

**CENTER**

**YAMAHA  
CAR AUDIO**

**CASSETTE RECEIVER**

**KASSETTEN-RECEIVER**

**KASSETTRECEIVER**

**YCR-5155/515L**

**OWNER'S MANUAL  
BEDIENUNGSANLEITUNG  
BRUKSANVISNING**

ENGLISH  
DEUTSCH  
SVENSKA

● Thank you for purchasing the YAMAHA YCR-515S/515L cassette receiver.

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## FEATURES

- High power 4 channel output with Rear Output terminals
  - The Car CD Input terminals allow the unit to reproduce CD sound
  - Illuminated controls for night time listening
  - Separate BASS and TREBLE controls
  - FADER control (between front and rear speakers/REAR OUTPUTS)
  - Continuously variable loudness control
  - The SEL-PUSH switches the unit among radio mode, cassette tape mode and CD mode without ejecting a cassette
  - Thief-proof mounting holder
- Auto reverse transport for continuous listening pleasure
  - Dual azimuth tape head ensures precise, high-fidelity cassette reproduction in both directions
  - Dolby B noise reduction
  - YMS — YAMAHA MUSIC SEARCH automatically finds the beginning of a selection on a cassette
  - MTL — Metal tape compatibility
  - KEY OFF RELEASE — When power is turned off, or radio mode or CD mode is selected during cassette tape operation, the pinch roller disengages to prevent damage
  - SEEK tuning finds stations with the touch of a button
  - Auto Scan/Auto Store function facilitates station presetting
  - 18 FM/6 AM (MW)/6 LW illuminated Memory Presets provide optimum visibility for one-touch tuning of preset stations
  - SDK (traffic information) Reception Circuitry incorporates such functions as: SK seek, alarm, auto volume control, and an auto function switcher allows you to listen to SDK during tape/CD playback. (for YCR-515S only)
  - FM/AM·LW independent LO/DX selection allows you to set the LO and DX modes independently for FM and AM·LW reception.
  - FM tuner with built-in noise canceller
  - Dual Gate MOS FET and PIN Diode pull in even weak FM stations without interference from adjacent strong FM stations

## PRECAUTIONS

### ● CONNECTIONS

**IMPORTANT!** Improper connections and installation can damage the unit. Please read the installation instructions thoroughly before installing or connecting.

### ● CASSETTE TAPES

- 1) Before loading a cassette, remove all tape slack with your finger, a pencil, etc.
- 2) Do not expose cassette tapes to direct sunlight or moisture since this can damage the cassette shell and tape.
- 3) YAMAHA does not recommend the use of 120-minute cassettes because their extremely thin tapes are susceptible to entanglement in the tape transport.
- 4) Through normal use, dust and magnetic particles from the tape will accumulate on the tape path (head, pinch roller, capstan, etc.). This can result in poor sound quality and uneven tape speed. Regularly clean the tape path with a commercially available cleaning tape.

### ● FUSES

If a fuse has blown (no wire visible in the glass vial), first check if all connections are correct and the car's electrical system is operating properly. Replace **ONLY** with a fuse of the designated rating. If the fuse blows again, contact your nearest YAMAHA dealer or an authorized YAMAHA service center.

### ● OPERATING TEMPERATURE

Extreme hot or cold indoor car temperature levels (parking in direct sunlight, snow, etc.) may result in malfunction. If this condition occurs, turn the unit off and allow the car's interior temperature to acclimate to a moderate level before use.

### ● POWER INTERRUPTION

The unit has the presets. This feature requires a constant power supply to retain their memories. If the car's power supply is interrupted (battery change, engine repair, etc.), the preset memories may be cleared. In this case, please reprogram the stations into memory as necessary.

When the unit is used for a long time, the heat sink will be hot. Do not touch the heat sink at the rear of the unit.

## UNPACKING

Check whether the supplied accessories are complete.

PARTS	Q'ty
Mounting holder	1
Chassis strap	1
M5 x 16 tapping hex. screw with washer	1
M5 x 16 hex. bolt	1
M5 nut	1
Plastic bushing	1
Washer	1
Spare 3 A fuse	1
Spare 10 A fuse	1
Car audio passport (for YCR-515S only)	1

## INSTALLATION

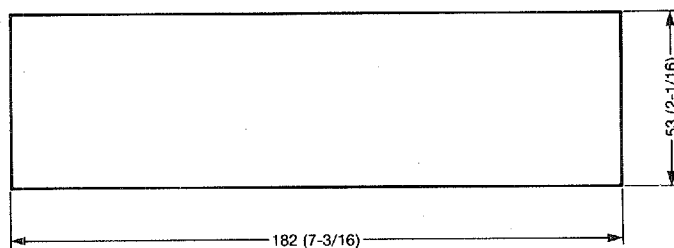
Depending on the car and mounting location, cutting or drilling may be necessary for proper installation and fit. Please consult your YAMAHA dealer before attempting installation.

### ■ LOCATION

Do not install the unit where it will be exposed to extreme temperatures, such as near the car heater, air conditioner or in direct sunlight. Try to mount the unit where it will not interfere with your driving nor be subject to excessive vibration and dust.

