



DEALER GUIDE

1 OVERVIEW

LOEWE (pronounced "LOO-va") televisions offer a new world of quality viewing. As a LOEWE dealer, you have the opportunity to bring this unique and extraordinary world to your customers. Since LOEWE televisions are digital televisions, there are special considerations that you need to keep in mind.

Please take the time to read this manual and familiarize yourself with the particular capabilities that go along with this high tech product. You can better support your customers by gaining a thorough understanding of LOEWE products.

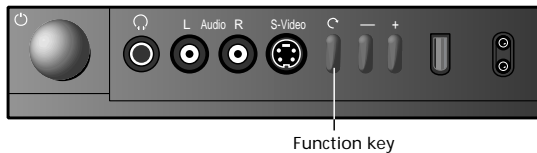
Some of the information contained in this manual goes beyond the User's Guide. Remember, the customer is expecting you to be the expert on the proper set up and operation of Loewe TVs.

⚠ The information contained in this reference guide is confidential and is intended for Dealer and Service Center use only.

2 SERVICE MODE

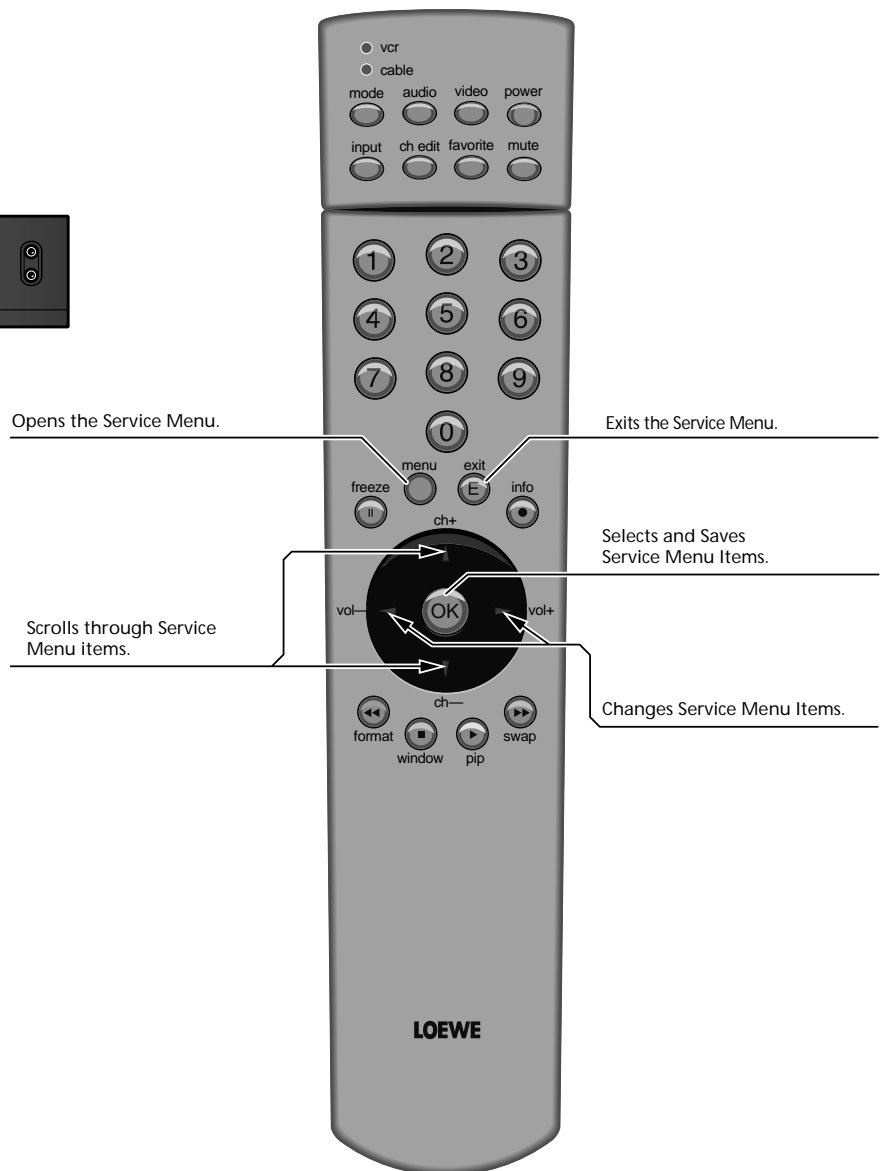
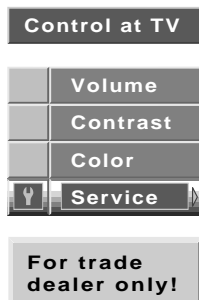
To enter Service Mode:

