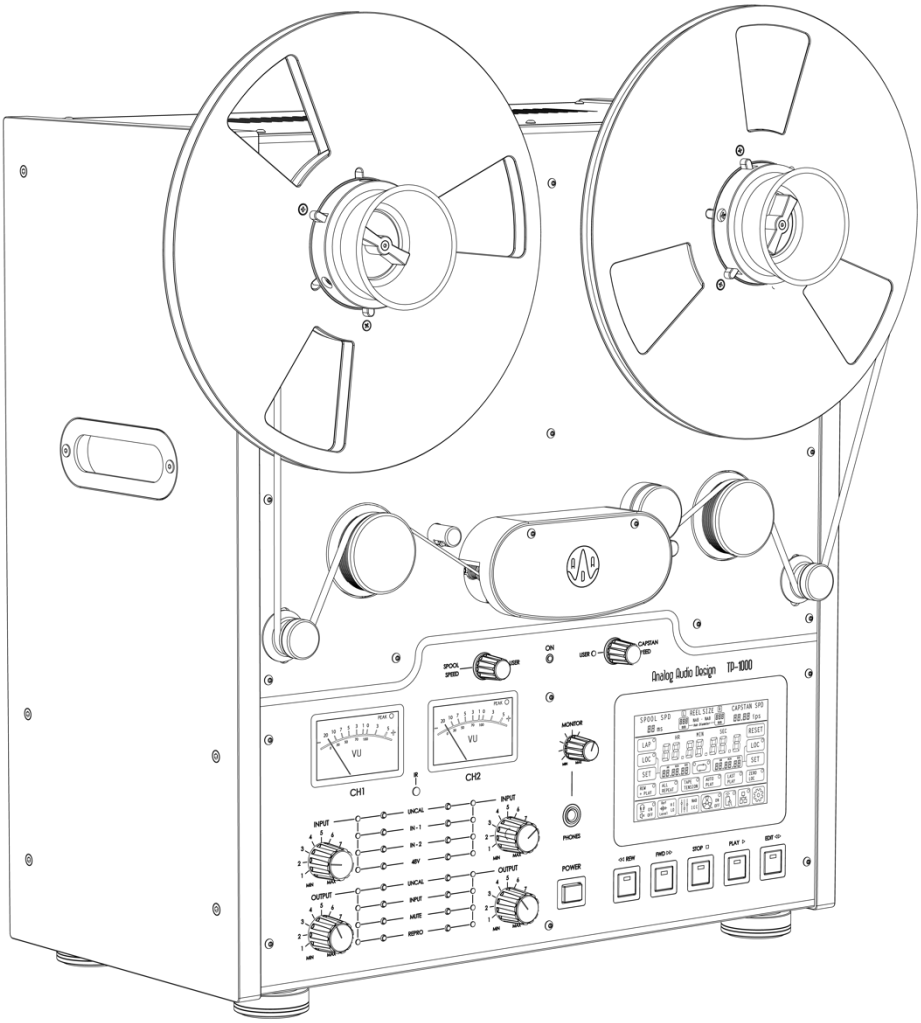
Analog Audio Design

Operating Manual



TP-1000

CAUTION

To prevent fire or shock hazard :

Do not expose this unit to rain or moisture.

Do not remove panels (unless instructed to do so).

There are no user-serviceable parts inside.

Refer servicing to qualified service personnel.

PLEASE READ THROUGH THE SAFETY INSTRUCTIONS ON THE NEXT PAGE

1. Read Instructions	All the safety and operating instructions should be read before the device is operated.
2. Retain Instructions	The safety and operating instructions should be retained for future.
3. Heed Warnings	All warnings on the device and in the operating instructions should be adhered to.
4. Follow Instructions	All operating and use instructions should be followed.
5. Water and Moisture	The device should not be used near water – for example, near bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc....
6. Ventilation	The device should be situated so that its location or position does not interfere with its proper ventilation. For example, the device should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
7. Heat	The device should be situated away from heat sources such as radiator, heat registers, stoves or other appliances (including amplifiers) that produce heat.
8. Power Sources	The device should be connected to a power supply only of the type described in the operating instructions or as marked on the device.
9. Grounding or Polarization	Precautions should be taken so that the grounding or polarization means of the device is not defeated.
10. Power Cord Protection	Power supply cords should be routed as they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the device.
11. Cleaning	The device should be cleaned only as recommended by the manufacturer.
12. Non-Use Periods	The power cord of the device should be unplugged from the out-let when left unused for a long period of time.
13. Object and Liquid Entry	Care should be taken so that objects do not fall and that liquids are not spilled into the enclosure through openings.
14. Damage Requiring Service	The device should be serviced by qualified service personnel when: A. The power-supply cord or the plug has been damaged; or B. Objects have fallen, or liquid has been spilled into the appliance; or C. The appliance has been exposed to rain; or D. The appliance does not appear to operate normally or exhibits marked change in performance; or E. The appliance has been dropped, or the enclosure damaged.
15. Servicing	The user should not attempt to service the device beyond that described in the operating instructions. All other service should be referred to qualified personnel.

FOR SERVICE INFORMATION AND PARTS

All Anaude products are manufactured under strict quality control. Each unit is carefully inspected and tested prior to shipment.

If, however, some adjustment or technical support becomes necessary, replacement parts are required, or technical questions arise, please contact your Anaude dealer or contact Anaude at :

Anaude SAS
48 Bis route de Trébeurden
22560 PLEUMEUR-BODOU
FRANCE

Phone : +33 6 64 93 83 84

Another part of Anaude's continuing technical support program for our products is the continuous revision of manuals as the equipment is improved or modified. In order for you to receive the information and support which is applicable to your equipment, and for the technical support program to function properly, please include the following information, most of which can be obtained from the Serial number label on the machine, in all correspondence with Anaude :

- Model Number :
- Serial Number :
- Date of Purchase :
- Name and address of the dealer where the machine was purchased :

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1. General description

1.1. Introduction

The TP-1000 is a tape player designed entirely with modern components. It benefits from the latest motor technology, using coreless motors for example, to achieve minimum wow and flutter. The tape player is equipped with a touch screen to provide a variety of functions to enhance the user experience.

Some of the new features built into the TP-1000 player :

- Automatic slow down and stop at the end or beginning of the tape, before the tape comes off the reel, allowing rewinds with automatic playback. Very useful when buying recorded tapes, as they come with the end of the music (Tail Out) on the outside of the reel, which means a complete rewind before the tape can be played.
- The player can be connected to an Internet box via the RJ45 network socket, so that the device can be controlled with a smartphone or tablet via Wifi, without having to install an application. A web server is integrated in the player.
- Possibility to update the player's internal firmware via the RJ45 network socket.
- Possibility to change the playback speed over the entire speed range with a step of 0.01 ips.

Important notes :

This player has been designed without a mechanical brake, which means that the reels rotate freely on the winding motors when the device is switched off. The first advantage is that when a tape is present and the unit is turned off, there is no tension on the tape. The second advantage is that in the event of a power failure, you can always rewind the tape manually.

The player must be switched on and powered up before a tape can be installed.

When the unit is switched off with a tape already installed and tensioned, when restarting the player will automatically rewind the tape to activate the scroll and playback functions.

Conventions within this manual :

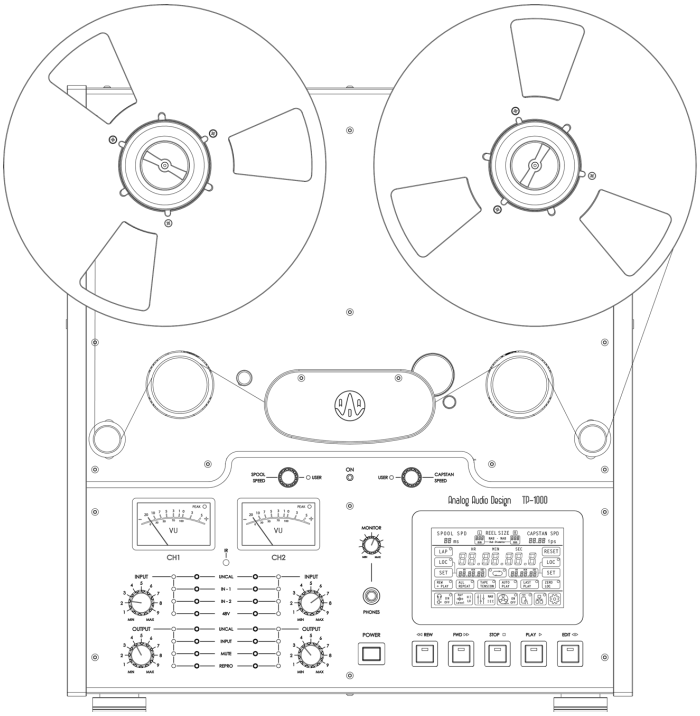
Capitalized words are used to designate a label, a button whose name is written on the player or on the touch screen, e.g. the PLAY button or the TAPE TENSION function on the touch screen.

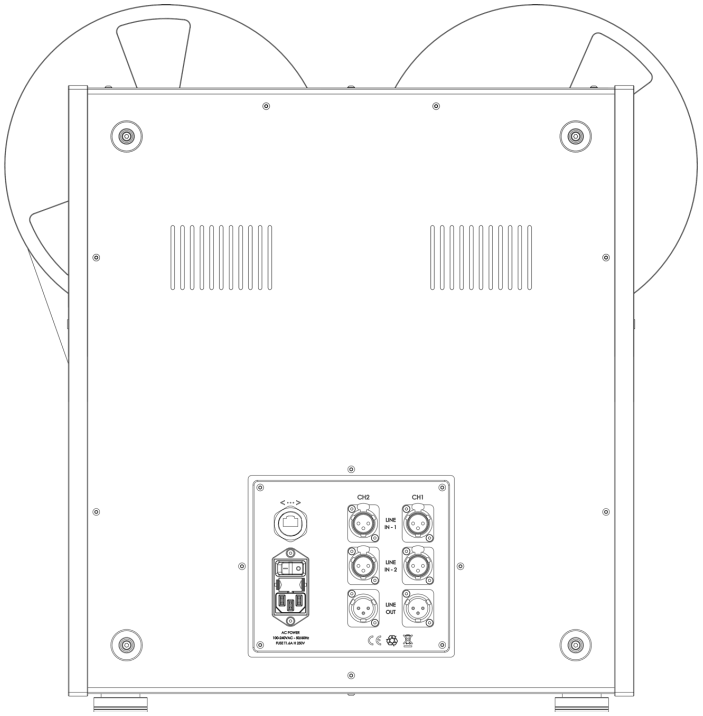
Words with a capital letter as the first letter usually designate a function or state of the machine, e.g. Play mode.

The symbol ✎ indicates a special remark to attract the user's attention.

The symbol ⚠ indicates mandatory information that the user must remember.

1.2. Overall front and rear view





2. Specifications

2.1. Mechanical specifications

Tape :	1/4 inch (6.35mm)
Track Format :	2-track. 2 channel (DIN 0.106 inch, 2.7mm)
Max. Reel Size :	11.8 inch (30 cm)
Tape Speed :	Switchable two speeds : 15 ips (38.1 cm/s) and 7.5 ips (19.05 cm/s)
Tape Speed Accuracy :	Within +/-0.05%
Pitch Control Range :	+/-100%, resolution of 0.01 ips
Wow and Flutter :	15 ips = <0.045% peak, weigthed (DIN 45507)
	7.5 ips = <0.090% peak, weigthed (DIN 45507)
Wind Speed :	Switchable three speeds = 2 m/s, 6 m/s, 10 m/s
Wind Speed Control :	1 m/s to 12 m/s, resolution of 1 m/s
Capstan Motor :	DC servo motor, belt drive
Reel Motor :	2x DC motor, belt drive
Dimensions (WxHxD) :	466mm x 519mm x 305mm
Weight :	61.73 lbs (28 kg)

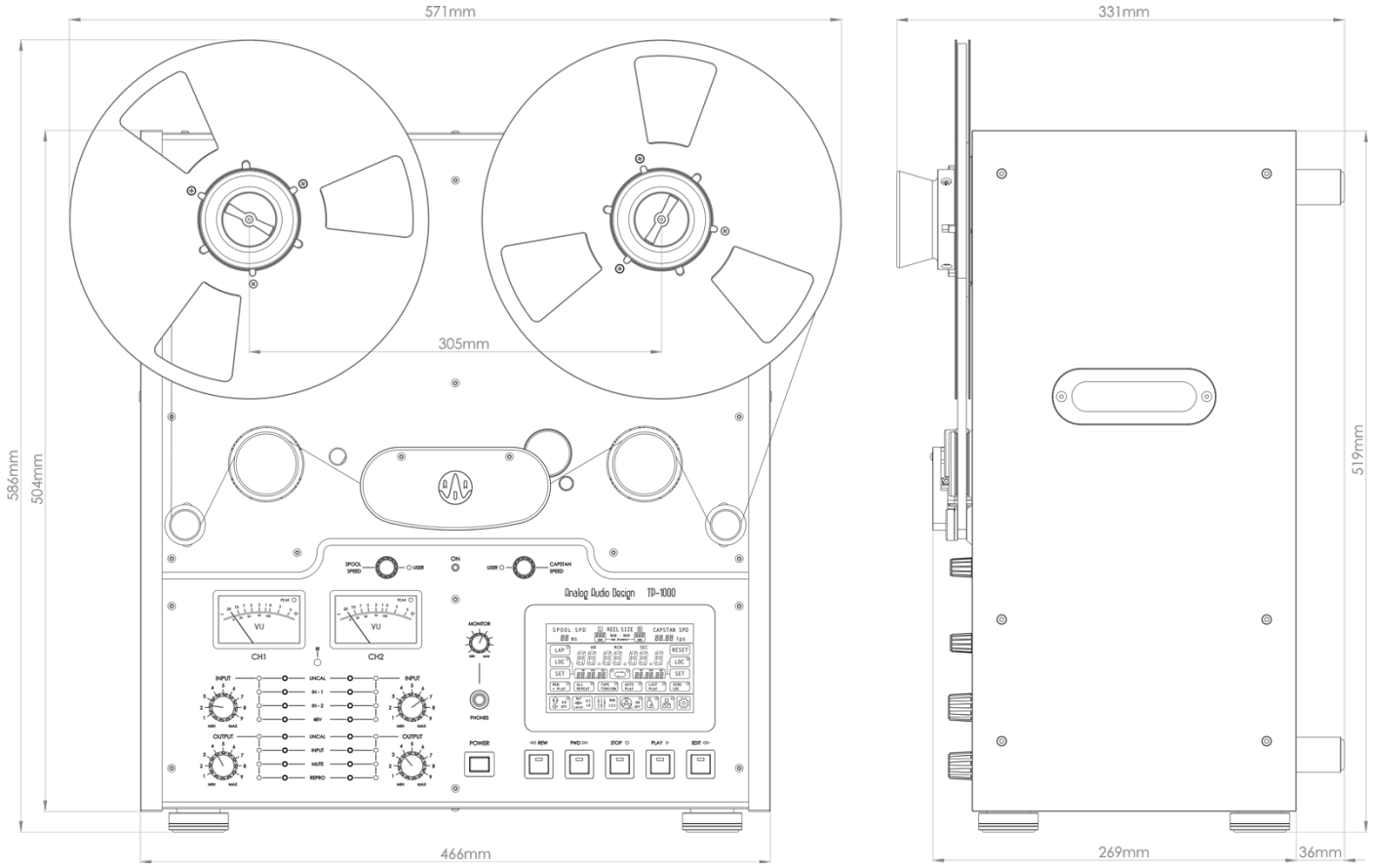
2.2. Electrical specifications

Power Supply :	Connector	= IEC 3-pole
	Voltage Range	= 90 to 264 VAC
	Frequency Range	= 47 to 63 Hz
	Power Consumption	= 40 W maximum
Input 1 :	Connector	= XLR
	Level, selectable	= Balanced : +4dBu (in CAL)
		Unbalanced : -10dBV (in CAL)
Input 2 :	Connector	= XLR (powered 48V)
	Level, selectable	= -60 dBV (in CAL)
		-40 dBV (in CAL)
Output :	Connector	= XLR
	Level, selectable	= Balanced : +4dBu (in CAL)
		Unbalanced : -10dBV (in CAL)
Headphone Output :	1.5 W maximum (8 ohm load)	
Ethernet :	RJ45 10/100Base-T for remote control and firmware update	
IR Input :	Infrared remote control (optional)	

