

ZOOM506BASS Operation Manual

Thank you for selecting the **ZOOM 506** (hereafter simply called the "**506**").

Please take the time to read this manual carefully so as to get the most out of your 506 and to ensure optimum performance and reliability. Retain this manual for future reference.

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1 Major Features

- 24 individual built-in effects provide maximum flexibility. Up to 8 effects can be used simultaneously in any combination.
- Memory capacity for up to 24 user-programmable patches.
- Integrated auto-chromatic bass guitar tuner for simple and precise tuning anywhere.
- Optional foot controller FP01 can be used for pedal wah or pedal pitch, and volume control is also possible.
- Optional foot switch FS01 can be used for bank switching, resulting in enhanced playability.
- Dual power supply principle allows the unit to be powered from an alkaline battery or an AC adapter.
- New DSP (digital signal processor) ZFx-2 developed by Zoom produces high-quality effects from an amazingly compact package.

2 Safety Precautions


USAGE AND SAFETY PRECAUTIONS

In this manual, symbols are used to highlight warnings and cautions for you to read so that accidents can be prevented. The meanings of these symbols are as follows:



Warning


This symbol indicates explanations about extremely dangerous matters. If users ignore this symbol and handle the device the wrong way, serious injury or death could result.



Caution

This symbol indicates explanations about dangerous matters. If users ignore this symbol and handle the device the wrong way, bodily injury and damage to the equipment could result.

Please observe the following safety tips and precautions to ensure hazard-free use of the 506.



Warning

About power

Since power consumption of this unit is fairly high, we recommend the use of an AC adapter whenever possible. When powering the unit from a battery, use only an alkaline type.

AC adapter operation


- Be sure to use only an AC adapter which supplies 9 V DC, 300 mA and is equipped with a "center minus" plug (Zoom AD-0006). The use of an adapter other than the specified type may damage the unit and pose a safety hazard.
- Connect the AC adapter only to an AC outlet that supplies the rated voltage required by the adapter.
- When disconnecting the AC adapter from the AC outlet, always grasp the adapter itself and do not pull at the cable.
- If the unit is not to be used for a long time, disconnect the AC adapter from the outlet.

Battery operation

- Use only a 9 V (alkaline) battery (6LR61).
- The 506 cannot be used for recharging.

Pay close attention to the labelling of the battery to make sure you choose the correct type.

- If the 506 is not to be used for an extended period of time, remove the battery from the unit.
- If battery leakage has occurred, wipe the battery compartment and the battery terminals carefully to remove all remnants of battery fluid.
- While using the unit, the battery compartment cover should be closed.




Caution

Environment

Avoid using your 506 in environments where it will be exposed to:


- Extreme temperature
- High humidity or moisture
- Excessive dust or sand
- Excessive vibration or shock



Caution

Handling

- The 506 is a precision instrument. Except for the foot switches, do not push other parts with your feet or subject them to strong force.
- Take care that no foreign objects (coins or pins etc.) or liquids can enter the unit.
- Be sure to turn the power to all equipment off before making connections.
- Before moving the unit, turn the power off, and disconnect all cables and the AC adapter.



Caution

Alterations

Never open the case of the 506 or attempt to modify the product in any way since this can result in damage to the unit.

Usage precautions

Electrical interference

For safety considerations, the 506 has been designed to provide maximum protection against the emission of electromagnetic radiation from inside the device, and from external interference. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves should not be placed near the 506, as the possibility of interference cannot be ruled out entirely.

Whatever the type of digital control device, the 506 included, electromagnetic damage can cause malfunctioning, and can corrupt or destroy data. Since this is an ever-present danger, thorough care should be taken to minimize the risk of damage.

