

TANDBERG® TPR 3080A

Operating Instructions



READ THIS FIRST!

For your safety!

To prevent electrical shock 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 units caused by the circumstances described in the warnings below, do not necessarily apply for warranty service.

Main power

In some areas the main power wall outlet carries high frequency data and intercom communications. To prevent this high frequency to reach the receiver/power amplifier, an HF filter should be connected in the power line. Ask your local Tandberg dealer if this high frequency is in your area. Should this high frequency reach the receiver/power amplifier, and interfere with the electronics, damage may occur in the outputstage or the speakers.



Connecting

When connecting the units in a HI-FI 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 receiver/power amplifier or the speakers. To avoid this problem, switch off all the units in the system before connecting.

Speaker connection

Use speaker systems with two speaker wires (+ and ÷) to each speaker. Some speaker systems have common ground between the speakers, and this may cause oscillation. If this type of speaker system with common ground is used, damage may occur in the receiver/power amplifier or speakers.

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Power requirements

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

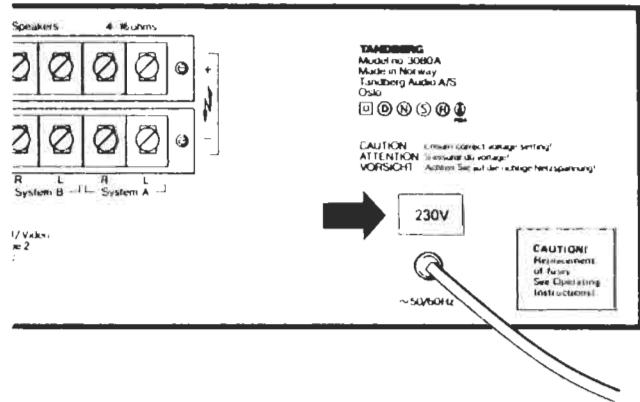
US version: 110 – 115 V ± 10 %, 50/60 Hz
 European version: 220 – 230 V ± 10 %, 50/60 Hz
 GB version: 240 V ± 10 %, 50/60 Hz

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

The power consumption is 500 watt maximum.

Fuses: Fuse: 5 x 20 mm slow blow
 220 – 240 V: Eu: T2,5A
 115 V: Us: T6,3A

NOTE! Before connecting the receiver to the wall socket, read chapter Main power on page 2. Do not switch Power on yet.



Check that the receiver is marked with the correct mains voltage.

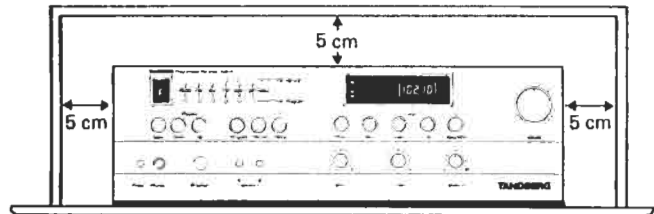
Placing the receiver

The best position for TPR 3080A is free on a shelf with sufficient ventilation/space to each sides and the top, see figure. If the shelf is open on the back, the space to the sides and the top can be slightly reduced.

Never place the receiver on soft surface that can impede ventilation, or in front of or above a radiator.

If placing units on top of each other, the receiver must always be positioned at the top.

Important!: Never place any other equipment on the top of this receiver as this may cause damage to the other equipment. In rack, make sure that sufficient ventilation is available, for instance a fan.

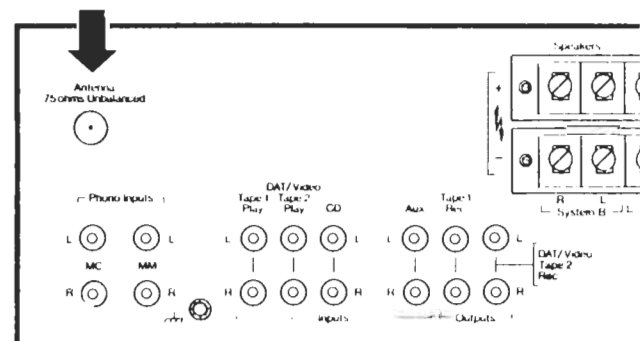


Connecting external equipment

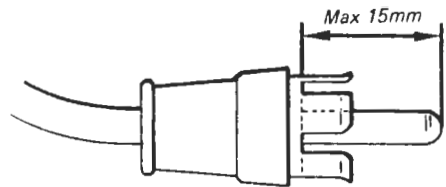
Important!: All connections must be carried out **before** the Power is switched on.*

Antenna 75 ohm:
 FM antenna with 75 ohm down lead should be connected direct to this input.

FM antenna with 300 ohm down lead should be connected via an antenna transformer 300/75 ohm. A 75 ohm antenna plug with an antenna transformer will be supplied with receivers intended for the US market.



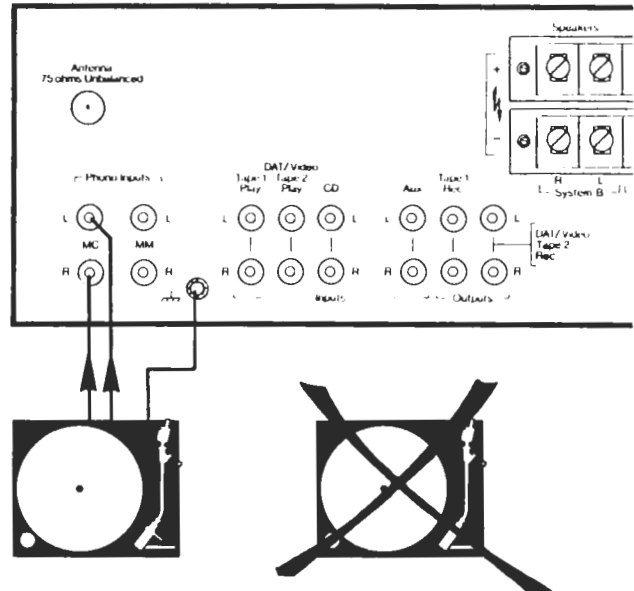
CAUTION! When connecting a record player, do not use phono plugs with a center terminal longer than 15 mm, see figure. At the bottom of each phono socket there is a switch which can be damaged if the plug is too long.