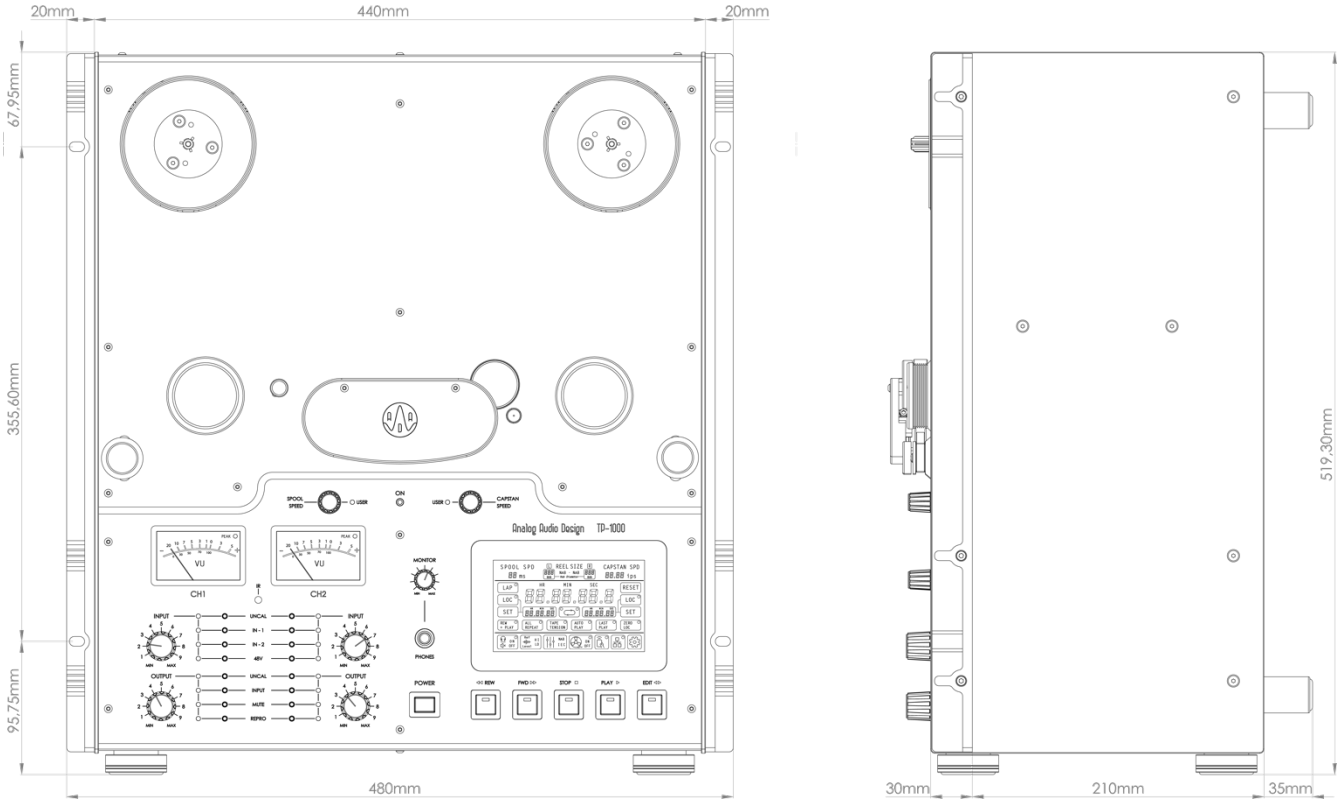
2.3. Audio specifications

Equalization :	NAB or IEC, switchable
Reproduce Record Level :	320 nWb/m or 514 nWb/m, switchable
Frequency Response :	15 ips = 30hz to 22kHz (+/-2 dB) at 0 VU
	7.5 ips = 30hz to 20kHz (+/-2 dB) at 0 VU
Signal-To-Noise Ratio :	(THD-N, in CAL) / A-Weighting
	15 ips = 71 dB / 78 dB
	7.5 ips = 70 dB / 77 dB
Distortion :	0.8% or less at 1kHz, 15 ips
Channel Crosstalk :	60 dB or more

2.4. External dimensions

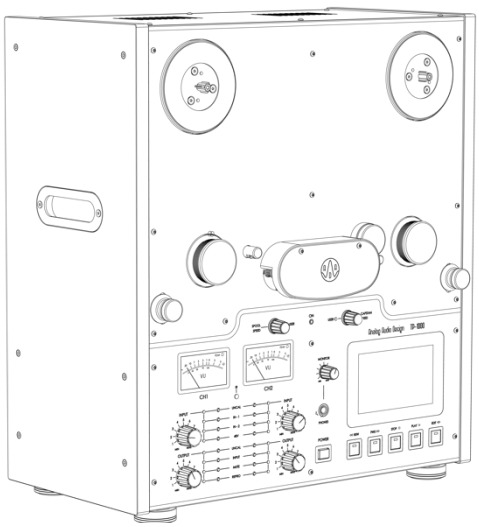


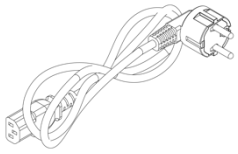
Dimensions with optional Rack 19" accessory kit :

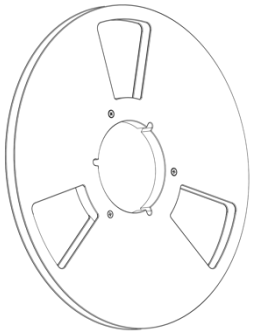


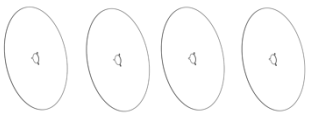
3.1. Unpacking and Inspection

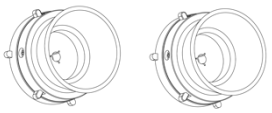
Contents of the packaging :

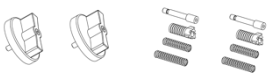


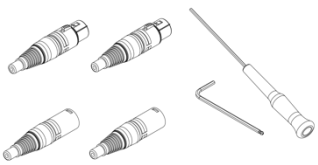






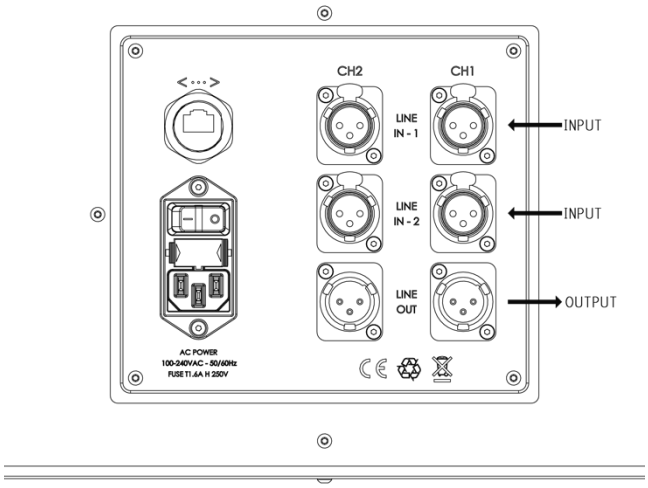






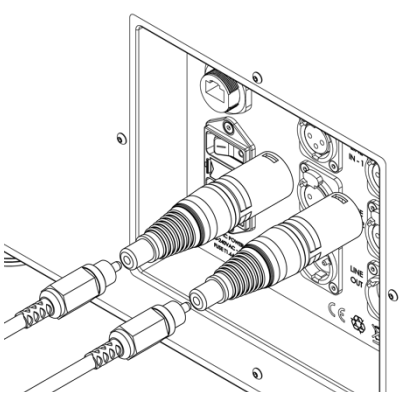
3.2. Audio Signal Connection

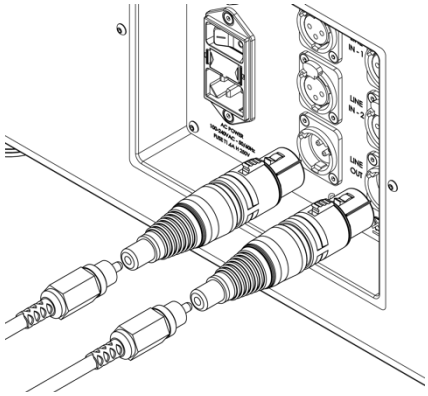
All audio inputs and outputs are transformerless and balanced, with the ability to select input and output gain via the audio interface on the touch screen (see section 4.2.) :



The LINE IN-1 input has an input impedance of 10k ohms, the LINE IN-2 input has an input impedance of 10k ohms and can be supplied with 48V to power, for example, a turntable pre-amp box. The LINE OUT has an output impedance of 50 ohms.

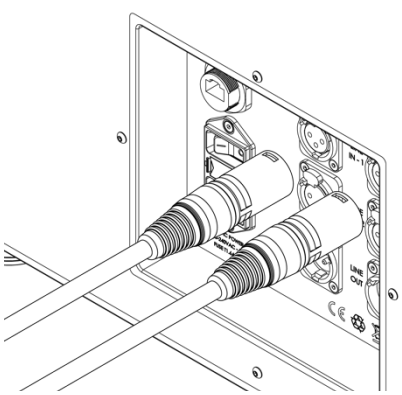
Two types of connections are possible at the input and output of the unit, either to a standard hi-fi system (-10dBV) in unbalanced mode with the adapters supplied :

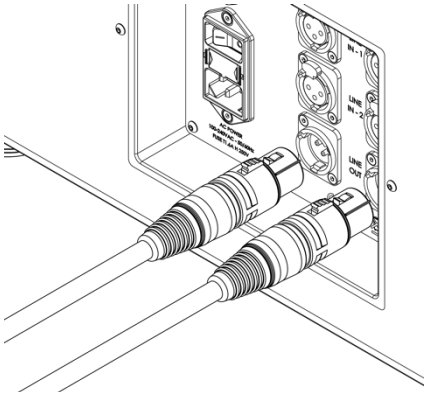




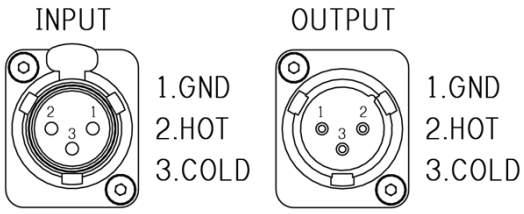
Be careful to choose the output gain -10dBV when you connect the device to a Hifi amplifier !

Either on a system with line inputs and outputs (+4dBu) in balanced mode :





XLR pin assignment :

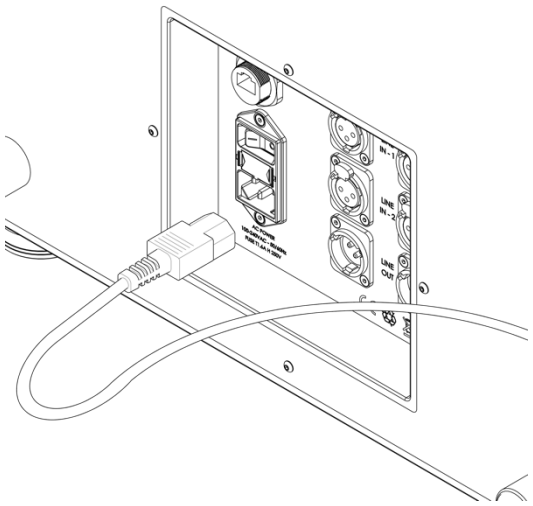


3.3. Power Connection

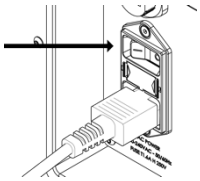
Confirm that the power voltage marked on the rear panel corresponds with the line voltage being used.

Turning on the machine :

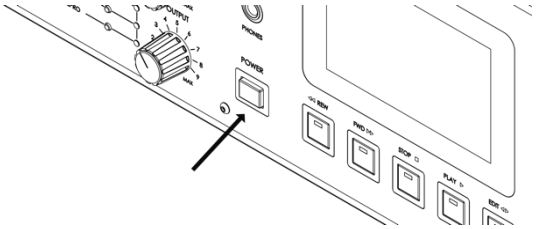
For power connection, use the included Power Cable. Connect the Power Cable plug to the power connector located at the rear of the machine. Make sure that the machine is turned off before connecting the other end of the power cable to the AC line outlet :



The machine is now ready to be turned on. Press the IEC socket switch on the back of the unit to turn on the device in standby mode, the green light indicates the presence of voltage :



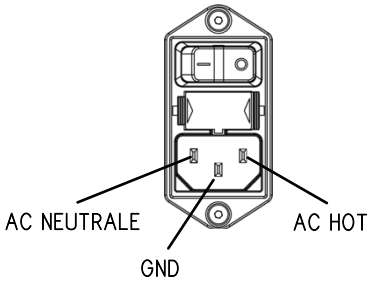
To turn on the unit, press the POWER button on the front panel :



After the unit is turned on, the VU meters, the ON indicator and the touch screen will light up.

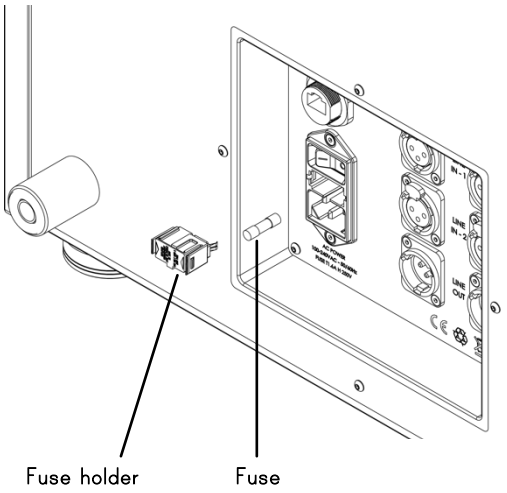
*Please **turn on** the unit first **before** the output devices.*
*Please **turn off** the device **after** the output devices first.*

IEC pin assignment :

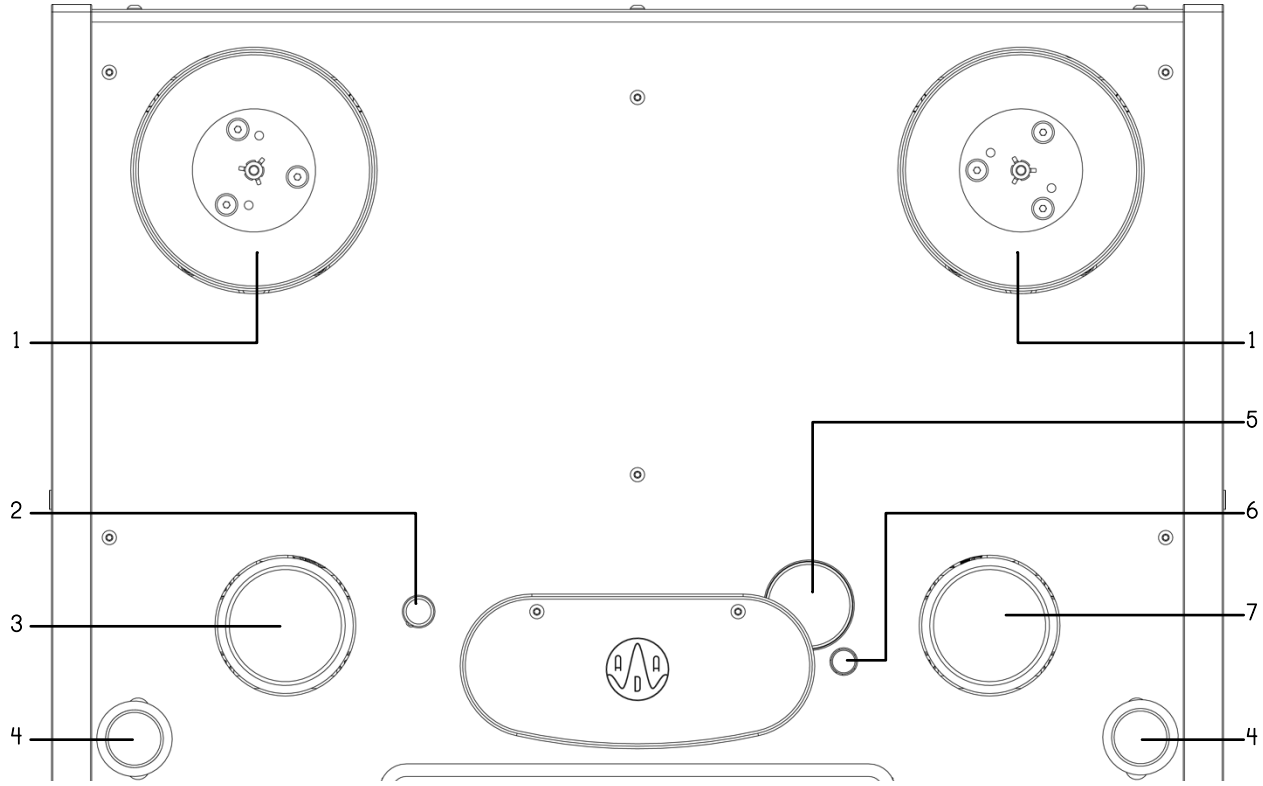


3.4. Fuse Replacement

To replace the fuse, first disconnect the mains cable, then remove the fuse holder, take out the defective fuse and replace it with a fuse of the same rating T1.6A H 250V :



4.1. Tape Transport



1. **Reel Table** — Accepts all types of 1/4" reels, trident, NAB, AEG, etc... The distance between the two brackets allows for the placement of 30 cm AEG trays.

   Please enter the center diameter of the empty coils to allow the machine to stop before the end.

2. **Detection of the leader tape** — Detects the leading tape of the tape to stop the run before the tape comes off the reel.

3. **Roller guide** — Correctly positions the tape along the transport.

4. **Tension arm** — The tension arm is provided with a safety switch which stops the transport when the tape becomes unthreaded from the reel or when too much slack develops in the tape path.

   Be careful not to apply too much pressure on the tension arm, as this may damage the strain gauges used to calculate the tension.

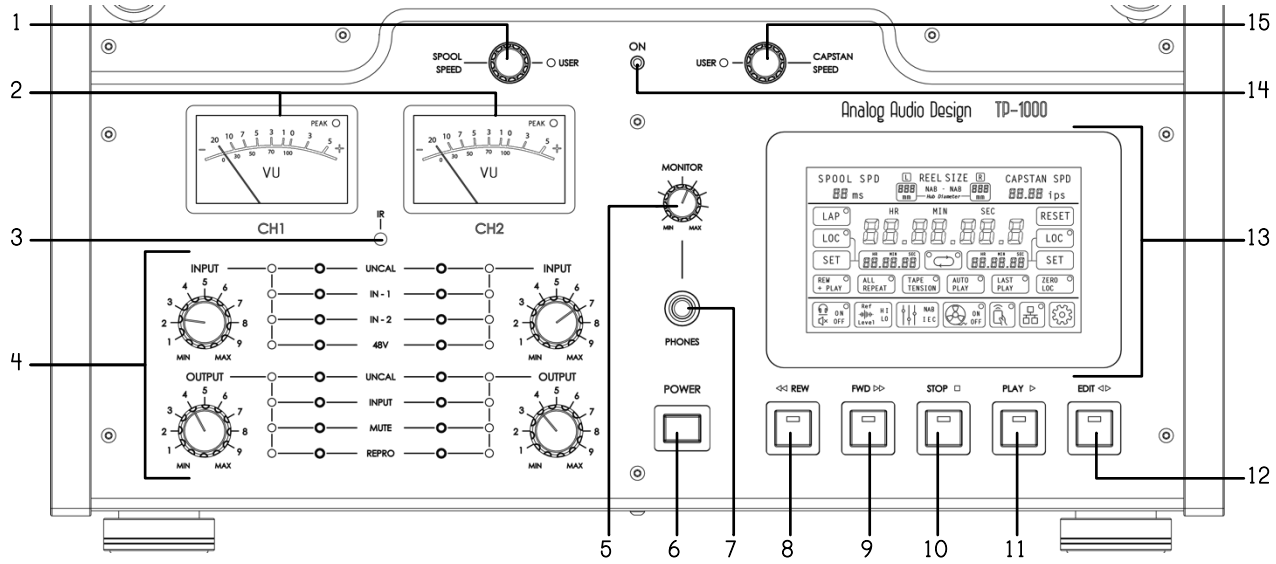
5. **Pinch Roller** — The tape is driven by the rotation of the Capstan Shaft against the Pinch Roller.

