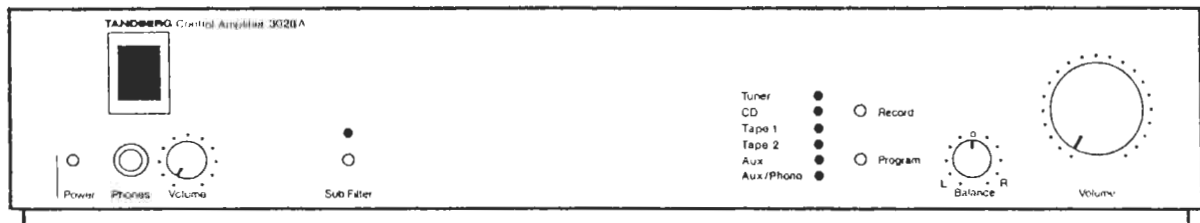

TANDBERG® TCA 3028A

Operating Instructions

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READ THIS FIRST!

To prevent electrical shocks or fire, do not expose electronic products to rain or moisture and do not remove covers or back. If anything fails, leave the repair to a qualified technician.

Pull out the power plug during thunder storms and when you are away for a long time (e.g. holidays, etc.).

WARNING

Faults on the unit caused by the circumstances described in the warnings on this page, do not necessarily apply for warranty service.

MAIN POWER

In some areas the main power wall outlets carries high frequency data and intercom communications. To prevent this high frequency to reach the tuner/control amplifier, a HF filter should be connected in the power line. Ask your local Tandberg dealer if this high frequency is in your area.

Should the high frequency reach the tuner/control amplifier and interfere with the electronics, damage might occur in the output stage or the speakers.



Connecting

When connecting the units in a HiFi system together, it is very easy to touch the hot wire on the phono lead and generate a hum signal. This signal can be amplified and cause damage to the tuner/control amplifier or the speakers.

To avoid the problem, switch off all the units in the system before connecting.

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Power requirements

Make sure the control amplifier is marked at the rear panel with the correct mains voltage for your area:

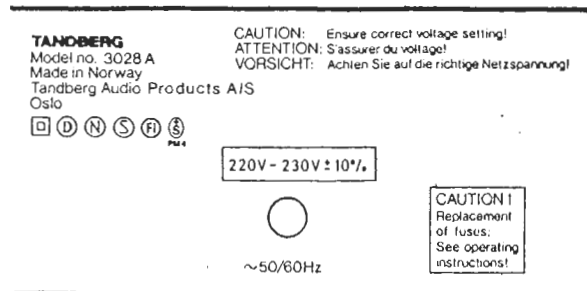
US version: 110 - 115 v +/- 10 %, 50/60 Hz
 European version: 220 - 230 v +/- 10 %, 50/60 Hz
 GB version: 240 V +/- 10 %, 50/60 Hz

Changing the mains voltage setting and fuse (inside) should be carried out by a qualified service technician.

The power consumption is 30 watt maximum.

Fuses:

220 V/240 V: 125 mA, slow blow, 5 x 20 mm.
 115 V: 315 mA, slow blow, 5 x 20 mm



Check that the control amplifier is marked with the correct mains voltage.

Connecting external equipment

Important!: All connections must be carried out before the Power is switched on.

High level inputs

NOTE! All high level inputs are identical, and therefor the sources can be exchanged. If exchanging the inputs, note that the text on the front no longer matches the connected equipment. For example you can connect four CD players.

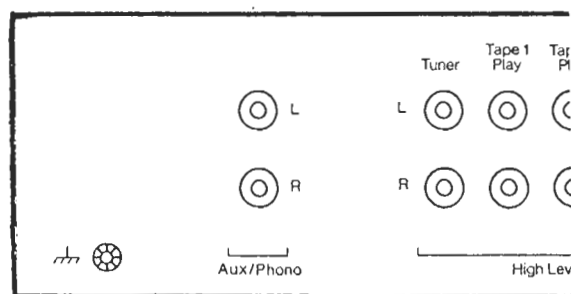
For best performance use High Resolution phono cables for interconnection (in- and outputs) between the TCA 3028A and the external equipment.

Aux/Phono

Aux/Phono input is, on a standard unit, an extra high level input. The only difference between this Aux and the ordinary Aux, is the Sub Sonic filter.

It is possible to insert one of two Phono stages on the main-pcb of the TCA 3028A. This will convert the Aux/Phono input to a Low Level input.

If you are interested in this extra feature, contact your local Tandberg dealer.