1. Press the Function Key (⏏) on the TV front panel as shown below.

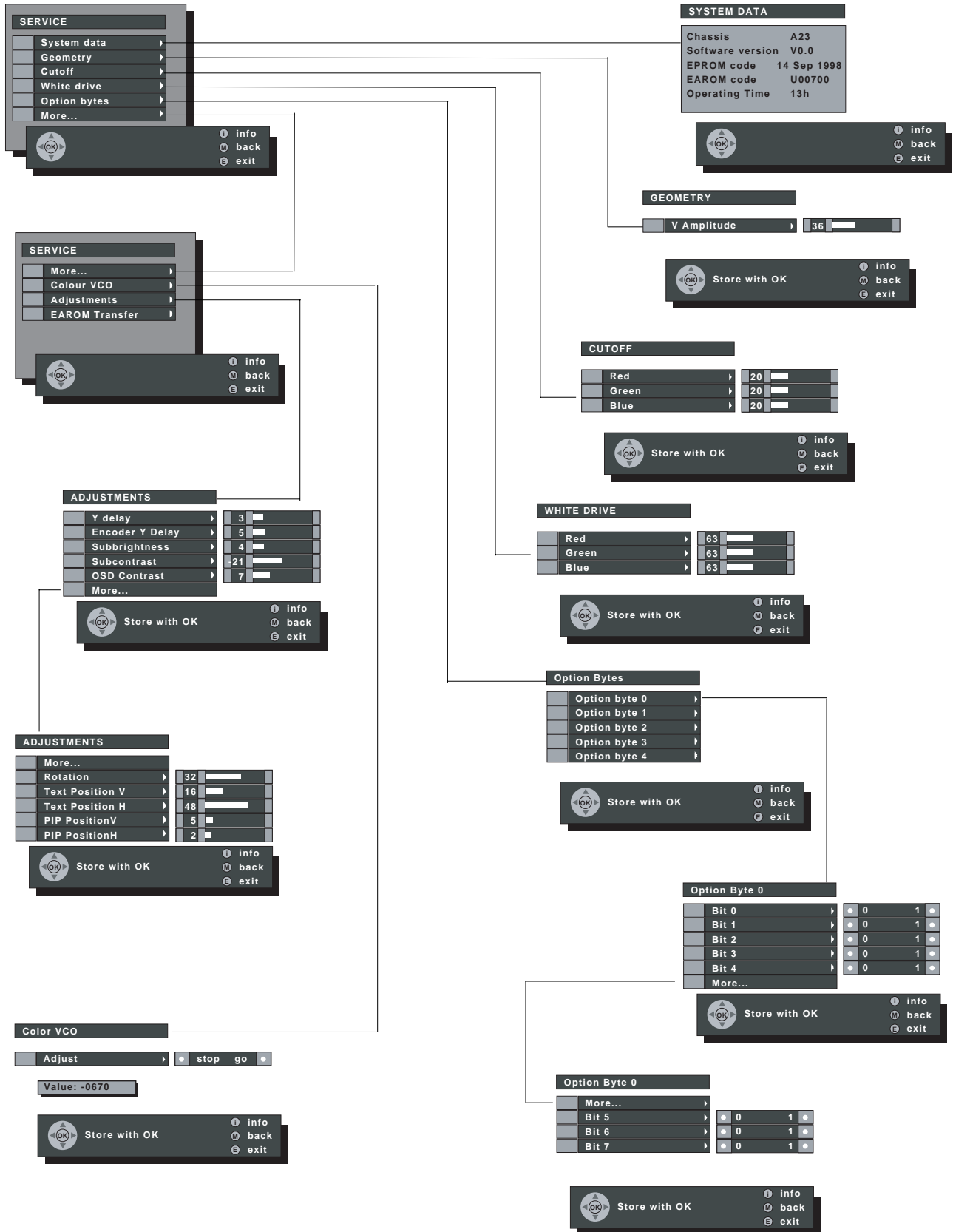


Using the Remote Control:

