SAAB
AUDIO EQUIPMENT MANUAL - 1992

Introduction

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

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

You will be rewarded with optimum audio performance on the road.

Saab/Clarion Audio Protection System

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

The Surest Protection: Removing Your Radio

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

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

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

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

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

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

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

CAUTION!

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

Using The Electronic Lock-Out System

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

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

Owner Identification Card

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

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

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

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:

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

Photocell/Anti-Theft Indicator

Code Entry Switches
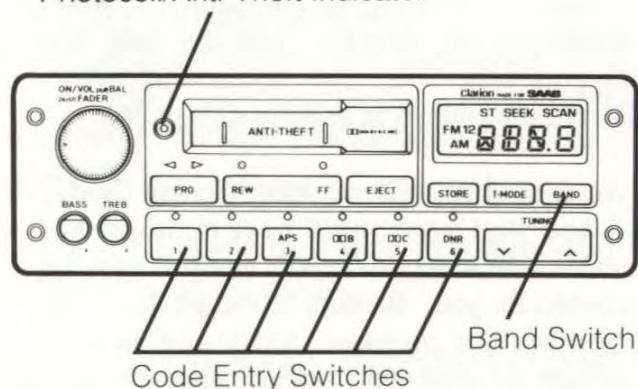
Band Switch

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!
1. **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.**
2. **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.

Cassette AutoReverse, Automatic Program System

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.

Night Illumination

All switches and controls are illuminated for night viewing.
A photocell is built into the face of the cassette/receiver. It controls the brightness of the display functions on all audio system components according to ambient lighting.

Automatic Antenna Circuit

When the radio is turned on, the electric antenna automatically extends. When the radio is turned off, the antenna automatically retracts.
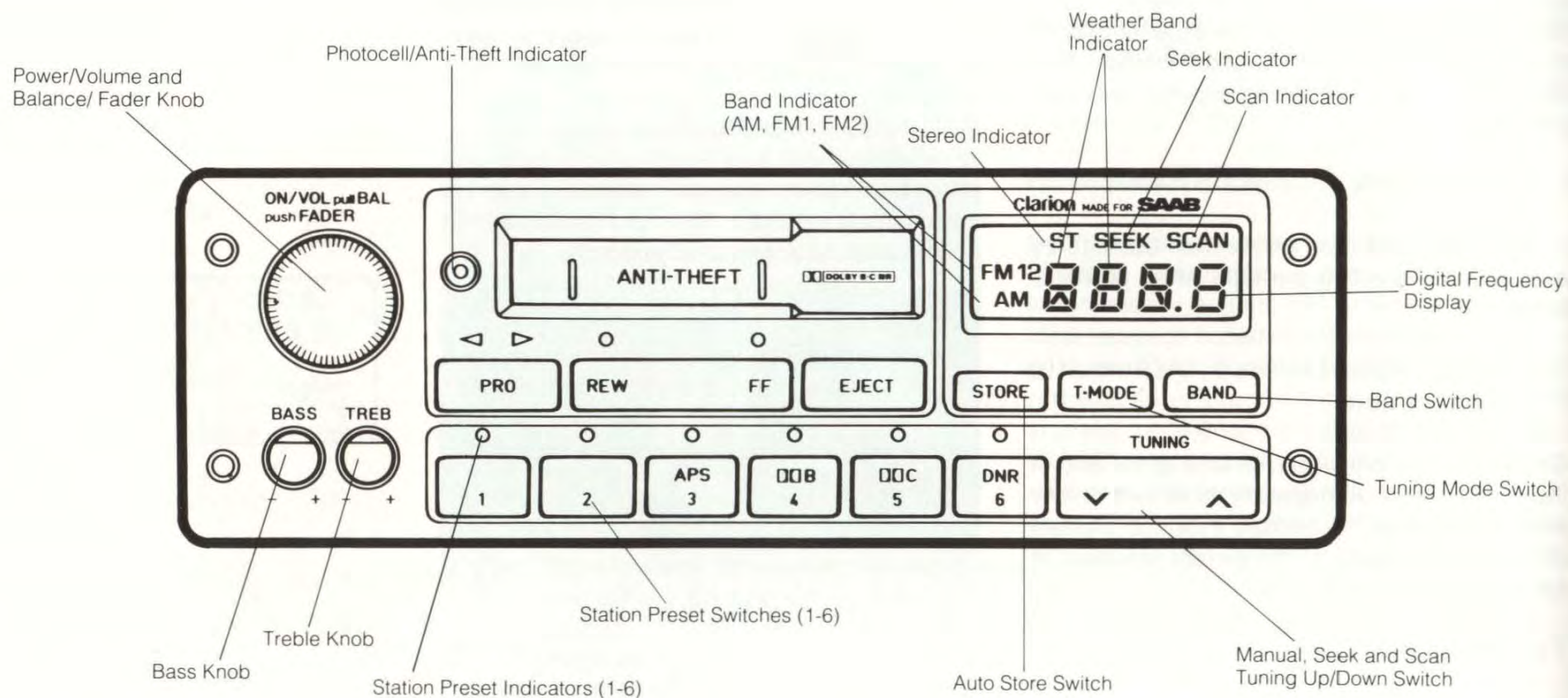
CAUTION!
When entering an automatic car wash, be sure to turn the radio off. If the car is driven through the car wash with the antenna extended, the antenna might be damaged.

Tuner Features and Operation (All Turbo Models)

Power/Volume and
Balance/ Fader Knob

Photocell/Anti-Theft Indicator

Band Indicator
(AM, FM1, FM2)

Stereo Indicator

Weather Band
Indicator

Seek Indicator

Scan Indicator

Digital Frequency
Display

Band Switch

Tuning Mode Switch

Manual, Seek and Scan
Tuning Up/Down Switch

Auto Store Switch

Station Preset Switches (1-6)

Station Preset Indicators (1-6)

Bass Knob

Treble Knob

ON/VOL pull BAL
push FADER

ANTI-THEFT

clarion MADE FOR SAAB

ST SEEK SCAN

FM 12
AM

PRO   REW   FF   EJECT   STORE   T-MODE   BAND

BASS   TREB

1   2   APS
3   B
4   C
5   DNR
6   TUNING

TunerFeatures 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!**
> 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

(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.

Treble

Depress the treble knob and it will spring outward so that the treble can be adjusted. Rotate the knob clockwise from the center click-stop 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.

Bass

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 counter-clockwise 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 ∨ or ∧ switches. The ∨ switch lowers the frequency. The ∧ 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 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.

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 listening 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.

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

Auto Store

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

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

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

Stereo Indicator

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

Weather Band

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

To exit weather band mode, depress the band select (BAND) switch, which will return you to FM1.