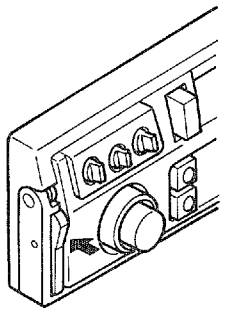
### ■ MOUNTING

1. Make the holes in the dashboard as shown in the illustration.

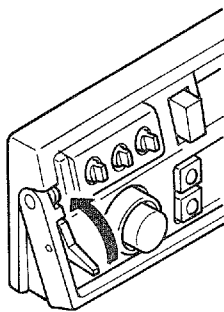


Unit: mm (inch)

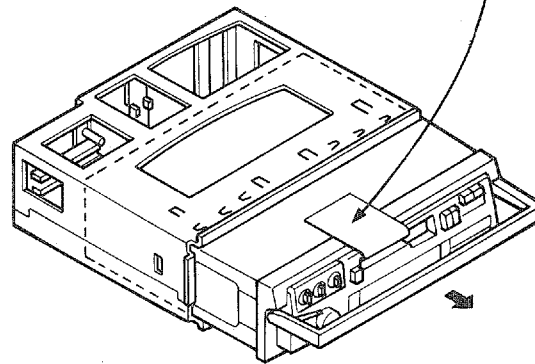
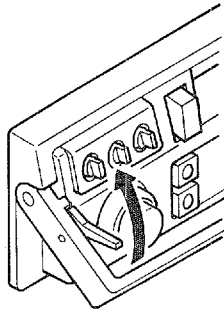
2. Remove the unit from the mounting holder as shown in the illustrations.



Push on the top of the small lever.



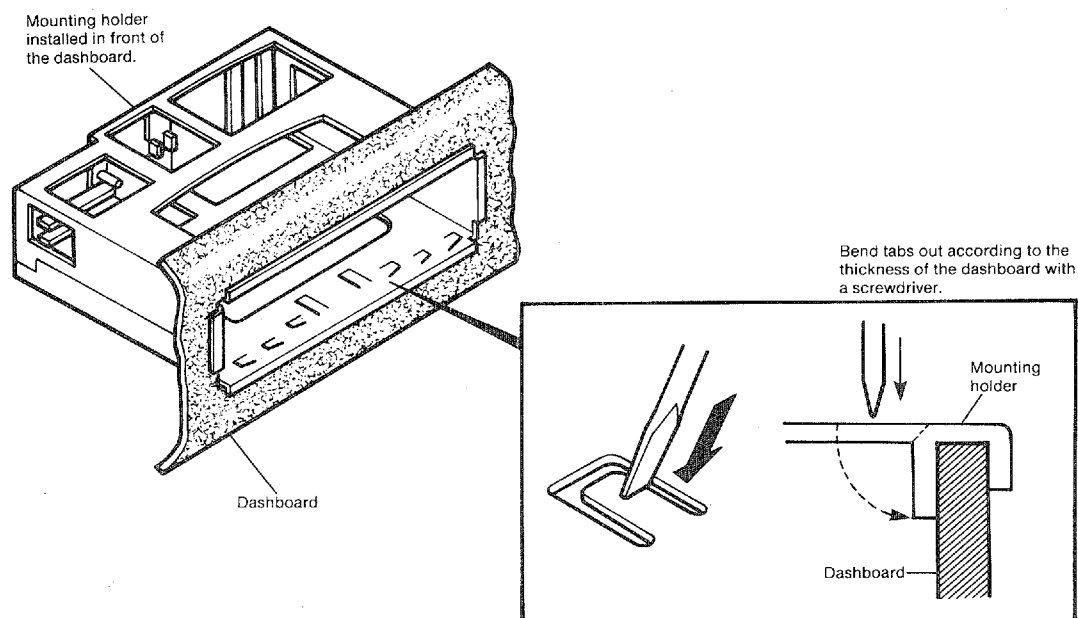
Raise the small lever, so that the handle of the unit comes out.



Before installing the unit, be sure to remove this label. After connection, be sure to press the ◀▶ and ▶▶ buttons simultaneously to initialize the unit.

Remove the unit from the mounting holder by pulling on the handle.