2. Press the down arrow key ("ch-") until "Service" is highlighted.
3. Press the **menu** button to enter Service Mode.
4. To scroll through menu items, press the up/down arrow keys ("ch +/-"). To make selections, press the **OK** key. To change menu items, press the left/right arrow keys ("vol +/-"). To save a particular setting, press the **OK** key.



3 SERVICE MENU OVERVIEW



4 ALIGNMENT FUNCTIONS

To prevent misalignment, before adjusting any service parameter, write down its current setting. This will allow you to reset it if necessary. You can make adjustments without saving, but once a parameter is selected again it will be restored to its original setting. To save a particular setting, press OK on the remote.

ALIGNMENT FUNCTION	EEROM DEFAULT	TYPICAL ADJUSTMENT FOR 33"	TYPICAL ADJUSTMENT FOR 16:9	SETTINGS/SPECIAL FEATURES	
0	Vertical Amplitude	34	36	30	Optimum Setting Standard crosshatch
1	Vertical Position	26	29	38	
2	Vertical Symmetry	-43	-43	-43	
3	Vertical Linearity	-30	-6	-30	
4	Horizontal Amplitude	-30	-13	39	Different for various screen settings
5	Horizontal Position				
6	EW Amplitude	-67	-58	-64	Optimum settings
7	EW Upper	45	16	45	
8	EW Lower	22	17	31	
9	Trapezium Correction	0	4	0	
10	Vertical Bow	0	0	0	
11	Vertical Angle	-1	-11	-1	
12	Horizontal Offset	82	67	82	
13	Cut-off Reference	R 20 G 20 B 20	R 20 G 27 B 41	R 20 G 21 B 47	In the grey area, raise the missing two colors until black becomes standard. One cutoff should be set to 20.
14	White Level	R 63 G 63 B 63	R 61 G 57 B 63	R 62 G 58 B 63	In the white area, reduce the dominant two colors until black becomes standard. One drive should be 63.
15	Option Bytes				These adjustments are outlined in the option byte table
16	Option Bytes				
17	Option Bytes				
18	Option Bytes				
19	Option Bytes				
20	Colour VCO				Adjust zero beat
21	Y delay	6	3	3	Optimum settings
22	Comp. Y Delay	5	14	14	
23	Subbrightness	4	-6	-3	Don't adjust!
24	Subcontrast	-21	-40	-14	
25	OSD Contrast				Optimum settings
26	Rotation	8	7	8	
27	Text Position V	27	32	32	
28	Text Position H	0	16	16	
29	PIP Position V	0	1	1	
30	PIP Position H	5	3	3	

5 OPTION BYTE TABLE



Caution: Only adjust option bits that are highlighted. Other option bits are for authorized service personnel only. Some option bits, if incorrectly adjusted, can cause unrecoverable system failures.