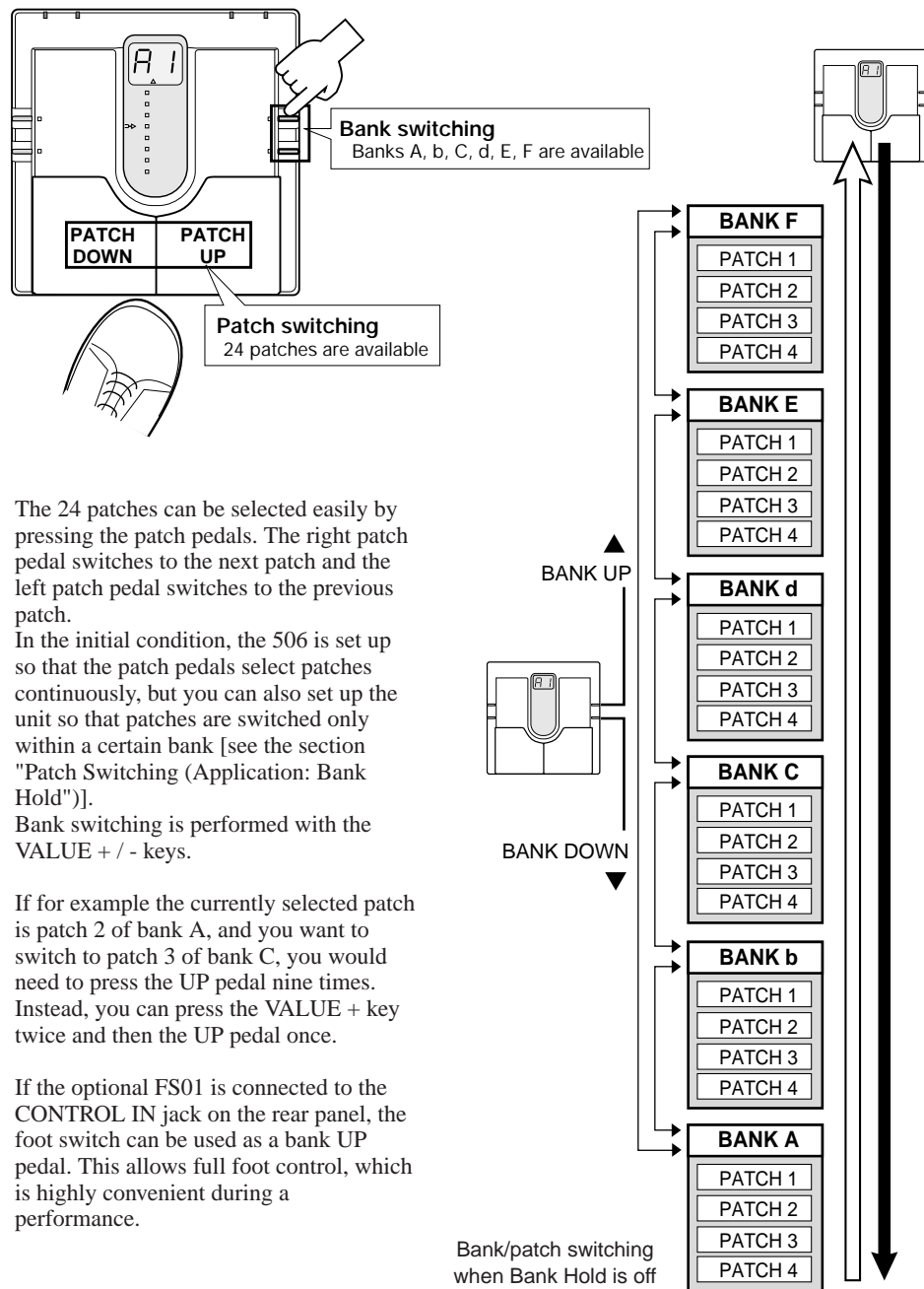
Cleaning

Use a soft, dry cloth to clean the 506. If necessary, slightly moisten the cloth. Do not use abrasive cleanser, wax, or solvents (such as paint thinner or cleaning alcohol), since these may dull the finish or damage the surface.

Connecting cables and input and output jacks

You should always turn off the power to the 506 and all other equipment before connecting or disconnecting any cables. Also make sure to disconnect all cables and the AC adapter before moving the 506.

7 Selecting Patches



The 24 patches can be selected easily by pressing the patch pedals. The right patch pedal switches to the next patch and the left patch pedal switches to the previous patch.

In the initial condition, the 506 is set up so that the patch pedals select patches continuously, but you can also set up the unit so that patches are switched only within a certain bank [see the section "Patch Switching (Application: Bank Hold)"].

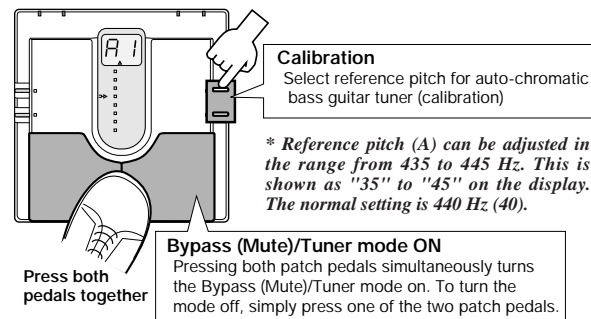
Bank switching is performed with the VALUE + / - keys.

If for example the currently selected patch is patch 2 of bank A, and you want to switch to patch 3 of bank C, you would need to press the UP pedal nine times. Instead, you can press the VALUE + key twice and then the UP pedal once.

If the optional FS01 is connected to the CONTROL IN jack on the rear panel, the foot switch can be used as a bank UP pedal. This allows full foot control, which is highly convenient during a performance.

8 Using the Bypass (Mute)/Tuner Mode

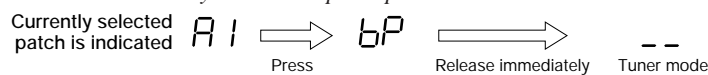
In the Bypass mode, the effects of the 506 are temporarily turned off, so that the original sound of the instrument only is heard. In this mode, the auto-chromatic tuning function is also active. It is also possible to activate muting, to prevent the tuning sound from being sent to the output.



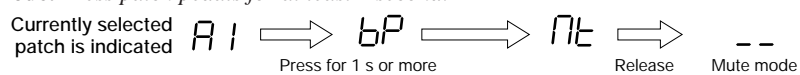
Bypass and mute condition

Pressing both patch pedals simultaneously activates the Bypass or Mute mode.

- **For bypass mode:** Press and immediately release the patch pedals.



- **For mute mode:** Press patch pedals for at least 1 second.



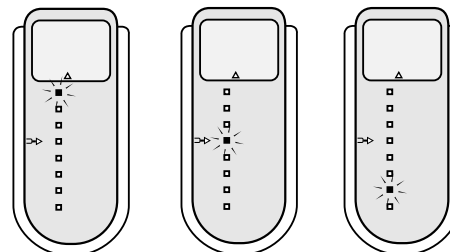
To cancel the bypass or mute condition, simply press one of the patch pedals. The unit then reverts to the previously selected patch.

Tuning function

When the 506 is in the Bypass or Mute mode, the tuning function is activated automatically. Pick an open string to be tuned. The closest note is shown on the display.

Input signal standby condition --			
Do = C	Regular tuning Re = D	Mi = E	So# = G#
Do# = C#	2nd string	Fa = F	Regular tuning La = A
		Fa# = F#	La# = A#
	1st string	So = G	Si = B

When the tuning function is active, the parameter cursor LEDs serve as tuning meter, designed to enhance tuning precision when making fine adjustments.



Pitch is too high

Correctly tuned

Pitch is too low

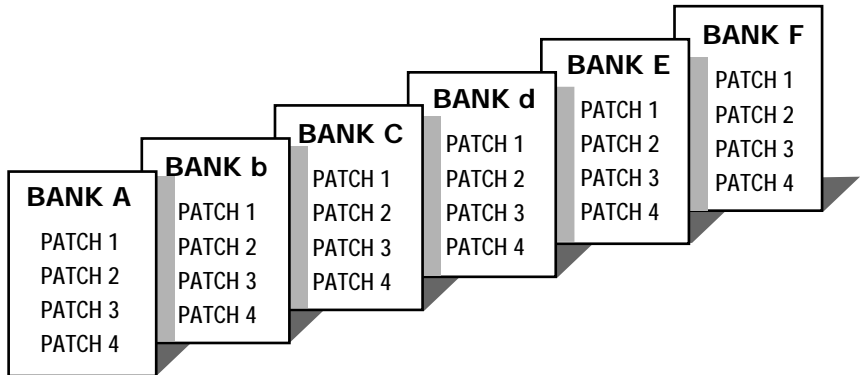
3 What Are Banks and Patches?

