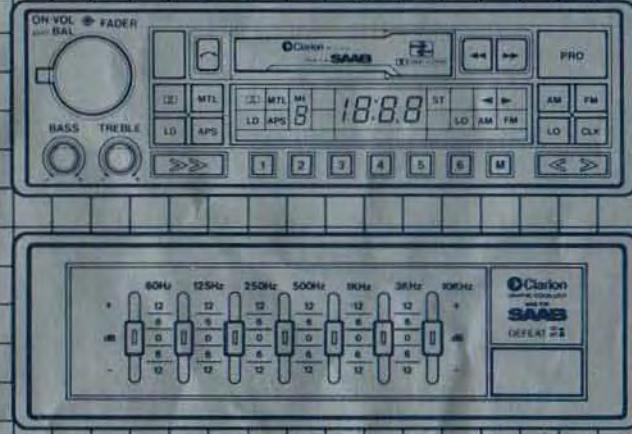
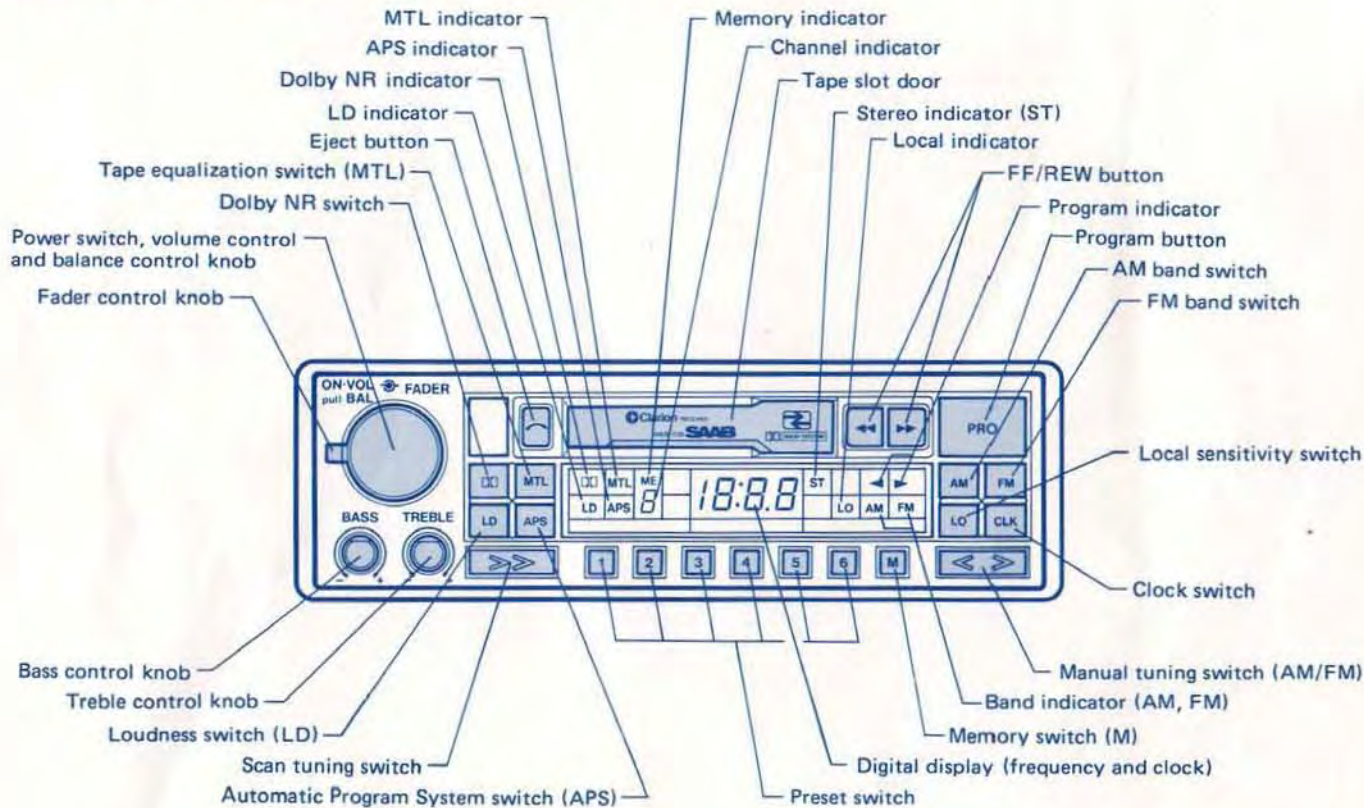


AUDIO SYSTEM OWNERS MANUAL 1985 CLARION ETR SERIES



SAAB

AM/FM CASSETTE CAR STEREO



SPECIFICATIONS

GENERAL

Power supply voltage	14.4V (10.8 to 15.6V allowable)
Current consumption	Less than 7.5 amps

AUDIO SECTION

* Tone action	±8dB at 100Hz
	±5dB at 10KHz

FM SECTION

Frequency range	88.1 to 107.9MHz
* Usable sensitivity	12dBf
* 50dB quieting sensitivity	17dBf
* Capture ratio	1.5dB
* Alternate channel selectivity	70dB
* Stereo separation	35dB at 1KHz
* Frequency response	30 to 15,000Hz ± 3dB