Record player

- Connect the record player as shown.
- Phono MC: Record player with moving-coil pick-up.
- Phono MM: Record player with moving-magnet pick-up.
- The ground lead (static) from the record player must be connected to the ground terminal.

If no record player is connected, the noise level from the phono amplifier will be higher than normal. To minimize this noise level, connect shorting plugs to the MM phono input.



Only one record player must be connected at the same time.

High level inputs

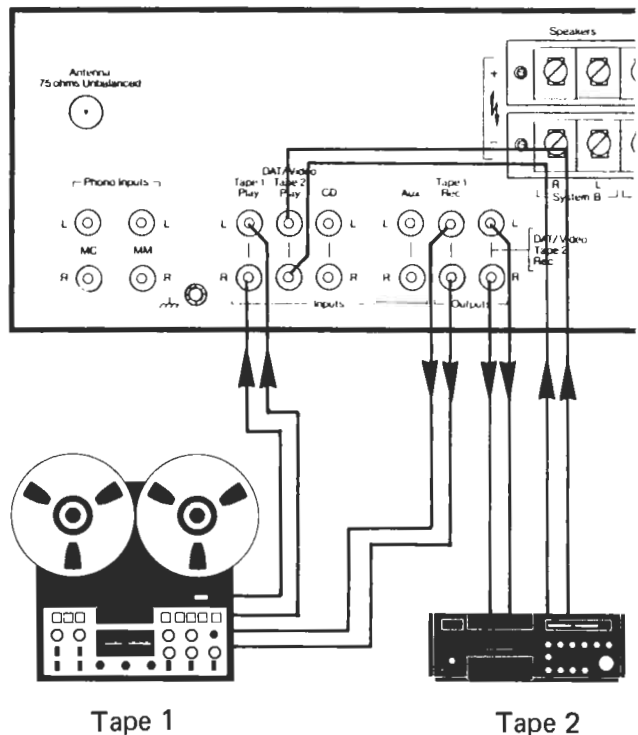
NOTE! All high level inputs, except phono, are identical, and therefore the sources can be exchanged. If exchanging the inputs, note that the text on the front no longer matches the connected equipment. For example you can connect four CD players.

For best performance use High Resolution phono cables for interconnection (in- and outputs) between the TPR 3080A and the external equipment.

Tape/cassette deck*

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

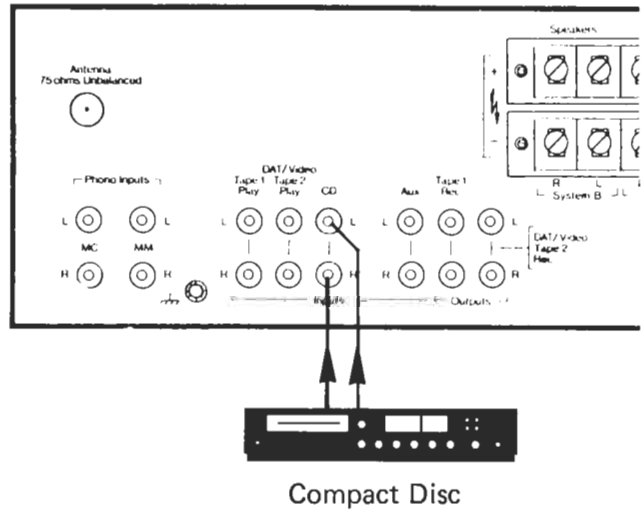
A Digital Audio Tape or the audio input of a Video recorder may also be connected to Tape 2 input.



* Do not put shorting plugs into any of the outputs because the plug will short the audio signal on all the other outputs.

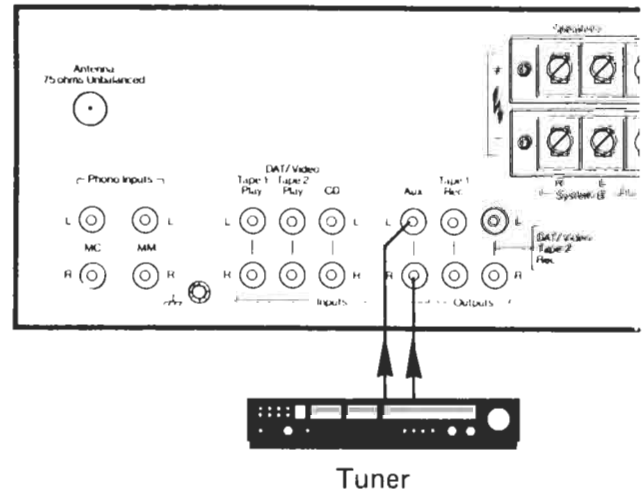
Compact Disc

- Connect a Compact Disc player to CD input.