• PATCH

A combination of several effects, each with individual parameter settings is called a "patch". The 506 comes with 24 preset patches which can be changed (edited) by the user.

• BANK

The 506 calls up patches in sets of four, called a "bank".



4 PATCH LIST

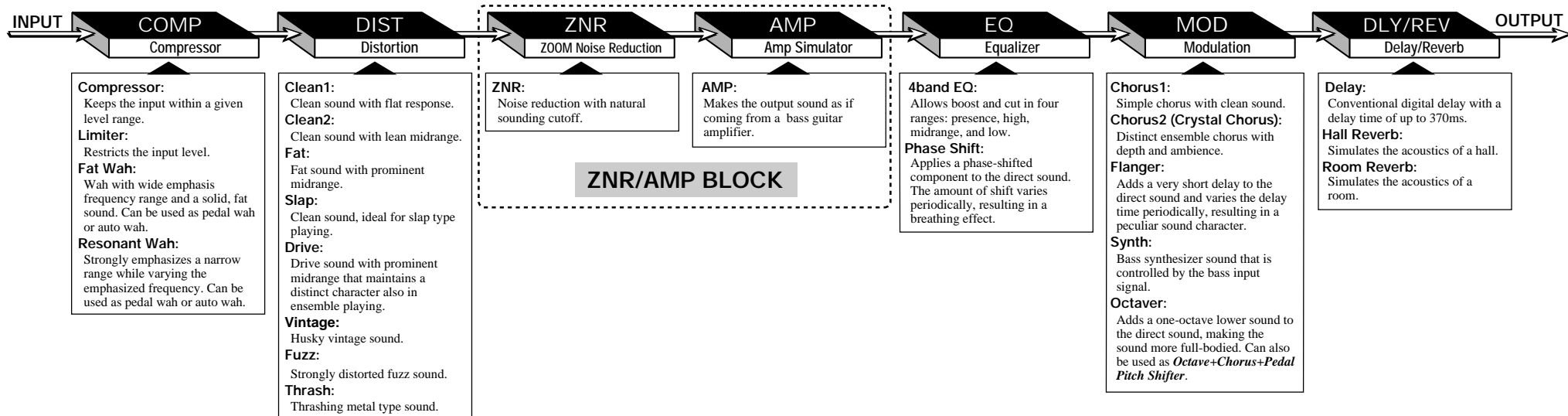
The 506 has memory capacity for 24 patches. At the factory, these are programmed with recommended settings. The user can freely change the contents of any patch, and it is also possible to restore the factory settings.

BANK	PATCH	PATCH NAME	COMMENT
A	1	SLAP SOLO	Orthodox slap sound with flanger flavoring
	2	BIG FUZZ	Fuzz tone with straight distortion
	3	TAURUS	Fat synthesizer bass sound
	4	OCTAVE CHORUS	Chorus tone with octave effect
b	1	VINTAGE	Vintage seventies UK hard rock sound
	2	MILLER'S SLAP	Fashionable, danceable slap sound
	3	LOVERS' FUNK	Gritty bass for P-funk bass solos
	4	CHORD CHORUS	Ideal sound for six-string bass upper-range chord play
C	1	BILLY DRIVE	Great for super-fast right hand play
	2	UNITE	Wah & octave funk bass sound
	3	CRAZY PHASE	Percussive slap creates a dazzling effect
	4	BASS SYNTH	Synthesizer bass mixed with direct sound
d	1	FAT SLAP	Straight, fat sound
	2	WILD	Combination of resonant wah with drive sound + pedal pitch
	3	THICK	Characteristic disco bass sound
	4	JET ON	For eighth note play with jet sound
E	1	SO FAT	Lower-octave addition creates full-bodied sound
	2	NATURAL CLEAN TONE	Practical, basic bass sound
	3	ATTRACTIVE SYNTH	Distortion + synthesizer sound for on-stage playing
	4	U. K. ROCK	Chorus + pedal sound ideal for picking
F (LINE OUTPUT SETTING)	1	T.M. SLAP	Energetic slap sound
	2	GETTIN'	Picking nuance changes the distortion intensity
	3	SOLIST	Ideal for ballad solos and backing
	4	MULTI SYNTH	Synthesizer bass for any kind of playing style

5 Effect Connections

As shown in the illustration below, the 506 can be thought to contain seven "effect modules" which are internally connected. In most effect modules, only one effect may be active at any given time, but the MOD

module can use two effects simultaneously. Therefore the 506 can act like a total of eight single effect devices.



6 Controls and Functions

Top Panel

TUNER indicator

In the Bypass (Mute)/Tuner mode, this indicator shows that the tuner is active, and it serves as a gauge for fine tuning your instrument.

• Battery empty warning

When the unit is powered from the battery, this indicator begins to flash when the battery is exhausted.

STORE key

Serves to initiate and execute the store function for patches.

• Direct Load function

When the key is held down for at least 1 second in the Play mode, the Direct Load function is turned on or off.