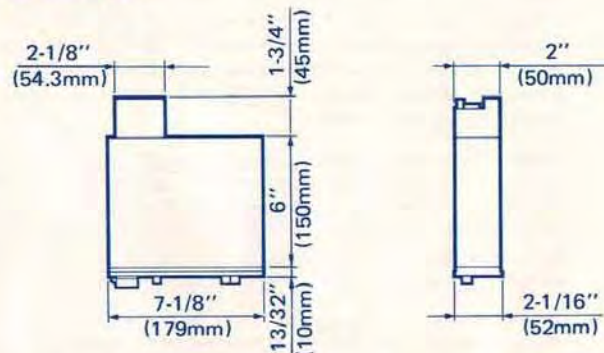
AM SECTION

Frequency range	530 to 1,610KHz
Usable sensitivity (20dB S/N)	28 µV

TAPE SECTION

Tape speed	4.75cm/s (1-7/8 ips)
* Wow & Flutter	0.13% WRMS
* Signal to noise ratio	
Standard tape (120µs)	53dB/62dB (Dolby NR off/on)
CrO ₂ -Metal tape (70µs)	56dB/65dB (Dolby NR off/on)
* Frequency response	50 to 12,500Hz ± 3dB
* Stereo separation	42dB

DIMENSIONS



Weight 3.86 lbs (1.75kg)

Specifications subject to design change.

* Marks comply with AD-HOC committee standards

- Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
- "Dolby" and the double-D symbols are trademarks of Dolby Laboratories Licensing Corporation.

FEATURE

1. Improved FM provides these advanced electronic circuits.

- a. Automatic Distance/Local circuit (**Keyed AGC**) automatically adjusts the FM receiver sensitivity for ideal reception based on the signal strength of both desired and nearby stations. A new FM circuit using **Dual Gate FET/Balanced Mixer** reduces interference distortion from nearby strong radio signals.
- b. Signal Actuated Stereo Control (SASC) circuit conveniently monitors weak stereo FM signals for optimum reception. When the stereo signal falls below the level of noise free reception, the SASC adjusts the receiver to reduce objectionable noise by changing from stereo to mono mode and reducing high frequency response.
- c. SUPER SASC circuit continuously monitors FM signal. If the receiver gets FM MULTIPATH INTERFERENCE NOISE, this circuit adjusts the receiver to reduce objectionable noise, in any signal condition by reducing high frequency response.
- d. FM noise canceller circuit automatically senses strong noise impulses received through the antenna and blocks their passage through the audio amplifier giving impulse noise free FM sound.
The overall FM benefit is clear and clean FM reception under all conditions without need for Dx/Lo switch, stereo/mono switch or pulse noise suppression.

2. Head release system

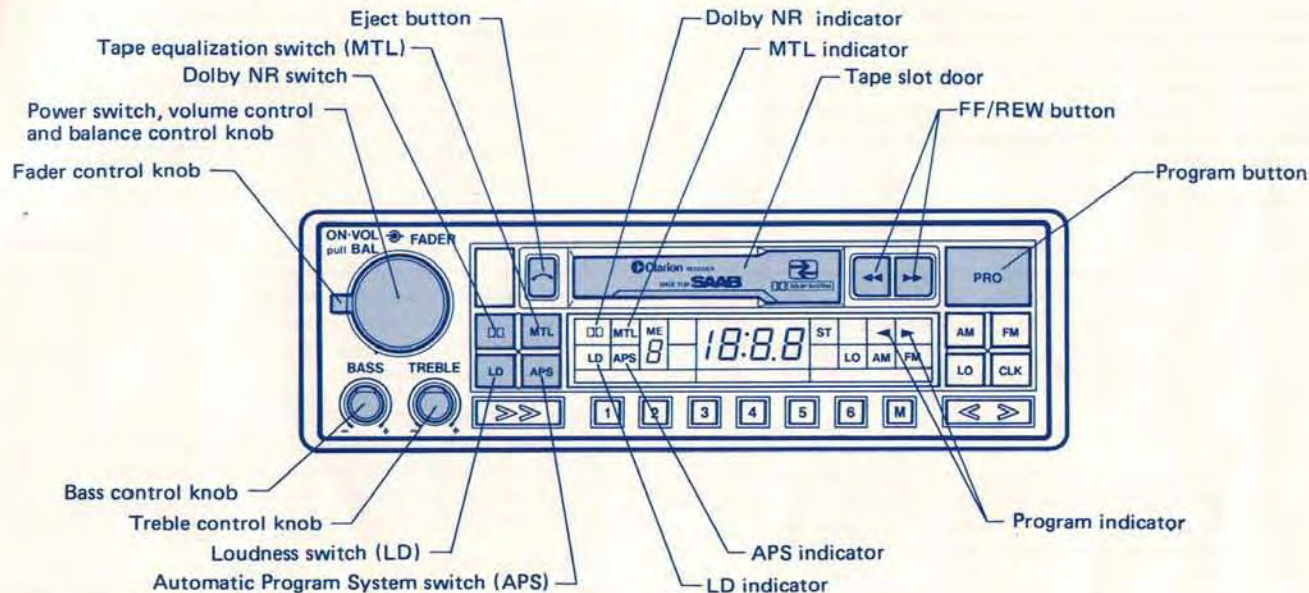
If the power is turned off while the tape is playing the head will automatically be retracted. When it is turned on once again, the tape will start playing. The accessory/ignition switch (ON-OFF) also has the same function.

Note: With this feature the tape will not automatically eject when the power is turned off because it is not necessary for drive capstan or tape starting protection.

3. Auto Reverse cassette mechanism

Automatically reverses at end of tape to play both sides of cassette. Locking fast forward, rewind and Automatic Program System (APS) provide convenience in locating music selections. The tape direction memory will continue to play a new cassette in the same direction as the last cassette.