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

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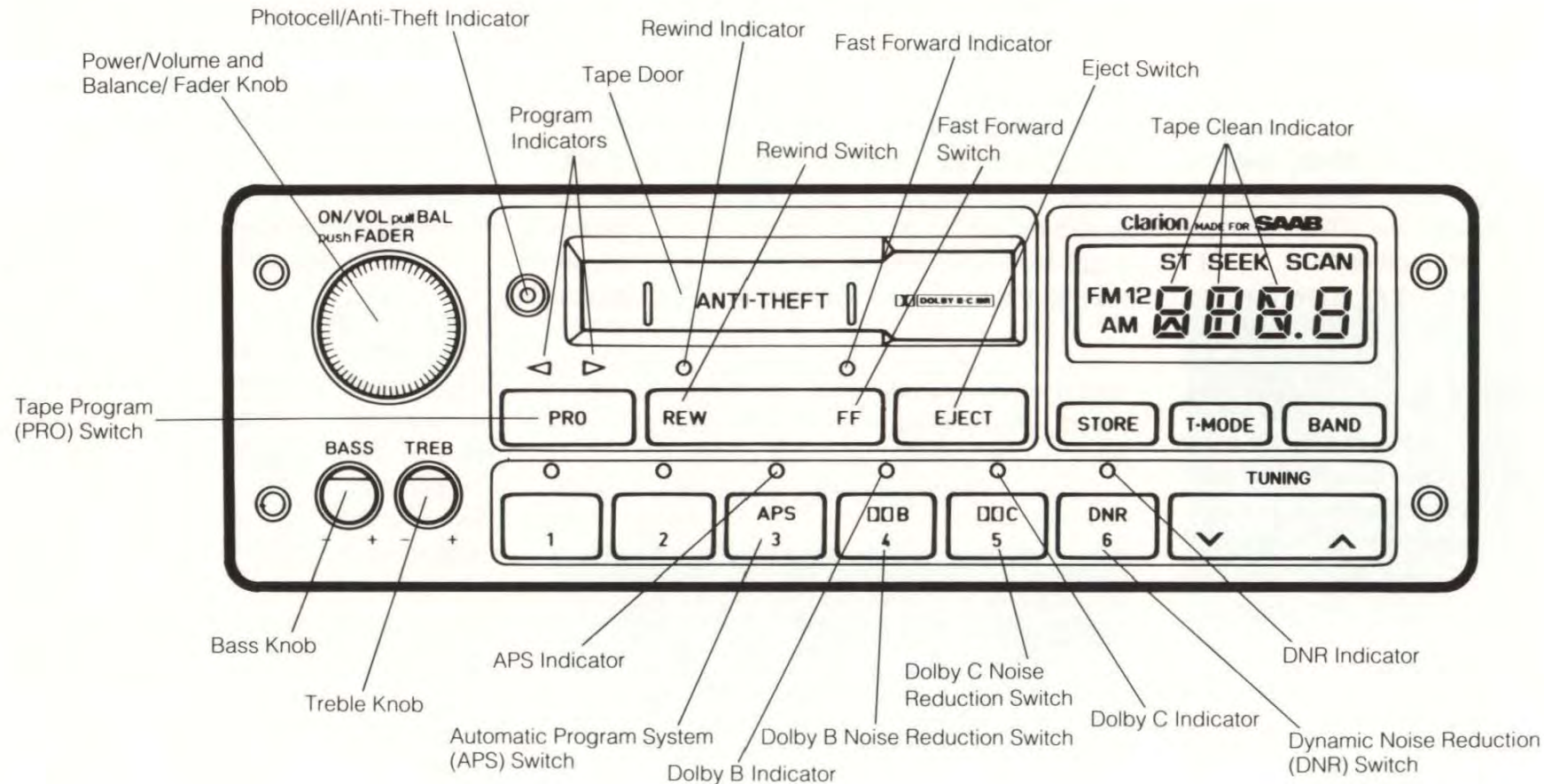
1. Turn the radio OFF using the volume control switch.
2. Remove and reinstall the radio. DO NOT ENTER THE ANTI-THEFT CODE YET.
3. Turn the radio ON.
4. Depress the Tuning Mode (T•MODE) switch and the Band (BAND) switch simultaneously.
5. Release both switches.
6. Enter your correct anti-theft code.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

To reverse the tuning mode, repeat the procedure.

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

Cassette Features and Operation (All Turbo Models)

Photocell/Anti-Theft Indicator

Rewind Indicator   Fast Forward Indicator

Power/Volume and
Balance/ Fader Knob

Tape Door   Eject Switch

Program
Indicators   Fast Forward   Tape Clean Indicator

Rewind Switch   Switch

ON/VOL pull BAL
push FADER

clarion MADE FOR SAAB

ST SEEK SCAN

ANTI-THEFT   DOLBY B C

FM 12
AM

Tape Program
(PRO) Switch

PRO   REW   FF   EJECT   STORE   T-MODE   BAND

BASS   TREB

TUNING

APS
3   B
4   C
5   DNR
6

1   2

Bass Knob   DNR Indicator

APS Indicator

Dolby C Noise
Reduction Switch   Dolby C Indicator

Treble Knob

Automatic Program System   Dolby B Noise Reduction Switch   Dynamic Noise Reduction
(APS) Switch   (DNR) Switch
Dolby B Indicator

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. ($\triangleleft \blacktriangleright$ = forward play, $\blacktriangleleft \triangleright$ = 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 necessary to hold the switch while the tape is fast forwarding or rewinding. The appropriate indicator will illuminate above the switch.

NOTE!
1. **To release the cassette from fast forward, press the FF switch again. To stop the cassette from rewinding, press the REW switch again.**
2. **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.**
3. **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 tape requires 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 μs) equalization. In this case the unit will not select high-bias.

Noise Reduction

This tape player offers three types, Dolby® B (□□ B), Dolby® C (□□ C) and Dynamic Noise Reduction (DNR). If a cassette is Dolby encoded (look for the □□), press the appropriate Dolby □□ 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.
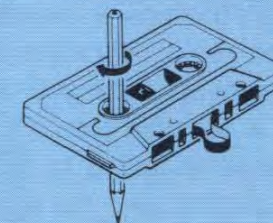
Routine Maintenance

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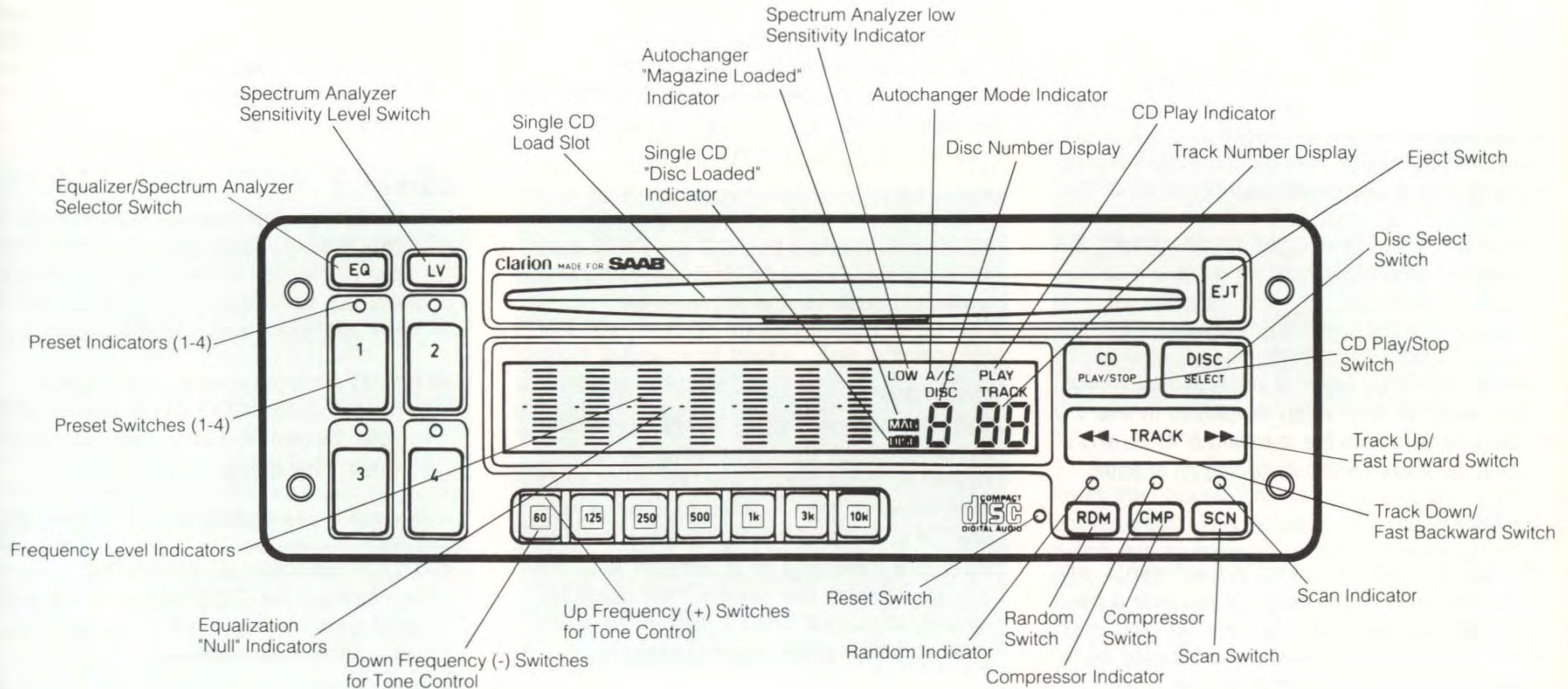1. **Store cassettes in their plastic cases when not in use.**
2. **Do not leave cassettes in your car, particularly during warm weather.**
3. **Take up any slack in the cassette before playing.**