Aux

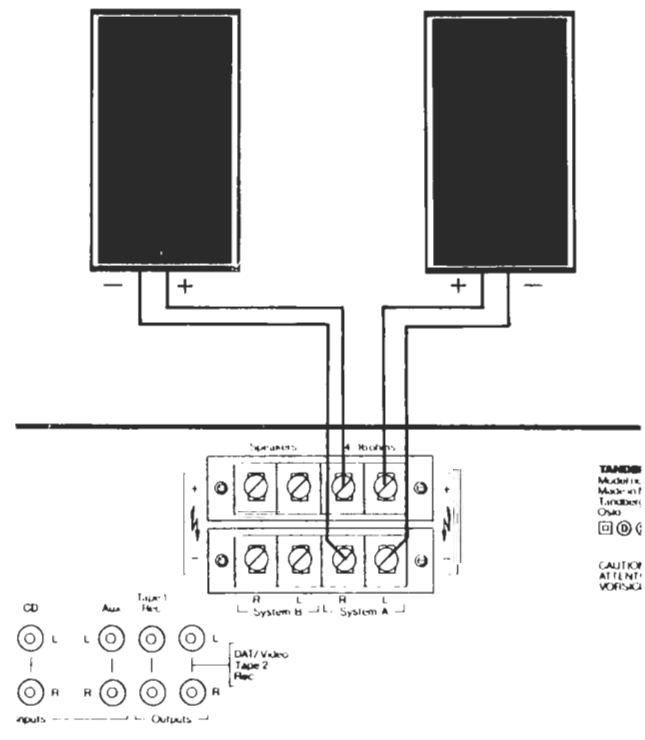
- To connect other auxilliary equipment, for example an AM tuner.



Speakers

As noted on page 2 in the chapter Speaker connection, **do not use** speaker systems with common ground between the speakers.

- Connect the speakers to the Speaker terminals. Make sure the polarity is correct on the A and B speakers outputs.



Switching on

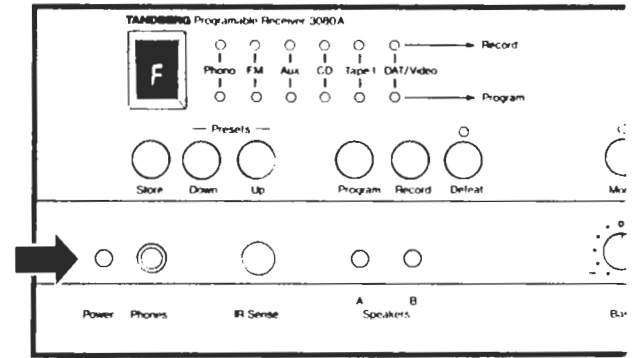
Check that the receiver is marked with the correct voltage on the rear panel.

NOTE! The Zero Feedback stages have to stabilize before the receiver 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 receiver.

When power is switched on, the functions of the receiver are automatically set as follows:

- Tuned to the last station you listened to.
- F is shown in the left display.
- Tone Defeat LED on (Bass and Treble neutralized).
- Auto/Man LED off, the receiver is ready for manual search.

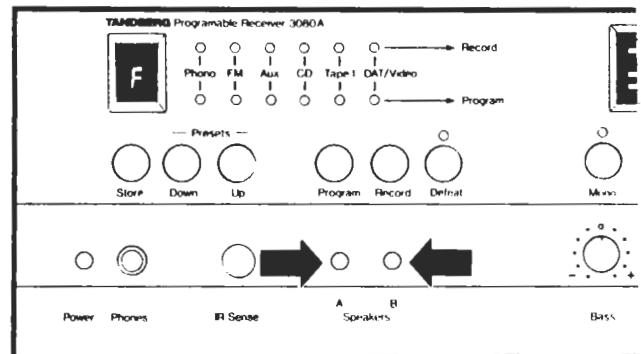


- The (FM) muting LED is on.
- Green and red LED indicates that the tuner is the program and record source.

Speakers

The two speaker buttons marked Speakers have four positions as follows:

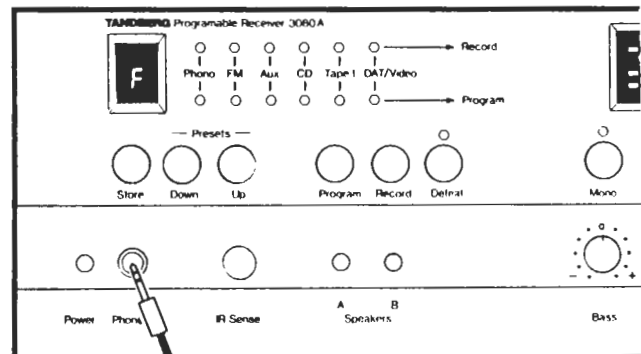
- | | |
|------------------------|--|
| Buttons out: | All speakers disconnected (headphone is still on). |
| Button A pressed: | Program to speaker outputs A only. |
| Button B pressed: | Program to speaker outputs B only. |
| Buttons A + B pressed: | Program to speaker outputs A and B. |



Headphones

The headphones output is independent of the speaker button positions.

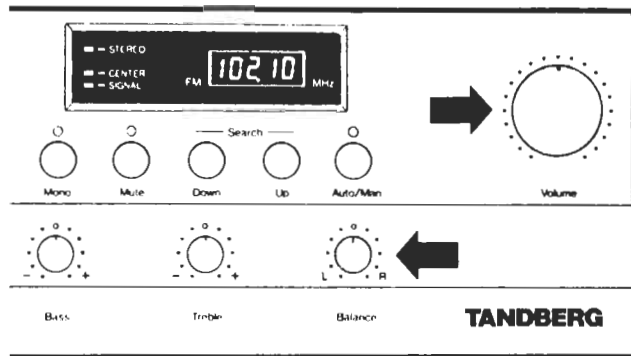
- Connect stereo headphones with a 1/4" stereo jack to the socket marked Phones.
- The Phones output is affected by the volume control and the tone controls.



