ZOOM 505II GUITAR

Operation Manual

Introduction

Thank you for selecting the ***ZOOM 505 II*** (hereafter simply called the "***505 II***").

Please take the time to read this manual carefully so as to get the most out of the unit and to ensure optimum performance and reliability.

Retain this manual, the warranty card and all other documentation for future reference.

Contents

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 505 II.

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 four IEC R6 (size AA) 1.5 V batteries (alkaline/manganese).
- The 505 II cannot be used for recharging. Pay close attention to the labelling of the battery to make sure you choose the correct type.
- If the 505 II 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 505 II 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 505 II 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 505 II or attempt to modify the product in any way since this can result in damage to the unit.

Features

The 505 II is a sophisticated multi effect processor for guitar with the following features and functions:

- **Top level performance**
  While similar in price to a compact effect device, the 505 II incorporates a varied palette of 33 effects. Up to nine effects (including ZNR and amp simulator) can be combined in a patch. The memory of the unit holds 36 rewritable patches, providing no-holds-barred performance.
- **Intuitive user interface**
  The user interface has been thoroughly redesigned. Large switches and keys and a rotary selector make the unit extremely simple to operate. Any desired effect can be called up swiftly and without fuss.
- **Built-in auto-chromatic tuner**
  The integrated tuning function lets you quickly and precisely tune your instrument on stage.
- **Dual power supply enables operation anywhere**
  The dual power supply principle allows the unit to be powered either from an AC adapter or from four IEC R6 (size AA) batteries. Continuous operation time on batteries is 8 hours with manganese batteries and 28 hours with alkaline batteries.
- **Compatible with foot switch and pedals**
  An optional foot switch (FS01) or expression pedal (FP01/FP02) can be connected to the CONTROL IN jack. The foot switch is useful for quickly switching patches, and the expression pedal can serve to adjust the volume or effect tone in real time.
- **Improved successor to 505**
  While inheriting the sound characteristics of the very successful ZOOM model 505, the 505 II is even more compact and carries a lower price tag. And what's more, it incorporates nine new effects, including distortion effects using sophisticated modeling techniques, practical stage-use and special effects.

Terms Used in This Manual

This section explains some important terms that are used throughout the 505 II documentation.

■Effect module

As shown in the illustration below, the 505 II can be thought of as a combination of several single effects. Each such effect is referred to as an effect module. In addition to modules comprising compressor effects (COMP) or distortion effects (DIST), the 505 II also provides a module for ZNR (ZOOM Noise Reduction) and a guitar amp simulator. Parameters such as effect intensity can be adjusted for each module individually, and modules can be switched on and off as desired.

■Effect type

Within each effect module, there are several different effects which are referred to as effect types. For example, the modulation effect module (MOD) comprises chorus, flanger, pitch shifter, and other effect types. Only one of these can be selected at a time. An effect type is also often simply referred to as an effect.

■Effect parameter

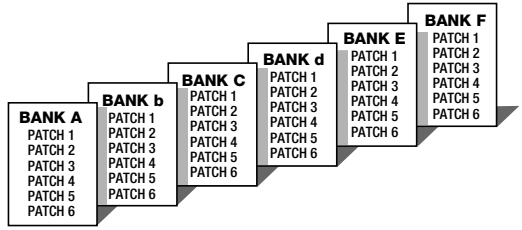
All effect modules have various parameters that can be adjusted. When likening an effect module to a compact effect device, the parameters can be thought of as the control knobs on the device. Changing the parameter settings will result in changes to items such as effect intensity and tonal characteristics.

■Patch

In the 505 II, effect module combinations are stored and called up in units referred to as patches. A patch comprises information about the on/off status of each effect module, about the effect type used in each module, and about effect parameter settings. The memory of the 505 II can store up to 36 patches.

■Bank

A group of six patches is called a bank. The 505 II manages a total of six banks, labelled A through F. The patches within each bank are numbered 1 through 6. To specify a patch, the 505 II uses the following format: "A1". This means that patch number 1 from bank A is selected. Therefore "b6" would refer to patch 6 from bank b.



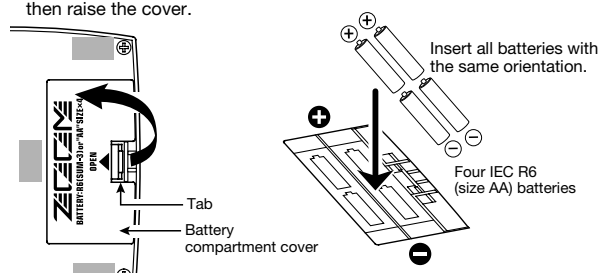
■Play mode/edit mode

The internal status of the 505 II is referred to as the operation mode. The two major modes are play mode, in which you can select patches and use them for playing your instrument, and edit mode, in which you can modify the effects. The [PLAY/EDIT] selector serves for switching between the play mode and edit mode.

Using the unit on batteries

1. Turn the 505 II over and open the cover of the battery compartment on the bottom.
Press the latch to release it and then raise the cover.

2. Insert four fresh IEC R6 (size AA) batteries into the battery compartment.



3. Close the cover of the battery compartment.
Close the cover of the battery compartment.
Push the cover in until the latch audibly snaps into place.

Use four IEC R6 (size AA) batteries.
When the batteries are getting low, a dot (.) in the bottom section of the display starts to flash.

NOTE While not using the 505 II, you should disconnect the cable plugged into the INPUT jack, to prevent draining the batteries.

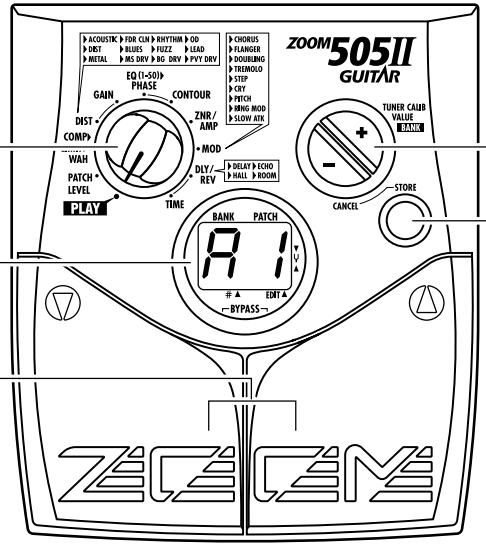
Controls and Functions

Top Panel

[PLAY/EDIT] selector
This knob serves for switching between play mode (in which you use the patches for playing) and edit mode (where you can edit patches to your liking).

