

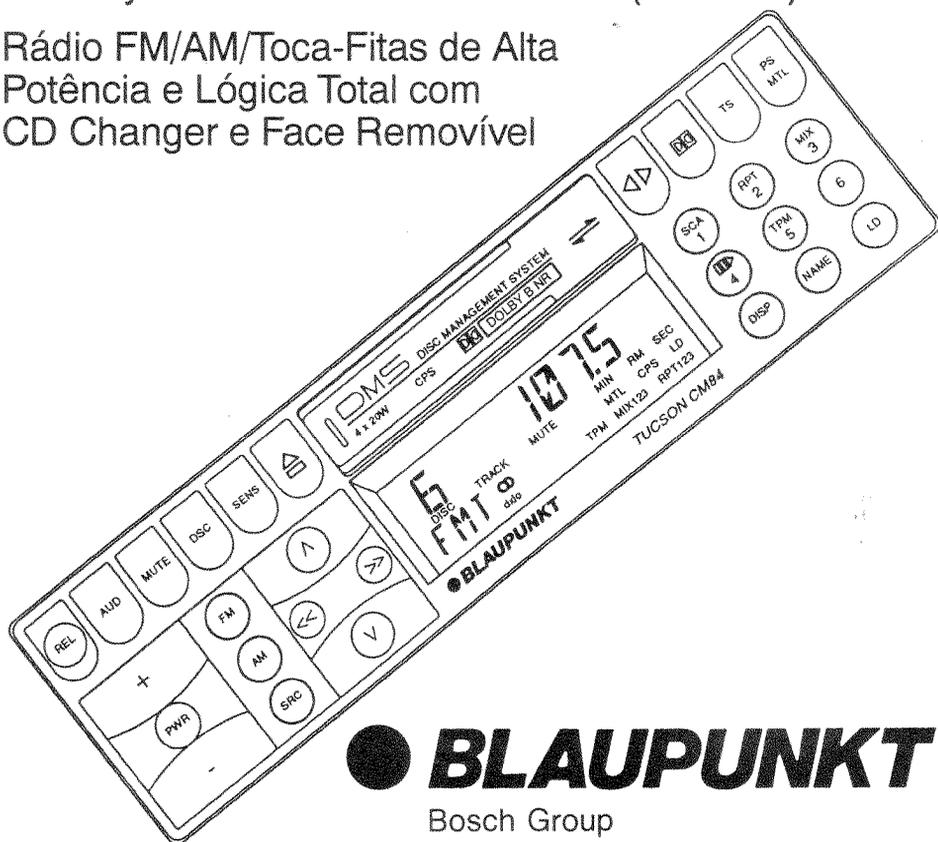
# TUCSON CM84

Full Logic, High-Power FM/AM/Cassette Receiver with CD Changer Control and Fully-Detachable Face

Auto-Radio/Cassette AM/FM de Forte Puissance avec Logique Intégrale, Changeur de CD et Face Avant Amovible

Receptor FM/AM/Reproductor de Cassette de Alta Potencia y Lógica Total con Control para Cambiador de CD y Panel Frontal Desmontable (Carátula)

Rádio FM/AM/Toca-Fitas de Alta Potência e Lógica Total com CD Changer e Face Removível



**BLAUPUNKT**

Bosch Group

# FCC Warning

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The equipment has been tested and found to comply with the limits for a Class B device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with instructions, may cause harmful interference with radio communications. However, there is no guarantee that radio interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet or circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

# Owner's Record

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The model and warranty numbers are located on the top of the unit. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Blaupunkt dealer regarding this product.

Model No. TUCSON CM84  
Warranty Number \_\_\_\_\_

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# Features

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Congratulations on your purchase of the Blaupunkt TUCSON CM84 FM/AM/Cassette Receiver. Its HDT Phase Locked Loop (PLL) quartz High-Definition FM and AM Tuner and high-quality, full-logic, soft-touch cassette tape player provide the ultimate in sound reproduction. This unit also provides complete control of Blaupunkt's CDC-M5 10-disc CD Changer and many other great features:

- Tuner Features:
  - HDT High-Definition PLL Tuner
  - 24 FM/6 AM Station Presets Including 6 FM Travel Store Presets
  - Scan, Preset Scan and Preset Naming
  - Automatic and Manual Tuning
  - Local/Distant Reception Control
- Cassette Features:
  - Soft-Touch, Full-Logic Auto-Reverse Cassette Mechanism
  - True Fast-Forward/Rewind
  - Hard Permalloy Tape Head
  - Pinch Roller release
  - Dolby B Noise Reduction
  - Metal Tape Equalization
  - CPS-Cassette Program Search
  - Radio Monitor
  - Blank Skip
- CD Changer-Control Features:
  - Controls up to 10 Blaupunkt CDC-M5 CD changers
  - Disc and Track Up/Down and Scan
  - Magazine, Disc and Track Mix and Repeat
  - Fast Track Up/Down
  - Disc Naming
  - Pause/Play
  - Cue/Review
  - TPM Track Program Memory
- Audio Features:
  - 4 x 20 Watt Integrated Amplifier
  - 4-Channel RCA Preamp Output
  - Flex Fader
  - Volume/Balance/Fader Controls
  - Separate Bass and Treble Controls for each Sound Source
  - Loudness Button
  - –20 dB Mute
  - Portable Input Jack
  - ASU Impulse Noise Quieting
  - Portable Input Jack
- DSC (Direct Software Control) Adjustable Features:
  - Tape and Radio Scan Time
  - lo/dx Tuning Threshold
  - Loudness Boost Levels +9 or +18 dB @ 60 HZ
  - Turn-On Volume-Level
  - Confirmation Beep On/Off
  - Programmable Turn-On Message, On/Off
  - Demo Message On/Off
  - Cassette Radio Monitor On/Off
  - Switchable Green/Amber Illumination/Display Color
- General Features:
  - Fully-Detachable Faceplate for Security w/Soft-Leather Case
  - Switchable Clock/Function LCD Display
  - Cellular Phone Mute
  - Includes Mounting Hardware and Wire Harness
  - DIN/ISO Mounting Chassis

Your unit's fully-detachable front faceplate makes the unit useless to would-be thieves.

# Precautions

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- If your vehicle was parked in direct sunlight resulting in a considerable rise in temperature inside the vehicle, allow the unit to cool off before operating your unit.
- If no power connection is supplied to the unit, check the connections first. If everything is in order, check the fuse.
- If no sound comes from the speakers of a two-speaker system, set the fader control to the center position.
- You are cautioned that any changes or modifications not expressly approved in this manual could void your warranty.
- If you have any questions or problems concerning your unit that are not covered in this manual, please contact your Blaupunkt dealer.

# Detachable Face

## Detaching & Attaching the Face:

The face of this unit can be detached and taken with you to prevent it from being stolen.

### Detaching the Face:

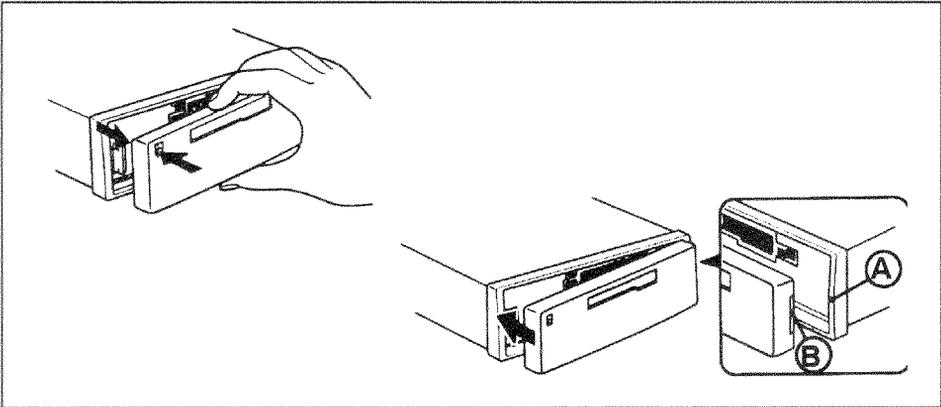
Before detaching the face, be sure to press the PWR Button first. Then press the REL (Release) Button and detach the face by gently pulling it off as illustrated.