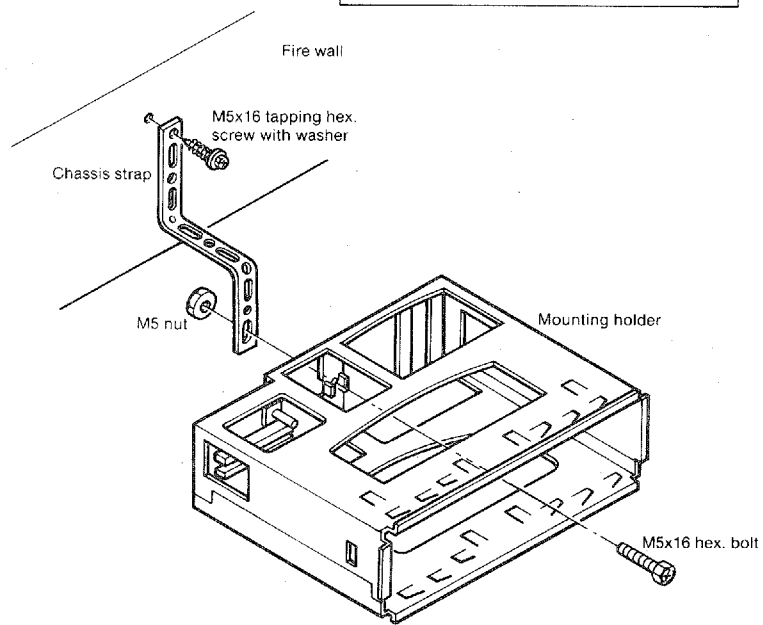
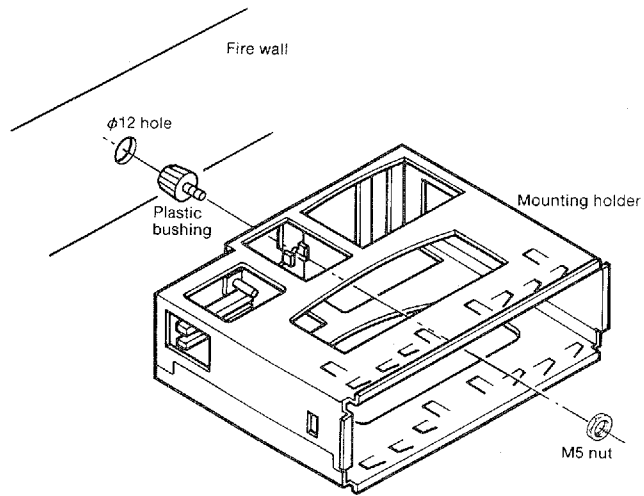
3. Install the mounting holder as shown in the illustration.



4. Secure the rear part of the mounting holder with the supplied plastic bushing or chassis strap as shown in the illustrations.

Be sure to secure the rear of the mounting holder with the chassis strap or plastic bushing. Otherwise, the unit may be damaged.

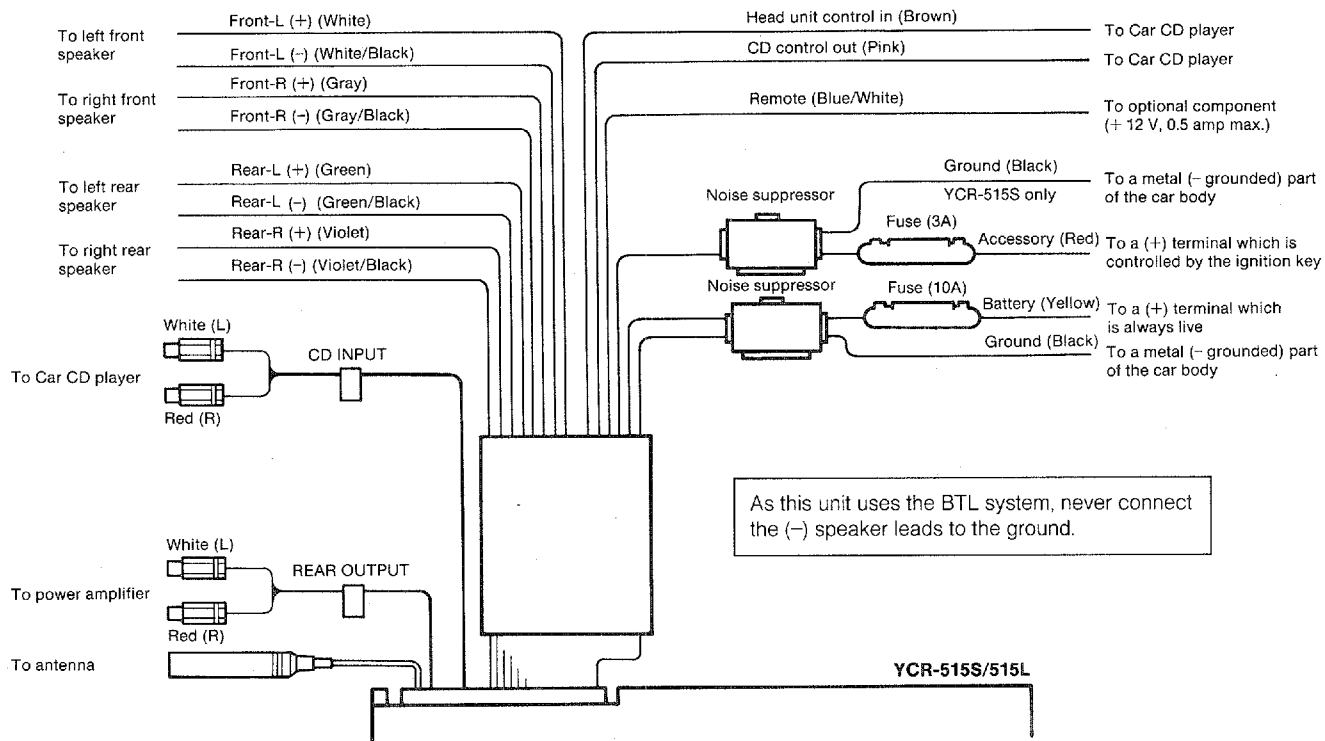
ENGLISH



5. Securely slide in the unit into the mounting holder.

# CONNECTIONS

When connecting a car CD other than a YAMAHA car CD player, connect the Head unit control-in lead (Brown) to the CD control-out lead (Pink).