Headphone impedance
150 – 2000 ohm

Volume – Balance

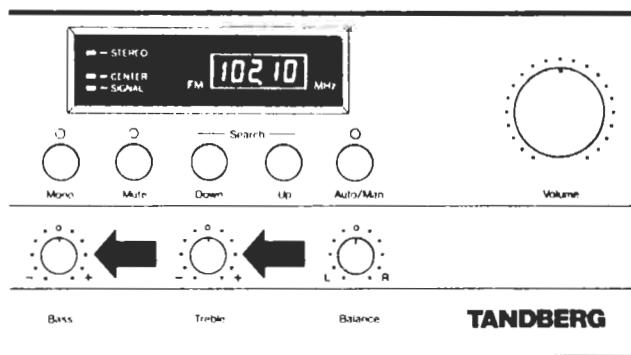
- Control the volume with the knob marked Volume.
- Control the volume's balance between right and left channel with the knob marked Balance.



Bass and Treble

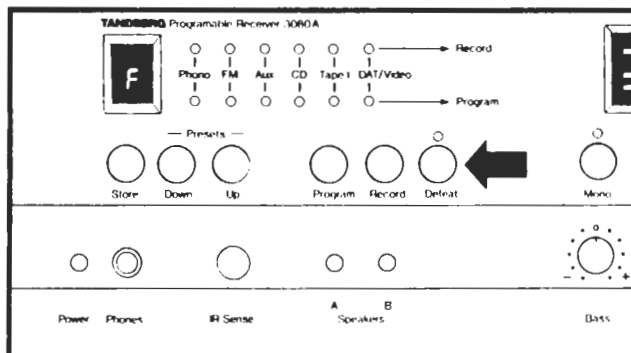
- Control the bass and treble levels with the knobs marked Bass and Treble.

NOTE! The tone controls will only work when the Defeat LED is off.



Tone Defeat

When Tone Defeat is activated (LED on), a flat frequency response is obtained regardless of the position of the tone controls. Switching off Tone Defeat gives you the tone control setting on the program you are listening to.

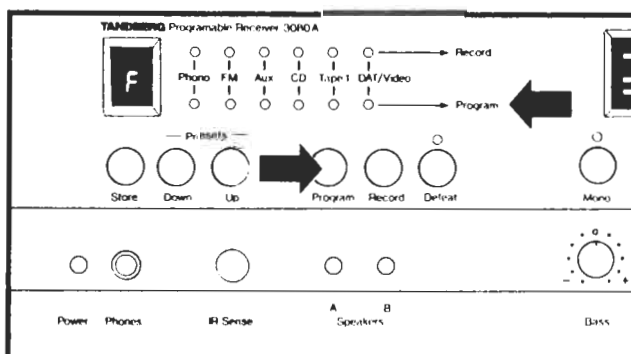


Program select

At power on, the program is set to the internal FM tuner. The Program button provides opportunities to choose between 6 different program sources. Short presses step the program sources one by one from left to right. Keeping Program button in will automatically step the programs, and when reaching DAT/Video go to Phono. DAT/Video is also suitable for Tape 2 as a program source.

The program selector in position:

- Phono:** Listen to a record player on one of the phono inputs.
- FM:** Listen to internal FM tuner.
- Aux:** Listen to the Aux input, other auxilliary equipment, ex. AM tuner.
- CD:** Listen to the CD input, Compact Disc player.
- Tape 1:** Listen to the Tape 1 input, open reel recorder, cassette deck.



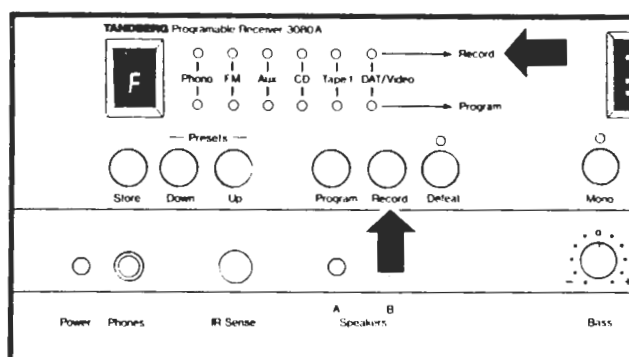
DAT/Video: Listen to the DAT/Video/Tape 2 input, Digital Audio Tape recorder, Audio signals from Video recorder, open reel recorder, cassette deck.

In principle all high level inputs, except phono, are identical, and therefore 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.

Record select

At power on, the program is set to the internal FM tuner. The Record button provides opportunities to choose between 6 different program sources to record from. Short presses step the record sources one by one from left to right. Keeping the Record button in, will automatically step the programs, and when reaching DAT/Video go to Phono. DAT/Video is also suitable for Tape 2 as program source.

- Phono:** Record player, recording on both Tape 1 and DAT/Video/Tape 2 outputs.
- FM:** FM tuner, internal, recording on both Tape 1 and DAT/Video/Tape 2 outputs.
- Aux:** Other auxiliary equipment, ex. AM tuner, recording on both Tape 1 and DAT/Video/Tape 2 outputs.
- CD:** CD player (Compact Disc), recording on both Tape 1 and DAT/Video/Tape 2 outputs.
- Tape 1:** Open reel recorder, cassette deck, playback from Tape 1 and recording on DAT/Video/Tape 2 output (copying).



