



CONTROLE OFFICIEL SUISSE DES CHRONOMETRES

BUREAUX OFFICIELS DE CONTROLE (BO) de Bienne, Le Locle, Saint-Imier	Edition :	1
	Edited par :	PSO
Homologation Report FIS (TIMING-BOOKLET v2.50 October 2013)	Date :	06.01.2014
	Page :	1 of 5

Homologation Report of timing device Digitech ChronoPrinter AG Master

based on FIS TIMING-BOOKLET (version 2.50 October 2013)

Report Number	HOM-DIGCPM2013001	
Requested by	Fédération Internationale de Ski (FIS) Mr. Francesco Cattaneo BlochStrasse 2 CH-3653 Oberhofen/Thunersee	
Description of equipment	Multi sports timing device, internal printer with battery	
Type	Chronoprinter AG Master, Thousandth writing chronometer	
Manufacturer	DIGITECH	
Serial Number	99991/3/0960	
Production Year	2013	
Date(s) of measures	13.12.2013 – 17.12.2013	
Date of report	06.01.2014	
Location(s) of measures	Bureau Officiel de Saint-Imier	
Rules	FIS 2.50, October 2013, rehomologation of DIG.001.99	
Results	Passed with comments	
Signatures	Tests and report by Pascal Soltermann	Controlled by Andreas Wyss
Comments	DUT resolution is limited to 1/1000 second. As a consequence, uncertainty for readings are limited to +/- 0.5ms. The reference triggering is within +/- 1µs GPS time-scale absolute time, uncertainty and propagation delays are included This device is tested as a re-homologation, so old applicable rules (until 2012-04-30) were used. DUT Time-of-Day is set in Manual mode DUT and electronically synchronized with 60S reference pulse.	
Content:	Appendices:	
Report: 5 pages	Appendix A: Test 8.2, Data and Statistics	
Appendices: 6 pages	Appendix B: Test 5.1, 7.2, Data and Statistics	



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Edition	:	1
Edited par	:	PSO
Date	:	06.01.2014
Page	:	2 of 5

Homologation Report FIS (TIMING-BOOKLET v2.50 October 2013)

Equipment Description



Dimensions	:	30 x 22 x 7 cm
Weight	:	1800 gr.
Operating Temperature	:	-10°C to +70°C
Relative Humidity	:	10 to 90% without condensation
Power Supply	:	built-in watertight lead accumulators with internal recombination LAUMA-NE 103 battery charger included
Number of inputs	:	4, Start, Intermediate I, Intermediate II, Finish
Min. Pulse Duration	:	2ms
Serial Interface	:	RS232C asynchronous
Local Network	:	RS485 asynchronous
Calibration Accuracy	:	+/- 0.3 PPM (+/-0.0011 s/hour)
Temperature stability	:	+/- 2 PPM from -20°C to +7°C (+/-0.007 s/hour)
Ageing	:	+/- 3 PPM per year (+/- 0.011 s/hour per year)

Abbreviations:

Ref. = Reference

P = PASS

F = FAIL

N/A = not applicable

N/C = not conducted (not measured or not checked)

DUT = Device under Test

GPS = Global Positioning System



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Homologation Report FIS (TIMING-BOOKLET v2.50 October 2013)	Date :	06.01.2014
	Page :	3 of 5