1. Before making any connection, be sure to remove the ground cable from the negative (-) terminal of the car battery, to prevent accidental short-circuiting during installation.
2. Refer to the diagram for proper wiring. Be sure to make good, well insulated connections.
3. Upon completion of all wiring and connections, recheck them once more for proper, secure, and insulated connections.

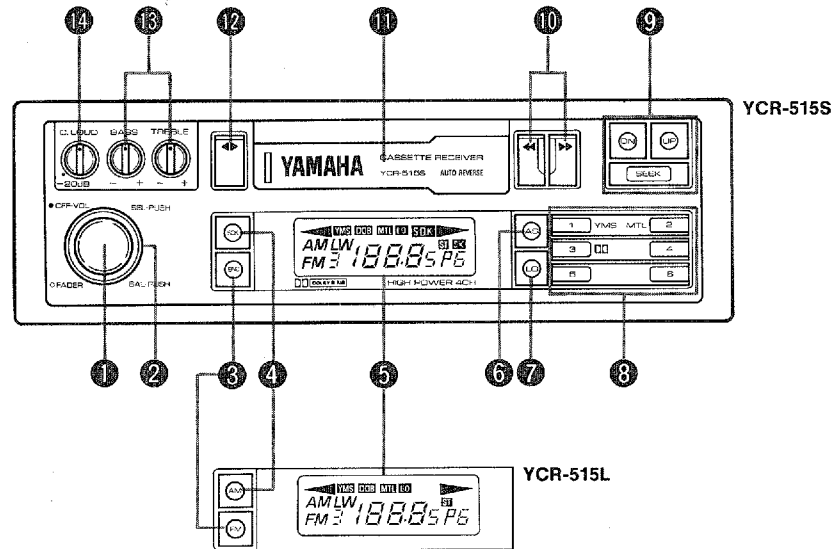
## ■ OPTIONAL EXTERNAL COMPONENTS

The REMOTE power lead and the OUTPUT plugs are provided to add other components to the unit. The REAR OUTPUTs can be connected to a power amplifier. The signal through these OUTPUT plugs are controlled by all controls (FADER, etc.). The REMOTE lead is supplied to control the power ON/OFF of the connected audio component or power antenna.

### **CAUTION:**

Never use the REMOTE lead to drive other components. The capacity of the REMOTE lead is +12V, 0.5A max. The power consumption of the connected component must not exceed the capacity of the REMOTE lead. Otherwise, the unit may be damaged.

## CONTROLS AND FUNCTIONS



### 1 OFF-VOL/SEL-PUSH control

Turn this control clockwise to turn the unit on; continue turning it to the right to increase volume. Turn the control counterclockwise to decrease the volume. To turn off the unit, turn it counterclockwise until it clicks.

This control is also used to select the source to be listened to.

Pressing this control switches the unit to radio mode, to cassette tape mode, to CD mode, and then back to radio mode. When a cassette tape is loaded into this unit and a compact disc is loaded into the car CD player, play starts automatically in the selected mode.

- When a cassette tape is not loaded, pressing this control switches the unit between radio mode and CD mode. When a compact disc is not loaded into the car CD player, pressing this control switches the unit between radio mode and cassette tape mode.

### NOTE:

Since the cassette tape is not ejected when the unit is switched to radio mode or CD mode, be sure to eject the cassette tape before trying to listen to another cassette tape.

**② FADER/BAL-PUSH control**

Turning this control adjusts the balance between the front and rear speakers. Turning to the right decreases the volume of the rear speakers; turning to the left decreases the volume of the front speakers.

The FADER simultaneously controls the balance of the signal levels through the REAR OUTPUTs and the front speaker leads.

To adjust the balance (the relative volume levels of the left and right speakers), while pushing in the knob, turn the control clockwise to decrease the left speaker's output, or turn it counterclockwise to decrease the right speaker's volume.

**③ BAND button (YCR-515S only)**

Each time this button is pressed, the reception band will be changed in the following sequence ; FM 1 → FM 2 → FM 3 → AM (MW) → LW.

**FM button (YCR-515L only)**

Press this button to receive the FM. Each time this button is pressed, the range will be changed in the following sequence; FM 1 → FM 2 → FM 3.

**④ SDK switch (YCR-515S only)**

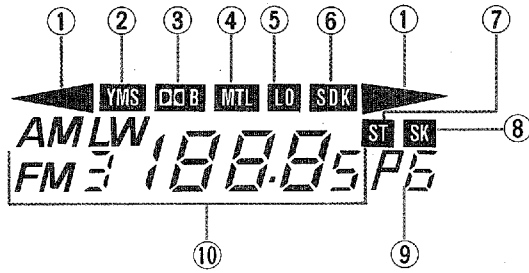
Press this switch to receive the traffic information station. See the "RECEIVING TRAFFIC INFORMATION" section described later on this manual.

**AM button (YCR-515L only)**

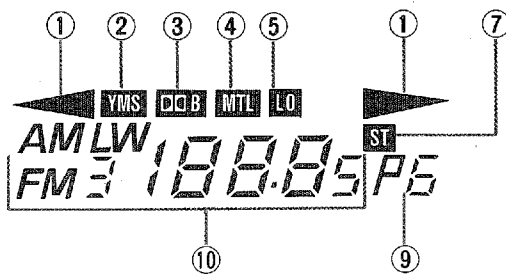
Press this button to receive the AM (MW) or LW. Each time this button is pressed, AM (MW) and LW reception will alternate.

