

# APart

# MANUAL



# PC1000R

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## **Features**

The APart PC1000R is a professional multisource CD/USB/SD card music player, equipped with balanced and unbalanced analog outputs, coaxial and optical digital outs and a RS232 port for use in automated systems.

The maximum analog output level can be preset at the back to match the output level of other audio sources, such as tuners and other media players.

The unit can be controlled by the front panel buttons, infrared remote (included), infrared remote extender such as PIR-REC (optional) or RS232 commands. A list with the commands is included in this manual.



## Front panel



1. Power led: this led lights up red when in standby, and becomes blue when the unit is powered on.
2. CD drawer.
3. Infrared eye and display, showing playback status, tracknumber and time information.
4. Stop button: press to stop playback.
5. Play/pause: push to start playback, push again to pause playback...
6. Fast backward: push once to search backwards. Push again to resume normal playback.
7. Fast forward: push once to search forwards. Push again to resume normal playback.
8. CD eject: push to open CD drawer, push again to close. Please note that the play button will also close the drawer.
9. Standby: push to switch the unit into standby mode, indicated by the power led lighting red.
10. Next track: push to switch to the next track.
11. Previous track: push to go back one track.
12. Repeat: push to switch between repeat-1 (repeat one track) or repeat all. Push again to resume normal playback.
13. Random: push to switch to random playback. Push again to resume normal playback.
14. USB-SD-CD: push to switch between USB, SD or USB playback. Default source is CD, but when no CD is present, the unit will automatically search for media on the SD and USB slots. Please note that it may take a while for the unit to react when switching sources. This is not a malfunction and depends on the amount of data present on the selected media.
15. SD card slot
16. USB slot.
17. Power switch.
18. Removable rackears, for use in 19 inch racks or as a standalone unit in hifi chains etc.

## Rear panel



1. Right channel balanced output. The maximum level can be set with level knob 4.
2. Left channel balanced output. The maximum level can be set with level knob 4.
3. Unbalanced output on cinch connectors. The maximum level can be set with level knob 4.
4. Level knob: to preset the maximum output level on the analog outputs.
5. Update: don't connect anything here.
6. Optical digital output on Toslink™. Output format is SPDIF, 16 bits, 44.1 kHz sampling rate.
7. Coaxial digital output on cinch. Output format is SPDIF, 16 bits, 44.1 kHz sampling rate.
8. USB slot: this is a copy of the front USB slot, use the front or the rear slot, not both simultaneously !
9. SD card slot: this is a copy of the front SD card slot, use the front or the rear slot, not both simultaneously !
10. IR in: infrared command input on stereo minijack. Connect for example our PIR-REC here. Please note that the front IR eye will be disabled when a jack is inserted here.
11. RS 232 port.
12. Fuse holder: contains a 500 mA slow blow fuse. Replace only with a fuse of identical voltage and current rating !
13. Mains cable inlet.

Notes: the output level can also be adjusted during playback via the infrared remote or serial control commands. This volume control is located before the master output level knob (4) on the rear of the unit. After waking up from standby or after power up, the volume level is automatically reset to the maximum as set by the rear volume knob.

## **RS232 communication**

Communication with PC1000R via RS232 is done with simple ASCII commands. The port settings are : **38400 baudrate, 8 databits, no parity, handshake off**. These parameters can not be changed. The physical connection is made with a straight through wired 9 pin serial cable (NO null modem cable !) Maximum wire length depends on cable quality and influence caused by external interference.

Pin 2 : TX data : data transmission output.

Pin 3 : RX data : data transmission input.

Pin 5 : GND : ground connection.

Other pins are not used.

Serial commands used in PC1000R have been simplified and consist basically of a command such as PLAY, STOP, ...commands are not case sensitive.

Some commands require an attribute, such as TRACK #, where # stands for a numeric value, in this case the track number. The unit needs no carriage return <CR> at the end of the instruction.

From here we assume that you are familiar with RS232 communication protocols and hardware. If not, please read the user manual of your control device first. In case you are experiencing a problem with serial communication, start at the basics, connect a computer with a working serial port, use the right serial cable, use a simple terminal program, make communication settings and start from there.

Please note that most commands sent from the infrared remote control will also be shown on the serial port. This is the easiest way to find out whether your serial communication settings are correct. Unknown characters in your terminal communication program usually indicate that the baudrate is incorrect.

Below is a table with the list of commands recognized by PC1000R and some examples of the replies sent by the PC1000R.

