hymn Of The Republic	
66	Aloha Oe	_	Camptown Races	
67	Die Lorelei		Romance De L'amour	
68	Londonderry Air	93	American Patrol	
69	Auld Lang Syne	94	Little Brown Jug	
70	Carry Me Back To Old Virginny	95	The Entertainer	
	The Yellow Rose Of Texas		Christmas	
	Long, Long Ago	96	Jingle Bells	
	London Bridge		Silent Night	
	Old Folks At Home		Joy To The World	
75		99	O Christmas Tree	
/3	O Du Liebei Augustin	100	Deck The Halls	

Quick STEP 2 Lesson

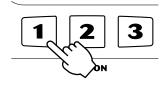


Using the Lesson Feature

Songs 001 to 100 are specially designed for use with the educational Lesson feature. Let's start the practice, following the light.

1 Select Timing, Waiting, or Minus One, and start the lesson.

When the power of the EZ-20 is turned on, the song of "003: Linus And Lucy" and the right-hand part are selected.



Lesson 1: Timing

This step lets you work on the timing of the notes. In Lesson 1, the particular note you play on the keyboard is unimportant. The EZ-20 checks your timing and how rhythmically "tight" your playing is.

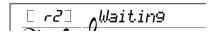


Timin9

Lesson 2: Waiting

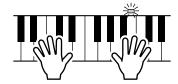
In Lesson 2, you practice playing the notes correctly as they appear in the display notation. The accompaniment pauses and waits for you to play the notes correctly before it continues.

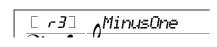




Lesson 3: Minus One

In Lesson 3, you practice playing correct notes, along with the accompaniment. The accompaniment continues playing in tempo.





2 When you're finished, stop the Lesson.



* Want to find out more? See page 35.

Grade

The EZ-20 has a built-in evaluation function that monitors your practicing and - like a real teacher - tells you how well you did each practice. Four grades are assigned, depending on your performance: "Try Again," "Good," "Very Good," and "Excellent."

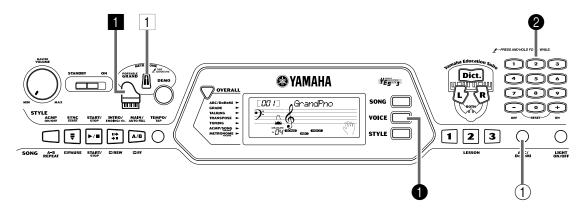
* Want to find out more? See page 38.

Talking

This feature "talks" to you through the speakers, "announcing" the Grade comments as well as the titles of the Lesson steps.

* Want to find out more? See page 39.

Quick STEP 3 Voices



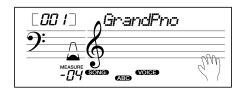
Playing the Piano

Simply by pressing the [**PORTABLE GRAND**] button, you can automatically reset the entire EZ-20 for piano play.

1 Press the [PORTABLE GRAND] button.

The song and style are also set for piano performance.





2 Play the keyboard.

* Want to find out more? See page 40.

Playing along with the Metronome

1 Press the [METRONOME] button.

* Want to find out more? See page 40.



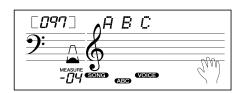


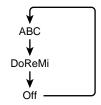
Playing the ABC/DoReMi Voices

1 Press the [ABC/DoReMi] button.

The ABC voice is selected. To select the DoReMi voice, press the [ABC/DoReMi] again.







- 2 Play the keyboard.
 - * Want to find out more? See page 43.

Selecting and Playing Other Voices

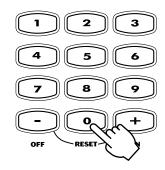
The EZ-20 has a huge total of 100 dynamic and realistic instrument voices. Let's try a few of them out now...

• Press the [VOICE] button.





2 Select a voice.

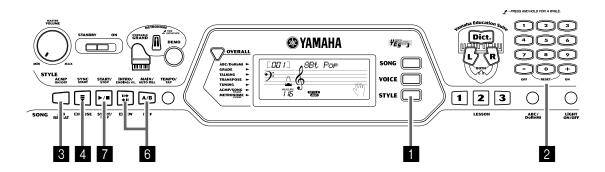




- **3** Play the keyboard.
 - * Want to find out more? See page 42.



Auto Accompaniment

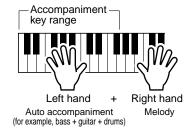


Using the Auto Accompaniment

Simply play chords with your left hand - and the EZ-20 automatically produces appropriate bass, chord and rhythm backing. Use your right hand to play melodies, and you'll sound like an entire band!

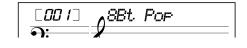


For more information on playing proper Note chords for the auto accompaniment, see "Using Auto Accompaniment - Multi Fingering" on page 50 and "Looking up Chords in the dictionary" on page 52.

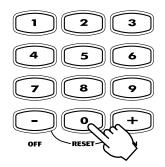


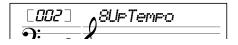
1 Press the [STYLE] button.





2 Select a style. Refer to the Style List on page 64.





3 Turn the auto accompaniment on.



4 Turn the Sync Start function on.



5 Play a chord with your left hand.

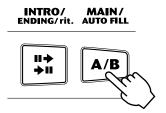
The auto accompaniment starts as soon as you play the keyboard.

* Want to find out more? See page 53.



6 Select a section.

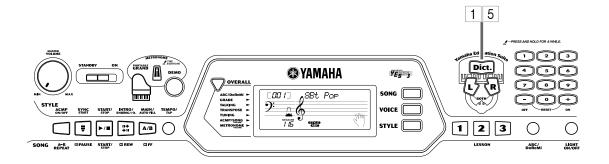
The auto accompaniment has four sections: Intro, Main A/B, and Ending.



7 Stop the auto accompaniment.

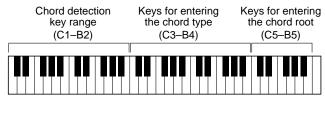


* Want to find out more? See page 46.



Looking up Chords in the Dictionary

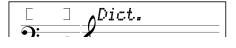
The convenient Dictionary function teaches you how to play chords by showing you the individual notes. In the example below, we'll learn how to play a GM7 chord...



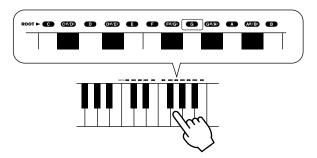
Example: Root note Chord type

1 Press the [Dict.] button.



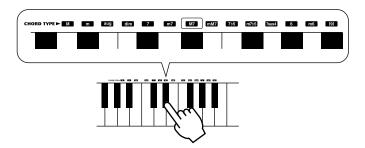


2 Specify the root note of the chord (in this case, G).





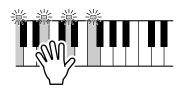
3 Specify the chord type of the chord (in this case, M7).





4 Play the chord by pressing the keys lighted up.

The chord name flashes and a "congratulations" melody is played, when the chord is played properly.



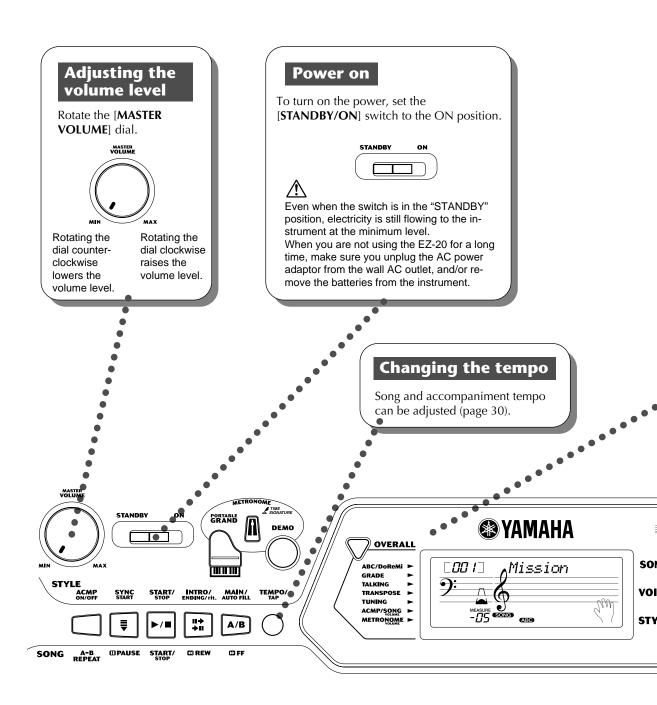


5 To leave the Dictionary function, press the [Dict.] button again.



* Want to find out more? See page 52.

Panel Display Indications

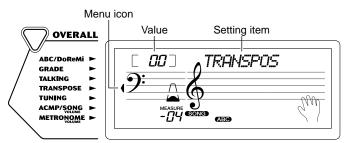


Overall settings

The [**OVERALL**] button enable you to make EZ-20's global settings.