Ref.	Description	Comments	Result
1	Timer		
1.1	The timing device must have an internal or external printer	Internal printer	P
1.2	Printing through a computer is not allowed	Internal printer	P
1.3	The timer must be able to operate in Time-of-Day		P
1.4	The output of the time must always have the same precision (e.g. printer, display and interface)		P
2	Printer		
2.1	This printer must print at least in a chronological order the time of day		P
2.2	For each printed time of day there must be an indication of the timing channel	S, I, II, F # Symbol if Manual sensing	P
2.3	If it is possible to do manipulation or correction of time in the timer, the printer must mark such a corrected time	Symbol "m" if entered manually	P
3	Interface		
3.1	The timing device needs an interface (e.g. RS232, RS422, USB) to connect a PC and transfer the data for data processing (result service) online	RS232C For automatic transmission, in RS232 Settings, set "TX Auto = YES"	P
4	Power Supply		
4.1a	The timing system must work without power supply on internal batteries for 4 hours at +10°C and two impulses per minute with printout	Valid from 2012-05-01 N/A because re-homologation	N/A
4.1b	The timing system must work without power supply on internal batteries for 4 hours at +23°C and one impulse per minute with printout	Valid until 2012-04-30 Battery Capacity 65% after 4 hours	P
4.1c	The timing system must work without power supply on internal batteries for 2 hours at -10°C and one impulse per minute with printout	Valid until 2012-04-30 Battery Capacity 15% after 9 hours	P
5	Operation Temperature		
5.1	The timing device and printer must work at ambient temperature from -10°C to +40°C	Tested with 7.2	P
6	Measuring range		
6.1	Time of day mode must be possible in hours, minutes, seconds and 1/1000, or better	All measures and calculations are made with 1/1000 second precision Can be truncated or rounded in 1/100, 1/10 or to the second	P



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	Edited par :	PSO
Homologation Report FIS (TIMING-BOOKLET v2.50 October 2013)	Date :	06.01.2014
	Page :	4 of 5

Ref.	Description	Comments	Result
7	Timer precision		
7.1a	Must measure up to 1/1000 second in time of day mode	Valid until 2012-04-30	P
7.1b	Must measure up to 1/10000 second in time of day mode	Valid from 2012-05-01 N/A because re-homologation	N/A
7.2	Timer accuracy must be below +/-10 PPM at a device temperature from -10°C to +60°C	Test Results Appendix B Time Drift after 2h @-10°C: 1.528 PPM (+11ms) Time Drift after 2h @+60°C: 0.417 PPM (+3ms)	P
8	Quartz		
8.1	Ageing of the quartz must be below +/-3 PPM per year	Not tested, given at +/- 3 PPM per year (manufacturer specifications)	P
8.2	With adjusted quartz frequency the time drift must be below +/-0.5PPM at 23°C	Test Results Appendix A Measured Time Drift after 24h: -0.104 PPM (-9ms)	P
9	Impulse Triggering		
9.1	The delay of impulses is not allowed to be higher than 1/1000 second for the same channel (the channel is triggered from a reference impulse device in minute intervals)		P
9.2	If two channels are triggered at the same time their times must be within 1/1000 second	All 4 channels are within the same 1/1000 second	P
9.3	The delay of impulses must be constant; the range must be less than 1/10000 second	This delay cannot be measured with DUT resolution of 1/1000 second. This value was measured under 1/1000 second.	N/C
10	Timing Channels		
10.1	The timing device needs a minimum of two independent channels, one for start and one for finish	4 Channels available: Start, Intermediate I, Intermediate II and Finish	P
11	Synchronization		
1.1	Synchronization between main and backup timer must be possible		P



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	Page :	5 of 5

Ref.	Description	Comments	Result
12	Electromagnetic		
12.1	The timing device must meet the standards of IEC (International Electronic Commission)	Safety: IEC950:1991 / EN60950:1993	P
12.2	The timing device must function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment	EMC: EN55022:1993 Class B EN50082-1:1997 EN61000-4-3: 3V/m ENV50204: 10V/m IEC801-2:1991-4kV CD-8kV AD IEC801-4:1988-1kV AC-0.5kV/O IEC801-5:1993-2kV C.mode IEC801-5:1993-1kV D.mode IEC801-6:1993-3Vemf C.mode	P
13	Truncation		
13.1	The truncation to 1/100 of seconds must be made after the calculation of the run tim. The digits of the run time after the 1/100 are thrown away (See booklet for details)		P