Display
Shows patch numbers, setting values, and other information required for operation of the 505 II.

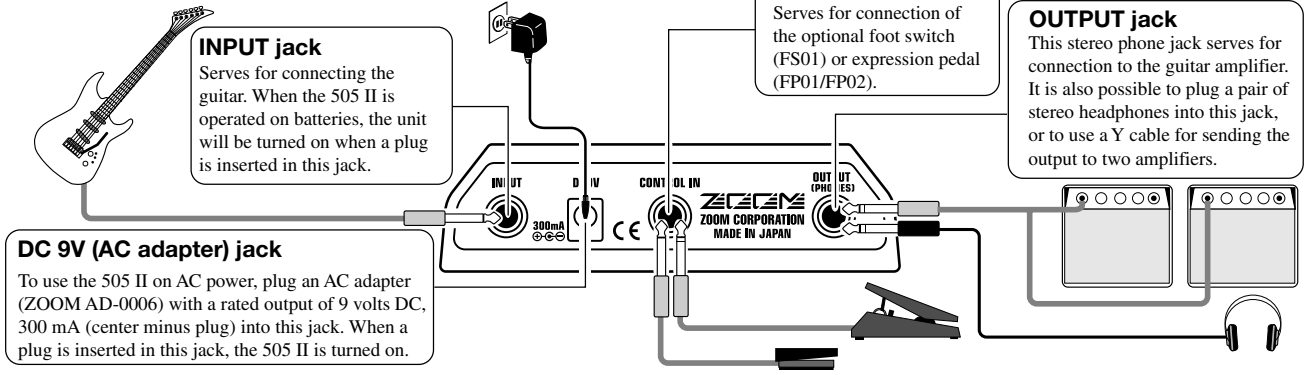
[▼]/[▲] foot switches
These switches are used for selecting patches, controlling the tuner, and other functions.



[+]/[-] keys
Serve for switching banks up and down, adjusting parameters, and other functions.

[STORE] key
Serves for storing edited patches, copying patches to another location, and other functions.

Rear Panel / Connections



INPUT jack
Serves for connecting the guitar. When the 505 II is operated on batteries, the unit will be turned on when a plug is inserted in this jack.

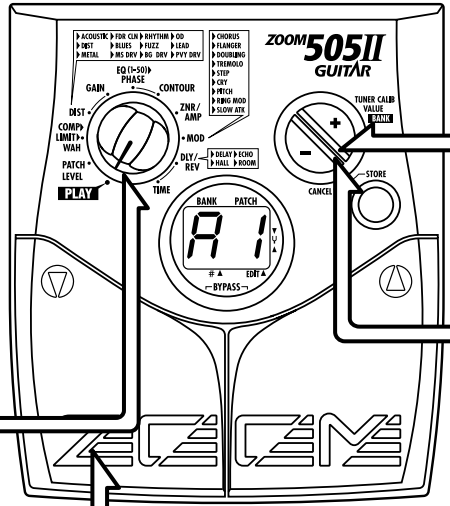
CONTROL IN jack
Serves for connection of the optional foot switch (FS01) or expression pedal (FP01/FP02).

OUTPUT jack
This stereo phone jack serves for connection to the guitar amplifier. It is also possible to plug a pair of stereo headphones into this jack, or to use a Y cable for sending the output to two amplifiers.

DC 9V (AC adapter) jack
To use the 505 II on AC power, plug an AC adapter (ZOOM AD-0006) with a rated output of 9 volts DC, 300 mA (center minus plug) into this jack. When a plug is inserted in this jack, the 505 II is turned on.

Selecting Patches for Play

To try out the 505 II, we recommend that you simply play your instrument while switching patches. This will let you quickly see what the 505 II can do.

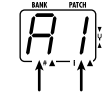


1 Power-on

- When using the 505 II on batteries, plug a shielded cable with mono phone plug into the INPUT jack of the 505 II.
- When using the 505 II with the AC adapter, plug the adapter into the outlet and plug the cable from the adapter into the DC 9V jack on the 505 II.
- Turn on the guitar amplifier and adjust the volume to a suitable position.

2 Set 505 II to play mode

- When the [PLAY/EDIT] selector is set to a different position, set it to "PLAY".



Bank Patch number

The currently selected bank and patch number are shown on the display.

HINT Immediately after turning on power to the 505 II, the unit will be in play mode also if the [PLAY/EDIT] selector is set to a different position.

3 Switch patches

- To switch patches in play mode, use the [▼]/[▲] foot switches.

4 To directly switch the bank

- You can use the [+]/[-] keys to directly switch among the banks A - F.

5 To adjust the master volume

- Keep both [+]/[-] keys depressed for more than 1 second.

- While the master volume setting is shown, pressing the [+] or [-] key changes the setting.

The setting range is 0 - 50. When the unit is turned off and on again, the setting will be reset to 40.

HINT When using headphones, the master volume setting can be used to adjust the listening volume.

Using the Tuner Function

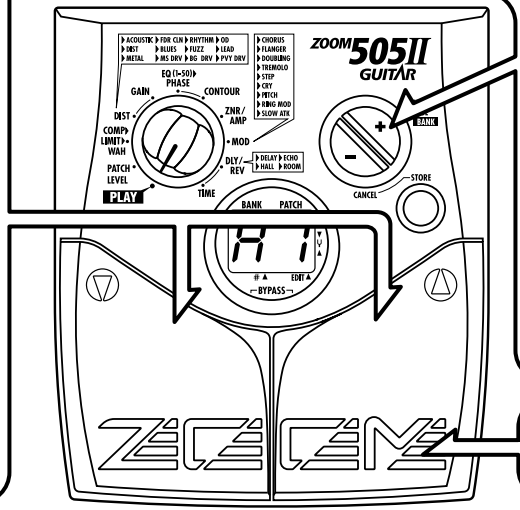
The 505 II incorporates an auto-chromatic tuner for guitars. To use the tuner function, the built-in effects must be bypassed (temporarily turned off) or muted (original sound and effect sound turned off).

