# AUDIO EQUIPMENT MANUAL SAAB - 1993

	r Numbers	Specifications Wiring Diagram	Broadcast Reception Performance Characteristics		Cassette Features and Operation (All Non-Turbo Models)  Equalizer Features and Operation (Optional)		Compact Disc/Equalizer Features and Operation (All Turbo Models)	Cassette Features and Operation (All Turbo Models)	Tuner Features and Operation (All Turbo Models)	Introduction
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### 2 Introduction

### Introduction

Saab/Clarion audio system in your car features a in an automotive sound system. level of operating convenience than ever before completely new design. It provides a higher The sophisticated, high performance

disc compact disc autochanger. Then practice operating the receiver/tape deck, equalizer/ read this owner's manual carefully before performing all major functions while the car is spectrum analyzer/compact disc player, or six yourself with its features and controls. Please however, you will first need to familiarize To make the most of the system's capabilities,

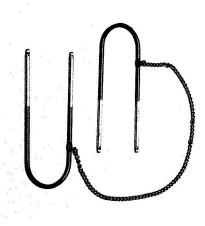
performance on the road You will be rewarded with optimum audio

# Saab/Clarion Audio Protection System

theft if protective measures were not taken. would make the system a tempting target for Saab/Clarion Audio Protection System. pleasure. Unfortunately, these same qualities sound of your Saab/Clarion audio system is designed to give you many years of listening These measures have been taken with the The superlative performance and high fidelity

# The Surest Protection: Removing Your

most effective deterrent is to remove the determined thief from breaking into your car, the been designed on a removable chassis that is not there to be stolen. That is why your Since there is no foolproof way to prevent a Saab/Clarion audio system components have incentive to do so. Nobody can take something



contact with the steering wheel. from the dash ensuring it does not come in pressure applied to the tools, withdraw the unit they lock firmly into place. With a slight outward into the holes on both sides of the faceplate until Simply insert the special removal tools provided

should be ejected before removing radio. The power should be off and the tape



be thieves with an empty space instead of a radio when it is removed and will help protect the designed protective carrying bag is available you, or store it in your trunk. A specially valuable target. You can either take the unit with This bag is a convenient place to store your from your Saab dealer (Part Number 02 73 136) It takes just a few seconds and presents would adio face from scratches and dings

> security or system fur some other or power i

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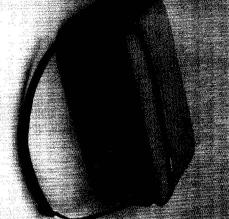
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simultaneously until it locks firmly into place. position. Gently apply pressure between the two for you to connect. There are no wires to worry about and nothing removal tool holes on each side of the unit To reinstall your unit, just slide it back into

> all user settings in memory for at least one equalizer is removed from the dash, it will retain



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small articles. The tidy box can be easily same time offers a convenient storage space for protects the electrical connections and at the 02 73 417) which can be inserted into the simultaneously pulling towards you. removed using outward finger pressure while brackets when the units are removed. This box There is also a tidy box available (Part Number When the radio, compact disc player and/or

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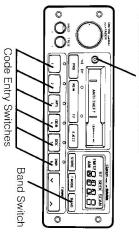
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### 4 Introduction

Keying in the code is simple. The easy to understand instructions are given on the special card which contains your code numbers and are repeated here. After putting the unit back in the dash bracket, simply:

- Turn on the ignition.
- Turn on the radio.
- Key in your code numbers using the station preset switches (1-6). The unit will now operate.

Photocell/Anti-Theft Indicator



If you make a mistake while entering your code, finish entering all four digits. Press and hold the BAND switch until "CODE" appears on the display. Then enter the correct code.

Your radio has a built in flashing light which indicates to outside viewers that it contains an electronic anti-theft system. When your ignition is turned off, this light will flash. It will not flash when the ignition is turned on. If you would like

to turn off the flashing light, you can do so manually. While the light is flashing, press and hold the BAND switch until the light goes out. This light will automatically be turned on again when the ignition has been turned on and off.

### NOTE

- If the incorrect code is entered on four consecutive attempts, the anti-theft circuitry will prevent any additional code entry attempts for one "radio on" hour.
- To restore normal code entry operation perform the following:
- a. Turn ignition key to Accessory position.
- b. Turn radio on.
- c. Leave vehicle ignition and radio turned on for a minimum of one hour. (Turbo vehicle radios will continue to beep during the one hour period).
- d. After the one hour, press and hold the BAND switch until "CODE" appears on the display. Resume code entry as outlined above.
- 3. After the one hour waiting period, the anti-theft system will only allow ONE code entry attempt. If the code entry is incorrect you must again wait one "radio on" hour. This cycle will continue until a correct code entry is made.

### Key Performance/Convenience Features

## Touch-plate Controls

Controls are logically arranged and fall readily to hand, through ergonomically efficient design. Touch-plate digital tuning eliminates conventional tuning knob inaccuracies.

# Advanced FM Circuit Design

Incorporates an automatic distance/local circuit (Keyed Automatic Gain Control) that automatically adjusts FM tuner sensitivity for ideal reception based on signal strength. Also, a dual-gate Field Effect Transistor/Balanced Mixer reduces interference from strong adjacent signals. A Signal Actuated Stereo Control (SASC) circuit reduces noise and resists multipath interference, while a special noise-cancelling circuit blocks strong noise impulses received through the antenna. It all adds up to clear, clean FM reception under virtually any operating conditions.

## Weather Band (Turbo)

Advanced technology provides up-to-the-minute weather forecasts right in your car. Using special assigned frequencies, your car radio is able to receive transmissions broadcast by the National Weather Centers throughout the continental United States.

# Dual Motor Cassette Drive

One motor is used to perform non-critical functions such as fast forward, rewind and tape load /unload. The second motor is used solely to drive the tape during playback. This dedicated playback motor is computer controlled to accurately control speed under all operating conditions, thereby providing superior playback performance.

# Cassette Power Off Eject System

Protects tape and tape player from damage by automatically ejecting the tape when power is turned off.

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# Cassette AutoReverse, Automatic Program System

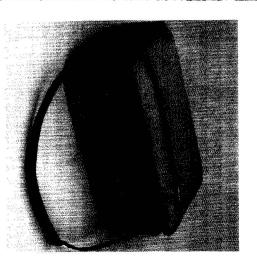
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Cassette will automatically reverse at the end of the tape or can be manually reversed at any point during play. Automatic Program System (APS) permits replay of the current selection or advancing on to the next.

# Tape Requires Cleaning Indicator

The unit will automatically indicate when it is time to clean the tape head and cassette drive components.

equalizer is removed from the dash, it will retain all user settings in memory for at least one When the radio, compact disc player and/or



small articles. The tidy box can be easily same time offers a convenient storage space for protects the electrical connections and at the brackets when the units are removed. This box 02 73 417) which can be inserted into the There is also a tidy box available (Part Number removed using outward finger pressure while simultaneously pulling towards you.

### CAUTION

- 1. Protect the unit from moisture, high Take sufficient care when cleaning the ambient temperature and humidity. ventilation. interior of the car and provide adequate
- 2. Wipe the unit with a soft, dry cloth for alcohol. Never use benzine, solvents contamination, use a mild cleaning cleaning. or the like. In cases of severe

# Using The Electronic Lock-Out System

some other reason. The only way to make the system functional again is by entering a four digit or power is disconnected during servicing or for feature renders the audio system inoperable if ingenious electronic lock-out feature. This Saab/Clarion Audio Protection System is the security code, which only you know. the cassette/receiver is removed from the dash The second protective measure in the

built in. To enjoy the years of listening pleasure you have to do is use it. your audio system was designed to provide, all The Saab/Clarion Audio Protection System is

### Introduction 3

# Owner Identification Carc

and other important information is recorded. Owner Identification Card attached to a card In your glove compartment, you will find an installation procedures outlined previously. Your card also contains the step-by-step carrier on which your electronic lock-out code

will not be available to anyone except you. can fall prey to vandals. File the card carrier NOT leave it in the glove compartment, where it to your card, place the card in your wallet. DO identification information from your card carrier When you have transferred the owner with your other important documents, where it

will see that your radio part number, serial If you look at your Owner Identification Card, you numbers on your card before placing it in your recorded for you. Be sure to record your vehicle number and electronic code have already been Owner Identification Card, contact your Saab wallet or other safe place. If you lose your identification number (VIN) and theft I.D.



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pecial noiseand resists ng adjacent olse impulses reo Control Manced Mixer ingth. Also, a ensitivity for ontrol) that /local circuit all adds up to

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# **Dual Motor Cassette Drive**

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# Cassette AutoReverse, Automatic Program System

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### Night Illumination

viewing. All switches and controls are illuminated for night

components according to ambient lighting. the display functions on all audio system cassette/receiver. It controls the brightness of A photocell is built into the face of the

# **Automatic Antenna Circuit**

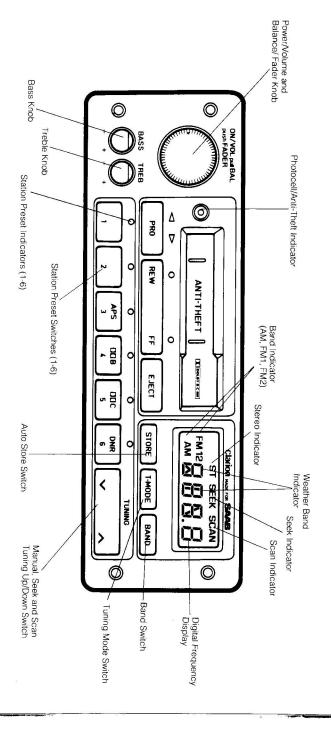
automatically extends. When the radio is turned off, the antenna automatically retracts. When the radio is turned on, the electric antenna

### **CAUTION!**

antenna extended, the antenna might be driven through the car wash with the sure to turn the radio off. If the car is When entering an automatic car wash, be damaged.

# 6 Tuner Features and Operation (All Turbo Models)

# Tuner Features and Operation (All Turbo Models)



### (All Turbo Models) Tuner Features and Operation

Power/Volume Control

electronic lock-out code. (See Saab/Clarion radio on, you must enter your four digit display and you hear a beep when you turn the on the radio. Rotating the knob more will Audio Protection System, p. 2). increase the volume. If "Code" appears on the Rotate the power/volume knob clockwise to turn

### NOTE

Disc Player/Equalizer is removed from It's basket. After reinstalling the CD code must be entered. Player/Equalizer the electronic lockout The radio will not play if the Compact

### Fader

equally balanced sound between front and rear. counter-clockwise from the center click-stop emphasize front speaker sound. Rotating clockwise from the center click-stop position to The center click-stop position provides an position will emphasize rear speaker sound toward the radio and hold while rotating (Front to Rear) Push the power/volume knob in

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# Tuner Features and Operation (All Turbo Models) 7

# Tuner Features and Operation (All Turbo Models)

Power/Volume Control

Rotate the power/volume knob clockwise to turn on the radio. Rotating the knob more will increase the volume. If "Code" appears on the display and you hear a beep when you turn the radio on, you must enter your four digit electronic lock-out code. (See Saab/Clarion Audio Protection System, p. 2).

### NOTE

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In Frequency

The radio will not play if the Compact Disc Player/Equalizer is removed from it's basket. After reinstalling the CD Player/Equalizer the electronic lockout code must be entered.

### Fader

Mode Switch

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(Front to Rear) Push the power/volume knob in toward the radio and hold while rotating clockwise from the center click-stop position to emphasize front speaker sound. Rotating counter-clockwise from the center click-stop position will emphasize rear speaker sound. The center click-stop position provides an equally balanced sound between front and rear.

### Balance

(Left to Right) Pull the power/volume knob out to the locked position. Rotate the knob clockwise from the center click-stop position to emphasize the sound to the right speakers and counter-clockwise from the center click-stop position to emphasize the sound to the left speakers. The center click-stop position provides an equal emphasis to both left and right speakers. After the adjustment is made, push the knob back into the original position.

### reble

Depress the treble knob and it will spring outward so that the treble can be adjusted. Rotate the knob clockwise from the center clickstop position to increase the treble. Turn it counter-clockwise from the center click-stop position to decrease the treble. After the adjustment is made, push the knob back into its original position.

### Das

Depress the bass knob and it will spring outward so that the bass can be adjusted. Rotate the knob clockwise from the center click-stop position to increase the bass. Turn it counterclockwise from the center click-stop position to decrease the bass. After the adjustment is made, push the knob back into its original position

### NOTE

When using the seven-band graphic equalizer, the bass and treble settings should be left in the center click-stop position for best performance.