OPERATIONS



FOR CASSETTE TAPES

* Starting

Turn the power switch clockwise to turn on power, and to receive radio broadcasts. By inserting the cassette tape later, the program indicator will light up and the tape will start playing.

* Stopping

Push the eject button and the cassette will be ejected. Be certain to push down the eject button fully in this case, because pressing the eject button mid-way only may cause malfunction. Eject the cassette tape to convert to radio broadcast reception.

* **Program selection**

1) **Automatic selection**

When playback of side A (or side B) is completed and the tape comes to an end, it will automatically be switched to the reverse side, i.e., side B (or side A) to enable uninterrupted playback.

2) **Manual selection**

By pushing the program button, the tape can be freely reversed from side A to side B, or vice versa, even while the tape is playing.

* **FF/REW (with lock)**

By pushing the FF/REW button whose indicator points in the same direction as that of the program indicator, the button will be locked and the tape will be wound at high speed in the fast forward mode. By pushing the FF/REW button whose indicator points in the opposite direction as that of the program indicator, the button will be locked, and the tape will be rewound at high speed.

In order to prevent malfunction, the mechanism of the button lock is designed so that the lock will not function until approximately one second after the tape is inserted or the FF/REW button is released. Accordingly, push the button after confirming that the tape is ready for playing.

The lock can be released under the following circumstances:

- 1) when lightly pushing the button on the side which is not locked.
- 2) when pushing the program button (after the lock is released, the reverse side will be played).
- 3) when the tape reaches the end (after the lock is released automatically, the tape will start playing).

* **Automatic Program System (APS)**

1. Depress the APS switch to actuate the function.
2. Depress the FF (or REW) button to send the tape in the forward (or reverse) direction at the end (or beginning) of the music and plays the next (or repeats the last) selection.

* **Volume control**

Turn the volume control clockwise and the volume will increase.

* **Bass control**

Depress the bass control knob and the knob will spring forward so that the bass can be controlled. Next, rotate the knob clockwise from the click-stop position to emphasize the bass, and turn it anti-clockwise to deemphasize the bass. After the adjustment is made, push the knob back to its original position.

* **Treble control**

Depress the treble control knob and the knob will spring forward so that the treble can be controlled. Next, rotate the knob clockwise from the click-stop position to emphasize the treble, and turn it anti-clockwise to deemphasize the treble. After the adjustment is made, push the knob back into its original position.

IMPORTANT NOTICE:

When using the 7 band graphic equalizer, bass and treble controls should be in the center or click/stop position as mentioned above. These controls were set in this center position by the manufacturer.

* **Balance control**

Pull the balance control out and the knob will be locked so that the balance can be controlled. Rotate the knob clockwise from the click-stop position to emphasize the volume of the right hand speakers, and turn it anti-clockwise to emphasize the sound of the left hand speakers.

* **Fader control**

Rotate the fader control knob clockwise from the click-stop position to emphasize the volume of the front speakers, and turn it anti-clockwise to emphasize the volume of the rear speakers.

* **Dolby NR switch**

Depress the Dolby NR switch to provide Dolby Noise Reduction System and the Dolby NR indicator will light up. The Dolby NR indicator will only light while the tape is playing.

* **Tape equalization switch (MTL)**

Depress this switch when using metal tapes (70 μ s). The MTL indicator will light up, and the equalization characteristics that matches the tape will be realized. The MTL indicator will only light while the tape is playing.

* **Loudness switch (LD)**

By depressing the loudness switch (LD), the LD indicator will light up and a deep powerful sound with a full bass is realized.

* **Head release system**

If the power is turned off while the tape is playing, the head of the mechanism will automatically be released. When the power is turned on once again, the tape will start playing. The accessory switch (on-off) also has the same function.

* **Program memory system**

When playing is interrupted mid-way by ejection of the tape or when the power is turned off (head release) and resumed later, the tape will start playing in the same program direction as it was playing before.