   Caution : never clean the pinch roller with a solvent, always use a damp lint-free cloth.

6. **Capstan Shaft** — The Capstan Shaft is driven by a DC servo motor which is controlled by a quartz crystal reference in a phase-locked-loop circuit.

7. **Tacho Roller** — The Tacho Roller is turned by tape motion and generates tacho pulses which are used for the calculation of tape time and recognition of the tape direction.

4.2. Front control panel



1. SPOOL SPEED knob

Allows you to select a rewind speed, 3 default speeds are available: 2 m/s (useful for tape archiving), 6 m/s (recommended for standard use) and 10 m/s. Pressing the button switches between USER mode and default mode. The USER mode allows to select a speed between 1 m/s and 12 m/s with a step of 1 m/s.

The rewinding is carried out with a constant tension on the tension rollers, which means that in some cases the required speed cannot be reached.

2. VU meters

The VU meters indicate the record and reproduce levels of the associated channels. The VU meters illuminate when the machine is turned on. Each VU meter has a PEAK level indicator which illuminates when the signal reaches a level equivalent to +3 dB.

3. IR receptor

Infrared receiver associated with the remote control (optional) which includes the main control functions of the unit.

4. INPUT/OUTPUT Level knobs

Selection and control area for the INPUT and OUTPUT levels of the device.

5. MONITOR level control

Adjust the listening level of the headphones plugged into PHONES jack.

6. POWER switch

On/Off switch for powering up the unit.

7. PHONES jack

Allows the connection of stereo headphones, 6.35mm jack type, the input impedance is 8 ohms.

Inserting the headphone jack can mute the audio output of the unit, selectable on the touch screen.

8. REW button

Pressing this button places the transport into Rewind mode, in which the tape moves from the Take-up reel to the Supply reel at Fast Wind speed.

9. FWD button

Pressing this button places the transport into Fast Forward mode, in which the tape moves from the Supply reel to the Take-up reel at Fast Wind speed.

10. STOP button

Pressing this button when the transport is in Play, Dump Edit, Fast Forward or Rewind mode causes the tape motion to stop.

11. **PLAY button**

Pressing this button when the transport is in Stop mode enters the tape into Play mode, in which the tape is reproduced at the currently selected tape speed.

12. **EDIT button**

Pressing this button puts the player in EDIT mode, allowing you to manually search for the beginning of a song. The audio output is activated.

13. **Touch screen**

Touch panel for control and display of meters.

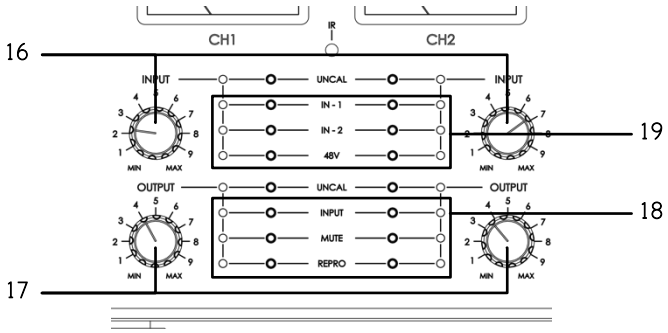
14. **Indicator ON**

This light indicates that the power is on.

When the light is off, the power supply remains in standby mode (0.5W consumption). To switch off the power supply completely, the switch on the back of the device must be operated.

15. **CAPSTAN SPEED knob**

Selects the playback speed, 2 default speeds are available: 15 ips and 7.5 ips, a third speed is available 30 ips optionally on some devices. Pressing the button switches between USER mode and default mode. The USER mode allows you to select a speed between 1 ips and 16 ips with a step of 0.01 ips.



16. **Input level control**

Allows to choose the level of the CH1 and CH2 channel inputs separately. Active only when the UNCAL mode is activated, in which case the corresponding green LED lights up.

17. **Output level control**

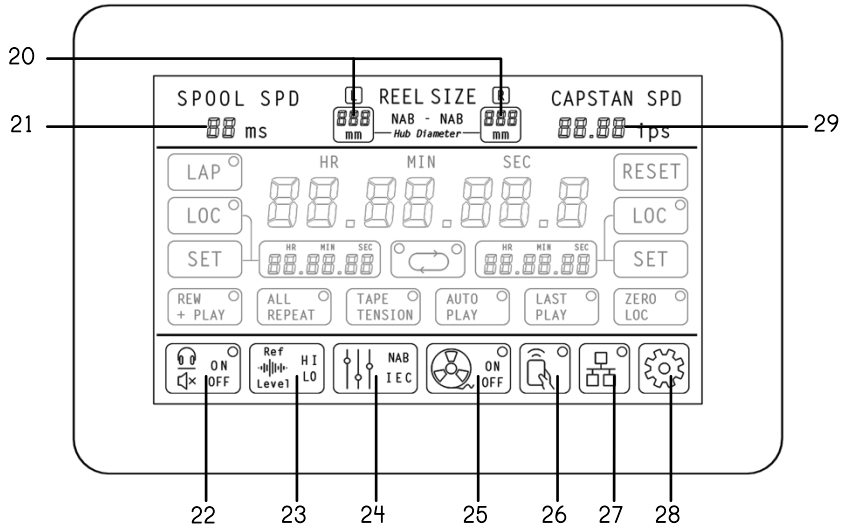
Allows you to choose the level of the CH1 and CH2 channel outputs separately. Active only when the UNCAL mode is activated, in which case the corresponding green LED lights up.

18. **Output selectors**

Pressing INPUT allows you to listen to the selected input, in which case the corresponding VU meter indicates the input level. Pressing MUTE mutes the corresponding output. Pressing REPRO allows you to listen to the recorded tape.

19. **Input selectors**

Pressing IN-1 or IN-2 selects the input to be listened to. Pressing 48V will power the IN-2 input.



20. Internal diameter of the reel

Allows you to select the internal diameter of the installed reels, tells the unit when to slow down the fast running at the end of the tape in REW and FWD modes.

Reel		*Diameter*
3" et 5"	*(small hub)*	*44mm*
7"	*(small hub)*	*60mm*
5"	*(medium hub)*	*68mm*
5"	*(large hub)*	*90mm*
7" DIN	*(large hub)*	*100mm*
10.5" NAB		*114mm*

21. Fast Wind speed

Displays the selected Fast Wind speed setpoint.

22. Automatic MUTE

Selects the automatic MUTE option when a headphone jack is inserted. The red LED indicates that headphones are connected.

23. Reference level

Selects the recording reference level of the installed tape. HI corresponds to a level of 514 nWb/m, LO corresponds to a level of 320 nWb/m. Refer to the recording specifications on the description sheet of the purchased tape.

24. EQ

Allows you to choose the equalization curve of the installed tape: NAB or IEC. Refer to the recording characteristics indicated on the description sheet of the purchased tape.

25. Leader Tape

Allows you to tell the unit whether or not to detect the leader tape at the beginning or end of the tape in order to stop the playback automatically. However, if the magnetic portion of the tape is detected as a leader, disabling this mode allows the tape to be played without detection. The red light indicates the presence of the leader tape.

26. Remote Control

Indicates when an action is requested via the IR remote control (optional) or via control through the Ethernet link with a smartphone or other. When a smartphone is connected to the unit, the red LED is lit solid. When a command is sent via the IR, the LED flashes with each command received.

27. Ethernet link

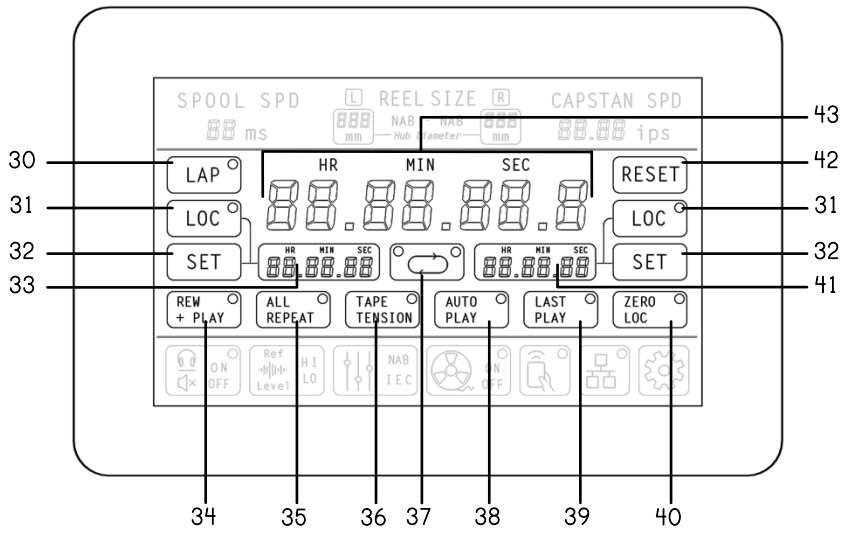
Indicates when external software is connected to the unit via the Ethernet link.

28. Settings page

Allows you to switch between the different settings pages.

29. Playback speed

Displays the selected playback speed setpoint.



30. Secondary counter

Separate secondary counter, not linked to the main counter, is activated when the red LED is on. Allows to position itself at a position independently from the origin of the tape.

31. LOC function

Move the tape to the stored position. The red LED flashes while the tape is running until the required position is reached.

32. SET function

Stores the current position in the counter.

33. Memory counter

Displays the position stored with the SET function. Two positions are stored depending on the status of the LAP function.

34. REW + PLAY function

Pressing this button will rewind the tape to the beginning and playback will start automatically when the beginning is reached. The red LED flashes during the whole rewind process.

The main counter is reset to zero when playback is started immediately after the start of the tape.

35. ALL REPEAT function

When the function is activated, the red LED is lit. At the end of the playback, when the tape is detected, the unit rewinds the tape to the beginning to start the playback again.

36. TAPE TENSION function

Indicates whether the tape is taut to allow access to all tape transport functions. The LED is lit when the device is ready. Pressing this button will cause the unit to automatically tension the tape.

37. Loop function

Allows looping between the two stored positions. The LED indicates the stop counter.

38. AUTO PLAY function

When the function is activated, the red LED is lit. At the end of all REW or FWD fast wind operations, playback is started automatically. The red LED flashes during fast wind operation.

39. LAST PLAY function

Tells the unit to return to the last position where playback was started. The red LED flashes during the fast wind operation.

40. ZERO LOC function

Pressing this key places the machine into Search Zero mode. In Search Zero mode the tape is moved at Fast Wind speed to the location of 00:00:00.0 and is then stopped.

41. Memory counter

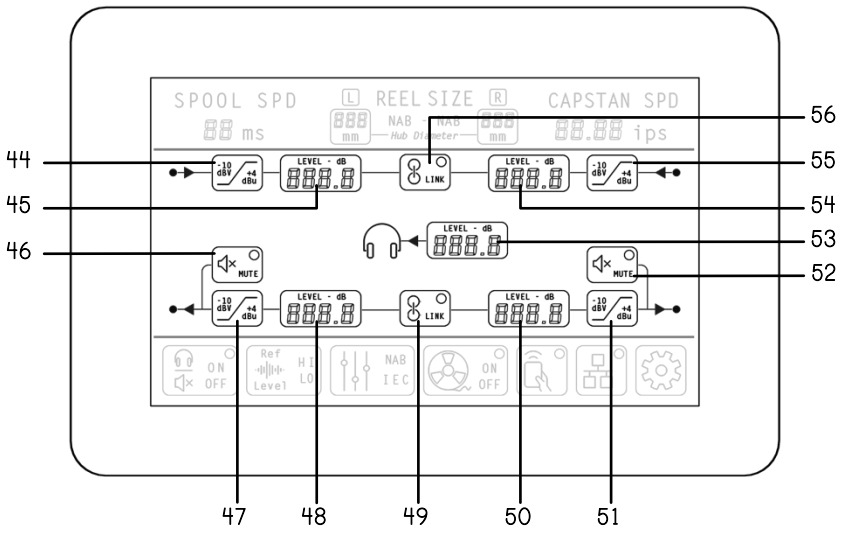
Displays the position stored with the SET function.

42. RESET function

The first press resets the main counter to zero, the second press resets the memory counters to zero.

43. Tape Time Display

This 7-digit display shows the tape time.



44. IN-1 CH1 gain selector

Indicates the gain of the IN-1 input : -10 dBV when connecting a HIFI type device, +4 dBu for a Studio type line output.

45. Input level IN-1 CH1

Displays the IN-1 input level. The value is greyed out at zero when the UNCALL function is disabled.

46. MUTE OUT CH1 function

Pressing this button switches the corresponding output, it is coupled with the MUTE button. The red LED indicates the status of the MUTE.

47. Gain selector OUT CH1

Indicates the output gain OUT : -10 dBV when connecting the unit to the input of a HIFI type device, +4 dBu when connecting the unit to a Studio type line input.

48. Output level OUT CH1

Displays the OUT output level. The value is greyed out at zero when the UNCALL function is disabled.

49. LINK OUT function

Indicates that the OUT output values are linked when the UNCALL function is activated. The LED indicates the LINK status. When the LINK is active, the output level value is the middle value of the two potentiometer positions.

50. Output level OUT CH2

Displays the OUT output level. The value is greyed out at zero when the UNCALL function is disabled.

51. Gain selector OUT CH2

Indicates the output gain OUT : -10 dBV when connecting the unit to the input of a HIFI type device, +4 dBu when connecting the unit to a Studio type line input.

52. MUTE OUT CH2 function

Pressing this button switches the corresponding output, it is coupled with the MUTE button. The red LED indicates the status of the MUTE.

53. Headphone output level

Displays the headphone output level. The value is greyed out when there are no headphones connected.

54. Input level IN-1 CH2

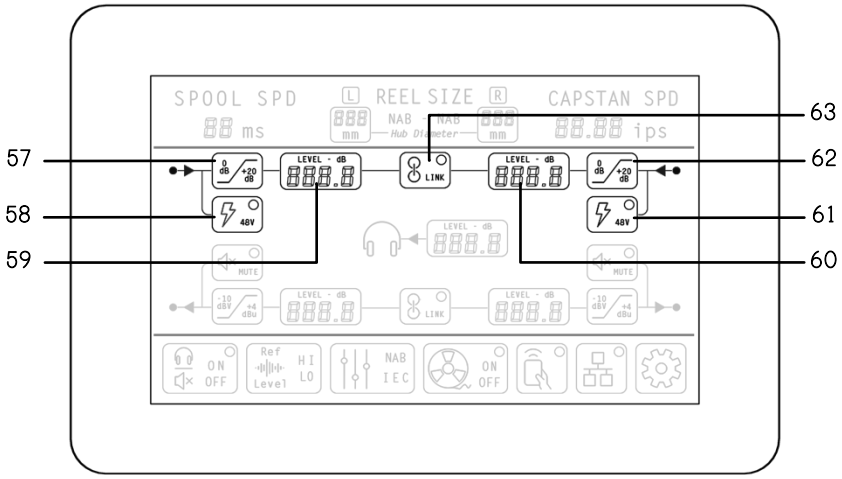
Displays the IN-1 input level. The value is greyed out at zero when the UNCALL function is disabled.

55. IN-1 CH2 gain selector

Indicates the gain of the IN-1 input : -10 dBV when connecting a HIFI type device, +4 dBu for a Studio type line output.

56. LINK IN function

Indicates that the IN input values are linked when the UNCALL function is activated. The LED indicates the LINK status. When the LINK is active, the input level value is the middle value of the two potentiometer positions.



57. IN-2 CH1 gain selector

Indicates the gain of the IN-2 input : 0 dB, or +20 dB.

58. 48V IN-2 CH1 power supply

Pressing this button provides 48V to the IN-2 input for use with a self-powered phono preamp, for example. The red LED is lit when 48V is present.

59. Input level IN-2 CH1

Displays the IN-2 input level. The value is greyed out at zero when the UNCALL function is disabled.

60. Input level IN-2 CH2

Displays the IN-2 input level. The value is greyed out at zero when the UNCALL function is disabled.

61. 48V IN-2 CH2 power supply

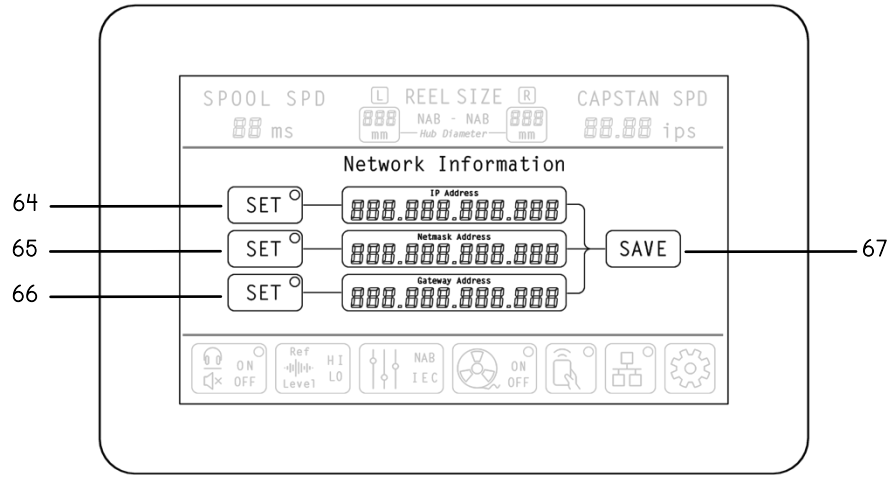
Pressing this button provides 48V to the IN-2 input for use with a self-powered phono preamp, for example. The red LED is lit when 48V is present.