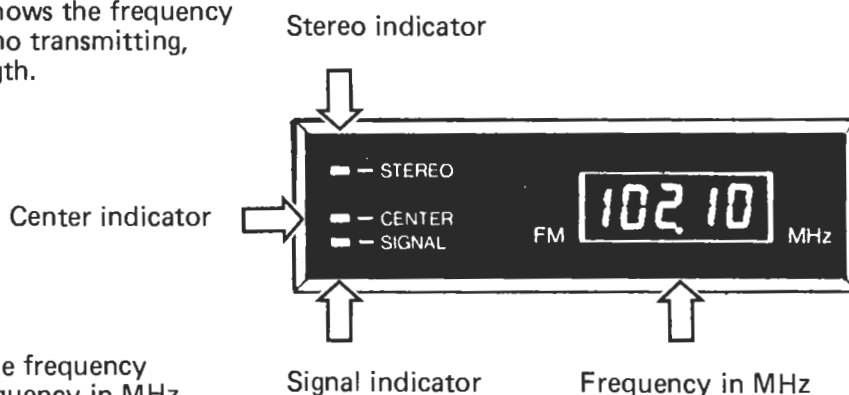
DAT/Video: Digital Audio Tape recorder, Audio signals from Video recorder, open reel recorder, cassette deck, playback from DAT/Video/Tape 2 and recording on Tape 1 output (copying).

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.

Tuning display

The Tuning display window shows the frequency of the FM scale, stereo or mono transmitting, center tuning and signal strength.



Frequency:

When searching to a station the frequency counter display shows the frequency in MHz.

Stereo:

The Stereo indicator will light when receiving a stereo signal.

If the stereo program is affected by noise, you can press the Mono button to have the program reproduced in mono with less noise.

Center:

When the Center LED is on, the station is exactly tuned in.

At auto search, no further adjustment is necessary when the required station is found.

At manual search, press the Search Up/Down button until the required station is found and the Center LED goes on.

Signal:

The Signal indicator shows at full light that the signal level is sufficient to receive the station without noise. At low signal strength the light in the Signal indicator is weak and the signal is possibly affected by noise.

Search functions

Both automatic and manual search are possible on the receiver.

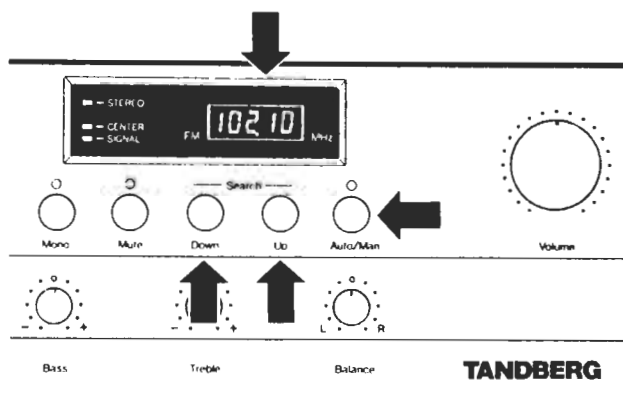
Manual search

Press the Auto/Man button to turn off the Auto/Man LED, if this LED was on. The receiver is now ready for manual search.

- Press Search Up or Down button to start searching for the required station. By giving the Up/Down button a short press you can increase/decrease in 50 KHz steps (100 KHz steps for USA). By keeping the Up/Down button in, the searching is at first slow and after a short time the searching will be fast. (See the frequency counter display).

When reaching the end of the scale, the frequency counter stops at 108.00 MHz for "Up" searching and at 87.50 MHz for "Down" searching.

Each time the Up or Down button is pressed the sound is muted.



Auto search

- Press the Auto/Man button to switch on the Auto/Man LED (if the LED was off). The Receiver is now ready for automatic search.
- Give Search Up or Down a short press. The receiver will now start searching for the nearest station (with a strong enough signal) and stop. If you want another station just press the Up/Down button again. When reaching 87.50 or 108.00 MHz the searching reverses and stops at the nearest station. At any time the searching can be reversed by pressing the opposite button (Up or Down). During auto search the sound is muted.

Presets

In addition to the search functions, there is a second stage which stores 16 pre-tuned FM stations in an electronic memory.

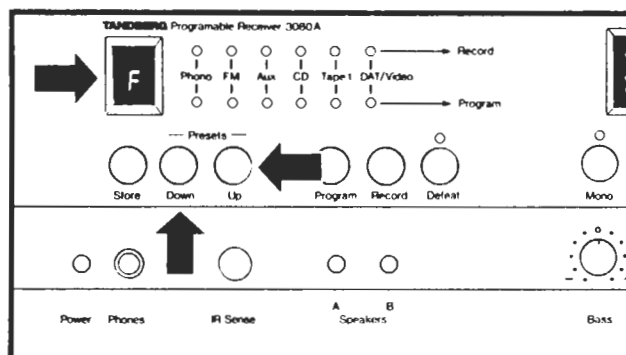
Using presets

When the power is switched on, a F will show in the left display. If you press one of the Presets buttons, the receiver will always start with preset No. 1.