If you press the [OVERALL] button located in the upper-left of the display, a menu icon advances and the top row in the display indicates the currently-selected "setting item" and "value." When you press the [OVERALL] button again, the menu icon advances to the next setting item.

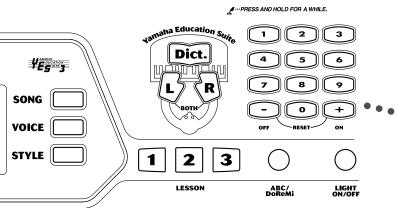
E.g., Transpose setting



Symbol for pressing and holding down the button

If you press and hold down a button with this symbol for more than one second, a different function will be activated.

Pressing and holding down



Changing the value

Use the numeric keypad [0]–[9], [+], or [–] buttons to change the value.

Pressing the button once decrements the value by one.

Pressing the button once increments the value by one.

Pressing and holding down the button increments/decrements the value continuously. For some functions, pressing both buttons simultaneously restores the default setting.

Selecting a function

• Pressing the [STYLE], [VOICE], or [SONG] button enables you to select one of EZ-20's basic functions. (The icon of the selected function appears.)



• If you select a song or accompaniment, then select a voice, the EZ-20 indicates the following:

[Song→Voice]

Select a voice using the numeric keypad.

The selected voice replaces the song's original melody voice.

SONG VOICE

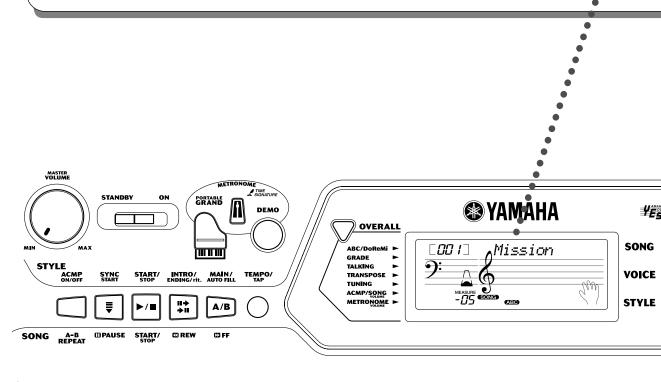
Press the **[START/STOP]** button to start the song.

[Style→Voice]

Select a voice using the numeric keypad.

STYLE VOICE

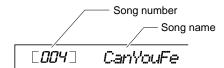
Press the [**START/STOP**] button to start the accompaniment.



Name & number indication (Song/Style/Voice)

The top row of the display indicates the name and number of the currently-selected function.

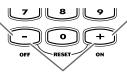
E.g., Selecting a song



Selecting a number

• To increment or decrement the number, use the numeric keypad or [+]/[–] buttons.

Pressing the button once decrements the number by one.

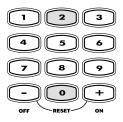


Pressing the button once increments the number by one.

Pressing and holding down the button increments/decrements the number continuously. Pressing both buttons simultaneously resets the number.

• To select the number directly, use the numeric keypad [0]–[9].

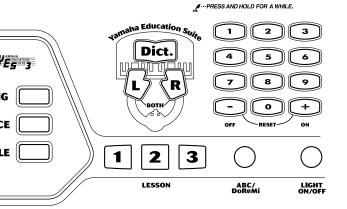
For example, to select Voice #002: HnkyTonk, press [0], [0], then [2] on the numeric keypad.

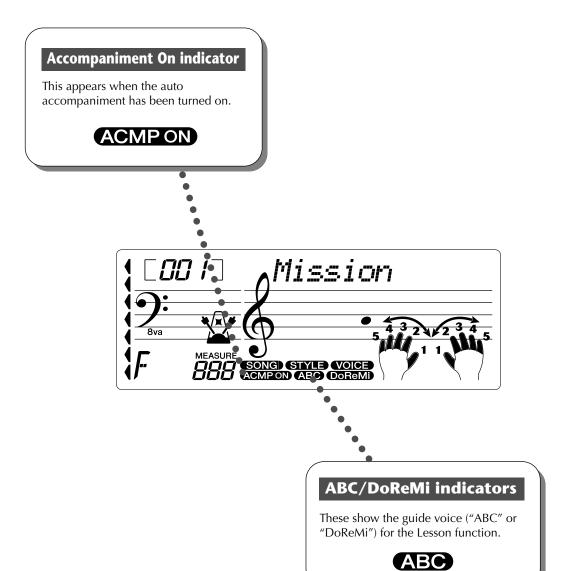


[*002*] HnkyTonk



If the first digit is "0," you can skip pressing [0]. If the first and second digits are both "0," you can also skip pressing [0] twice.





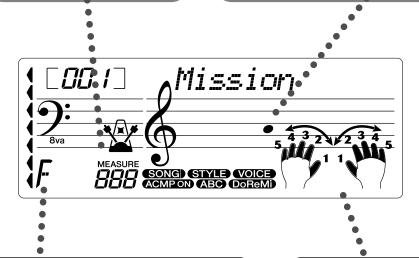
Notation display

When you are using the Lesson function, the notation display indicates the song melody or chord notation. When you are using the Dictionary function, it indicates the notes that make up the chord. Other than that, it usually indicates the notes you played.





- If a note is too high or too low to be notated within the score, a note that is one octave lower or higher will be indicated on the score, along with "8va" at the top or bottom of the score.
- Due to the limitation of the screen, some notes in a chord may not be displayed.



Chord indicator

Measure indicator
The measure numbers of a song or accompaniment are

displayed.

This indicator indicates the name of the currently-played chord or a chord you play on the keyboard.

F

Fingering guide

During the Lesson, this guide suggests a fingering for playing the song.



Selecting and Playing Songs

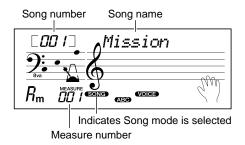
The EZ-20 has 100 preset songs. Try playing these songs.

Listening To a Demo Song

Press the [**DEMO**] button.

Songs from #1 to #100 will be played sequentially.





If you select a song after another song has started playing, the EZ-20 will sequentially play songs in the category (e.g., Piano/Classical etc. See page 13.) that contains the selected song.



Turning the power on while pressing and holding down the [DEMO] button will dis-**Note** able the Demo song playback function. To enable the Demo song playback, turn the power on in the normal manner.

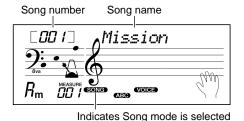
Press the [START/STOP] button or the [DEMO] button to stop Demo playback.

Selecting and Playing a Song



Press the [SONG] button.

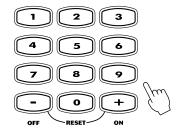






Select the desired song number.

Use the numeric keypad or the [+]/[-] buttons (page 25).





Start and stop the song playback.

Press the [**START/STOP**] button to start song playback. You can play the keyboard along with the playback. Press the [**START/STOP**] button to stop song playback.





The playback will repeat until you press the [START/STOP] button.

Other controls	
	Pressing this button during playback will fast forward the song. Pressing this button while playback is stopped will increment the measure number.
	Press this button during playback will rewind the song. (No sound will be heard at this time.) Pressing this button while playback is stopped will decrement the measure number.
	Pressing this button alternately starts and stops song playback.
	This controls the A-B Repeat function (See page 34).

Adjusting the Tempo

Song and accompaniment tempo can be adjusted in the range of J=40-240 (the number of quarter notes per minute).

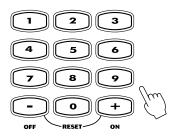


Press the [TEMPO/TAP] button.





Press the numeric keypad or [+]/[-] buttons to change the tempo value.





You can instantly restore the default setting by pressing both [+]/[-] buttons (When Tempo is selected).

Tap Function

You can set your own tempo intuitively.

Press the [**TEMPO/TAP**] button four times for a four-beat song and three times for a three-beat song at a tempo at which you would like to play.





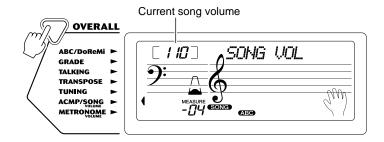
The Tap function is also available during song playback

Song Volume Level

Adjust the song volume to balance with the level of the keyboard performance.

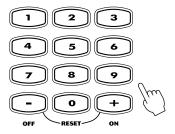


Press the [OVERALL] button repeatedly until "SONG VOL" appears in the display.





Press the numeric keypad or [+]/[-] buttons to set the song volume (000–127).





- You can instantly restore the default setting of "100" by pressing both [+]/[–] buttons simultaneously (When Song Volume is selected).
- You can set the volume level of the selected song.

Switching the Light Guide On and Off

You can switch the Light Guide on the keyboard on or off.