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

Compact Disc/Equalizer Features and Operation

Spectrum Analyzer low Sensitivity Indicator

Autochanger "Magazine Loaded" Indicator

Autochanger Mode Indicator

CD Play Indicator

Spectrum Analyzer Sensitivity Level Switch

Single CD Load Slot

Disc Number Display

Track Number Display

Eject Switch

Equalizer/Spectrum Analyzer Selector Switch

Single CD "Disc Loaded" Indicator

Disc Select Switch

Preset Indicators (1-4)

CD Play/Stop Switch

Preset Switches (1-4)

Track Up/ Fast Forward Switch

Track Down/ Fast Backward Switch

Frequency Level Indicators

Scan Indicator

Equalization "Null" Indicators

Up Frequency (+) Switches for Tone Control

Reset Switch

Random Switch

Compressor Switch

Scan Switch

Down Frequency (-) Switches for Tone Control

Random Indicator

Compressor Indicator

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.

Play/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.

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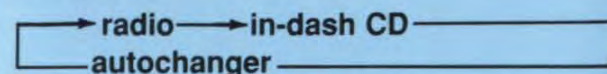
WITHOUT optional changer connected:
Depressing the CD/RADIO switch will toggle between radio and in-dash compact disc mode.

```
┌──→ radio ──→ in-dash CD ─────────┐
└──────────────────────────────────┘
```
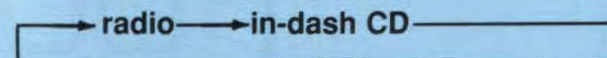
WITH optional changer connected:
Depressing the CD/RADIO switch will cycle you through radio, in-dash CD and autochanger modes.

```
┌──→ radio ──→ in-dash CD ─────────┐
└──── autochanger ─────────────────┘
```

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.

NOTE!
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.

[►►]: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.

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

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

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

Random

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

Compressor

Press the Compressor (CMP) switch to activate the audio compressor. The indicator light above the compressor switch will illuminate indicating compressor mode is activated. This feature produces an audio "envelope" into which all signals are placed. This feature is particularly useful for audio selections featuring a wide dynamic range of signal levels (i.e. classical). Signals which normally would be either too high or too low for the system to accurately reproduce are compressed into an accurately reproducible envelope. To deactivate the audio compressor press the Compressor (CMP) switch again. The 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 you are listening to. Some recordings will demonstrate dramatic changes while others will display little or no change.

Scan

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

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

Compact Disc Player Precautions

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

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

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

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

NO

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

3. 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 affect the recorded signals but, depending on the degree of contamination, the brightness of the light reflected from the

signal surfaces may be reduced, causing degradation of sound quality. Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery.
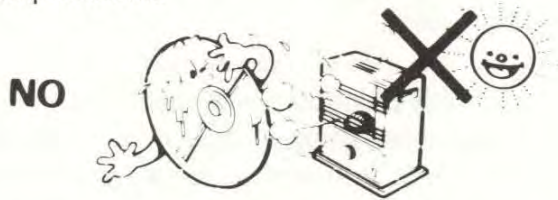
5 If a disc becomes very dirty, dip a soft cloth in water and after wringing it out well, wipe the dirt away gently, and then remove any water drops with another soft dry cloth.

6. Do not use record cleaning spray or anti-static agents on discs. Also, never clean

NO

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

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

NO

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

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 compact disc/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. Individual discs may still be loaded in the dash unit as desired. 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.**

Precaution

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

If necessary, the user should consult the car dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communication Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

> **WARNING!**
> **Use of controls, adjustment, or performance of procedures other than those specified herein, may result in hazardous radiation exposure.**
>
> **The compact disc player should not be adjusted or repaired by anyone except properly qualified service personnel.**

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.

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.

The equalization "NULL" indicators in between the frequency band indicators are provided for referencing. When a frequency level indicator is in line with a "NULL" indicator, there is no processing on that frequency band. In other words that frequency band is not being boosted or attenuated.
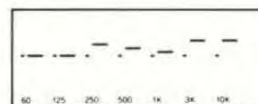
1 JAZZ
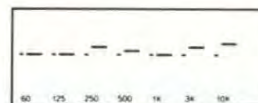
2 CLASSICAL
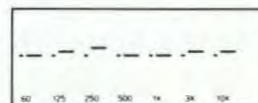
3 VOICE

4 ROCK

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.

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.

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.