62. IN-2 CH2 gain selector

Indicates the gain of the IN-2 input : 0 dB, or +20 dB.

63. LINK IN function

Indicates that the IN input values are linked when the UNCALL function is activated. The LED indicates the LINK status. When the LINK is active, the output level value is the middle value of the two potentiometer positions.



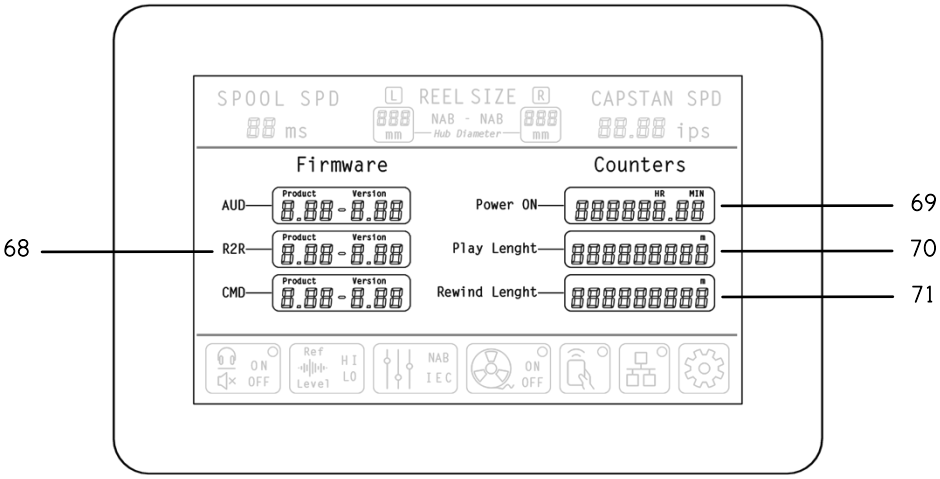
64. **Setting the IP address** — Pressing the SET button gives access to the editing of the IP address. Pressing the SET button again, when it is active, exits the edition.

65. **Setting the netmask address** — Pressing the SET button gives access to the netmask address edition. Pressing the SET button again, when it is active, exits the edition.

66. **Setting the gateway address** — Pressing the SET button gives access to the gateway edition. Pressing the SET button again, when it is active, exits the editing mode.

67. **Backup of network settings.** — Pressing the SAVE button saves the new network settings. The button becomes active when a change is made. The machine must be turned off for the new settings to become active.

The values are changed with the SPOOL SPD and CAPSTAN SPD rotary switches. The USER leds flash during editing. The SPOOL SPD rotary switch selects the block to be edited, the CAPSTAN SPD rotary switch changes the value.



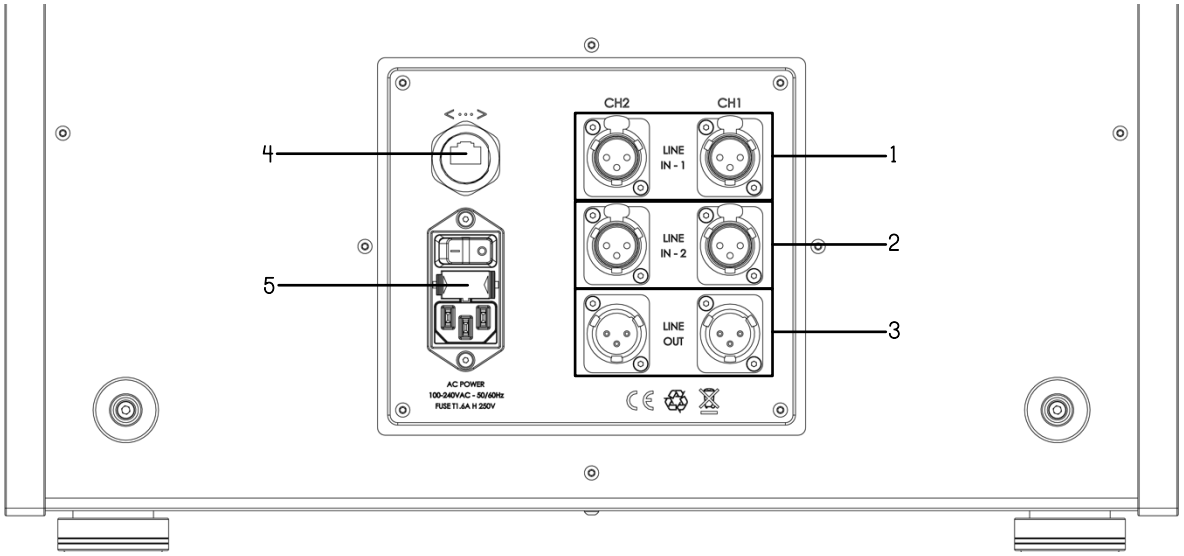
68. **Firmware version** — Lists the versions of the 3 embedded firmwares. AUD manages the audio part, R2R manages the tape transport part, CMD manages the user control part.

69. **Switch-on time** — Machine switch-on time counter.

70. **Tape length in PLAY mode** — Tape length counter read in PLAY mode.

71. **Length of tape on rewind** — Tape length counter in fast find mode operation.

4.3. Rear connection panel



1. **LINE IN-1 CH1 and CH2 inputs**

Balanced XLR line inputs, transformerless, two types of connections are possible, either via a standard hifi system (-10dBV) in unbalanced mode with the adapters supplied, or as a line input (+4dBu) in balanced mode. The input gain is selectable via the touch screen.

2. **LINE IN-2 CH1 and CH2 inputs**

Balanced XLR line inputs, transformerless, two types of connections are possible, balanced or unbalanced, gain selectable from 0db or +20db via the touch screen. Can supply 48V to power, for example, a turntable pre-amp box.

This input is a microphone type, allowing to connect sources with a very low level.

3. **LINE OUT CH1 and CH2 outputs**

Balanced XLR line output, transformerless, two types of connection are possible, either to a standard hifi system (-10dBV) in unbalanced mode with the adapters supplied, or to a line output (+4dBu) in balanced mode. The output gain is selectable via the touch screen.

Be careful to choose the output gain -10dBV when you connect the device to a Hifi amplifier !

4. **Ethernet network socket**

RJ45 socket for connecting the device to an internet box. Allows, when the box has a Wifi network, to remote control the device with a smartphone.

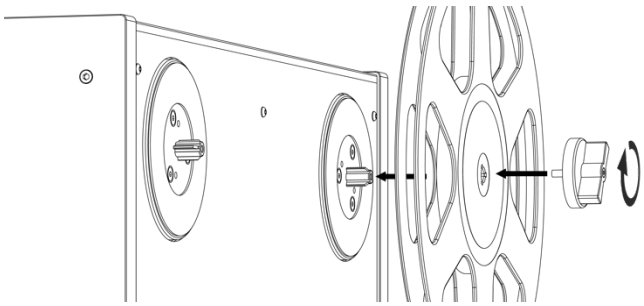
5. **Power supply socket**

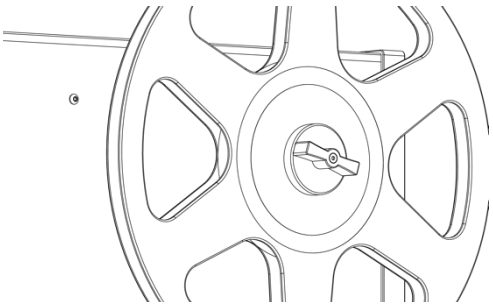
IEC socket for connecting the unit in the mains supply.

5.1. Placing Reels on the machine

Installation of a reel with a central Reel Spindle :

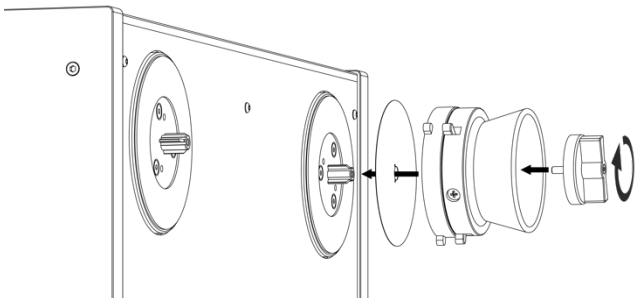
Position the reel on the Reel Table, then screw the locking head clockwise. No need to tighten it, a moderate pressure is sufficient :

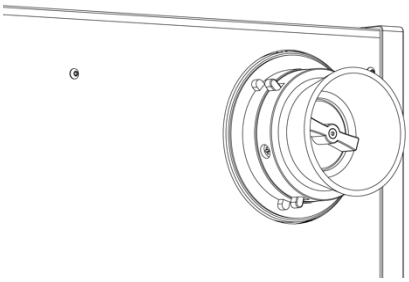




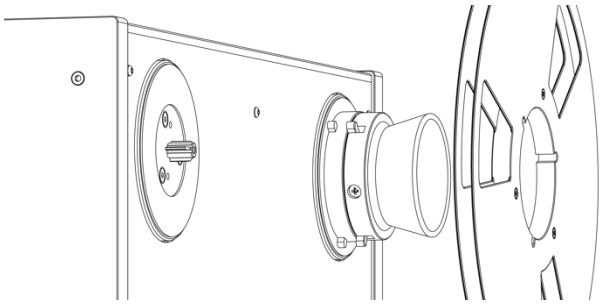
Installation of a reel with a NAB Hub Reels :

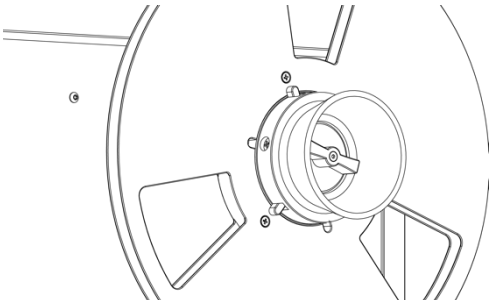
First, install the NAB (supplied), adding, if necessary, a spacer (supplied) between the NAB and the Reel Table to shift the assembly to center the tape on the reel, then screw the locking head clockwise. There is no need to tighten it, a moderate pressure is sufficient :





Prepare the NAB by aligning the two markings face to face, then install the reel and lock it by turning the NAB head to the detent :

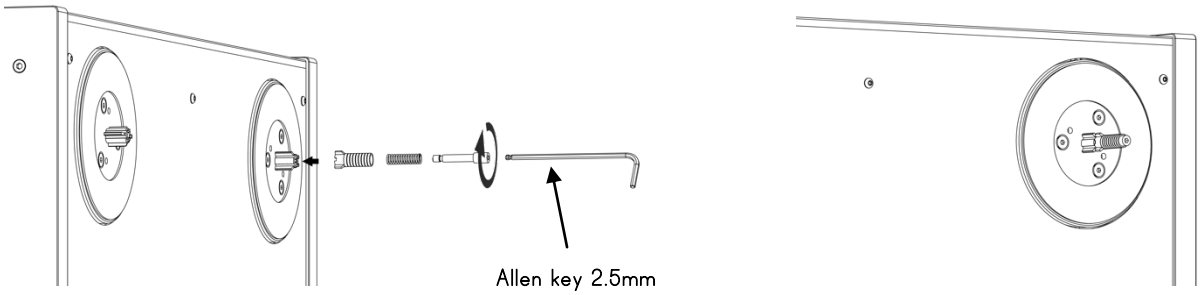




Please always switch on the machine when installing the reels in order to benefit from the mechanical brake.

Attaching the trident quick-release clip :

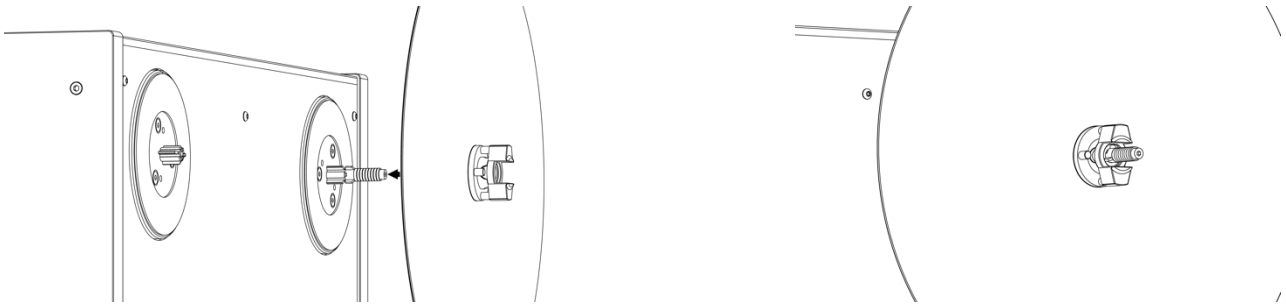
The trident quick-release clip replaces the fastener with the locking head and is supplied with two types of spring : a 25 mm long spring and a 30 mm long spring. The 30 mm spring will be used by default to hold the tapes securely, while the 25 mm spring will be used for AEG type plate :



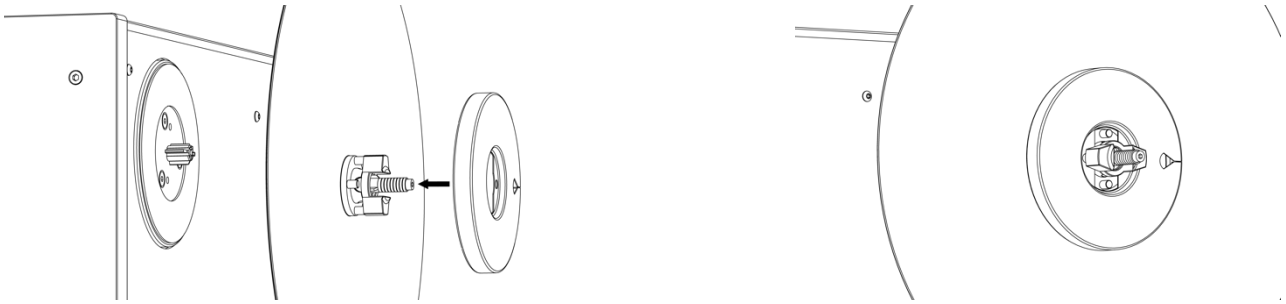
Always remove the trident quick-release before putting the TP-1000 back in its transport case, otherwise the Reel Table may be damaged.

Installation of an AEG type plate :

First install the trident quick release with the 25mm spring. Place the AEG plate on the support, pull on the trident quick-release to lock the AEG hub locking mechanism :



Prepare the hub by aligning its opening with the locking mechanism, then turn the locking mechanism a quarter turn :

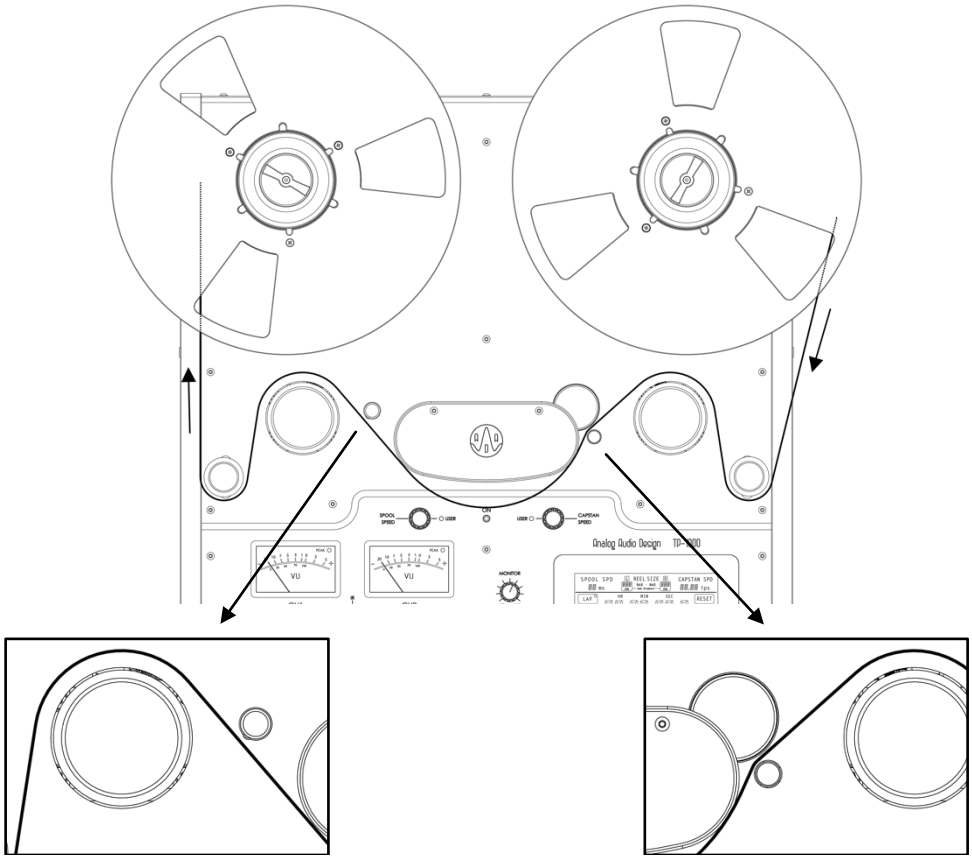


Although it is possible to use AEG platters in the vertical position, it is preferable to tilt the TP-1000. To do this, you can purchase the 19' kit (see page 44) and place the TP-1000 on a trolley with the option of tilting it.