The Light Guide can be used as a keyboard guide during song playback or while you are using the Lesson or the Dictionary function.



Press the [LIGHT ON/OFF] button to turn the Light Guide on or off.





A CAUTION

Playing while looking at the lights for a long period of time may cause eye strain and stiff neck/shoulders. For your health and comfort, we recommend that you take a ten-minute break for every hour.

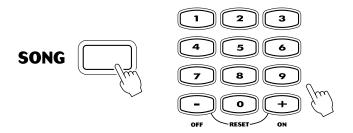
Multi Pads

This convenient function lets you instantly trigger various musical and rhythmic phrases as you play the EZ-20. There are a total of 19 different sounds or phrases. This function is assigned to the keyboard range of C1-F#2 only when you play back songs that support the function.



Select a song that supports the Multi Pads function.

(Songs 1–7, 9–20, 29–50, and 60–100 support the function.)





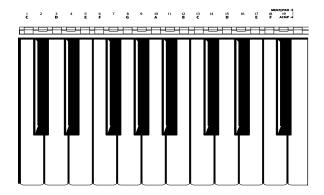
Start the song.





Play the Multi Pads.

Press the Multi Pads (keys C1–F#2) during the song playback.





- The Multi Pads produce the same sound in all songs that support the function.
- Note The Multi Pads function is disabled while songs are stopped.

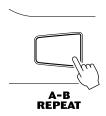
A-B Repeat

The convenient A-B Repeat function is an ideal aid for practicing and learning. It allows you to specify a phrase of a song (between point A and point B) and repeat it - while you play or practice along with it.



While playing a song, set point A (the start point).

During playback, press the [A-B REPEAT] button once, at the beginning point to be repeated.





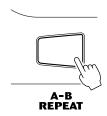


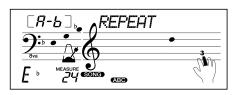
The A and B points can only be specified at the beginning of a measure (beat 1), **Note** and not at any point in the middle of a measure.



Set point B (the end point).

As the song continues playing, press the [A-B REPEAT] button once again, at the ending point to be repeated. The selected phrase repeats indefinitely until stopped.







- If you're repeat practicing a particularly difficult section, try slowing down the Tempo to an appropriate speed to make it easier to play and master the part. You may also want to slow down the Tempo while setting the A and B points; this makes it easier to accurately set the points.
- You can also set the A-B Repeat function when the song is stopped. Simply use the [REW] and [FF] buttons to select the desired measures, pressing the [A-B **REPEAT**] button for each point, then start playback.
- To set the A point to the beginning of a song, press the [A-B REPEAT] button before starting playback.

Song Lesson

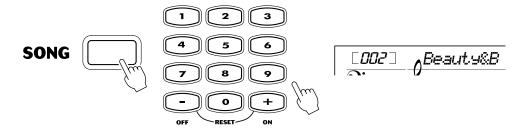
You can practice playing a song selected from Lesson songs #001–100.

Using the Lesson Feature



Select one of the Lesson songs.

Press the [**SONG**] button, then use the numeric keypad or [+]/[–] buttons to select the desired song.

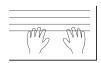




Select the part you wish to work on (left, right or both.)

If you want to work on the right-hand part, press the [R] button; to work on the left, press the [L] button. Press the [L] and [R] buttons simultaneously to work with both hands.





The icon of the selected hand(s) appears.



Start the Lesson.

When you press one of the **LESSON** [1]–[3] buttons, the Lesson song starts. The display indicates the notes to play and the Light Guide shows you which key to play.



Types of Lesson

Press one of the following buttons to select and start a type of Lesson.

Lesson 1: Timing This lesson step lets you practice just the timing of the notes - any note can be used. The melody does not sound unless you play in rhythm.

Lesson 2: WaitingIn this lesson step, the EZ-20 waits for you to play the correct notes before continuing play-back of the song. When you play the correct note, the next note to play is indicated. Also, the EZ-20 can sing the next note to play using "A, B, C..." or "Do, Re, Mi..." (page 37).

Lesson 3: Minus One ... This lesson step lets you practice playing the correct notes along with the accompaniment. All parts except for the part you are practicing will be played in tempo like a "karaoke".



- In Lesson 2, the rhythm part is muted.
- Note If the Talking function is turned on, the EZ-20 announces the Lesson number.
 - To exit from the Lesson, press the corresponding LESSON button.

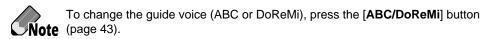


Press the [START/STOP] button to stop the Lesson.

The EZ-20 exits from the Lesson feature automatically when the [**START**/ **STOP**] button is pressed.

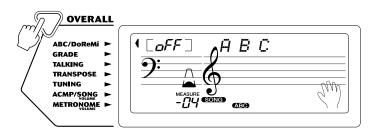
ABC/DoReMi Guide

When the ABC/DoReMi Guide is activated, the EZ-20 sings the next note to play using "A, B, C..." or "Do, Re, Mi..." in Lesson 2.



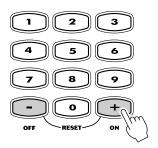


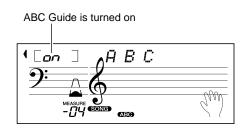
Press the [OVERALL] button to select "ABC/DoReMi."





Press the [+]/[-] buttons to turn the ABC/DoReMi Guide on or off.



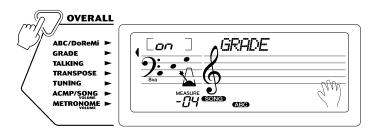


Grade

The Lesson feature has a built-in evaluation function that monitors your practicing of the Lesson songs, and just like a real teacher, it tells you how well you did each practice. Four grades are assigned, depending on your performance: "Try Again," "Good," "Very Good," and "Excellent." When the Talking function (page 39) is on, the EZ-20 also "announces" your grade.

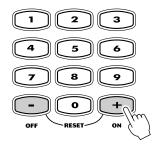


Press the [OVERALL] button repeatedly to select "GRADE".





Press the [+]/[-] buttons to turn the Grade on or off.



The EZ-20 tells you your grade via the LCD, Light Guide, and the Talking function.

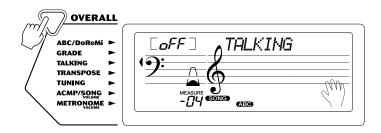
After displaying your grade, the EZ-20 resumes the Lesson.

Talking

This feature "talks" to you through the speakers, "announcing" the Grade comments as well as the titles of the Lesson steps and the names of certain functions.

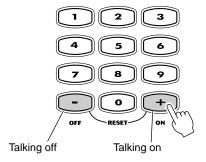


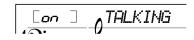
Press the [OVERALL] button repeatedly to select "TALKING".





Press the [+]/[-] buttons to turn the Talking on or off.





The Talking function includes the following "announcements":

[Dictionary]

[LESSON 1-3]

[Try Again]

[Good]

[Very Good]

[Excellent]

Portable Grand

You can practice playing "a real piano," by pressing the [POR-**TABLE GRAND**] button.

When you press the [PORTABLE GRAND] button, the EZ-20 configures all the settings for piano performance.



The EZ-20 configures the following settings when you press the [PORTABLE GRAND]

Voice001 Grand Piano Style089 Stride Song......021 Für Elise

The style category "PIANIST (089–100)" and the song category "PIANO/CLASSICAL (021-050)" (automatically selected with the settings described above) include the styles and songs that are suitable for the piano performance.



The "PIANIST" styles are played without any rhythm sound.

Using the Metronome

Press the [METRONOME] button to play the Metronome in tempo with the accompaniment. You can use this feature for your piano practice.

A high click sounds at every first beat of the measures.





To turn the Metronome off, press the [METRONOME] button again.

Setting a Tempo

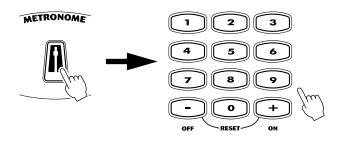
To change the tempo, press the [TEMPO/TAP] button and use the numeric keypad or [+]/[–] buttons to change the value. (See page 30.)



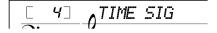
To restore the default Metronome Tempo value, press both [+]/[-] buttons simulta-**Note** neously (when Metronome Tempo is selected in the Overall menu).

Setting the Time Signature of the Metronome

You can set the time signature of the Metronome while the rhythm part is stopped. Press and hold down the [METRONOME] button for more than one second to display the Metronome time signature setting, and use the numeric keypad or [+]/[-] buttons to change the time signature value.