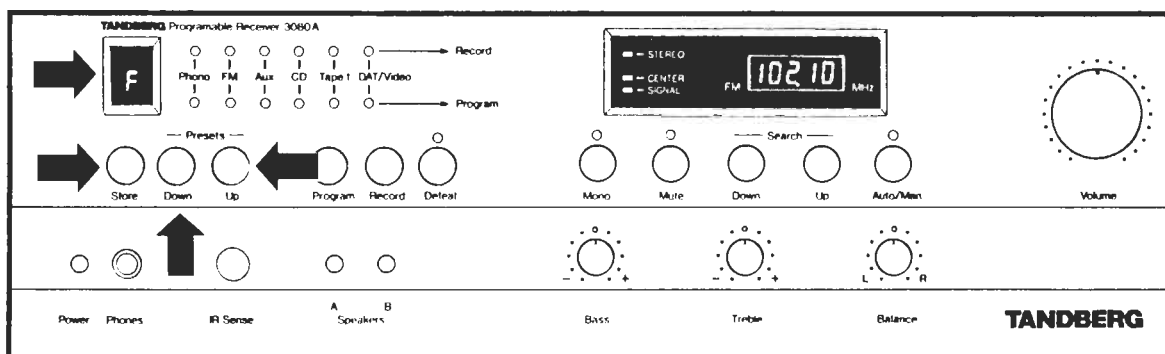
When F is shown in the left display during manual or auto search, you will get the last preset No. you listened to by pressing one of the Presets buttons.

Changing preset No.

- Press Preset Up or Down to the required preset No. Short presses will step the No. one at a time. Continuously depressing Preset Up/Down, the preset No. will increment/decrement. By pressing Preset Up when the No. is 16 the preset will change to 1, and by pressing Down when No. 1 is shown the preset will change to 16.



The stored stations will remain in the memory for approximately one week after the receiver has been switched off.



To store a station:

- Search to the required station by pressing Search Up or Down (See Search functions).
- Press Store and a preset No. is displayed. If you want to store your station at the displayed preset No., just press Store once more within 8 – 10 seconds. Then the letter P will be displayed a moment to acknowledge the storing.

Another preset No. is chosen by pressing Preset Up or Down after Store was pressed the first time.

- Choose the required preset No.
- Press Store once more (within 8 – 10 seconds). The letter P for acknowledgement will be displayed a moment, and your station is stored at the chosen preset No.

Aborting storing of a station:

- Wait until F is displayed (10 – 12 seconds) or
- Press any other touch button than Store or Preset Up/Down. F will then immediately show on the left display.

Transferring presets

Occasionally you might want to move a station from one preset No. to another.

- Choose the preset No. you want to transfer from. The frequency is shown in the display and you can listen to the program.
- Press Store.
- Choose the new preset No. The program on the preset No. you want to transfer from is not changed.
- Press Store. The letter P is shown a moment to acknowledge the storing. You have now copied your station to another preset No.

Mono – Mute

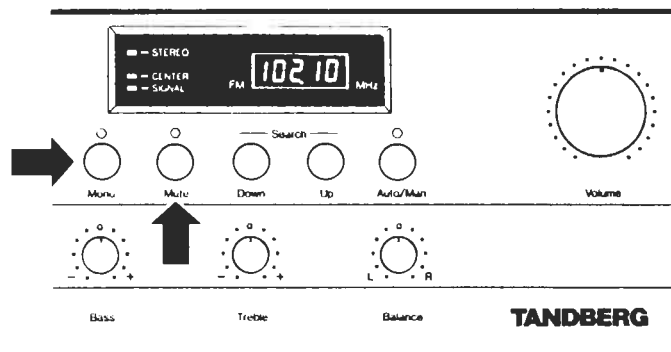
Mono

- Press Mono for mono reproduction of programs. The Mono LED goes on and the tuner part of the receiver is set to mono. In stereo mode the LED is off.

Mute

The muting circuit blocks weak signals and thereby ensures noise-free tuning.

- Press Mute for mute function. Weak stations below the muting threshold will not be presented.



Remote Control

The Master Remote Control RC 3000 is designed to operate many different units in the Tandberg series 3000.

Make sure 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 might damage the electronics.

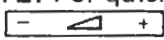
Point the remote control at the unit during operation. Maximum range, 10 to 14 metres, is achieved when there is a clear line of sight between the remote control and the unit you wish to control.

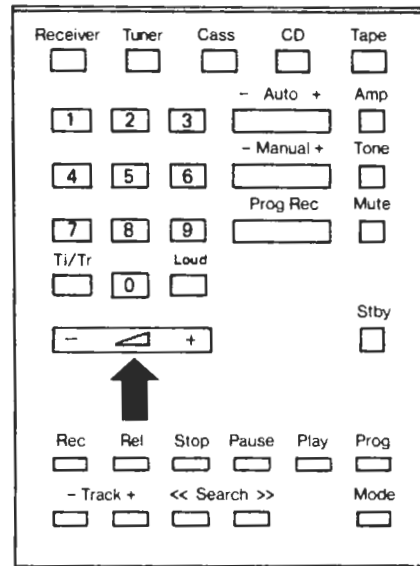
The RC 3000 can control the following units:

- Receiver, Tuner, Cassette deck, CD player, Tape deck and preamplifier.

Volume

Adjusts the Volume up or down.

NOTE! For quick access to the Volume, press the  button directly. (It is not necessary to enter receiver system by first pressing the Receiver button if you only need to adjust the volume).



Other remote control functions

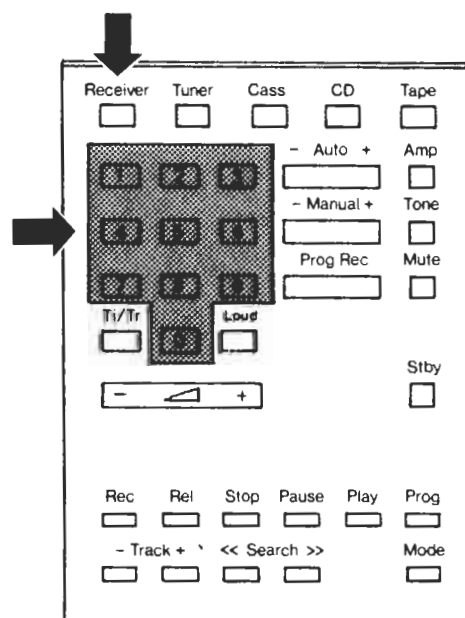
To control the other functions on the receiver the Receiver button must be pressed first. When the Receiver button is pressed you have access to all functions without pressing the system button each time. To leave the Receiver control system you must press any one of the other system buttons (Tuner, Cass etc.).