**Note:** Do not pull it straight out from the chassis. Be sure not to drop the face when detaching it from the chassis.

### Attaching the Face:

Apply the right hand side of the face to the chassis by sliding (part B) of the face to (part A) at the front of the chassis. Gently push the left side of the face against the front of the chassis until it snaps into place.

**Note:** Make sure that the face is inserted right side up. Do not press against the display window. Do not press hard against the face when attaching it to the chassis, it may be easily attached with gentle pressure. When carrying the face with you, put it in the carrying case. Do not expose the face to direct sunlight, heat sources such as hot air ducts or leave it in a humid place. Never leave it on the dash board of a vehicle parked in direct sunlight, where there may be a considerable rise in temperature inside the vehicle.



# Electrical Connections and Installation

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@/<?#&\*>@! To avoid the aggravation of costly mistakes and serious damage that could make you feel this way, please carefully follow all of the instructions. You'll be glad you did!

## GENERAL RECOMMENDATIONS

- If you're not confident that you can install the unit correctly, have it installed by a qualified Blaupunkt installation technician.
- Design and specifications subject to change without notice.
- We recommend making and testing all electrical connections before installing the unit.
- Be sure to detach the face before you start to connect or install the unit.

## ELECTRICAL CONNECTIONS

### Power Connections — To prevent short circuits and/or serious damage:

- Disconnect the vehicle battery's negative terminal before making connections.
- Use this unit only with negative ground 12 Volt (11-16 Volt) direct current (DC).
- Connect leads according to the wiring diagram.
- The total amperage required by the blue (remote) lead for triggering the antenna motor must not exceed 100 mA. We don't recommend connecting these leads to the main power input on an amplifier or anything else.
- The green cellular phone interrupt lead is for muting the audio sound while a cellular phone is in use. Connect this wire to the appropriate control terminal of the phone equipment.
- Connect the orange lead to the dashboard illumination lead.
- You can use the brown lead to the switch on an external amplifier. Connect this lead to the amplifier's remote input. (It should not be connected to the amplifier's power input.)
- Connect the red power input lead only after the other leads are connected. And be sure to connect it to a positive (+) 12 Volt power terminal that is energized only when the ignition key is set to the accessory position or on position.
- Connect the black lead to a grounded metal part of the vehicle. We recommend grounding all audio system black ground leads (head unit, external amplifier, etc.) to a common ground point.

### Speaker Connections

The Tucson CM84's Flex Fader allows you to fade between the front and the rear of the vehicle using either the speaker leads and/or the preamp outputs, providing you tremendous flexibility in configuring your speaker arrangement:

- You can connect speakers or speaker systems to each of the units' four speaker leads.
- You can connect the 4 RCA preamp outputs to external amplifiers and power up to four speakers or speaker systems to the amplifiers. (Blaupunkt amplifiers and speakers available separately).
- You can use a combination of these two methods, allowing your Tucson to provide sound to up to eight speakers or speaker systems.

### Speaker Lead Connections — To prevent short circuits, serious damage to the unit and/or speakers:

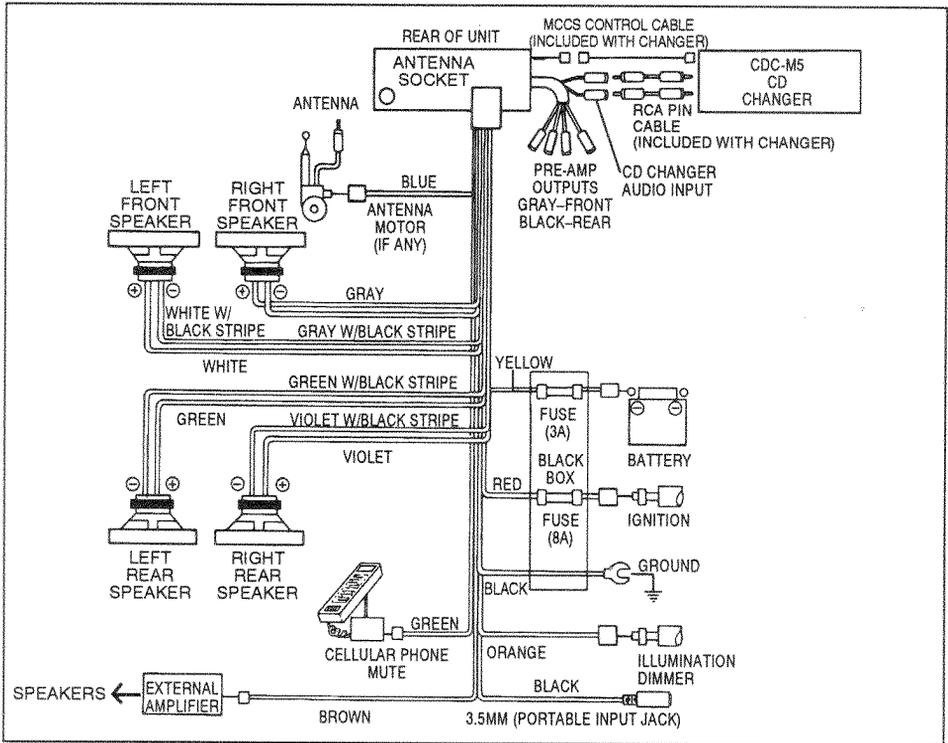
- Don't ground the speaker leads (or pre-amp outputs) to a metal part of the vehicle.
- Use speakers (or speaker systems) with 4 ohms minimum impedance that have adequate power-handling capabilities.
- Connect the speaker leads according to the wiring diagram.
- Don't connect more than one speaker (regular, co-axial or tri-axial) or (speaker systems) to each pair of speaker leads.
- Don't connect any active speakers (with built-in amplifiers) to the speaker leads.
- Don't connect the left and right speaker leads to each other or to the same speakers.
- Don't connect the front and rear speaker leads to each other or to the same speakers.

### Pre-Amp Output Connections To External Amplifier(s) — To prevent short circuits serious damage to the unit and/or speakers:

- Following the amplifier's instructions, connect the unit's preamp outputs to the external amplifier and connect the speaker(s) or speaker system(s) directly to the amplifier.

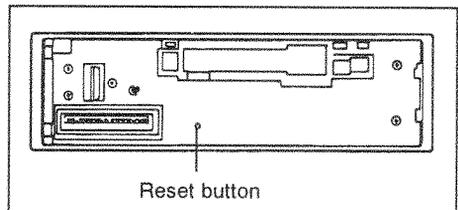
### CD Changer Connection

Follow the instructions that come with the changer.



## Resetting the Unit

After all of the electrical connections have been completed, but before operating the unit for the first time (or after reconnecting the car battery, etc.) press the reset button on the front of the unit with a ball-point pen. The reset button is located on the front of the unit.

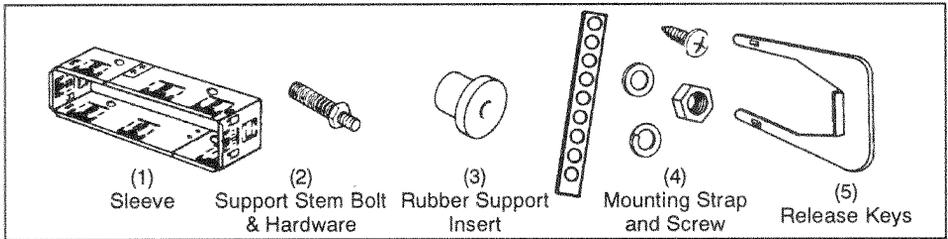


# Installation

## Recommendations

- Carefully choose the mounting location so that the unit won't interfere with normal driving.
- Avoid mounting locations where the unit would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- The illustration below shows a typical installation, however, you may need to adjust the installation, depending on the unit. If you have questions or need additional installation hardware, consult your Blaupunkt dealer.
- Make sure the unit is firmly anchored (preferably at both front and back) and does not vibrate.
- Press the reset button after completing the electrical connections and installation. The reset button is located on the front of the chassis.