## ⑤ Display window

YCR-515S



YCR-515L



### ① Play direction indicators

Indicate the tape transport direction.

### ② YMS indicator

This indicator lights when the YAMAHA Music Search circuitry is activated.

### ③ B indicator

This indicator lights when the Dolby B noise reduction is activated.

### ④ MTL (metal) indicator

Lights when the MTL (METAL) circuitry is activated with the MTL button.

### ⑤ LO (local) indicator

Lights when the unit is set to local mode with the LO button.

### ⑥ SDK indicator (YCR-515S only)

Lights when the SDK function is activated with the SDK switch.

### ⑦ ST (stereo) indicator

Lights when an FM stereo broadcast with a sufficient signal strength is received.

### ⑧ SK indicator (YCR-515S only)

Lights when a traffic information station is received.

### ⑨ Preset station display

This displays the selected preset station with a "P" and the preset's number.

### ⑩ Frequency display

When radio mode is selected, the reception band and frequency are displayed. When CD mode is selected, "Cd" is displayed.

## NOTE:

In the extremely high temperature condition, the display may be faint but this is not a failure. The display returns to the normal condition when the temperature is lowered.

**⑥ AS (Auto Scan/Auto Store) button**

This button has a dual purpose; Auto Scan and Auto Store.

**Auto Scan:**

When this button is pressed for less than about 2 seconds, the receivable preset stations are scanned in the direction previously designated by DN or UP button and can be listened to for about 5 seconds.

- For weak stations, the Auto Scan function cannot be carried out, even when they are preset.

When the desired station is received, press the AS button or corresponding preset button to stop auto scanning.

**Auto Store:**

When this button is pressed for more than about 2 seconds, the Auto Store function will be carried out first in Local mode. The reception band is scanned for the stations having a strong signal. Scanning starts from the displayed frequency and the stations are automatically stored in the preset memory, beginning at a low preset number, in turn.

When the preset memories are not filled with stations scanned with the Auto Store function in Local mode, scanning returns to the first displayed frequency and the Auto Store function starts again, in Normal mode, for the remaining preset memories. The reception band is scanned for stations of sufficient signal strength.

**NOTE:**

When the auto store function is activated, the previously preset stations are erased.

When the auto store function is completed, the unit receives the last received station.

When receivable station cannot be found, the auto store function stops with the first displayed frequency.




**⑦ LO (local) button**

Sometimes, if you get relatively close to a radio broadcasting station, the signal strength can become too strong and sound quality may suffer. In this case, press this button to switch to Local mode. The LO indicator lights on the display.

Normally, use the unit in Normal (DX) mode (the LO indicator is not lit). Each time this button is pressed, Local mode and Normal mode reception will alternate.

**⑧ Preset buttons**

During radio operation, pressing these buttons for more than about 2 seconds presets up to 6 AM (MW), 6LW and 18 FM stations into the tuner's memory for one-touch tuning, and pressing these buttons for less than about 2 seconds receives the memorized station in each preset button. In addition to these tuner functions, the following 3 buttons also operate during tape play:

- 1 YMS button:** During cassette tape operation, the button controls the YAMAHA Music Search circuitry. Press this button once to activate the YMS (indicator lights), and press it again to turn it off (indicator goes out).
  - 2 MTL button:** During tape operation with a metal or chrome type tape, press this button to activate the MTL tape equalization.
  - 3  button:** This button activates and deactivates the Dolby B NR noise reduction circuitry. When playing tapes recorded with Dolby B NR, press this button; the  B indicator lights. When playing tapes recorded without Dolby B NR, turn the Dolby B NR off by pressing the button again; the indicator goes out.
- \* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

### ⑨ DN/UP/SEEK buttons

#### DN/UP button:

Press these buttons to increase (UP) or decrease (DN) the reception frequency.

#### SEEK button:

When this button is pressed, the reception band is scanned for the receivable stations in the direction designated with the UP or DN button. When this button is kept pressed, the reception frequency is continuously decreased or increased.

### ⑩ ◀◀ and ▶▶ fast wind buttons

To fast forward or rewind the tape, press either of these buttons according to the illumination of the direction indicators. For example, when the ▶ play direction indicator is lit, pressing the ▶▶ button fast forwards the tape, while the ◀◀ button rewinds the tape. Conversely, when the ◀ play direction indicator is lit, the fast wind buttons reverse functions. When both buttons are pressed simultaneously, the cassette is ejected.

### ⑪ Cassette compartment

Remove any tape slack in a cassette. Position the cassette with the exposed tape side to the right and slide the cassette into the compartment. Playback automatically begins.

### ⑫ ◀ ▶ reverse program button

While playing a tape, press this button to play the opposite side of the cassette. The play direction indicators in the display will change accordingly.

While fast forwarding or fast rewinding a tape, pressing this button starts the tape playback.

### ⑬ BASS and TREBLE controls

Turning the control to the right increases the high (TREBLE) or low (BASS) frequency response. Turning it to left decreases the high or low frequency response.