Timer Homologation, Test Reference 9.1, Appendix A

Date / Tester : 13.12.2013 PSO
 Homologation # : DIGPCM2013001
 Test : 8.2, Time drift must be below +/-0.5PPM @ 23°C
 Result : **PASS**
 Drift after 24h [s] : -0.009000
 Drift after 24h [PPM] : **-0.104**
 Setup : Timer is triggered from 10MIN Reference Pulse on Finish input
 Test duration is 24h, 1 impulse every 10 minutes with printout
 Temperature : 23°C (+/- 0.5°C)
 Triggering rate [minutes] 10
 Synchronization Time : 16:28:00.000
 Comments : RS232 Auto TX is used for logging with a PC and compared against the printout results, if discrepancy is detected, the paper value is used and discrepancy is noted.

DATA			
<i>DUT PC RAW TRACE</i>	<i>Index</i>	<i>DUT Printout</i>	<i>Drift in [s]</i>
017-00000-163000000-000-000	0	16:30:00.000	
017-00000-163959999-000-001	1	16:39:59.999	-0.001000
017-00000-164959999-000-002	2	16:49:59.999	-0.001000
017-00000-165959999-000-003	3	16:59:59.999	-0.001000
017-00000-170959999-000-004	4	17:09:59.999	-0.001000
017-00000-171959999-000-005	5	17:19:59.999	-0.001000
017-00000-172959999-000-006	6	17:29:59.999	-0.001000
017-00000-173959999-000-007	7	17:39:59.999	-0.001000
017-00000-174959999-000-008	8	17:49:59.999	-0.001000
017-00000-175959998-000-009	9	17:59:59.998	-0.002000
017-00000-180959998-000-010	10	18:09:59.998	-0.002000
017-00000-181959998-000-011	11	18:19:59.998	-0.002000
017-00000-182959998-000-012	12	18:29:59.998	-0.002000
017-00000-183959998-000-013	13	18:39:59.998	-0.002000
017-00000-184959998-000-014	14	18:49:59.998	-0.002000
017-00000-185959998-000-015	15	18:59:59.998	-0.002000
017-00000-190959998-000-016	16	19:09:59.998	-0.002000
017-00000-191959998-000-017	17	19:19:59.998	-0.002000
017-00000-192959998-000-018	18	19:29:59.998	-0.002000
017-00000-193959997-000-019	19	19:39:59.997	-0.003000
017-00000-194959997-000-020	20	19:49:59.997	-0.003000
017-00000-195959997-000-021	21	19:59:59.997	-0.003000
017-00000-200959997-000-022	22	20:09:59.997	-0.003000
017-00000-201959997-000-023	23	20:19:59.997	-0.003000
017-00000-202959997-000-024	24	20:29:59.997	-0.003000
017-00000-203959997-000-025	25	20:39:59.997	-0.003000
017-00000-204959997-000-026	26	20:49:59.997	-0.003000
017-00000-205959997-000-027	27	20:59:59.997	-0.003000
017-00000-210959997-000-028	28	21:09:59.997	-0.003000
017-00000-211959997-000-029	29	21:19:59.997	-0.003000
017-00000-212959997-000-030	30	21:29:59.997	-0.003000
017-00000-213959997-000-031	31	21:39:59.997	-0.003000
017-00000-214959997-000-032	32	21:49:59.997	-0.003000
017-00000-215959997-000-033	33	21:59:59.997	-0.003000
017-00000-220959997-000-034	34	22:09:59.997	-0.003000
017-00000-221959997-000-035	35	22:19:59.997	-0.003000
017-00000-222959997-000-036	36	22:29:59.997	-0.003000
017-00000-223959996-000-037	37	22:39:59.996	-0.004000
017-00000-224959996-000-038	38	22:49:59.996	-0.004000
017-00000-225959996-000-039	39	22:59:59.996	-0.004000
017-00000-230959996-000-040	40	23:09:59.996	-0.004000