1 Switch to bypass or mute

- **Bypass:**
  Press both [▼]/[▲] foot switches together briefly and release.

- **Mute:**
  Press both [▼]/[▲] foot switches together and hold for at least 1 second.

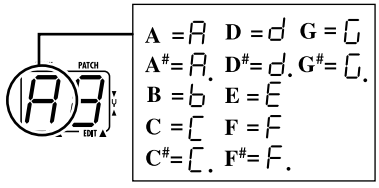
NOTE The bypass or mute condition cannot be activated when the unit is in the edit mode.



2 Tune the guitar

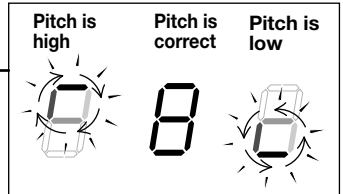
- **Play the open string you want to tune, and watch the display.**

  The left side of the display shows the note which is closest to the current pitch.



The right side of the display shows a symbol that indicates by how much the tuning is off.

- **Tune the other strings in the same way.**



3 Adjusting the reference pitch of the tuner

The center A reference frequency of the built-in tuner can be fine-adjusted.

- **Press one of the [+]/[-] keys.**

Reference pitch

- **While the reference pitch setting is shown, pressing the [+] or [-] key changes the setting.**

  The reference pitch range is 35 - 45 (center A = 435 Hz - 445 Hz).

NOTE When the unit is turned off and on again, the reference pitch setting is reset to 40 (440 Hz).

4 Return to play mode

- **Press one of the [▼]/[▲] foot switches.**

Editing a Patch

The patches of the 505 II can be freely edited by changing the effect parameter settings. Try editing the currently selected patch to create your own sound.

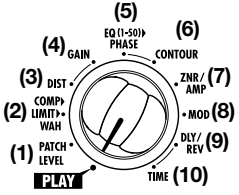
1 Select the effect parameter

- **Use the [PLAY/EDIT] selector to select the effect you want to change.**

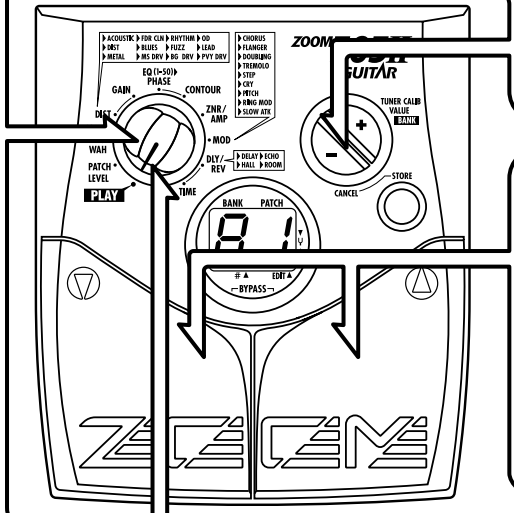
The value of the currently selected parameter is shown on the display. (When the 505 II is in edit mode, a dot (.) is shown in the bottom right section of the display.)

Modules and parameters that can be selected with the [PLAY/EDIT] selector

(1) Patch level
(2) Basic parameters of COMP module (*)
(3) Basic parameters of DIST module (*)
(4) Extended parameters of DIST module
(5) Basic parameters of EQ module (*)
(6) Extended parameters of EQ module



(7) Basic parameters of ZNR/AMP module (*)
(8) Basic parameters of MOD module (*)
(9) Basic parameters of DLY/REV module (*)
(10) Extended parameters of DLY/REV module



2 Change the parameter value

- **Use the [+]/[-] keys.**

Holding down one of these keys will continuously change the value. Additionally pressing the opposite key will cause a faster change. Pressing both keys simultaneously skips to the first value of the next effect type in the same effect module.

3 Changing the module on/off condition

- **Press both [▼]/[▲] foot switches together.**

This is possible only if the basic parameter of that module (marked with an asterisk in the illustration 1) has been selected.

NOTE When an effect module has been switched off, the extended parameter of that module is not shown.

4 Terminate the edit mode

- **To terminate the edit mode and return to the play mode, set the [PLAY/EDIT] selector to the "PLAY" position.**

NOTE Unless you store the edited patch in memory, the settings you made will be lost when you select a different patch after returning to the play mode. Do not forget to store an edited patch that you wish to keep, as described on page 14.

Storing/Copying Patches

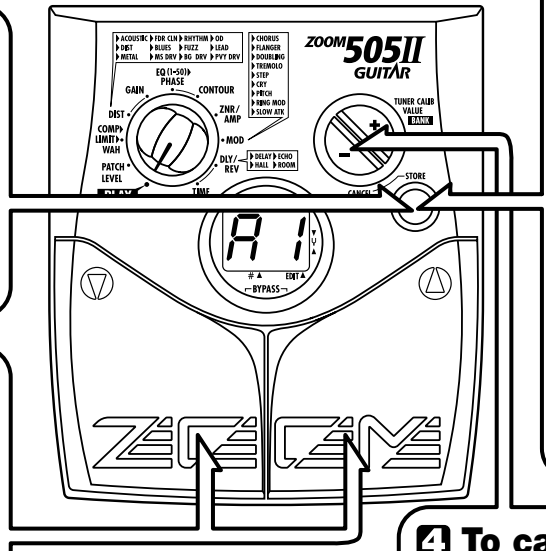
An edited patch can be stored at any desired location in the internal memory of the unit. It is also possible to copy an existing patch and store it at another location.

1 Press the STORE key in play mode or edit mode.

The bank and patch number on the display are flashing.

2 Use the [▼]/[▲] foot switches to select the target location in which to store the patch.

NOTE When storing or copying a patch, it is not possible to use the [+]/[-] keys to switch only the bank number.