### Tuning

Use the Tuning Mode (T-MODE) switch to select Manual, Seek, or Scan tuning. The display panel will indicate either SEEK or SCAN when those modes are selected. A blank display indicates manual mode.

Manual tuning is accomplished by pressing the  $\checkmark$  or  $\nearrow$  switches. The  $\checkmark$  switch lowers the frequency. The  $\nearrow$  switch raises the frequency.

In the Seek Tuning mode, the radio automatically seeks out the next clear station when the v or switch is depressed. Use the v switch to seek to the next clear lower frequency station, the switch to seek the next clear higher station.

Scan Tuning is started by depressing either the or switches. The radio will automatically scan for the next medium-to-strong frequency and play for a few seconds before continuing on to the next. Scanning can be stopped at any desired station simply by depressing the same switch again during the pause.

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# 8 Tuner Features and Operation (All Turbo Models)

### Station Presets

which stations you'll enjoy listening to regularly, the three indicated bands. Once you know You can preset up to 18 stations - six on each of you can use the preset function to summon them

band. The duplicate listing merely allows you to FM1 and FM2 both represent the regular FM First, use the band select (BAND) switch to six different FM stations on the other. store six FM stations in one memory bank, and select the AM, FM1 or FM2 band. Note that

memorized station, simply tap the appropriately procedure on the next preset switch. To call up a next station you want memorized and repeat the switch is held, you will hear the volume decrease. above the switch you have preset. While the this station in memory, depress and hold the No.1 sequence is easy for you to remember. To enter that you listen to frequently. Use whatever listen to most often or the first station on the dial and that station will be memorized. Tune to the release the switch. The indicator will flash once memory preset switch. An indicator will illuminate preset. Generally, this will either be the station you Using the manual mode, select the first station numbered memory preset When the volume returns to its original level

### Auto Store

memory. If six strong stations cannot be found, strong signal strength will be stored in the radio's memorize the strongest stations in the area If you are driving in an unfamiliar area - and on AM or six on FM. function will only store six stations at a time - six weaker stations will be chosen. The Auto Store (AM if on AM, FM if on FM). Six stations with will automatically scan the entire frequency band switch for two seconds. In this mode the radio Store function, depress the Auto Store (STORE) which you are driving. To activate the Auto you can use the Auto Store function to find and thereby lose the stations you generally listen to -

programmed into memory. They can be reset when you are again driving in your local area. the stations that had previously been If you use the Auto Store function, you will lose

FM2 be used for unfamiliar listening station presets (FM ONLY) it is suggested that FM1 be used for local listening and To prevent overwriting of your local

### Stereo Indicator

display panel. the stereo (ST) indicator will illuminate in the Whenever the radio is receiving a stereo signal

### Weather Band

in the area. The strongest station generally frequency display. The radio will automatically Weather Band mode. When selected "WB" will area you are traveling in. provides the most accurate information for the search for the strongest national weather station appear in the first and second digits of the Use the band select (BAND) switch to select the

select (BAND) switch, which will return you to To exit weather band mode, depress the band

### NOTE

mode by depressing the band (BAND) emit a short beep. The unit will continue enough station to lock onto, the unit will If the radio is unable to find a strong to search and beep until a station can be has not found a station, exit weather band found. If after several beeps the unit still

# Checking The Tuning Mode

frequency range limits and tuning steps for each U.S. will be in the U.S. tuning mode. To identify European markets. All radios delivered to the band in the chart below. manually tune up and down the band. Note the which mode the radio is in, turn on the radio and This radio is compatible in both U.S. and

> tuning mode, switching to the U.S. mode can If the radio has been delivered in the European easily be done following these steps:

- 1. Turn the radio OFF using the volume control switch.
- Remove and reinstall the radio. DO NOT ENTER THE ANTI-THEFT CODE YET.

Ξ

- Turn the radio ON.
- 4. Depress the Tuning Mode (T•MODE) switch and the Band (BAND) switch simultaneously.
- Release both switches.
- Enter your correct anti-theft code.
- Check the tuning spacing as shown on the chart below.

procedure.

To reverse the tuning mode, repeat the

generally on for the ner station omatically elect the "WB" will its of the

the band irn you to

U.S. and red to the To identify

on for each radio and Note the

If the radio has been delivered in the European tuning mode, switching to the U.S. mode can easily be done following these steps:

- 1. Turn the radio OFF using the volume control switch.

- Remove and reinstall the radio. DO NOT ENTER THE ANTI-THEFT CODE YET.
   Turn the radio ON.
   Depress the Tuning Mode (T•MODE) switch and the Band (BAND) switch simultaneously.
- Release both switches.
- 6. Enter your correct anti-theft code.7. Check the tuning spacing as shown on the chart below.

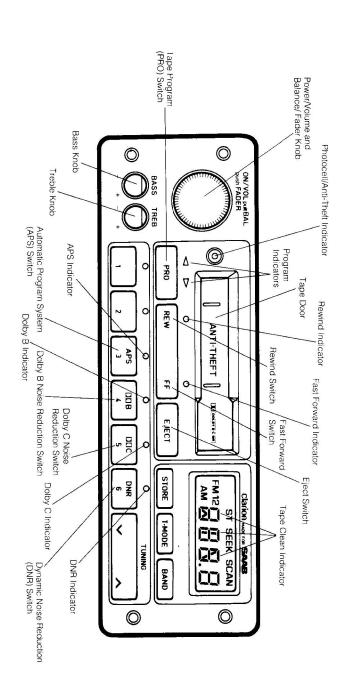
To reverse the tuning mode, repeat the

# Tuner Features and Operation (All Turbo Models) 9

	EUROPE		U.S.	i	
AM	FM	AM	FM	Band	
531 - 1602 kHz	87.5 - 108.0 MHz	530 - 1710 kHz	87.9 - 107.9 MHz	Frequency Range	
9 kHz	.1 MHz	10 kHz	.2 MHz	Steps	

# 10 Cassette Features and Operation (All Turbo Models)

# Cassette Features and Operation (All Turbo Models)



# Cassette Features and Operation (All Turbo Models)

### To Start

Turn on the power switch to activate the unit, and the radio will begin playing. If you hear a warning beep, enter your four digit security code. Insert a cassette with the exposed tape side of the cassette facing to the right. The tape will begin playing, and the appropriate tape direction indicator will light. (<| ▶ = forward play, <| ↑ > = reverse play). Next, adjust volume with the volume knob. Select the appropriate noise reduction setting (described later in this section). Tape equalization is automatically selected (described later in this section).

## Cassette Programming

The tape player features Auto Reverse, which means the second side of a cassette will automatically be played when the first side is finished. But, if you decide you'd like to listen to side B midway through side A or vice-versa, you can switch instantly simply by depressing the Tape Program (PRO) switch.

# Fast Forward or Rewind

Fast Forward or Rewind is accomplished by pressing the (FF) or (REW) switch. It is not

# Cassette Features and Operation (All Turbo Models) 11

# Cassette Features and Operation (All Turbo Models)

### To Start

Turn on the power switch to activate the unit, and the radio will begin playing. If you hear a warning beep, enter your four digit security code. Insert a cassette with the exposed tape side of the cassette facing to the right. The tape will begin playing, and the appropriate tape direction indicator will light. (△ ▶ = forward play, ▲ ▷ = reverse play). Next, adjust volume with the volume knob. Select the appropriate noise reduction setting (described later in this section). Tape equalization is automatically selected (described later in this section).

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## Fast Forward or Rewind

Fast Forward or Rewind is accomplished by pressing the (FF) or (REW) switch. It is not

necessary to hold the switch while the tape is fast forwarding or rewinding. The appropriate indicator will illuminate above the switch.

### NOTE

- To release the cassette from fast forward, press the FF switch again.
   To stop the cassette from rewinding, press the REW switch again.
- If the tape is wound completely in the FF mode, it will stop automatically and play the opposite side. If the tape is wound completely in the REW mode, it will stop automatically and play the same side.
- If the tape is in the FF or REW mode and the PRO switch is pressed, the tape will stop and begin to play in the opposite direction.

# Automatic Program System (APS)

This feature provides still more flexibility. It allows you to repeat the selection you are currently listening to or jump ahead to the next selection before the current one is finished.

To repeat the selection that is currently playing, tap the Automatic Program System (APS) switch (the APS indicator will light) and the cassette rewind (REW) switch.

To jump to the next selection, tap the (APS) and the cassette fast-forward (FF) switch.

### NOTE!

The APS system may occasionally be "fooled" by the long low-level passages of certain music types (i.e. Classical), since these resemble the silent gaps between selections.

### Tape Equalization

There are several different types of tape currently in use, and Automatic Tape Equalization is provided to enable you to match their playback characteristics for the best sound. Most tapes have a normal equalization of 120 \(\mu\)s (normal bias). Unless there is some indication to the contrary - such as the designation "metal", "chrome" or "70 \(\mu\)s high bias" - you can assume that the unit will select the normal equalization and the unit will select the normal mode. However, high-performance metal and chrome cassettes (as well as ferrichrome, an infrequently used tape type) require a different equalization. In this case the unit will automatically select the high-bias position.

There is one important exception: Many prerecorded cassettes today use chrome tape for improved performance with normal bias (120  $\mu$ s) equalization. In this case the unit will not select high-bias.

# 12 Cassette Features and Operation (All Turbo Models)

### Noise Reduction

This tape player offers three types, Dolby® B ( DD B), Dolby® C ( DD C) and Dynamic Noise Reduction (DNR). If a cassette is Dolby encoded (look for the DD ), press the appropriate Dolby DD switch. If the cassette is not Dolby encoded, the DNR switch will still provide useful noise reduction. There are illuminated indicators for all three controls.

### Eject

When you're finished listening to a tape, simply press the Tape Eject (EJECT) switch. The cassette will be released for retrieval from the tape slot, and the radio will resume playing the most recently tuned station. Your tape will automatically be ejected if the power is turned off

### NOTE!

The power should be off and the tape should be ejected before removing the radio from the dash.

## Tape Clean Indicator

After every fifteen hours of tape use the unit will automatically indicate that it is time to clean the tape head and the cassette drive components. When fifteen hours of use have expired, the unit will mute the audio output of the system and

sound a warning beep for ten seconds. In addition, "CLN" will appear on the first, second and third digits of the frequency display. After ten seconds normal audio volume will resume and the beeping will stop. The "CLN" indication will remain on the display for an additional twenty seconds.

When this indication is observed please clean the cassette unit as indicated in Routine Maintenance below.

## Routine Maintenance

To perform at its peak, your tape player requires periodic cleaning and demagnetization (elimination of the magnetic field that gradually builds up around the playback head). Of these two tasks, cleaning is the most important - dulled high frequencies will result if it is not carried out regularly.

Cleaning should be performed after every fifteen hours of playing time, using a quality head cleaning cassette. Demagnetization should be carried out every 50 to 100 hours of playing time, using a quality head demagnetizer (available from most car stereo and audio stores).

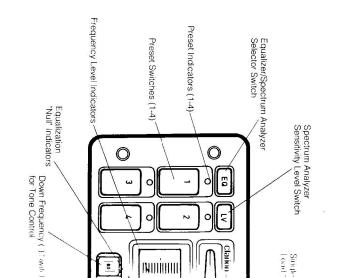
### NOTE

- Store cassettes in their plastic cases when not in use.
- Do not leave cassettes in your car particularly during warm weather.
- Take up any slack in the cassette before playing.



 Do not play C-120 (or longer) cassettes.
 The tape in these cassettes is very thin and prone to breakage.

# Compact Disc/Equalizer Features



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### NOTE

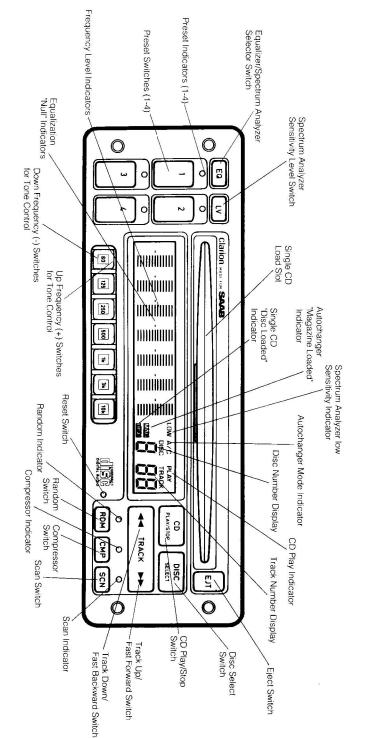
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# Compact Disc/Equalizer Features and Operations (All Turbo Models) 13

# Compact Disc/Equalizer Features and Operation



# 14 Compact Disc/Equalizer Features and Operations (All Turbo Models)

# Compact Disc Features and Operation

### Introduction

The Saab/Clarion compact disc/equalizer/ autochanger controller is provided as standard equipment on all turbo model cars. The unit may be fitted as an option on non-turbo vehicles. Consult your dealer for details.