017-00000-075959994-000-093	93	07:59:59.994	-0.006000
017-00000-080959994-000-094	94	08:09:59.994	-0.006000
017-00000-081959994-000-095	95	08:19:59.994	-0.006000
017-00000-082959994-000-096	96	08:29:59.994	-0.006000
017-00000-083959994-000-097	97	08:39:59.994	-0.006000
017-00000-084959994-000-098	98	08:49:59.994	-0.006000
017-00000-085959994-000-099	99	08:59:59.994	-0.006000
017-00000-090959994-000-100	100	09:09:59.994	-0.006000
017-00000-091959993-000-101	101	09:19:59.993	-0.007000
017-00000-092959993-000-102	102	09:29:59.993	-0.007000
017-00000-093959993-000-103	103	09:39:59.993	-0.007000
017-00000-094959993-000-104	104	09:49:59.993	-0.007000
017-00000-095959993-000-105	105	09:59:59.993	-0.007000
017-00000-100959993-000-106	106	10:09:59.993	-0.007000
017-00000-101959993-000-107	107	10:19:59.993	-0.007000
017-00000-102959993-000-108	108	10:29:59.993	-0.007000
017-00000-103959993-000-109	109	10:39:59.993	-0.007000
017-00000-104959993-000-110	110	10:49:59.993	-0.007000
017-00000-105959993-000-111	111	10:59:59.993	-0.007000
017-00000-110959993-000-112	112	11:09:59.993	-0.007000
017-00000-111959993-000-113	113	11:19:59.993	-0.007000
017-00000-112959993-000-114	114	11:29:59.993	-0.007000
017-00000-113959993-000-115	115	11:39:59.993	-0.007000
017-00000-114959993-000-116	116	11:49:59.993	-0.007000
017-00000-115959993-000-117	117	11:59:59.993	-0.007000
017-00000-120959993-000-118	118	12:09:59.993	-0.007000
017-00000-121959993-000-119	119	12:19:59.993	-0.007000
017-00000-122959993-000-120	120	12:29:59.993	-0.007000
017-00000-123959992-000-121	121	12:39:59.992	-0.008000
017-00000-124959992-000-122	122	12:49:59.992	-0.008000
017-00000-125959992-000-123	123	12:59:59.992	-0.008000
017-00000-130959992-000-124	124	13:09:59.992	-0.008000
017-00000-131959992-000-125	125	13:19:59.992	-0.008000
017-00000-132959992-000-126	126	13:29:59.992	-0.008000
017-00000-133959992-000-127	127	13:39:59.992	-0.008000
017-00000-134959992-000-128	128	13:49:59.992	-0.008000
017-00000-135959992-000-129	129	13:59:59.992	-0.008000
017-00000-140959992-000-130	130	14:09:59.992	-0.008000
017-00000-141959992-000-131	131	14:19:59.992	-0.008000
017-00000-142959992-000-132	132	14:29:59.992	-0.008000
017-00000-143959992-000-133	133	14:39:59.992	-0.008000
017-00000-144959992-000-134	134	14:49:59.992	-0.008000
017-00000-145959992-000-135	135	14:59:59.992	-0.008000
017-00000-150959992-000-136	136	15:09:59.992	-0.008000
017-00000-151959992-000-137	137	15:19:59.992	-0.008000
017-00000-152959992-000-138	138	15:29:59.992	-0.008000
017-00000-153959992-000-139	139	15:39:59.992	-0.008000
017-00000-154959991-000-140	140	15:49:59.991	-0.009000
017-00000-155959991-000-141	141	15:59:59.991	-0.009000
017-00000-160959991-000-142	142	16:09:59.991	-0.009000
017-00000-161959991-000-143	143	16:19:59.991	-0.009000
017-00000-162959991-000-144	144	16:29:59.991	-0.009000

