

MANUAL



PCR3000R

Features

The APart PC3000R is a professional multisource CD/USB/SD card music player with integrated FM RDS and DAB+ tuner, equipped with multiple independent analog outputs, coaxial and optical digital output for the CD/USB/SD player 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. Additionally there is a combi output available. This output will play the music from the CD/USB/SD player by default. When there is no media playing from the CD/USB/SD player, the output will automatically switch to the tuner (FM or DAB+) output after a few seconds, provided that the tuner is not in standby mode.

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 possible RS232 commands is included in this manual. If you wish to control the unit using a third party infrared remote control unit, use the learn function on your third party remote to transfer the commands from the included remote. Read the manual of your third party remote for more details.

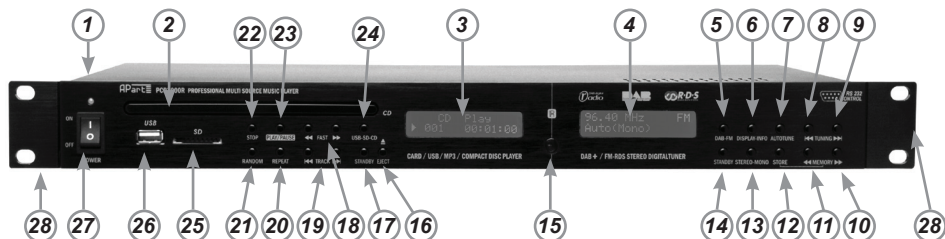
The CD/USB/SD player has an additional digital volume control, which can be operated via the infrared remote or via serial control.



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.

Front panel



1. Power led: lights up blue when powered on, lights up red when in standby mode.
2. CD tray.
3. CD/USB/SD player display: displays track number and playback time and status.
4. Tuner display: displays tuner info such as station name, tuner frequency, RDS information...
5. DAB-FM: push button to switch between DAB and FM tuner mode.
6. Display-info: push to switch between different display options, such as RDS information, station name, program type, mono/stereo (auto) and time information. Default setting is to display station name.
7. Autotune: push to perform a quick scan in DAB mode, hold for a full scan. in FM mode, pushing the autotune button will search for the next station on the FM band. Hold to search for a station backward.
8. Tuning back: tune one step back (FM mode). In DAB mode the tuner will tune to the previous station.
9. Tuning forward: tune one step up (FM mode). In DAB mode the tuner will tune to the next station.
10. Memory up: tune to the next station stored in memory. There is a maximum of 10 memory locations available in FM mode and also 10 memory locations in DAB mode.
If there is no station programmed on a certain memory location, the display will show "Preset xx free".
11. Memory down: tune to the previous station stored in memory. There is a maximum of 10 memory locations available in FM mode and also 10 memory locations in DAB mode.
If there is no station programmed on a certain memory location, the display will show "Preset xx free".
12. Store button: press to store a station into memory. First select an empty memory location or a location you wish to overwrite. Then tune to the desired station and press store to store the station on the previously selected memory location.
13. Stereo/mono: push to switch between mono or stereo operation (FM mode only)
14. Standby: push to switch the tuner to standby mode or to wake up from standby mode.
15. Infrared receiver eye.
16. Eject button: push to open or close the CD tray.
17. Standby: push to switch to standby mode or to wake up from standby mode.
18. Fast forward, Fast backward: push once to search for or backward. Push again to resume normal play.
19. Track down: push to go one track back, Track up: push to skip to the next track.
20. Repeat: push to switch between the repeat modes: repeat one, repeat all, off
21. Random: push to switch on random playback mode. Push again to switch this mode off.
Default = random off.
22. Stop: push to stop the play modus.
23. Play: push to start play or pause a playing song.
24. USB-SD-CD: push this button to switch between the media drives, USB, SD or CD (see *note page4).
25. SD card slot
26. USB connector: accepts memory sticks only, capacity up to 32 GB.
27. Power button: Push to power on or off. This button powers off the unit entirely in the off position.
The power led will not light up when in the off position.
28. Removable rack ears.

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.