Tuner Features and Operation (All Non-Turbo Models)
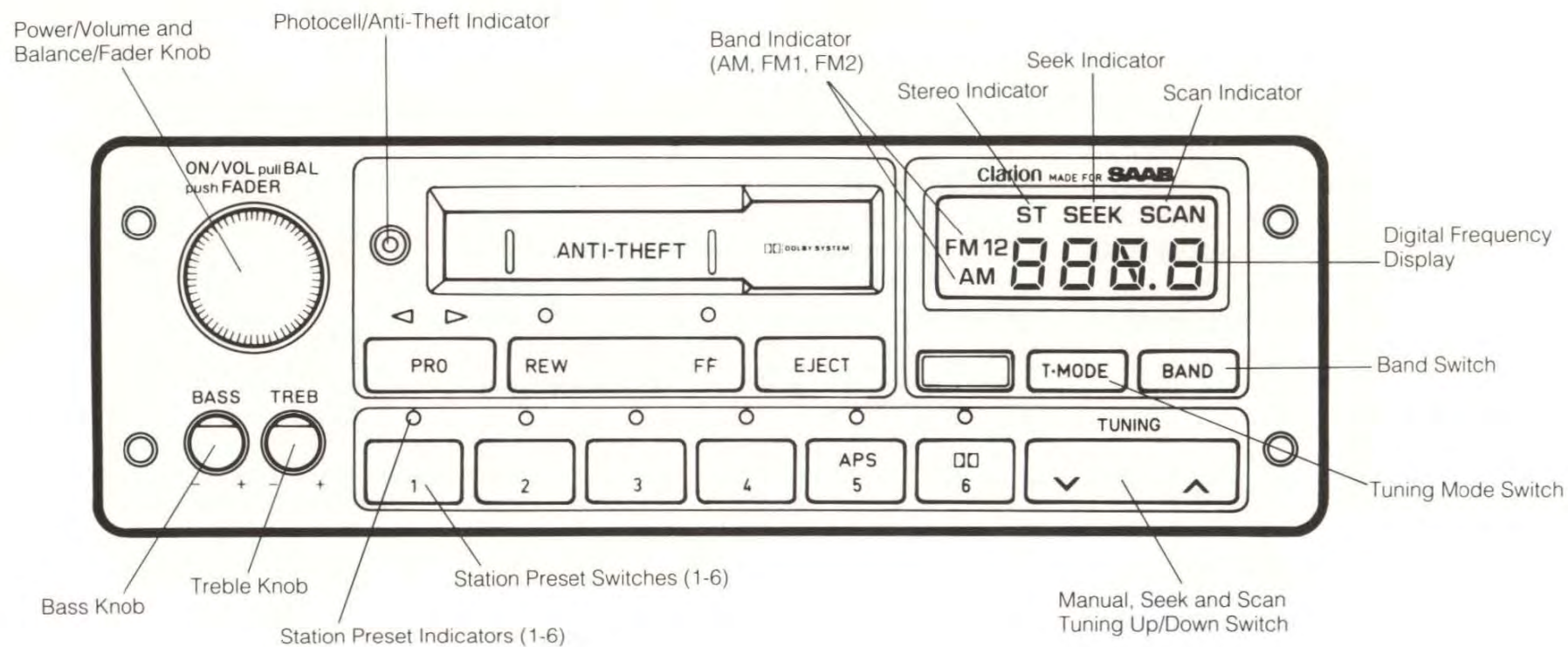
Power/Volume and Balance/Fader Knob

Photocell/Anti-Theft Indicator

Band Indicator (AM, FM1, FM2)

Stereo Indicator

Seek Indicator

Scan Indicator

ON/VOL pull BAL push FADER

clarion MADE FOR SAAB

ST SEEK SCAN

ANTI-THEFT

DOLBY SYSTEM

FM 12
AM

Digital Frequency Display

PRO   REW   FF   EJECT

T·MODE   BAND

Band Switch

BASS   TREB

1   2   3   4   APS 5   6

TUNING

Tuning Mode Switch

Bass Knob

Treble Knob

Station Preset Switches (1-6)

Station Preset Indicators (1-6)

Manual, Seek and Scan Tuning Up/Down Switch

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.

Fader

(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.

Treble

Depress the treble knob and it will spring outward so that the treble can be adjusted. Rotate the knob clockwise from the center click-stop 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.

Bass

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 counter-clockwise 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 ∨ or ∧ switches. The ∨ switch lowers the frequency. The ∧ 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 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.

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.

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

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
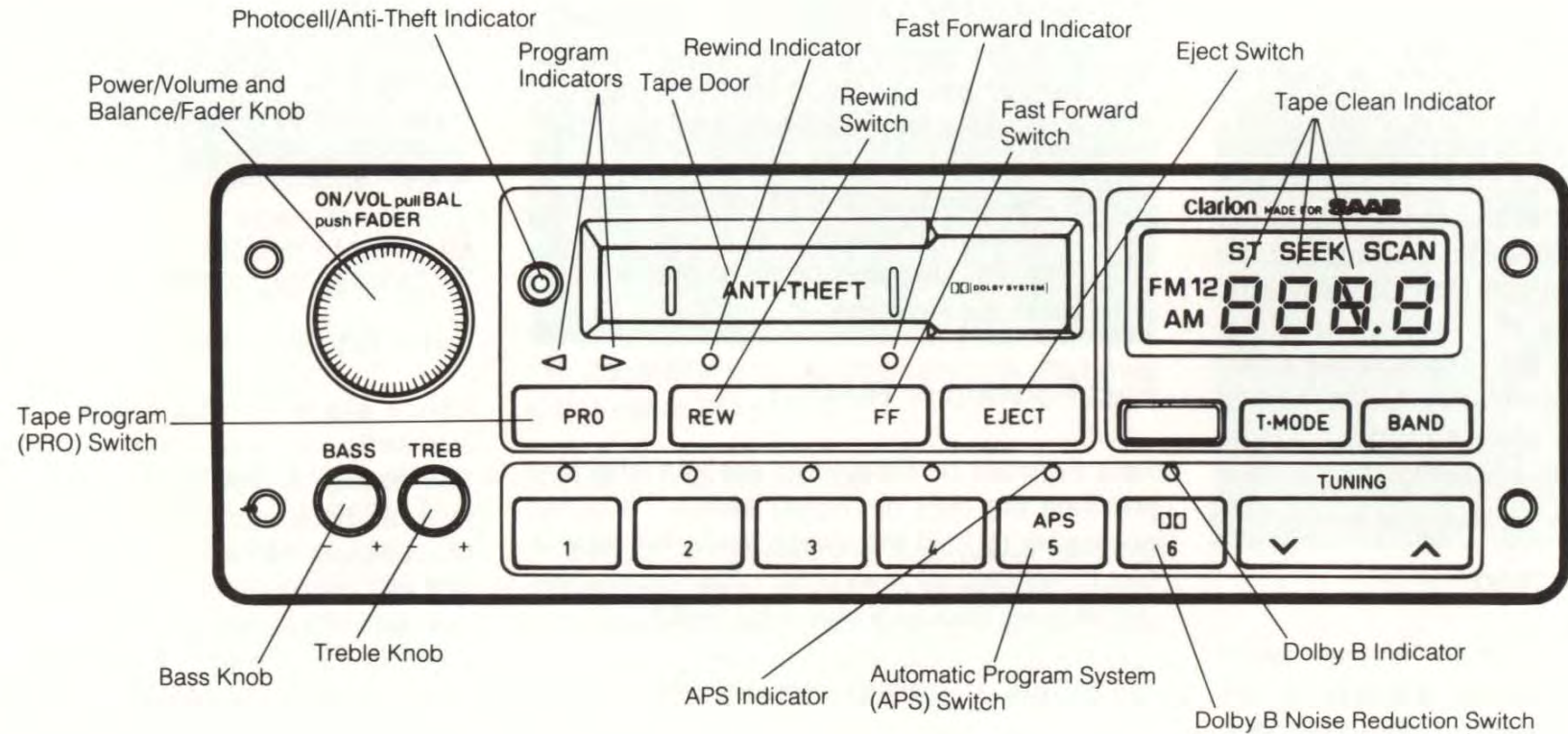
easily be done following these steps:

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

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

Cassette Features and Operation (All Non-Turbo Models)

Photocell/Anti-Theft Indicator

Program Indicators

Rewind Indicator

Fast Forward Indicator

Eject Switch

Power/Volume and Balance/Fader Knob

Tape Door

Rewind Switch

Fast Forward Switch

Tape Clean Indicator

ON/VOL pull BAL push FADER

ANTI-THEFT

DOLBY SYSTEM

Clarion MADE FOR SAAB

ST SEEK SCAN

FM 12
AM

PRO   REW   FF   EJECT   T·MODE   BAND

Tape Program (PRO) Switch

BASS   TREB

TUNING

1   2   3   4   APS 5   6

Bass Knob

Treble Knob

APS Indicator

Automatic Program System (APS) Switch

Dolby B Indicator

Dolby B Noise Reduction Switch

Cassette Features and Operation (All Non-Turbo Models)

To Start

Turn on the power switch to activate the unit, and the radio will begin playing. If you see "Code" on the display, enter your four digit security code. (See Saab/Clarion Audio Protection System, P.2). 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. ($\triangleleft \blacktriangleright$ = forward play, $\blacktriangleleft \triangleright$ = 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.