Tuner

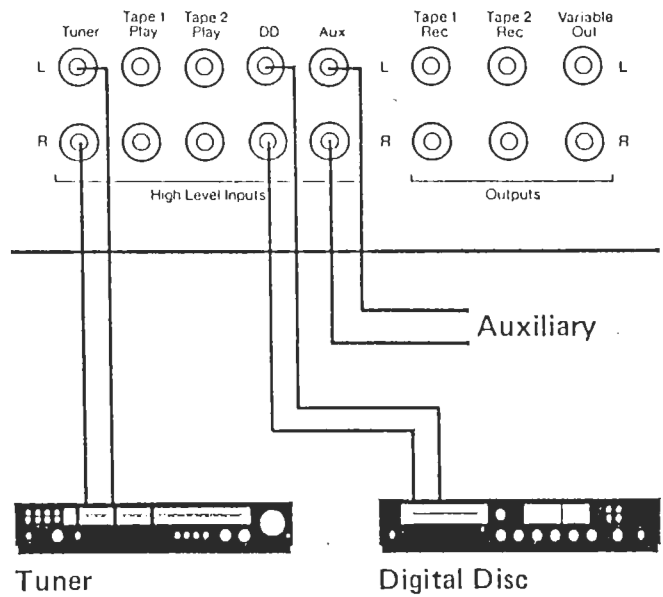
- Connect an FM/AM tuner to the tuner input.

DD

- Connect a CD player to the DD input.

AUX

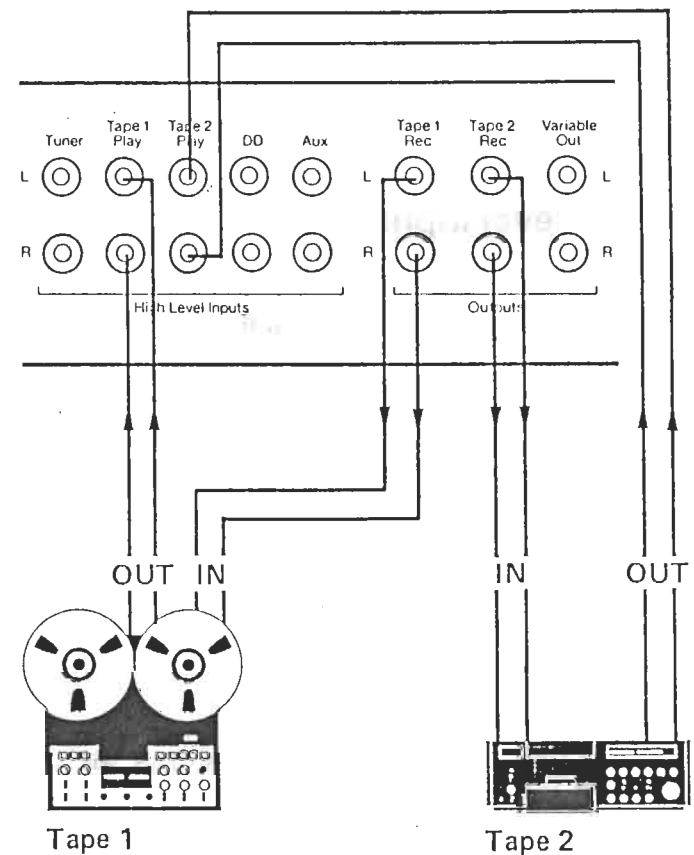
- Connect an extra CD, Tuner, Cassette/Tape or Video Recorder to the Aux inputs.



Tape/Cassette deck

- Connect the tape/cassette deck to Tape 1 or Tape 2 sockets as shown.

A Digital Audio Tape or the audio output of a Video recorder may also be connected to any of the high level inputs.

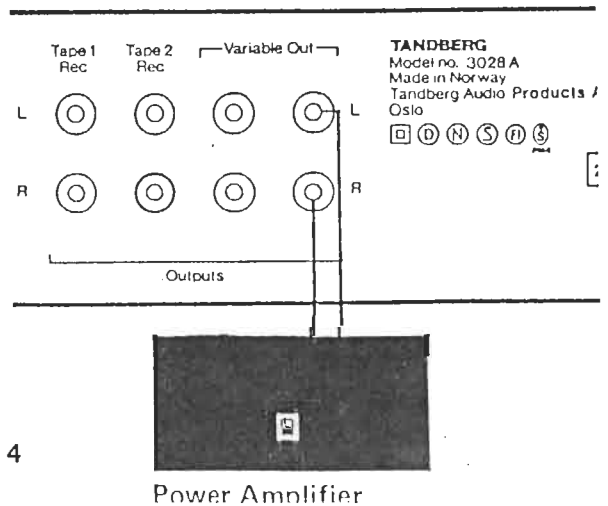


Variable Output

Connect a power amplifier to one or both the Variable Outputs.