## Mounting Hardware

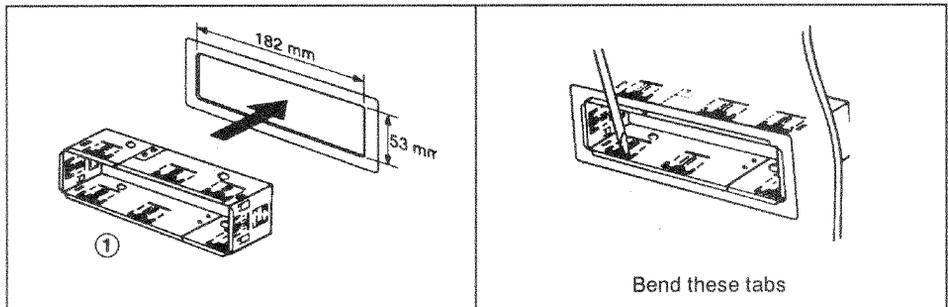


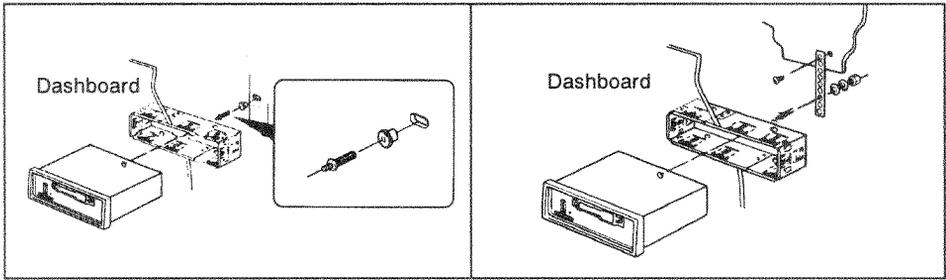
## Mounting The Unit in Most Dashboards

- 1 Install the Sleeve (1) in the dashboard.
- 2 Select and bend the appropriate tabs to hold the sleeve firmly in place.
- 3 **If your vehicle has a support hole behind its radio cavity:**
  - A. Attach the Support Stem (2) onto the back of the unit.
  - B. Insert the Rubber Support Insert (3) into the hole centered behind the radio cavity of the vehicle.
  - C. Slide the body of the unit into the sleeve until the support stem bolt slides into the rubber support insert and unit snaps into the sleeve.

### **If your vehicle doesn't have a support hole behind its radio cavity:**

- A. Attach the Mounting Strap (4) to the underside of the dashboard, using screw.
- B. Attach the back of the unit to the mounting strap using the support stem bolt and hardware.

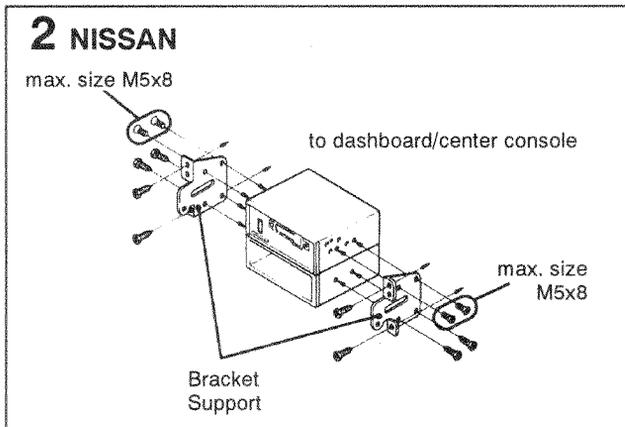
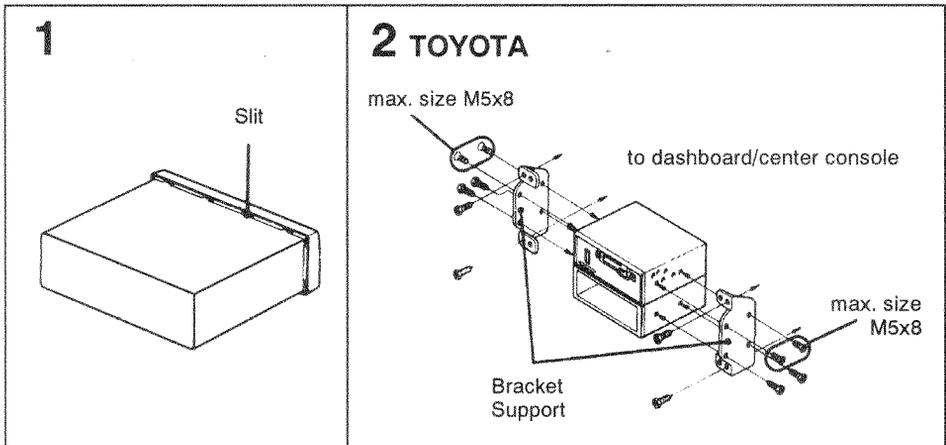




## Mounting the Unit in a Japanese Car

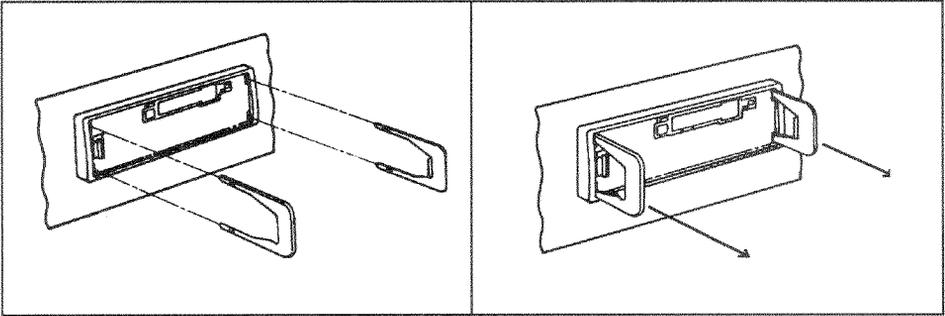
You may have difficulty mounting this unit in some Japanese cars that have ISO mounting features. In this case, consult your Blaupunkt dealer.

- 1 Run a blade along the slits on the back of the front trim ring and separate it from the unit. Discard the trim ring.
- 2 Use the vehicle's own mounting hardware to attach the unit.



## Removing the Unit

Use the Release Keys as shown below. Keep them in a safe place in case you need them in the future.



## Maintenance

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### Fuse Replacement

When replacing the fuse, be sure to use one with the correct amperage, which will be stated on the fuse case. Never use a fuse that has a stated amperage exceeding the one supplied for this unit, as this could cause malfunction and serious damage to the unit.

### Cleaning the Connectors

The unit may not operate properly if the connectors between the unit and the face are contaminated with dirt. In order to prevent this from happening, remove the face from the unit by pressing the REL (Release Button), then detach it and clean the connectors from time to time. Clean the connectors with a cotton swab. Be sure to clean them with a horizontal motion. Never clean them vertically, because this could damage the contact points.

# Specifications

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## Audio Power Specifications

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POWER OUTPUT AND TOTAL HARMONIC DISTORTION 13 watts per channel minimum continuous average power into 4 ohms, 4 channels driven, from 30-15,000 Hz with no more than 1% total harmonic distortion.