Timer Homologation, Test Reference 5.1, 7.2, Appendix B

Date / Tester : 16.12.2013 PSO
 Homologation # : DIGPCM2013001
 Test : 7.2, Timer accuracy must be below +/- 10 PPM from -10°C to +60°C
 Result : **PASS**
 Drift after 2h [s] : 0.003000
 Drift after 2h [PPM] : **0.417**
 Setup : Timer is triggered from 60S Reference Pulse on Finish input
 Test duration is 2h, 1 impulse every 1 minute with printout
 Temperature : 60°C (+/- 0.5°C)
 Triggering rate [minutes] 1
 Synchronization Time : 12:47:00.000
 Comments : RS232 Auto TX is used for logging with a PC and compared against the printout results, if discrepancy is detected, the paper value is used and discrepancy is noted.
 Test 5.1 is intrinsically tested with test 7.2 as the unit has proven to be able to work with printout from -10°C up to +60°C

DATA			
<i>DUT PC RAW TRACE</i>	<i>Index</i>	<i>DUT Printout</i>	<i>Drift in [s]</i>
017-00000-124800000-000-000	0	12:48:00.000	
017-00000-124900000-000-001	1	12:49:00.000	0.000000
017-00000-125000000-000-002	2	12:50:00.000	0.000000
017-00000-125100000-000-003	3	12:51:00.000	0.000000
017-00000-125200000-000-004	4	12:52:00.000	0.000000
017-00000-125300000-000-005	5	12:53:00.000	0.000000
017-00000-125400000-000-006	6	12:54:00.000	0.000000
017-00000-125500000-000-007	7	12:55:00.000	0.000000
017-00000-125600000-000-008	8	12:56:00.000	0.000000
017-00000-125700000-000-009	9	12:57:00.000	0.000000
017-00000-125800000-000-010	10	12:58:00.000	0.000000
017-00000-125900000-000-011	11	12:59:00.000	0.000000
017-00000-130000000-000-012	12	13:00:00.000	0.000000
017-00000-130100000-000-013	13	13:01:00.000	0.000000
017-00000-130200000-000-014	14	13:02:00.000	0.000000
017-00000-130300000-000-015	15	13:03:00.000	0.000000
017-00000-130400000-000-016	16	13:04:00.000	0.000000
017-00000-130500000-000-017	17	13:05:00.000	0.000000
017-00000-130600000-000-018	18	13:06:00.000	0.000000
017-00000-130700000-000-019	19	13:07:00.000	0.000000
017-00000-130800000-000-020	20	13:08:00.000	0.000000
017-00000-130900000-000-021	21	13:09:00.000	0.000000
017-00000-131000000-000-022	22	13:10:00.000	0.000000
017-00000-131100000-000-023	23	13:11:00.000	0.000000
017-00000-131200000-000-024	24	13:12:00.000	0.000000
017-00000-131300000-000-025	25	13:13:00.000	0.000000
017-00000-131400000-000-026	26	13:14:00.000	0.000000
017-00000-131500000-000-027	27	13:15:00.000	0.000000
017-00000-131600000-000-028	28	13:16:00.000	0.000000
017-00000-131700000-000-029	29	13:17:00.000	0.000000
017-00000-131800000-000-030	30	13:18:00.000	0.000000
017-00000-131900000-000-031	31	13:19:00.000	0.000000
017-00000-132000000-000-032	32	13:20:00.000	0.000000
017-00000-132100000-000-033	33	13:21:00.000	0.000000
017-00000-132200000-000-034	34	13:22:00.000	0.000000
017-00000-132300001-000-035	35	13:23:00.001	0.001000
017-00000-132400001-000-036	36	13:24:00.001	0.001000
017-00000-132500001-000-037	37	13:25:00.001	0.001000
017-00000-132600001-000-038	38	13:26:00.001	0.001000