Do not put shorting plugs into any of the outputs, because the plug will short the audio signal on all the other outputs. This may cause damage.

This may cause damage.



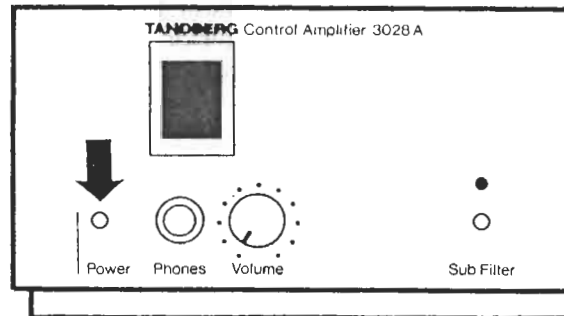
Switching on

Check that the control amplifier is marked with the correct voltage on the rear panel.

Plug the mains lead into the wall socket.

- NOTE! The Zero Feedback stages have to stabilize before the control amplifier is ready for operation. Therefore a protection circuit will cause an approx. 12 - 15 seconds delay after switching on.

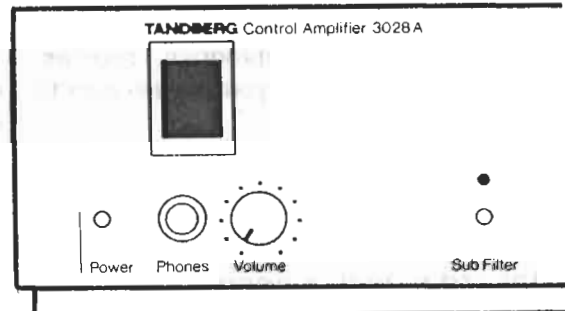
Press the Power switch to turn on the control amplifier. The control amplifier will always go to Tuner mode and with Sub Sonic filter off after switching on.



Headphones

- Connect stereo headphones with a 1/4" stereo jack to the socket marked Phones.

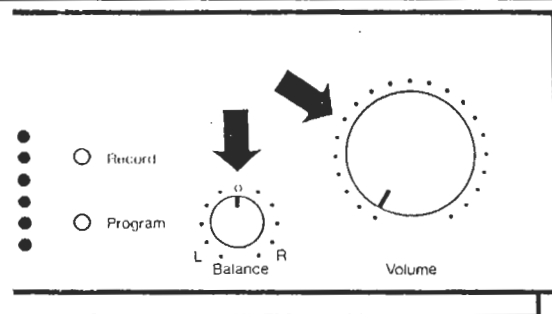
- Adjust the level in the headphones with the small knob marked volume.



Volume - Balance

- Control the output volume with the knob marked Main Volume.

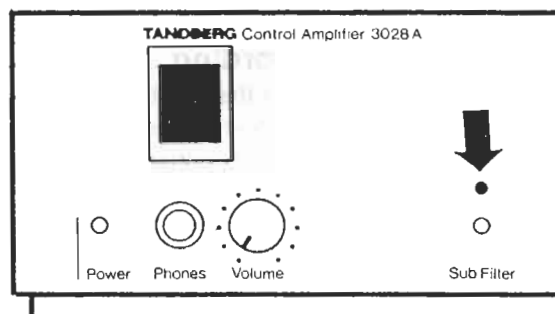
- Control the volume's balance between right and left channels with the knob marked Balance.



Sub Sonic Filter (Rumble Filter)

- Press in this button to reduce noise in the low frequency region.

The attenuation is - 12 dB per octave, and - 3 dB at 15 Hz.



Program selector

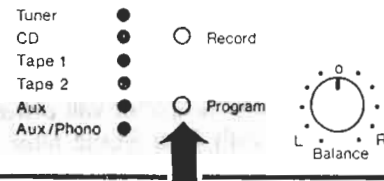
The Program selector provides opportunities to choose between 6 program sources. You will listen to the program in the speakers depending on the position of the program selector.

Green LED on the front of the control amplifier indicates program source.

Short presses on the program selector step the program source one by one from top to bottom and back to the top again. Keeping the selector in will automatically step the source and when releasing, stop at the present source.

The program selector position:

Tuner: Listen to the Tuner input.
CD: Listen to the DD input.
Tape 1: Listen to the Tape 1 input
Tape 2: Listen to the Tape 2 input.
Aux: Listen to the Aux input.
Aux/Phono: Listen to the Aux./Phono input.