## Other Specifications

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### Power amplifier section

Outputs: Speaker output with bullet connectors  
Speaker impedance: 4-8 ohms  
Maximum power output: 20 W x 4 (at 4 ohms)  
Measured at 14.4 V

### Cassette section

Signal-to-noise ratio: 55 dB  
Tape WOW and Flutter: < 0.15%  
Tape frequency response: 30 - 18,000 Hz  $\pm$  3 dB

### Tuner section

#### FM

Tuning range: 87.7 - 107.9 MHz  
Antenna terminal: External antenna connector  
Intermediate frequency: 10.7 MHz  
Sensitivity: 13 dBf  
Selectivity: 75 dB at 400kHz  
Signal-to-noise ratio: 65 dB(stereo), 70 dB (mono)  
Harmonic distortion at 1 kHz: 0.7%(stereo), 0.3%(mono)  
Separation: 35dB  
Frequency response: 30 - 15,000 Hz  $\pm$  3 dB

#### AM

Tuning range: 530 - 1,710 kHz  
Antenna terminal: External antenna connector  
Intermediate frequency: 450 kHz  
Sensitivity: 13 dB $\mu$ V  
Signal-to-noise ratio: 55 dB  
Harmonic distortion at 1 kHz: 1.0%

### General

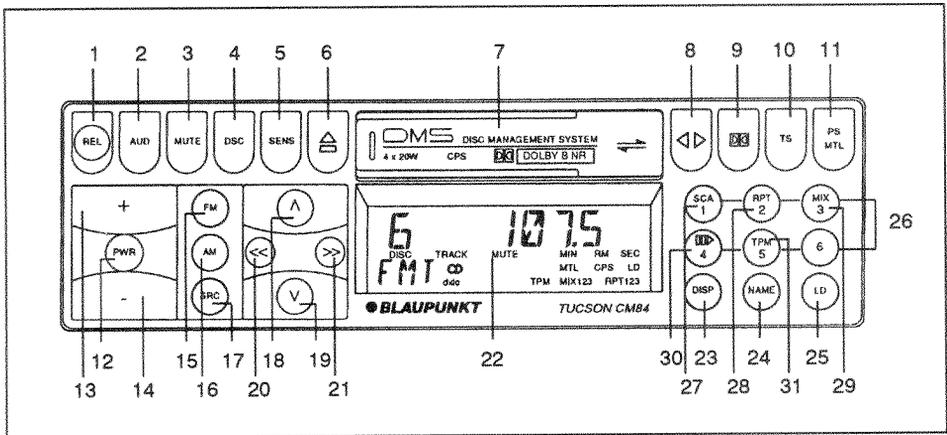
Tone controls: Bass  $\pm$  10 dB at 100 Hz  
Treble  $\pm$  10 dB at 10 kHz  
Power requirements: 12 V DC car battery (negative ground)  
Operating temperature:  $-10^{\circ}\text{C}$  to  $50^{\circ}\text{C}$  ( $15^{\circ}\text{F}$  to  $120^{\circ}\text{F}$ )  
Dimensions: Approx. 178 x 50 x 150mm (w/h/d) (7 x 2 x 6 in.) not incl. projecting parts and controls  
Mass: Approx. 1.7kg (3 lb. 12 oz.)  
Supplied accessories: Mounting hardware (1 set)  
Face plate case (1)

Design and specifications subject to change without notice.

### Optional accessories

CDC-M5 10 CD Changer  
9-404-230-283  
CDC Bridge  
9-404-230-290

# Location of Controls



1. REL (Release) Button
2. AUD (Audio Select) Button  
Bass Mode  
Treble Mode  
Balance Mode  
Fader Mode  
Preset Name Storing  
Name Character Completion
3. MUTE Button
4. DSC (Direct Software Control) Button
5. SENS Button
6. Cassette Eject Button
7. Cassette Door
8. Cassette Program Change Button
9. Dolby B Noise Reduction Button
10. TS Button
11. PS (Radio Scan/Preset Scan)/  
MTL (Metal Tape Equalization) Button
12. PWR (Power) Button
13. + Control:  
Volume +  
Bass +  
Treble +  
Name Character Selection  
TPM Skip/Play
14. - Control:  
Volume -  
Bass -  
Treble -  
Name Character Selection  
TPM Skip/Play
15. FM (FM Band-Select) Button
16. AM (AM Band-Select) Button
17. SRC (Audio Source) Button
18.  $\wedge$  Control  
Fade Rear  
Automatic Seek-Radio Tuning (Up)  
DSC (Direct Software Control)  
Feature Selection
19. V Control  
Fade to Front  
Automatic Seek-Radio Tuning (Down)  
DSC (Direct Software Control) Feature Selection  
Cassette Program Search (Backward)  
CD Disc Search (Backward)  
CD Fast Track Search (Backward)  
Clock Hour Adjustment (Down)
20.  $\ll$  Control  
Balance Left  
Manual Radio Tuning (Down)  
DSC (Direct Software Control) Feature Adjustment  
Cassette Fast-Rewind  
CD Track Search (Backward)  
Audible CD Track Review (Backward)  
Clock Minute Adjustment (Down)
21.  $\gg$  Control  
Balance Right Manual  
Manual Radio Tuning (Up)  
DSC (Direct Software Control) Feature Adjustment  
Cassette Fast-Forward  
CD Track Search (Forward)  
Audible CD Track Review (Forward)  
Clock Minute Adjustment (Up)
22. LCD Display Window
23. DISP Button
24. NAME Button
25. LD (Loudness) Button
26. FM/AM Preset Buttons
27. SCA (Tape and CD Scan) Button
28. RPT (Tape and CD Repeat) Button
29. MIX (CD Mix) Button
30.  $\lll>$  (CD Pause/Play) Button
31. TPM (Track Program Memory) Button

# It's Easy to Locate Selections With The Tucson CM84!

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Use the SRC Button to select the source — radio, cassette, CD changer, or portable input.

## **Use the 4-Way Rocker Switch to locate the selection:**

The unit's extra-versatile 4-Way Rocker Switch works in a similar fashion to locate music with radio, cassette tapes, and CD changers:

Use the  $\wedge$  and  $\vee$  Controls to move in typically larger steps, such as Radio Station Seek, Cassette Program Search, and CD Disc Selection.

Use the  $\ll$  and  $\gg$  Controls to move in typically smaller or "open-ended" steps, such as Radio Manual Tuning, Cassette Fast-Winding, and CD Track Selection and Audible Cue/Review.

## Instructions — General Operation

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Before operating the unit for the first time (or after reconnecting the car battery, etc.) press the reset button on the front of the unit with a ball-point pen. The reset button is located on the front of the unit. (See page 7.)

### **Turning Unit On**

Vehicle ignition must be on. To turn unit on, press PWR Button (12) or insert a tape.

### **Turning Unit Off**

Press the PWR Button (12) to turn the unit off.

### **Volume**

Press the + and - Controls (13 & 14) to increase or decrease the volume to the desired level. The relative volume level is indicated in the Display Window (22).

### **Mute**

To reduce the volume level by 20 decibels, press the MUTE Button (3). The "MUTE" indicator appears in the Display Window. To return to the previous volume level, press it again.

### **Loudness Control**

Press the LD Button (25) to increase sound level of the low and high frequencies, especially when listening at low volume levels. Choose between two Loudness settings under DSC for each source (except AM). The "LD" indicator appears in the display. To cancel, press this button again.