5.2. Threading the Tape

Threading of the tape between the two reels :

Place the tape along the path indicated below, paying particular attention to the sensor of the leader tape and the axis of the capstan :



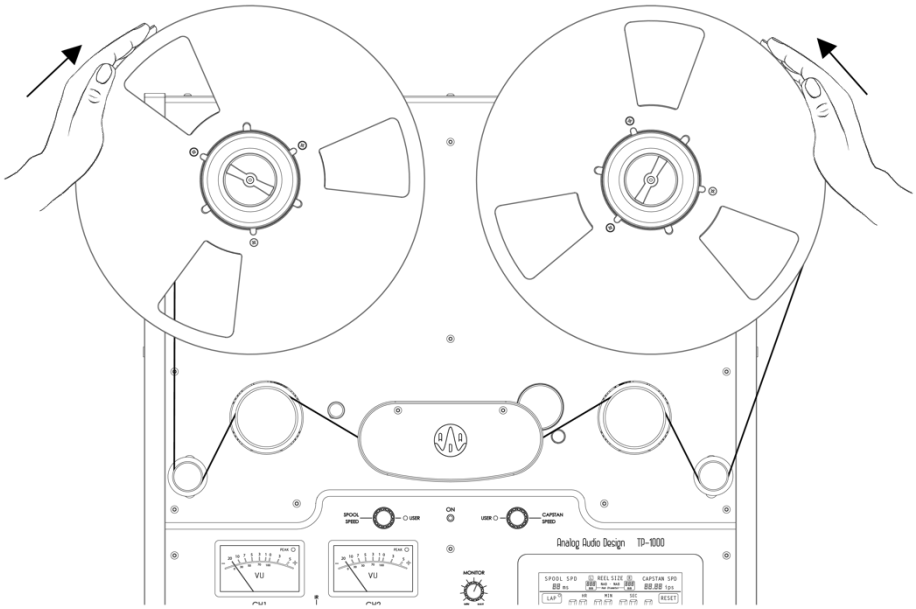
Although the machine allows the use of all types of reels of different diameters on the right or left side, it is preferable to use the same two types of reels.

Remember to tune the correct internal diameter of the reel on the touch screen when placing a reel of different internal diameter (see page 18 item 20, for the selection of the diameter)

Tape tension :

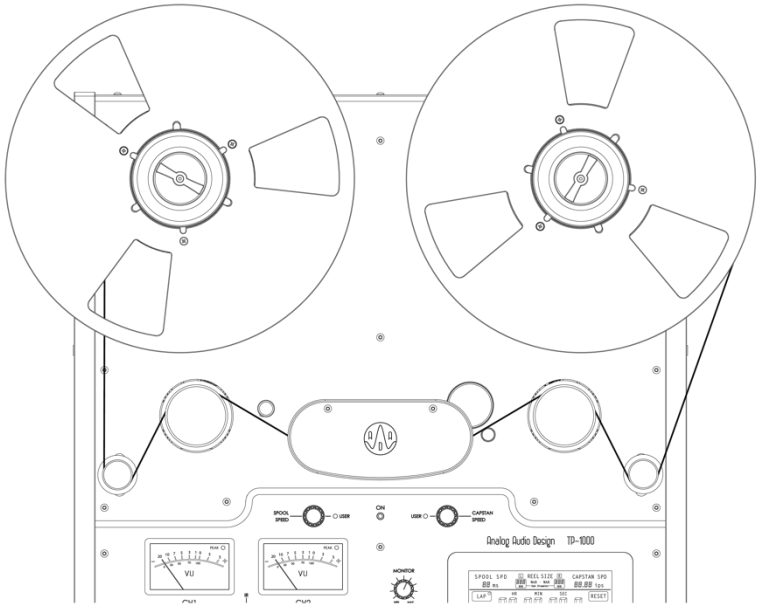
There are two methods of tensioning the tape between the two reels to put the unit into transport mode. The unit is in transport mode when the touch screen displays the main counter in red and activates all transport related functions, conversely, when the counter is grey the transport related functions are grey or disabled.

The first method is to apply a slight tension on the tape by holding both reels by hand until the main counter is red, the red LED of the TAPE TENSION button lights up, then simply release the reels :



Alternatively, only the empty reel can be held in the hand to apply the tension.

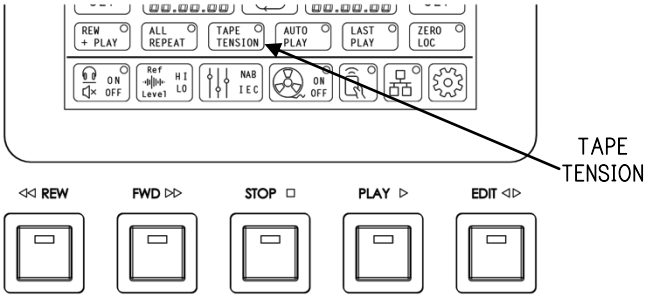
The second method consists only in tensioning the tape slightly, once released, press the TAPE TENSION button on the touch screen, the device will tension the tape by itself, once the process is finished, the main counter will be displayed in red, the red LED of the TAPE TENION button will light up (see page 19 item 36, to locate the button on the touch screen) :



Be careful not to apply too much pressure on the tension arms, as this may damage the strain gauges used to calculate the tension.

Tape tension when the unit is switched on :

If the device is switched off with the tape in tension, i.e. when the main counter is displayed in red, the LED of the TAPE TENSION button is lit, the device memorizes this state.



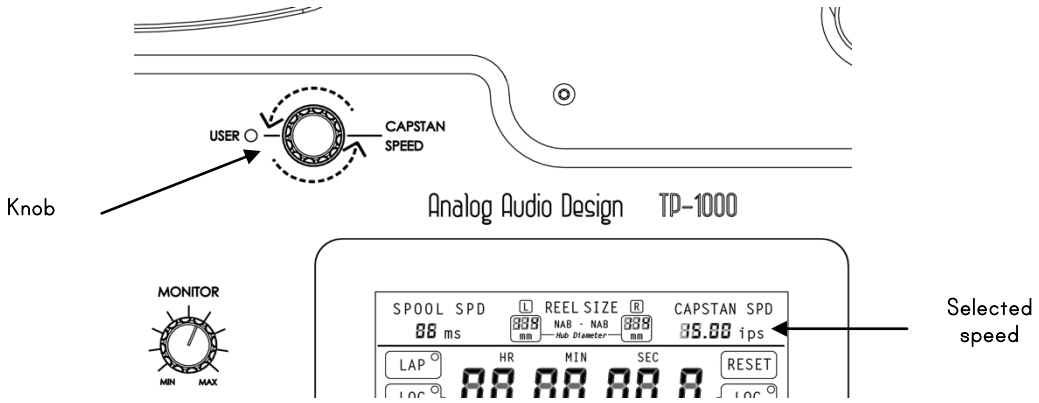
When the unit is turned on again, the TAPE TENSION function is automatically activated to re-tension the tape to enable all transport-related functions.

Be careful not to touch the moving reels, keep your hands away from any moving parts. Do not press the POWER button when the tape is moving: always press STOP before turning off the unit.

5.3. Playing Back the Tracks

Choice of playback speed :

Before starting to playback your tape, please check the tape jacket for the speed at which it should be played, then select this speed using the CAPSTAN SPEED knob if the speed displayed on the touch screen is different :

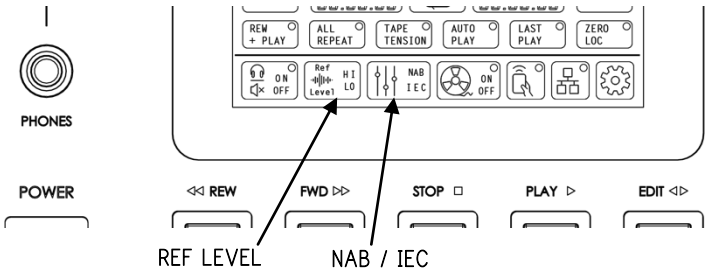


The choice of speed can also be made during playback.

Press the knob to switch to USER mode, the LED lights up red, in this mode you can choose the speed with a step of 0.01 ips. Pressing the knob again switches back to the default mode, in this case the speed of the USER mode is rounded to the nearest default speed.

Choice of EQ curve and reference level :

As a rule, the tape jacket indicates the equalisation with which the tape was recorded and also the recording level. Please press the REF LEVEL and NAB/IEC functions in accordance with the written information :



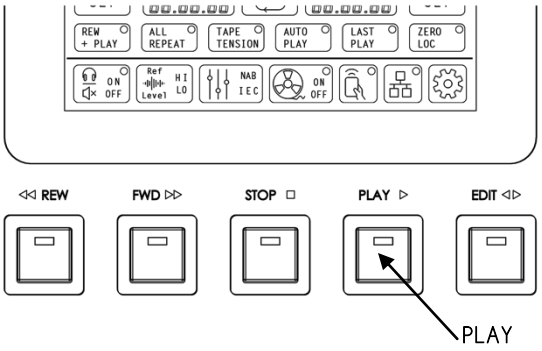
Level REF LEVEL = HI corresponds to a recording level of 514 nWb/m, which means that a signal recorded at 0 dB on tape will be output at 0 dB if the UNCAL output function is disabled. REF LEVEL = LO corresponds to a recording level of 320 nWb/m.

The reference level and EQ settings are stored and restored when the unit is switched on again.

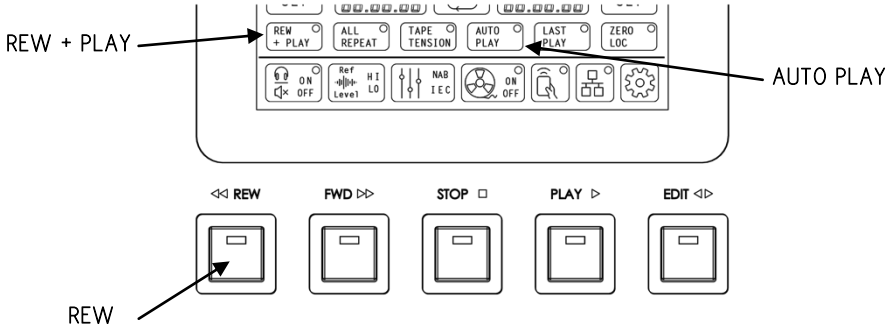
Playing Back the tracks :

Once the tape is installed and tensioned, the main counter is displayed in red, two cases are possible :

1. When the empty reel is on the right-hand reel, pressing the PLAY button will play the tape :

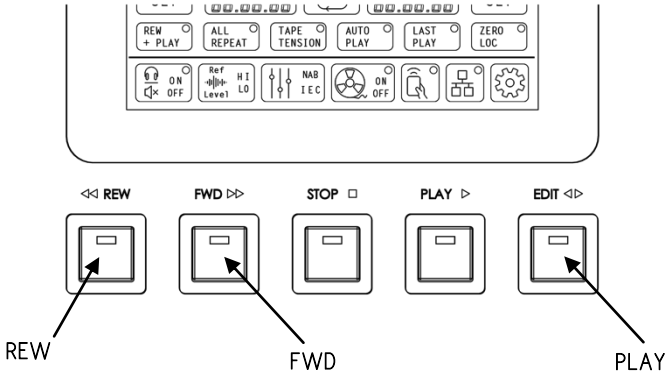


2. When the empty reel is on the left reel, you must rewind to the beginning before you can play the tape by pressing the REW button and then pressing PLAY. However, you can also ask the unit to do this automatically by pressing the REW + PLAY button or engage the AUTO PLAY mode to indicate that at the end of the rewind operation the unit will start PLAY automatically :



Activating EDIT mode :

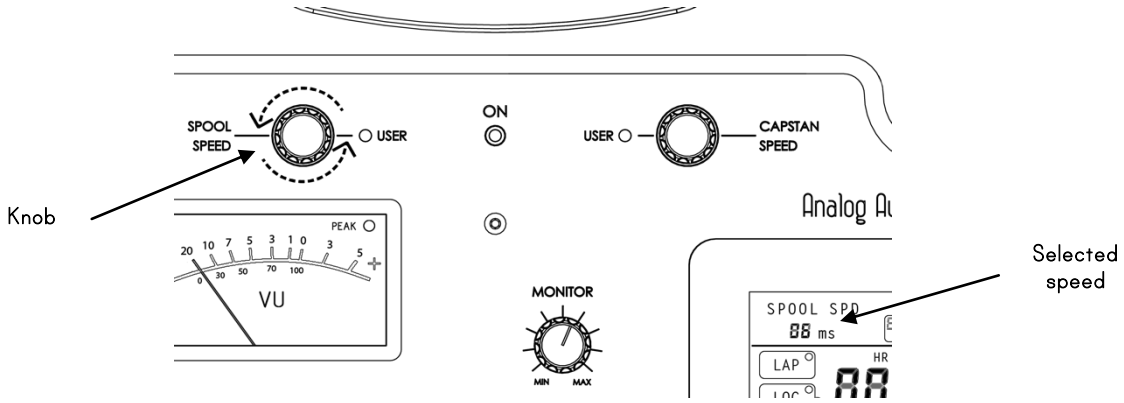
Once the tape is installed and tensioned, the main meter is displayed in red, pressing the EDIT button allows the tape to be scrolled at low speed to search for an audio track. During this mode the audio output and the magnetic head are active. The REW and FWD buttons are used to advance or rewind the tape, the STOP button is used to exit the EDIT mode :



5.4. Fast Wind Mode Operation

Choice of speed for Fast Wind mode :

You can choose the Fast Wind speed with the SPOOL SPEED knob, the current speed is displayed on the touch screen :



The choice of speed can also be made during the fast wind process.

Pressing the knob switch switches to USER mode, the LED lights up red, in this mode the speed can be selected in steps of 1 m/s. Pressing the knob again switches back to the default mode, in this case the speed in USER mode is rounded up to the nearest default speed.

The recommended speed is 6 m/s. If you wish to store or archive your tapes, the choice of 2 m/s speed allows for more regular tape windings.

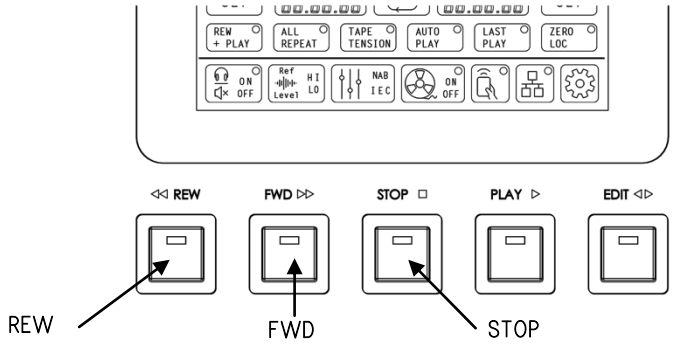
When listening to a tape with the end of the music on the outside of the reel (tail out), there is no need to rewind the tape for archiving, the playback of the tape allows a smooth rewind.

Fast Wind Mode Operation :

Once the tape is installed and tensioned, the main counter is displayed in red, two cases are possible:

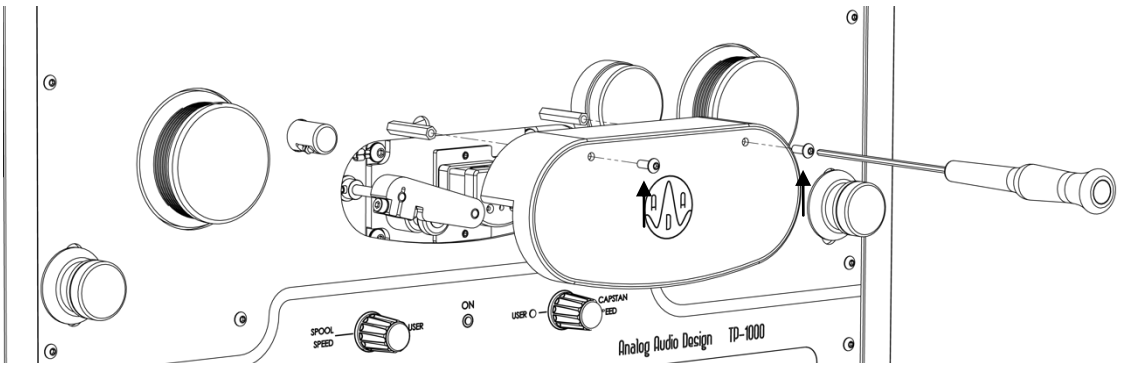
1. Pressing REW returns to the beginning of the tape,
2. Pressing FWD will advance the tape to the end,

Pressing STOP stops the fast wind mode operation :

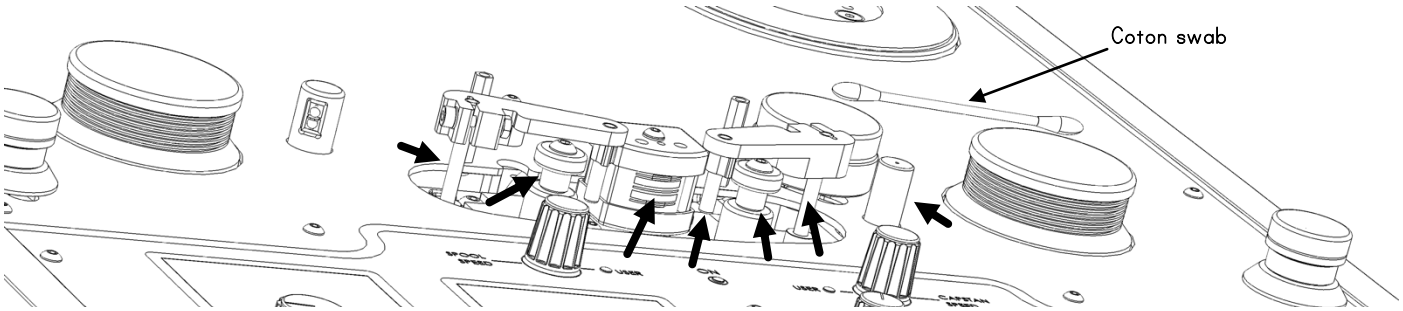


6.1. Cleaning the Tape Path

Before cleaning the head unit, please first switch off the device, remove both reels and then remove the head unit cover by unscrewing the two cover screws with the supplied 2mm hexagon screwdriver :

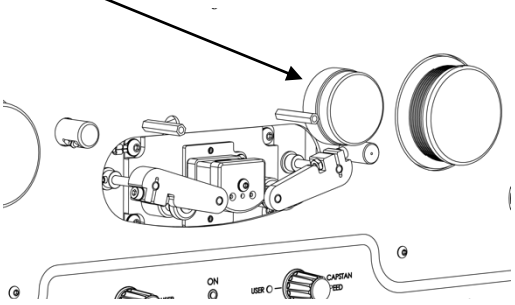


Using a cotton swab soaked in isopropyl alcohol or equivalent you can clean the areas in contact with the tape :



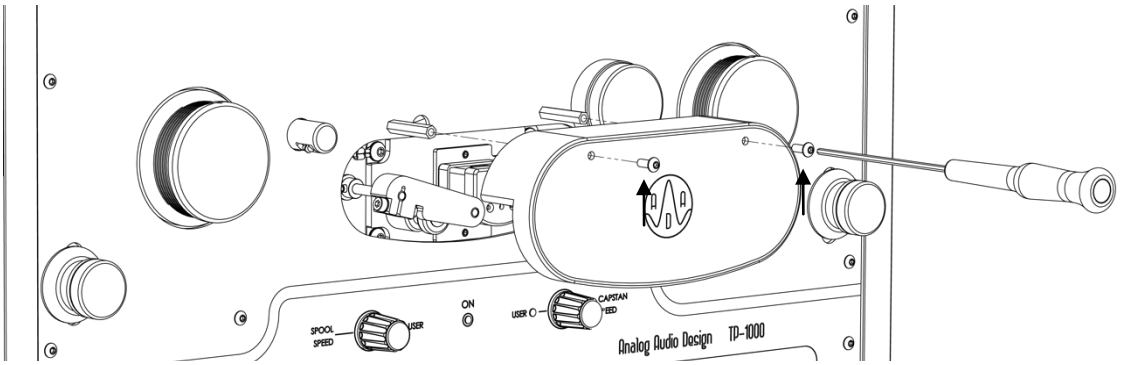
Once the areas have been cleaned, replace the head unit cover.