The unit has been designed specifically for the playing of compact discs bearing the



symbol. No other types of discs can be played. The advanced technology employed in this CD system permits both the standard 5" CD's and 3" CD's to be played without utilizing an adapter.

### To Start

All audio functions and adjustments are controlled by the radio head. If you hear a beep while turning the audio system on, you must enter your four digit electronic lockout code. (See Saab/Clarion Protection System p. 2).

Gently insert the CD into the player slot until the motorized loading system automatically accepts the disc. Make sure that the CD is inserted with the label facing upward. When the disc is

accepted the " **DISC** " indicator on the display panel will illuminate. The CD is now properly loaded and playback will begin.

The player will always start at track 1 and play the entire compact disc. It will also continuously repeat playing the whole compact disc until the play/stop (CD PLAY/STOP) or eject (EJT) switch is depressed, or the ignition is turned off.

### NOTE

After reinstalling the CD player it may become necessary to depress the Reset switch in order to make it operate.

### CAUTION

Because compact disc players have wider dynamic range than conventional analog systems, peak levels are recorded with high fidelity. Also, the noise level is very low. If you inadvertently turn the volume up while listening to a portion with no signals or very low signals, the speakers may be damaged when a part of the track with very loud peak levels is played.

### ⊃lay/Stop

Turn the radio on. When you insert the CD, it will automatically start to play and the number "1" will appear in the display under the TRACK heading. The display shows the number of the

track currently being played. Depress the play/stop (CD PLAY/STOP) switch to stop play. The radio will play. Depress the switch again to resume play from the same point. If the ignition switch is turned off during play, the unit will stop. When the ignition key is switched on, play is resumed at the point where you left off.

### OTE

Connection of the optional Saab/Clarion rear mounted six disc autochanger (Part Number 02 47 544) slightly alters the operation of the play/stop (CD PLAY/STOP) switch as shown below:

WITHOUT optional changer connected:

Depressing the CD/RADIO switch will toggle between radio and in-dash compact disc mode.

→ radio → in-dash CD

WITH optional changer connected:

Depressing the CD/RADIO switch will cycle you through radio, in-dash CD and autochanger modes.

For autochanger operation instructions refer to Compact Disc Autochanger Features and Operation p. 29.

### Eject Switch

Depress the eject (EJT) switch to eject the CD. The eject switch will continue to function with the ignition switched off. To prevent disc damage, if a disc is ejected and not removed from the player within 15 seconds, the disc will automatically be pulled back into the player. However, disc play will not resume unless the play/stop (CD PLAY/STOP) button is depressed.

### OTE

The automatic retraction feature will activate only when ejecting a standard 5" disc.

Music Search/Fast Forward/Fast Backward

When the player is in the normal play mode, these switches are pressed to search for a desired track or to fast forward/fast backward. Pressing and releasing either switch causes the player to advance to the next track, or return to the previous track.

 $[\blacktriangleright \blacktriangleright]$ :Press and release to advance to the next track on the disc.

[ ▲ ▲ ]:Press and release to return to the beginning of the current track; or continue pressing and releasing to return to previous tracks on the disc.

=

n the display

now properly

disc until the bk 1 and play (EJT) switch continuously

d of Not it may The Resel

mel analog # With no **Volume** IVO WİDO

ert the CD, it orded with • speakers the number

number of the the TRACK

> switch is turned off during play, the unit will stop. track currently being played. Depress the resumed at the point where you left off. When the ignition key is switched on, play is resume play from the same point. If the ignition The radio will play. Depress the switch again to play/stop (CD PLAY/STOP) switch to stop play.

PLAY/STOP) switch as shown below: operation of the play/stop (CD Connection of the optional Saab/Clarion Number 02 47 544) slightly alters the rear mounted six disc autochanger (Part

WITHOUT optional changer connected: Depressing the CD/RADIO switch will toggle between radio and in-dash compact disc mode.

+ radio --- in-dash CD

WITH optional changer connected: cycle you through radio, in-dash CD Depressing the CD/RADIO switch will and autochanger modes.

+ radio --- in-dash CD -autochanger -

For autochanger operation instructions refer to Compact Disc Autochanger Features and Operation p. 29.

### Eject Switch

player within 15 seconds, the disc will ignition switched off. To prevent disc damage, if play/stop (CD PLAY/STOP) button is depressed However, disc play will not resume unless the automatically be pulled back into the player a disc is ejected and not removed from the Depress the eject (EJT) switch to eject the CD The eject switch will continue to function with the

activate only when ejecting a standard 5" The automatic retraction feature will

Music Search/Fast Forward/Fast Backward

desired track or to fast forward/fast backward. the previous track. player to advance to the next track, or return to Pressing and releasing either switch causes the these switches are pressed to search for a When the player is in the normal play mode,

track on the disc. ▶]:Press and release to advance to the next

pressing and releasing to return to previous beginning of the current track; or continue tracks on the disc. ▲ ■ ]:Press and release to return to the

Compact Disc/Equalizer Features and Operations (All Turbo Models) 15

the switch is kept depressed. player will continue to fast forward for as long as forward through the current selection. The ▶ ▶ ]:Press and hold (2 seconds) to fast player to fast forward, or fast backward

Pressing and holding either switch causes the

as the switch is kept depressed. player will continue to fast backward for as long backward through the current selection. The [ ▲ ▲ ]:Press and hold (2 seconds) to fast

switch again. The indicator light will extinguish. random playback, press the Random (RDM) indicating random playback mode is activated. above the random switch will illuminate begin at the first calculated track. Playback will been selected (1 - 3 seconds) playback will repeat) playback order. Once the order has random playback of tracks. The indicator light Press the Random (RDM) switch to select a then continue in a random fashion. To cancel The player will quickly determine a random (no

### Compressor

produces an audio "envelope" into which all useful for audio selections featuring a wide compressor mode is activated. This feature the compressor switch will illuminate indicating Press the Compressor (CMP) switch to activate signals are placed. This feature is particularly the audio compressor. The indicator light above

> dynamic range of signal levels (i.e. classical) envelope. To deactivate the audio compressor press the Compressor (CMP) switch again. The are compressed into an accurately reproducible or too low for the system to accurately reproduce Signals which normally would be either too high indicator light will extinguish.

### NOTE

- 1. Compressor function is only applicable in CD modes.
- 2. The compressor "effect" will vary depending on the type of recording while others will display little or no will demonstrate dramatic changes you are listening to. Some recordings

scan mode. This function will play the first ten will extinguish. seconds of every track. To stop scanning press switch will illuminate indicating the player is in favorite track. The indicator light above the scan Press the Scan (SCN) switch to search for your the scan (SCN) switch again. The indicator ligh:

player may skip, particularly at low If you drive over a severe bump the CD This skip will not damage the disc. same point on the disc automatically temperature. Play will resume at the

# 16 Compact Disc/Equalizer Features and Operations (All Turbo Models)

# Compact Disc Player Precautions

1. If the car is parked for a long time in the may not function properly in such a case, car will reach extreme levels. As the unit during winter, the temperature inside the sun during summer or in a cold location has returned to normal use it only after the ambient temperature

extinguished. If this happens allow the CD situation will be indicated by the " DISC Should the temperature in the car reach player to return to normal temperature flashing and the "PLAY" indicator player will stop operating to protect the an extreme level, hot or cold, the CD "TRACK", and track number indicators laser diode. An out-of-temperature

2. When the player is brought into a warm the room temperature gradually. the unit to stand for about an hour or raise full performance. In cases like this allow and the player may not be able to attain its increased, condensation may form inside when the room temperature is suddenly room from previously cold surroundings or

### Care of Discs

1. When holding discs, do not touch their



signal surfaces. Hold by the edges, or by one edge and the center hole.

2. Do not affix gummed labels or tape to the



label surfaces. Also, do not scratch or damage the label

- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.
- The presence of fingerprints or smudges on the degree of contamination, the affect the recorded signals but, depending on the surface of the disc will not directly brightness of the light reflected from the

outer periphery. a soft cloth from the inner edge toward the your discs clean by wiping them gently with degradation of sound quality. Always keep signal surfaces may be reduced, causing



- 5 If a disc becomes very dirty, dip a soft cloth water drops with another soft dry cloth. the dirt away gently, and then remove any in water and after wringing it out well, wipe
- 6. Do not use record cleaning spray or anti static agents on discs. Also, never clean



volatile solvents, since damage to the disc discs with benzene, thinner, or other surface may result

> 7. Discs are made of the same kinds of plastic warp in the car. Avoid locations with high used for conventional analog audio temperatures. heat or humidity, or extremely low records. Be careful not to allow discs to

> > 9



the precautionary notes provided with each direct sunlight. Always read and abide by interior of a car can become very hot in Avoid leaving discs in cars, since the

### Autochanger Optional 6-Disc Compact Disc

while driving. Individual discs may still be safety by not having to handle CD jewel cases are prewired to accept this option with minimum loaded in the dash unit as desired. Some cars continually load and unload discs while provides the convenience of not having to control head in the dashboard. The autochanger be accessed via the compact disc/equalizer allows you to pre-load 6 discs which may then of an optional 6-Disc CD Autochanger (Part simultaneously providing an increased margin of system can be further enhanced by the addition Number 02 47 544). This rear mounted module The versatility of your Saab/Clarion audio

touch their

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or tape to the

ot scratch or

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Ill not directly cited from the ination, the ut, depending or smudges

> outer periphery. a soft cloth from the inner edge toward the your discs clean by wiping them gently with degradation of sound quality. Always keep signal surfaces may be reduced, causing



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discs with benzene, thinner, or other surface may result. volatile solvents, since damage to the disc

> Discs are made of the same kinds of plastic warp in the car. Avoid locations with high temperatures heat or humidity, or extremely low records. Be careful not to allow discs to used for conventional analog audio



80

direct sunlight. Always read and abide by the precautionary notes provided with each interior of a car can become very hot in Avoid leaving discs in cars, since the

## Autochanger Optional 6-Disc Compact Disc

while driving. Individual discs may still be safety by not having to handle CD jewel cases simultaneously providing an increased margin of provides the convenience of not having to control head in the dashboard. The autochanger system can be further enhanced by the addition are prewired to accept this option with minimum continually load and unload discs while be accessed via the compact disc/equalizer Number 02 47 544). This rear mounted module of an optional 6-Disc CD Autochanger (Part loaded in the dash unit as desired. Some cars allows you to pre-load 6 discs which may ther The versatility of your Saab/Clarion audic

# Compact Disc/Equalizer Features and Operations (All Turbo Models) 17

details installation effort. Consult your dealer for

Operating instructions for the compact disc Autochanger Features and Operation p. 29. autochanger may be found under Compact Disc

### WARNING

The Saab/Clarion car audio system was designed specifically for use with the associated wiring. to the audio system components and/or changer may result in permanent damage (Part Number 02 47 544). Use of any other Saab/Clarion compact disc autochanger

### Precaution

to provide reasonable protection against such of Part 15 of the FCC Rules, which are designed the limits for a Class B computing device in television reception, which can be determined by will not occur in a particular installation. If this However, there is no guarantee that interference accordance with the specifications in Subpart J properly, that is, in strict accordance with the frequency energy and if not installed and used equipment does cause interference to radio or interference in a residential installation interference to radio and television reception. It manufacturer's instructions, may cause has been type tested and found to comply with This equipment generates and uses radio

> turning the equipment off and on, the user is encouraged to try to confirm the interference by the following measure.