Record Selector

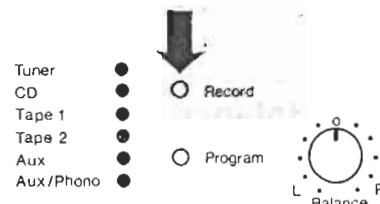
The record selector provides opportunities to record from 6 different program sources, regardless of which program you are listening to in the speakers.

Red LED on the front of the control amplifier indicate record source.

Short presses on the record selector step the record source one by one from top to bottom and back to the top again. Keeping the selector in will automatically step the source and when releasing, stop at the present source.

The Record selector position:

Tuner: Recording on both Tape 1 and Tape 2 outputs.
CD: Recording on both Tape 1 and Tape 2 outputs.
Tape 1: Playback from Tape 1 and recording on the Tape 2 output. (Copying).
Tape 2: Playback from Tape 2 and recording on the Tape 1 output. (Copying).
Aux: Recording on both Tape 1 and Tape 2 outputs.
Aux/Phono: Recording on both Tape 1 and Tape 2 outputs.



Monitoring during recording

Step the program selector to the position where the recording unit is connected. Then use the Tape/Source function on the recording unit to monitor the recording.

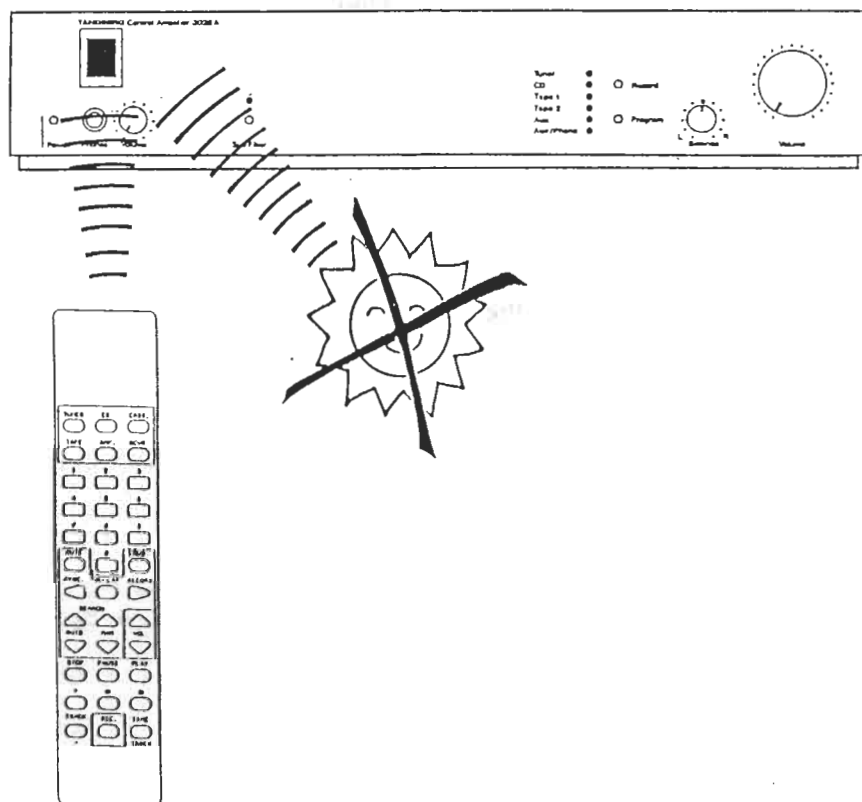
Remote Control operation

Make sure that the batteries are correctly inserted.

NOTE! For longer periods of absence, we recommend removing the batteries. Worn out batteries should be removed immediately. Leakage from the batteries may damage the electronics.

Point the remote control at the unit during operation. Maximum range, 10 meters, is achieved when there is a clear line of sight between the remote control and the unit you wish to control.

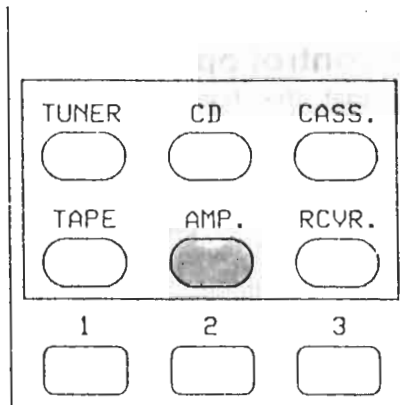
Do not expose the remote control receiver to any strong light sources.