3 Press the STORE key once more.

When the store/copy process is completed, the unit reverts to the original mode, with the target patch being selected.

NOTE When the store/copy process is executed, the previous content of the store target is overwritten and cannot be restored if it was a user-created patch. You should therefore take care when selecting a target patch. However, the factory default settings of an individual patch or all patches can be restored, as described on page 19.

4 To cancel the store/copy process

- **Press the [-] key instead of the STORE key.**

  The store process is aborted and the unit reverts to the previous mode.

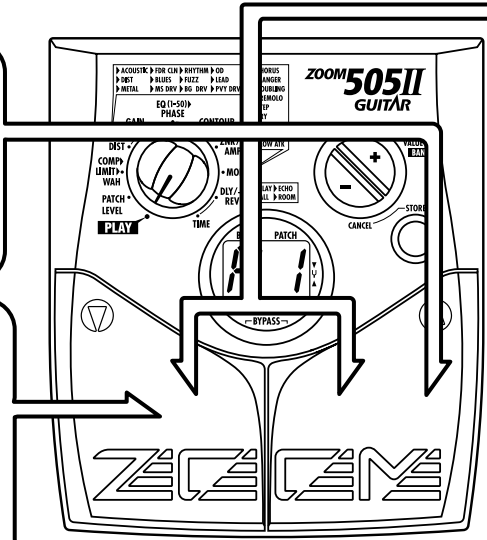
NOTE The store process is also canceled when [PLAY/EDIT] selector is operated instead of the [-] key.

Changing the "Patch Call" Method

In normal operation, the sound of the 505 II will change immediately if a patch is selected in play mode. This may be undesirable if a patch from a distant memory location is called and the sound of other unwanted patches in between is heard. If desired, you can change the "Patch call" method from direct selection to the pre-select method. In pre-select mode, you first specify the desired patch and then confirm the selection. The sound will only change after you have confirmed the operation.

1 Changing the "Patch call" method to pre-select

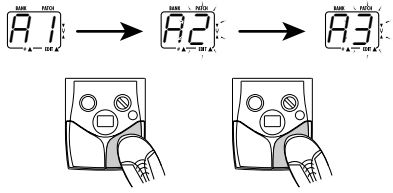
To change the "Patch call" method to pre-select, you must turn the unit on while holding down the [▲] foot switch.



2 Specifying the desired patch

- **Use the [▼]/[▲] foot switches to select the patch you want to use next.**

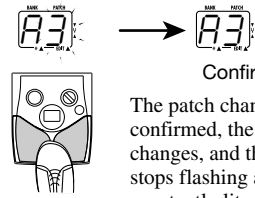
  You can also use the [+]/[-] keys to only switch the bank.



The bank and patch number of the patch to be used next will be shown on the display, but the sound does not yet change.

3 Confirm the patch change

- **When the desired patch is shown, press the [▼]/[▲] foot switches together.**



The patch change is confirmed, the sound changes, and the display stops flashing and stays constantly lit.

4 Changing the "Patch call" method back to direct select

- **To change the "Patch call" method back to normal direct select operation, simply turn the unit off and back on again.**

  This will return the patch select method to the default setting.

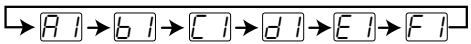
Using the Optional Pedal

The 505 II is equipped with a CONTROL IN jack designed for connection of an optional foot switch or expression pedal. This section explains how to use these accessories.

■ Using the foot switch (FS01)

Connecting the optional foot switch FS01 to the CONTROL IN jack allows changing banks with the foot switch while the unit is in play mode. (Operating the foot switch in play mode has the same effect as pressing the [+] key.)

1. **Plug the cable from the FS01 into the CONTROL IN jack, and then plug the appropriate cable into the INPUT jack (or DC 9V jack).**
2. **Press the foot switch.**
   With each push of the foot switch, the bank is switched up.



■ Using the expression pedal (FP01/FP02)

Connecting an expression pedal (FP01/FP02) to the CONTROL IN jack allows adjusting the volume or an effect parameter in real time. For information on parameters that can be adjusted with the expression pedal, please refer to pages 22 - 29.

1. **Plug the cable from the expression pedal into the CONTROL IN jack, and then plug the appropriate cable into the INPUT jack (or DC 9V jack).**
2. **Select the patch in play mode, and move the expression pedal back and forth.**
   Depending on the program content of the patch, the volume or effect parameter will change.

NOTE If the foot switch or expression pedal is connected to the 505 II while the unit is powered, malfunction may occur. Be sure to plug the foot switch or expression pedal into the CONTROL IN jack first and then plug the appropriate cable into the INPUT jack (or DC 9V jack).

HINT The pedal is active also in edit mode.

Restoring Factory Defaults

The 505 II comes with 36 preprogrammed patches. These factory default patches can be restored also if they were overwritten by patches created by the user.
There are two ways of restoring factory defaults. "All Initialize" returns the entire set of patches to the original condition. "Factory Recall" restores a specific patch to the original condition.

1. **While holding down the STORE key, plug the appropriate cable into the INPUT jack (or DC 9V jack).**
   The indication "AL" flashes on the display.

■ To perform All Initialize

2. **Press the STORE key once more.**
   All patch settings are returned to the factory default condition, and the unit switches to play mode. To cancel All Initialize, press the [-] key.

NOTE All user-created patches will be lost when performing All Initialize. Use this function with care.

■ To perform Factory Recall

2. **Use the [▼]/[▲] foot switches to select the patch you want to return to the original condition.**
   The specified bank and patch number are flashing on the display.