Numeric keypad	Time signature		
0	Plays no "1" beats		
0	(all low clicks)		
1	1/4 - Plays only "1" beats		
Į.	(all high clicks)		
2	2/4		
9	9/4		



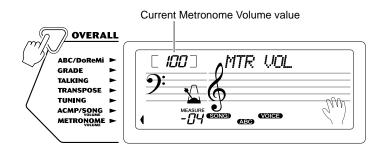


When you select another style or song, the time signature of the Metronome also Note changes to that of the selected style or song.

Adjusting the Metronome Volume

You can adjust the volume of the Metronome sound independently of the other EZ-20 sounds. The volume range is 000-127.

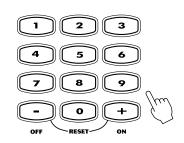
Press the [OVERALL] button repeatedly to select "METRONOME VOLUME".



2 Press the numeric keypad or [+]/[–] buttons to set the desired Metronome Volume value.



To restore the default Metronome Volume value Note (100), press both [+]/[-] buttons simultaneously (when Metronome Volume is selected in the Overall menu).



Playing Voices

Selecting a Voice

The EZ-20 features high-quality voices that use an advanced technology AWM (Advanced Wave Memory) tone generator. (See page 61.)

Some voices include the following effects.

Harmony voices (#054-#063)

automatically add a one-, two- or three-note harmony to the original voice.

Split voices (#064-#073)

feature two separate voices, each playable from opposite sections of the keyboard - the lower voice playable up to B2 and the upper voice from C3.

Dual voices (#089-#096)

blend two voices together for a rich, layered sound.

ABC (Oboe) voice (#097), DoReMi (Oboe) voice (#098)

When you play the keyboard, the EZ-20 "sings" the corresponding notes using ABC or DoReMi. If the Transpose value is adjusted (other than "00"), they sound using Oboe voice.

Drum kit (#100)

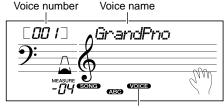
Playing different keys on the keyboard produces different drum sounds.

Playing a Voice



Press the [VOICE] button.





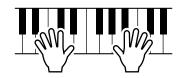
Indicates Voice mode is selected



Select the desired voice number.

Use the numeric keypad to directly enter the voice number, or use the [+]/[–] buttons to step up and down through the voices (page 25).



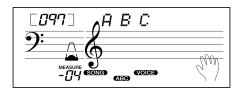


Selecting the ABC or DoReMi voice

Simply by pressing the [ABC/DoReMi] button, you can select the ABC (Oboe) voice (#097) or DoReMi (Oboe) voice (#098). The setting is also valid for the guide voice for the Lesson function (page 37).

1. Press the [ABC/DoReMi] button repeatedly to select the ABC or DoRemi voice. Pressing the [ABC/DoReMi] button toggles among ABC voice, DoReMi voice and Guide Off.





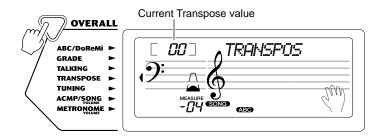


Transpose

Transpose determines the key of both the main voice and the bass/chord accompaniment of the selected style. The Transpose settings can be adjusted over a range of ± 12 semitones (± 1 octave).



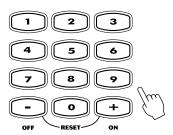
Press the [OVERALL] button repeatedly to select "TRANSPOSE".





Press the numeric keypad or [+]/[-] buttons to set the desired Transpose value (-12 - +12).

To transpose the pitch down, simultaneously press and hold the [–] button, and use the numeric keypad to type in the (negative) value.





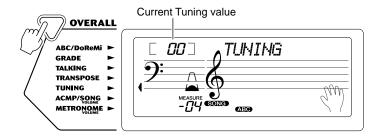
- You can instantly restore the default setting of "00" by pressing both [+]/[-] buttons simultaneously (when Transpose is selected).
- The Transpose function has no effect on the Drum Kits voices (#100).
- If the Transpose value is adjusted (other than "00"), the ABC and DoReMi voices sound using Oboe voice.

Tuning

Tuning determines the fine pitch setting of both the main voice and the bass/chord accompaniment of the selected style. The Tuning settings can be adjusted over a range of ± 50 .



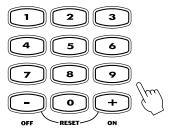
Press the [OVERALL] button repeatedly to select "TUNING".





Press the numeric keypad or [+]/[-] buttons to set the desired Tuning value (-50 - +50).

To tune the pitch down, simultaneously press and hold the [–] button, and use the numeric keypad to type in the (negative) value.





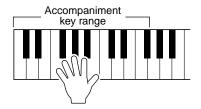
- You can instantly restore the default setting of "00" by pressing both [+]/[–] buttons simultaneously (when Tuning is selected).
- The Tuning settings have no effect on the Drum Kit voice (#100).

Auto Accompaniment

The EZ-20 provides dynamic rhythm/accompaniment patterns - as well as voice settings appropriate for each pattern - for various popular music styles. A total of 100 different styles are available, in several different categories.

With the auto accompaniment function, the EZ-20 automatically plays accompaniment parts (bass sound and chords) that match the selected style and the chords played in the accompaniment key range.

Select the desired accompaniment style and play the keyboard using the auto accompaniment function.



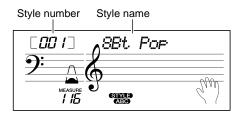
Select an accompaniment style.	Selecting a Stylepage 46
-	
Start the accompaniment.	Starting Accompanimentpage 47
Play chords (left hand).	Using Auto Accompanimentpage 50
-	
Play melody (right hand).	Playing a Melody along with the Accompani-
-	mentpage 55
Change the accompaniment section.	Changing the Accompaniment
	Sectionpage 56
Stop the accompaniment.	Stopping the Accompanimentpage 48

Selecting a Style



Press the [STYLE] button.







Select the desired style number.

Use the numeric keypad to directly enter the style number, or use the [+]/[–] buttons to step up and down through the styles (page 25).

Starting Accompaniment

Press the [ACMP ON/OFF] button to turn the auto accompaniment function on.



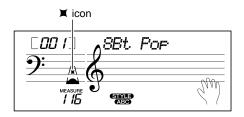
You can start playing accompaniment using one of the following four methods.

Sync start

Press the [SYNC START] button. The EZ-20 enters Sync start waiting mode, and the icon flashes.

When you start playing chords in the accompaniment key range, the accompaniment starts playing.









To cancel Sync start waiting mode, press the [SYNC START] button again. At this Note time, playing a chord in the accompaniment key range will produce bass sounds and chords without a rhythm section.

Start

As soon as you press the [START/STOP] button, the rhythm part starts playing. When you play a chord in the accompaniment key range, the EZ-20 produces the bass and chords.







When you press the [START/STOP] button, only the rhythm part of the selected **Note** accompaniment starts playing. If any of accompaniment styles 89–100 (Accompaniment category: PIANIST) is selected, no rhythm part sounds.

Tap start

Press the [**TEMPO/TAP**] button four times for a four-beat song and three times for a three-beat song at a tempo at which you would like to play.

The rhythm part starts playing.

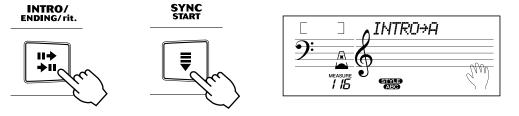


Intro Sync start

Press the [SYNC START] button. The EZ-20 enters Sync start waiting mode, and the

▼ icon flashes. Then press the [**INTRO/ENDING**] button. The EZ-20 waits for the sync start that begins with an Intro section.

When you play a chord in the accompaniment key range, the accompaniment starts with an Intro section, followed by the Main A (or B) accompaniment section.



Stopping the Accompaniment

You can stop the accompaniment playback using one of the following three methods.

• Press the [START/STOP] button.



The accompaniment stops immediately.

• Press the [SYNC START] button.



The accompaniment stops immediately. **▼** icon flashes and the EZ-20 enters Sync start waiting mode.

 Press the [INTRO/ENDING] button.



The accompaniment stops after the ending section.

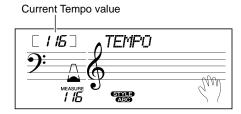
Changing the Tempo

The tempo of style playback can be adjusted over a range of 40–240 bpm (beats per minute).



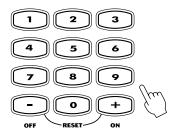
Press the [TEMPO/TAP] button.







Press the numeric keypad or [+]/[-] buttons to set the desired value.



You can also use the convenient Tap Tempo function to change the tempo by "tapping" a new one in real time.



- When the rhythm part is stopped, selecting an accompaniment style automatically sets a tempo suitable for the accompaniment.
- You can instantly restore the default setting by pressing both [+]/[–] buttons simultaneously (when Tempo is selected).