System select

To be able to control your control amplifier from the remote controller, you have to tell the remote controller what kind of equipment it is going to control. This you do by pressing once on the system button corresponding with the unit type you want to control.

In this case you press system bottom marked AMP. Once pressed, the remote controller is in the amplifier mode until another system bottom is pressed.



Main Volume

Adjusts the Main Volume up or down.

NOTE! The Main Volume can be adjusted regardless of the selected system.

E.G. if you are changing stations on your Tuner, with the remote controller in Tuner system mode, you are still able to adjust the Main Volume on your control amplifier without switching to the AMP. system.

Other remote control functions

Program select

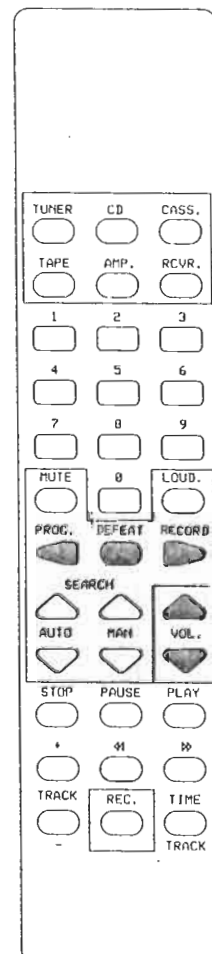
- Use short presses on the PROG. button to select the program source to the headphone/speakers. See LED indication on the front of the control amplifier.

Record select

- Use short presses on the RECORD button to select the record source. See LED indication on the front of the control amplifier.

Defeat

- Use short presses on the DEFEAT button to turn the Sub Sonic filter on and off. See LED indication on the front of the control amplifier.



Technical data

Tandberg Control Amplifier 3028A	Power requirements:	115/230, 50/60 Hz
	Power consumptions:	25 W
	Dimensions:	Width 17 1/8" (43,5 cm)
		Depth 13 3/4" (35,0 cm)
		Height 3 1/2" (8,9 cm)
	Weight 12,5 lbs (5,7 kg)	

Technical Data according to INF - A - 202, 1978

Frequency range:		
Tape 1, Tape 2:	20 - 20.000 Hz	+ 0/ - 0,3 dB
Tuner, Digital Disc, AUX:	20 - 20.000 Hz	+ 0/ - 0,3 dB
Maximum Voltage Output:		
Variable output:		5 V at THD = 0,006 %
Variable output:		10 V at clipping level
Tape 1, Tape 2:		4,5 V
Headphone output:		10 V unloaded
Total Harmonic Distortion (20 Hz - 20.000 Hz):		
Tape 1, Tape 2:		< 0,005 %
Tuner Digital Disc, AUX:		< 0,005 %
Input sensitivity - Ref. 0,5 V output voltage:		
Tape 1, Tape 2:		80 mV
Tuner, Digital Disc, AUX:		80 mV
A - Weighted Signal-to-Noise ration:		
Tape 1, Tape 2:		85 dB
Tuner, Digital Disc, AUX:		85 dB
Maximum Input Voltage (1 kHz):		
Tape 1, Tape 2:		5,0 V
Tuner, Digital Disc, AUX:		5,0 V
Input Impedance:		
Tape 1, Tape 2:		10 kohm
Tuner, Digital Disc, AUX:		10 kohm

Secondary Disclosures

Output Impedance:	
Variable Output:	
Headphones:	47 ohm + 4,7 uF in serie
Filter:	150 ohm
Sub Sonic:	
Crosstalk (100 Hz - 10 kHz):	- 12 dB/oct., - 3 dB at 15 Hz
Tape 1, Tape 2:	
Tuner, Digital Disc, AUX:	To any of the other sources > 70 dB
Separation (100 Hz - 10 kHz):	To any of the other sources > 70 dB
Tape 1, Tape 2:	
Tuner, Digital Disc, AUX:	> 55 dB
Transient intermodulation:	> 55 dB
All inputs:	Immeasurable

- Specifications are subject to change without notice.

NOTE

The information in this manual is subject to change without notification. Additional pages may be inserted in future editions. The user is asked to excuse any **omissions** or errors in the present edition.

No responsibility is assumed if accidents occur while the user is following the instructions in this manual. No responsibility is assumed for defects in the **unit's firmware**.

We **shall have no liability** or responsibility to customer or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by equipment sold or furnished by us, including, but not limited to, any interruption of service, loss of business or anticipatory profits or consequential damages resulting from the use or operation of the equipment or software.