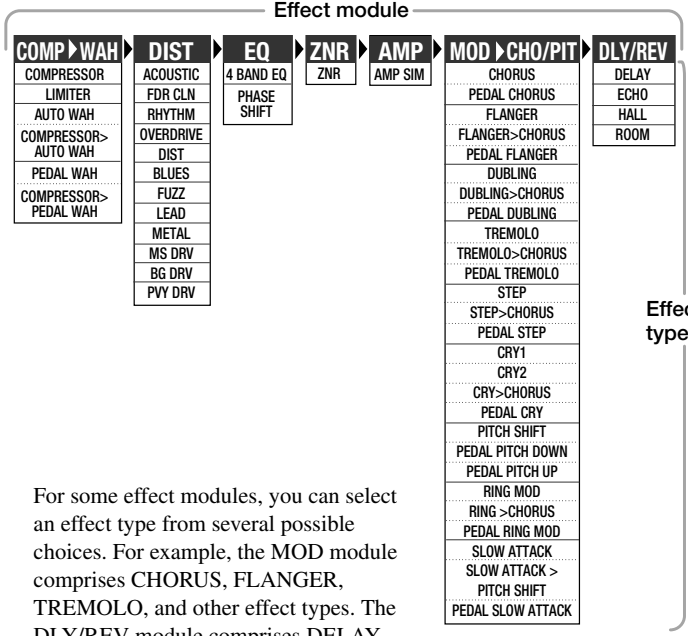
   During Factory Recall, the [+]/[-] keys cannot be used to switch the bank only.

3. **Press the STORE key once more.**
   The settings of the specified patch are returned to the factory default condition.

   If desired, repeat steps 2 and 3 to restore other patches. To terminate the Factory Recall operation, press the [-] key. The unit will switch to the play mode at this point.

Linking Effects

The patches of the 505 II consist of seven serially linked effect modules, as shown in the illustration below. (The maximum number of effects that can be used simultaneously is 9.) You can use all effect modules or selectively set certain modules to on or off.



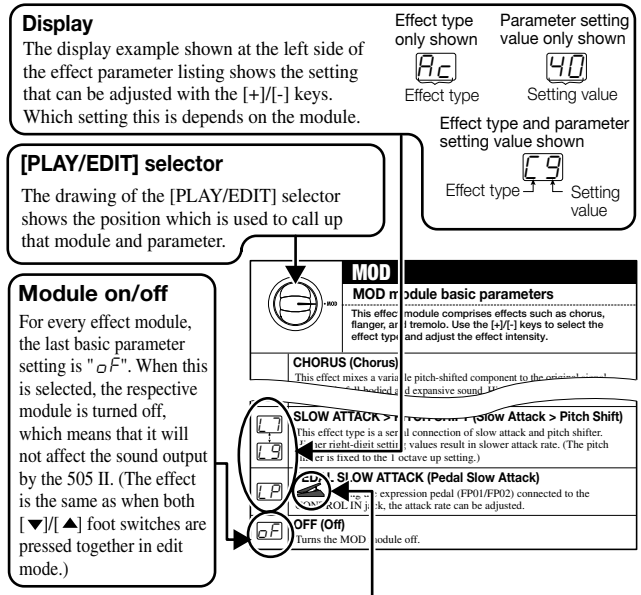
For some effect modules, you can select an effect type from several possible choices. For example, the MOD module comprises CHORUS, FLANGER, TREMOLO, and other effect types. The DLY/REV module comprises DELAY, HALL, ROOM, etc.

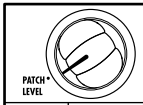
The COMP module and MOD module allow you to choose two effect types simultaneously, such as COMPRESSOR > AUTO WAH or DOUBLING > CHORUS.

Effect Types and Parameters

Starting on the next page, all effect types in all effect modules are listed, together with their parameters.

How to read the listing



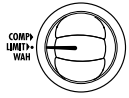


PATCH LEVEL

PATCH LEVEL

1 ↕ 30

Adjusts the overall volume of the patch. A value of 25 corresponds to unity gain (input level and output level are equal).



COMP▸LIMIT▸WAH

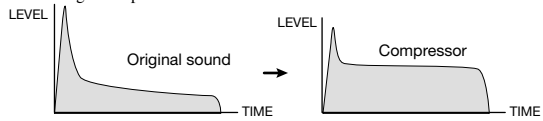
COMP module basic parameters

This module comprises the compressor, limiter, auto wah, and pedal wah effect types. Use the [+]/[-] keys to select the effect type and adjust the effect intensity.

C1 ↕ C9

COMPRESSOR (Compressor)

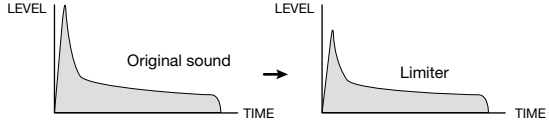
This effect type attenuates high-level signal components and boosts low-level signal components, thereby keeping the overall signal level within a certain range. The effect prolongs sustain and makes the sound more uniform. Higher setting values result in stronger compression.



L1 ↕ L9

LIMITER (Limiter)

This effect type attenuates peak levels and prevents overload of the next module. Higher setting values result in stronger limiter action.



A1 ↕ A4

AUTO WAH (Auto Wah)

This effect type applies wah which is dependent on playing intensity. Higher setting values result in higher input sensitivity for the auto wah effect.

A5 ↕ A9

COMPRESSOR > AUTO WAH (Compressor > Auto Wah)

This effect type is a serial connection of compressor and auto wah. Higher setting values result in higher input sensitivity for the auto wah effect. (The compressor effect is fixed.)

P1 ↕ P4

PEDAL WAH (Pedal Wah)

This effect type allows using an expression pedal (FP01/FP02) connected to the CONTROL IN jack for pedal wah. The expression pedal then controls the frequency that is emphasized. Higher setting values result in higher emphasized frequency.

P5 ↕ P9

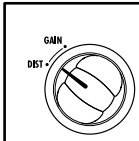
COMPRESSOR > PEDAL WAH (Compressor > Pedal Wah)

This effect type is a serial connection of compressor and pedal wah. Higher setting values result in higher emphasized frequency. (The compressor effect is fixed.)

oF

OFF (Off)

Turns the COMP module off.



DIST

DIST module basic parameters

In addition to 10 distortion type effects, this module also comprises two clean effect types. Use the [+]/[-] keys to select the effect type.

Ac

ACOUSTIC (Acoustic)

Changes the sound of an electric guitar into that of an acoustic guitar.

Fd

FDR CLN (FDR Clean)

Simulates the clean sound of a built-in type tube amplifier.

rY

RHYTHM (Rhythm)

This is a crunch sound with slight distortion when playing strongly.