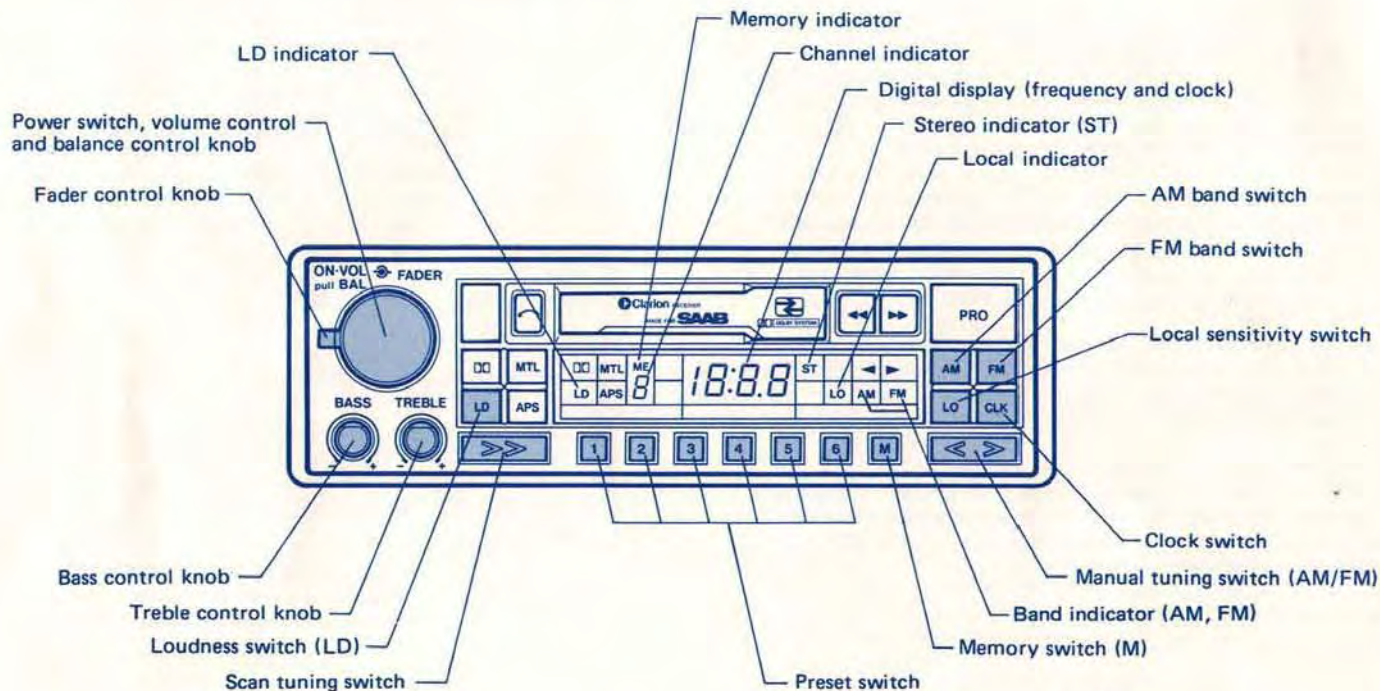
CAUTION IN HANDLING

1. When inserting the cassette tape in the unit for the first time, be certain to push the eject button in advance to release the tape mechanism from the shipping condition.
2. The cassette tape should be loaded horizontally.
3. When the fuse has blown, replace it with a 7.5A rated fuse.
4. Malfunction is sometimes caused if the tape is loose when inserted in the cassette unit (such as too fast running or accidental reversal of the tape). Therefore, tape slack should be removed before use. This precaution is especially required when using a C-90 or hi-fi tape.



5. C-120 tapes or longer tapes should not be used.
6. Use the SAAB PART NUMBER 02 59 994 HEAD CLEANER (sold separately) and clean the tape head of this unit when the high frequencies become muffled during tape playback.

FOR AM/FM BROADCAST RECEPTION



* **Power switch/Volume control**

Turn clockwise to switch unit on and increase volume.

* **AM/FM band switch**

Depress the AM switch, the AM indicator will light up.
Depress the FM switch, the FM indicator will light up.

* **Manual tuning switch**

Depress the right side of the switch and the radio frequency shown on the digital display will increase; press the left side, and the radio frequency will decrease. By continuously pressing the switch, the frequency will keep on changing without interruption.

* **SCAN tuning switch**

To start scan tuning, depress this switch. Tuned frequency will increase, stopping for 5 seconds at each station. To hold desired station, depress switch again within 5 seconds.

* **Local sensitivity switch**

Depress the LO sensitivity switch, the Lo indicator will light up. It operates during SCAN mode only for strong stations. Depress the switch once again and it scans all listenable stations.

* **Preset**

It is possible to preset 6 stations each for AM and FM.

1. Select the desired stations by manual or Scan tuning.
2. Push the memory button. The memory indicator (ME) will light up for 5 seconds.
3. Within 5 seconds, press the desired preset switch to store station in that position. The number of the preset switch will be shown on the channel indicator at that time.

TIME SETTING

For time display, depress "CLK" button. Within 5 seconds, depress and hold memory switch "M". Depress the left side of the manual tuning switch  to set the hours and the right side to set the minutes.

FM RECEPTION IN YOUR CAR

FM radio waves are transmitted at very high frequency (VHF) in straight lines like light waves. Tall buildings, hills or other obstructions may cause "shadows" with loss of signal noted by momentary "ZZT ZZT" noise in FM reception. FM signals can also be reflected by obstructions. Direct and reflected radio signals from the same station arriving together at the antenna may cause similar noise (multipath interference).

This may occur in any FM receiver in a moving vehicle.



This unit incorporates advanced technology to improve FM reception.

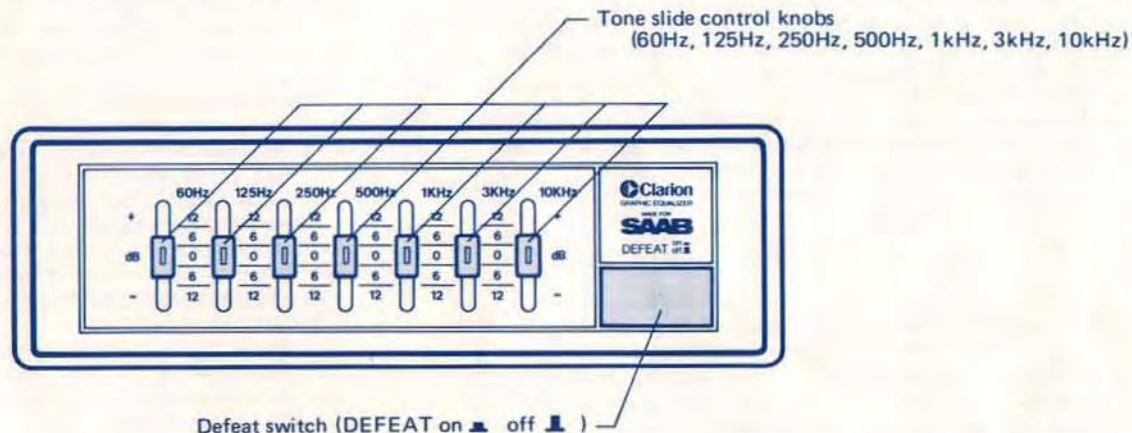
WEAK SIGNAL CONDITION As FM signals weaken with distance from the transmitter, the Signal Actuated Stereo Control (SASC) circuit provides optimum low noise reception; the stereo separation is gradually changed to mono mode simultaneously with high frequency response (hiss noise) reduction. **Dual Gate FET** RF amplifier has higher signal to noise ratio and improved sensitivity. Automatic Dx/Lo circuit (**Keyed AGC**) gives full sensitivity.