Alignment function	Bit-Nr. N°.	Meaning	"0"	"1"	Adjusted in the factory		
					32"	33"	37"
					16:9	4:3	4:3
Byte 0	0	free	—	—	0	0	0
	1	Sync Slicer VPC	written	not written	1	1	1
	2	free	—	—	0	0	0
	3	free	—	—	0	0	0
	4	free	—	—	0	0	0
	5	Blue picture w/o signal	yes	no	0	0	0
	6	Inhibit VGA	no	yes	1	1	1
	7	Inhibit delayed switch to VGA	no	yes	0	0	0
Byte 1	0	Timer controlled channel switch	yes	no	0	0	0
	1	Auto YC on AV mode	yes	no	0	0	0
	2	Vertical deflection (Do NOT Change)	60 Hz progressive	120 Hz	0	0	0
	3	free	—	—	0	0	0
	4	PIP mode	PIP frame mode	PIP field mode display	0	0	0
	5	16:9 sets and PIP on	PAN/CIN/ZOOM possible	PAN/CIN/ZOOM impossible	0	0	0
	6	Auto color system for ext. input admitted	no	yes	0	0	0
	7	Side panels with BESIC	no	yes	0	0	0
Byte 2	0	Auto PAL/NTSC	always NTSC	auto PAL	0	0	0
	1	free	—	—	0	0	0
	2	Lock Mode VPC	no	yes	1	1	1
	3	Blanking during channel or input change	yes	no	0	0	0
	4	free	—	—	0	0	0
	5	AGC memory	off	on	1	1	1
	6	Reaction time of remote orders	fast	slow	0	0	0
	7	free	—	—	0	0	0
Byte 3	0	Default to 4:3 aspect ratio	enabled	disabled	1	1	1
	1	CRT	4:3	16:9	1	0	0
	2	free	—	—	0	0	0
	3	free	—	—	0	0	0
	4	Switch-off autom. (w/o Sync)	yes	no	0	0	0
	5		off	on	0	0	0
	6	free	—	—	0	0	0
	7	Virgin mode	no	yes	1	1	1
Byte 4	0	Sound ident info OSD active	no	yes (only for test!)	0	0	0
	1	Automatic Volume Control (AVC)	slow	fast	0	0	0
	2	free	—	—	0	0	0
	3	free	—	—	0	0	0
	4	AMD switch -over	fast	slow	1	1	1
	5	Warm-up mode (Factory ONLY)	on	off	1	1	1
	6	Besic Chroma Inverter	on	off	1	1	1
	7	Vertical freeze in VCR mode	yes	no	0	0	0

6 SETUP, CONNECTION AND INSTALLATION CONSIDERATIONS

There is a substantial amount of information within the User's Guide regarding setup and installation. It is recommended that you read this information prior to installing a customer's set. Below is additional information that may help you custom install the set.

Antenna Connections

- TV Input from Antenna Input A is internally split to three destinations:
 1. Tuner #1
 2. Tuner #2 (switched between this signal and Ant B)
 3. Loop Out
- Antenna Input B goes directly (via an antenna switch) to Tuner #2. Because of this, the RF signal sensitivity of Antenna Input B will be slightly better than Antenna A.
- The built in LOOP OUT is useful for sending the incoming RF signal to a Cable Box or VCR from the incoming main RF signal.

Video Auxiliary Connections

- The TV has three video inputs: Video 1 and 2 (both rear panel) and Video 3 (front panel).
- All Video Inputs (except Antenna A) are "closed" out of the box. That means they are unavailable until opened to suit the specific product you wish to connect to the TV, e.g. Cable Box, VCR, Camcorder, etc. To do this, first select the TV Setup Menu, then select Connections, then follow the steps for the particular device you wish to connect.
- Due to the digital design and digital progressive scan inherent in Loewe sets, it is important to understand that the Video 1 and Video 2 inputs are optimized for different signal types:
 1. Video 1 - Best for highest quality sources, such as DVD, Laserdisc, Satellite.
 2. Video 2 - Best for lesser quality sources, such as VHS Tape.
 3. Video 3 (Front) - For headphones and camcorders.
- If you connect a DVD Player to Video Input 2, the picture quality will be compromised.
- Although the TV has component video inputs, we strongly recommend the "S-Video" inputs when connecting a DVD player to achieve the highest quality signal transfer as well as to take advantage of the automatic formatting function.
- If you connect your DVD player to Video Input 1, the television automatically detects whether the incoming signal is Composite or S-Video.

Letterbox and DVD Considerations

- The User's Guide gives a comprehensive explanation of Video Sources vs. Television Format Settings. Please refer to the User's Guide regarding media type vs. TV settings.
- Don't forget (especially with the Planus model): If you are watching a DVD in 16x9 mode, set the DVD Player to 16x9 mode for the television to auto-format.

VGA/RGB Setup

The VGA/RGB Input is designed for a computer or other RGB device, such as a HDTV Set-top Box.