Od

OVERDRIVE (Overdrive)

Extended overdrive sound with the character of tube amplifier distortion.

dt

DIST (Distortion)

Distortion similar to driving a three-stack amp in the hard rock style.

bL

BLUES (Blues)

Overdrive with a solid blues style sound.

FU

FUZZ (Fuzz)

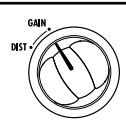
Sixties style fuzz sound with fat bass.

Ld

LEAD (Lead)

Smooth, bright distortion sound.

mt	**METAL (Metal)** Heavy metal type distortion with emphasized bass and treble.
ms	**MS DRV (MS Drive)** Drive sound emulating a British style tube stack amp.
bd	**BG DRV (BG Drive)** Drive sound emulating a tube stack amp with a tight and controlled midrange.
Pu	**PVY DRV (PVY Drive)** High-gain tube amplifier drive sound, great for heavy metal.
oF	**OFF (Off)** Turns the DIST module off.



GAIN

DIST module extended parameters

These parameters serve to adjust the volume or distortion depth for the effect type selected with the DIST module basic parameters.

GAIN (Gain)

The function of this parameter depends on the effect type selected for the DIST module.

1 ↕ 30

- **When ACOUSTIC (Ac) is selected**
  Higher setting values emphasize the characteristic acoustic guitar string sound.
- **FDR CLN (Fd) is selected**
  Depending on the guitar in use, the sound may be distorted at certain settings. In such cases, reduce the setting value until the distortion disappears.

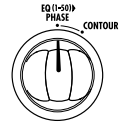
-- (Off indication)

- **Other effect type is selected**
  Higher setting values result in stronger distortion.

PEDAL DIST (Pedal Distortion)

Pd

Using the expression pedal connected to the CONTROL IN jack, the GAIN value (1 - 30) can be controlled.



EQ▸PHASE

EQ module basic parameters

This module comprises a 4-band equalizer and phaser. Use the [+]/[-] keys to select the effect type and adjust the effect intensity.

4 BAND EQ (4-Band Equalizer)

Allows boost or cut in the bass/middle/high/presence band. You can select one out of 50 patterns (01 - 50).

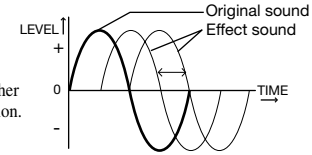
01 ↕ 50

- **01 - 10:** Lower values result in attenuated highs and emphasized lows.
- **11 - 20:** Lower values result in lower emphasized frequency.
- **21 - 24:** Lower values result in emphasized midrange.
- **25:** Flat characteristics
- **26 - 30:** Higher values result in emphasized highs.
- **31 - 40:** Higher values result in higher emphasized frequency.
- **41 - 50:** Higher values result in emphasized presence and lows.

PHASE SHIFT (Phaser)

P1 ↕ P9

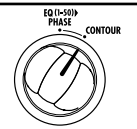
This effect mixes a phase-shifted component to the original sound, resulting in a pulsating character. Higher setting values result in faster modulation.



OFF (Off)

oF

Turns the EQ module off.



CONTOUR

EQ module extended parameters

These parameters serve to adjust the effect operation for the effect type selected with the EQ module basic parameters.

CONTOUR (Contour)

-10 ↕ 0 ↕ 10

- **4 BAND EQ is selected**
  Using the 0 value as a reference (flat setting), negative values cause an increasing boost in the low range and positive values cause an increasing boost in the high range. When the EQ module is On, this parameter is always active. Check this parameter if the 4-band EQ effect type setting does not seem to produce the desired results.

-- (Off indication)

- **PHASE SHIFT is selected**
  Using the 0 value as a reference, changing the value towards negative or positive makes the phaser effect stronger. (Negative values result in reversed phase for the effect sound feedback.)

ZNR/AMP

ZNR/AMP module basic parameters

Serves for making the ZNR module and AMP module settings. ZNR is a noise reduction circuit developed by ZOOM, allowing control over the noise threshold. The AMP module is a guitar amp simulator that can be switched on or off.

ZNR

ZNR (ZOOM Noise Reduction) serves for reducing noise during play pauses or silent passages. Higher setting values result in more efficient noise reduction. Set the value as high as possible without causing the sound to be cut off unnaturally.

AMP (Amp Simulator)

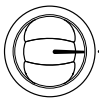
The amp simulator adds the character of a guitar amplifier to the output signal. When this setting is selected, the amp simulator is on and ZNR is off.

ZNR+AMP (ZNR + Amp Simulator)

ZNR and amp simulator are both on. Increasing the right- digit value results in more efficient noise reduction. Set the value as high as possible without causing the sound to be cut off unnaturally.

OFF (Off)

ZNR and amp simulator are both off.



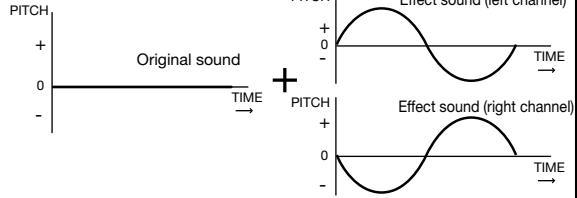
MOD

MOD module basic parameters

This effect module comprises effects such as chorus, flanger, and tremolo. Use the [+]/[-] keys to select the effect type and adjust the effect intensity.

CHORUS (Chorus)

This effect mixes a variable pitch-shifted component to the original signal, resulting in full-bodied and expansive sound. Higher setting values result in a more pronounced chorus effect.



PEDAL CHORUS (Pedal Chorus)

Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the chorus depth can be adjusted.

FLANGER (Flanger)

This effect produces a unique, undulating sound by shifting the pitch up and down. Higher right-digit setting values result in faster modulation.

FLANGER > CHORUS (Flanger > Chorus)

This effect type is a serial connection of flanger and chorus. Higher right-digit setting values result in faster flanger modulation. (Chorus intensity is fixed.)

PEDAL FLANGER (Pedal Flanger)

Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the flanger modulation rate can be adjusted. The adjustable range is larger than available with F1 - F9.