### ⑭ C.CLOUD-20dB control


This control adjusts the continuous loudness function which compensates for the human ear's diminished ability to hear low and high frequencies at low volume levels. To set the control, proceed as follows:

1. Turn the C.CLOUD-20dB control fully to the right.
2. Set the OFF-VOL control to a level slightly above the desired volume level.
3. Turn the C.CLOUD-20dB control knob to the left until the desired volume level is attained.

The more this control is turned to the left, the more the volume level drops (up to 20 decibels) and the greater the loudness effect.

#### LAST SELECTION CALL

When power is turned on, the mode selected before power was turned off will automatically be set.

When power is turned off during a cassette tape operation, cassette tape mode will resume with the last setting of the reverse program button, and the YMS, MTL and  buttons when power is restored.









When power is turned off during a radio operation, radio mode will resume and the last received frequency is displayed along with the settings of the LO, SDK and preset station buttons.

#### When the YAMAHA YCD-500 Car CD player is connected:

When power is turned off during CD operation, CD mode will resume when power is turned back on. According to the type of the vehicle, CD memory function is not retained.

## OPERATION

### ■ TO LISTEN TO CASSETTE

1. Turn the OFF-VOL/SEL-PUSH control to the right.
2. Insert a cassette into the cassette slot.
3. The tape playback automatically starts.
4. If a METAL tape is loaded, press the MTL button to activate the METAL tape equalization circuitry.
5. If the loaded tape is encoded with Dolby B, press the  button to activate the Dolby B circuitry and decode the tape.
6. Adjust the VOL, BASS and TREBLE controls as desired.
  - To fast forward or rewind the tape, press either of the  or  button according to the illumination of the play direction indicators.
  - **YMS:** To search for the next selection, press the YMS button to activate the music search function. Press the fast wind (  or  ) button pointing in the same direction as the play direction indicator.  
To search for the beginning of the selection being played, press the YMS button to activate the music search function. Press the fast wind button pointing in the opposite direction of the play direction indicator. The tape will be fast wound to the beginning of the current selection and play will begin. If the selection previous to the current one is desired, press the same fast wind button again. The tape will be searched for the beginning of the previous selection, stop and begin play. In this way, selections can easily be searched for.
  - To play the reverse side of the tape, press the  reverse program button.
  - To stop cassette playback, simultaneously press both the  and  buttons. The cassette will be ejected and the radio mode is selected.

- When either radio or CD mode is selected with the SEL-PUSH control, the cassette is not ejected, but tape play stops and the unit enters the selected mode.

### ■ TO LISTEN TO A CD

1. Turn the OFF-VOL/SEL-PUSH control to the right.
2. When a YAMAHA car CD player is used and the Head unit control-in and CD control-out leads are connected, loading a compact disc into the CD player starts CD play.
3. Set the volume control of the CD player to the maximum position, then adjust the volume with the OFF-VOL/SEL-PUSH control of this unit. To adjust the tone, the BASS and TREBLE controls of this unit can be used.
  - \* It is advisable to adjust the volume control of the CD player to the maximum position beforehand. Otherwise, the difference in the volume level between CD mode and cassette tape/radio modes is noticeable.
- When a compact disc is ejected, the unit enters radio mode.
- When either radio mode or cassette mode is selected with the SEL-PUSH control, CD play stops and the unit enters the selected mode.

#### **When a car CD player other than a YAMAHA car CD player is connected to this unit**

1. Turn the OFF-VOL/SEL-PUSH control to the right.
2. Press the SEL-PUSH control so that "Cd" appears on the display.
3. Load a compact disc into the CD player. The CD player enters play mode.
- The unit does not enter radio mode even when the compact disc is ejected. To listen to the radio, select radio mode with the SEL-PUSH control.

## ■ TO LISTEN TO RADIO

Since there are three ways to tune your unit, you can select the best method according to the signal strength or your preference.

### **SEEK TUNING:**

To find a station of sufficient signal strength.

### **MANUAL TUNING:**

To receive a weak station.

### **PRESET TUNING:**

To receive a preset station with one-touch tuning.

### **NOTE (YCR-515S only):**

When the SDK indicator is lit, the unit seeks for a traffic information station.

To tune the desired station, press the SDK switch so that the SDK indicator goes off.

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### **SEEK TUNING**

1. Turn the OFF-VOL/SEL-PUSH control to the right.
2. If the unit is set to a mode other than radio, press the SEL-PUSH control so that the frequency appears on the display.
3. Select the reception band.

#### **YCR-515S:**

Each time the BAND button is pressed, the reception band will be changed in the following sequence; FM (FM 1 → FM 2 → FM3) → AM (MW) → LW .

#### **YCR-515L:**

Each time the AM button is pressed, AM (MW) and LW will alternate. For FM, press the FM button.

4. Activate the tuning SEEK function by pushing in the SEEK button.
  5. If an undesired station is received, press the SEEK button again.
  6. Adjust the VOL, BASS and TREBLE controls to your preference.
- When an FM stereo broadcast with sufficient signal strength is received, the ST indicator lights.

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### **MANUAL TUNING**

For weak stations, use the manual tuning mode.

1. Turn the OFF-VOL/SEL-PUSH control to the right.
2. If the unit is set to a mode other than radio, press the SEL-PUSH control so that the frequency appears on the display.
3. Select the reception band.

#### **YCR-515S:**

Each time the BAND button is pressed, the reception band will be changed in the following sequence; FM (FM 1 → FM 2 → FM3) → AM (MW) → LW .