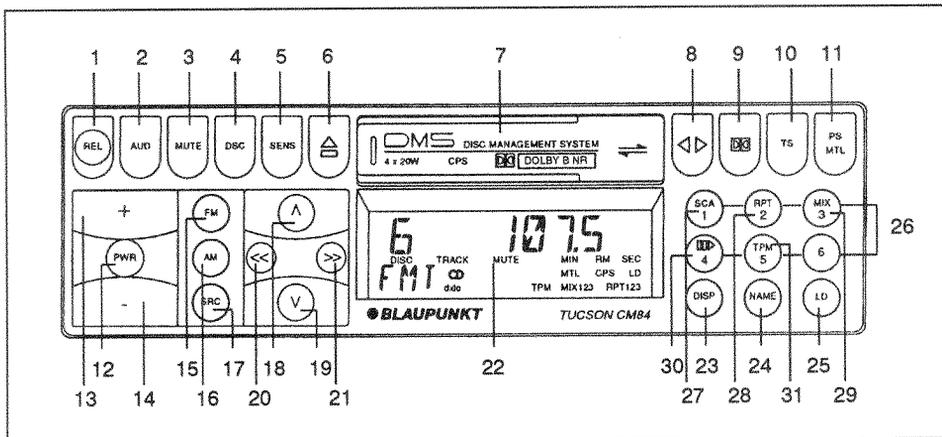
### **Setting the Clock**

Turn the ignition key to the on position and turn the unit on by pressing the PWR Button (12). If the clock does not appear in the display, press and release the DISP Button (23) until the clock appears in the display. Press the DISP Button again for more than two seconds until the clock starts blinking. Press the  $\wedge$  and  $\vee$  Controls (18 and 19) to set the hour, and press the  $\ll$  and  $\gg$  Controls (20 and 21) to set the minutes. Press the DISP Button again to activate the clock.

### **Changing the Information Displayed**

To change the display priority, press the DISP Button (23) and the display changes as follows:

During Radio Reception:	Station Name (If assigned) —> Frequency —> Clock
During Cassette Playback:	Program Indication —> Clock
During CD Playback:	CD Information —> Disc Name (If assigned) —> Clock
During Portable Playback:	"PORTABLE" —> Clock



To temporarily change the display between non-clock information in the radio and changer modes, press and release the NAME Button (24). After two seconds, the display changes back to the priority information.

### Source Selection

Press the SRC Button (17) to change the active audio source among radio, tape, CD or portable. The name of the new audio source is shown in the Display for at least one second, then reverts to the standard display, depending on the audio source. Inserting a tape at any time will turn the unit on or switch the unit into the tape mode.

### Bass and Treble

Select the desired source. Press AUD (Audio Select) Button (2) once to select the Bass mode, twice for the Treble mode. The level is indicated in the Display Window (22). Press the + Control (13) or - Control (14) to increase or decrease the level. Four seconds after you complete your adjustments, the display will revert to showing the sound source.\* You can set different bass and treble levels for AM, FM, tape, CD and Portable.

### Balance

Press AUD (Audio Select) Button (2) three times to select the Balance mode. The balance is indicated in the Display Window (22). Press the << Control (20) to increase the left speaker output or press the >> Control (21) to increase the right speaker output to the desired level.\*

### Fader

Press AUD (Audio Select) Button (2) four times to select the Fader mode. The level of output for front and back speakers is indicated in the Display Window (22). Press the ^ Control (18) to decrease the rear speaker output. Press the v Control (19) to decrease the front speaker output.\*

\*You can also press and release AUD as needed to return to VOLUME, which appears after FADER in the AUD Button cycle.

## DSC Direct Software Control Operation

You can customize many operational settings to your personal preference. Different menus options are available depending on which source is in use: AM, FM, Cassette, CD Changer, and Portable. Here's how to adjust the settings:

1. Select the audio source you wish to modify.
2. Press the DSC Button (4) to access the Direct Software Control menu.
3. Select the desired DSC function by pressing and releasing the ^ and v Buttons (18 & 19).
4. Adjust the function as desired using the << and >> Controls (20 & 21). As soon as you move to the next function or after eight seconds, your changes are stored. All other buttons become inactive until the DSC Button is pressed again or until approximately eight seconds pass.

5. Press the DSC Button (4) to complete the changes. While in the DSC mode, if 8 seconds pass and no buttons are pressed, the unit automatically exits the DSC mode. All changes made in the DSC mode are automatically saved.

Here are the TUCSON CM84's DSC functions:

**Loudness (LD) Level (LOUD 1 & 2)** — You can choose between two loudness levels for each sound source: FM, TAPE, CD CHANGER and PORTABLE. (The loudness level for AM is automatically set to LOUD 1.) LOUD 1 provides a 9 dB boost in bass (centered at 60 Hz) and a 3 dB boost in treble (centered at 8 PHz). LOUD 2 provides an 18 dB boost in bass (centered at 60 Hz) and a 3 dB boost in treble (centered at 8 KHz).

**FM Search Sensitivity Levels (LO 1 & 2, DX 1 & 2)** — You can choose between low or high FM sensitivity thresholds for both local (lo) and distant (dx) stations.

Thresholds:	lo 1 > 65 dB $\mu$ V +/- 5	Only very strong stations
	lo 2 > 50 dB $\mu$ V +/- 5	Also strong stations
	dx 1 > 35 dB $\mu$ V +/- 5	Also distant stations
	dx 2 > 25 dB $\mu$ V +/- 5	Also very distant stations

**Turn-On Fix Volume Level (FIX VOL)** — Sets the volume level that is heard each time the unit is turned on. You can adjust the volume by using either the + & - Controls (13 & 14) or the << and >> Controls (20 & 21).

**Radio and Tape Scan Time (SCAN T 1-16)** — Adjusts the time the unit stops at a station or tape selection during scan and preset scan between 1 and 16 seconds. (The scan time for CD disc and tracks is factory-set to 10 seconds.)

**Blank Skip (BSKP T 5-20)** — When the unit reaches a blank section of tape, the Blank Skip features allows the unit to automatically fast-forward to the next recorded section. You can set the minimum amount of blank time on a tape (between 5 and 20 seconds) after which the Blank Skip begins. If you listen to a lot of classical music that has soft passages, you can select a longer amount of time to minimize the possibility that the unit misinterprets super-soft passages for blank space.

**Blank Skip (BSKP ON & OFF)** — Allows you to turn this feature on and off.

**Confirmation Beep (BEEP ON & OFF)** — Allows you to activate or defeat an audible beep that sounds when a button is pushed or an operation step is completed.

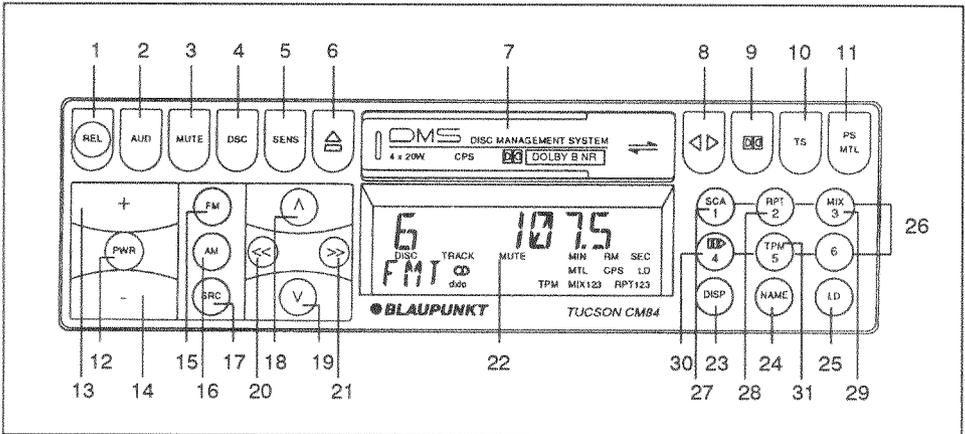
**Illumination Color (ORANGE & GREEN)** — Allows you to change the color of the illumination.