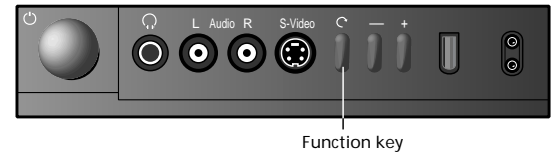
To turn on the VGA/RGB Input:

1. Press the **menu** button on the remote control.
2. Use the up/down arrow keys ("ch +/-") to highlight "TV Setup," then press **OK**.
3. Use the up/down arrow keys to highlight "Connections," then press **OK**.
4. Use the up/down arrow keys to highlight "VGA/RGB," then press **OK**. (If VGA/RGB does not appear on your Connections menu, see "VGA Option Bit" below).
5. Follow the instructions to connect your VGA/RGB device to the television. After each step, press **OK** to continue.
6. When you reach the Congratulations Screen, press **exit** to quit the menu system.
7. Continue below with "Using the VGA/RGB Connection."

VGA/RGB Option Bit

If "VGA/RGB" does not appear under your TV Setup/Connections menu, follow these instructions to open the Input:

1. Press the Function Key (↻) on the TV front panel
2. Use the up/down arrow keys ("ch +/-") on the remote control to highlight "Service" then press **menu**.
3. Use the up/down arrow keys to highlight "Option Bytes" then press **OK**.
4. Use the up/down arrow keys to highlight "Option Byte 0" then press **OK**.
5. Use the up/down arrow keys to highlight "Option Bit 6."
6. Use the left arrow ("vol -") to change the bit setting from 1 to 0, then press **OK**.
7. Press **exit** to quit the Service Menu.
8. Complete the steps in VGA/RGB Setup above to enable the Input.



Using the VGA/RGB Connection

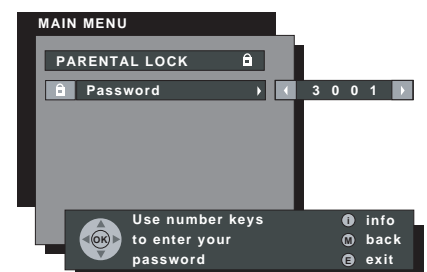
- Make sure your display settings are set as follows:
 - Resolution is 640 x 480 Standard VGA
 - Refresh rate is 60Hz
 - Maximum scan rate is 31.5 KHz
 - Once the VGA/RGB Input is selected on the television, you may adjust the VGA Geometry in the Main menu.
 - For laptop computers, the monitor type may need to be changed to Standard VGA as well.
- If the picture is not in sync, press the **input** key repeatedly to slowly cycle through the inputs. If the picture is still not in sync, try powering off the television using the front panel **On/Off** button. Wait a few seconds, and turn on the television. Then slowly cycle through the inputs again.
- If you are using a laptop computer with Windows 95 or above, you will need to turn off the LCD display and enable the VGA Computer output. On some laptops, you can do this by holding down the function key (Fn) and pressing F7 until the LCD is off and the television is on.
- If you have turned on the VGA Option Bit, we strongly recommend that you install a line filter choke. Contact the Sensory Science Parts Department for more information. If your set has a 3-wire grounded cord, this choke is installed internally in the television and is not necessary.

Rotation Coil Adjustment

- On larger screen sizes (16:9 and 36" models), an adjustment of the Rotation Coil may be necessary to compensate for the earth's magnetic field. Turning the television may cause the picture to tilt on the horizontal axis, depending on which direction the television is facing. To compensate for this, a Rotation Coil is installed in the television. To adjust the Rotation Coil:
 - Version 1 Software: Enter the Service Menu, scroll to "Adjustments" using the down arrow key ("ch -"), and press **OK**. Then scroll down to "Rotation." Use the left/right arrow keys ("vol +/-") to adjust the tilt of the picture.
 - Version 2 Software: the Rotation Coil adjustment is found in the Customer Setup menu.
- On smaller screen size televisions (Arcada/Calida), the Rotation Coil is not necessary.

7 PARENTAL LOCK

In the event that customers forget their Parental Lock password, you can access the Parental Lock menu by using the password "3001". Once the Parental Lock menu is accessed, the customer's password can be viewed, changed, or deleted as desired.