NOTE!
1. **To release the cassette from fast forward, press the FF switch again. To stop the cassette from rewinding, press the REW switch again.**
2. **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.**
3. **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 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.

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.

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.

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

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 μs (normal bias). Unless there is some indication to the contrary - such as the designation "metal","chrome" or "70 μs high bias" - you can assume that the tape requires 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 μs) equalization. In this case the unit will not select high-bias.

Noise Reduction

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

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!
1. **Store cassettes in their plastic cases when not in use.**
2. **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) cassettes. The tape in these cassettes is very thin and prone to breakage.**

Equalizer Features and Operation

Autochanger Mode Indicator

Spectrum Analyzer
Sensitivity Level Switch

Spectrum Analyzer low
Sensitivity Indicator

Disc Number
Display

CD Play Indicator

Autochanger
"Magazine Loaded"
Indicator

Equalizer/Spectrum Analyzer
Selector Switch

Track Number Display

Play/Stop
Switch

Clarion MADE FOR **SAAB**

EQ   LV

CD
PLAY/STOP

DISC
SELECT

Disc Select
Switch

LOW A/C   PLAY
     DISC TRACK

MAG

Preset Indicators (1-4)

1   2

TRACK

Track Up/
Fast Forward Switch

Preset Switches (1-4)

3   4

60 125 250 500 1k 3k 10k

RDM CMP SCN

Track Down/
Fast Backward Switch

Frequency Level Indicators

Scan Indicator

Up Frequency (+) Switches
for Tone Control

Random Indicator

Scan Switch

Equalization
"NULL" Indicators

Down Frequency (-) Switches
for Tone Control

Random Switch

Compressor
Indicator

Compressor Switch

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.

[1] JAZZ
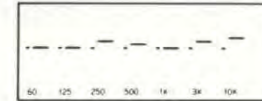
[2] CLASSICAL
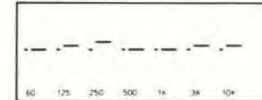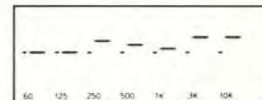
[3] VOICE

[4] ROCK

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.

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 Features and Operation
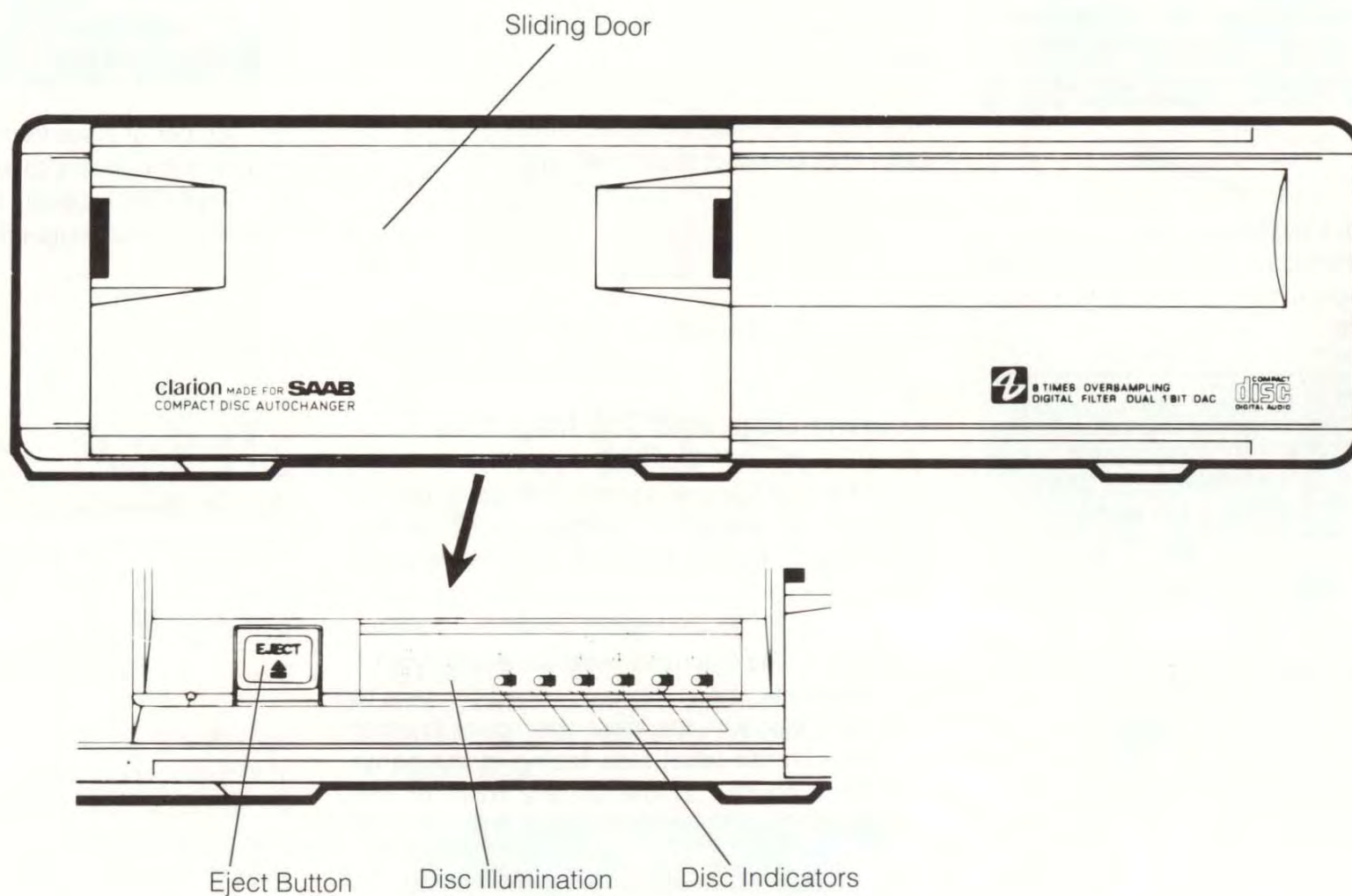
Sliding Door

clarion MADE FOR **SAAB**
COMPACT DISC AUTOCHANGER

8 TIMES OVERSAMPLING
DIGITAL FILTER DUAL 1 BIT DAC

EJECT

Eject Button   Disc Illumination   Disc Indicators

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.

Introduction

This rear mounted module allows you to pre-load 6 discs which may then be accessed via the compact disc/equalizer control head (Part Number 02 47 528):
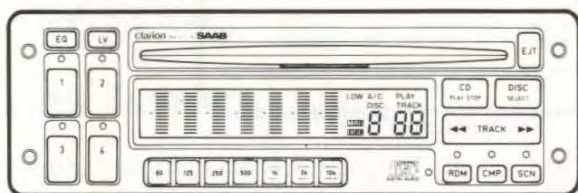
or the equalizer control head (Part Number 02 47 536):
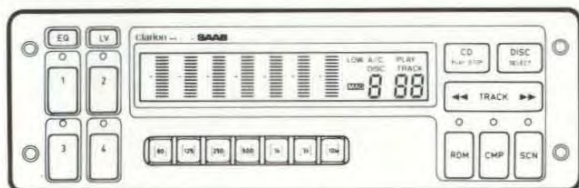
The autochanger provides the convenience of not having to continually load and unload discs while simultaneously providing an increased margin of safety by not having to handle CD jewel cases while driving. Some cars are prewired to accept this option with minimum installation effort. Consult your dealer for details.