RS232 communication

Communication with PCR3000R 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 PCR3000R 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 PCR3000R and some examples of the replies sent by the PCR3000R.

RS232 COMMANDS

COMMAND (DISCRIPTION)	REPLY
PLAY	PCR3000R--> Play
PAUSE	PCR3000R--> Pause
STOP	PCR3000R--> Stop
EJECT	PCR3000R--> Eject Command
SKIP+ (go to next track)	PCR3000R--> Skip Next
SKIP- (go to previous track)	PCR3000R--> Skip Back
FAST+ (fast forward search, send again to resume normal play)	PCR3000R--> Fast Play Forward
FAST- (fast backward search, send again to resume normal play)	PCR3000R--> Fast Play Backward
TRACK # (# stands for a numerical value from 1 to 255; note the space between TRACK and #)	PCR3000R--> Track : 25
CD ON	PCR3000R--> CD On
CD OFF	PCR3000R--> CD Off
INPUT (change between inputs CD-USB-SD, valid only when a medium is present)	PCR3000R--> Change Playing Source
CD MUTE ON (mute the output)	PCR3000R--> CD Mute On
CD MUTE OFF (unmute the output)	PCR3000R--> CD Mute Off
VOL+	PCR3000R--> Vol Up
VOL-	PCR3000R--> Vol Down
RANDOM ON	PCR3000R--> Random Mode On
RANDOM OFF	PCR3000R--> Random Mode Off
REPEAT 1	PCR3000R--> Repeat 1
REPEAT ALL	PCR3000R--> Repeat All
REPEAT OFF	PCR3000R--> Repeat Off
STATUS CD (displays the status of the PCR3000R)	PCR3000R--> Device: CD Player PCR3000R--> MP3: 030 PCR3000R--> Status: Play PCR3000R--> Time: 03:18

COMMAND (DISCRIPTION)	REPLY
DAB ON (switches the tuner ON)	PCR3000R--> DAB on
DAB OFF (switches the tuner to STANDBY)	PCR3000R--> DAB off
BAND (Switch bewteen FM and DAB+)	PCR3000R--> Band command
TUNE+ (tune up)	PCR3000R--> Tuning up command
TUNE- (tune down)	PCR3000R--> Tuning down command
PRESET 1 (recall preset1, max preset# =10)	PCR3000R--> Preset: 1
SAVE 1 (save to preset1, max preset# =10)	PCR3000R--> Save: 1
AUTO+ (search next station up, FM. DAB+ perform quick scan)	PC3000R--> Up search for FM/Quick scan for DAB
AUTO- (search previous station down, FM. DAB+ perform full scan)	PC3000R--> Down search for FM/Full scan for DAB
ENTER (FM: switch between mono and stereo, DAB+ no function)	PCR3000R--> Enter Command
DAB MUTE ON (mute tuner, FM or DAB+)	PCR3000R--> DAB Mute On
DAB MUTE OFF (un-mute, FM or DAB+)	PCR3000R--> DAB Mute Off
STATUS DAB (displays tuner status, FM or DAB+)	PCR3000R--> 97.40 MHz FM Auto (Stereo)

Please note that the commands are not case sensitive.



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CD PLAYER	Technical Specifications
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	Technical Specifications
Line level output (balanced & unbalanced)	1.9V adjustable
Output impedance	less than 1K Ω
Digital outputs (Toslink and Coax)	SPDIF format, 16BIT, 44.1KHz
S/N ratio	>90dB
THD	<0.05%
Frequency range	20Hz - 20KHz
FM-RDS/DAB/DAB+TUNER	Technical Specifications
Frequency range FM radio	87.5 MHz to 108 MHz
Frequency range DAB radio band 3	174 MHz to 240 MHz
Frequency response FM radio	20 Hz - 15 KHz
Frequency response DAB+	20 Hz - 20 KHz
Sensitivity	-97 dBm typical
Aerial input impedance	50 Ω
THD	<0.05%, 1kHz (DAB) <0.15%, 1kHz 50KHz deviation (FM mono) <0.6%, 1kHz 50KHz deviation (FM stereo)
GENERAL	Technical Specifications
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