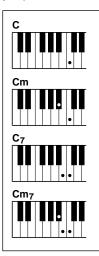
Using Auto Accompaniment—Multi Fingering

When it is set to on (page 47), the auto accompaniment function automatically generates bass and chord accompaniment for you to play along with, by using Multi Fingering operation. You can change the chords of the accompaniment by playing keys in the auto accompaniment key range using either the "Single Finger" or "Fingered" method. With Single Finger you can simply play a one-, two- or three-finger chord indication (see "Single Finger Chords" below). The Fingered technique is that of conventionally playing all the notes of the chord.

Whichever method you use, the EZ-20 "understands" what chord you indicate and then automatically generates the accompaniment.

Single Finger Chords

Chords that can be produced in Single Finger operation are major, minor, seventh and minor seventh. The illustration shows how to produce the four chord types. (The key of C is used here as an example; other keys follow the same rules. For example, B\(\delta\)7 is played as B\(\delta\) and A.)



C

To play a major chord: Press the root note of the chord.

Cm

To play a minor chord: Press the root note together with the nearest black key to the left of it.

C7

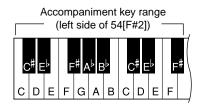
To play a seventh chord: Press the root note together with the nearest white key to the left of it.

Cm7

To play a minor seventh chord: Press the root note together with the nearest white and black keys to the left of it (three keys altogether).



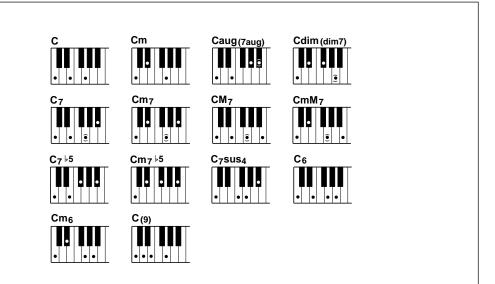
A root key and keys you play



Fingered Chords

Using the key of C as an example, the chart below shows the types of chords that can be recognized in the Fingered mode.

Fingered Chords in the Key of C



Notes enclosed in parentheses are optional; the chords will be recognized without them.



If the chord is inverted (i.e., C-E-G is played as G-C-E), the EZ-20 will still recog-Note nize it as a C chord. The chord recognition system also has the following rules and exceptions:

- · Major 6th chords are recognized only in root position. However, all other inversions are interpreted as minor 7th.
- · Minor 6th chords are recognized only in root position. However, all other inversions are interpreted as minor 7th/flatted 5th.
- · If augmented and diminished 7th chords are inverted, the lowest note will be recognized as the root.
- 7th flatted 5th chords may be played with the lowest note as the root or the flat-
- Augmented 7th and diminished 7th chords are interpreted as simple augmented and diminished.



The following chords are not recognized: B 6, B 6, B minor 6, B minor 6, and B Note augmented.

Looking up Chords in the dictionary

The Dictionary function is essentially a built-in "chord book" that shows you the individual notes of chords. It is ideal when you know the name of a certain chord and want to quickly learn how to play it.



Press the [Dict.] button.



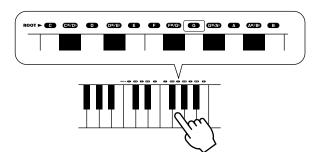




Specify the root of the chord.

Press the key on the keyboard that corresponds to the desired chord root (as printed on the panel).

Pressing this key selects the root G.



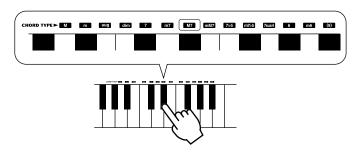




Specify the type of the chord (major, minor, seventh, etc.).

Press the key on the keyboard that corresponds to the desired chord type (as printed on the panel).

In this example, play M7 key.





- Usually, a Major chord name is represented by a root note name. E.g., "C" represents C Major.
- If you press the [+]/[-] buttons, another inversion will be indicated.



Play a chord, following the Light Guide.

The display indicates the notes of the GM7 chord, and the Light Guide indicates which keys to play on the keyboard.

The chord name flashes in the display (and a "congratulations" melody is played) when the correct notes are held down.



• • • • What is a Chord? • •

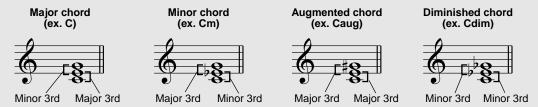
The simple answer: Three or more notes played simultaneously is a chord. (Two notes played together is an "interval" — an interval being the distance between two different notes. This is also referred to as a "harmony.") Depending on the intervals between the three or more notes, a chord can sound beautiful or muddy and dissonant.



The organization of notes in the example at left — a triad chord — produces a pleasant, harmonious sound. Triads are made up of three notes and are the most basic and common chords in most music.

In this triad, the lowest note is the "root." The root is the most important note in the chord, because it anchors the sound harmonically by determining its "key" and forms the basis for how we hear the other notes of the chord.

The second note of this chord is four semitones higher than the first, and the third is three semitones higher than the second. Keeping our root note fixed and changing these notes by a semitone up or down (sharp or flat), we can create four different chords.



Keep in mind that we can also change the "voicing" of a chord — for example, change the order of the notes (called "inversions"), or play the same notes in different octaves — without changing the basic nature of the chord itself.

Inversion examples for the key of C



Beautiful sounding harmonies can be built in this manner. The use of intervals and chords is one of the most important elements in music. A wide variety of emotions and feelings can be created depending on the types of chords used and the order in which they are arranged.

• • • Writing Chord Names• •

Knowing how to read and write chord names is an easy yet invaluable skill. Chords are often written in a kind of shorthand that makes them instantly recognizable (and gives you the freedom to play them with the voicing or inversion that you prefer). Once you understand the basic principles of harmony and chords, it's very simple to use this shorthand to write out the chords of a song.

First, write the root note of the chord in an uppercase letter. If you need to specify sharp or flat, indicate that to the right of the root. The chord type should be indicated to the right as well. Examples for the key of C are shown below.

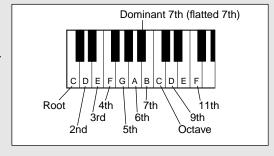


For simple major chords, the type is omitted.

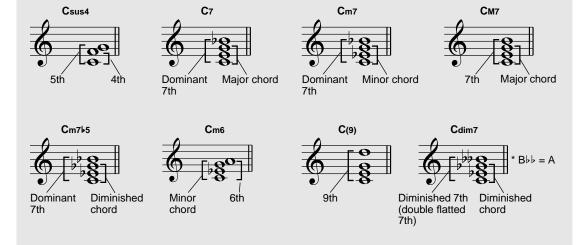
One important point: Chords are made up of notes "stacked" on top of each other, and the stacked notes are indicated in the chord name of the chord type as a number — the number being the distance of the note from the root. (See the keyboard diagram below.) For example, the minor 6th chord includes the 6th note of the scale, the major 7th chord has the 7th note of the scale, etc.

The Intervals of the Scale

To better understand the intervals and the numbers used to represent them in the chord name, study this diagram of the C major scale:

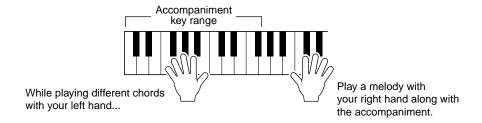


Other Chords



Playing a Melody along with the Accompaniment

You can play a melody along with the accompaniment.





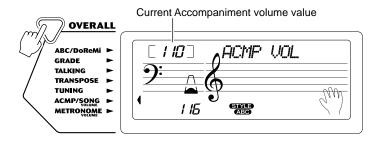
Set a tempo you feel comfortable with. (See page 49.)

Adjusting the Accompaniment Volume

The playback volume of the accompaniment can be adjusted. This volume control affects only the accompaniment volume.

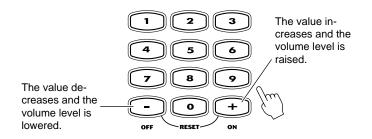


Press the [OVERALL] button repeatedly until "ACMP VOL" appears in the display.





Press the numeric keypad or [+]/[-] buttons to set the desired Accompaniment Volume value (000–127).

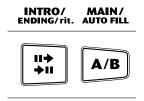




- You can instantly restore the default setting of "100" by pressing both [+]/[-] buttons simultaneously (when Accompaniment Volume is selected).
- Accompaniment Volume cannot be changed unless the Style mode is active.

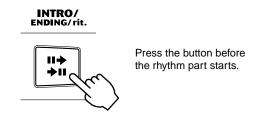
Changing the Accompaniment Section

Accompaniment consists of Intro, Main A/B (Fill-in), and Ending sections. Using different sections based on the structure of songs enables you to enhance musical expression.



Intro

Press the [INTRO/ENDING] button before you start playing to select an Intro section. The Intro section is followed by the Main section.



Press the [MAIN/AUTO FILL] button before pressing the [START/STOP] button to specify the Main section that follows the Intro section.