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

symbol. No other types of discs can be played.

Loading Discs Into The Magazine

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

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

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

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

CD Magazine   Labelled side up.

Disc No. 6
Disc No. 5
Disc No. 4
Disc No. 3
Disc No. 2
Disc No. 1

Disc No. 1 is at bottom.
Disc No. 6 is at top.

One disc per compartment (6 discs)
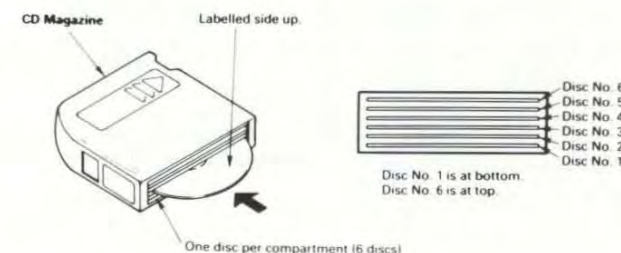
Removing Discs From The Magazine

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

To eject the disc from the magazine, move the

Disc lever

CD Magazine

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

Loading The Magazine Into The Changer

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

will begin to flash indicating magazine is properly loaded.

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

Sliding door

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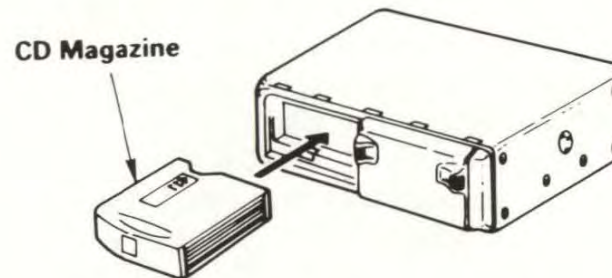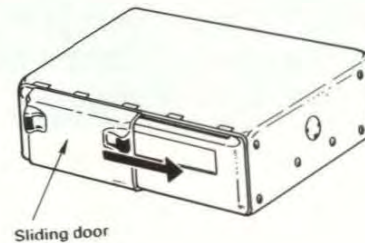
loaded. When complete, the changer will illuminate the disc indicators corresponding to the loaded slots.

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

Once the magazine has been loaded, slide the door back to the left (closed).
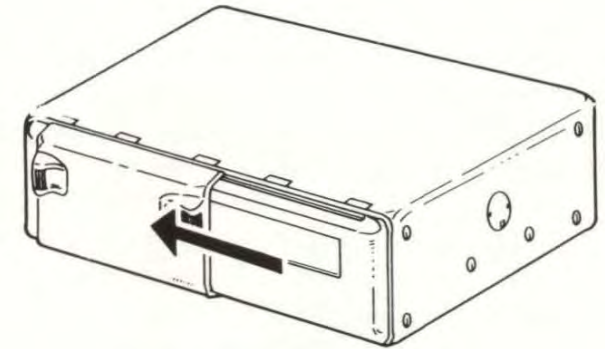
CAUTION!
1. **Do not leave the magazine door open at any time other than during magazine loading and unloading. Debris may fall into the mechanism and eventually cause damage.**
2. **Take care when loading and unloading the magazine during inclement weather as excessive moisture inside the unit may damage the mechanism.**
3. **Do not insert more than one disc into one disc compartment as damage to both disc and magazine will result.**

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).

EJECT button
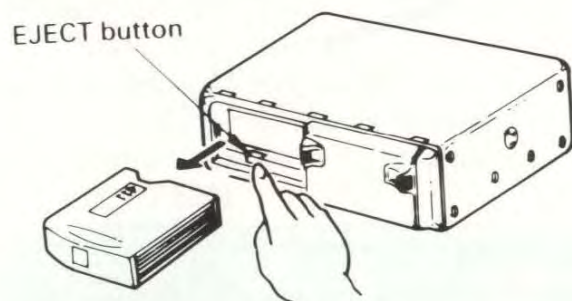
To Start

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.

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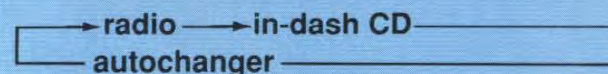
This cycle is applicable only if both in-dash and autochanger are loaded with discs. (i.e. if in-dash CD player is not loaded with a disc, then depressing (CD PLAY/STOP) will only cycle between radio and autochanger modes. The unloaded in-dash unit will be skipped over as if not there.

With EQ Part Number 02 47 536:
Depressing the play/stop (CD PLAY/STOP) switch will toggle between radio and autochanger mode.

```
 ┌──►radio──►autochanger──────┐
 └────────────────────────────┘
```
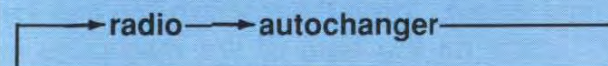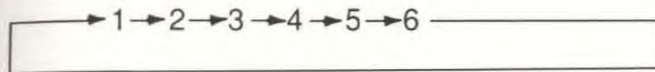
Disc Selection

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

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:

```
┌─► 1 ─► 2 ─► 3 ─► 4 ─► 5 ─► 6 ───┐
└─────────────────────────────────┘
```

NOTE!
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.

Music Search/Fast Forward/Fast Backward

When the changer 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.

[►►]: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.

Pressing and <u>holding</u> either switch causes the player to fast forward, or fast backward.

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

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

Random

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

Compressor

Press the Compressor (CMP) switch to activate the audio compressor. The indicator light above the compressor switch will illuminate indicating compressor mode is activated. This feature produces an audio "envelope" into which all signals are placed. This feature is particularly useful for audio selections featuring a wide dynamic range of signal levels (i.e. classical). Signals which normally would be either too high or too low for the system to accurately reproduce are compressed into an accurately reproducible envelope. To deactivate the audio compressor press the Compressor (CMP) switch again. The 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 you are listening to. Some recordings will demonstrate dramatic changes while others will display little or no change.**

Scan

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

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

Compact Disc Player Precautions

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

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

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

NO

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

3. 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 affect the recorded signals but, depending on the degree of contamination, the brightness of the light reflected from the signal surfaces may be reduced, causing degradation of sound quality. Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery.
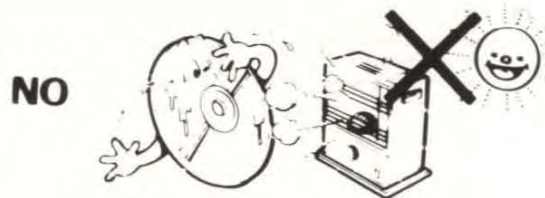
5. If a disc becomes very dirty, dip a soft cloth in water and after wringing it out well, wipe the dirt away gently, and then remove any water drops with another soft dry cloth.

6. Do not use record cleaning spray or anti-static agents on discs. Also, never clean

NO

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

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

NO

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

Precaution

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

If necessary, the user should consult the car dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communication Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

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

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

Broadcast Reception Performance Characteristics

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

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

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

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

Optimum selectivity virtually eliminates interference from strong nearby stations, and a special FM noise canceller works to suppress ignition noise and other pulse interference. Wide dynamic range avoids overload distortion and the unpleasant noise it causes.

