

2009

SEISMIC SIGNAL RECORDER BAYKAL-7 HR *Technical description.*



EXPAS

30.12.2009

1. PURPOSE

Mobile high-resolution seismic signal recorder «Baykal-7HR» is an autonomous seismic station to record signals from external seismic or other sensors in a wide frequency range with a high accuracy and referencing to absolute time.

The device can be used for operational and long-term seismic and geophysical measurements in real field conditions in a wide range of temperatures. Small consumed power from an external accumulator, large nonvolatile (NVRAM) memory volume, built-in high-stability generator and a GPS module with a high-quality analog-to-digital tract provide excellent operational characteristic for solving a wide class of problems.

Seismic signal recorder "Baykal-7H.
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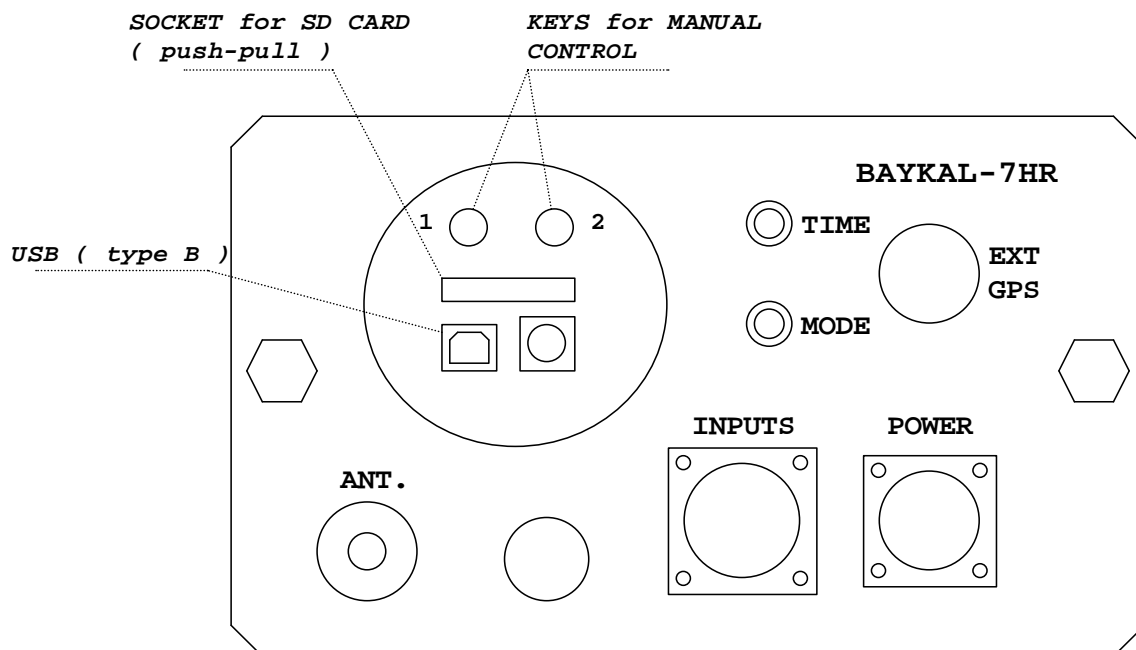
2.BASIC Specification

Parameter	Ед.	Значение	Option
Number of channels		3	6
Data resolution	bits	24	32
Inputs		Diff.	
Input impedance		44 kOm 4700 pF	
Sampling rates FD	SPS	50,100, 200,500, 1000, 2000	
Bandwidth(-3dB) ^{*3}	Hz.	0 - 370	
Gain G		1,4,16,64	
Input range G=1	Volt	± 2.5	
Input referred noise	mkV		
G=1; FD=100		< 1.0	
G=1; FD=1000		< 1.2	
G=16; FD=100		< 0.2	
Number of effective bits	bits		
G=1; FD = 100		>21.5	
G=1; FD = 1000		>21.0	
G=16; FD = 100		>21.0	
Storage type		SD miniSD (adapt.) microSD (adapt.)	
Capacity of memory	GBytes	1 - 32	
Stability internal time generator (-20 - +60 °C)		± 1 * 10 ⁻⁸	±2*10 ⁻⁷
Precision of time synchronization	Mksec.		
External GPS		± 2	
Internal GPS		± 1	

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External power voltage	Volt	10 - 28 DC	
Power consumption ^{*1, *2}	Watt		
State "WAIT"		< 0.6	
State "RECORD"		< 1.2	
Power for external Sensors.		+5V (0.1A) -5V (0.1A)	
Hardware Interface to PC.		USB 2.0 FULL SPEED	
Temperature range	°C	-30 ÷ +60	
Size	mm.	170 × 100 x140	
Weight	kg.	3	

Front panel of registrator.



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Russian language program for BY-7HR.

(English may be)

Байкал-7HR (17.01.2010); Серийный номер: 00015100; Дискрет: 8-ТНЧ

Экспас

ПК 18.01.2010 4:54:28
f - 200Гц; GPS - через 2м;

NO установки FAT пуск

Синхронизован в 18.01.2010 2:27:40
dT -0мкс/-4.557e-10 в 18.01.2010 4:53:07; -16

режим ожидания

Unit 18.01.2010 4:53:45
долгота 083.114270
широта 54.847327
высота 51.2067986 м

чтение Unit'a
регистрация
настройки
коррекция времени

59 из 7820Мб; файлов: 36; fat 12/22

весь файл 0.00 Hz

начало/конец 00016384 15639999 close

	Время начала	Длина		
0	15.01.2010 8:25:00	1201	с	
1	15.01.2010 11:27:00	11999	с	
2	16.01.2010 19:37:07	41501		
3	16.01.2010 20:47:50	6061		
4	16.01.2010 20:58:17	101		
5	16.01.2010 20:59:11	1		
6	16.01.2010 20:59:19	31		
7	16.01.2010 20:59:37	1		
8	16.01.2010 20:59:45	31		
9	16.01.2010 21:00:00	31		
10	16.01.2010 21:02:48	4071		
11	16.01.2010 21:13:15	531		
12	16.01.2010 21:17:03	22591		
13	16.01.2010 21:55:04	471		
14	16.01.2010 22:00:37	1571		
15	16.01.2010 22:27:14	9691		
16	16.01.2010 22:49:50	141		
17	16.01.2010 22:53:03	1		
18	16.01.2010 22:53:23	1		
19	16.01.2010 22:54:15	1		
20	16.01.2010 22:54:42	1		
21	16.01.2010 22:55:11	1		
22	16.01.2010 22:55:55	1		

Время Unit'a в момент синхронизации 17.01.2010 0:00:56 + 212449.6мкс;

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