Presets

From the key board you have access to the already stored presets in the receiver. The preset number (up to 16) can be chosen as follows:

- Press the required preset No. directly. The number "0" can not be set as the first preset No. you enter. If the required preset No. is from 10 to 16, you must press the last number button within a few seconds. Otherwise the receiver will only accept the first number, and give you the station on preset No. 1.

To avoid ruining the stored presets with the remote control, the storing can only be performed directly on the receiver.



Search functions

Both auto and manual search are possible from the remote control.

Auto search

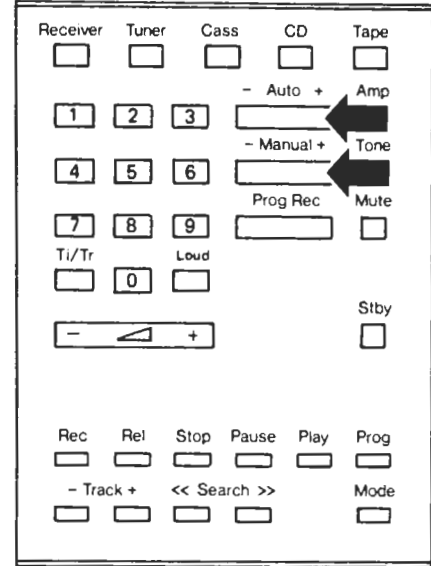
- Press the Auto button (+ or – side) and the receiver goes directly into automatic searching independently of the position of the Auto/Man function on the receiver, and the Auto/Man LED will be switched on. The receiver is now searching for the nearest station (with a strong enough signal) and stops. If you want another station just press the + or – side on the Auto button once more or until you have found the required station.

For further information read chapter Auto search on page 10.

Manual search

- Press the Manual button (+ or – side) to start searching for the required station. The manual searching will start independently of the position of the Auto/Man function and the Auto/Man LED is switched off. By giving the + or – side of the Manual button short presses, the receiver will search in 50 kHz steps (100 kHz steps for USA). By depressing the + or – side of the Manual button the searching is at first slow and after a short time the searching will be fast. (See the frequency counter display on the receiver).

For further information read chapter Manual search on page 10.



Mute

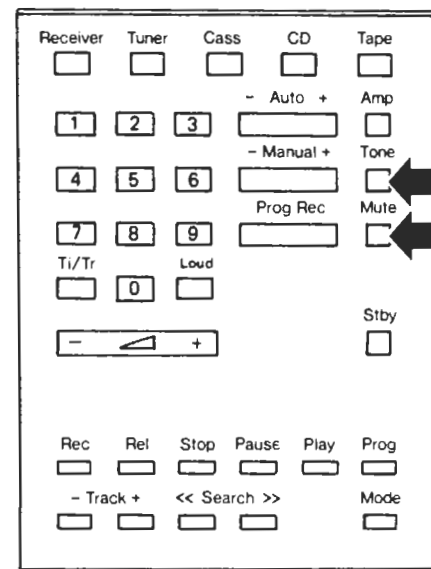
The muting circuit blocks weak signals and ensures noise free tuning.

- Press the Mute button for mute function. Weak stations below the muting threshold will not be presented.

Tone

- Press the Tone button to control the preset bass and treble. The Defeat LED on the receiver is on when the tone defeat is activated and a flat frequency response is obtained regardless of the position of the tone controls.

Switching off tone defeat (LED is off) gives you the tone control setting.



Program select

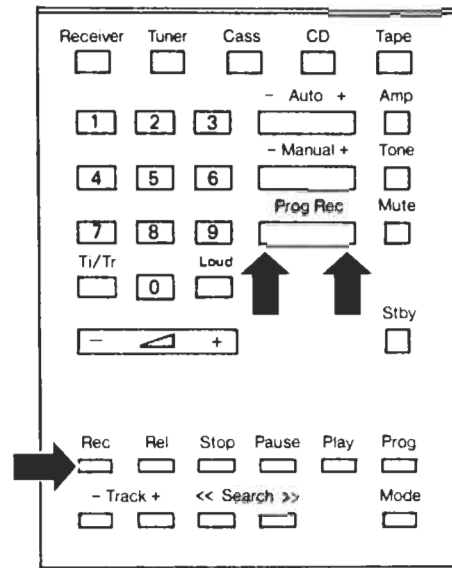
- Press the left side of the Prog Rec button to choose between 6 different program sources. Short presses step the program sources one by one from left to right on the receiver's front panel. Keeping Prog side of the button in will automatically step the programs.

For further information see chapter Program on page 8.

Record select

For extra safety, the Rec button must be pressed before selecting the record source. Record select is activated until any other receiver button than Rec, or the right side of the Prog Rec, is pressed.

- Press Rec button.
- Press right side of the Prog Rec button to choose between 6 different program sources to record from. Short presses step the record sources one by one from left to right on the receiver's front panel. Keeping the Rec side of the button in will automatically step the programs.