ANY SIGNAL CONDITION **Keyed AGC** automatically controls sensitivity for ideal FM reception. Interference from strong nearby stations is avoided by optimum selectivity. FM noise canceller can suppress ignition noise and other pulse interference picked by the car antenna, giving cleaner FM sound. **SUPER SASC** circuit can reduce FM MULTIPATH INTERFERENCE NOISE.

STRONG SIGNAL CONDITION **Dual Gate FET** plus **Balanced Mixer** in FM tuner have wide dynamic range and avoid the annoying noise from overload distortion. **Keyed AGC** also eliminates overload distortion by reducing sensitivity of the RF amplifier. It is more effective and convenient than a manual Dx/Lo switch.

All these circuit refinements add to your listening enjoyment.

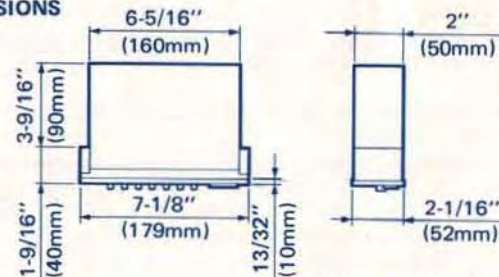
GRAPHIC EQUALIZER



SPECIFICATIONS

Center frequencies for adjustment . .	60 Hz/125 Hz/250 Hz/ 500 Hz/1 kHz/3 kHz/ 10 kHz
Adjustment range	±12 dB each
Frequency response	15 Hz 100 kHz $\begin{smallmatrix} +0 \\ -3 \end{smallmatrix}$ dB
Gain	0 dB
Distortion	0.03%
Power consumption	350 mA

DIMENSIONS



Weight 1.65 lbs (0.75 kg)

FEATURES

1. Slide controls with LED indicators

The 7 slide controls for frequency adjustment each contain a LED indicator, which makes for easy adjustment and lets the user check the settings at a glance.

2. Defeat switch

By pressing the defeat switch, flat response can be restored instantly, regardless of the slide control settings. When the switch is set to "defeat" (in), the LED indicators on the slide controls go out.

OPERATING PRECAUTIONS

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. For reasons of traffic safety, the unit should best be operated while the car is stationary. Volume levels while driving should be set so as not to mask exterior sounds.
3. Wipe the unit with a soft, dry cloth for cleaning. In cases of severe contamination, use some cleaning alcohol. Never use benzine, solvents or the like.

* **Slide controls for 60 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 3 kHz, 10 kHz**

By operating these 7 controls, any desired frequency balance can be created. Center frequencies for adjustment are 60 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 3 kHz and 10 kHz. Sliding the control towards (+) emphasizes the respective frequency band, and sliding it towards (-) attenuates it. Adjustment range for emphasis and attenuation is ± 12 dB. When the

equalizer circuit is active, the LED indicator of each control lights up.

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.