DOUBLING (Doubling)

This effect adds very short delay components to the original signal, which gives the sound a more full-bodied character such as when several instruments are playing in unison. Higher right-digit setting values result in more pronounced doubling effect.

DOUBLING > CHORUS (Doubling > Chorus)

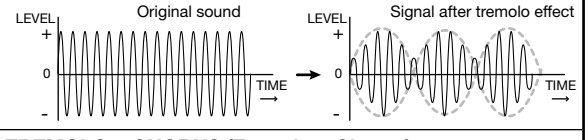
This effect type is a serial connection of doubling and chorus. Higher values result in more pronounced doubling effect. (Chorus intensity is fixed.)

PEDAL DOUBLING (Pedal Doubling)

Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, doubling intensity can be adjusted.

TREMOLO (Tremolo)

This effect periodically varies the volume. Higher setting values result in faster tremolo.

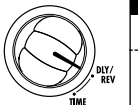


TREMOLO > CHORUS (Tremolo > Chorus)

This effect type is a serial connection of tremolo and chorus. Higher setting values result in faster tremolo. (Chorus intensity is fixed.)

tP	**PEDAL TREMOLO (Pedal Tremolo)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, tremolo speed can be adjusted. The adjustable range is larger than available with t1 - t9.
S1 ↕ S6	**STEP (Step)** This effect introduces a filter which changes randomly, resulting in an auto-arpeggio sound. Higher right-digit setting values give faster step sound change.
S7 ↕ S9	**STEP > CHORUS (Step > Chorus)** This effect type is a serial connection of step and chorus. Higher right-digit setting values result in faster step sound change. (Chorus intensity is fixed.)
SP	**PEDAL STEP (Pedal Step)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the step sound change rate can be adjusted. The adjustable range is larger than available with S1 - S9.
c1 ↕ c3	**CRY1 (Cry 1)** This effect changes the sound in a similar way as a talking simulator. Higher right-digit setting values result in more pronounced sound change.
c4 ↕ c6	**CRY2 (Cry 2)** This is a cry effect with a different sound character. Higher right-digit setting values result in more pronounced sound change.
c7 ↕ c9	**CRY > CHORUS (Cry > Chorus)** This effect type is a serial connection of cry and chorus. Higher right-digit setting values result in more pronounced cry type sound change. (Chorus intensity is fixed.)
cP	**PEDAL CRY (Pedal Cry)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the cry type sound change can be adjusted.
P1 ↕ P9	**PITCH SHIFT (Pitch Shift)** This effect varies the pitch of the original sound. You can select one out of nine preset pitch shift patterns (P1 - P9). • **P1:** A component shifted by 1 octave down is mixed to the original sound. • **P2:** A component shifted by a perfect fifth down is mixed to the original sound. • **P3:** A chorus effect is added to the P2 setting. • **P4:** A component shifted by a perfect fourth up is mixed to the original sound. • **P5:** A chorus effect is added to the P4 setting. • **P6:** A component shifted by 1 octave up is mixed to the original sound. • **P7:** A slightly pitch-shifted component is mixed to the original sound, resulting in a chorus with slight modulation. • **P8:** A component shifted by a perfect fourth up and down is mixed to the original sound. • **P9:** A component shifted by 1 octave up and down is mixed to the original sound.

Pd	**PEDAL PITCH DOWN (Pedal Pitch Down)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the pitch of the effect sound can be shifted over the range of 0 to -2 octaves.
PU	**PEDAL PITCH UP (Pedal Pitch Up)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the pitch of the effect sound can be shifted over the range of 0 to +1 octave.
r1 ↕ r6	**RING MOD (Ring Modulator)** This effect adds amplitude modulation to the signal, resulting in a metallic sound. Higher right-digit setting values result in higher modulation frequency.
r7 ↕ r9	**RING > CHORUS (Ring > Chorus)** This effect type is a serial connection of ring modulator and chorus. Higher right-digit setting values result in higher modulation frequency. (Chorus intensity is fixed.)
rP	**PEDAL RING MOD (Pedal Ring Modulator)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the ring modulator frequency can be adjusted.
L1 ↕ L6	**SLOW ATTACK (Slow Attack)** This effect reduces the attack rate of the sound, resulting in a volume playing style sound. Higher right- digit setting values result in slower attack rate.
L7 ↕ L9	**SLOW ATTACK > PITCH SHIFT (Slow Attack > Pitch Shift)** This effect type is a serial connection of slow attack and pitch shifter. Higher right-digit setting values result in slower attack rate. (The pitch shifter is fixed to the 1 octave up setting.)
LP	**PEDAL SLOW ATTACK (Pedal Slow Attack)** Using the expression pedal (FP01/FP02) connected to the CONTROL IN jack, the attack rate can be adjusted.
oF	**OFF (Off)** Turns the MOD module off.



DLY/REV

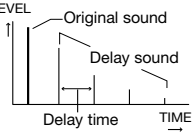
DLY/REV module basic parameters

This module comprises delay, echo, reverb, and other effects. Use the [+]/[-] keys to select the effect type and adjust the effect intensity.

d1 ↕ d9

DELAY (Delay)

This is a conventional digital delay effect. By using the output in stereo, you can achieve a ping-pong delay where the delay sound alternates between the left and right channels. The right-digit setting values control the feedback (number of repetitions) and the mixing ratio between original sound and effect sound.



E1 ↕ E9

ECHO (Echo)

This is a delay effect with a warm sound similar to a tape echo. By using the output in stereo, you can achieve a ping-pong delay where the delay sound alternates between the left and right channels. The right-digit setting values control the feedback (number of repetitions) and the mixing ratio between original sound and effect sound.

H1 ↕ H9

HALL (Hall)

This is a reverb effect that produces a sound similar to the reverberation in a concert hall. Higher right-digit setting values result in stronger reverb.

r1 ↕ r9

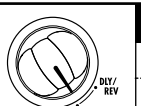
ROOM (Room)

This is a reverb effect that simulates the reverberation in a room. Higher right-digit setting values result in stronger reverb.

oF

OFF (Off)

Turns the DLY/REV module off.