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

AM and FM

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

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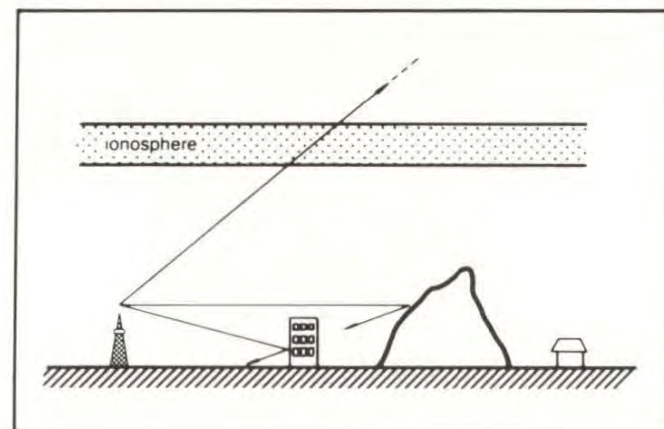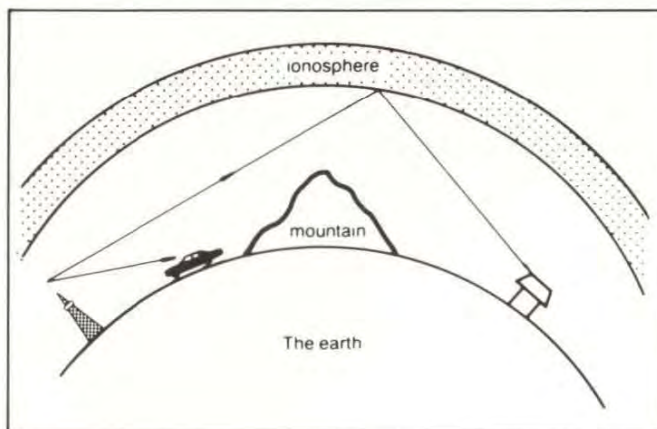
Stereo and Monaural

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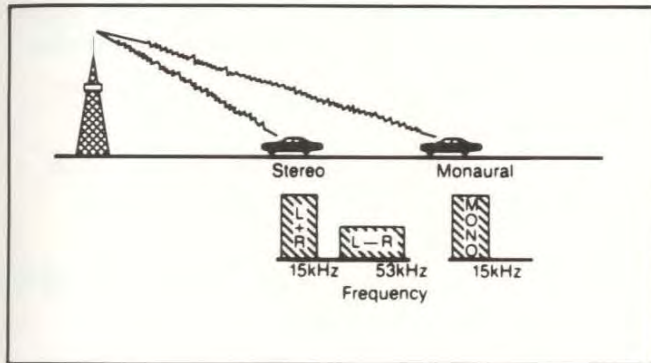
In weak signal areas - called fringe areas - there will be increased noise on stereo broadcasts. When signal strength diminishes significantly in the stereo mode, the radio will automatically switch to monaural transmission.
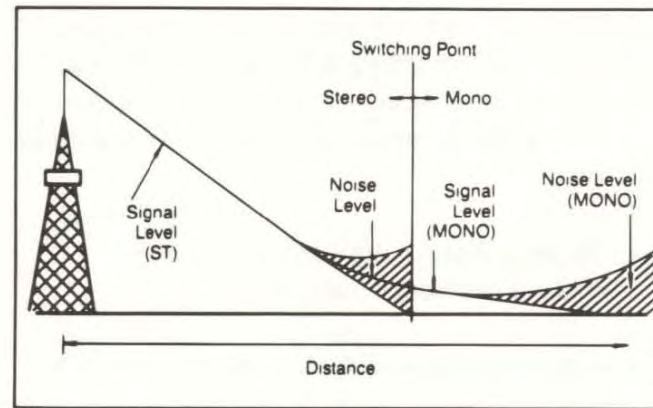
Fuse Replacement

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

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

900 - Fuse Box (under rear seat)

Power Fuse 5
Memory Fuse 6

9000 - Fuse Box (in glove box)

Power Fuse 27
Memory Fuse 19
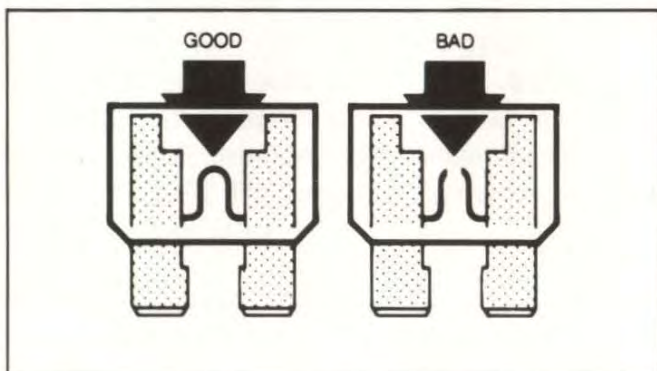
Radio/Amplifier

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.
2. Slide the unit out and locate the two blade type fuses at the rear inside of the bracket.
3. Check and replace the fuses as necessary using the removal tool found in the fuse box.

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

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

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

Rear Amplifier

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

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

Specifications

Radio/Amplifier Specifications

General -

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

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

Audio Section -

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

FM Section -

Frequency Range ....87.9 - 107.9 MHz
*Usable Sensitivity ....12 dBf
*50db Quieting Sensitivity ....18 dBf
*Capture Ratio ....1.5 dB
*Alternate Channel Selectivity.................70 dB
*Stereo Separation...................27 dB @ 1kHz
*Frequency Response......60 - 15k Hz +/- 3 dB

AM Section -

Frequency Range ....530 - 1710 kHz
Usable Sensitivity (20dB S/N)................28μv

Weather Band Section -

Frequency Range ....162.4 - 162.55 MHz
Usable Sensitivity......................................5 dBf
Image Rejection Ratio.............................30 dB
Signal to Noise Ratio ....45 dB

Tape Section -

Tape Speed ....4.76 cm/s
WOW And Flutter......................0.07% WRMS
*Signal to Noise Ratio :
Standard Tape (120 μs) ....53 dB/ 61 dB
(Dolby B NR off/on)
53 dB/ 69 dB
...(Dolby C NR off/on)
Chrome Tape(70μs)................... 56 dB/ 64 dB
(Dolby C NR off/on)
56 dB/ 72 dB
...(Dolby B NR off/on)
*Stereo Separation ....45 dB
*Frequency Response ......50 - 14kHz +/- 3 dB

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

Dolby noise reduction manufactured under license from DolbyLaboratories Licensing Corporation.

"Dolby" and the double-D symbols are trademarks of Dolby Laboratories Licensing Corporation.
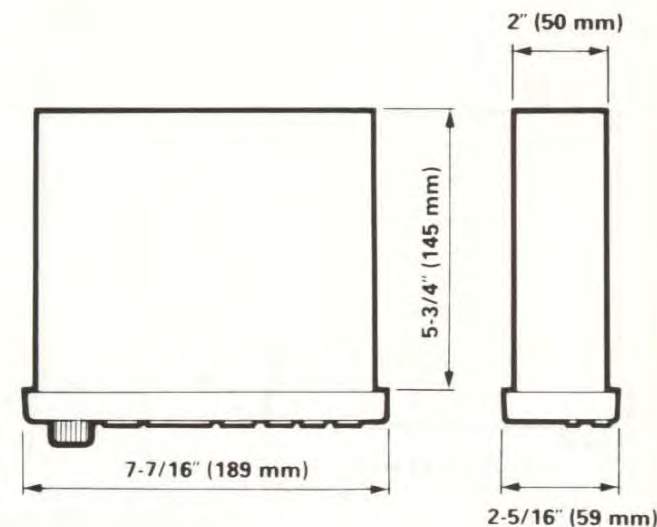
Compact Disc/Equalizer -

