OMEGA X-33 and BREITLING B-1 COMPARED (MJC 2006 ©)


OMEGA
Seamaster
PROFESSIONAL
BREITLING
CHRONOMETRE B-1

Synopsis: Both these watches are functional tools. And in the same way that industrial architecture can be aesthetically pleasing, so can these equipment pieces. For long period comfortable wrist the all titanium X-33 beats the solid steel B-1, simply because you can forget you are wearing the X-33, something you cannot say about the B-1 which always has presence. The B-1 is arguably easier to use as functions can be reached either forward or backward by spinning the crown –the X-33 crown depression changes each function in a one way cycle only. B-1 has winning accuracy, varying only a few seconds a year with its proprietary 'SuperQuartz' movement developed from by ETA. The X-33 beats on loudness of alarms because of excellent sound-chamber design – this is apparent on-wrist. But, the B-1 sound chamber looks cool. The Breitling has a (useful) slide-rule bezel. X-33 digital displays completely disappear when switched off leaving just the analogue hands. Difficult to say which beats on functionality – though the X-33 'count-up' feature on the counter is unique and useful. Price – Retail prices are almost identical but the X-33 is rare and maybe been discontinued to the public, so is difficult to find new. So, difficult choice between them – so that's why I now have both!

	B-1	X-33

		
Manufacturer	Breitling	Omega
Named after	B-1 bomber aircraft	X-33 “next generation” launch vehicle, NASA project.
Created for	Navigational aid – the most highly functional watch developed by Breitling.	Designed for space flight crew, non-EVA, for space mission crews, used actively in space by NASA.
Movement	Breitling 78 (SuperQuartz)	Cal 1666 precision quartz
Case	Highly polished Steel (or Gold) – matt bezel	Brushed Titanium
Size	Diameter. 42.5mm, Thickness 16.50mm, Weight, 95.7g (without bracelet)	Diameter. 42.25mm, Thickness 14mm? (est.) Weight, <30g? (est.)
Expected battery life	24-36 months – though there is a battery saving setting that should improve this figure if not worn.	24-36 months
Expected accuracy	+-15sec / year – stated as approximately x10 more accurate than standard quartz modules – thermo-compensated.	+-15sec / month – stated as precision quartz. Some sources state +0.1sec/day for this module. Non-thermo-compensated
Real life accuracy	+4sec / year (consistent over it’s lifetime since 12/2003)	Unknown (<0.2sec / day) – no variance in last 4 days
Mode of Operation	Spinning the crown selects mode of operation – can be selected forward / backward. Two multi-function pushers.	Depressing the crown selects mode of operation –only cycling one way. Four multi-function pushers.

Adjustment method	Pressing pushers activates digital numbers affected. Spinning crown forward or backward changes values.	Pressing pusher activates digital numbers affected. Pressing other pushers' changes values.
Digital Display	Two digital LCD displays – can be switched off.	Two curved LCD displays – can be switched off.
Face markers	Arabic 12,9,6,3; stick chapters otherwise, arrow hands, dot on bezel.	Stick chapters, double dot each side of 12, broad-arrow hands – superlova
Aesthetics	Tool watch, 'massive steel', may be too bulky for some – (tends to take out chunks in door frames), highly functional – still looks like a 'Breitling' watch, quite 'shiny'	Tool watch, easy to wear, highly functional – looks like a 'digital instrument'. Has a 'stealth' look about it.
Water resistance	Rated at 50m – ok for surface swimming. Not a diving watch. Designed for Air not Sea.	Rated at 30m – Omega website officially says its 30m rated watches are ok for surface swimming. Not a diving watch – designed for Space Missions not Underwater Missions
COSC certification	One of a few digital watches that is COSC certified.	Has passed rigorous testing for space missions
Availability	To be superseded by 'Air Wolf', announced at 2006 Basel Fair.	Not in 2005-2006 Omega catalogue.
Bezel	Internal "Navitimer" style rotating slide-rule with gearing, and descending reverse minute intervals on outer edge of bezel	Ascending minute intervals bi-directional rotation 2 clicks per minute.

FUNCTIONS		
Backlight	Illuminates digital readouts – activated by depressing the crown.	Complete backlit display – activated by depressing specific pusher (P3)
Analogue display	Hr, Min, Sec hands	Hr, Min, Sec hands
Digital Time display	24hr (only) Hr, Min, Sec	24 or am/pm Hr, Min, Sec
Calendar display	Day (can be switched off) digital dd.mm.yy perpetual calendar (can be mm.dd.yy), different languages can be set.	Day, digital dd.mm.yy, perpetual calendar to 2100 (can be mm.dd.yy)
Daily alarm	Daily Alarm for Local Time. Set by hh.mm – rings again if not switched off in 30sec	Daily Alarm for Local Time. Set by hh.mm – rings again if not switched off in 30sec
Mission Time		An independent time to define the start time of a long running experiment (up to 999d). Useful application is to synchronise this with current time and it can then use this as another independent time zone.
Mission Alarm		An alarm set to go off– defined by ddd/hh.mm.ss where ddd is the day number of the mission time. Useful application for setting an alarm some date ahead in the future
Universal Time (Coordinates)	UTC set independently of the Local Time – can be up to 24hrs difference from Local Time - set with 15min. incremental differences. Seconds are synchronised with Local Time (can be am/pm or 24hr)	UTC set totally independently of Local Time. Indicates the number of days since the beginning of the year and ddd/ hh.mm.ss. Seconds are synchronised with Local Time (24hr only)

Universal Time Alarm		Alarm for a defined UTC. Set by ddd/hh.mm – rings again if not switched off, in 60sec
Timer	Count down timer max 99d 23m59s. Alarm repeats itself after 30sec if not acknowledged. Auto-reload of last countdown time.	Count down timer max -99h59m59s. Counter counts up to +99h.59m59s after alarm point reached (like space shuttle launch). Alarm repeats itself after 30sec if not acknowledged. Auto-reload of last countdown time.
Chronometer	Digital chronometer with synchronised analogue second hand with the chronometer measurement, resolution to 1/100th sec. Stop/Start/Split Time function. Maximum duration 99d 24h 59m59.99s	Independent digital chronometer resolution to 1/100th sec. Stop/Start/Split Time function. Maximum duration 99h 59m59.99s
Second time zone	Digital Second Time Zone set independently of the Local Time – can be up to 24hrs difference from Local Time - set with 15min. incremental differences. Seconds are synchronised with Local Time (can be am/pm or 24hr)	
Second time zone Alarm	Daily Alarm set, against a time (hh.mm) in the second time zone	
Battery EOF indicator	Yes - Jumping second hand	Yes - Jumping second hand
Un-documented features	'BAT' mode allows watch to be set into 'hibernation' mode, which saves battery consumption when off wrist.	Most functions (except MT) can be accessed by holding down the crown rather than pulling out the crown (as documented).
Time signals	Hourly chimes can be set – audible confirmation of settings can be set on/off.	

Size is actually quite similar –the B-1 being steel weighs much more

Notice the crown differences

X-33 is domed (for outward pressure loss), B-1 has a flat crystal face.

Sound chamber design on X-33 allows alarm to be heard on wrist – B-1 sound can be muffled on wrist. So wear the B-1 loose to use the alarm

Both alarms are loud off wrist. Note the neat turbine-blade design on the B-1.

Shiny finish on the stainless steel B-1. . .

Titanium - brushed finished on X-33

Both excellent finished clasps – B-1 has safety clasp,

X-33 double ‘speedy’ style clasp