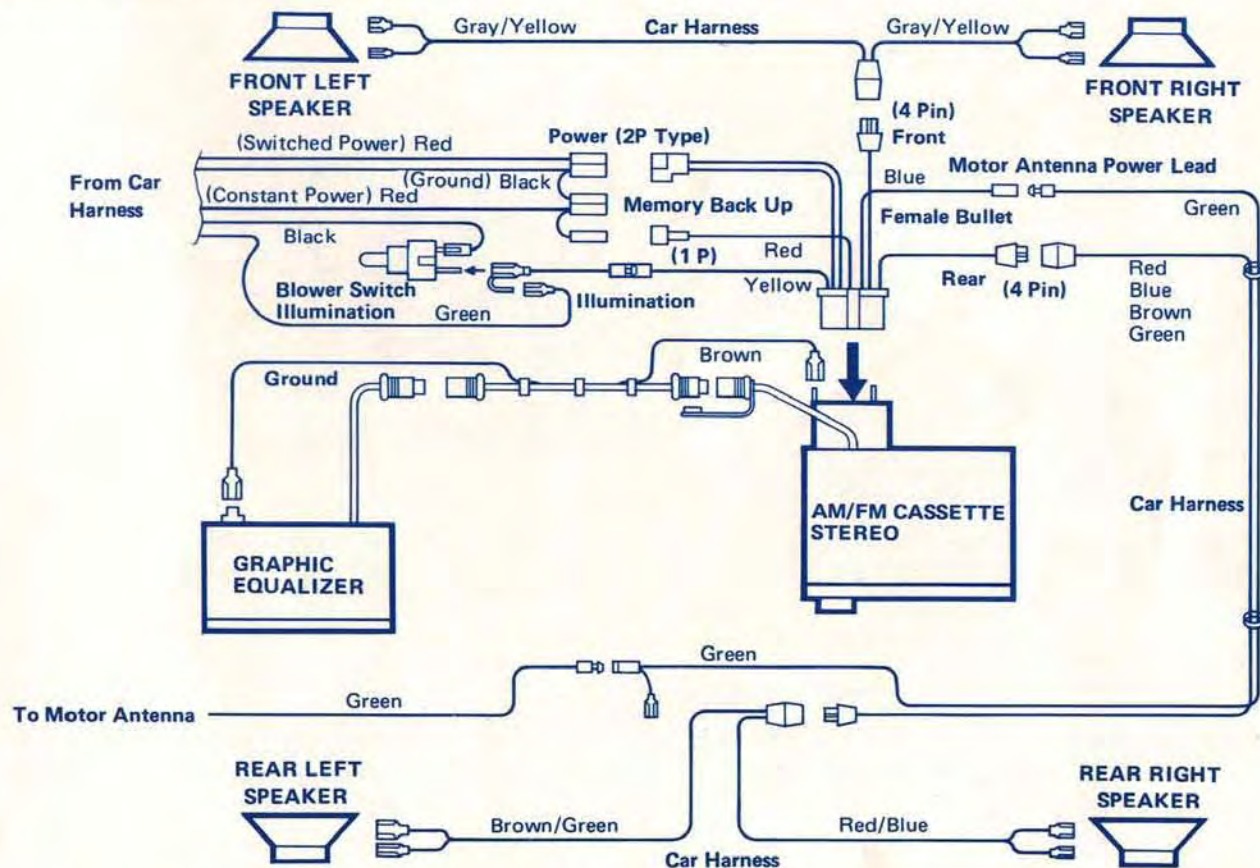
10 kHz frequency band

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

* **Defeat switch**

Depressing this switch instantly restores flat frequency response, regardless of the settings of the 7 frequency controls. When this switch is pushed, the equalizer circuits are bypassed and the LED indicators in the slide controls go out.

WIRE CONNECTION



INSTALLATION

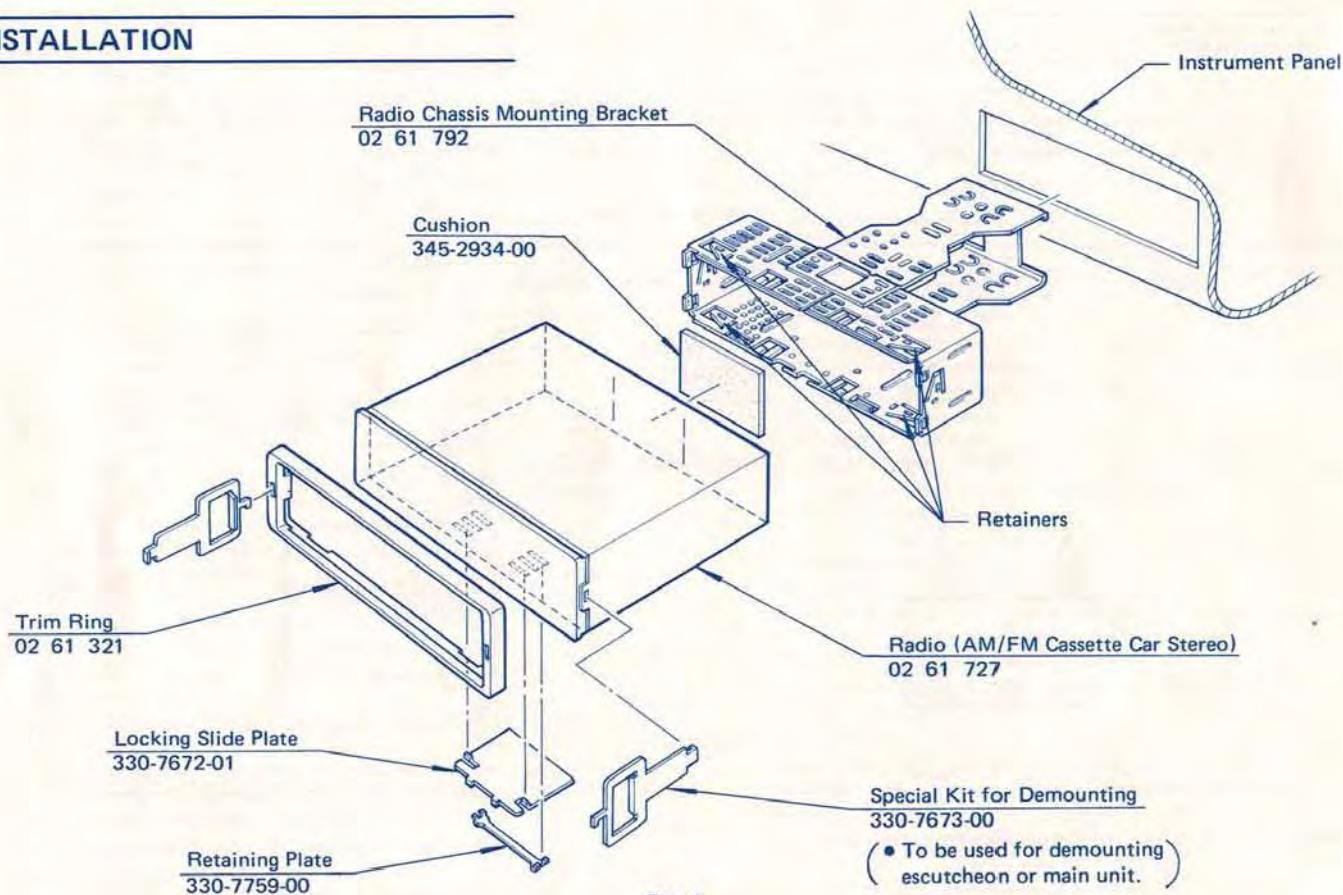


Fig 1.