To cancel the Intro section, press the [INTRO/ENDING] button again. The display indicates the Main section (A or B) that will be played when the song starts.

Main

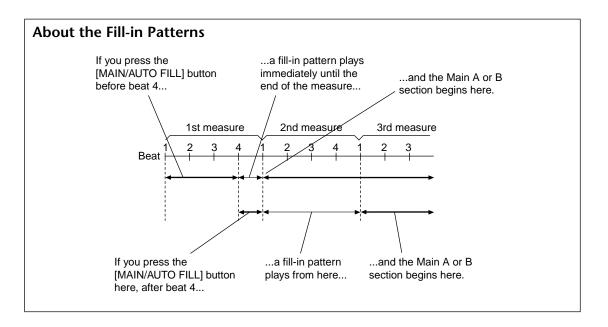
There are two Main sections, A and B. When you press the [MAIN/ **AUTO FILL**] button, the EZ-20 plays the Fill-in pattern, then changes to another variation.







You can also assign the accompaniment sections by press-**Note** ing the [MAIN/AUTO FILL] button before the song starts (while the rhythm part is stopped).



Ending

When you press the [INTRO/ENDING] button at the end of the song, the EZ-20 plays the Ending section appropriate for the song, then stops the performance.



Ritardando (rit.)

If you press the [INTRO/ENDING] button during the Ending section, the song gets slower little by little and then stops.

MIDI Functions

The EZ-20 also features MIDI terminals, allowing you to interface the EZ-20 with other MIDI instruments and devices.

About MIDI

MIDI (Musical Instrument Digital Interface) is a worldwide standard that is built into many electronic musical instruments and other digital music related devices, allowing them to be connected and "communicate" with each other.

For two MIDI instruments to communicate, they must be connected by MIDI cables. In a basic example, the MIDI IN and MIDI OUT terminals of the EZ-20 could be connected to the MIDI OUT and MIDI IN terminals of a sequencer, allowing you to record and play back performance data from the EZ-20.

The instruments communicate with each other by sending "messages" or MIDI data. The sending instrument usually assigns the data to one of sixteen MIDI channels, then transmits it over the MIDI cable. The cable itself, however, is not divided up into sixteen channels. Just as with a television set that receives programs on different channels, it is up to the receiving instrument to "tune into" the proper MIDI channel. If the sending and receiving channels on the respective instruments do not match, the receiving instrument may not understand or respond to the one sending.

MIDI Terminals

In order to exchange MIDI data between multiple devices, each device must be connected by a cable.

The MIDI terminals of the EZ-20 are located on the rear panel.



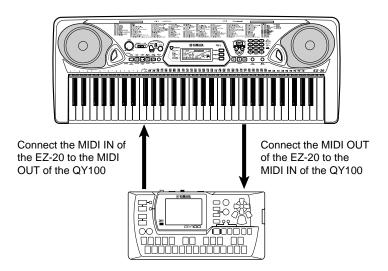
IN - MIDI - OUT

MIDI IN...... Receives MIDI data from another MIDI device.

MIDI OUT..... Transmits the EZ-20's keyboard information as MIDI data to another MIDI device.

How Can MIDI be Used?

In the simple, yet powerful MIDI application example below, the Yamaha QY100 Music Sequencer is used to record and play back performance data played on the EZ-20 keyboard.





On the EZ-20, the following channels (eight total) are enabled for MIDI reception: 1, 2, 3, 4, 5, 6, 7, 10. The MIDI transmit channels are fixed to the following data:

Ch. 1: Keyboard, harmony

Ch. 2: Bass Ch. 3: Chord Ch. 4–7: Other Ch. 10: Rhythm

 Parts that have been recorded using the EZ-20 should also be played back from the EZ-20. Data may not play back as expected when using other sound sources (such as the internal sounds of the QY100).

Also, a connected sound source may sound at a different octave from that originally played on the EZ-20.

- · MIDI data cannot be transmitted during song playback.
- Avoid using MIDI cables 15 meters or longer, since doing so can result in MIDI errors.

Viewing the Notation for MIDI Channel 1

• The EZ-20 has a special function that lets you view the notes of the MIDI data (channel 1 only) on the display.

Troubleshooting

Problem Possible Cause and Solution		
When the EZ-20 is turned on or off, a popping sound is temporarily produced.	This is normal and indicates that the EZ-20 is receiving electrical power.	
 The volume level is low. Tonal quality has degraded. The display indication is turned off suddenly and the panel settings are reset. 	The battery voltage is low. Replace all six batteries with new ones, or use the AC adaptor.	
Noise is produced from the EZ-20.	When using a mobile phone, noise is produced. Using a mobile phone in close proximity to the EZ-20 may produce interference. To prevent this, turn off the mobile phone or use it further away from the EZ-20.	
There is no sound even when the keyboard is played or when a song is being played back.	Check that nothing is connected to the PHONES/OUTPUT jack on the rear panel. When a set of headphones is plugged into this jack, no sound is output.	
	When using the Dictionary function (page 52), the keys in the right hand section are used only for entering the chord root and type.	
The auto accompaniment doesn't turn on, even when pressing the [ACMP ON/OFF] button.	When playing back one of the Pianist styles (#89–#100), the rhythm cannot be heard. The Pianist styles have no drums or bass - only piano accompaniment.	
Not all of the voices seem to sound, or the sound seems to be cut off.	The EZ-20 is polyphonic up to a maximum of 16 notes. If the Dual voice or Split voice is being used and a style or song is playing back at the same time, some notes/sounds may be omitted (or "stolen") from the accompaniment or song.	
The accompaniment does not sound properly.	Make sure that the Accompaniment Volume (page 55) is set to an appropriate level.	
The polarity of the footswitch is reversed.	You turned on the power to the EZ-20 while pressing the foot-switch. Turn the power off, then turn it on again without pressing the footswitch.	

Voice List

■ Maximum Polyphony

The EZ-20 has 16-note maximum polyphony. This means that it can play a maximum of up to 16 notes at once, regardless of what functions are used. Auto Accompaniment uses a number of the available notes, so when Auto Accompaniment is used the total number of available notes for playing on the keyboard is correspondingly reduced. The same applies to the Split Voice and Song functions.



- The Voice List includes MIDI program change numbers for each voice. Use these program change numbers when playing the EZ-20 via MIDI from an external device.
- Some voices may sound continuously or have a long decay after the notes have been released while the sustain pedal (footswitch) is held.

The following voices can be selected when the Voice mode is active. They can also be selected by a connected MIDI device; the corresponding bank select messages are: MSB=00H, LSB=70H. When selecting voices via MIDI:

* The Harmony voices (#054 - #063) and Echo voices (#079 - #088) are sounded without the respective harmony and echo effects.

Voice#	MIDI Program Change#	Voice Name	Used Notes		
	PIANO				
1	0	GRAND PIANO	2		
2	1	HONKY-TONK PIANO	2		
3	2	ELECTRIC PIANO 1	2		
4	3	ELECTRIC PIANO 2	2		
5	4	ELECTRIC PIANO 3	1		
6	5	ELECTRIC PIANO 4	1		
7	6	HARPSICHORD	2		
8	7	CLAVI	1		
9	8	CELESTA	1		
		ORGAN	'		
10	9	ELECTRIC ORGAN 1	2		
11	10	ELECTRIC ORGAN 2	2		
12	11	WAVE ORGAN	2		
13	12	CHURCH ORGAN	2		
14	13	ACCORDION	2		
15	14	HARMONICA	1		
		GUITAR/BASS	!		
16	15	SOFT GUITAR	1		
17	16	FOLK GUITAR	1		
18	17	12STRINGS GUITAR	2		
19	18	JAZZ GUITAR	1		
20	19	ELECTRIC GUITAR	2		
21	20	DISTORTION GUITAR	2		
22	21	WOOD BASS			
23	22	FINGER BASS			
24	23	SLAP BASS	1		
STRINGS/MALLET					
25	24	STRINGS	1		
26	25	VIOLIN	1		
27	26	CELLO	1		
28	27	HARP	1		
29	28	SITAR	1		
30	29	BANJO	1		
31	30	VIBRAPHONE	1		
32	31	MARIMBA	1		
33	32	STEEL DRUMS	1		
		WIND			
34	33	TRUMPET	1		
35	34	TROMBONE	1		
36	35	MUTE TRUMPET 1			
37	36	FRENCH HORN 1			
38	37	BRASS SECTION 1			
39	38	ALTO SAX	1		
40	39	TENOR SAX	1		