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 -

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

Current Consumption. ....less than 3 amps

2" (50 mm)

5-3/4" (145 mm)

7-7/16" (189 mm)

2-5/16" (59 mm)
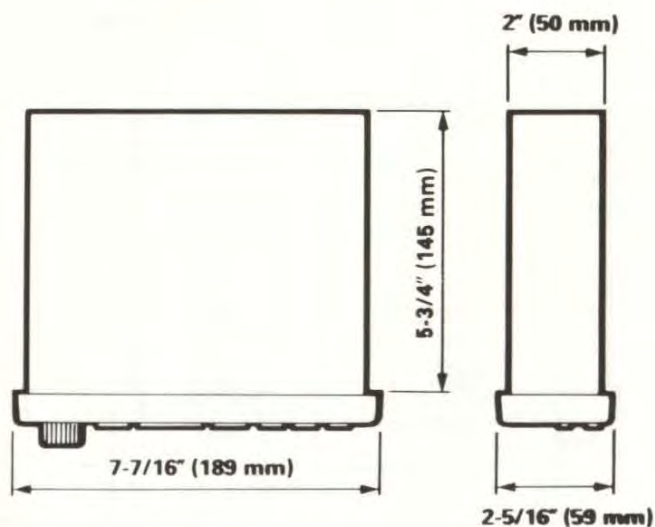
Equalizer -

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

Current Consumption. ....less than 2 amps

2" (50 mm)

6-1/4" (160 mm)

7-7/16" (189 mm)

2-5/16" (59 mm)
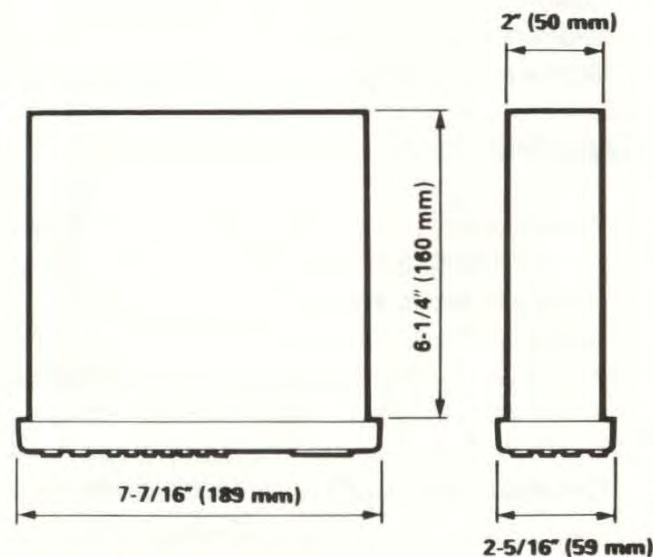
Compact Disc Autochanger-

Frequency Response. .....20 - 20kHz +/- 3 dB
Harmonic Distortion.....0.008% @ 1 kHz, 0dB
Dynamic Range.....................................90 dB
Channel Separation................75 dB @ 1 kHz
Disc to Disc Access Time.............7.2 sec. typ

Current Consumption. ....less than 3 amps

11-1/2"
(292 mm)

7"
(176 mm)

2-7/8"
(73 mm)
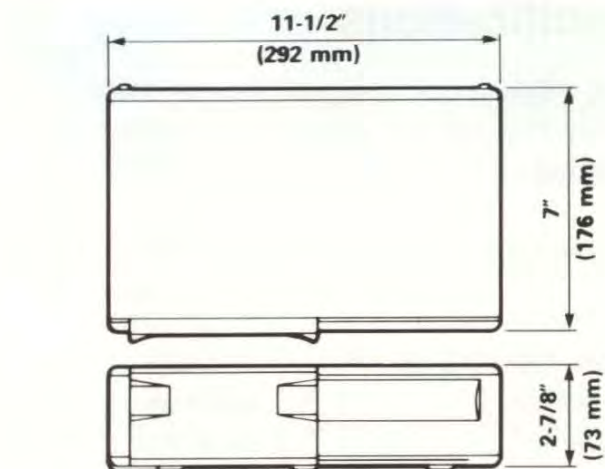
Rear Amplifier-

Power Supply Voltage ....14.4 V (10.8 to
15.6 V allowable)
Current Consumption.........less than 15 amps
Power Output.....................50 watts x 2 at
max.power output

6-1/4" (160 mm)

6-5/8" (167 mm)

1-9/16" (40 mm)

Wiring Diagram

Red Band

CD/EQ

900 ONLY

13P

12P 8P

8P

8P 8P

12P 12P

RADIO
(with AMP.)

Blue Band

Green Band

Right Rear Speaker

ACC

GND

Yellow
Band

Left Front Speaker

Green Left Front (-)1	
Brown Left Front(+)2	
Red Right Front(+)3	
Blue Right Front(-)4	

B

Rear
Speaker

A

6P

AMPLIFIER
(for REAR)

Blue Band

B

Right Front Speaker

C

Black Ground 5	1 Grey Memory
Green Antenna Trigger 6	2 Telephone Mute
Brown/White Illumination 8	4 Red Switched Power

C

Left Rear Speaker

13P

CD AUTO
CHANGER

Optional

1 Blue /White Right Rear(-)
2 Green/White Left Rear(-)
3 Black Ground

A

6 Brown/White Left Rear(+)
5 Red/White Right Rear(+)
4 Grey Power

Audio System Part Numbers

SAAB P/N
Radio Head (Turbo) 02 47 502
Radio Head (Non-Turbo).....................02 47 510
Radio Bracket/Amplifier......................40 83 036
CD/Graphic Equalizer 02 47 528
Graphic Equalizer...............................02 47 536
CD/Graphic Equalizer Bracket 40 83 044
CD/EQ DIN Cord (900 Only) 40 83 168
CD Autochanger...................................02 47 544
CD Autochanger, Data Cable..............40 83 291
CD Autochanger, Disc Magazine 02 47 585

CD Autochanger, Bracket Kit:
   900 3 and 4 Door 02 47 593
   900 Convertible 02 47 601
   9000 All 02 47 619
Rear Amplifier 40 83 051
Rear Amplifier DIN Cable (900) 40 85 270
Rear Amplifier DIN Cable (9000) 40 83 085
Shorting Plug (Base and S)................40 85 197
900 4" Front Spkr (All)........................40 85 189
900 4"x10" Rear Spkr (3&4 Dr) 40 83 150
900 6" Rear Spkr (Conv.) 41 68 563
9000 1" Front Tweeter (All) 40 85 148
9000 4" Front Woofer (All)...................40 67 534

9000 5DR Rear Spkr Assy-Left..........40 83 119
9000 5DR Rear Spkr Assy-Right 40 83 127
9000 4DR Rear Spkr Assy-Left 40 83 275
9000 4DR Rear Spkr Assy-Right 40 83 283
Removal Tools With Pouch 02 73 706
Radio Carry Bag...............................02 73 136
Tidy Box 02 73 417
Power/Volume/Balance/Fader Knob. ..02 47 627
Bass/Treble Knobs x2 ....02 47 635
15 Amp Fuse Blade Type (Blue) 79 74 645
5 Amp Fuse Blade Type (Amber)........02 11 300
Audio System Owners Manual...........02 47 551
Owner Identification Card (x2)
   With Carrier 02 47 643

Index

Photographs and Illustrations

Saab Cars USA, Inc., Orange, CT, USA.