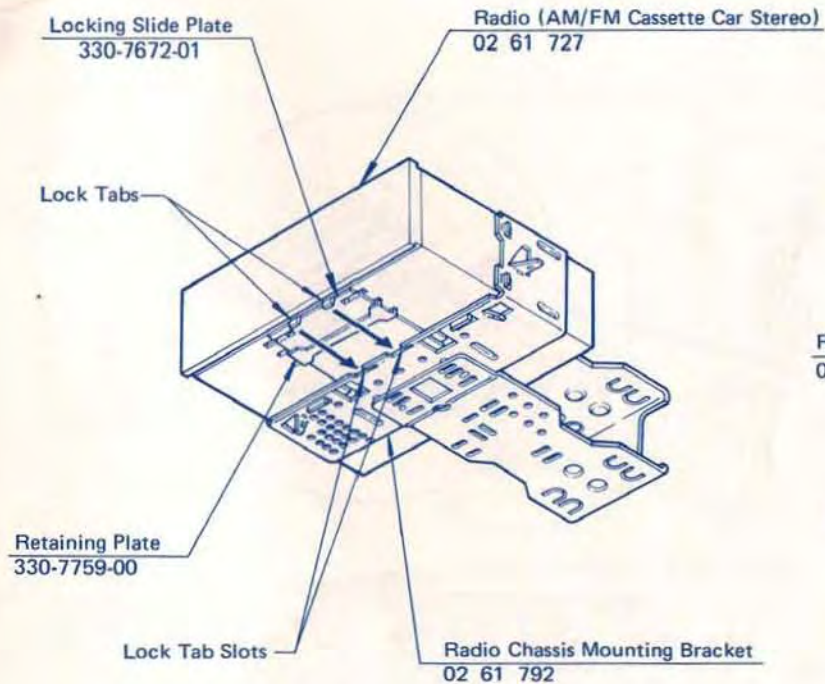


Fig 2.

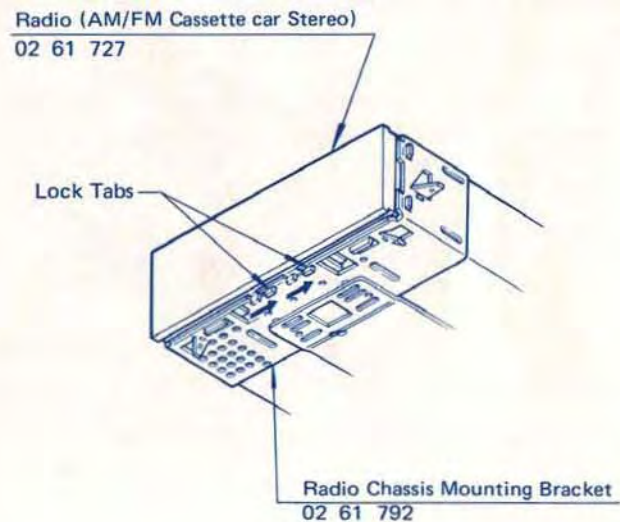
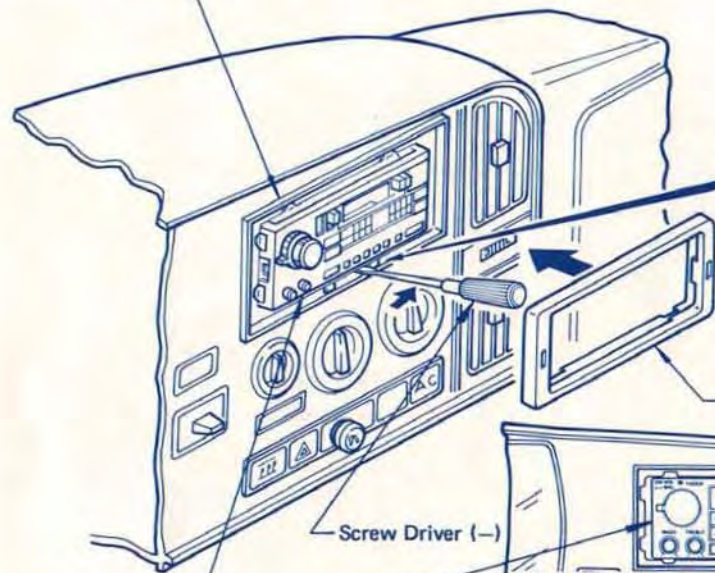


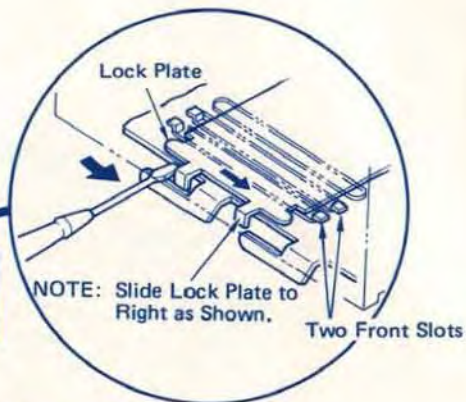
Fig 3.

Instrument Panel



Screw Driver (-)

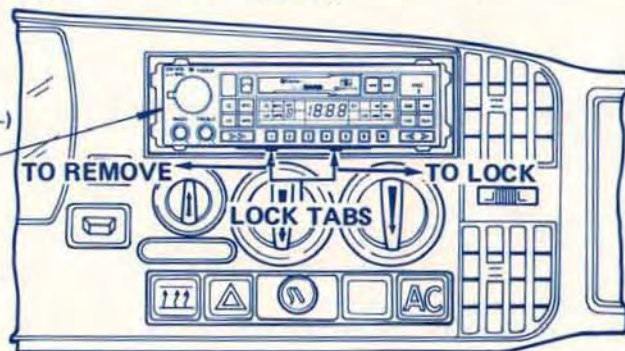
Radio (AM/FM Cassette Car Stereo)



NOTE: Slide Lock Plate to Right as Shown.