017-00000-135000001-000-062	62	13:50:00.001	0.001000
017-00000-135100001-000-063	63	13:51:00.001	0.001000
017-00000-135200001-000-064	64	13:52:00.001	0.001000
017-00000-135300001-000-065	65	13:53:00.001	0.001000
017-00000-135400001-000-066	66	13:54:00.001	0.001000
017-00000-135500001-000-067	67	13:55:00.001	0.001000
017-00000-135600002-000-068	68	13:56:00.002	0.002000
017-00000-135700002-000-069	69	13:57:00.002	0.002000
017-00000-135800002-000-070	70	13:58:00.002	0.002000
017-00000-135900002-000-071	71	13:59:00.002	0.002000
017-00000-140000002-000-072	72	14:00:00.002	0.002000
017-00000-140100002-000-073	73	14:01:00.002	0.002000
017-00000-140200002-000-074	74	14:02:00.002	0.002000
017-00000-140300002-000-075	75	14:03:00.002	0.002000
017-00000-140400002-000-076	76	14:04:00.002	0.002000
017-00000-140500002-000-077	77	14:05:00.002	0.002000
017-00000-140600002-000-078	78	14:06:00.002	0.002000
017-00000-140700002-000-079	79	14:07:00.002	0.002000
017-00000-140800002-000-080	80	14:08:00.002	0.002000
017-00000-140900002-000-081	81	14:09:00.002	0.002000
017-00000-141000002-000-082	82	14:10:00.002	0.002000
017-00000-141100002-000-083	83	14:11:00.002	0.002000
017-00000-141200002-000-084	84	14:12:00.002	0.002000
017-00000-141300002-000-085	85	14:13:00.002	0.002000
017-00000-141400002-000-086	86	14:14:00.002	0.002000
017-00000-141500002-000-087	87	14:15:00.002	0.002000
017-00000-141600002-000-088	88	14:16:00.002	0.002000
017-00000-141700002-000-089	89	14:17:00.002	0.002000
017-00000-141800002-000-090	90	14:18:00.002	0.002000
017-00000-141900002-000-091	91	14:19:00.002	0.002000
017-00000-142000002-000-092	92	14:20:00.002	0.002000
017-00000-142100002-000-093	93	14:21:00.002	0.002000
017-00000-142200002-000-094	94	14:22:00.002	0.002000
017-00000-142300002-000-095	95	14:23:00.002	0.002000
017-00000-142400002-000-096	96	14:24:00.002	0.002000
017-00000-142500002-000-097	97	14:25:00.002	0.002000
017-00000-142600003-000-098	98	14:26:00.003	0.003000
017-00000-142700003-000-099	99	14:27:00.003	0.003000
017-00000-142800003-000-100	100	14:28:00.003	0.003000
017-00000-142900003-000-101	101	14:29:00.003	0.003000
017-00000-143000003-000-102	102	14:30:00.003	0.003000
017-00000-143100003-000-103	103	14:31:00.003	0.003000
017-00000-143200003-000-104	104	14:32:00.003	0.003000
017-00000-143300003-000-105	105	14:33:00.003	0.003000
017-00000-143400003-000-106	106	14:34:00.003	0.003000
017-00000-143500003-000-107	107	14:35:00.003	0.003000
017-00000-143600003-000-108	108	14:36:00.003	0.003000
017-00000-143700003-000-109	109	14:37:00.003	0.003000
017-00000-143800003-000-110	110	14:38:00.003	0.003000
017-00000-143900003-000-111	111	14:39:00.003	0.003000
017-00000-144000003-000-112	112	14:40:00.003	0.003000
017-00000-144100003-000-113	113	14:41:00.003	0.003000
017-00000-144200003-000-114	114	14:42:00.003	0.003000
017-00000-144300003-000-115	115	14:43:00.003	0.003000
017-00000-144400003-000-116	116	14:44:00.003	0.003000
017-00000-144500003-000-117	117	14:45:00.003	0.003000
017-00000-144600003-000-118	118	14:46:00.003	0.003000
017-00000-144700003-000-119	119	14:47:00.003	0.003000
017-00000-144800003-000-120	120	14:48:00.003	0.003000