#### **YCR-515L:**

Each time the AM button is pressed, AM (MW) and LW will alternate. For FM, press the FM button.

4. Press the DN or UP button to receive the desired station.
  5. Adjust the VOL, BASS and TREBLE controls to your preference.
- In the manual tuning mode, the FM stereo broadcast is heard in monaural.



## PRESET TUNING

When stations are preset, you can receive a desired station by simply pressing the corresponding preset station button.

Each preset station button can store three FM, one AM (MW) and one LW stations.

### PRESETTING STATIONS

#### ● Manual presetting

1. Turn the unit on.
2. If the unit is set to a mode other than radio, press the SEL-PUSH control so that the frequency appears on the display.
3. Select the range 1 of FM reception.  
**YCR-515S:**  
 Press the BAND button so that the "FM 1" appears on the display window.  
**YCR-515L:**  
 Press the FM button so that the "FM 1" appears on the display window.
4. Tune in a station to be preset and press one of the preset station buttons for more than about 2 seconds. The displayed frequency is stored in memory.
5. Perform step 4 for other preset station buttons. When the presetting is completed for range 1, press the BAND button (YCR-515S) or FM button (YCR-515L) to select the range 2 and perform step 4 for 6 preset station buttons of the range 2. When the presetting is completed for range 2, press the BAND button (YCR-515S) or FM button (YCR-515L) to select the range 3 and perform step 4 for 6 preset station buttons of the range 3.
6. For AM (MW) reception, press the BAND button (YCR-515S) or AM button (YCR-515L).
7. Perform step 4 for 6 preset station buttons.

8. For LW reception, press the BAND button (YCR-515S) or AM button (YCR-515L).

9. Perform step 4 for 6 preset station buttons.

#### ● Auto storing

1. Turn the unit on.
2. If the unit is set to a mode other than radio, press the SEL-PUSH control so that the frequency appears on the display.
3. Press the AS button for more than about 2 seconds. The reception band is scanned for the receivable stations from the displayed frequency and they are automatically stored in the preset memory from low preset number in turn. For the FM reception, the frequency will be stored in the range from FM 1 to 3.
- When the SDK switch is pressed on, the Auto Store function cannot be carried out.

### PRESET TUNING

#### ● Auto scanning for preset stations

1. Turn the unit on.
2. If the unit is set to a mode other than radio, press the SEL-PUSH control so that the frequency appears on the display.
3. Press the AS button for less than about 2 seconds. The receivable preset stations are scanned in the direction previously designated by DN or UP button, and can be listened to for about 5 seconds.
- For weak stations, the Auto Scan function cannot be carried out, even when they are preset.
4. When the desired station is received, press the corresponding preset button or AS button to stop the auto scanning.
5. Adjust the VOL, BASS and TREBLE controls to your preference.
- When the SDK switch is pressed on, the Auto Scan function cannot be carried out.

● **Manual preset tuning**

1. Turn the unit on.
2. If the unit is set to a mode other than radio, press the SEL-PUSH control so that the frequency appears on the display.
3. Select the reception band.

**YCR-515S:**

Each time the BAND button is pressed, the reception band will be changed in the following sequence; FM (FM 1 → FM 2 → FM3) → AM (MW) → LW .

**YCR-515L:**

Each time the AM button is pressed, AM (MW) and LW will alternate. For FM, press the FM button.

- \* For FM, select the range of the band with the BAND button (YCR-515S) or FM button (YCR-515L).
4. Press the preset station button for less than about 2 seconds to receive the desired preset station.
  5. Adjust the VOL, BASS and TREBLE controls to your preference.

■ **RECEIVING TRAFFIC INFORMATION  
(for YCR-515S only)**

This model is equipped with traffic information receiving circuitry to be used in West Germany where traffic information is broadcast in FM. The following is a description of how to use this unit to receive traffic information broadcasts.

1. Select the FM with the BAND button.
2. Press the SDK switch and tune to a station. If the station is a traffic information station, the SK indicator will light to show that a broadcast from a traffic information station is being received. In SDK mode, stations other than traffic information stations are skipped, and the unit scans for traffic information stations in the direction last selected with the tuning DN/UP buttons. This feature makes it easy to locate traffic information stations.

**NOTES:**

- When a traffic information station is received, the SK indicator lights regardless of the position of the SDK switch.
- Even if the OFF-VOL control is set to the minimum volume position, the volume of the traffic information broadcast will be output with the proper level when a signal is detected. After the message is over, the sound volume returns to the previously adjusted level.
- If traffic information reception is no longer necessary, release the SDK switch for normal radio reception.

## CONTINUOUSLY VARIABLE LOUDNESS

ENGLISH

When the signal of the tuned-in traffic information station becomes weak, the SK indicator goes out.

Then, after about 25 seconds, the unit seeks for a stronger station in the direction last set with the tuner DN/UP buttons. When the seek function reaches the frequency at the extreme edge of the FM frequency band, the seek function restarts from the opposite extreme edge and the seek function continues until it finds a station or until it reaches the opposite extreme edge. If a receivable station cannot be found, a rhythmical alarm will start to sound and the unit continues to seek for an information station.

\* Since the alarm will continue to sound if no signal from any traffic station can be received, release the SDK switch to enter the previous mode (normal radio broadcast reception, cassette play, or CD play).