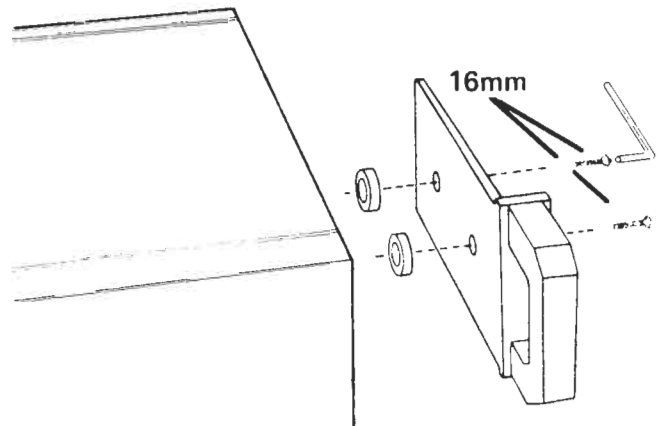


- Press any other Receiver system button than the two used above to release Record select mode. (For example No. 1 button in the key board).

For further information read chapter Record select on page 9.

Accessories (extras)

Mounting the 19"-rack mount kit (extra)

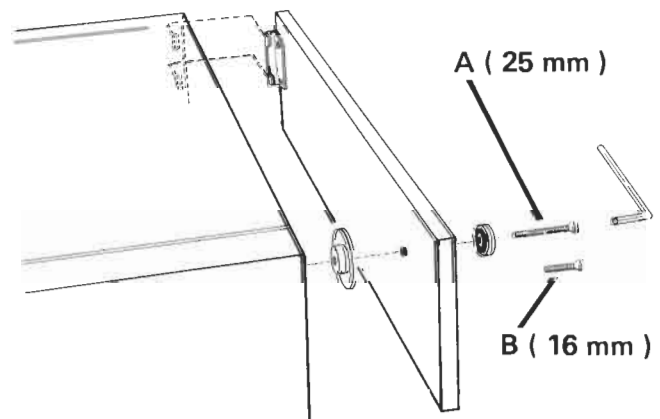


Mounting the side panels (extra)

NOTE!

When fitting extra side panels you must use the long screws (A) which are supplied.

Take care of the short screws (B) originally used to hold the side panels because you will need them if you remove the extra side panels. The long screws must not be used without the extra side panels because they can cause damage inside the power amplifier.



Technical Data

	Power requirements:	110 – 115 V/220 – 230 V/240 V ± 10 %, 50/60 Hz
Tandberg Programable Receiver TPR 3080A	Power consumption:	60 – 500 W
	Dimensions:	Width 435 mm Height 137 mm Depth 354 mm Weight 12 kg
AMPLIFIER	Continuous Average Power Output:	(8 ohm, 20 – 20.000 Hz, THD < 0.09%) 2 x 80 W (4 ohm, 20 – 20.000 Hz, THD < 0.09%) 2 x 100 W > 800
Technical Data according to IHF-A-202, 1978	Wideband damping factor:	
	Frequency response:	Linear inputs 5 – 100.000 Hz + 0/– 3 dB Phono MC and MM inputs 20 – 20.000 Hz ± 0.5 dB
	Sensitivity:	Phono MC 70 µV Phono MM 500 µV FM, Tape 1, Tape 2, Video, AUX, CD 75 mV
	A-weighted Signal-to-noise ratio:	Phono MC 68 dB Phono MM 72 dB FM, Tape 1, Tape 2, CD 85 dB
	Maximum input signal:	Phono MC 5.0 mV Phono MM 70 mV FM, Tape 1, Tape 2, CD, Video, DAT, AUX 3.5 V
	Input impedance:	Phono MC 150 ohm Phono MM 47 kohm FM, Tape 1, Tape 2, CD, Video, DAT, AUX 10 kohm
FM TUNER	Tuning range:	87.5 – 108 MHz
Technical Data according to IHF-T-200, 1975	Usable sensitivity:	Mono 1 µV/75 ohm Stereo 2 µV/75 ohm
IEEE Std. 185, 1975	50 dB quieting sensitivity:	Mono 20.0 µV/75 ohm Stereo 78 dB Stereo 75 dB
	Signal-to-noise ratio:	Mono 78 dB Stereo 75 dB
	Muting threshold:	10 µV/75 ohm
	Muting hysteresis:	6 dB
	Stereo threshold:	1 µV/75 ohm
	Frequency response (30 Hz to 15 kHz):	Mono + 0.5 dB – 1 dB Stereo + 0.5 dB – 1 dB
	Distortion at 50 dB quieting:	Stereo 0.3%
	Distortion at 65 dBf (0.5 mV/75 ohm at 1 kHz):	Mono 0.15% Stereo 0.15%
	Distortion at 65 dBf (30 Hz to 15 kHz):	Stereo 0.4%
	Intermodulation distortion:	Mono 0.2% Stereo 0.2%
	Capture ratio, selectively measured:	1.0 dB
	Adjacent channel selectivity ± 200 kHz:	8 dB
	Alternate channel selectivity ± 400 kHz:	> 75 dB
	Spurious response ratio:	> 95 dB
	Image response ratio, balanced:	> 100 dB
	RF intermodulation:	> 70 dB
	AM suppression ratio:	> 70 dB
	Stereo separation (60 Hz to 10 kHz, selectively measured):	> 45 dB
	Subcarrier product ratio:	70 dB
	19 kHz suppression:	70 dB
	38 kHz suppression:	100 dB
	Center LED on:	20 dBf
	Signal LED on:	30 dBf

Specifications are subject to change without notice.

Tandberg Audio A.s
Fetveien 1, P.O. Box 49
N-2007 Kjeller, Norway

NOTE

The information in this manual is subject to improvements 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.

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