Timer Homologation, Test Reference 5.1, 7.2, Appendix B

Date / Tester : 17.12.2013 PSO
 Homologation # : DIGPCM2013001
 Test : 7.2, Timer accuracy must be below +/- 10 PPM from -10°C to +60°C
 Result : **PASS**
 Drift after 2h [s] : 0.011000
 Drift after 2h [PPM] : **1.528**
 Setup : Timer is triggered from 60S Reference Pulse on Finish input
 Test duration is 2h, 1 impulse every 1 minute with printout
 Temperature : -10°C (+/- 0.5°C)
 Triggering rate [minutes] : 1
 Synchronization Time : 07:16:00.000
 Comments : RS232 Auto TX is used for logging with a PC and compared against the printout results, if discrepancy is detected, the paper value is used and discrepancy is noted.
 Test 5.1 is intrinsically tested with test 7.2 as the unit has proven to be able to work with printout from -10°C up to +60°C

DATA			
<i>DUT PC RAW TRACE</i>	<i>Index</i>	<i>DUT Printout</i>	<i>Drift in [s]</i>
017-00000-071800000-000-000	0	07:18:00.000	
017-00000-071900000-000-001	1	07:19:00.000	0.000000
017-00000-072000000-000-002	2	07:20:00.000	0.000000
017-00000-072100000-000-003	3	07:21:00.000	0.000000
017-00000-072200000-000-004	4	07:22:00.000	0.000000
017-00000-072300000-000-005	5	07:23:00.000	0.000000
017-00000-072400000-000-006	6	07:24:00.000	0.000000
017-00000-072500001-000-007	7	07:25:00.001	0.001000
017-00000-072600001-000-008	8	07:26:00.001	0.001000
017-00000-072700001-000-009	9	07:27:00.001	0.001000
017-00000-072800001-000-010	10	07:28:00.001	0.001000
017-00000-072900001-000-011	11	07:29:00.001	0.001000
017-00000-073000001-000-012	12	07:30:00.001	0.001000
017-00000-073100001-000-013	13	07:31:00.001	0.001000
017-00000-073200001-000-014	14	07:32:00.001	0.001000
017-00000-073300001-000-015	15	07:33:00.001	0.001000
017-00000-073400001-000-016	16	07:34:00.001	0.001000
017-00000-073500001-000-017	17	07:35:00.001	0.001000
017-00000-073600002-000-018	18	07:36:00.002	0.002000
017-00000-073700002-000-019	19	07:37:00.002	0.002000
017-00000-073800002-000-020	20	07:38:00.002	0.002000
017-00000-073900002-000-021	21	07:39:00.002	0.002000
017-00000-074000002-000-022	22	07:40:00.002	0.002000
017-00000-074100002-000-023	23	07:41:00.002	0.002000
017-00000-074200002-000-024	24	07:42:00.002	0.002000
017-00000-074300002-000-025	25	07:43:00.002	0.002000
017-00000-074400002-000-026	26	07:44:00.002	0.002000
017-00000-074500002-000-027	27	07:45:00.002	0.002000
017-00000-074600003-000-028	28	07:46:00.003	0.003000
017-00000-074700003-000-029	29	07:47:00.003	0.003000
017-00000-074800003-000-030	30	07:48:00.003	0.003000
017-00000-074900003-000-031	31	07:49:00.003	0.003000
017-00000-075000003-000-032	32	07:50:00.003	0.003000
017-00000-075100003-000-033	33	07:51:00.003	0.003000
017-00000-075200003-000-034	34	07:52:00.003	0.003000
017-00000-075300003-000-035	35	07:53:00.003	0.003000
017-00000-075400003-000-036	36	07:54:00.003	0.003000
017-00000-075500003-000-037	37	07:55:00.003	0.003000
017-00000-075600003-000-038	38	07:56:00.003	0.003000