**Programmable Turn-On Message (MSG ON & OFF)** — Turns message on or off and allows you to create your own turn on message each time the radio is turned on. Here's how to create your own turn-on message of up to 16 characters:

1. Select the "Message On" DSC function.
2. Press the AUD Button.
3. Press either the + or - Buttons (13 & 14) to select the desired characters, A-Z, 0-9 and other characters. If you wish to put a blank space in the name, select the " \_ " (underbar).
4. Press the AUD Button after locating the desired character.
5. The next space to the right begins to flash. Repeat steps 3 and 4 for each desired character. After the sixteenth character (the farthest right character) is completed, the first (left-most) character begins to flash.
6. To store your turn-on message, press the  $\wedge$  or  $\vee$  Button or press the DSC Button.

**Radio Monitor Function (RM ON)** — This feature allows you to have the radio play when a tape is being rewound or fast-forwarded. If this feature has been activated, RM appears in the Display when the cassette tape is in use.

**Demonstration Mode** — Your unit has a built-in demonstration message mode that scrolls a description of some of the unit's key features across the Display. (Should this unit be used by a retailer in a display, it would allow the retailer to provide customers with information about the unit.)



**To activate the demonstration mode:** Press the DSC Button (4). All of the unit's features and buttons remain available. However, if one minute passes during which no buttons have been pressed, the demonstration message continuously scrolls across the screen.

**To deactivate the demonstration mode:** Press the DSC Button again for 4 seconds. The demonstration mode is also active whenever the ignition voltage (red lead) is connected but no back-up voltage (yellow lead) is connected. The yellow lead must also be connected to make it possible to deactivate the demonstration mode.

## Radio Operation

### Band Selection

Press the FM Button (15) to select the bands FM1, FM2, FM3, and FMT, sequentially. [You can also press and release the TS Button (10) to switch to the FMT Band.] Press the AM Button (16) to select the AM band. The indicator for the active band (FM1, FM2, FM3, FMT or AM) appears in the Display along with the radio frequency being received.

### Travel Store

This feature allows you to automatically store the best-received FM stations, which is especially handy when you travel to a different reception area.

When the FM mode is active, pressing the TS Button (10) changes the active band to FMT. To store the most-receivable FM stations, press the TS Button (10) for more than 2 seconds. The lower left display changes to FMT. Beginning with the last-received FMT-Band station, the unit automatically scans the FM band first for stations receivable with a minimum 85 dB $\mu$ V sensitivity, then with the lo and dx sensitivity levels you select under DSC. The unit then stores the six most-receivable stations and switches to preset 1 on the FMT Band.

### Manual Tuning

Select the desired band: AM or FM. Press and hold the << or >> Controls (20 and 21) until the desired frequency appears in the Display.

### Automatic Seek Tuning

Select the desired band AM or FM. Press and release the  $\wedge$  and  $\vee$  Controls (18 and 19) to seek the next receivable station.

### Scan Tuning

Press the PS Button (11) for more than 2 seconds to scan each receivable station. Scan tuning will stop at stations receivable using the reception sensitivity and scan time specified under DSC. (See page 14.) During scan tuning, the frequency blinks in the Display. To stop the scan and listen to a station by received, press the PS Button again.

### Search Sensitivity

To have the automatic and scan tuning stop only at strong local stations, press and release the SENS Button (5). "lo" will be shown in the display. When "dx" is displayed, the distant reception mode is in effect and automatic tuning stops at ALL receivable stations, weak or strong.

When an FM stereo program with a signal strength of at least 20 dB $\mu$ V is tuned in, the stereo indicator ("Ⓢ") appears in the Display Window. If the FM stereo program is weak and noisy, the unit automatically blends the signals, eliminating the noise and gradually converts to the monaural or "mono" mode. The stereo symbol will disappear from the Display.

### Preset Tuning

Up to 24 FM and 6 AM stations can be stored in preset memory.

1. Tune in a desired station, either manually or automatically, on the desired Band, AM, FM1, FM2, FM3, or FMT.
2. Press and hold any one of the six Preset Buttons (26). The Preset Button number will appear in the Display Window. After two seconds, the frequency will blink twice, indicating that the station has been stored in the Button's memory storage for that Band.
3. Repeat the above procedure with the rest of the presets for each Band, as desired.
4. To select a preset station, select the desired band, then press the desired Preset Button.

### Preset Scan

To review the stations stored in the Preset Buttons, press and release the PS (Preset Scan) Button (11). All of the stations stored in memory will be scanned, in order, for the amount of time you've programmed under DSC. If any of the preset frequencies are not receivable with a signal strength of at least 15 dB $\mu$ V, they will be skipped over. To stop the scanning and listen to the station being received, press PS Button again or press a Preset Button or another tuning control.

### Preset/Station Naming

You can enter and store the names of up to thirty radio stations in the units memory. If you try to enter more than 30 names, the "\*\*FULL\*\*" indication will appear in the Display. You can then enter new names after erasing some of the existing names.

1. Tune in a station that you wish to name.
2. Press the NAME Button (24) for more than two seconds to enter the "name edit mode."
3. Press either the + or – Buttons (13 & 14) to select the desired characters, A-Z, 0-9 and other characters. If you wish to put a blank space in the name, select the " \_ " (underbar).
4. Press the AUD Button after locating the desired character.
5. The next space to the right begins to flash. Repeat steps 3 and 4 for each desired character. Up to eight characters can be used per name. After the eight character (the farthest right character) is completed, the first (left-most) character begins to flash.
6. To store the name, press the NAME Button for more than two seconds. If after 8 seconds you do not press the NAME Button or any other button, the unit exits the naming mode and automatically stores your changes.)
7. To name another station, tune in the station using  $\wedge$ , V, << and >> (18-21) and repeat steps 1-6.

### Changing a Station Name

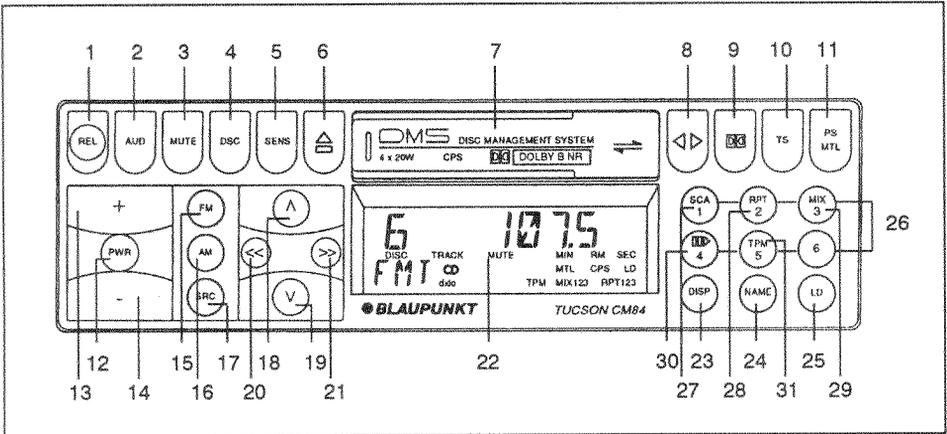
Repeat steps 1 to 6 in Preset/Station Naming, changing only those characters that you wish to change.

### Erasing a Preset Station Name

1. Tune in the station that has the name that you wish to erase.
2. Press the NAME Button (24) for more than two seconds to enter the "name edit mode."
3. Press the DISP Button (23) for more than two seconds to erase the name. "DELETE" appears in the display to confirm the erasure.
4. To complete the erasing process, press the NAME Button for more than two seconds. (If after 8 seconds you do not press the NAME Button or any other button, the unit exits the naming mode and automatically completes your erasing.)

### Displaying a Station Name

See "Changing The Information Displayed" in the GENERAL OPERATION section.



## Cassette Player Operation

### Cassette Tape Play:

- Insert cassette into Cassette Door (7). Note: Make sure that the side of the cassette with the tape exposed is facing to the right side and that all slack has been removed from the tape prior to insertion. The insertion of the cassette will turn the unit on if it not already turned on.
- The insertion of the cassette will automatically override the radio (or portable input) and the cassette will begin to play. When the cassette deck is being used, "CASS 1" or "CASS 2" will appear, depending on which tape program is being played.
- The tape will continue to play until ejected, until the radio or portable input is selected using the SRC Button (17), or until the unit has been turned off.

