

Philips Clock Radio AJL308

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Market Position (per Philips)

“Start the day your way”

- 7” color display for easy viewing of clock, radio and calendar date
- Wake up to sounds of nature and start a fresh new day!
- Preloaded relaxation music lets you fall asleep peacefully

“Multimedia at your fingertips”

- USB and SD card slots for your favorite photos, music and video clips
- Enjoy music or radio channels while picture viewing
- Your favorite photo or image by your bedside

“Easy to use”

- Gentle wake with increasing alarm volume
- FM digital tuning with presets
- Dual alarm time

Shelf price: \$129.99 at Meijer’s

On-line price: \$99 at Amazon.com, free shipping; Amazon.com promotional price: \$50;

Target.com price: \$79.99

Sales rank on 12/23/07: #53 in Camera and Photo on Amazon.com

User rating: 3.5 stars out of 5

<http://www.amazon.com/Philips-AJL308-Digital-7-Inch-Display/dp/B000U6LEGS>

reviews:

http://www.amazon.com/review/product/B000U6LEGS/ref=dp_top_cm_cr_acr_txt?%5Fencoding=UTF8&showViewpoints=1

<http://www.engadget.com/2007/11/08/philips-ajl308-clock-radio-digital-photo-frame-is-like-a-rea/>

There is no backup battery in case of power failure.

Estimated sales volume: in the mid 100k’s for 2007. The next highest ranked product on Amazon.com is the Sony Cybershot TSC-200, a popular, high-volume product.

Unit serial number is 13,943 in the 34th week of 2007 (August 2007). 30k/week over a quarter is consistent with mid 100k’s production run rate.

Photographs



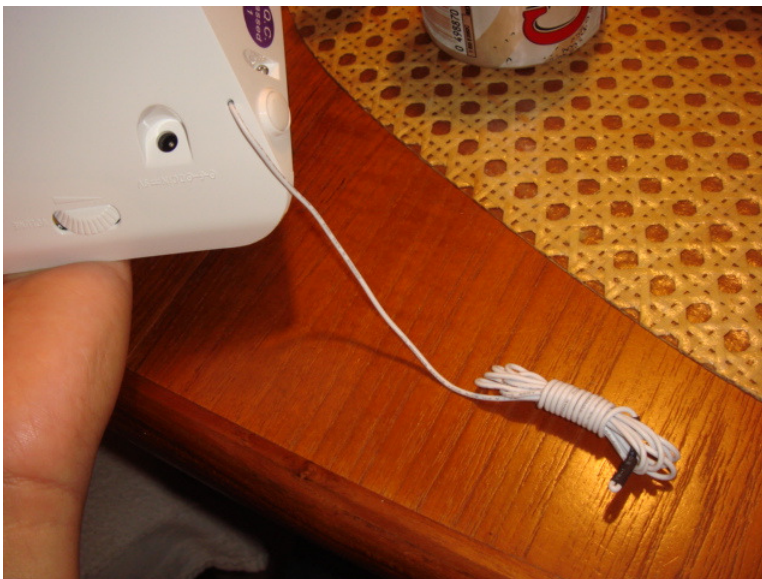
“CLOCK RADIO”



4-color printed cardboard box, with cardboard inserts to keep LCD safe during shipping, and device wrapped in a thin layer of foam. Collateral includes four black and white printed and folded user manuals.



Note how bright the laptop screen is next to this one. The camera was very forgiving of the flaws of the LCD here.



This is your antenna. It can be unrolled to clear interference from the electronics and to get better reception without having to move the clock unit itself.



Mostly single-sided PCB, looks to be low-grade FR-4, 2 layers. No BGAs. Very cheap assembly process.




Power adapter is OEM logo'd. Allows for DVE to pay for the UL registration, etc. etc.

Bestsellers in Camera & Photo

[Any Category](#) > Camera & Photo

The most popular items in Camera & Photo. Updated hourly.


51.



[Canon HG10 AVCHD 40GB High Definition Camcorder with 10x Optical Zoom](#)
by Canon
★★★★☆ (18 customer reviews) | 6 customer discussions
In Stock

List Price: ~~\$1,499.99~~
Price: [Click to see price](#)
29 used & new from ~~\$744.95~~


Offered by [Electronic Express](#)
[Add to cart](#) [Add to Wish List](#)
52.