Caution : never clean the pinch roller with a solvent, always use a damp lint-free cloth.



6.2. Demagnetizing

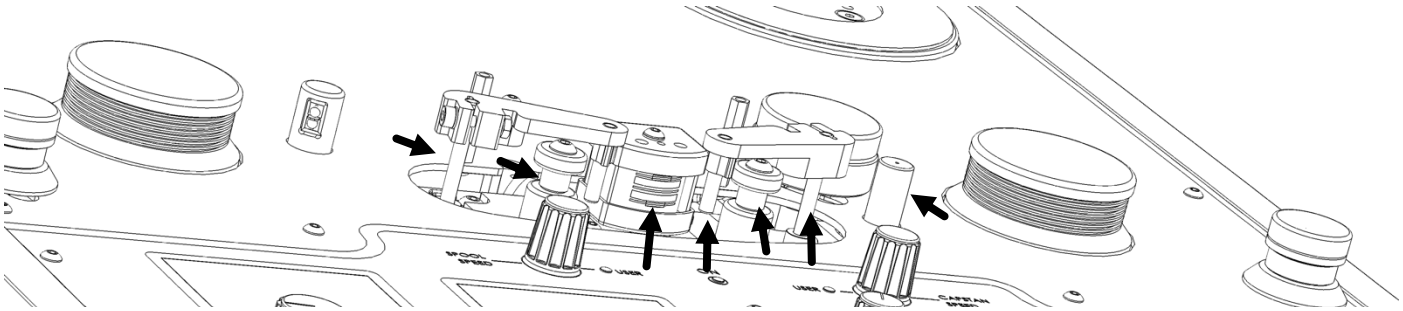
Demagnetizing (sometimes called degaussing, although that term is more often applied to bulk tape erasure) is a necessary procedure and should be performed approximately every 100 hours of playback. Demagnetizing should always be carried out with extreme caution. Before demagnetizing the head unit, please first switch off the unit, remove both reels and then remove the head unit cover by unscrewing the two cover screws with the supplied 2mm hexagon screwdriver :



Please note that the device must be switched off before demagnetizing !

Never turn the power to the demagnetizer on or off unless it is at least 1 meter (3 feet) away from the unit. When the demagnetizer is turned on or off, an extremely strong moving magnetic field is created which could possibly place a permanent magnetic charge on parts of the machine. The demagnetizer would not be powerful enough to remove these charges under normal circumstances, and the parts might have to be removed and discarded. Use only a demagnetizer with high flux density; inexpensive "Hi-Fi" type demagnetizers can leave residual fields that will cause more harm than benefit.

Turn on the demagnetizer at least 1 meter (3 feet) away from the unit, slowly move the demagnetizer towards the indicated metal areas until the tip is approximately 3 mm (1/8") from the area. Slowly move the demagnetizer tip up and down the area so that the entire surface is exposed to the demagnetizing field. Do not touch any part of the device with the demagnetizer :

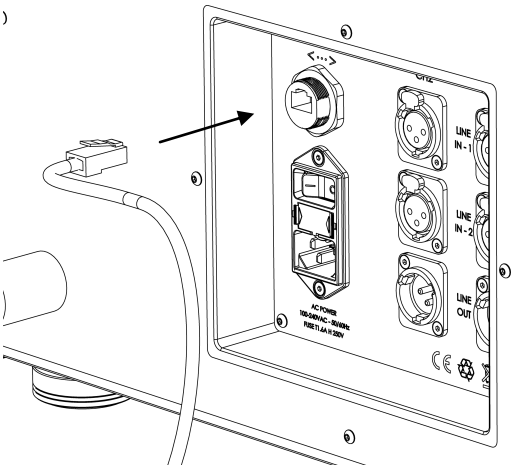


Before moving the demagnetizer to another metal area, slowly move the demagnetizer more than 1 meter (3 feet) away from the area and repeat the procedure for each area moving from left to right. At the end of the procedure, slowly move the degausser more than 1 meter away and then turn it off and replace the head unit cover.

7. Firmware update

7.1. Connecting the TP-1000 to the Ethernet network

To update the TP-1000 firmware, you need to connect an RJ45 CAT5 Ethernet cable to the port on the rear of the machine :

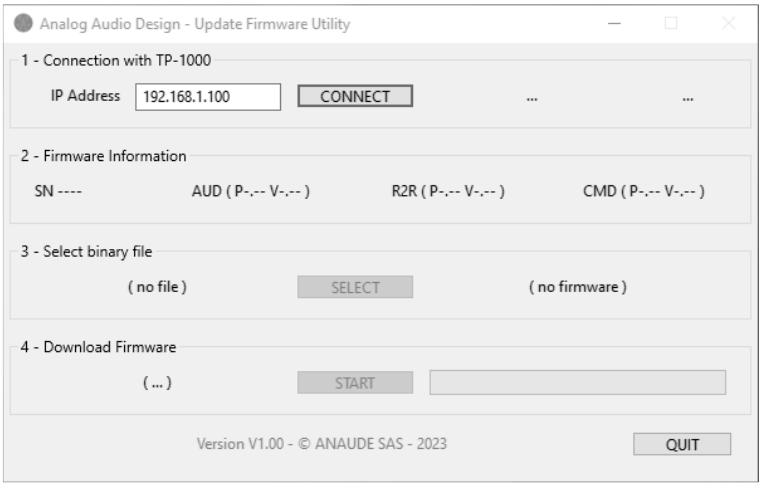


The TP-1000 must be connected to a SWITCH-type box. Do not use a simple HUB box; this box must also be connected to your computer with an Ethernet cable.

The TP-1000 must be switched on with the cable connected to an active Ethernet network, otherwise the connection between the TP-1000 and the computer will not be established.

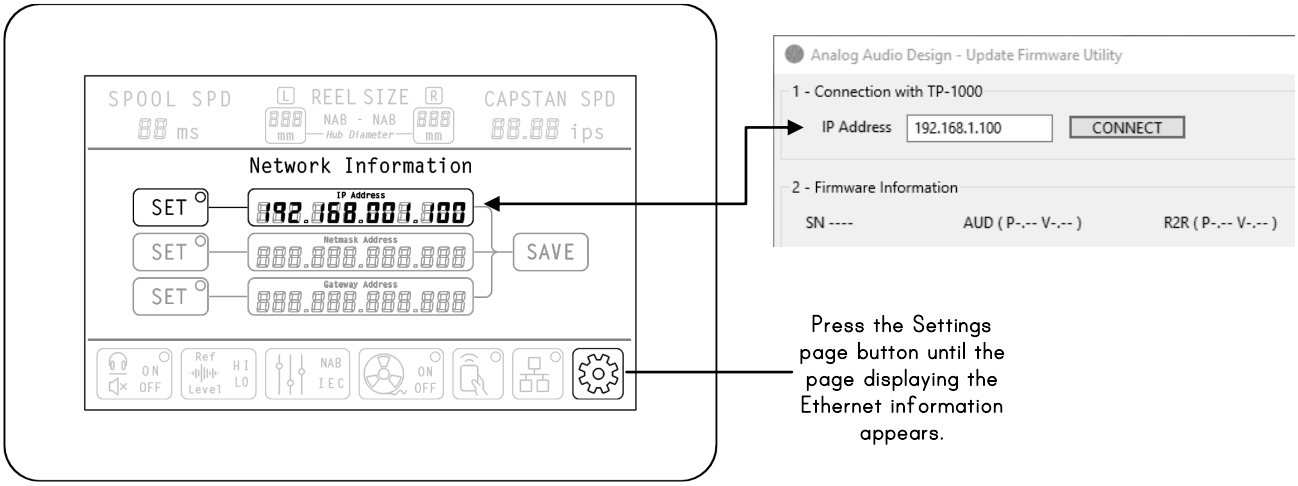
7.2. Launching the update program

To launch the update program, click on the **AAD_FW_Utility.app** file on an Apple computer, or on **AAD_FW_Utility.exe** on a Windows computer :



IP address verification :

To enable communication between the TP-1000 and the software, you need to check that the IP address is the same on both sides. To do this, switch the TP-1000 screen to the page displaying Ethernet network information :

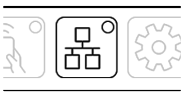


If the Ethernet IP address is different, change the IP address on the TP-1000 or on the update software. To change the IP address on the TP-1000, follow the instructions on page 22.

1. Connection with TP-1000 :

To establish communication with the TP-1000, click on the CONNECT button, the button is renamed DISCONNECT and the screen looks like this :

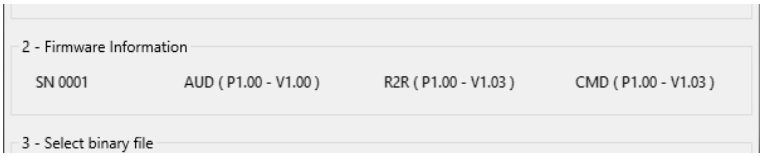
And the Ethernet icon LED on the TP-1000 touchscreen is lit :



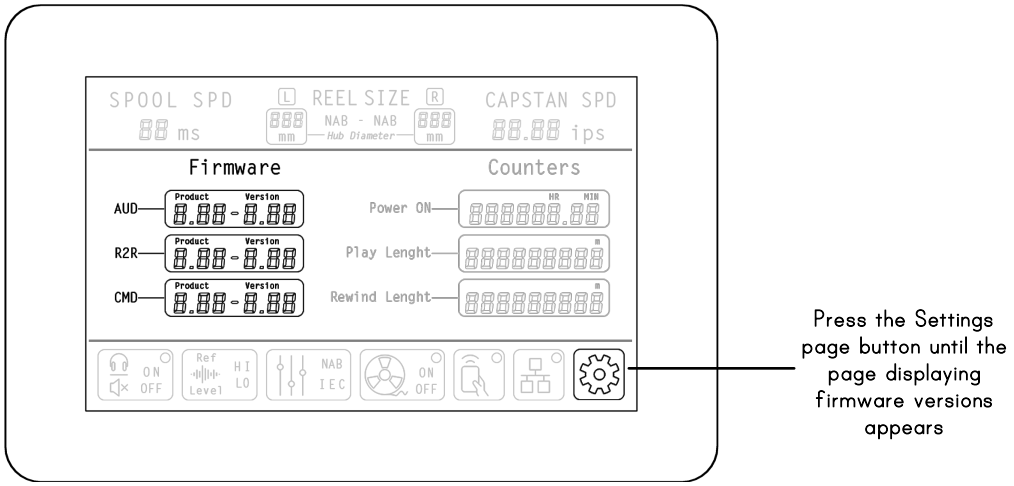
2. Firmware information :

The TP-1000 comes with three firmwares : one for managing the AUD (Audio) card, one for managing the R2R (Tape Transport) card and one for managing the CMD card (Management of the interface between the TP-1000 and the user).

TP-1000 on-board firmware information is displayed as follows :

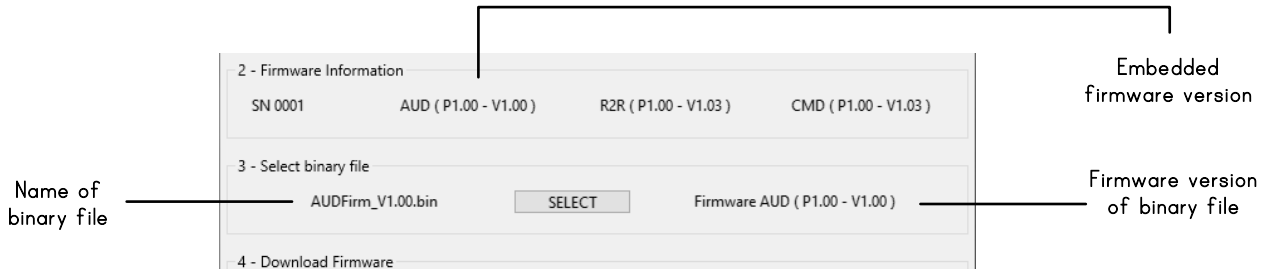


This information can also be found on the TP-1000's touch screen :



3. Select binary file :

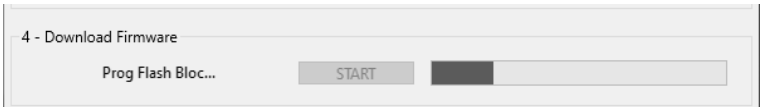
Click on SELECT to select the firmware binary file to be updated, and a window will open for you to select the correct file :



If the versions of the embedded firmware and the binary file are identical, there is no need to reload it.

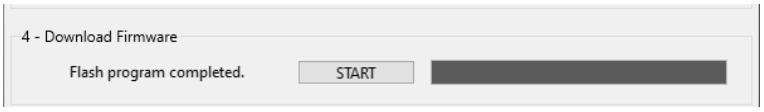
4. Download firmware :

Click START to initiate firmware download to the TP-1000. During download, the progress bar indicates the state of download :



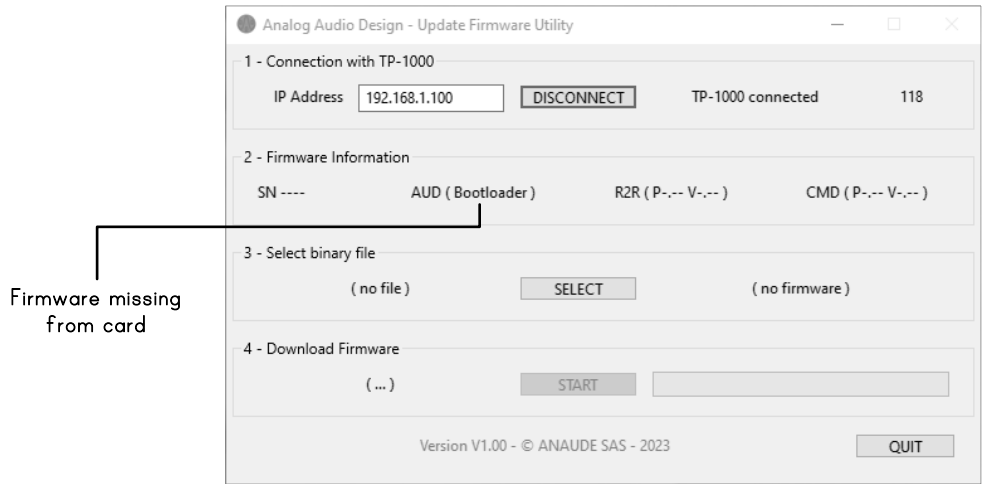
Be careful not to switch off the TP-1000 while the firmware is being loaded, and ensure that the power supply is stable and free of micro-cuts, otherwise the machine may break down, requiring a return to the factory to restart it.