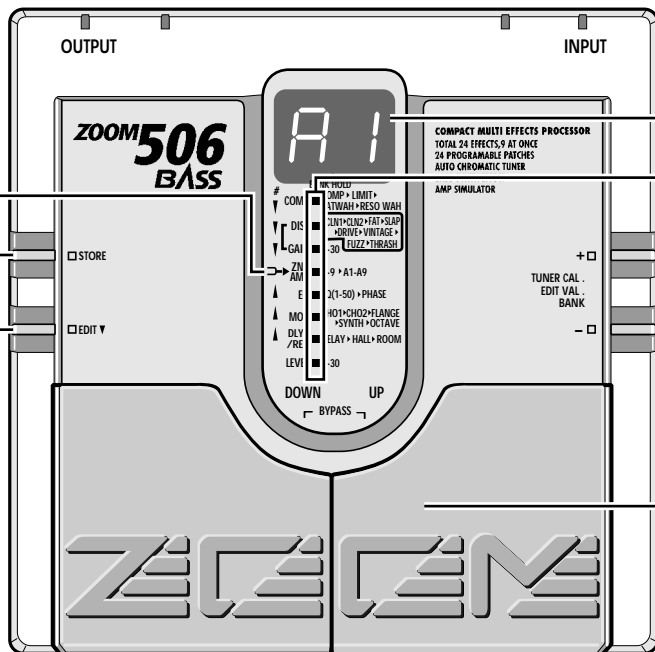
EDIT key

This key serves to toggle between the Play mode (where effects are used for playing the instrument) and Edit mode (where the user can freely change patch settings). The Edit mode is also used to select effect parameters.

When the key is pressed while a Delay/Reverb effect parameter is selected, the unit switches back to Play mode.

• Bank Hold function

When the key is held down for at least 1 second in Play mode, the Bank Hold function is turned on or off.



Display

Shows information required to operate the 506.

• Play mode:

Shows the currently selected bank and patch.

• Edit mode:

Shows the value of the parameter currently being edited.

• Bypass (Mute)/Tuner mode:

Shows the pitch of the input signal.

Parameter cursor LEDs

• Play mode:

The currently used effect module lights up.

• Edit mode:

The currently used effect module lights up. When selected for editing, the indicator for the effect module flashes.

• Bypass (Mute)/Tuner mode:

Indicators function as tuning meter.

VALUE + / - keys

• Play mode:

The keys serve for bank switching.

• Edit mode:

The keys serve for changing the effect parameter.

• Bypass (Mute)/Tuner mode:

The keys serve for setting the tuner reference pitch (calibration).

Patch UP / DOWN pedals

• Play mode:

The pedals serve for patch switching. Pressing both pedals simultaneously activates the Bypass (Mute)/Tuner mode.

• Edit mode:

The pedals serve for selecting effect parameters. Pressing both pedals simultaneously turns the currently selected effect module on or off.

• Bypass (Mute)/Tuner mode:

Pressing a pedal cancels the Bypass (Mute)/Tuner mode.

Rear Panel

INPUT jack

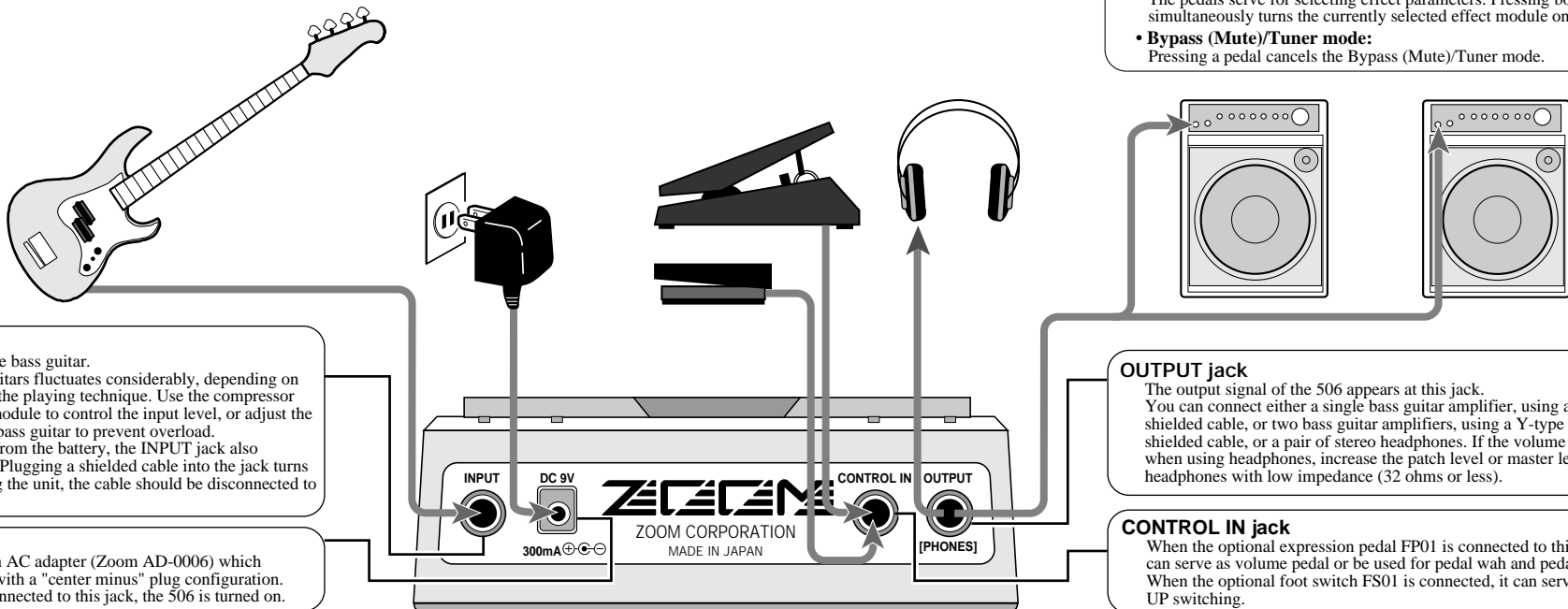
Serves for connection of the bass guitar.

The output level of bass guitars fluctuates considerably, depending on the type of instrument and the playing technique. Use the compressor and limiter of the COMP module to control the input level, or adjust the output level control of the bass guitar to prevent overload.

When the unit is powered from the battery, the INPUT jack also functions as on/off switch. Plugging a shielded cable into the jack turns the 506 on. When not using the unit, the cable should be disconnected to prevent battery drain.