8 REMOTE CONTROL ISSUES

When it comes to remote controls, we can meet most special requirements. While some solutions will be implemented in the near future, under most circumstances we can help you today.

Direct Function "Extended" TV Remote Codes

We understand that when installers use third-party remote control systems (such as Crestron, Niles, Philips, etc.), they may require special control functions, such as Direct Input or Power Select. These functions are available—however, to do this, you must acquire the Loewe "Extended Remote Control IR Command Set" (not available from the standard Loewe Remote), and the TV's software must be upgraded to version 2.0.

- In order for us to provide you with these "extended" remote codes, we can send you (via FedEx) a special remote that is marked and preprogrammed with "extended" codes installed. Using this remote, you can copy the IR code commands into your programmable remote or remote system, then return the special remote to us.
 - We use the remote's number keys and provide the following 8 direct access function codes:

1. Antenna A	5. Video 2
2. Antenna B	6. Front *
3. Video 1 S-Video	7. VGA *
4. Video 1 C-Video	8. Power Off *
- * Only valid on version 2.0 or better software.
- Power On can be initiated by actuating a Power Off and then a normal Power command.
 - Functions 1-5 will work with any Loewe model; however, functions 6, 7 and 8, require version 2.0 software. To ensure version 2.0 software is installed, press the front panel key, cursor down to Service, then press the Menu key on the remote. Check System Data to see if the software is version 1.4 or version 2.0. You can upgrade the software by replacing a socketed integrated circuit available from Sensory Science.
 - You may borrow this remote control by calling Stan Brown at (480) 998-3400, ext. 1026, or via e-mail at sbrown@sensoryscience.com.

Programming Loewe Remotes With Additional Device Codes

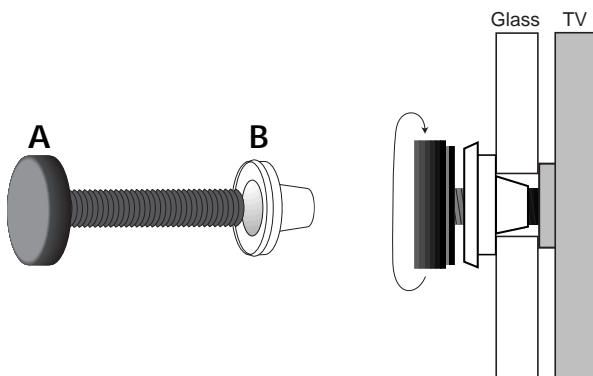
In addition, some customers want the Loewe remote to control a specific device (such as a DVD player, Satellite dish, VCR or Cable box), but the device's codes are not included in the standard universal Loewe remote control programming list.

- If you wish to program a Loewe remote with codes that are not in the standard library, the short-term solution is to contact Sensory Science and arrange to send us the remote. We will then program the codes into a standard Loewe remote control and return both remotes to you. You would then return the owner's original remote.
- Our long term plan is to supply all key dealers with a special "video box" and cable along with our proprietary software. The video box connects between your Windows PC and your SVGA monitor. Just follow the instructions provided with the box and install the supplied software. By exposing the Loewe remote control's built-in sensor to the supplied infrared emitter, you can program the remote with any code from our extensive library of over 2000 units. If a product is not in our library, simply send us the remote and we will update our code library. You will also be able to acquire remote data codes via the Internet.
- One of the program codes available in our library will be the "Loewe Extended Remote Code" set. As discussed above, a dealer with the "video box" will be able to program any Loewe remote with the Extended Remote Code set so you can add new codes to the system as necessary.
- Should you have any further problems or questions regarding use of or programming Loewe remotes, please do not hesitate to call or send e-mail (preferred) to Sensory Science at: sbrown@sensoryscience.com.

9 ART 636 FILTER GLASS INSTALLATION

⚠ READ ALL WARNINGS BEFORE INSTALLING GLASS!