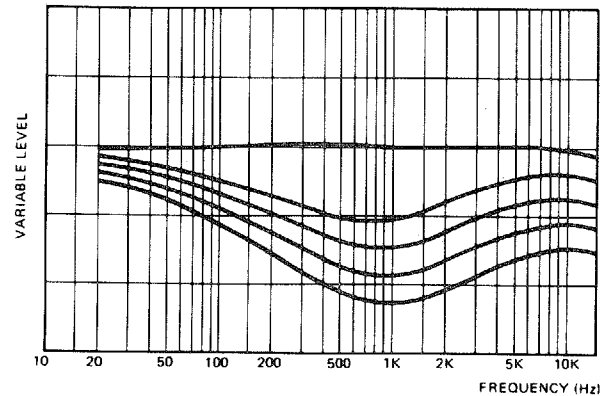
### During cassette tape or CD play operation

When a traffic information broadcast begins with the SDK switch pressed on, play is interrupted and the mode is switched to reception of the traffic information station last received. When a station having no traffic information is received, the unit seeks for a traffic information station. When the traffic information message is over, the unit automatically returns to play mode.

- When a traffic information station is received, the preset station buttons will not function to store the station in the tuner's memory.

The YAMAHA Continuously Variable Loudness control provides compensation for the human ear's loss of sensitivity to high and low frequency sounds at low listening levels.

The Continuously Variable Loudness control provides a maximum of 20 dB attenuation at middle range, resulting in full tonal perspective even at reduced listening levels and the most accurate compensation at any listening level.



## SPECIFICATIONS

### FM TUNER SECTION

#### Mono Usable Sensitivity

YCR-515S: DIN S/N 26 dB	1.3 $\mu$ V (2.3 dB $\mu$ )
YCR-515L: IHF 3.2% THD	2 $\mu$ V (6.0 dB $\mu$ )
Alternate Channel Selectivity	70 dB
IF Response Ratio	70 dB
Signal to Noise Ratio (Mono)	
YCR 515S	65.0 dB
YCR-515L	70.0 dB
Harmonic Distortion (1000 HZ)	Mono 0.6%
	Stereo 0.7%
Frequency Response	40 — 16,000 Hz $\pm$ 3 dB
Tuning Range	87.5 — 108.0 MHz (50 kHz step)

### AM TUNER SECTION

#### Usable Sensitivity

MW	25.1 $\mu$ V (28 dB $\mu$ )
LW	31.6 $\mu$ V (30 dB $\mu$ )
Selectivity	50 dB
Tuning Range	
MW	522 — 1620 kHz (9 kHz step)
LW	153 — 281 kHz (1 kHz step)

### DECK SECTION

Wow and Flutter	Less than 0.08% WRMS
Frequency Response	40–16,000 Hz $\pm$ 3 dB (120 $\mu$ s)
	40–17,000 Hz $\pm$ 3 dB (70 $\mu$ s)
Signal to Noise Ratio (A weighted)	54 dB (120 $\mu$ s)
	58 dB (70 $\mu$ s)
with Dolby B NR (A weighted)	63 dB (120 $\mu$ s)
	67 dB (70 $\mu$ s)

### AUDIO SECTION

#### Power output (1 kHz, 4 ohms)

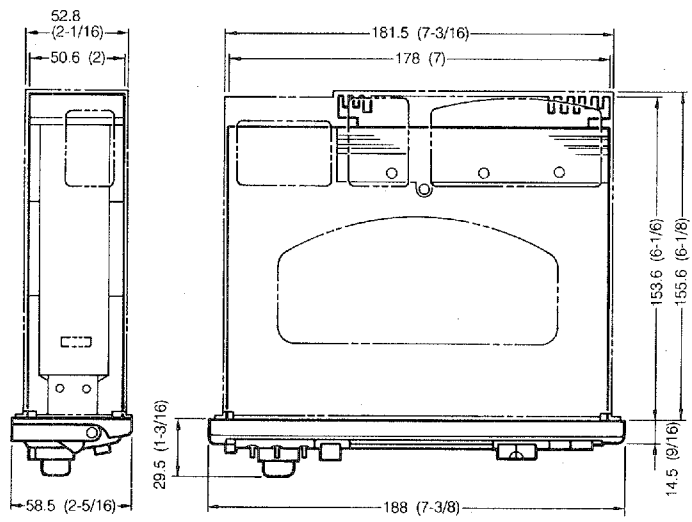
max.	20W (1 channel driven) x 4
10% THD	15W (1 channel driven) x 4
Bass Control	$\pm$ 10 dB at 100 Hz
Treble Control	$\pm$ 10 dB at 10 kHz
Continuous Loudness	-20 dB (1 kHz)
REAR OUTPUT Impedance	Less than 1k ohms
REAR OUTPUT Level	More than 1.0V
CD Input Sensitivity	380 $\pm$ 80 mV

### GENERAL

Operating Voltage	DC 14.4V (negative ground)
Dimensions (W x H x D)	188 x 58.5 x 185.1 mm
	(7-3/8" x 2-5/16" x 7-5/16")
Weight	1.8 kg (3 lbs. 15 oz.)

Specifications subject to change without notice.

# DIMENSIONS



Unit: mm (inch)

ENGLISH