Move the CD player away from the device that is interference disappears. being interfered with to confirm that the

Washington, DC 20402, Stock No. 004-000 from the U.S. Government Printing Office Interference Problems." This booklet is available "How to Identify and Resolve Radio-TV Federal Communication Commission helpful may find the following booklet prepared by the technician for additional suggestions. The user dealer or an experienced radio/television If necessary, the user should consult the car

### WARNING

Use of controls, adjustment, or performance of procedures other than hazardous radiation exposure. those specified herein, may result in

properly qualified service personnel. adjusted or repaired by anyone except The compact disc player should not be

# 18 Compact Disc/Equalizer Features and Operations (All Turbo Models)

# Equalizer/Spectrum Analyzer Features and Operation

manually adjusted only when the car is very close attention to what you are hearing, it is for better sound quality requires that you pay analyzer provides a range of tonal adjustments stationary strongly recommended that the equalizer be This sophisticated graphic equalizer/spectrum far beyond the capabilities of conventional tone Because altering frequency response

enables you to see the frequency band are listening to, it could prove distracting on the components and sound levels of the music you road and should not be used while driving Similarly, because the spectrum analyzer

settings simply by tapping the programmed memory preset switches. any of four preferred frequency band equalizer However, you can easily and safely summon up

### Equalizer Memory

separate settings in its memory. Use the equalizer adjustment trequency band control switches to make your This equalizer is capable of storing up to four

referencing. When a frequency level indicator is the frequency band indicators are provided for The equalization "NULL" indicators in between

> processing on that frequency band. In other in line with a "NULL" indicator, there is no or attenuated. words that frequency band is not being boosted

1 JAZZ 1177171

THILL 250 250

N

CLASSICAL

3

VOICE

4

ROCK

the factory to enhance four types of music. You As shown above, your equalizer has been set at suit your listening taste may keep these settings or store new ones to

reduce tape hiss. Deemphasize this frequency the treble content of the music (at 10kHz) to As an example, suppose you want to decrease

> emphasize the selected frequency band, switch when you think you've reduced this control switch depress the upper half of the frequency band frequency far enough. frequency band control switch. Release the by depressing the lower portion of the 10kHz Conversely, to

curve is now stored in that memory location. indicator light above the switch flashes, then release the switch. The displayed equalizer an appropriate memory preset (1-4) until the your settings in memory, simply press and hold that needs adjusting. Then, if you wish to enter Repeat this procedure with each frequency band

# 60 Hz Frequency Band

used to counter the masking effect of road noise, Controls the extreme low frequencies. Can be

# 125 Hz Frequency Band

Controls the low frequencies. Boosting this help to alleviate muffled speaker sound. frequency range emphasizes the sound of bass drums, etc. Cutting this frequency range can

# 250 Hz Frequency Band

section instruments (drums, bass, etc.) are centered around this frequency range. Controls the medium-low frequencies. Rhythm

# 500 Hz Frequency Band

main sound energy of most instruments and Controls the lower mid-range frequencies. The human voices is centered around this frequency

(EQ) SWI

## 1 kHz Frequency Band

the musi

Controls the mid-range frequencies (above 500

# 3 kHz Frequency Band

quality to the sound. Excessive boost can therefore lend a stringent human ear is most sensitive in this range. Controls the upper mid-range frequencies. The

> content of Level (I \

During h

Low Le (EQ) swit then adju no music spectrum evidence Use the: Simply p

sensitivity level of

the displa

# 10 kHz Frequency Band

attenuate tape hiss, etc. Controls the high frequencies. Can be used to

disconnected for any reason, the equalizer memory will retain your settings If the unit is removed or battery power is for up to one month.

there is no eing boosted nd. In other

i : 1 : 1

curve is now stored in that memory location. an appropriate memory preset (1-4) until the that needs adjusting. Then, if you wish to enter indicator light above the switch flashes, then your settings in memory, simply press and hold release the switch. The displayed equalizer

11111

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1 1

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# 250 Hz Frequency Band

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music. You

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emphasize the selected frequency band, switch when you think you've reduced this control switch. depress the upper half of the frequency band frequency band control switch. Release the by depressing the lower portion of the 10kHz frequency far enough. Conversely, to

Repeat this procedure with each frequency band

# 3 kHz Frequency Band Controls the mid-range frequencies (above 500

Excessive boost can therefore lend a stringent Controls the upper mid-range frequencies. The quality to the sound. human ear is most sensitive in this range.

# 10 kHz Frequency Band

attenuate tape hiss, etc. Controls the high frequencies. Can be used to

disconnected for any reason, the equalizer memory will retain your settings If the unit is removed or battery power is for up to one month.

# Compact Disc/Equalizer Features and Operations (All Turbo Models) 19

Spectrum Analyzer

main sound energy of most instruments and

Controls the lower mid-range frequencies. The

human voices is centered around this frequency

1 kHz Frequency Band

500 Hz Frequency Band

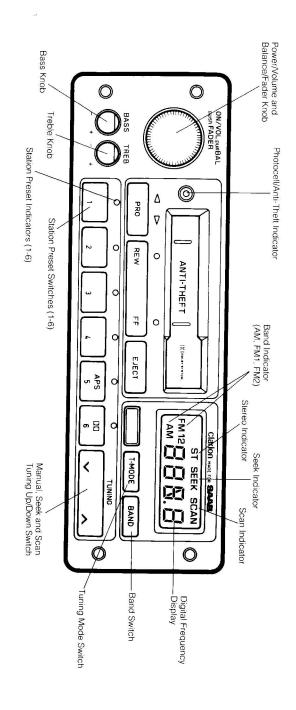
then adjust the equalizer accordingly. Press the no musical energy in the lower frequency bands, spectrum analyzer confirms that there is little or the music could use more deep bass, and the evidence of your ears. For example, if you feel Use the spectrum analyzer display to confirm the Simply press the Equalizer/Spectrum Analyzer (EQ) switch again to return to equalizer mode (EQ) switch to turn on the spectrum analyzer.

### Low Level Switch

sensitivity mode is active, "LOW" will appear on content displayed does not exceed the upper Level (LV) switch will ensure that the musical During high powered listening, use of the Low level of the spectrum analyzer. When low the display panel.

# 20 Tuner Features and Operation (All Non-Turbo Models)

# Tuner Features and Operation (All Non-Turbo Models)



### (All Non-Turbo Models) Tuner Features and Operation

Power/Volume Control

enter your four digit electronic lock-out code display when you turn the radio on, you must (See Saab/Clarion Audio Protection System, increase the volume. If "Code" appears on the turn on the radio. Rotating the knob more wil Rotate the power/volume knob clockwise to

Equalizer/Autochanger Controller is out code must be entered. reinstalling the unit, the electronic lockremoved from it's basket. Compact Disc Player/Equalizer or the The radio will not play if an optional

### Fader

counter-clockwise from the center click-stop equally balanced sound between front and rear. position will emphasize rear speaker sound emphasize front speaker sound. Rotating clockwise from the center click-stop position to toward the radio and hold while rotating The center click-stop position provides an (Front to Rear) Push the power/volume knob in

to the (Left to

clockwi

Balan

emphas counte

speak positio

provide

speake

Depres Treble

stop po Rotate outwar

counte

original adjustn positio

Bass

Depress

position so that knob c

decreas clockwi

# Tuner Features and Operation (All Non-Turbo Models)

Power/Volume Control

Rotate the power/volume knob clockwise to turn on the radio. Rotating the knob more will increase the volume. If "Code" appears on the display when you turn the radio on, you must enter your four digit electronic lock-out code. (See Saab/Clarion Audio Protection System, p. 2).

### NOTE

The radio will not play if an optional Compact Disc Player/Equalizer or the Equalizer/Autochanger Controller is removed from it's basket. After reinstalling the unit, the electronic lock-out code must be entered.

### rage

(Front to Rear) Push the power/volume knob in toward the radio and hold while rotating clockwise from the center click-stop position to emphasize front speaker sound. Rotating counter-clockwise from the center click-stop position will emphasize rear speaker sound. The center click-stop position provides an equally balanced sound between front and rear.

### Balance

(Left to Right) Pull the power/volume knob out to the locked position. Rotate the knob clockwise from the center click-stop position to emphasize the sound to the right speakers and counter-clockwise from the center click-stop position to emphasize the sound to the left speakers. The center click-stop position provides an equal emphasis to both left and right speakers. After the adjustment is made, push the knob back into the original position.

### reble

Depress the treble knob and it will spring outward so that the treble can be adjusted. Rotate the knob clockwise from the center clickstop position to increase the treble. Turn it counter-clockwise from the center click-stop position to decrease the treble. After the adjustment is made, push the knob back into its original position.

### ass

Depress the bass knob and it will spring outward so that the bass can be adjusted. Rotate the knob clockwise from the center click-stop position to increase the bass. Turn it counterclockwise from the center click-stop position to decrease the bass. After the adjustment is made, push the knob back into its original position.

Tuner Features and Operation (All Non-Turbo Models) 21

When using the seven-band graphic equalizer, the bass and treble settings should be left in the center click-stop position for best performance.

### Tuning

Use the Tuning Mode (T-MODE) switch to select Manual, Seek, or Scan tuning. The display panel will indicate either SEEK or SCAN when those modes are selected. A blank display indicates manual mode.

Manual tuning is accomplished by pressing the  $\checkmark$  or  $\land$  switches. The  $\checkmark$  switch lowers the frequency. The  $\land$  switch raises the frequency.

In the Seek Tuning mode, the radio automatically seeks out the next clear station when the 
or 
switch is depressed.
Use the 
switch to seek to the next clear lower frequency station, the 
switch to seek the seek to seek the next clear higher station.

Scan Tuning is started by depressing either the  $\checkmark$  or  $\nearrow$  switches. The radio will automatically scan for the next medium-to-strong frequency and play for a few seconds before continuing on to the next. Scanning can be stopped at any desired station simply by depressing the same switch again during the pause.

# 22 Tuner Features and Operation (All Non-Turbo Models)

### Station Presets

You can preset up to 18 stations - six on each of the three indicated bands. Once you know which stations you'll enjoy listing to regularly, you can use the preset function to summon them instantly.

First, use the band select (BAND) switch to select the AM, FM1 or FM2 band. Note that FM1 and FM2 both represent the regular FM band. The duplicate listing merely allows you to store six FM stations in one memory bank, and six different FM stations on the other.

memory preset station, simply tap the appropriately numbered the next preset switch. To call up a memorized want memorized and repeat the procedure on will be memorized. Tune to the next station you returns to its original level, release the switch switch will start to flash. When the volume volume decrease and the indicator above the While the switch is held, you will hear the illuminate above the switch you have preset sequence is easy for you to remember. To enter dial that you listen to frequently. Use whatever preset. Generally, this will either be the station Using the manual mode, select the first station The indicator will stop flashing and that station this station in memory, depress and hold the No. you listen to most often or the first station on the f memory preset switch. An indicator will

### Stereo Indicator

Whenever the radio is receiving a stereo signal the stereo (ST) indicator will illuminate in the display panel.

# Checking The Tuning Mode

This radio is compatible in both U.S. and European markets. All radios delivered to the U.S. will be in the U.S. tuning mode. To identify which mode the radio is in, turn on the radio and manually tune up and down the band. Note the frequency range limits and tuning steps for each band in the chart below.

If the radio has been delivered in the European tuning mode, switching to the U.S. mode can

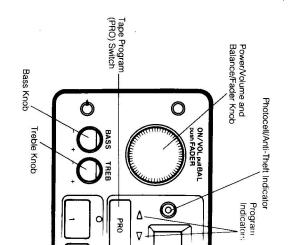
easily be done following these steps:

- Turn the radio OFF using the volume control switch.
- 2. Remove and reinstall the radio. DO NOT ENTER THE ANTI-THEFT CODE YET.
- Turn the radio ON.
- Depress the Tuning Mode (T• MODE) switch and the band (BAND) simultaneously.
- Release both switches
- Enter your correct anti-theft code.
- Check the tuning spacing as shown on the chart below.

To reverse the tuning mode, repeat the procedure.

9 kHz	531 - 1602 kHz	AM	
.1 MHz	87.5 - 108.0 MHz	FM	EUROPE
$10\mathrm{kHz}$	530 - 1710 kHz	AM	
.2 MHz	87.9 - 107.9 MHz	FM	U.S.
Steps	Frequency Range	Band	

# Cassette Features and Operation (A



easily be done following these steps:

1. Turn the radio OFF using the volume control switch.

stereo signal minate in the

- 2. Remove and reinstall the radio. DO NOT ENTER THE ANTI-THEFT CODE YET.
- 3. Turn the radio ON.
- 4. Depress the Tuning Mode (T• MODE) switch and the band (BAND) simultaneously.
- Release both switches.