DC IN jack

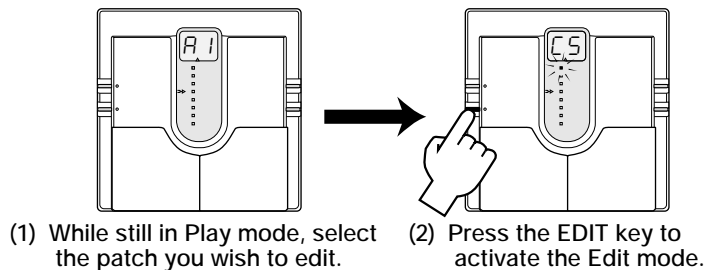
Serves for connection of an AC adapter (Zoom AD-0006) which delivers 9 V DC, 300 mA with a "center minus" plug configuration. When the AC adapter is connected to this jack, the 506 is turned on.



11 Editing Patches

The 506 comes with 24 predefined patches that have been programmed at the factory. However, the 506 offers many more possibilities for combining effects in innovative ways. To discover these possibilities, we recommend that you try out the editing function, which lets you create your own patches. The mode in which patches can be edited is called the Edit mode.

To switch from normal Play mode to Edit mode, briefly press the EDIT key. Do not keep the EDIT key depressed, because if the key is held for 1 second, the Bank Hold mode will be activated.



Immediately after switching from the Play mode to the Edit mode, the parameter cursor flashes at the highest position (COMP module), regardless of which patch was selected. The COMP module setting of the current patch is shown on the display.

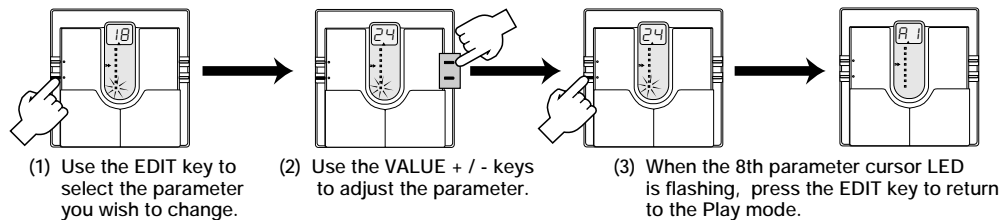
While Edit mode is active, each push of the EDIT key causes the parameter cursor to move one position down. The flashing position shows which module is selected for editing. The relation between parameter cursor LEDs and modules is as shown below.

- 1st parameter cursor LED: COMP module setting
- 2nd parameter cursor LED: DIST module distortion type setting
- 3rd parameter cursor LED: DIST module distortion gain setting
- 4th parameter cursor LED: ZNR and AMP block settings
- 5th parameter cursor LED: EQ module setting
- 6th parameter cursor LED: MOD module setting
- 7th parameter cursor LED: DLY/REV module setting
- 8th parameter cursor LED: PATCH level setting

Use VALUE + / - keys to change parameters.

For an explanation of the various parameters, please refer to the section "Effect Parameters".

When the EDIT key is pressed while the 8th parameter cursor LED flashes, the Edit mode is canceled and the unit returns to the Play mode.



12 Effect Parameters

COMP module	DIST module	ZNR/AMP block	EQ module	MOD module	DLY/REV module	PATCH Level
Compressor The input signal from the bass guitar is compressed to achieve a uniform volume level. Setting range: $C1 \leftrightarrow C9$ (C1 - C9) Higher values result in stronger compression.	Distortion Type A total of eight effect types are available, including four different distortion types and four effects which produce a clean sound without distortion. $C1$ (Clean1) Clean sound with flat response. $C2$ (Clean2) Clean sound with lean midrange. Ft (Fat) Fat sound with prominent midrange. SL (Slap) Clean sound, ideal for slap type playing. dr (Drive) Drive sound with prominent midrange that maintains a distinct character also in ensemble playing. Ut (Vintage) Husky vintage sound. Fu (Fuzz) Strongly distorted fuzz sound. tH (Trash) Thrashing metal type sound.	ZNR module Determines the settings for Zoom Noise Reduction. AMP module Simulates the sonic characteristics of a bass guitar amplifier. Both modules together form the ZNR/AMP block. Setting range: $1 \leftrightarrow 9$ (1 - 9) Higher values result in more effective noise reduction in the no-signal condition. Choose the highest setting that will remove noise without making the instrument sound unnatural at the trailing edge (when the sound decays into silence). $A1 \leftrightarrow A9$ (A1 - A9) A1: Amp simulator only is active. A2 - A9: ZNR is also used. Higher values result in more effective noise reduction.	4band EQ Allows boost and cut in the presence, high, midrange, and low range, with 50 available settings. Setting range: $1 \leftrightarrow 10$ (1 - 10) Lower values result in a stronger high-range cut and low-range boost. $11 \leftrightarrow 20$ (11 - 20) Lower values result in a lower boosted frequency. $21 \leftrightarrow 24$ (21 - 24) Lower values result in a stronger presence-range boost. 25 (25) Yields flat frequency response. $26 \leftrightarrow 30$ (26 - 30) Higher values result in a stronger high-range boost. $31 \leftrightarrow 40$ (31 - 40) Higher values result in a higher boosted frequency. $41 \leftrightarrow 50$ (41 - 50) Higher values result in a stronger presence-range and low-range boost, giving a firm, solid sound.	Chorus1 Simple chorus which adds a component with periodically changing pitch to the direct sound. Suitable for enhancing body while maintaining a clean sound. Setting range: $C1 \leftrightarrow C9$ (C1 - C9) Higher values result in a stronger effect. Chorus2 (Crystal Chorus) Distinct ensemble chorus with depth and ambience. Setting range: $C1 \leftrightarrow C9$ (C1 - C9) Higher values result in a stronger effect. Flanger Adds a very short delay to the direct sound and varies the delay time periodically, resulting in a peculiar sound character. Setting range: $F1 \leftrightarrow F9$ (F1 - F9) Higher values result in a stronger effect.	Delay Conventional digital delay with a delay time of up to 370 ms. By monitoring this effect in stereo, you can achieve a ping-pong delay. Setting range: $d1 \leftrightarrow d9$ (d1 - d9) Higher values result in longer delay time. Mix and feedback are also optimized. Hall Reverb Simulates the acoustics of a hall. Setting range: $H1 \leftrightarrow H9$ (H1 - H9) Higher values result in longer reverb time. Mix setting is also optimized. Room Reverb Simulates the acoustics of a room. Setting range: $r1 \leftrightarrow r9$ (r1 - r9) Higher values result in longer reverb time. Mix setting is also optimized.	Patch Level Allows setting the level of individual patches. This setting is stored for each patch like the effect parameters. Setting range: $1 \leftrightarrow 30$ (1 - 30) Higher values result in higher level.