017-00000-082000006-000-062	62	08:20:00.006	0.006000
017-00000-082100006-000-063	63	08:21:00.006	0.006000
017-00000-082200006-000-064	64	08:22:00.006	0.006000
017-00000-082300006-000-065	65	08:23:00.006	0.006000
017-00000-082400006-000-066	66	08:24:00.006	0.006000
017-00000-082500006-000-067	67	08:25:00.006	0.006000
017-00000-082600006-000-068	68	08:26:00.006	0.006000
017-00000-082700006-000-069	69	08:27:00.006	0.006000
017-00000-082800006-000-070	70	08:28:00.006	0.006000
017-00000-082900007-000-071	71	08:29:00.007	0.007000
017-00000-083000007-000-072	72	08:30:00.007	0.007000
017-00000-083100007-000-073	73	08:31:00.007	0.007000
017-00000-083200007-000-074	74	08:32:00.007	0.007000
017-00000-083300007-000-075	75	08:33:00.007	0.007000
017-00000-083400007-000-076	76	08:34:00.007	0.007000
017-00000-083500007-000-077	77	08:35:00.007	0.007000
017-00000-083600007-000-078	78	08:36:00.007	0.007000
017-00000-083700007-000-079	79	08:37:00.007	0.007000
017-00000-083800007-000-080	80	08:38:00.007	0.007000
017-00000-083900008-000-081	81	08:39:00.008	0.008000
017-00000-084000008-000-082	82	08:40:00.008	0.008000
017-00000-084100008-000-083	83	08:41:00.008	0.008000
017-00000-084200008-000-084	84	08:42:00.008	0.008000
017-00000-084300008-000-085	85	08:43:00.008	0.008000
017-00000-084400008-000-086	86	08:44:00.008	0.008000
017-00000-084500008-000-087	87	08:45:00.008	0.008000
017-00000-084600008-000-088	88	08:46:00.008	0.008000
017-00000-084700008-000-089	89	08:47:00.008	0.008000
017-00000-084800008-000-090	90	08:48:00.008	0.008000
017-00000-084900008-000-091	91	08:49:00.008	0.008000
017-00000-085000009-000-092	92	08:50:00.009	0.009000
017-00000-085100009-000-093	93	08:51:00.009	0.009000
017-00000-085200009-000-094	94	08:52:00.009	0.009000
017-00000-085300009-000-095	95	08:53:00.009	0.009000
017-00000-085400009-000-096	96	08:54:00.009	0.009000
017-00000-085500009-000-097	97	08:55:00.009	0.009000
017-00000-085600009-000-098	98	08:56:00.009	0.009000
017-00000-085700009-000-099	99	08:57:00.009	0.009000
017-00000-085800009-000-100	100	08:58:00.009	0.009000
017-00000-085900009-000-101	101	08:59:00.009	0.009000
017-00000-090000009-000-102	102	09:00:00.009	0.009000
017-00000-090100010-000-103	103	09:01:00.010	0.010000
017-00000-090200010-000-104	104	09:02:00.010	0.010000
017-00000-090300010-000-105	105	09:03:00.010	0.010000
017-00000-090400010-000-106	106	09:04:00.010	0.010000
017-00000-090500010-000-107	107	09:05:00.010	0.010000
017-00000-090600010-000-108	108	09:06:00.010	0.010000
017-00000-090700010-000-109	109	09:07:00.010	0.010000
017-00000-090800010-000-110	110	09:08:00.010	0.010000
017-00000-090900010-000-111	111	09:09:00.010	0.010000
017-00000-091000010-000-112	112	09:10:00.010	0.010000
017-00000-091100010-000-113	113	09:11:00.010	0.010000
017-00000-091200011-000-114	114	09:12:00.011	0.011000
017-00000-091300011-000-115	115	09:13:00.011	0.011000
017-00000-091400011-000-116	116	09:14:00.011	0.011000
017-00000-091500011-000-117	117	09:15:00.011	0.011000
017-00000-091600011-000-118	118	09:16:00.011	0.011000
017-00000-091700011-000-119	119	09:17:00.011	0.011000
017-00000-091800011-000-120	120	09:18:00.011	0.011000