Voice#	MIDI Program Change#	Voice Name	Used Notes
41	40	OBOE	1
42	41	CLARINET	1
43	42	FLUTE	1
44	43	PAN FLUTE	1
		SYNTHESIZER	
45	44	THICK LEAD	2
46	45	SIMPLE LEAD	1
47	46	THICK SAWTOOTH	2
48	47	SIMPLE SAWTOOTH	1
49	48	SYNTH BASS	1
50	49	SYNTH STRINGS	1
51	50	SYNTH BRASS	2
52	51	SLOW STRINGS	1
53	52	CHORUS	1
		HARMONY	
54	53	PIANO TRIO	3
55	54	PIANO COUNTRY	2
56	55	ELECTRIC PIANO TRIO	3
57	56	HARPSICHORD TRIO	3
58	57	ELECTRIC ORGAN TRIO	3
59	58	VIBRAPHONE DUET	2
60	59	TRUMPET DUET	2
61	60	HORN DUET	2
62	61	CLARINET TRIO	3
63	62	FLUTE DUET	2
		SPLIT	_
64	63	WOOD BASS / PIANO	1
65	64	STRINGS / PIANO	1
66	65	FINGER BASS / ELECTRIC PIANO	1
67	66	SLAP BASS / CLAVI	1
68	67	FINGER BASS / ELECTRIC ORGAN	1
69	68	FINGER BASS / FOLK GUITAR	1
70	69	HARP / VIOLIN	1
71	70	FRENCH HORN / TRUMPET	1
72	71	SYNTH BASS / BRASS SECTION	1
73	72	PIANO / FLUTE	1
7.4	70	SUSTAIN	
74	73 74	SUSTAIN FLECTRIC BIANG 4	1
75		SUSTAIN ELECTRIC PIANO 1	
76 77	75 76	SUSTAIN ELECTRIC PIANO 2	
78	76 77	SUSTAIN VIBRAPHONE SUSTAIN STRINGS	
10		ECHO	1
79	78	ECHO ECHO PIANO	1 1
80	78	ECHO PIANO ECHO ELECTRIC PIANO	1
00	13	LOTIO LLLOTRIO FIANO	

Voice#	MIDI Program Change#	Voice Name	Used Notes
81	80	ECHO HARPSICHORD	1
82	81	ECHO CELESTA	1
83	82	ECHO FOLK GUITAR	1
84	83	ECHO BANJO	1
85	84	ECHO VIBRAPHONE	1
86	85	ECHO MARIMBA	1
87	86	ECHO STEEL DRUMS	1
88	*1	ECHO DRUM KIT	1
DUAL			
89	88	PIANO CONCERTO	2
90	89	ELECTRIC PIANO CONCERTO	2
91	90	FAIRY LAND	2
92	91	MOOD GUITAR	2
93	92	RICH GUITAR	2
94	93	EXCEL VIOLIN	2
95	94	CRYSTAL	2
96	95	STAR SHIP	2

The following voices cannot be directly selected from the panel controls; they are special voices programmed into the songs of the EZ-20 and are selected automatically in song playback.
However, they can be selected by a connected MIDI device; the corresponding bank select messages are: MSB = 00H, LSB = 00H.

MIDI Program Change#	Voice Name	Used Notes
0	Piano	1
3	Honky-tonk Piano	2
4	Electric Piano 1	1
5	Electric Piano 2	1
6	Harpsichord	1
7	Clavi	1
8	Celesta	1
11	Vibraphone	1
12	Marimba	1
16	Electric Organ 1	1
17	Electric Organ 2	1
19	Church Organ	1
21	Accordion	1
22	Harmonica	1
23	Wave Organ	2
24	Soft Guitar	1
25	Folk Guitar	1
26	Jazz Guitar	1
27	Electric Guitar	1
28	12Strings Guitar	2
29	Rich Guitar	2
30	Distortion Guitar	1
32	Wood Bass	1
33	Finger Bass	1
34	Mute Bass	1
36	Slap Bass	1
38	Synth Bass	1
40	Violin	1
42	Cello	1
46	Harp	1
49	Strings	1
51	Synth Strings	1
52	Chorus	1
56	Trumpet	1
57	Trombone	1

Voice#	MIDI Program Change#	Voice Name	Used Notes	
		ABC		
97	96	A B C (OBOE)	1	
	DoReMi			
98	97	DoReMi (OBOE)	1	
SOUND EFFECTS				
99	98	SOUND EFFECTS	1	
DRUMS				
100	*1	DRUM KIT	1	

^{*1} MSB=7FH, LSB=00H, Prg Ch#=1

MIDI Program Change#	Voice Name	Used Notes
59	Muted Trumpet	1
60	French Horn	1
61	Brass Section	2
63	Synth Brass	1
65	Alto Sax	1
66	Tenor Sax	1
68	Oboe	1
71	Clarinet	1
73	Flute	1
75	Pan Flute	1
80	Lead	1
81	Sawtooth	1
88	Piano Concerto	2
89	Electric Piano Concerto	2
90	Fairy land	2
92	Mood Guitar	2
93	Excel Violin	2
94	Star ship	2
95	Slow Strings	1
98	Crystal	2
104	Sitar	1
105	Banjo	1
114	Steel Drums	1
117	Sound Effects	1
118	Wood Bass / Piano	1
119	Strings / Piano	1
120	Finger Bass / Electric Piano	1
121	Slap Bass / Clavi	1
122	Finger Bass / Electric Organ	1
123	Finger Bass / Folk Guitar	1
124	Harp / Violin	1
125	French Horn / Trumpet	1
126	Synth Bass / Brass Section	1
127	Piano / Flute	1

Sound Effects&Drum Kit List

- * Each percussion voice uses one note.
- * Voices with the same Alternate Note Number (*1 ... 2) cannot be played simultaneously. (They are designed to be played alternately with each other.)

Bank	MSB#	0	127	
Bank	LSB#	112	0	
	gram nge#	98	1	
Keyb	oard			
Note#	Note	Sound Effects	Alternate assign	Drum Kit
36	C1	Want to play?		
37	C#1	LION 1		
38	D1	Check this out!		
39	D#1	LION 2		
40	E1	Excellent		
41	F1	Very Good		
42	F#1	MONKEY 1		
43	G1	Good		
44	G#1	MONKEY 2		
45	A1	Try again		
46	A#1	Dog1		
47	B1	One		
48	C2	Two		
49	C#2	Dog2		
50	D2	Three		
51	D#2	Cat1		
52	E2	Four		
53	F2	Go!		
54	F#2	Cat2		
55	G2			Electronic Bass Drum
56	G#2			Electronic Snare Drum
57	A2			Electronic Floor Tom
58	A#2			Shaker
59	B2			Electronic Low Tom
60	C3	Dog		Electronic Mid Tom
61	C#3			Claves
62	D3			Electronic High Tom
63	D#3			Rim Shot
64	E3			Bass Drum 1
65	F3			Bass Drum 2
66	F#3		1	Hi-Hat Close

Bank	MSB#	0	127	
Bank	LSB#	112		0
Prog Chai	gram nge#	98	1	
Keyb	oard			
Note#	Note	Sound Effects	Alternate assign	Drum Kit
67	G3			Snare Drum 1
68	G#3		1	Hi-Hat Pedal
69	А3			Snare Drum 2
70	A#3		1	Hi-Hat Open
71	В3			Floor Tom
72	C4	Cat		Low Tom
73	C#4	Cal		Crash Cymbal
74	D4			Mid Tom
75	D#4			Splash Cymbal
76	E4			High Tom
77	F4			Cowbell
78	F#4			Conga H Mute
79	G4			Bongo H
80	G#4			Conga H Open
81	A4			Bongo L
82	A#4			Conga L
83	B4		2	Triangle Mute
84	C5	Dind 4	2	Triangle Open
85	C#5	Bird 1		Timbale H
86	D5			Tamboulin
87	D#5			Timbale L
88	E5			Agogo H
89	F5			Agogo L
90	F#5			Guiro Short
91	G5			Guiro Long
92	G#5			Bell Tree
93	A5	Dired O		
94	A#5	Bird 2		
95	B5			
96	C6			

Style List & Multipads

■ Style List

No.	Style Name		
	8 BEAT		
1	8 Beat Pop		
2	8 Beat Uptempo		
3	8 Beat Standard		
4	Folkrock		
5	Pop Rock		
6	8 Beat Medium		
7	Crystal Pop		
	16 BEAT		
8	16 Beat1		
9	16 Beat2		
10	16 Beat Pop		
11	16 Beat Shuffle		
12	16 Beat Ballad		
BALLAD			
13	Piano Ballad		
14	8 Beat Ballad		
15	6/8 Ballad		
16	Fusion Ballad		
17	Harp Arpeggio		
18	Music Box		
DANCE			
19	Techno		
20	Euro Techno		
21	Eurobeat		
22	Euro House		
23	Нір Нор		
24	DancePop		
25	70s Disco		
26	Disco Tropical		
27	Pop Reggae		
28	Shakin'		