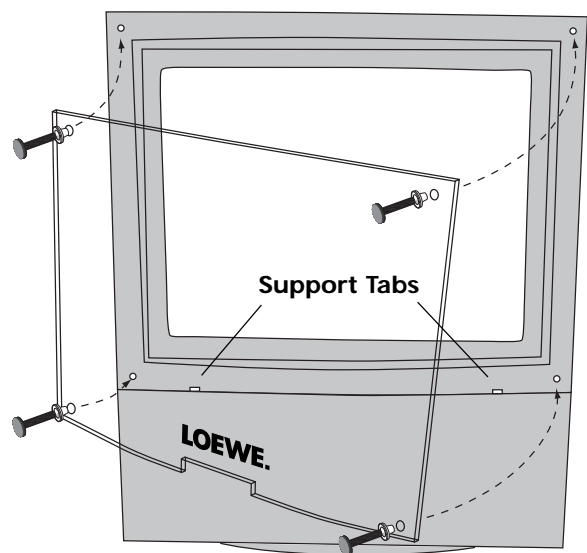
- The filter glass is made of compound glass and weighs approximately 20 pounds. It is breakable if treated improperly.
- Always use the supplied nonslip gloves to prevent damage when removing the glass from the carton and during assembly.
- Make sure the glass is positioned securely so it cannot slip or tip over during preparation for assembly.
- Do not set the glass down on a hard or slick surface.
- Keep children away from all packing material and stickers.
- Once the glass is in place, treat it with care. Do not tap the glass with a blunt or sharp object (e.g. hammer, or sharp tool).
- Use only the supplied mounting screws, and **HAND-TIGHTEN** them to prevent damage—**DO NOT OVERTIGHTEN!**
- If the glass breaks, use extreme caution: Do not touch the glass unless you are wearing protective gloves and special protective clothing. Thoroughly remove and dispose of all glass fragments and keep glass fragments away from children.
- Remove the glass if: 1) it becomes scratched or cracked, or 2) you plan to ship the television. Use the original packaging if at all possible for transportation of the television.
- To uninstall the filter glass, please follow the instructions in reverse.



How to Install Filter Glass

Installing the filter glass requires nonslip gloves (supplied) and two people: one to hold the glass and one to insert and hand-tighten the four mounting screws.

- 1 Carefully remove the filter glass from the carton and place it lengthwise on a soft, nonslip surface.
- 2 Put on the supplied nonslip gloves before removing the protective cover. If necessary, clean the front and back of the glass with a soft cloth before installing.
- 3 Insert each thumb-tight screw (A) into its white plastic spacer (B) as shown in the diagram at left.
- 4 Position the glass against the television so the four screw holes are in alignment. The glass is curved and follows the contour of the cabinet. The front of the glass is indicated by the LOEWE logo, model number, and attached sticker(s).
- 5 Insert and tighten all four mounting screws just enough to hold the glass in place, then gently snug each screw until the glass fits securely to the cabinet.
WARNING: DO NOT OVERTIGHTEN, AS THIS COULD BREAK OR PERMANENTLY DAMAGE THE GLASS!!!
- 6 Remove the warning sticker(s) from the front of the glass.
- 7 Installation is complete!



*Gently fasten the filter glass to the television cabinet using the four supplied thumb-tight mounting screws and spacers. **DO NOT OVERTIGHTEN!***

10 ART HANDLE USAGE

⚠ Moving the Art television requires two people: one on each side to lift the set. Although the handles are positioned to prevent tipping, a third person is recommended in the front as a precaution.

- 1 Insert one side of the S-shaped handle completely into the hole on the side of the Art television (see figure 1. Note: You may need to move the handle up and down slightly during insertion).
- 2 Repeat for the other side of the television.
- 3 Rotate the handles up so that the foam is against the side of the television cabinet. Use the free side of the handle to lift the set (see figure 2).
- 4 After moving the television, remove the handles and store them for future use.