TIME

DLY/REV module extended parameters

These parameters serve to adjust the effect operation for the effect type selected with the DLY/REV module basic parameters.

1 ↕ 37

DELAY TIME (Delay Time)

(When DELAY or ECHO is selected as effect type)
Sets the delay time in the range from 1 - 37. The actual delay time is the setting value x 10 (ms). (Example: A setting of "15" results in a delay time of 150 ms.)

1 ↕ 10 ↕ - - (Off indication)

REVERB TIME (Reverb Time)

(When HALL or ROOM is selected as effect type)
Sets the reverb time in the range from 1 - 10. Higher right-digit setting values result in longer reverb time.

Specifications

Built-in effects	max. 9 simultaneous / 33 total
Effect modules	max. 7 simultaneous (5 modules + 1 block)
Banks and patches	6 banks x 6 patches = 36 patches (rewritable, with memory store capability)
A/D converter	16 bit, 64 times oversampling
D/A converter	16 bit, 8 times oversampling
Sampling frequency	31.25 kHz
Input	GUITAR input: standard mono phone jack (rated input level -20 dBm/input impedance 470 kilohms)
Output	Standard stereo phone jack (doubles as line and headphone jack) (maximum output level +5 dBm/output load impedance 10 kilohms or more)
Control input	For optional FP01 or FP02 / FS01
Display	2-digit 7-segment LED
Power requirements	Separately available AC adapter, 9 V DC, 300 mA (center minus plug) (ZOOM AD-0006) Four IEC R6 (size AA) batteries Battery life: approx. 28 hours continuous operation (alkaline batteries) / approx. 8 hours continuous operation (manganese batteries)
Dimensions	145 mm (D) x 125 mm (W) x 40 mm (H) Weight280 g (without batteries)

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

Usage Precautions

- **Electrical interference**

  For safety considerations, the 505 II has been designed to provide maximum protection against the emission of electromagnetic radiation from inside the device, and protection from external interference. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves should not be placed near the 505 II, as the possibility of interference cannot be ruled out entirely.

  With any type of digital control device, the 505 II included, electromagnetic interference can cause malfunctioning and can corrupt or destroy data. Care should be taken to minimize the risk of damage.

- **Cleaning**

  Use a soft, dry cloth to clean the 505 II. 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.

Please keep this manual in a convenient place for future reference.

Patch List

BANK	PATCH	PATCH NAME	COMMENT	PEDAL
A [DEMO]	1	SUPER DIST	Tight and smooth distortion sound.	Volume
	2	CLEAN DELAY	Clean sound with pedal-chorus and feedback delay.	Chorus
	3	METAL PANEL	Rectified modeling sound with pedal-gain control.	Gain
	4	WILD METAL II	High-gain metal sound allows 2-octave bend-down with pedal.	Pitch
	5	AMERICAN	Crunchy clean sound of the built-in type tube amp.	Volume
	6	HARMONY SOLO	Distorted sound for harmony solo.	Volume
b [DEMO]	1	PVY POWER	American fat amp distortion with pedal-gain control.	Gain
	2	MULTI PHASER	Clean sound with phase shift effect.	Volume
	3	STANDARD OD	Straight overdrive sound.	Volume
	4	LA POWERED	80's lead guitar sound with detune effect.	Volume
	5	ACOUSTIC	Electric acoustic guitar simulation sound.	Gain
	6	TALKING CRY	Talking lead sound with pedal-cry effect.	Cry
C [MODEL]	1	VAN'S DRIVER	Eddie's famous hard driven sound.	Volume
	2	SURF	Vintage tube amp sound with old tremolo effect.	Tremolo
	3	ZEP STACK	Old British style tube amp modeling sound.	Volume
	4	PEDAL WAH	Straight pedal-wah sound.	Wah
	5	ROCK'N POPS	60's British crunch sound with 1-octave up pedal-pitch.	Pitch
	6	SORROW	Like Santana's "Solo".	Volume
d [VARIATION]	1	JET DRIVE	Wild jet sound with pedal-flanger.	Flanger
	2	FUNKY PHASE	Clean sound with auto-wah and phase shift for rhythm play.	Volume
	3	ECHO VIOLIN	Slow attack sound with delay.	Slow attack
	4	WAH FUZZ	Noisy pedal-wah/fuzz sound.	Wah
	5	BLUE NOTE	Crunch sound for blues style play.	Volume
	6	CHO WAH	Distorted sound with auto-wah and chorus effect.	Volume
E [SFX]	1	PWM SYNTH	Synthesizer sound with full effect palette.	Wah
	2	STEP MODE	SF style sound combining step effect with chorus.	Volume
	3	SPACE CONTACT	Ring modulator sound,sound good with pedal.	Ring Mod
	4	STEP JET	Zoom's famous step-type effect.	Volume
	5	SYMPHONY	Clean sound with phase and pedal-chorus.	Chorus
	6	STEEL CHINA	Synthesizer-like SFX sound.	Volume
F [REAL]	1	POWER LEAD	Heavy distortion sound with doubling.	Volume
	2	FLOW FLANGE	Clean sound with transparent chorus and flanger.	Volume
	3	ROCK DRIVE	Straight distortion sound for rock style play.	Volume
	4	TREBLE DIST	High frequency distortion sound with pedal-doubling.	Doubling
	5	BRIGHT CHORUS	Chorus sound with a distinct edge.	Volume
	6	DUPLEX	Distorted sound with twin pitch shifter.	Volume

It is recommended to set the ZNR (Zoom Noise Reduction) value for each patch to match the guitar being used.

Troubleshooting

No power	High level of noise
Refer to "1. Power-on" on page 8.	Is ZOOM AC adapter being used? Be sure to use only adapter for 9 V DC, 300 mA with center minus plug (ZOOM AD-0006).
Patch does not change	**Battery life is short**
Check whether patch call method is set to pre-select (see page 16).	Are manganese batteries being used? Continuous operation time is 28 hours with alkaline batteries but only 8 hours with manganese batteries. The use of alkaline batteries is recommended.

ZOOM®
CATCH US IF YOU CAN

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Printed in Japan 505 II-5000