No. Style Name			
	ROCK		
29	Rock		
30	8 Beat Rock Ballad		
31	16 Beat Rock		
32	16 Beat Rock Ballad		
33	Hard Rock		
34	6/8 Heavy Rock		
35	Rock Shuffle		
36	Slow Rock		
37	US Rock		
38	Rock & Roll		
39	Boogie		
40	Twist		
RHYTHM & BLUES			
41	R&B		
42	Funk		
43	Soul		
44	Soul Ballad		
45	Motown		
46	Gospel Shuffle		
47	6/8 Gospel		
48	6/8 Blues		
JAZZ			
49	Swing1		
50	Swing2		
51	Cool Jazz		
52	Jazz Ballad		
53	Jazz Waltz		
54	Big Band Swing		
55	Big Band Ballad		
56	Jazz Quartet		
57	Fusion		

No.	Style Name	
COL	JNTRY & WESTERN	
58	Dixieland	
59	Bluegrass	
60	2/4 Country	
61	Country Waltz	
62	Country Ballad	
63	Country Shuffle	
64	Cowboy Boogie	
LATIN		
65	Bossa Nova	
66	Salsa	
67	Samba	
68	Mambo	
69	Beguine	
70	Merengue	
71	Bolero Lento	
72	Reggae 1	
73	Reggae 2	
74	Cha Cha Cha	
75	Foxtror	
76	Rumba	
77	Tango Continental	
78	Jive	
MARCH & WALTZ		
79	US March	
80	German March	
81	6/8March	
82	Polka	
83	Standard Waltz	
84	Pop Waltz	
85	German Waltz	
86	Viennese Waltz	

No.	Style Name	
87	Orchestra Waltz	
88	Crystal Waltz	
	PIANIST	
89	Stride	
90	8 beat	
91	Honky-Tonk	
92	Swing1	
93	Swing2	
94	Jazz Waltz	
95	Dance Pop	
96	Rock & Roll	
97	Ragtime	
98	March	
99	6/8 March	
100	Arpeggio	

■ Multi pads

Keyboard		Multi Pads
Note#	Note	Muiti Faus
36	C1	Want to play?
37	C#1	Piano 1
38	D1	Check this out!
39	D#1	Piano 2
40	E1	Excellent
41	F1	Very Good
42	F#1	Piano 3
43	G1	Good
44	G#1	Piano 4
45	A1	Try Again
46	A#1	Twinkle 1
47	B1	1,2
48	C2	1,2,3
49	C#2	Twinkle 2
50	D2	1,2,3,4
51	D#2	Twinkle 3
52	E2	1,2,1,2,3,4
53	F2	Go
54	F#2	Twinkle 4

MIDI Implementation Chart

YAMAHA	[Portable Keyboard Model EZ-20 MII	J J	Implementation Chart	Date:26-JAN-2001 Version : 1.0
		Transmitted	Recognized	Remarks
Fune	Function			
Basic Channel	Default Changed	1 - 7,10 x	1 - 7,10 x	
Mode	Default Messages Altered	3 X *******	x x 3	
Note Number :	True voice	0 - 127	0 - 127 0 - 127	
Velocity	Note ON Note OFF	o 9nH,v=1-127 *1 x 9nH,v=0	o 9nH,v=1-127 x 9nH,v=0 or 8nH	
After Touch	Key's Ch's	× ×	x x	
Pitch Bend	Ţ	×	×	
Control	0,32 10 6,38 64 71-74 71-74 91,93,94 96-97 98,99 100-101	000000000000000000000000000000000000000	* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Bank Select LSB,MSB Volume Pan Data Entry Sustain Portamento Cntrl RPN Inc,Dec NRPN LSB,MSB

					o : Yes x : No
0 0 - 127 *3	٥ * 4	× × ×	××	****0*	ON , MONO OFF, MONO
0 0 - 127 *3	0	× × ×	××	****	Mode 2 : OMNI ON , MONO Mode 4 : OMNI OFF, MONO
Prog Change : True #	System Exclusive	Song Pos. Common : Song Sel.	System : Clock Real Time: Commands	Aux :All Sound OFF :Reset All Chtrls :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset	Mode 1 : OMNI ON , POLY Mode 3 : OMNI OFF, POLY

NOTE:

- *1 The transmitted velocity value is constant, for notes played on the keyboard.
- *2 MSB can be used to change the voice for the Melody or Rhythm.

MSB=00H: Melody Voice MSB=7FH: Rhythm Voice LSB: Refer to Voice list.

- *3 For program change values, refer to the voice list. Program change and other like channel messages received will not affect the EZ-20 panel settings or what is being played on the keyboard.
- *4 < GM System on > F0H,7EH,7FH, 09H, 01H, F7H All data is restored to the default values.
- *5 MIDI does not function (transmit/receive) in the Song mode.

Specifications

Keyboards

61 standard-size keys (C1
 -C6) with Light Guide

Display

Large multi-function LCD display

Setup

- STANDBY/ON
- MASTER VOLUME : MIN
 MAX

Panel Controls

 OVERALL, SONG, VOICE, STYLE, PORTABLE GRAND, METRONOME, DEMO, Dict., L, R, [0]– [9], [+] (ON), [–] (OFF), TEMPO/TAP, LESSON [1]–[3], ABC/DoReMi, LIGHT ON/OFF

Voice

- 100 voices
- Polyphony: 16

Auto Accompaniment

- 100 styles
- Accompaniment Control: ACMP ON/OFF, SYNC START, START/STOP, INTRO/ENDING, MAIN A/B(AUTO FILL)
- Fingering : Multi fingering
- Accompaniment Volume

Yamaha Educational Suite

- Dictionary
- Lesson 1-3

One Touch Setting

 Voice (for each style or song)

Overall controls

- ABC/DoReMi
- Grade
- Talking
- Transpose
- Tuning
- Accompaniment Volume
- Song Volume
- Metronome Volume

Effects

- Dual (Included in Voice)
- Harmony/Echo (Included in Voice)
- Split (Included in Voice)
- Sustain

Preset Song

• 100 Songs

Auxiliary jacks

 PHONES/OUTPUT, DC IN 12V, MIDI IN/OUT, SUSTAIN

Amplifier

• 2 W + 2 W

Speakers

• 12 cm x 2

Power Supply

- Adaptor : Yamaha PA-3B AC power adaptor
- Batteries : Six "D" size, R20P(LR20) or equivalent batteries

Power Consumption

• 10 W (when using PA-3B power adaptor)

Dimensions (W x D x H)

• 931 x 348.8 x 127.9 mm

Weight

• 5.0 kg

Supplied Accessories

- Music Stand
- Owner's Manual
- Song Book

Optional Accessories

Headphones : HPE-150AC power adaptor : PA-3B

Footswitch: FC4, FC5Keyboard stand: L-2L, L-

2Ć

^{*} 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.

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Yamaha Corporation of America, hereafter referred to as Yamaha, warrants to the original consumer of a product included in the categories listed below, that the product will be free of defects in materials and/or workmanship for the periods indicated. This warranty is applicable to all models included in the following series of products:

PSR SERIES OF PORTATONE ELECTRONIC KEYBOARDS

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If warranty service should be required, it is necessary that the consumer assume certain responsibilities:

- 1. Contact the Customer Service Department of the retailer selling the product, or any retail outlet authorized by Yamaha to sell the product for assistance. You may also contact Yamaha directly at the address provided below.
- Deliver the unit to be serviced under warranty to: the retailer selling the product, an authorized service center, or to Yamaha with an explanation of the problem. Please be prepared to provide proof purchase date (sales receipt, credit card copy, etc.) when requesting service and/or parts under warranty.
- 3. Shipping and/or insurance costs are the consumers responsibility.* Units shipped for service should be packed securely.

*Repaired units will be returned PREPAID if warranty service is required within the first 90 days.

IMPORTANT: Do NOT ship anything to ANY location without prior authorization. A Return Authorization (RA) will be issued that has a tracking number assigned that will expedite the servicing of your unit and provide a tracking system if needed.

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This warranty does not apply to units whose trade name, trademark, and/or ID numbers have been altered, defaced, exchanged removed, or to failures and/or damages that may occur as a result of:

- 1. Neglect, abuse, abnormal strain, modification or exposure to extremes in temperature or humidity.
- 2. Improper repair or maintenance by any person who is not a service representative of a retail outlet authorized by Yamaha to sell the product, an authorized service center, or an authorized service representative of Yamaha.
- 3. This warranty is applicable only to units sold by retailers authorized by Yamaha to sell these products in the U.S.A., the District of Columbia, and Puerto Rico. This warranty is not applicable in other possessions or territories of the U.S.A. or in any other country.

Please record the model and serial number of the product you have purchased in the spaces provided below.

Model	Serial #	Sales Slip
#		
Purchased from		
Date		
(Retailer)		

YAMAHA CORPORATION OF AMERICA

Electronic Service Division 6600 Orangethorpe Avenue Buena Park, CA 90620

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