1 Selecting parameters to change

As described in "Editing Patches", parameters to be edited are selected by repeatedly pressing the EDIT key, but you can also use the patch

pedals for this purpose. Pressing the patch UP pedal (right pedal) moves the parameter cursor (the selected parameter) up.

Pressing the patch DOWN pedal (left pedal) moves the parameter cursor (the selected parameter) down.



2 Effect module on/off switching

Each effect module in the 506 can be considered as a single compact effect device. Adjusting parameters then is equivalent to selecting the type of effect device or turning the knobs on an effect device. What is called a patch corresponds to a collection of effect devices connected in various ways and set to ON or OFF.

As you will know if you have used several individual effect devices in a performance before, not all devices will be switched on all the time. Depending on the mood of the song and other factors, devices will be switched on and off in different combinations. The same applies to the 506. The on/off timing and combination of effect modules are important aspects in creating a certain sound.

Except for the distortion gain (3rd

parameter cursor position) and patch level setting (lowest parameter cursor setting), the flashing parameter cursor indicates that the corresponding effect module can be turned on or off. The ZNR and AMP modules are turned on and off together. When wishing to disable them individually, you must do this by setting the parameters accordingly.

Effect modules can be switched on and off in three ways.

1. Using the VALUE + / - keys
When using the VALUE + key to increase the parameter value, the setting following the maximum value is the "effect off" setting. Similarly, when using the VALUE - key to decrease the parameter value, the setting before the minimum value is the "effect off" setting. When the VALUE + key is pressed once in the "effect off" condition, the effect

is turned on and the minimum value is set. When the VALUE - key is pressed once in the "effect off" condition, the effect is turned on and the maximum value is set.

2. Using a shortcut
Pressing both VALUE + / - keys together for an effect module functions as a shortcut. Repeating the shortcut procedure several times turns the effect off. Performing the shortcut when the effect is off turns it on and sets the minimum parameter value.

3. Using the patch pedals
Pressing both patch pedals together for an effect module turns the effect off. Pressing both patch pedals together when the effect is off turns it on and restores the previously selected parameter value.

Effect off indication

EFFECT OFF= OF



3 Parameter setting shortcut

Normally, parameter values are set by tapping the VALUE + or VALUE - key once for each increment. To allow quick operation in effect modules which contain more than one effect, you can use the shortcut function which is activated by pressing both VALUE keys simultaneously. For example, if you are currently at the "Delay" parameter of the DLY/REV module and the current setting is "d5", you would need to press the VALUE + key 18 times to set the "Room" effect to "r5". However, you can achieve the same effect by activating the shortcut twice and then pressing the VALUE + key 4 times.



4 Volume control with FP01

When the optional expression pedal FP01 is connected to the CONTROL IN jack, it can also be used for adjusting the output volume of the 506. However, if the COMP module parameter is set to a range which activates pedal wah for Fat Wah or Resonant Wah, or if the Octaver parameter in the MOD module is set to pedal pitch (Pu or Pd), this setting has priority and the pedal controls the effect. In other cases, the pedal controls the volume between the EQ module and the MOD module. As opposed to a volume pedal connected after the 506, the level can be adjusted without affecting the sonic impression of reverb and delay effects.



5 Master level adjustment

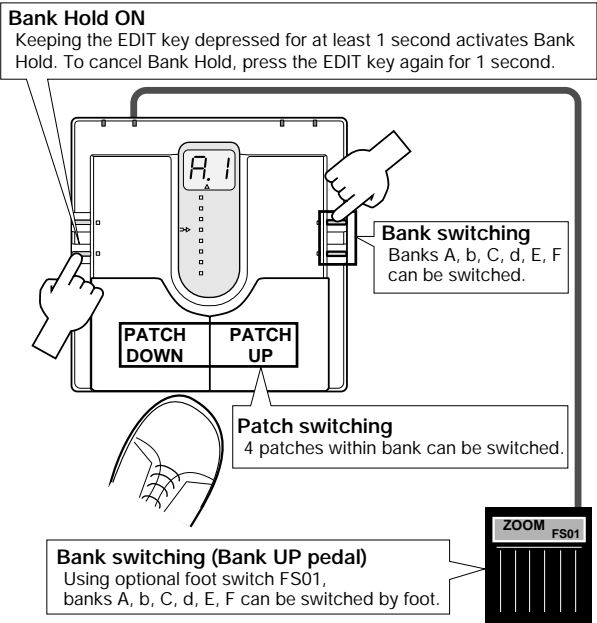
The 506 also lets you set the overall output level, separately from individual patch levels. The master level can be adjusted in Play mode, as follows. Keep both VALUE keys depressed for at least 1 second. The current master level is then shown on the display for 1 second. While the level is displayed, you can use the VALUE + / - keys to change it. The setting range is 0-50. At "40", the level is identical to the individual patch level. The master level setting is not stored by the unit. After the power has been turned off, the master level must be set again.