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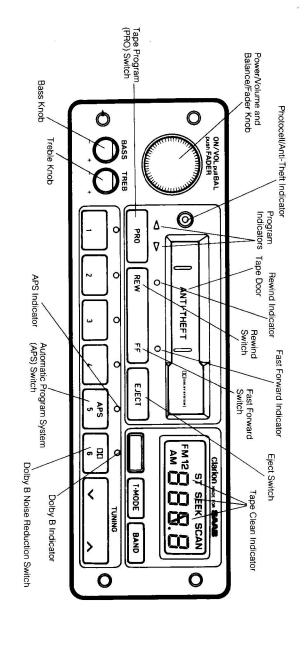
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the European S. mode can

87.9 - 107.9 MHz 530 - 1710 kHz
87.9 - 107.9 MHz
530 - 1710 kHz
87.5 - 108.0 MHz
531 - 1602 kHz

Cassette Features and Operation (All Non-Turbo Models) 23

# **Cassette Features and Operation (All Non-Turbo Models)**



# 24 Cassette Features and Operation (All Non-Turbo Models)

### Models) Operation (All Non-Turbo Cassette **Features** and

### To Start

security code. (See Saab/Clarion Audio later in this section). equalization is automatically selected (described Select the appropriate noise reduction setting Protection System, P.2). Insert a cassette with and the radio will begin playing. If you see (described later in this section). Tape Next, adjust volume with the volume knob. appropriate tape direction indicator will light. the right. The tape will begin playing, and the the exposed tape side of the cassette facing to Turn on the power switch to activate the unit  $\triangle \Rightarrow$  = forward play,  $\blacktriangleleft \triangleright$  = reverse play) "Code" on the display, enter your four digit

## Cassette Programming

can switch instantly simply by depressing the side B midway through side A or vice-versa, you finished. But, if you decide you'd like to listen to automatically be played when the first side is means the second side of a cassette will The tape player features Auto Reverse, which Tape Program (PRO) switch.

- 1. To release the cassette from fast press the REW switch again. To stop the cassette from rewinding, forward, press the FF switch again.
- 2. If the tape is wound completely in the it will stop automatically and play the wound completely in the REW mode, same side. play the opposite side. If the tape is FF mode, it will stop automatically and
- If the tape is in the FF or REW mode and the PRO switch is pressed, the tape will stop and begin to play in the opposite direction.

# Fast Forward or Rewind

Fast Forward or Rewind is accomplished by indicator will illuminate above the switch. tast forwarding or rewinding. The appropriate necessary to hold the switch while the tape is pressing the (FF) or (REW) switch. It is not

# Automatic Program System (APS)

allows you to repeat the selection you are selection before the current one is finished. currently listening to or jump ahead to the next This feature provides still more flexibility. It

> rewind (REW) switch. tap the Automatic Program System (APS) switch (the APS indicator will light) and the cassette To repeat the selection that is currently playing,

since these resemble the silent gaps of certain music types (i.e. Classical), between selections. "fooled" by the long low-level passages The APS system may occasionally be

the cassette fast-forward (FF) switch To jump to the next selection, tap the (APS) and

### Tape Equalization

unit will automatically select the high-bias require a different equalization. In this case the ferrichrome, an infrequently used tape type) metal and chrome cassettes (as well as normal mode. However, high-performance designation "metal", "chrome" or "70  $\mu s$  high Most tapes have a normal equalization of currently in use, and Automatic Tape normal equalization and the unit will select the bias" - you can assume that the tape requires their playback characteristics for the best sound Equalization is provided to enable you to match indication to the contrary - such as the 120  $\mu$ s (normal bias). Unless there is some There are several different types of tape

> prerecorded cassettes today use chrome tape not select high-bias. for improved performance with normal bias (120  $\mu$ s ) equalization. In this case the unit will There is one important exception: Many

### Noise Reduction

encoded, the Dolby function should be switched function is activated. If the cassette is not Dolby display screen indicating when the Dolby for the □□ ), press the Dolby □□ switch. Reduction. If a cassette is Dolby encoded (look This tape player offers Dolby® B ( 🛛 🖺 B) Noise There is an illuminated Dolby indicator in the

### Eject

automatically be ejected if the power is turned off most recently tuned station. Your tape wil tape slot, and the radio will resume playing the cassette will be released for retrieval from the press the Tape Eject (EJECT) switch. The When you're finished listening to a tape, simply

should be ejected before removing the radio from the dash. The power should be off and the tape

### Tape C

will rema and the b ten secor and third addition, sound a When fitte automatic After even will mute tape hear

twenty so

Maintenar he cass When this

Routine

builds up (eliminatu periodic nigh frequ wo tasks To perform

Cleaning hours of

egularly

om fasi Minding again

play the tape is mode. / in the Illy and a, The mode

y in the

the tape is Nich. ch. It is not mplished by appropriate

### (APS)

d to the next inished. flexibility. It ion you are

> (the APS indicator will light) and the cassette tap the Automatic Program System (APS) switch To repeat the selection that is currently playing rewind (REW) switch.

since these resemble the silent gaps of certain music types (i.e. Classical), "fooled" by the long low-level passages between selections. The APS system may occasionally be

To jump to the next selection, tap the (APS) and the cassette fast-forward (FF) switch.

### Tape Equalization

metal and chrome cassettes (as well as designation "metal", "chrome" or "70  $\mu s$  high unit will automatically select the high-bias require a different equalization. In this case the ferrichrome, an infrequently used tape type) normal mode. However, high-performance normal equalization and the unit will select the bias" - you can assume that the tape requires indication to the contrary - such as the 120  $\mu s$  (normal bias). Unless there is some Most tapes have a normal equalization of their playback characteristics for the best sound. Equalization is provided to enable you to match currently in use, and Automatic Tape There are several different types of tape

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### Noise Reduction

encoded, the Dolby function should be switched display screen indicating when the Dolby for the □□ ), press the Dolby □□ switch. function is activated. If the cassette is not Dolby There is an illuminated Dolby indicator in the Reduction. If a cassette is Dolby encoded (look This tape player offers Dolby® B ( DD B) Noise

### Eject

automatically be ejected if the power is turned off tape slot, and the radio will resume playing the press the Tape Eject (EJECT) switch. The When you're finished listening to a tape, simply most recently tuned station. Your tape will cassette will be released for retrieval from the

should be ejected before removing the radio from the dash. The power should be off and the tape

# Tape Clean Indicator

will remain on the display for an additiona and the beeping will stop. The "CLN" indication and third digits of the frequency display. After addition, "CLN" will appear on the first, second sound a warning beep for ten seconds. In will mute the audio output of the system and automatically indicate that it is time to clean the After every fifteen hours of tape use the unit will twenty seconds. ten seconds, normal audio volume will resume When fifteen hours of use have expired, the unit tape head and the cassette drive components.

When this indication is observed please clean Maintenance below. the cassette unit as indicated in Routine

## Routine Maintenance

builds up around the playback head). Of these periodic cleaning and demagnetization To perform at its peak, your tape player requires two tasks, cleaning is the most important - dulled (elimination of the magnetic field that gradually nigh frequencies will result if it is not carried out

Cleaning should be performed after every fifteen hours of playing time, using a quality head

> time, using a quality head demagnetizer carried out every 50 to 100 hours of playing cleaning cassette. Demagnetization should be

Cassette Features and Operation (All Non-Turbo Models) 25

### NOTE!

stores)

(available from most car stereo and audio

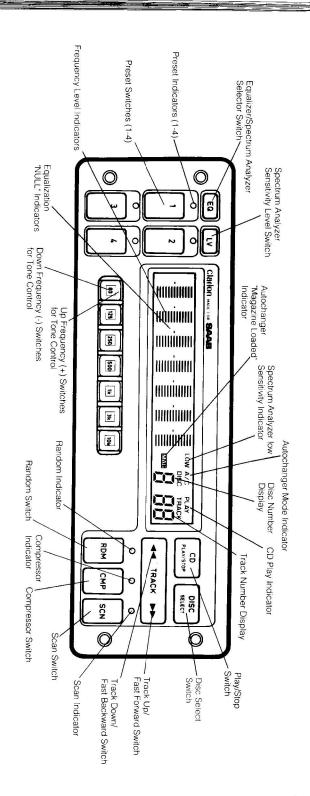
- Store cassettes in their plastic cases when not in use.
- Do not leave cassettes in your car. particularly during warm weather.
- 3. Take up any slack in the cassette
- before playing.



4. Do not play C-120 (or longer) is very thin and prone to breakage. cassettes. The tape in these cassettes

# 26 Equalizer Features and Operation (Optional)

# **Equalizer Features and Operation**



# Equalizer/Spectrum Analyzer Features and Operation

strongly recommended that the equalizer be stationary. manually adjusted only when the car is very close attention to what you are hearing, it is for better sound quality requires that you pay controls. Because altering frequency response analyzer provides a range of tonal adjustments far beyond the capabilities of conventional tone This sophisticated graphic equalizer/spectrum

N

enables you to see the frequency band Similarly, because the spectrum analyzer road and should not be used while driving. are listening to, it could prove distracting on the components and sound levels of the music you

any of four preferred frequency band equalizer settings simply by tapping the programmed However, you can easily and safely summon up memory preset switches

suit your listening taste. may keep these settings or store new ones to the factory to enhance four types of music. You As shown above, your equalizer has been set at

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equalizo frequenc This equ

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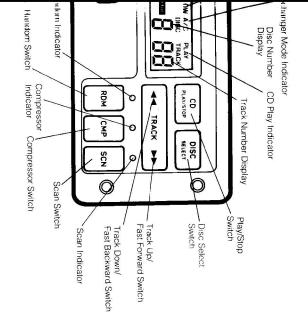






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# Equalizer/Spectrum Analyzer Features and Operation

This sophisticated graphic equalizer/spectrum analyzer provides a range of tonal adjustments far beyond the capabilities of conventional tone controls. Because altering frequency response for better sound quality requires that you pay very close attention to what you are hearing, it is strongly recommended that the equalizer be manually adjusted only when the car is stationary.

Similarly, because the spectrum analyzer enables you to see the frequency band components and sound levels of the music you are listening to, it could prove distracting on the road and should not be used while driving.

However, you can easily and safely summon up any of four preferred frequency band equalizer settings simply by tapping the programmed memory preset switches.

As shown above, your equalizer has been set at the factory to enhance four types of music. You may keep these settings or store new ones to suit your listening taste.

# Equalizer Features and Operation (Optional) 27

JAZZ

2 CLASSICAL

3 VOICE

11111

ROCK

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### **Equalizer Memory**

This equalizer is capable of storing up to four separate settings in its memory. Use the frequency band control switches to make your equalizer adjustment.

As an example, suppose you want to decrease the treble content of the music (at 10kHz) to reduce tape hiss. Deemphasize this frequency by depressing the lower portion of the 10kHz frequency band control switch. Release the

switch when you think you've reduced this frequency far enough. Conversely, to emphasize the selected frequency band, depress the upper half of the frequency band control switch.

Repeat this procedure with each frequency band that needs adjusting. Then, if you wish to enter your settings in memory, simply press and hold an appropriate memory preset (1-4) until the indicator light above the switch flashes, then release the switch. The displayed equalizer curve is now stored in that memory location.

## 60 Hz Frequency Band

Controls the extreme low frequencies. Can be used to counter the masking effect of road noise, etc.

# 125 Hz Frequency Band

Controls the low frequencies. Boosting this frequency range emphasizes the sound of bass drums, etc. Cutting this frequency range can help to alleviate muffled speaker sound.

# 250 Hz Frequency Band

Controls the medium-low frequencies. Rhythm section instruments (drums, bass, etc.) are centered around this frequency range.

# 28 Equalizer Features and Operation (Optional)

# 500 Hz Frequency Band

Controls the lower mid-range frequencies. The main sound energy of most instruments and human voices is centered around this frequency range.

## 1 kHz Frequency Band

Controls the mid-range frequencies (above 500 Hz).

## 3 kHz Frequency Band

Controls the upper mid-range frequencies. The human ear is most sensitive in this range. Excessive boost can therefore lend a stringent quality to the sound.

# 10 kHz Frequency Band

Controls the high frequencies. Can be used to attenuate tape hiss, etc.

### NOTE

If the unit is removed or battery power is disconnected for any reason, the equalizer memory will retain your settings for up to one month.

### Spectrum Analyzer

Simply press the Equalizer/Spectrum Analyzer (EQ) switch to turn on the spectrum analyzer. Use the spectrum analyzer display to confirm the evidence of your ears. For example, if you feel the music could use more deep bass, and the spectrum analyzer confirms that there is little or no musical energy in the lower frequency bands, then adjust the equalizer accordingly. Press the (EQ) switch again to return to equalizer mode.