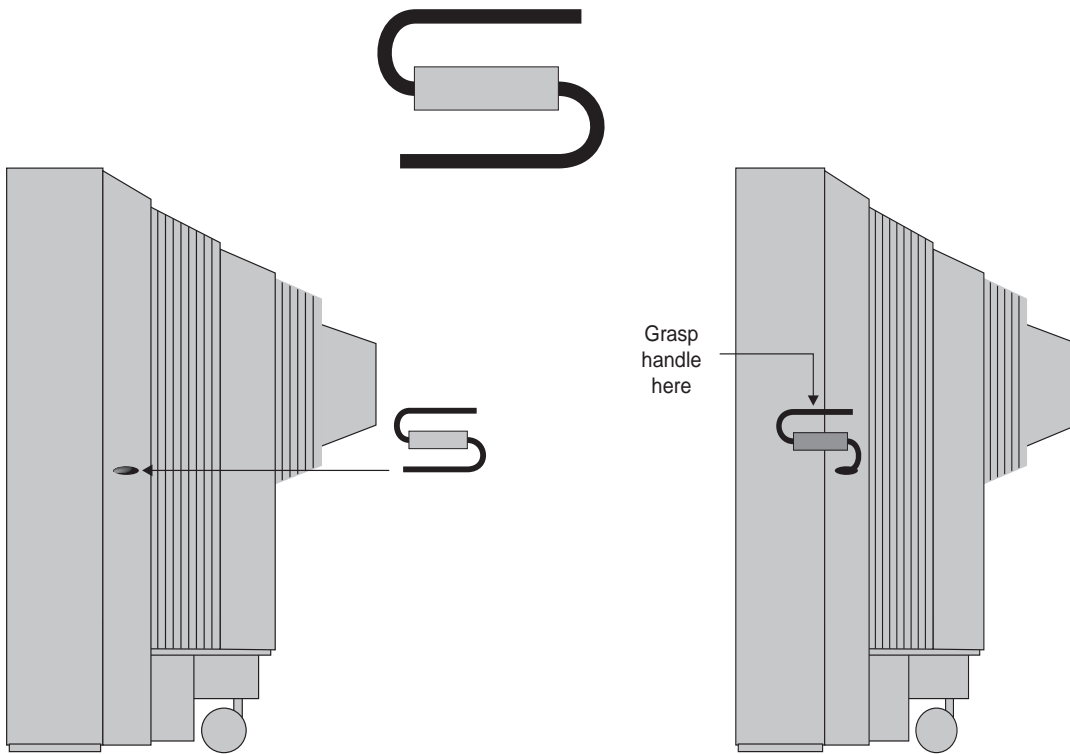


Figure 1. Insert handle.

Figure 2. Grasp handle and lift.

11 FREQUENTLY ASKED QUESTIONS

- Q.** What is the Dot Pitch of the Picture Tube?
A. 1 mm (compared to 0.28mm on a standard 15-inch monitor). However, because the Picture Tube is 3 times larger, the relative Dot Pitch is the same.
- Q.** How many lines of resolution does the set have?
A. Over 400 lines (NTSC) to over 600 lines (RGB)
- Q.** Are there "burn in problems" with the Loewe TVs?
A. No. Loewe sets use standard phosphor picture tubes.
- Q.** How is the TV "HDTV ready"?
A. By using the RGB/VGA input with a set-top box equipped with a 480p VGA output.
- Q.** Why isn't the picture centered vertically on 4:3 sets in the 16:9 mode?
A. To indicate that the set is in 16:9 anamorphic mode. This is normal.
- Q.** Why does Initial Setup run every time I turn on the television?
A. Units with Version 2 software include an Initial Set-up procedure that guides the customer through a series of menus to set up the television. If the customer exits this procedure before it reaches the final "Congratulations" screen, the television can be set up manually; however, the Initial Set-up will automatically start again the next time the unit is turned on until the entire process is completed. To disable this feature, open the Service Menu, select Option Bytes, then scroll to Option Byte 3 (press OK), then scroll down to Bit 7 and change it from "0" to "1," and press OK to save.
- Q.** Can I play PAL and SECAM sources?
A. Loewe sets are capable of displaying PAL sources, but not SECAM. This feature must be enabled in the Service Menu. To enable this feature, open the Service Menu, select Option Bytes, then scroll to Option Byte 2 (press OK), then change Bit 0 from "0" to "1," and press OK to save. This will enable the television to automatically detect and display PAL sources through the video inputs.

12 SENSORY SCIENCE CONTACTS

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