### Auto-Reverse Tape Function

- Automatic: When the end of the tape (side A or B, program 1 or 2) is reached, the tape will automatically reverse direction and play the other side of the tape.
- Manual: To reverse tape direction during playback, press the <> Button (8). The change in direction and in tape program will be confirmed in the Display.

### Fast Winding of Tape

- To fast-rewind the tape, press the << Control (20).  
To fast-forward the tape, press the >> Control (21)
- To stop fast winding, press the same button, or press the <> Button (8).

### Cassette Program Search

- Press the ^ Control (18) to fast-forward to the next selection. The unit automatically stops fast-forwarding after finding blank section of at least three seconds in length.
- Press the v Control (19) to fast-rewind to the beginning of the current selection.
- To manually stop the Cassette Program Search, press the same button, or press the <> Button (8).

### Blank Skip

The unit can automatically skip blank sections of tape and automatically fast-forward to the next selection. This feature can be turned on and off under DSC. You can set the minimum amount blank time on a tape (between 5 and 20 seconds) after which the Blank Skip begins. If you listen to a lot of classical music, you can select a longer amount of time, in order to minimize the possibility that the unit misinterprets super-soft passages for blank space. Among the benefits of this feature is that after the last song on a tape, the unit automatically advances to the end of the tape.

### **Repeat**

**Selection Repeat** — To play the currently-selected selection repeatedly, press and release the RPT Button (28) as needed until "RPT1" appears in the Display.

**Program Repeat** — To play the currently-selected program (or side) repeatedly, press and release the RPT Button (28) as needed until "RPT2" appears in the Display.

### **Tape Scan**

To scan the tape, press the SCA Button (27) during cassette playback. The unit scans the tape using the Scan sample time you've selected under DSC (1 - 16 seconds). "T-SCAN" appears in the Display. To cancel, press it again.

### **Pause**

To pause during tape playback, press the Pause Button (30). To resume playback, press this button again. The unit's Pinch Roller Release feature automatically protects the tape from crimping.

### **Ejecting Tape**

Press the Cassette Eject Button (6) to eject the tape. The radio will play.

### **Dolby B Noise Reduction**

Press the Dolby B NR Button (9) to activate the high-cut circuit to reduce high frequency noise during tape play. The Dolby B NR symbol appears in the display. To cancel, press this button again.

*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.*

### **Metal Tape**

Press the MTL Button (11) when playing a metal or CRO2 tape. The MTL indicator will appear in the Display Window. To deactivate, press this button again.

## **CD Changer Operation**

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The Tucson CM84 allows you to control up to 10 CDC-M5 changers.

### **Notes on Handling Discs**

Handle the disc by its edge, and to keep the disc clean, do not touch the surface. Do not attach any paper or tape. Do not expose the disc to direct sunlight or heat sources, such as hot-air ducts, or leave it in a vehicle parked in direct sunlight, where there can be a considerable rise in temperature.

### **Cleaning Discs**

Before playing, clean the disc with a compact disc cleaning cloth. Wipe the disc from the center of the disc to the outer edge of the disc. Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.

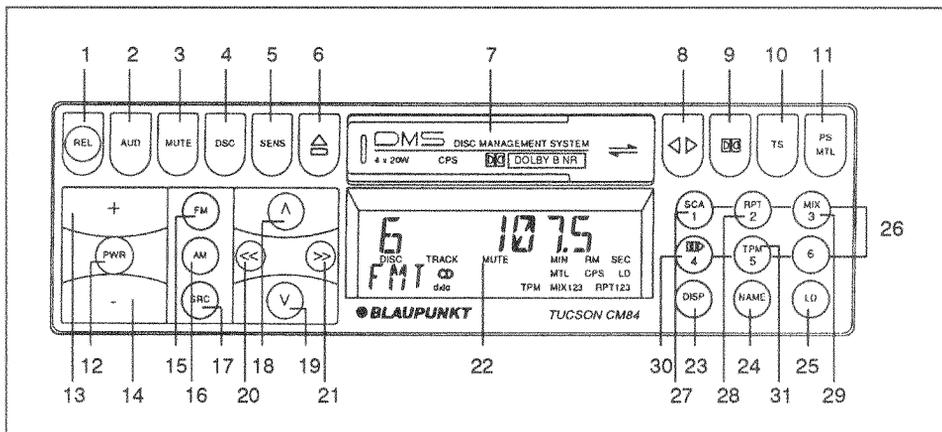
### **CD Changer Operation**

Press and release the SRC Button (17) to locate and activate the desired CD changer. The Display shows the Changer Number in the lower left corner. It also shows the Disc Number, the Track Number, and the elapsed playing time. If you press the SRC Button (17) during CD play, the CD play will automatically stop and the next available audio source, including any other CD changers installed, will be activated.

Radio → Cassette → Changer 1 → Changer 2 etc. → Portable → Radio

### **Switching To The Next CD Changer (If connected)**

Press and release the SRC Button (17) to locate and select the (next) changer and its magazine.



### Switching To Another Disc

- To move ahead to the next disc, press and release the  $\wedge$  Control (18).
- To go back to the previous disc, press and release the  $\vee$  Control (19). (If you keep these buttons pressed, the unit will switch to fast track mode.)

### Moving To Another Part of The Current Disc

- To go to the next track, press and release the  $\gg$  Control (21).  
To go back to the beginning of the track being played, press and release the  $\ll$  Control (20).  
Press these controls repeatedly to locate previous or succeeding tracks. (You can also press and hold the  $\wedge$  Control (18) and the  $\vee$  Control (19) to quickly move to another track.)
- To move ahead within a track, press and hold the  $\gg$  Control (21) for audible cue.  
To go back within a track, press and hold the  $\ll$  Control (20) for review.

### Pause

To pause during the disc playback, press the Pause Button (30). To resume playback, press this button again.

### At the End of The Disc

The track number returns to "1" and the disc is repeated from the beginning of the disc.

### Repeat

**Track Repeat** — To play the currently selected track repeatedly, press and release the RPT Button (28) as needed until "RPT1" appears in the Display.

**Disc Repeat** — To play the currently selected disc repeatedly, press and release the RPT Button (28) as needed until "RPT2" appears in the Display.

**Changer Magazine Repeat** — To play the currently selected changer repeatedly, press and release the RPT Button (28) as needed until "RPT3" appears in the Display.

To cancel RPT1, RPT2 or RPT3, press and release this button one or more times, as needed, to remove all RPT indications from the Display.

### Mix Play

**Disc Mix** — To play the tracks on the currently-selected disc in random order, press and release the MIX Button (29) as needed until "MIX1" appears in the Display. (You can use also MIX1 with RPT2 to continuously mix the tracks on a single disc.)

**Changer Magazine Mix** — To play the tracks on all of the discs in the currently-selected changer in random order, press and release the MIX Button (29) as needed until "MIX2" appears in the Display.

All CD Mix — To play all of the tracks in all of the changers and built-in player in random order, press and release the MIX Button (29) as needed until "MIX3" appears in the Display.

To cancel MIX1, MIX2 or MIX3, press and release this button one or more times, as needed, to remove all MIX indications from the Display.

### **Track Scan**

To play the first 10 seconds of each track in order, press the SCA Button (27) during CD playback. To cancel, press it again.

With optional CD changer(s) connected, after the first disc has been scanned using the Track Scan feature, the subsequent disc in the same CD changer will be scanned, with 10 seconds of each track played. If more than one changer is connected, when the last track of the last disc in the first CD changer has been scanned, the first disc in the next changer will be scanned, etc.

If the SCA Button (27) is pressed during MIX play, the first 10 seconds of every track will be played randomly.