### Low Level Switch

During high powered listening, use of the Low Level (LV) switch will ensure that the musical content displayed does not exceed the upper level of the spectrum analyzer. When low sensitivity mode is active, "LOW" will appear on the display panel.

### Optional 6-Disc Compact Disc Autochanger

The versatility of your Saab/Clarion audio system can be further enhanced by the addition of an optional 6-Disc CD Autochanger (Part Number 02 47 544). This rear mounted module allows you to pre-load 6 discs which may then be accessed via the equalizer control head in

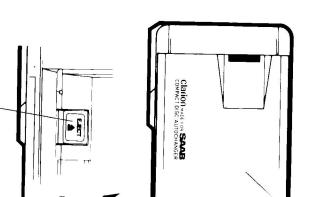
the dashboard. The autochanger provides the convenience of not having to continually load and unload discs while simultaneously providing an increased margin of safety by not having to handle CD jewel cases while driving. Some cars are prewired to accept this option with minimum installation effort. Consult your dealer for details.

Operating instructions for the compact disc autochanger may be found under Compact Disc Autochanger Features and Operation p. 29.

### WARNING

The Saab/Clarion car audio system was designed specifically for use with the Saab/Clarion compact disc autochanger (Part Number 02 47 544). Use of any other changer may result in permanent damage to the audio system components and/or associated wiring.

# Compact Disc Autochanger Feature



Eject Button

<u>\_</u>

Compact Disc Autochanger Features and Operation (Optional) 29

the dashboard. The autochanger provides the

um analyzer rum Analyzer 14. Ac.

autochanger may be found under Compact Disc Operating instructions for the compact disc Autochanger Features and Operation p. 29.

designed specifically for use with the to the audio system components and/or changer may result in permanent damage Saab/Clarion compact disc autochanger (Part Number 02 47 544). Use of any other The Saab/Clarion car audio system was

are prewired to accept this option with minimum details an increased margin of safety by not having to and unload discs while simultaneously providing convenience of not having to continually load installation effort. Consult your dealer for handle CD jewel cases while driving. Some cars

izer mode. lly. Press the uency bands, ere is little or ass, and the le, if you feel o confirm the

### WARNING!

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associated wiring.

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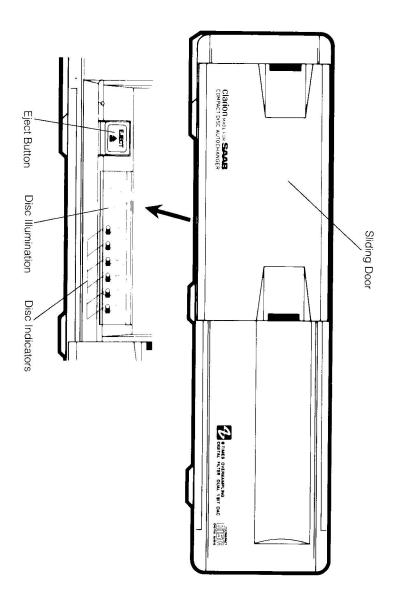
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vill appear on ed the upper of the Low

# Compact Disc Autochanger Features and Operation



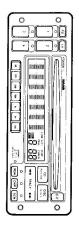
# 30 Compact Disc Autochanger Features and Operation (Optional)

### WARNING

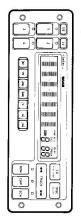
changer may result in permanent damage Saab/Clarion compact disc autochanger designed specifically for use with the associated wiring. to the audio system components and/or (Part Number 02 47 544). Use of any other The Saab/Clarion car audio system was

### Introduction

compact disc/equalizer control head (Part This rear mounted module allows you to preload 6 discs which may then be accessed via the Number 02 47 528)



47 536) or the equalizer control head (Part Number 02



details installation effort. Consult your dealer for prewired to accept this option with minimum jewel cases while driving. Some cars are while simultaneously providing an increased margin of safety by not having to handle CD not having to continually load and unload discs The autochanger provides the convenience of

playing of compact discs bearing the The unit has been designed specifically for the



symbol. No other types of discs can be played

# Loading Discs Into The Magazine

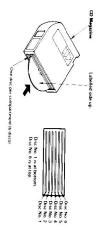
front of the magazine is pointing up. In this Grasp the magazine so that the arrow on the position, the bottom slot is disc #1 and the top slot is disc #6.

words, with the label side facing in the same insert the disc with the label side up, or in other Remove the disc from its jewel case and insert it direction as the arrow on the front of the into an empty slot in the magazine. Be sure to

### NOTE!

purchased from most record shops and adapter is used. Adapters may be use with standard 5" CD's. Single CD's mobile audio stores. (3") may be played providing the proper The magazine is designed specifically for

determine which slots are loaded and which are the magazine at any given time. They need not Any number of discs from (1-6) may be loaded in be loaded consecutively as the changer will later



# Removing Discs From The Magazine

Will b loado

magazine will be extended from the magazine When a disc has been loaded into the magazine the disc lever (white) on the back of the edge as shown below:

The

To eject the disc from the magazine, move the



action will cause the disc to be partially ejected indicated by the arrow in the drawing. This Grasp the edge of the disc as shown, gently lever toward the edge of the magazine as remove it and return it back to its jewel case.

# Loading The Magazine Into The Changer

mechanism lock into place. Disc indicator lights pointing away from the disc indicator panel "UP" arrow on the face of the magazine is appears right side up, slide the magazine door to Depress magazine until you hear the the right (open). Insert the magazine so that the Viewing the changer so that the SAAB logo

CD

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com **₹** 읎



th minimum ne cars are handle CD n increased unload discs wenience of dealer for

lically for the

### be played.

and the top up. In this irrow on the

In the same **Be** sure to front of the ), or in other

### NOTE

purchased from most record shops and (3") may be played providing the proper use with standard 5" CD's. Single CD's The magazine is designed specifically for mobile audio stores. adapter is used. Adapters may be

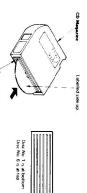
edge as shown below:

To eject the disc from the magazine, move the

magazine will be extended from the magazine

the disc lever (white) on the back of the When a disc has been loaded into the magazine

Any number of discs from (1-6) may be loaded in determine which slots are loaded and which are be loaded consecutively as the changer will later the magazine at any given time. They need not



azine

## remove it and return it back to its jewel case Loading The Magazine Into The

Grasp the edge of the disc as shown, gently action will cause the disc to be partially ejected indicated by the arrow in the drawing. This lever toward the edge of the magazine as

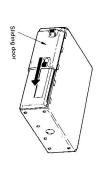
mechanism lock into place. Disc indicator lights Depress magazine until you hear the pointing away from the disc indicator panel "UP" arrow on the face of the magazine is the right (open). Insert the magazine so that the appears right side up, slide the magazine door to Viewing the changer so that the SAAB logo

# Compact Disc Autochanger Features and Operation (Optional) 31

will begin to flash indicating magazine is properly

Removing Discs From The Magazine

determine which disc locations have beer The changer will then search the magazine to

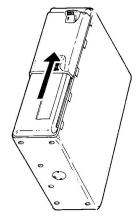




illuminate the disc indicators corresponding to the loaded slots. loaded. When complete, the changer will

will not function until changer has completed the disc search process. Changer controls on dash mounted unit

> Once the magazine has been loaded, slide the door back to the left (closed)



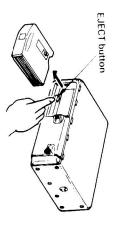
- 1. Do not leave the magazine door open at loading and unloading. Debris may fall any time other than during magazine into the mechanism and eventually cause damage.
- 2. Take care when loading and unloading as excessive moisture inside the unit may damage the mechanism. the magazine during inclement weather
- 3. Do not insert more than one disc into one disc compartment as damage to both disc and magazine will result.
- We recommend the use of the protecever you are not changing the CD changer magazine. tive cover (part number 0247940) when-

# 32 Compact Disc Autochanger Features and Operation (Optional)

# Ejecting The Magazine From The Changer

Viewing the changer so that the SAAB logo appears right side up, slide the magazine door to the right (open). Depress the EJECT button and when the magazine pops up remove it.

Once the magazine has been removed slide the door back to the left (closed).



### To Start

All audio functions and adjustments are controlled by the radio head. If you see "Code" on the display and hear a beep while turning the audio system on, you must enter your four digit electronic lockout code. (See Saab/Clarion Protection System p. 2).

A disc magazine should already be loaded into the changer. A properly loaded magazine will result in the "MAG" indicator being illuminated on the display panel of the controller. Refer to "Loading The Magazine Into The Changer" on pg. 31.

### CAUTION

Because compact players have wider dynamic range than conventional analog systems, peak levels are recorded with high fidelity. Also, the noise level is very low. If you inadvertently turn the volume up while listening to a portion with no signals or very low signals, the speakers may be damaged when a part of the track with very loud peak levels is played.

### Play/Stop

Turn the radio on. Depress the play/stop (CD PLAY/STOP) switch to enter autochanger mode. Autochanger mode is indicated by "A/C" appearing on the display panel and a two section display. The display will indicate both DISC number and TRACK number. The changer will begin playing at Disc 1, Track 1. To stop CD autochanger play, depress the play/stop (CD PLAY/STOP) switch and the unit will return to radio mode. Depress the switch again to return to autochanger mode and resume play from the same point. If the ignition switch is turned off during play, the unit will stop. When the ignition key is switched on, play is resumed at the point where you left off.

### NOTE

Depending on the controller being used (CD/EQ Part Number 02 47 528 or EQ Part number 02 47 536) there will be a slight difference in operation of the (CD PLAY/STOP) switch.

With CD/EQ Part Number 02 47 528:

Depressing the play/stop (CD PLAY/STOP) switch will cycle you through radio, in-dash CD and autochanger modes.

— autochanger —————

This cycle is applicable only if both indash and autochanger are loaded with discs. (i.e. if in-dash CD player is not loaded with a disc, then depressing (CD PLAY/STOP) will only cycle between radio and autochanger modes. The unloaded in-dash unit will be skipped over as if not there.

With EQ Part Number 02 47 536:

Depressing the play/stop (CD PLAY/STOP) switch will toggle between radio and autochanger mode.

-- radio --- autochanger-

### Disc Selection

This function allows you to select which of the loaded discs you wish to listen to.

Backv

When these

Depress and release the disc select (DISC SELECT) switch to advance to the next disc. The disc number will advance with each subsequent depression. The disc selector is cyclical as shown below:

Pressin

desired

player the pro



next tra

**V** 

**A** 

### NOTE

beginn pressii tracks (

The changer will only allow access to properly loaded discs. If you select a disc number which is either improperly loaded, or not loaded at all, the unit will skip to the next correctly loaded CD.

[ ▲ ▲ backwa player v

the swil

Hall

Press I

A Mitter wider **Bakers** track

mber. The d by "A/C" alt will return the play/stop Track 1. To ndicate both inger mode. lay/stop (CD and a two With no

stop. When on switch is usume play tch again to is resumed

1

difference in operation of the (CD number 02 47 536) there will be a slight Depending on the controller being used PLAY/STOP) switch. (CD/EQ Part Number 02 47 528 or EQ Part

# With CD/EQ Part Number 02 47 528:

PLAY/STOP) switch will cycle you through radio, in-dash CD and Depressing the play/stop autochanger modes. (CD

+ radio ----- in-dash CD autochanger

discs. (i.e. if in-dash CD player is not dash and autochanger are loaded with be skipped over as if not there. loaded with a disc, then depressing This cycle is applicable only if both inmodes. The unloaded in-dash unit will between radio and autochanger (CD PLAY/STOP) will only cycle

# With EQ Part Number 02 47 536:

PLAY/STOP) switch will toggle Depressing the play/stop (CD between radio and autochanger mode.