When the download is complete, you can choose another firmware or quit the program :



7.3. Special case of a fault during updating

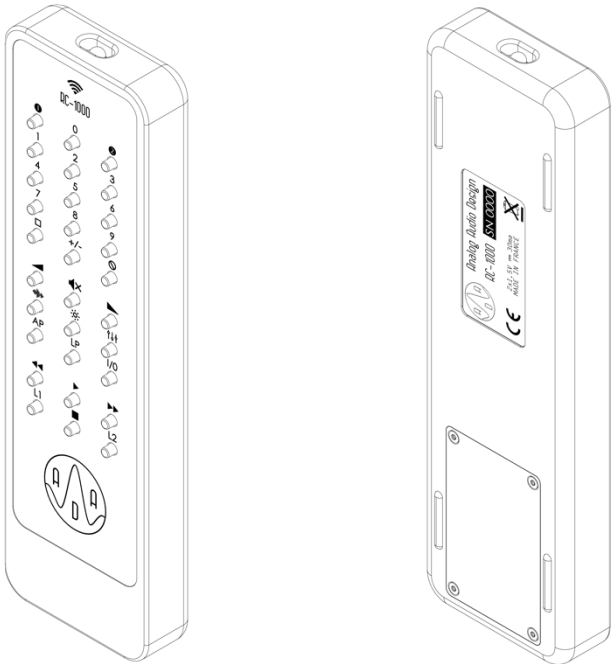
If, during firmware loading, a connection is lost or some other problem occurs which prevents the download from being completed, when the TP-1000 is reconnected the screen will look like this :



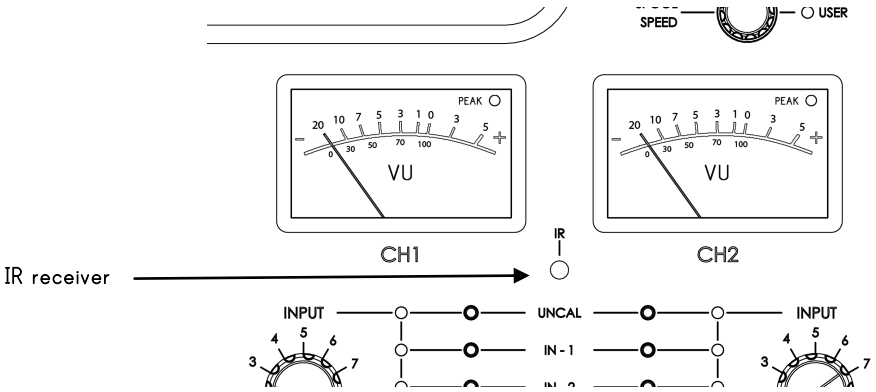
The Bootloader status indicates that firmware is missing from one of the boards. In this case, you need to load the binary file for the board in question, in order to restore normal operation of the TP-1000.

8.1. Introduction

The TP-1000 can be controlled by an RC-1000 remote control (item code ART-N0-0004) :



The TP-1000's IR receiver is located in the middle at the base of the two VU meters :



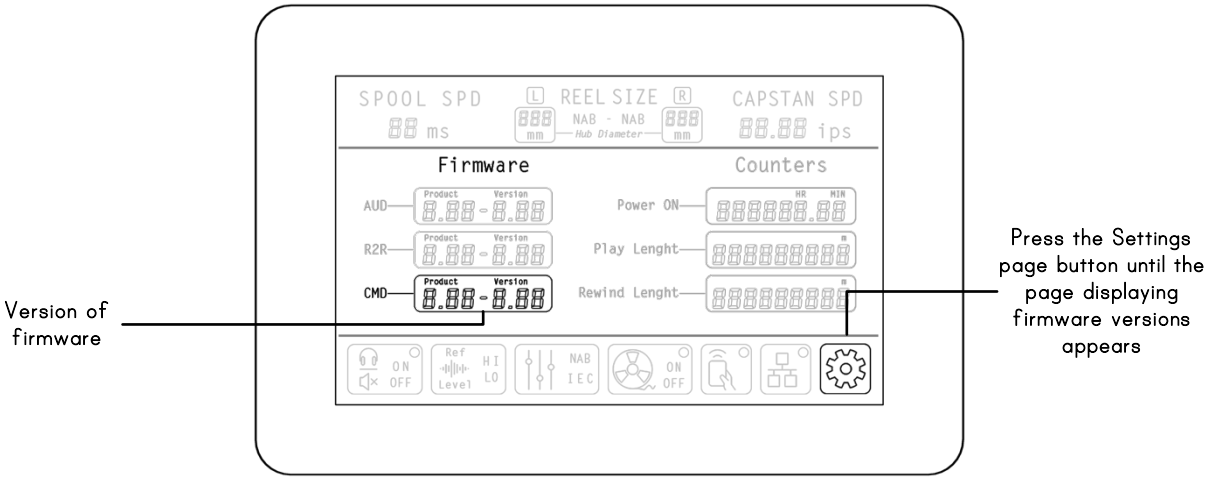
To ensure optimum operation of the remote control, remove any obstacles between the remote control's IR transmitter and the TP-1000's IR receiver.

Each time a button on the remote control is pressed, the light on the remote control icon displayed on the touchscreen flashes, indicating that the command has been received :

If, however, the TP-1000 receives interfering IR commands from another remote control, it is possible to deactivate the reception of IR commands by pressing this button. It then becomes greyed out, indicating that the function is deactivated.

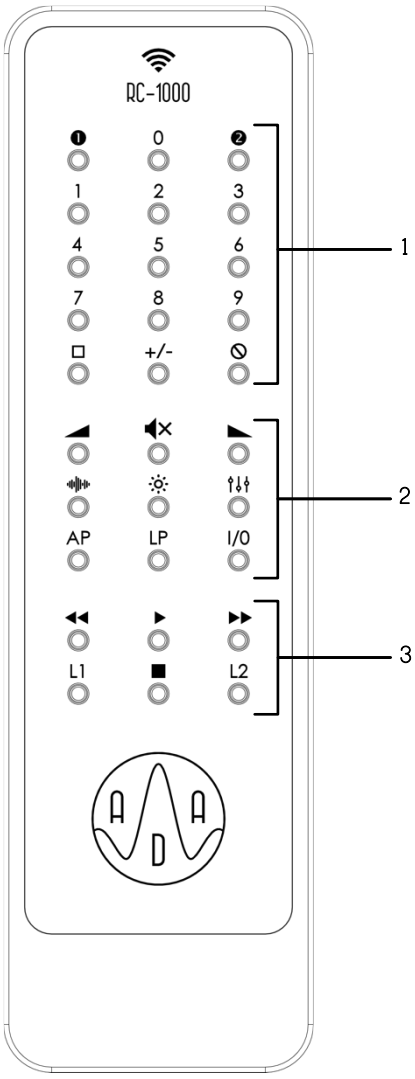
Each time the machine is restarted, the function becomes active again by default.

To operate, the TP-1000 must be programmed with a CMD firmware version higher than V1.02. To check the firmware version, switch the screen to the page displaying firmware versions :



To update the firmware, please refer to the Firmware update paragraph (see page 35).

8.2. Description



1. **Locator programming**

   Numeric keypad for programming LOC 1 and LOC 2 counter memories, see section (8.3 Counter programming).

2. **Functions**

   The MUTE key " 🔇 " deactivates the output, another press reactivates the sound, " ◢ " decreases the volume by 0.5dB per press, " ◣ " increases the volume by 0.5dB.

   The " 〰 " key switches between the two REF LEVEL levels HI and LO for tape recording, " ☼ " switches the intensity of the control unit to match the ambient light level, " 🎚 " switches between the two NAB/IEC equalization curves (see page 18).

   The " **AP** " key activates or deactivates the AUTO PLAY function, " **LP** " activates the LAST PLAY function (see page 19).

   The " **I/O** " key switches the sound output between INPUT and REPRO (see page 17).

3. **Tape transport management**

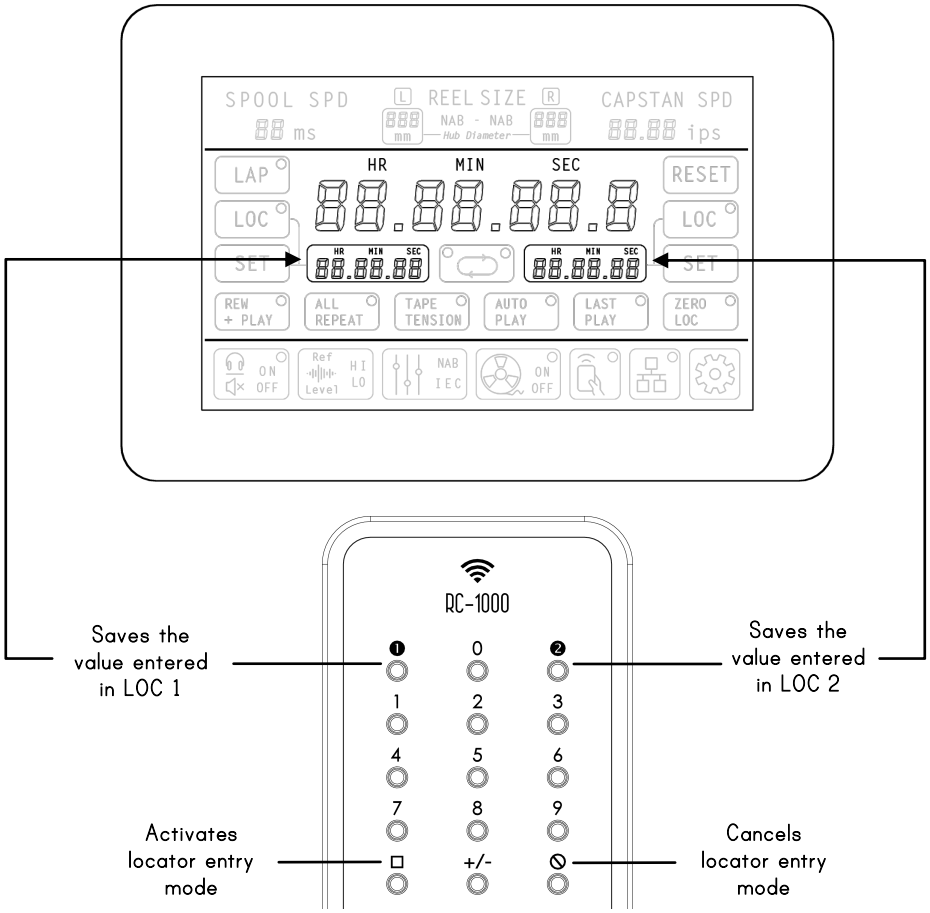
   The " ◀◀ " key activates the REW function, " ▶▶ " activates the FWD function,
   " ▶ " activates the PLAY function, " ■ " activates the STOP function (see page 16).

   The " **L1** " and " **L2** " keys activate the LOC functions, allowing you to go directly to locator position 1 or 2 (see page 19).

8.3. Locator programming

The RC-1000 remote control lets you program the LOC 1 and 2 counters, which is useful if you know the location of the music tracks on your tape, so you can go straight to playing a chosen track.

Press the " □ " key to enter counter entry mode, the main counter starts flashing and is reset to zero. Enter the counter value using the numeric keypad, the digits entered are inserted from right to left, the " **+/-** " key is used to change the counter sign, the " ⊘ " key cancels the entry and the " ❶ " and " ❷ " keys save the value entered in the corresponding LOC :

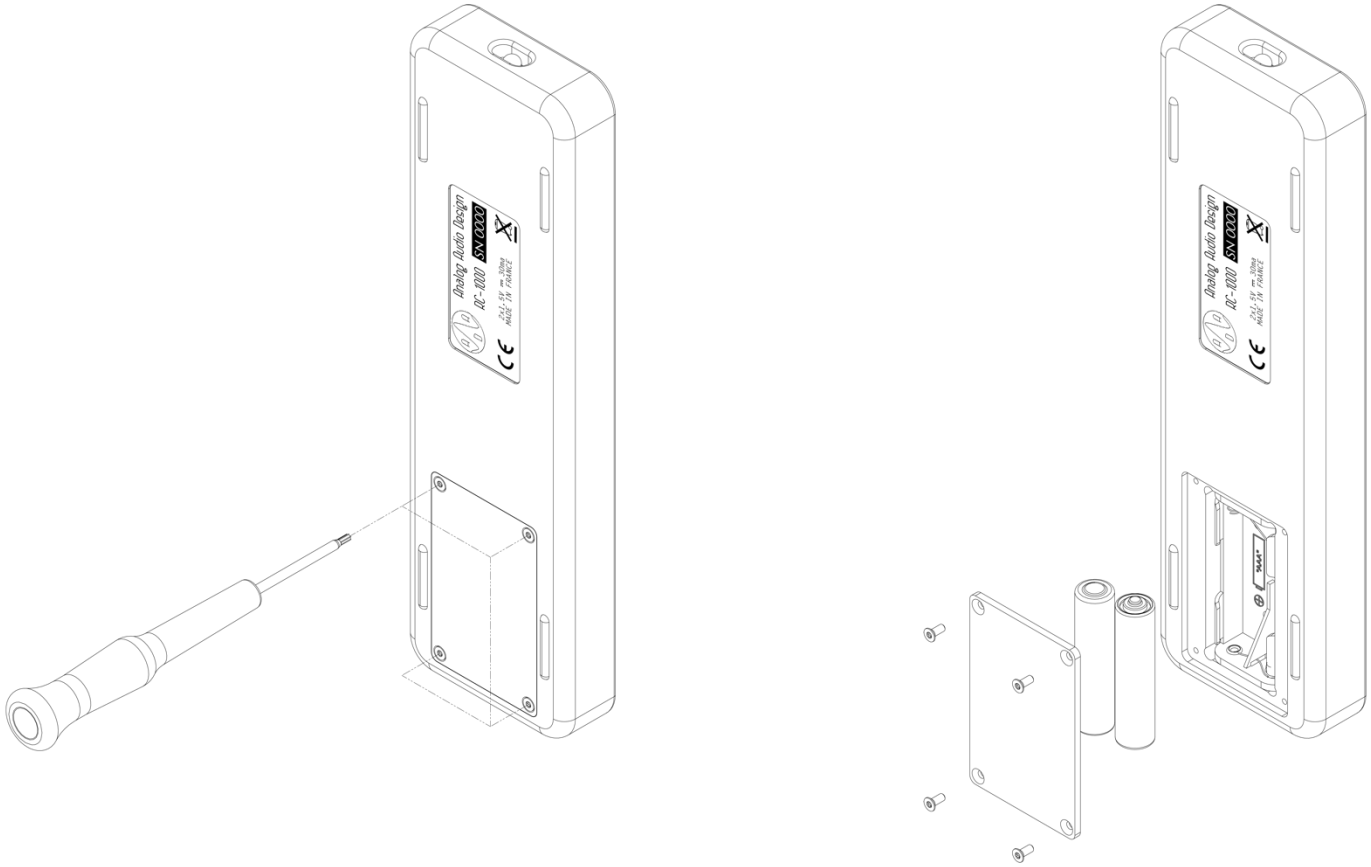


Counter programming is not available during REW and FWD phases.

8.4. Changing batteries

When the batteries are low, the RC-1000 remote control may not operate correctly, or the range of the remote control may be reduced. If this happens, replace both batteries with new ones.

To do this, remove the cover on the back of the remote control using the screwdriver supplied with the RC-1000. Replace the two AAA 1.5 V DC alkaline batteries. Be sure to insert the batteries according to the polarities (+/-) indicated on the battery compartment. Replace the cover :

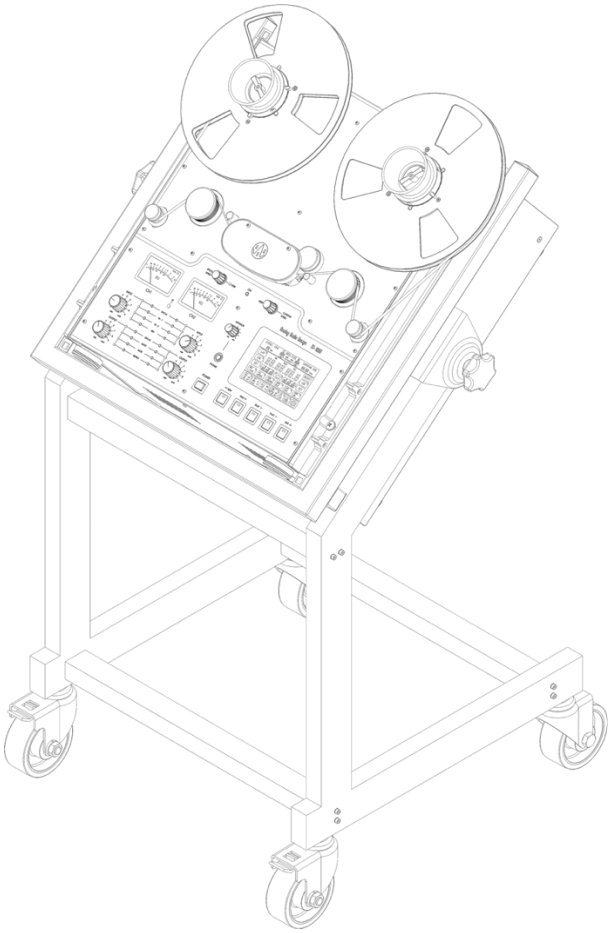


When replacing batteries, use the same type and replace both batteries at the same time.