9 Patch Switching (Application: Bank Hold ON)

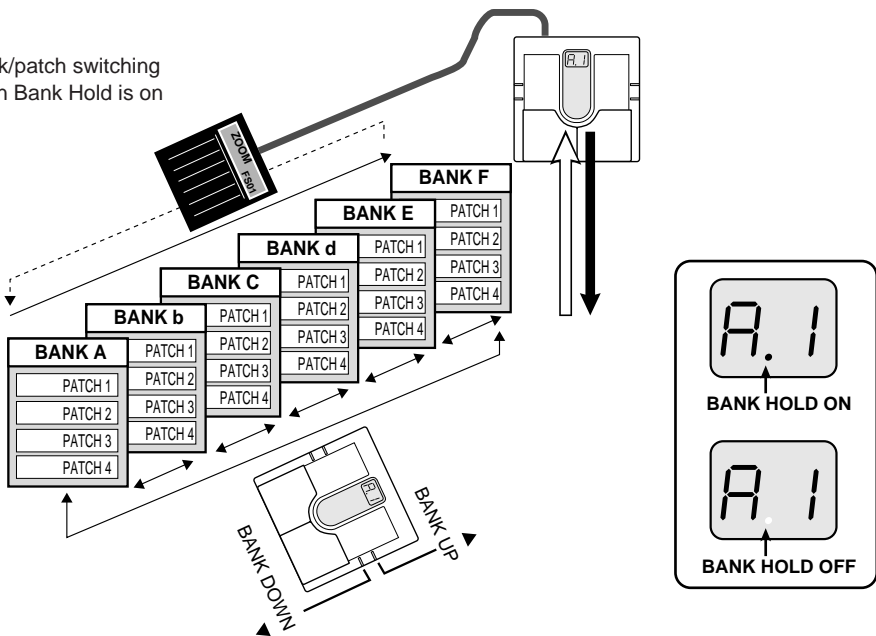
In the factory default condition, the patch pedal switches all patches, regardless of the bank divisions. This kind of patch switching is called the Bank Hold off condition.

The Bank Hold function limits switching to the four patches within a bank. When the function is activated, the patch pedals switch only between the patches in the current bank. To activate the function, keep the EDIT key depressed for at least 1 second in the Play mode. The BANK HOLD indicator on the display lights up. To turn the function off again, perform the same step (press the EDIT key for at least 1 second). The BANK HOLD indicator on the display goes out.

Bank switching can be performed using the VALUE + / - keys or the optional foot switch FS01 connected to the CONTROL IN jack on the rear panel.



Bank/patch switching when Bank Hold is on



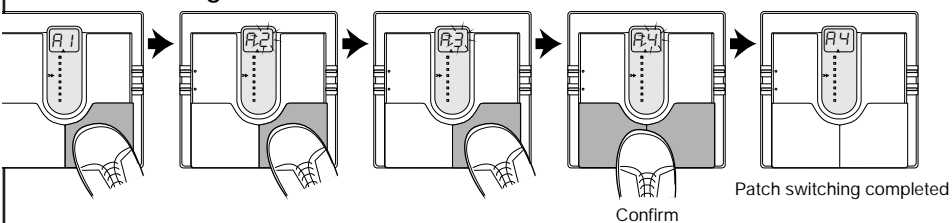
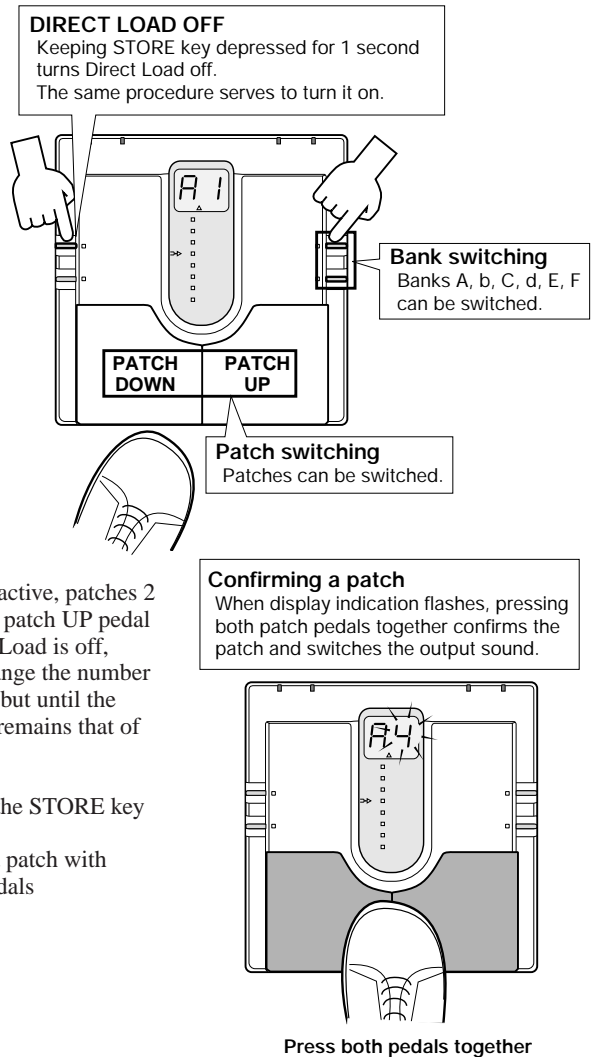
10 Patch Switching (Application: Direct Load OFF)

In the default condition, the 506 is set up in such a way that pressing a patch pedal immediately switches the patch and alters the output sound. This is called Direct Load ON. This switching principle is most convenient when the desired patches are adjacent or close to each other. However, when wanting to switch to a patch that is further away, it may be desirable not to activate the sound of the other patches in between.

When this is desired, turn the Direct Load function off as follows. When Direct Load has been turned off, switching banks and patches has no effect until the user confirms the selection.

For example, when going from patch 1 to patch 4 with Direct Load active, patches 2 and 3 will briefly be heard when the patch UP pedal is pressed three times. When Direct Load is off, pressing the patch UP pedal will change the number on the display (the number flashes), but until the user confirms the choice, the sound remains that of patch 1.