# Disc Selection

loaded discs you wish to listen to. This function allows you to select which of the

subsequent depression. The disc selector is SELECT) switch to advance to the next disc Depress and release the disc select (DISC cyclical as shown below: The disc number will advance with each

+1-+2-+3-+4+5-+6

### NOTE

number which is either improperly properly loaded discs. If you select a disc The changer will only allow access to skip to the next correctly loaded CD. loaded, or not loaded at all, the unit will

> above the random switch will illuminate disc. This will continue until random mode has disc and select a random playback order for that the changer will proceed to the next available tracks on the current disc have been exhausted, then continue in a random fashion. When all begin at the first calculated track. Playback will been selected (1 - 3 seconds) playback will repeat) playback order. Once the order has indicating random playback mode is activated press the Random (RDM) switch again. The been deselected. To cancel random playback, indicator light will extinguish The player will quickly determine a random (no

### Compressor

are compressed into an accurately reproducible or too low for the system to accurately reproduce Signals which normally would be either too high signals are placed. This feature is particularly produces an audio "envelope" into which all compressor mode is activated. This feature Press the Compressor (CMP) switch to activate press the Compressor (CMP) switch again. The envelope. To deactivate the audio compressor useful for audio selections featuring a wide the compressor switch will illuminate indicating the audio compressor. The indicator light above indicator light will extinguish dynamic range of signal levels (i.e. classical)

## Backward Music Search/Fast Forward/Fast

Compact Disc Autochanger Features and Operation (Optional) 33

Pressing and releasing either switch causes the these switches are pressed to search for a the previous track. player to advance to the next track, or return to desired track or to fast forward/fast backward. When the changer is in the normal play mode,

- [ ▶ ▶ ]:Press and release to advance to the next track on the disc.
- beginning of the current track; or continue [ ▲ ▲ ]:Press and release to return to the pressing and releasing to return to previous tracks on the disc.

Pressing and holding either switch causes the player to fast forward, or fast backward.

- [ ▶ ▶ ]:Press and hold (2 seconds) to fast the switch is kept depressed. player will continue to fast forward for as long as forward through the current selection. The
- as the switch is kept depressed player will continue to fast backward for as long backward through the current selection. The ▲ ]:Press and hold (2 seconds) to fast

### Random

Press the Random (RDM) switch to select a random playback of tracks. The indicator light

# 34 Compact Disc Autochanger Features and Operation (Optional)

### NOTE

- 1. Compressor function is only applicable in CD modes.
- 2. The compressor "effect" will vary while others will display little or no will demonstrate dramatic changes you are listening to. Some recordings depending on the type of recording

### Scan

scanning, press the scan (SCN) switch again seconds of every track. When the changer scan mode. This function will play the first ten switch will illuminate indicating the player is in Press the Scan (SCN) switch to search for your continue on to the next available disc. To stop reaches the end of the current disc it will favorite track. The indicator light above the scan The indicator light will extinguish.

### NOTE

same point on the disc automatically. player may skip, particularly at low If you drive over a severe bump the CD This skip will not damage the disc. temperature. Play will resume at the

# Compact Disc Player Precautions

winter, the temperature inside the car will reach during summer or in a cold location during If the car is parked for a long time in the sun ambient temperature has returned to normal. properly in such a case, use it only after the extreme levels. As the unit may not function

player to return to normal temperature alternately. If this happens, allow the CD extinguished. On the autochanger, disc number and track number indicators Should the temperature in the car reach before using. indicators 1,3,5 and 2,4,6 will flash situation will be indicated by the player will stop operating to protect the an extreme level, hot or cold, the CD flashing and the "PLAY" indicator laser diode. An out-of-temperature MAG ","A/C"," DISC ","TRACK",disc

### Care of Discs

1. When holding discs, do not touch their one edge and the center hole signal surfaces. Hold by the edges, or by



2. Do not affix gummed labels or tape to the



damage the label. label surfaces. Also, do not scratch or

- 3. Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.
- 4. The presence of fingerprints or smudges signal surfaces may be reduced, causing on the degree of contamination, the affect the recorded signals but, depending a soft cloth from the inner edge toward the your discs clean by wiping them gently with degradation of sound quality. Always keep brightness of the light reflected from the on the surface of the disc will not directly outer periphery



- 5. If a disc becomes very dirty, dip a soft cloth the dirt away gently, and then remove any water drops with another soft dry cloth in water and after wringing it out well, wipe
- 6. Do not use record cleaning spray or antistatic agents on discs. Also, never clean



discs with benzene, thinner, or other surface may result. volatile solvents, since damage to the disc

Discs are made of the same kinds of plastic warp in the car. Avoid locations with high records. Be careful not to allow discs to used for conventional analog audio heat or humidity, or extremely low temperatures.



interior of a car can become very hot in Avoid leaving discs in cars, since the

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2. Do not affix gummed labels or tape to the

5. If a disc becomes very dirty, dip a soft cloth

in water and after wringing it out well, wipe

the dirt away gently, and then remove any

normal. ly after the not function tion during r will reach

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Hodges, or by touch their

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label surfaces. Also, do not scratch or damage the label.

**2**0

- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.
- 4. The presence of fingerprints or smudges on the surface of the disc will not directly on the degree of contamination, the affect the recorded signals but, depending your discs clean by wiping them gently with signal surfaces may be reduced, causing brightness of the light reflected from the outer periphery. a soft cloth from the inner edge toward the degradation of sound quality. Always keep

temperatures.

heat or humidity, or extremely low warp in the car. Avoid locations with high records. Be careful not to allow discs to used for conventional analog audio

Discs are made of the same kinds of plastic

volatile solvents, since damage to the disc discs with benzene, thinner, or other

surface may result.



# Compact Disc Autochanger Features and Operation (Optional) 35

the precautionary notes provided with each direct sunlight. Always read and abide by

> If necessary, the user should consult the car dealer or an experienced radio/television

### Precaution

6. Do not use record cleaning spray or anti-

water drops with another soft dry cloth.

static agents on discs. Also, never clean

This equipment generates and uses radio interference in a residential installation. to provide reasonable protection against such of Part 15 of the FCC Rules, which are designed the limits for a Class B computing device in the following measure. encouraged to try to confirm the interference by turning the equipment off and on, the user is television reception, which can be determined by equipment does cause interference to radio or will not occur in a particular installation. If this However, there is no guarantee that interference accordance with the specifications in Subpart J has been type tested and found to comply with interference to radio and television reception. It manufacturer's instructions, may cause properly, that is, in strict accordance with the frequency energy and if not installed and used

being interfered with to confirm that the interference disappears. Move the CD player away from the device that is

Federal Communication Commission helpful: technician for additional suggestions. The user Washington, DC 20402, Stock No. 004-000 Interference Problems." This booklet is available "How to Identify and Resolve Radio-TV may find the following booklet prepared by the from the U.S. Government Printing Office Use of controls, adjustment, or

### WARNING

performance of procedures other than hazardous radiation exposure. those specified herein, may result in

properly qualified service personnel. adjusted or repaired by anyone except The compact disc player should not be

interior of a car can become very hot in Avoid leaving discs in cars, since the

# 36 Broadcast Reception Performance Characterisitcs

### **Performance Characteristics Broadcast Reception**

etc. Such obstacles can cause "shadows" with can and do get in the way: tall buildings, hills, transmitted at very high frequencies in straight problems because FM radio waves are momentary loss of signal. lines like light waves. Any number of obstacles FM reception poses particularly challenging

obstructions. When this happens, direct and interference. noise this causes is known as multipath arrive at the car's antenna simultaneously. The reflected signals from the same station can In addition, FM signals can also be reflected by

multipath interference and other common The tuner in this unit was designed to minimize reception problems.

dual-gate FET RF amplifier provides a high Gain Control) provides full sensitivity, while a over to provide the strongest possible signal, Actuated Stereo Control (SASC) circuit takes signal-to-noise ratio distance/local reception circuit (Keyed Automatic circumstances warrant. switching to Under weak signal conditions, the Signa mono reception when An automatic

Optimum selectivity virtually eliminates interference from strong nearby stations, and a

> Wide dynamic range avoids overload distortion special FM noise canceller works to suppress ignition noise and other pulse interference. and the unpleasant noise it causes.

> > around buildings or mountains and bounce of distances than FM waves. They can bend properties. AM waves can reach longer

the ionosphere. This means that the AM service

area is very wide.

accounts for the superb performance of the get through when broadcast conditions are less permits only the strongest, clearest stations to design of this tuner. A special circuit feature Nor has AM reception been neglected in the tuner and adds to your listening enjoyment. than optimum. It is one more refinement that

### AM and FM

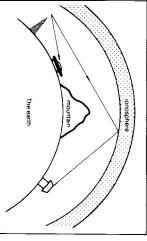
signal can be heard only within a 25-mile to 35-

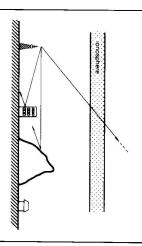
limit the areas they can reach. An average FM They reflect off solid objects in their path, which AM waves, they cannot travel around corners. frequencies and shorter wave lengths. Unlike FM waves, on the other hand, have much higher

mile radius of the transmitter.

and disadvantages resulting from differing Both AM and FM reception have advantages

87.9 - 107.9 MHz	Good	25 - 30 miles	FM
530 · 1,710 kHz	Fair	60 - 120 miles	AM
Frequency	Sound quality	Arrival distance	

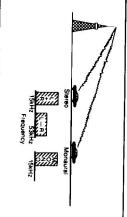




## Stereo and Monaural

reducing the range of a station broadcasting frequency range requires more power, thereby the high and low ends. This broadened that extend beyond human hearing limits on both frequencies audible to the human ear. Stereo transmission utilizes the range of audio characteristics are also different. Monaural Stereo and monaural FM reception transmission relies on a range of frequencies

> Switc the s Will b **Whor**







to suppress iterference.

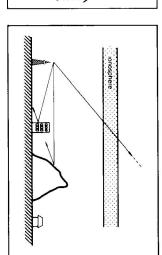
rcult feature rcult feature it stations to ons are less nement that ance of the yment.

properties. AM waves can reach longer distances than FM waves. They can bend around buildings or mountains and bounce of the ionosphere. This means that the AM service area is very wide.

FM waves, on the other hand, have much higher frequencies and shorter wave lengths. Unlike AM waves, they cannot travel around corners. They reflect off solid objects in their path, which limit the areas they can reach. An average FM signal can be heard only within a 25-mile to 35-mile radius of the transmitter.

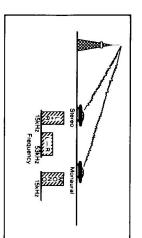
### advantages m differing

87.9 - 107.9 MHz	Good	
530 · 1,710 kHz	Fair	
Frequency	Sound quality	



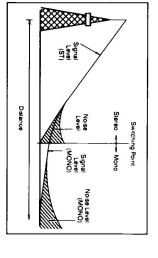
# onger Stereo and Monaural bend Stereo and monaur

Stereo and monaural FM reception characteristics are also different. Monaural transmission utilizes the range of audio frequencies audible to the human ear. Stereo transmission relies on a range of frequencies that extend beyond human hearing limits on both the high and low ends. This broadened frequency range requires more power, thereby reducing the range of a station broadcasting in stereo.



# Broadcast Reception Performance Characterisitcs 37

In weak signal areas - called fringe areas - there will be increased noise on stereo broadcasts. When signal strength diminishes significantly in the stereo mode, the radio will automatically switch to monaural transmission.



# 38 Fuse Replacement

## Fuse Replacement

If your radio will not activate when you turn on the power switch or if your electric antenna will car fuses first: not function, a fuse may have blown. Check the

### **CAUTION!**

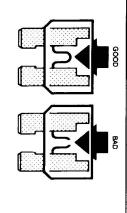
one of a higher rating may cause Never replace a "blown" fuse with a fuse of a higher rating. Replacing a fuse with permanent damage.

900 - Fuse Box (under rear seat)

7	┰
lerr	ower I
Memory	er F
Ţ	S
se	Ð:
Fuse6	Fuse5
	•
ö	Ġ

9000 - Fuse Box (in glove box)

Memory Fuse19	Power Fuse27
19	27





### Radio/Amplifier

If the car fuses are good, check the radio fuses.

### See directions below:

- 1. Insert the radio removal tools into the four holes in the face of the radio.
- Slide the unit out and locate the two blade type fuses at the rear inside of the bracket.
- Check and replace the fuses as necessary using the removal tool found in the fuse

5 amp (amber) - back-up power 15 amp (blue) - accessory power

4. Reinstall the radio by sliding it back into simultaneously until it locks into place. place. Gently apply pressure between the two removal holes on each side of the unit

### NOTE

out code. must enter your four digit electronic lock-To make the radio operational again you

### Rear Amplifier

possible that the rear amplifier fuse has blown. separate amplifier for the rear speakers. If only the rear speakers are not functioning it is The sound system in this vehicle employs a

serviceable, contact your local dealer for service. Since this component fuse is not user

## **Specifications**

Radio/Amplifier Specifications

General -

Power Supply Voltage ... 14.4 V (10.8 to 15.6 V

Current Consumption -

C.	В	Þ
	ack-up	ccessory
	Back-upless than 3 amps	Accessoryless than 15 amps

Tap

Sign Ξ Ċ

power output	$\pm$ 10 dB at 10 kHz Power Output (Front)25 watts x 2 at max	*Tone Action ± 10 dB at 100 Hz;	Audio Section -	back-upless than 3 amps
Ĭ	ax H	, Z		sdi

### FM Section -

CH.