Two Front Slots

Trim Ring



TO REMOVE

TO LOCK

LOCK TABS

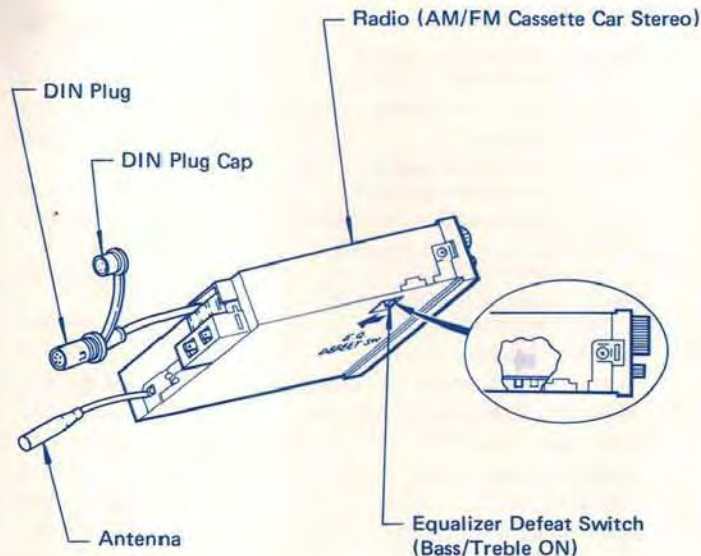


Fig 4.

NOTE: **DO NOT REMOVE** the DIN plug cap at the rear of the radio. For installations without Graphic Equalizer, the cap must be plugged into the DIN plug socket for the unit to function.

MANUAL EQUALIZER DEFEAT SWITCH

When using 7 band graphic equalizer, set defeat switch "ON" position, see Fig 4. Bass and treble control should automatically set in flat position.

MOUNTING BRACKET INSTALLATION

Insert radio mounting bracket 02 61 792 into the instrument panel. Using the six bracket retainers, two on top and bottom and one on each side (See Fig 1.), bend in to secure mounting bracket to instrument panel. Peel off protective backing from the foam cushion (supplied) and secure to rear of radio/equalizer bracket. Install Equalizer Mounting Bracket 02 61-420 in the same manner.

LOCKING PLATE INSTALLATION

Locate locking slide plate and slide plate holder in accessories bag. Install locking slide plate (330-7672-01) and slide plate holder (330-7759-00) onto bottom of radio/equalizer chassis per Fig 1.

Insert radio/equalizer into mounted radio/equalizer bracket making sure that locking plate tabs, locate into bracket slots.

DO NOT FORCE UNIT INTO BRACKET. (Fig 2)

TO LOCK UNIT INTO DASH

With pointed tool slide locking tabs to the right. Make sure radio is secure in bracket. (Fig 3)

Install trim ring onto face of unit, see Fig 1 (02 61 321).

REMOVAL OF RADIO

REMOVAL INSTRUCTIONS

To begin the removal of the radio, locate the special tools (P/N 330-7673-00) supplied in the Glove Box. The tools are shown in Figure 1. Insert the flat "L"-shaped end into the slots in the trim ring or escutcheon, lock in place, gently push the tool to the side away from the radio, and then pull toward you, removing the trim ring. Locate two very small lock tabs under radio. (They will be located directly under the #2 and #4 push-buttons.) With a pointed tool, slide the lock tabs to the left approximately 1/2-inch. Radio is now ready for removal with the special tools (330-7673-00). Insert the curved end of the tool into the slots on both sides of the radio. Pull gently towards you. When the radio is removed from the dash, disconnect the DIN plug, chassis ground, power and speaker plug, and antenna.

The equalizer is removed in the same manner.

PARTS DESCRIPTION

SAAB P/N:

Complete Radio/Equalizer Kit (excluding speakers) (Turbo)	02 61 743
Radio Kit(s) or replacement for above	02 61 727
Graphic Equalizer	02 61 206
Wiring Harness (DIN cord & radio-to-equalizer ground)	02 61 230
Adapter Cable (radio to Saab wiring)	02 61 313
Trim Ring (fits radio & equalizer around face of unit)	02 61 321
Radio Chassis Mounting Bracket (dash mounting)	02 61 792
Equalizer Mounting Bracket	02 61 420
Equalizer Side Brackets (2) (2 screws)	02 61 453
Radio On/Off Balance Knob	02 61 347
Radio Bass/Treble Knob	02 61 369
Equalizer Slide Knobs	02 61 339
Tool Kit	02 61 404
Fuse 7.5 amp (GM Type)	02 61 461
Owner's Manual	02 61 776

SAAB-SCANIA

OF AMERICA, INC.

SAAB DRIVE

ORANGE, CONNECTICUT 06477

This manual pertains to the ETR radio which is standard equipment on 1985 SAAB 900S and Turbo Models, and a Graphic Equalizer which is standard equipment on 1985 SAAB 900 Turbo Models only. Both are available as a dealer-installed option at extra cost on other SAAB Models. SAAB-Scania of America, Inc. reserves the right to make changes at any time without obligation or prior notice to information, specifications and illustrations contained herein.