## **RS232 COMMANDS**

COMMAND (DESCRIPTION)	REPLY
PLAY	PC1000R--> Play
PAUSE	PC1000R--> Pause
STOP	PC1000R--> Stop
EJECT	PC1000R--> Eject Command
SKIP+ (go to next track)	PC1000R--> Skip Next
SKIP- (go to previous track)	PC1000R--> Skip Back
FAST+ (fast forward search, send again to resume normal play)	PC1000R--> Fast Play Forward
Fast- (fast backward search, send again to resume normal play)	PC1000R--> Fast Play Backward
TRACK # (# stands for a numerical value from 1 to 255; note the space between TRACK and #)	PC1000R--> Track : 25
ON	PC1000R--> CD On
OFF	PC1000R--> CD Off
INPUT (change between inputs CD-USB-SD, valid only when a medium is present)	PC1000R--> Change Playing Source
CD MUTE ON (mute the output)	PC1000R--> CD Mute On
CD MUTE OFF	PC1000R--> CD Mute Off
VOL+	PC1000R--> Vol Up
VOL-	PC1000R--> Vol Down
RANDOM ON	PC1000R--> Random Mode On
RANDOM OFF	PC1000R--> Random Mode Off
REPEAT 1	PC1000R--> Repeat 1
REPEAT ALL	PC1000R--> Repeat All
REPEAT OFF	PC1000R--> Repeat Off
STATUS (displays the status of the PC1000R)	PC1000R--> Device: CD Player PC1000R--> MP3: 030 PC1000R--> Status: Play PC1000R--> Time: 03:18

***Important notice:*** always allow the unit to acclimatize during at least one hour. E.g when the unit has been transported in cold weather conditions, the electronics and optical devices inside the unit might condensate, causing malfunction or even permanent damage to the unit !

Please note that the unit may respond slowly when you change the input source. This depends on the size and number of files present on the media.

## **Technical Specifications**

CD PLAYER	
Compatible media	Audio CD, CDR, CDRW, DVD, DVDR, DVDRW
Audio format	Audio CD 16 bit PCM, MP3 32-320 kbps and variable bitrate, WMA. ID3 tags are not supported.
USB - SD	
Compatible media	Flash memory sticks and cards, 32 Mb up to 32 GB. File system recognized is FAT32. Some memory sticks and cards may not work because they don't allow direct memory access !
Audio format	MP3 32-320 kbps and variable bitrate, WMA ID3 tags are not supported.
CD-USB-SD	
Line level output (balanced & unbalanced)	1.9V adjustable
Output impedance	less than 1K $\Omega$
Digital outputs (Toslink and Coax)	SPDIF format, 16BIT, 44.1KHz
S/N ratio	>90dB
THD	<0.05%
Frequency range	20Hz - 20KHz
Power supply	230 VAC 50-60Hz max 30VA
Fuse rating	500mA / 250V
Dimensions	430 (482) x 305 (315) x 44 mm
Net weight	4.5Kg
Shipping weight	5.5Kg
Accessories supplied	Mains power cable, IR remote control unit
RS232 port	Standard RS232 port on DB9 connector.
RS232 port setting (fixed)	38400 baudrate, 8 databits, no parity, handshake off
Infrared extension port	Mini jack connector at the rear, disables the front infrared receiver
Remote control battery type	AAA type LR03
Operating temperature	10 - 40 °C
Relative humidity	10 to 80 % non condensing

## **Important safety instructions**

- Please check the carton box for any kind of damage on reception of the goods.  
In case of a damaged carton, please contact your dealer before opening the carton.
- Read all documentation before operating your equipment.
- Keep all documentation for future reference.
- Save the carton and packing material even if the equipment has arrived in good condition.
- Should you ever need to ship the unit, use only the original factory packing.
- Do not spill water or other liquids into or on the unit.
- Make sure power outlets conform to the power requirements listed on the back of the unit.
- Do not use the unit if the electrical power cord is frayed or broken.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Have gain controls on amplifiers turned down during power-up to prevent speaker damage if there are high signal levels at the inputs.
- Do not connect the inputs / outputs of amplifiers or consoles to any other voltage source, such as a battery, mains source, or power supply, regardless of whether the amplifier or console is turned on or off.
- Power down & disconnect units from mains voltage before making connections.
- Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
- Do not remove the cover. Removing the cover will expose you to potentially dangerous voltages.
- Do not drive the inputs with a signal level higher than that required to drive equipment to full output.
- In case of mal-function this device should be serviced by qualified service personnel only.

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