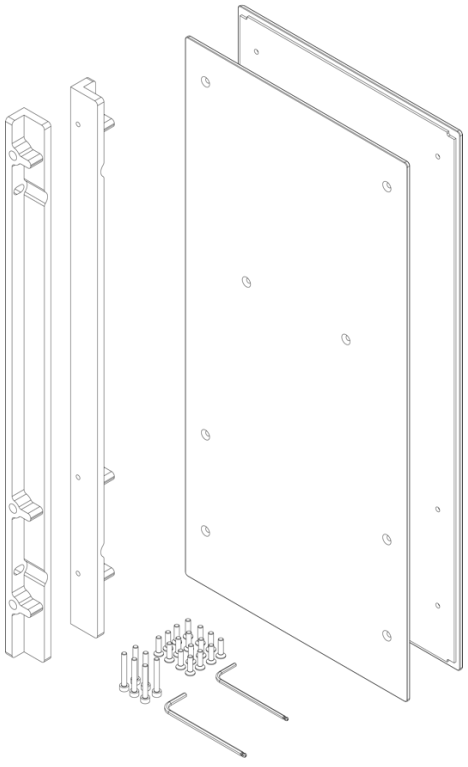
9. Accessories

9.1. 19" Rack mounting kit

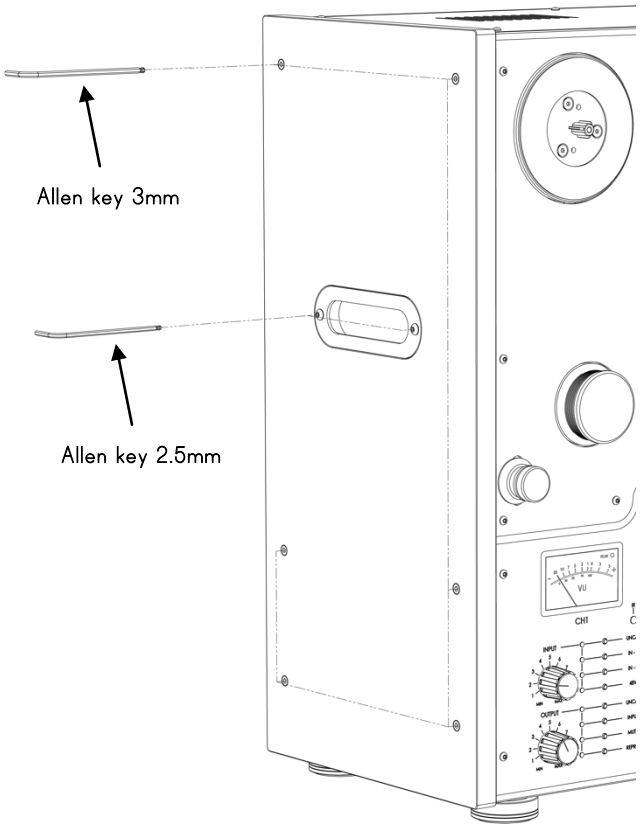
The TP-100 can be mounted on a 19" rack using the Rack 19" kit (item code ART-N0-0005).:

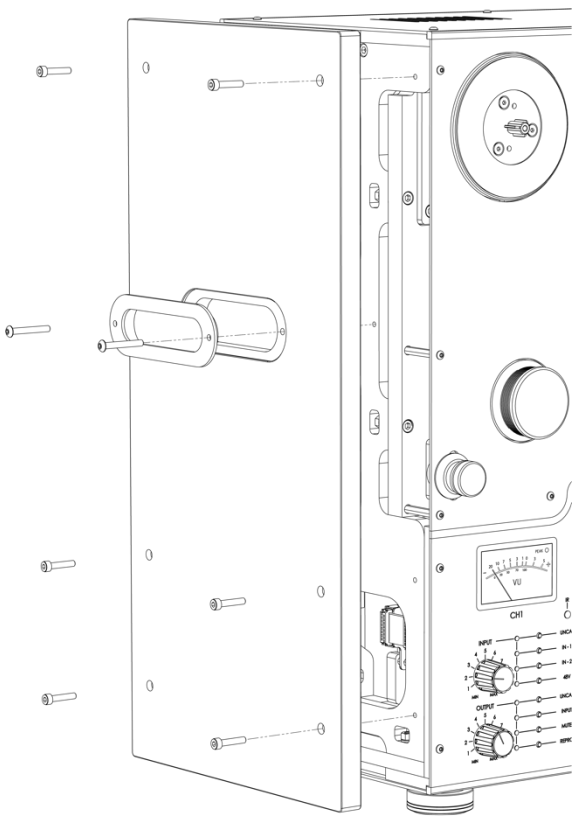


Kit contents :

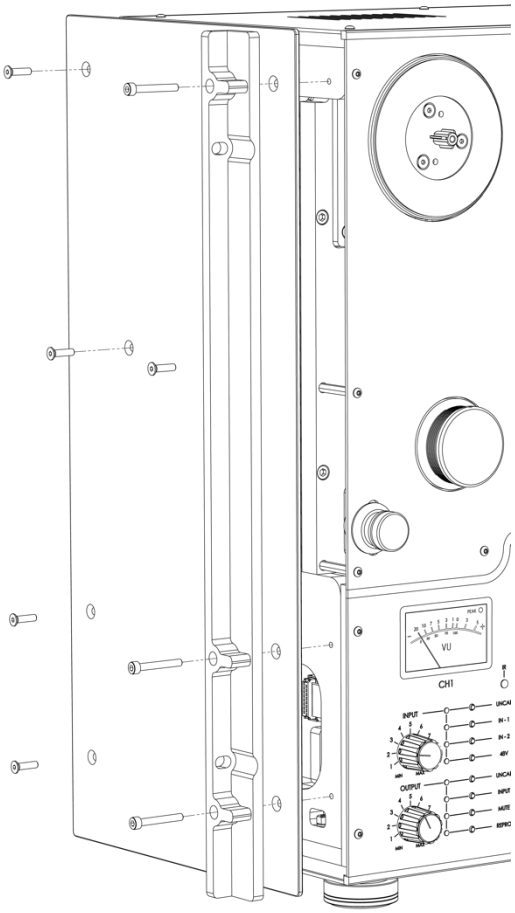


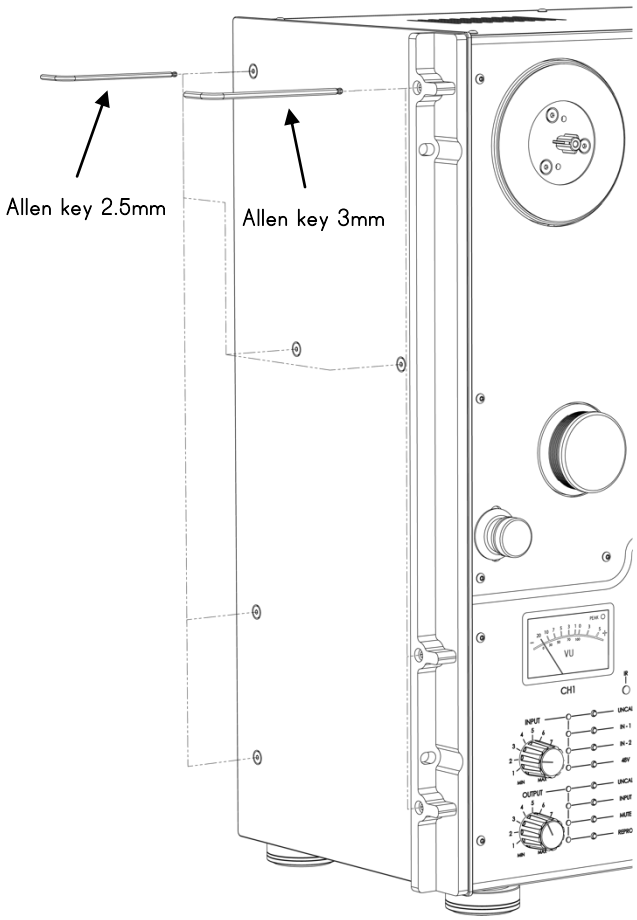
Dismantle wooden panels, repeat on 2 sides :



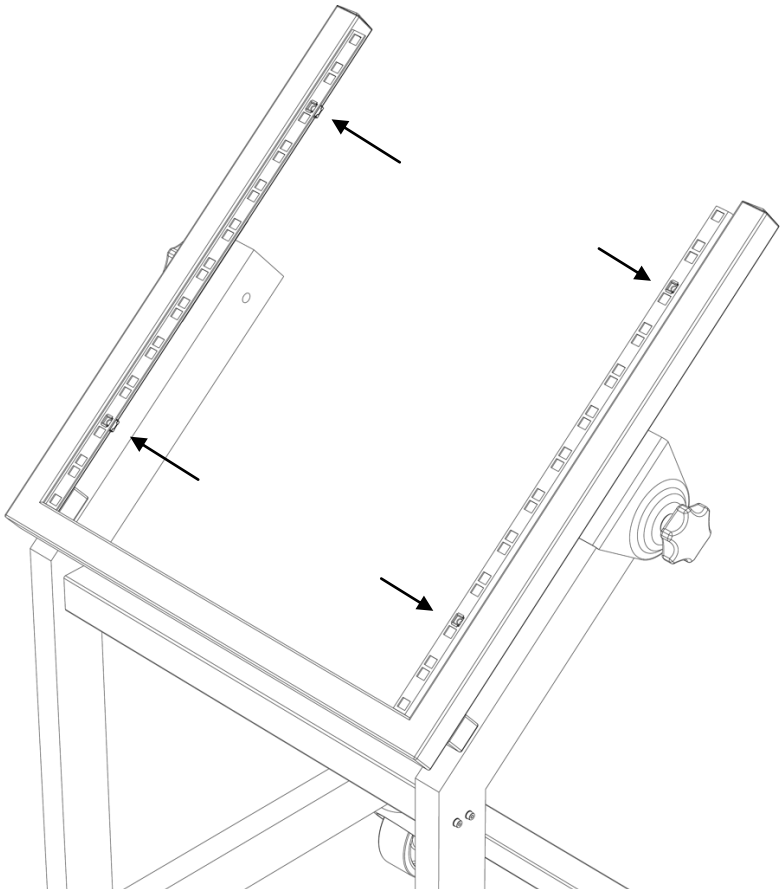


Assembly of aluminum panels and rails, to be repeated on 2 sides :

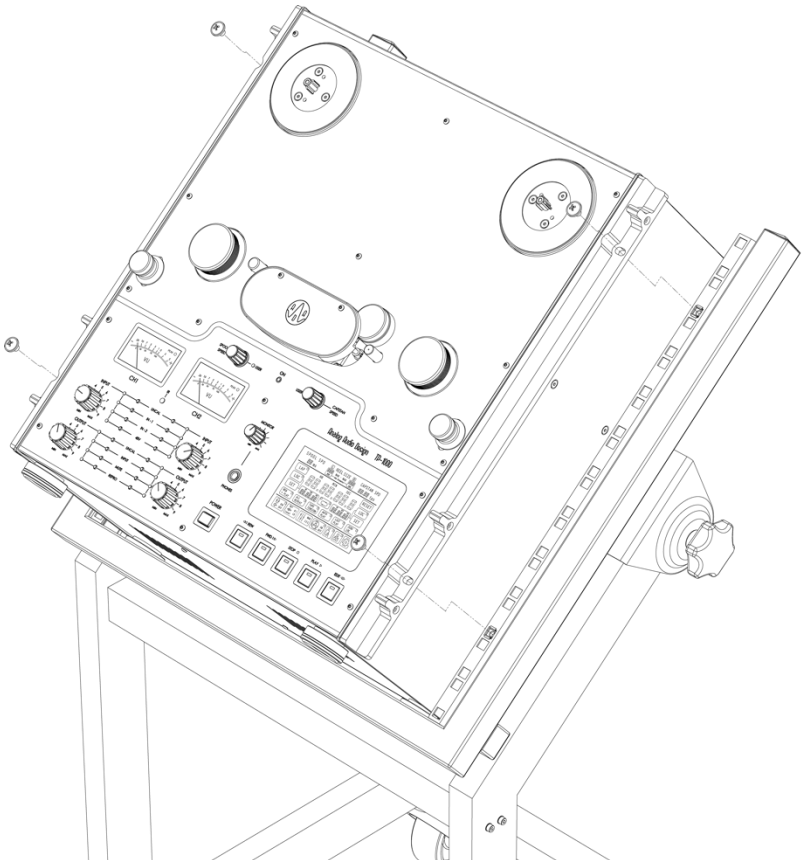




Position of inserts on cart :

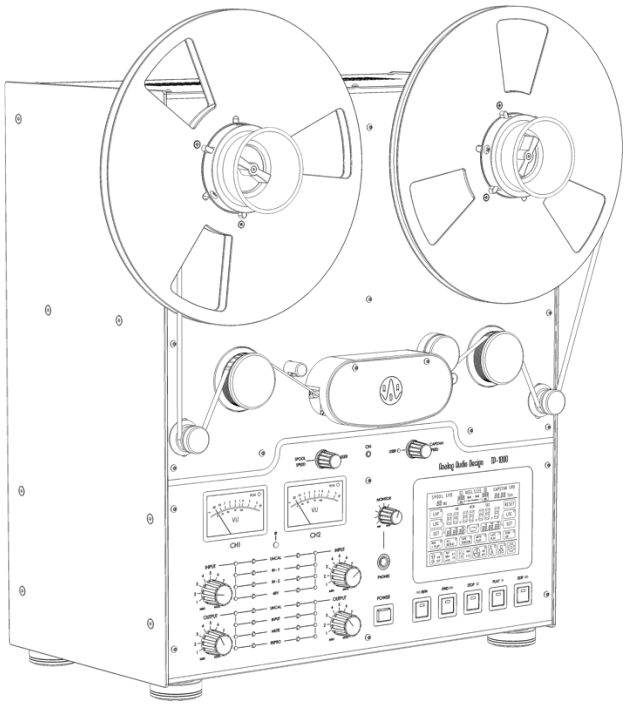


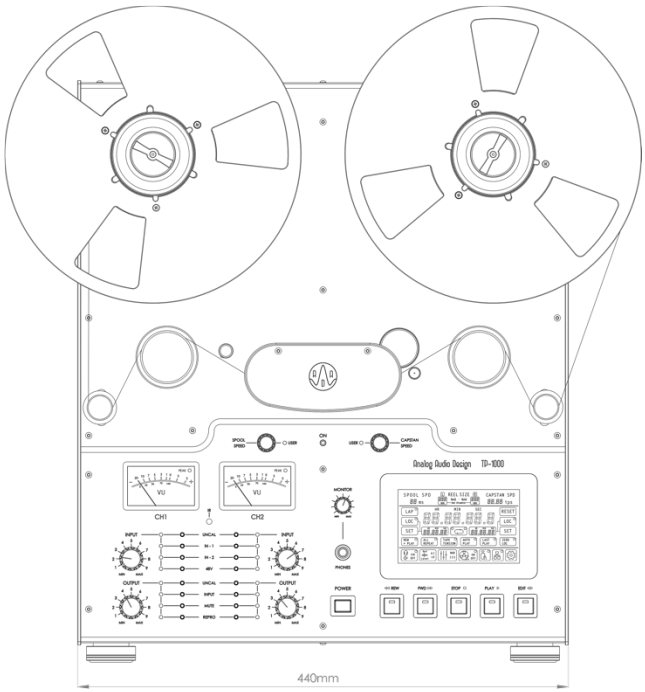
Mounting the TP-1000 on the cart :



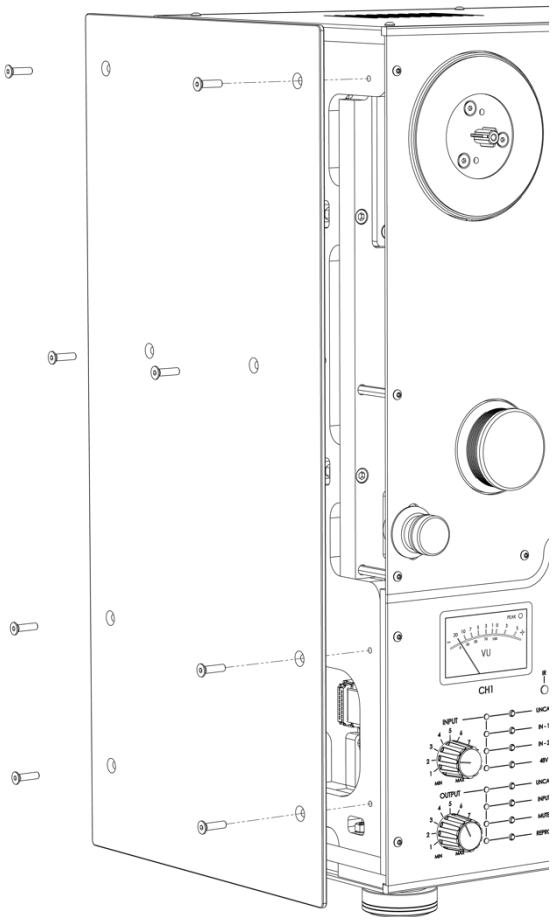
9.2. 44cm width adjustment kit

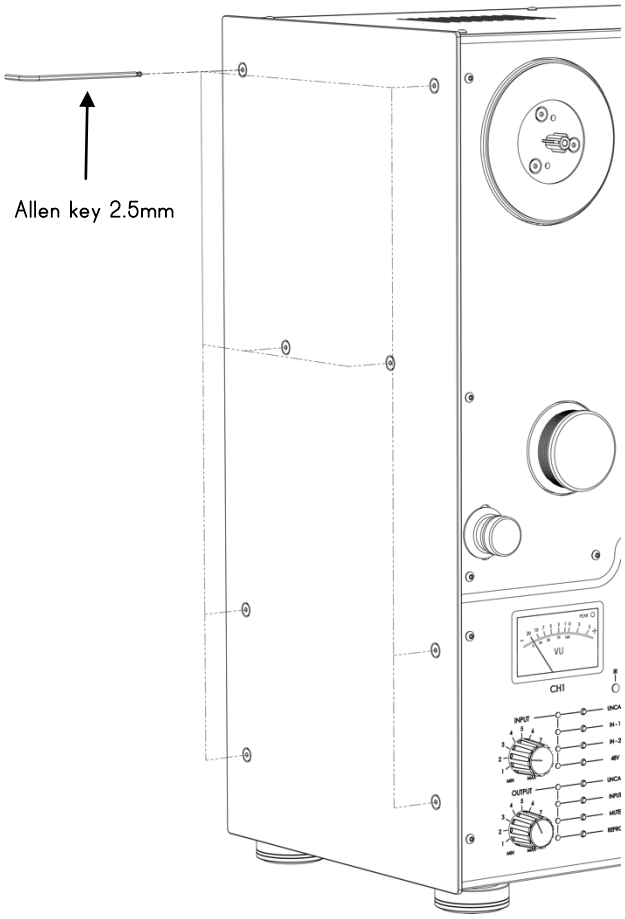
With the help of the 19" Rack kit (item code ART-N0-0005), the TP-1000 can be transformed so that its width is reduced to 44cm, ideal if you want to place it in a HIFI cabinet :





Assembly of aluminum panels, to be repeated on 2 sides :





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11.Revision history

Date	Revision	Changes
07/01/2022	V1.0	Initial release
06/01/2023	V1.1	• Added chapter Firmware update • Add IR remote control chapter • Added accessories chapter
08/23/2024	V1.2	• Add trident quick-release clip • Installation of AEG plate with AEG Hub