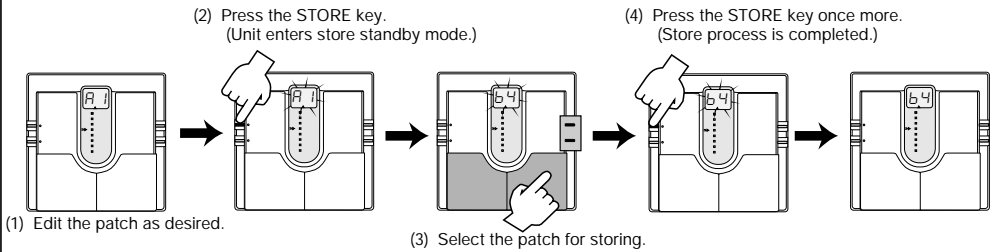
To turn Direct Load on or off, keep the STORE key depressed for at least 1 second. To confirm a choice after selecting a patch with Direct Load off, press both patch pedals simultaneously.



13 Storing Patches

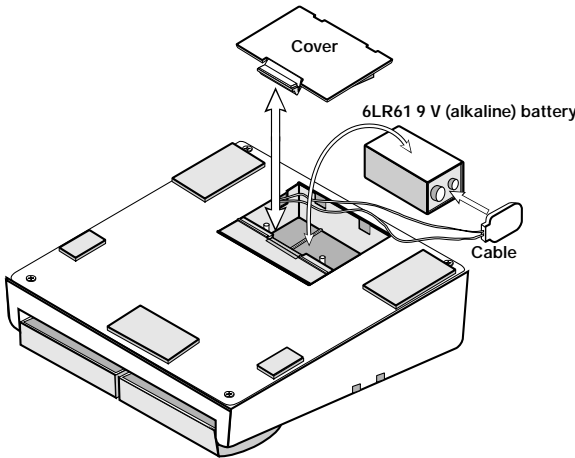
If you have edited (altered) a patch and turn the 506 off without storing the patch, the patch will revert to its old setting. To store an edited patch, use the following simple procedure.

Storing can be carried out in Play mode and Edit mode. After you have edited the patch, press the STORE key. If the unit is currently in Play mode, release the key before 1 second has elapsed, otherwise the Direct Load function will be activated. The display starts to flash. This condition is called the store standby condition. If you wish, you can abandon the store procedure at this point by pressing the EDIT key. If you press the STORE key once more, the contents of the patch are updated. You can also change the patch number before storing, so that the edited patch will be stored in a different number. In this case, the original patch that was used as a starting point for editing will not be changed.



14 Replacing the Battery

If the tuning indicator flashes while the unit is being powered from the battery, the battery is exhausted and should be replaced as described below. Since the 506 has fairly high rated power consumption, use only a 6LR61 9 V (alkaline) battery. Using another kind of battery will result in shorter operation.



1. Turn the 506 upside down and open the cover of the battery compartment. (Push the catch to unlock the cover, then lift it up.)
2. Remove the battery from the compartment and disconnect the battery cable. (Grasp the terminal strip and do not pull at the cable.)
3. Connect the battery cable to the new battery, taking care to observe correct polarity (+/-). Then insert the battery into the battery compartment.
4. Close the battery compartment cover, taking care not to pinch the cable. (Make sure that the cover is properly locked.)

15 Returning Patches to Factory Settings

The 506 comes with 24 predefined patches that have been programmed at the factory. Also after you have edited and stored your own patches, you can return to the factory default settings at any time. This process is called "recalling". Returning all 24 patches to the original contents and resetting the Bank Hold and Direct Load functions is called "all initialize".

The recall mode is separate from the Play mode and Edit mode. You cannot switch directly to recall mode from these modes. The recall mode can only be activated by turning the unit on in a special way, as described below.

1. Turn the unit off by disconnecting the AC adapter or the guitar input cable.
2. Keep the STORE key depressed and turn the unit on.
3. The indication "AL" flashes on the display.
4. To perform "all initialize", press the STORE key once more in this condition. The flashing rate increases and the initialization procedure is carried out. When it is completed, the unit automatically enters the Play mode.
5. When wishing to recall only a particular patch, select the patch number in step 3, using the same procedure as for normal patch selection.
6. When the desired patch has been selected, press the STORE key. The flashing rate increases and the contents of the selected patch are recalled.
7. Recalling of individual patches can be carried out continuously. When you wish to terminate the process, press the EDIT key. The unit then returns to the Play mode. Turning the unit off also terminates the recall condition.

16 Specifications

Effects	Maximum number of simultaneous effects: 8 24 effect types: Compressor, Limiter, Fat Wah, Resonant Wah, Clean1, Clean2, Fat, Slap, Drive, Vintage, Fuzz, Thrash, 4Band Equalizer, Phase, Chorus1, Chorus2 (Crystal Chorus), Flanger, Synthesizer, Octaver, Delay, Hall, Room, Amp Simulator, ZNR
Effect modules	Maximum number of simultaneous modules: 7 (5 modules + 1 block)
Banks and patches	6 banks x 4 patches = 24 patches (edit + store possible)
Analog/digital conversion	18 bit, 128 times oversampling
Digital/analog conversion	16 bit, linear
Sampling frequency	31.25 kHz
Input	Bass guitar input (standard monaural phone jack) Rated input level: -20 dBm Input impedance: 470 kilohms
Output	Combined line/headphone output (standard stereo phone jack) Max. output level: +6 dBm Output load impedance: 10 kilohms or more
Control input	For optional FP01 or FS01
Display indicator	2-digit, 7-segment LED tuning indicator parameter cursor indicator
Power requirements	Optional AC adapter: 9 V DC, 300 mA (Zoom AD-0006) Battery: 6LR61 9 V (alkaline) battery x 1 Battery life: approx. 4 h continuous operation
Dimensions	147 (W) x 157 (H) x 48 (D) mm
Weight	480 g (without batteries)

* 0 dBm = 0.775 Vrms
* Design and specifications subject to change without notice.