35 Š ≶ 

<u>-</u> S,

### AM Section -

### 

NAME OF THE OWNER, THE

e four JBes.

essary blade acket esut a

ek into en the he unit

NOTE!
To make the radio operational again you must enter your four digit electronic lock-

### Rear Amplifier

The sound system in this vehicle employs a separate amplifier for the rear speakers. If only possible that the rear amplifier fuse has blown. the rear speakers are not functioning it is

serviceable, contact your local dealer for service. Since this component fuse is not user

## Specifications

# Radio/Amplifier Specifications

### General -

Power Supply Voltage ... 14.4 V (10.8 to 15.6 V allowable)

### Current Consumption -Back-up..... Accessory.....less than 15 amps ......less than 3 amps

### Audio Section -

power output
Power Output (Front)25 watts x 2 at max
± 10 dB at 10 kHz
*Tone Action ± 10 dB at 100 Hz;

### FM Section -

### AM Section -

Jsable Sensitivity	requency Range530 -
Jsable Sensitivity (20dB S/N)28µv	530 - 1710 kHz

## Weather Band Section -

Signal to Noise Ratio45 dB	Image Rejection Ratio30 dB	Usable Sensitivity5 dBf	Frequency Range162.4 - 162.55 MHz
45 dB	30 dB	5 dBf	55 MHz

### Tape Section -

*Stereo Separation45 dB *Frequency Response50 - 14kHz +/- 3 dB		 Chrome Tape(70 \(\mu \sigma \sigma \)		:	*Signal to Noise Ratio:	Tape Speed
50 - 14kHz +/- 3 dB	(Dolby C NR off/on) 56 dB/ 72 dB (Dolhy B NB off/on)	(Dolby C NR off/on) 56 dB/ 64 dB	(Dolby B NR off/on) 53 dB/ 69 dB	53 dB/ 61 dB		4.76 cm/s 0.07% WRMS

Specifications 39

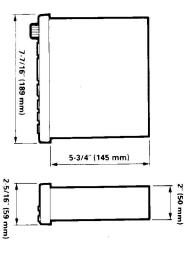
Specifications subject to design change.
\*Marks comply with AD-HOC committee

.standards

license from DolbyLaboratories Licensing Dolby noise reduction manufactured under

Corporation.

trademarks of Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbols



### 40 Specifications

# Compact Disc/Equalizer -

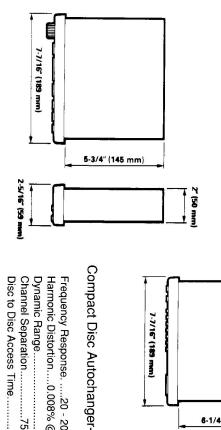
## Compact Disc Section -

Frequency Response ......20 - 20kHz +/- 3 dB Harmonic Distortion.....0.008% @ 1 kHz, 0dB Dynamic Range.......90 dB Channel Separation......75 dB @ 1 kHz

### Equalizer Section -

Distortion ..... Adjustment Range .... ....0.003% @ 1 kHz .....+/- 12 dB

Current Consumption. .....less than 3 amps



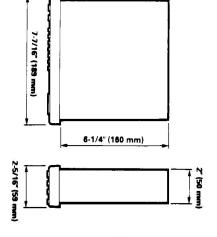
### Equalizer -

Adjustment Range ....... +/- 12 dB
Distortion. .....0.003% @ 1 kHz

Current Consumption. .....less than 2 amps

7"

(176 mm)



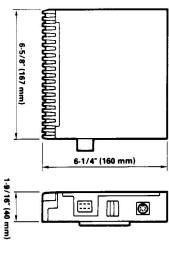
### Rear Amplifier-

2-7/8"

(73 mm)

Power Supply Voltage ......14.4 V (10.8 to Current Consumption... less than 15 amps 15.6 V allowable)

Power Output......50 watts x 2 at max.power output



Frequency Response. .....20 - 20kHz +/- 3 dB Harmonic Distortion.....0.008% @ 1 kHz, 0dB

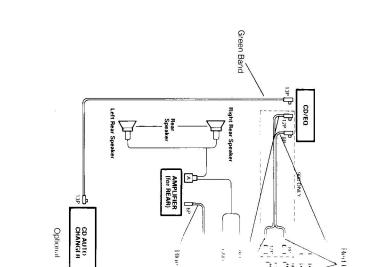
Dynamic Range.....

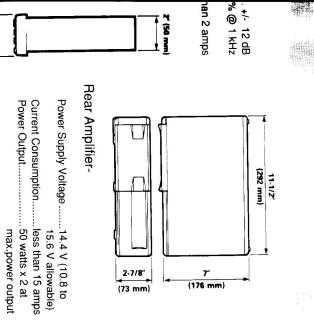
...90 dB

Current Consumption. .....less than 3 amps Disc to Disc Access Time......7.2 sec. typ Channel Separation......75 dB @ 1 kHz

## Wiring Diagram

11-1/2" (292 mm)





than 3 amps

6-5/8" (167 mm)

1-9/16" (40 mm)

kHz +/- 3 dB 0 1 kHz, 0dB ......90 dB dB @ 1 kHz 7.2 sec. typ

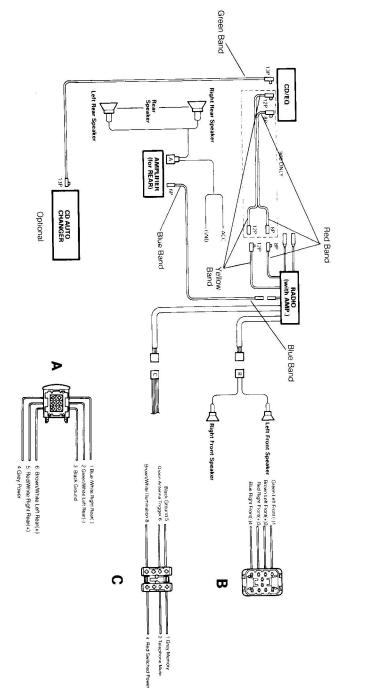
6-1/4" (160 mm)

0

2-5/16" (59 mm)



Wiring Diagram 41



# 42 Audio System Part Numbers

# **Audio System Part Numbers**

CD Autochanger, Cover02 47	CD Autochanger, Disc Magazine02 47 585	CD Autochanger, Data Cable40 83 291	CD Autochanger02 47 544	CD/EQ DIN Cord (900 Only)40 83 168	CD/Graphic Equalizer Bracket40 83		CD/Graphic Equalizer02 47 528	Radio Bracket/Amplifier40 83 036	Radio Head (Non-Turbo)02 47 510	Radio Head (Turbo)02 47	SAAB P/N
02 47 940	47 585	83 291	47 544	83 168	40 83 044	02 47 536	47 528	83 036	47 510	02 47 502	

With Carrier	9000 4" Front Woofer (All)40 85 239
Owner Identification	9000 1" Front Tweeter (All)40 85 148
Audio System Ow	900 6" Rear Spkr (Conv.)41 68 563
5 Amp Fuse Blade	900 4"x10" Rear Spkr (3&4 Dr)40 83 150
15 Amp Fuse Blace	900 4" Front Spkr (All)40 85 189
Bass/Treble Knob	Shorting Plug (Base and S)40 85 197
Power/Volume/Ba	Rear Amplifier DIN Cable (9000)40 83 085
Tidy Box	Rear Amplifier DIN Cable (900)40 85 270
Radio Carry Bag	Rear Amplifier40 83 051
Removal Tools W	9000 CS02 47 957
9000 4DR Rear S	9000 CD02 47 619
9000 4DR Rear S	900 Convertible02 47 601
9000 CS Rear Spl	900 3 and 4 Door02 47 593
9000 CS Rear Spl	CD Autochanger, Bracket Kit:

02 47 643	With Carrier
	Owner Identification Card (x2)
02 46 553	Audio System Owners Manual
02 11 300	5 Amp Fuse Blade Type (Amber)
79 74 645	15 Amp Fuse Blade Type (Blue)
02 47 635	Bass/Treble Knobs x2
02 47 627	Power/Volume/Balance/Fader Knob
02 73 417	Tidy Box
02 73 136	Radio Carry Bag
02 73 706	Removal Tools With Pouch
40 83 283	9000 4DR Rear Spkr Assy-Right
40 83 275	9000 4DR Rear Spkr Assy-Left
40 85 221	9000 CS Rear Spkr Assy-Right
40 85 213	9000 CS Rear Spkr Assy-Left

### Index

Disc Eject  Disc In  Disc Selection  Dolby Noise Reduction  Dynamic Noise Reduction (DNR)	Carry Bag	Balance Band SelectionBass	Anti-Theft Code
15 14 33 12,25	12,25 12,25 16,34 15,33	7,21 8,22 7,21	3,4 29 5 5 11,24 5,11,24

Ţ	Ţ	

Fast I Cass CD Fast B Flashin Freque

Handle Radio CD

Head ( High B

Low Lo

Magazi Ejectir Ejectir Loadir Loadir Memor Equali Station

Night III Noise (

....3,4

Electronic Lock-Out System.....
Equalizer/Spectrum Analyzer
Selection .......Analyzer

Owner

.....19,28

Play/Sto

### 02 47 593 02 47 601 02 47 619 02 47 957 02 83 051 40 83 105 40 85 197 40 85 197 40 85 189 40 85 189 40 85 189 40 85 189 40 85 189 Owner Identification Card (x2) With Carrier..... ...02 47 643

### Index

Index 43

Memory

Play/Stop, CD.....

.....14,32

Owner Identification Card ......3

Noise-Cancelling Circuit .....

Ejecting Magazine From Changer32  Loading Discs Into Magazine33	
Magazine, CD Autochanger	
Low Level19,28	
CD16 Head Cleaning Cassette12,25 High Bias11,24	
Handling Precaution	
Flashing Light Frequency Band Control Switches18.27	
CD15,33 Fast Backward, CD15,33	
Cassette11,24	
ward	
Fader	

Weather Rand 4.8	Voise-Cancelling Circuit 4 36
	Night Illumination5
Volume Control7,21	
	Music Search, CD15,33
Frequency Step Change8,22	Station Presets8,22
Manual, Seek, Scan7,21	Equalizer18,27
Tuning	Memory
Treble7,21	Loading Magazine Into Changer 31
Track Number, CD14,32	Loading Discs Into Magazine30
Tape Program Direction11,24	Ejecting Magazine From Changer32
Tape Eject12,25	Ejecting Disc From Magazine31
Tape Equilization11,24	Magazine, CD Autochanger
Tape Clean Indicator12,25	
	ow Level19,28
Station Presets8,22	
Spectrum Analyzer19,28	High Bias11,24
Specifications39	Head Cleaning Cassette12,25
(SASC)4,36	CD16
Signal Actuated Stereo Control	Radio
CD15,34	Handling Precaution
Radio7,21	
Scan	uses
	d Control Switches
Rewind11,24	=lashing Light4
In-Dash14	ast Backward, CD15,33
	CD15,33
Random, CD15,33	Cassette11,24
Radio Removal Tools2	ast Forward
Hadio Hemoval	-ader/,21

### 44 Index

# Photographs and Illustrations

Viring Diagram41
Code4
Jsing the Electronic Lock-Out
Specification Diagrams39,40
Radio Removal Tools
Radio Removal2
Loading Magazine Into Changer31
Loading Discs Into Magazine30
Ejecting Magazine From Changer32
Ejecting Disc From Magazine31
Magazine, CD Autochanger
use Replacement38
requency Bands (U.S./Europe)9,22
qualizer Preset Switches18,27
qualizer Features and Operation26
Features and Operation13
Compact Disc/Equalizer
Compact Disc Handling Tips16,34
Features and Operation29
Compact Disc Autochanger
Cassette Handling Tips12,25
Cassette Features and Operation10,23
Sarry Bag3
3roadcast Reception36
uner Features and Operation6,20

CAUTION!

Changes or modifications not expressly approved by the manufacturer for compliance could void the users authority to operate the equipment.