[Sony Cybershot DSC-T200 8.1MP Digital Camera with 5x Optical Zoom with Super Steady Shot Image Stabilization \(Silver\)](#)
by Sony
★★★★☆ (35 customer reviews) | 2 customer discussions
In Stock

Price: ~~\$349.94~~
7 used & new from ~~\$314.95~~


[Add to cart](#) [Add to Wish List](#)
53.



[Philips AJL308 Digital Frame Clock Radio with 7-Inch TFT LCD Color Display and USB/SD Card Slot](#)
by Philips
★★★★☆ (13 customer reviews) | 3 customer discussions
In Stock

List Price: ~~\$129.00~~
Price: ~~\$99.99~~
You Save: ~~\$29.01~~ (22%)
10 used & new from ~~\$75.00~~


[Add to cart](#) [Add to Wish List](#)
54.



[GE A730 7MP Digital Camera with 3x Optical Zoom \(Black\)](#)
by General Imaging
★★★★☆ (11 customer reviews) | 2 customer discussions
In Stock

List Price: ~~\$129.99~~
Price: ~~\$99.99~~
You Save: ~~\$30.00~~ (23%)
5 used & new from ~~\$96.99~~

[Add to cart](#) [Add to Wish List](#)
55.



[Canon Digital Rebel XT 8MP Digital SLR Camera with EF-S 18-55mm f3.5-5.6 Lens \(Silver\)](#)
by Canon
★★★★☆ (374 customer reviews) | 48 customer discussions
In Stock

Ranked #53 on amazon.com, right behind the Sony Cybershot DSC-T200 camera!

User-Visible Feature Pushdown

- Dual alarms
- Snooze bar
- 7" Color TFT LCD
- FM radio – 5' pigtail antenna for good reception
- Built in wakeup sounds (5 nature sounds + buzzer)
- Relaxation music preloaded for sleep music
- USB 1.1 slot
- SD media slot
- Plays DivX, WMA, MP3, MPEG2 (at least) at resolutions of at least 640x480, bitrate of 350 kbps, 24kHz stereo audio in MP3 format
- No battery backup – interestingly, under “safety instructions” it refers to installing a battery in correct polarity, but the tear-down reveals no such feature. Interestingly, the device draws 9V from the power brick...

Hardware Features

- 7" LCD, resolution not advertised, 480x234 stated on-line, no touchscreen
- CCFL backlight, variable dimming (7 steps plus ultra-dim, which is not that dim)
- 8 MB SDR SDRAM (Hynix HY57V641620FTP-7)
- 4 MB NOR FLASH for firmware (Spansion S29AL032D)
- Mediatek MT8303FE Digital Picture Frame SoC
 - No datasheets available—can do IC decap and analysis
 - Mediatek has license to ARM926EJ-S core:
<http://www.arm.com/news/317.html>
 - Estimate TSMC 0.13u process / implies ARM core running at ~200 MHz
 - Mediatek has core competencies in video decoding hardware (major business line is DVD player ICs), so likely there is a dedicated video decoding core for DivX/WMA/MP3 with integrated drivers
- NXP 5763 FM radio IC (digital tuning, analog output)
- Youda YD2822 audio amplifier (0.38W into 8 ohms @ 6V; 1W into 8 ohms @ 9V)
- Stereo 8ohm 1W speakers in acoustic suspension housing (bass response non existent)
- Volume control exclusively through analog potentiometer knob on side
- 9 pushbutton switches for UI
- Pericom Technology PT7C4337 I2C real time clock IC for keeping time
- Audio switching between MP3 stream and FM radio done using 74HC4053 analog mux + RC4558 op amp (Chinese clone part, not authentic TI)
- YD3414 IC used for VCOM
- SS7707 boost controller for CCFL backlight
- 2x switching regulators + AMS1117 LDO for digital supplies

BOM Analysis

Item	Price
LCD	\$ 18.00
SDRAM	\$ 1.50
FLASH	\$ 1.50
MT8303	\$ 5.80
FM radio	\$ 1.90
YD2822	\$ 0.50
2x speakers	\$ 0.80
volume	\$ 0.30
14x buttons	\$ 1.90
PT7C4337	\$ 0.50
audio mux	\$ 1.00
VCOM	\$ 0.80
backlight	\$ 1.00
digital regulators	\$ 1.90
discretes	\$ 1.50
crystals	\$ 0.30
PCB assy	\$ 1.50
PCB	\$ 1.00
USB/SD sockets	\$ 1.40
power supply	\$ 2.30
plastic case	\$ 2.00
speaker grill	\$ 0.30
chassis assy	\$ 0.20
test	\$ 0.50
box/collateral	\$ 0.90
total	\$ 49.30