### **Disc Scan**

To play the first 10 seconds of every disc, press the SCA Button (27) for two seconds during CD playback. To cancel, press it again.

With the optional CD changer(s) connected, the first 10 seconds of all the discs in the currently-selected CD changer will be played in order. When the last disc in the CD changer has been played, the disc on the next CD player (or built-in CD player) will be played.

### **Disc Naming**

You can enter and store names of your own choice onto up to 100 discs (one name per disc, maximum of eight characters per name). The name can be displayed in the Display Window while the disc is being located and played. To name a disc:

1. Play the disc that you wish to name.
2. Press the NAME Button (24) for more than two seconds to enter the "name edit mode."
3. Press either the + or – Buttons (13 & 14) to select the desired characters, A-Z, 0-9 and other characters. If you wish to put a blank space in the name, select the " \_ " (underbar).
4. Press the AUD Button after locating the desired character.
5. The next space to the right begins to flash. Repeat steps 3 and 4 for each desired character. Up to eight characters can be used per name. After the eight character (the farthest right character) is completed, the first (left-most) character begins to flash.
6. To name another disc, press and release the  $\wedge$  and  $\vee$  (18 & 19) as needed to locate the desired disc and repeat steps 1-5.
7. To complete Disc Naming, press the NAME Button for more than two seconds. (If after 8 seconds, you do not press the NAME Button or any other button, the unit automatically stores your changes.)

### **Changing a Disc Name**

Repeat steps 1 to 7 in Disc Naming, changing only those characters that you wish to change.

### **Erasing a Preset Station Name**

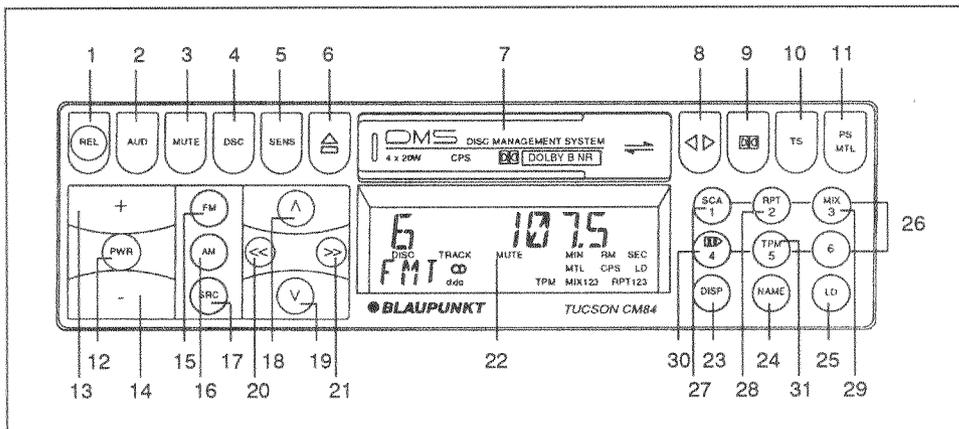
1. Tune in the station that has the name that you wish to erase.
2. Press the NAME Button (24) for more than two seconds to enter the "name edit mode."
3. Press the DISP Button (23) for more than two seconds to erase the name. "DELETE" appears in the display to confirm the erasure.
4. To complete the erasing process, press the NAME Button for more than two seconds. (If after 8 seconds you do not press the NAME Button or any other button, the unit exits the naming mode and automatically completes your erasing.)

### **Displaying a Disc Name**

See "Changing The Information Displayed" in the GENERAL OPERATION section.

### **Track Program Memory**

This feature allows you to program a disc to play only certain tracks and skip others.



### Programming the Memory

1. Play any Named disc you wish to program. The disc must have a name before it can be programmed. (See previous section about Naming.)
2. Press and release the TPM Button (31) for more than two seconds to enter the PLAY/SKIP program mode.
3. Press the << and >> Controls (20 and 21) to select the tracks you wish to program.
4. Press the + and - Buttons (13 & 14) to program the track to "PLAY" or "SKIP".
5. Press the ^ and v Controls (18 & 19) to select other discs you wish to program.
6. Press the TPM Button for more than two seconds to complete the programming. (If after 8 seconds, you do not press the TPM Button or any other button, the unit automatically stores your changes.)

Note: You can only program a disc to skip 24 tracks. If a disc has more than 24 tracks, you will not be able program tracks to skip after track 24. You cannot program all of the tracks on a disc to skip.

### Activating the Track Program Memory

Press and release the TPM Button (31) to activate the programming. The "TPM" indication will come appear on the Display. The unit will start playing only the tracks programmed to play.

To go back to the normal playing mode, press the TPM Button again. If TPM is not activated, your programming will not be followed.

## Portable Jack Input

An auxiliary input jack that allows you to connect portable audio equipment, such as a portable CD player, with a 1.2 volt/3.5 mm connector is located at the back of the unit. To play your portable equipment through your car audio system, simply plug your portable equipment's output into the jack and use the SRC (Source) Button (17) to select the portable jack as the active sound source. When the auxiliary jack is the audio source, "PORTABLE" will appear in the Display.

# Troubleshooting Guide

The following check will assist in the correction of most problems which you may encounter with your unit. Before going through the check list below, refer back to the connection and operating procedures.

## General

Trouble	Cause/Solution
No sound.	<ul style="list-style-type: none"> <li>Adjust the volume with the + button.</li> <li>Set the fader control to the center position on the 2-speaker system.</li> </ul>
Indications do not appear on the display window.	<ul style="list-style-type: none"> <li>Remove the front panel and clean the connectors. See "Cleaning the Connectors" of "Maintenance" for details.</li> </ul>
Demonstration message appears when unwanted.	<ul style="list-style-type: none"> <li>Yellow lead is not connected → Connect yellow lead.</li> <li>Demonstration mode is active → To stop, press DSC button for 4 seconds.</li> </ul>

## Radio reception

Trouble	Cause/Solution
Preset stations are not receivable.	<ul style="list-style-type: none"> <li>The broadcast is too weak.</li> </ul>
Automatic tuning is not possible.	<ul style="list-style-type: none"> <li>The broadcast is too weak. → Use manual tuning.</li> </ul>
Travel Store feature does not complete storing of six stations.	<ul style="list-style-type: none"> <li>Not enough broadcast frequencies are receivable.</li> </ul>

## CD operation\*

Trouble	Cause/Solution
CD play does not start.	<ul style="list-style-type: none"> <li>Dusty or defective disc.</li> <li>The ambient temperature is more than 50°C (120°F).</li> </ul>
The disc cannot be loaded or is automatically ejected.	<ul style="list-style-type: none"> <li>The disc is inserted with the labeled side downwards.</li> </ul>
The operation buttons do not work.	<p>The built-in microprocessor has malfunctioned. → Press the reset button.</p>
The sound skips due to vibration.	<ul style="list-style-type: none"> <li>The unit is installed at an angle of more than 20°.</li> <li>The unit is not installed on the sturdy part of a car.</li> <li>Dusty or defective disc.</li> </ul>

## Error displays

Display	Cause	Solution
<b>NO MAG*</b>	The disc magazine is not inserted in the CD changer	Insert the disc magazine with discs into the CD changer.
<b>NO DISC*</b>	No disc is inserted in the disc magazine.	Take out the magazine and insert the discs.
<b>ERROR*</b>	The disc is dirty.	Clean the disc.
	The disc is inserted upside down.	Insert the disc correctly.
<b>RESET*</b>	The CD changer cannot be operated because of some problem.	Check the changer connections. Press the reset button of the main unit.
<b>NO NAME*</b>	Attempt to program TPM on disc with no name.	Name the disc first.
<b>FULL</b>	Attempt to name more stations or discs than is possible.	Erase other names first.

\*When the optional CD changer(s) is (are) connected.

If the above mentioned solutions do not help to improve the situation, consult your nearest **Blaupunkt** dealer.