

No	Temp.	Slope	Sigma	P406	Short term	P121.5
2401	-15,8	3,7E-10	1,1E-10	36,8	1,8E-10	25,0
2431	-18,0	3,1E-10	2,6E-10	36,8	3,1E-10	24,9
2461	-19,3	2,4E-10	1,8E-10	36,7	1,8E-10	24,7
2491	-19,3	3,1E-11	2,4E-10	36,6	2,4E-10	25,1
2521	-19,2	5,9E-12	1,7E-10	36,6	2,1E-10	25,2
2551	-19,2	-8,5E-12	1,9E-10	36,5	2,1E-10	25,1
2581	-19,2	-1,4E-11	1,7E-10	36,5	1,5E-10	25,0
2611	-8,9	-2,3E-10	3,2E-10	36,4	1,7E-10	25,1
2641						
2671						
2701						
2731						
2761						
2791						
2821						
2851						
2881						
2911						
2941						
2971						
3001						
3031						
3061						
3091						
3121						
3151						
3181						
3211						
3241						
3271						
3301						
3331						
3361						
3391						
3421						
3451						
3481						
3511						
3541						
3571						
3601						
3631						
3661						
3691						
3721						
3751						
3781						
3811						
3841						
3871						
3901						

Beacon message at the end of Frequency Stability Test with Temperature Gradient :
FFFE2F901E1E24002B80374C89B78E0159E3

Frequency variation

406025136



406025048

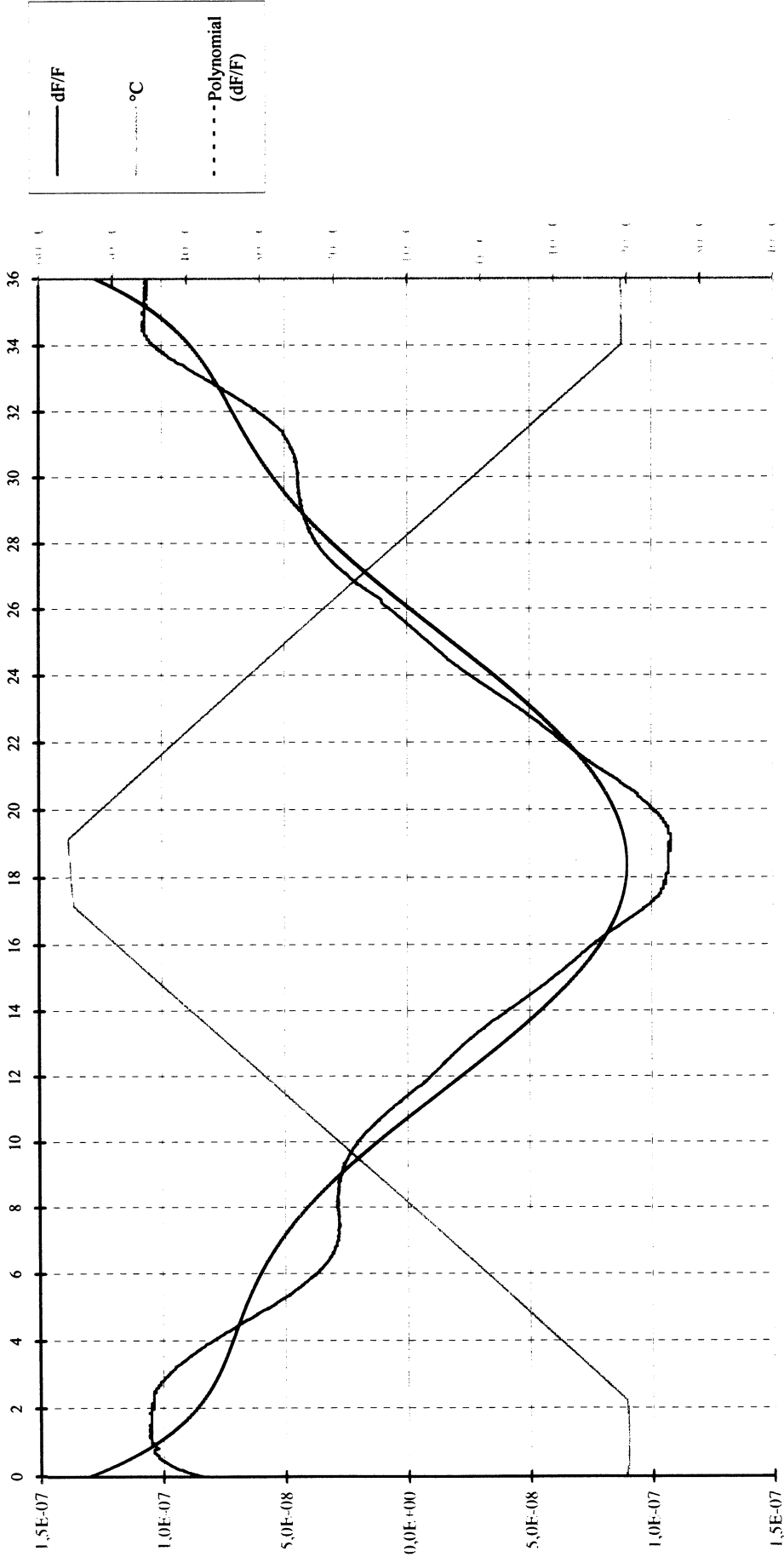
— Initial tracing	— Smoothed tracing
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TEMPERATURE GRADIENT TEST RESULTS (5 °C / hour)

Manufacturer : JOTRON
Model : TRON 40GPS
Number : 7001

Date : 24/06/2000
Time : 19:33:54

FREQUENCY VARIATION

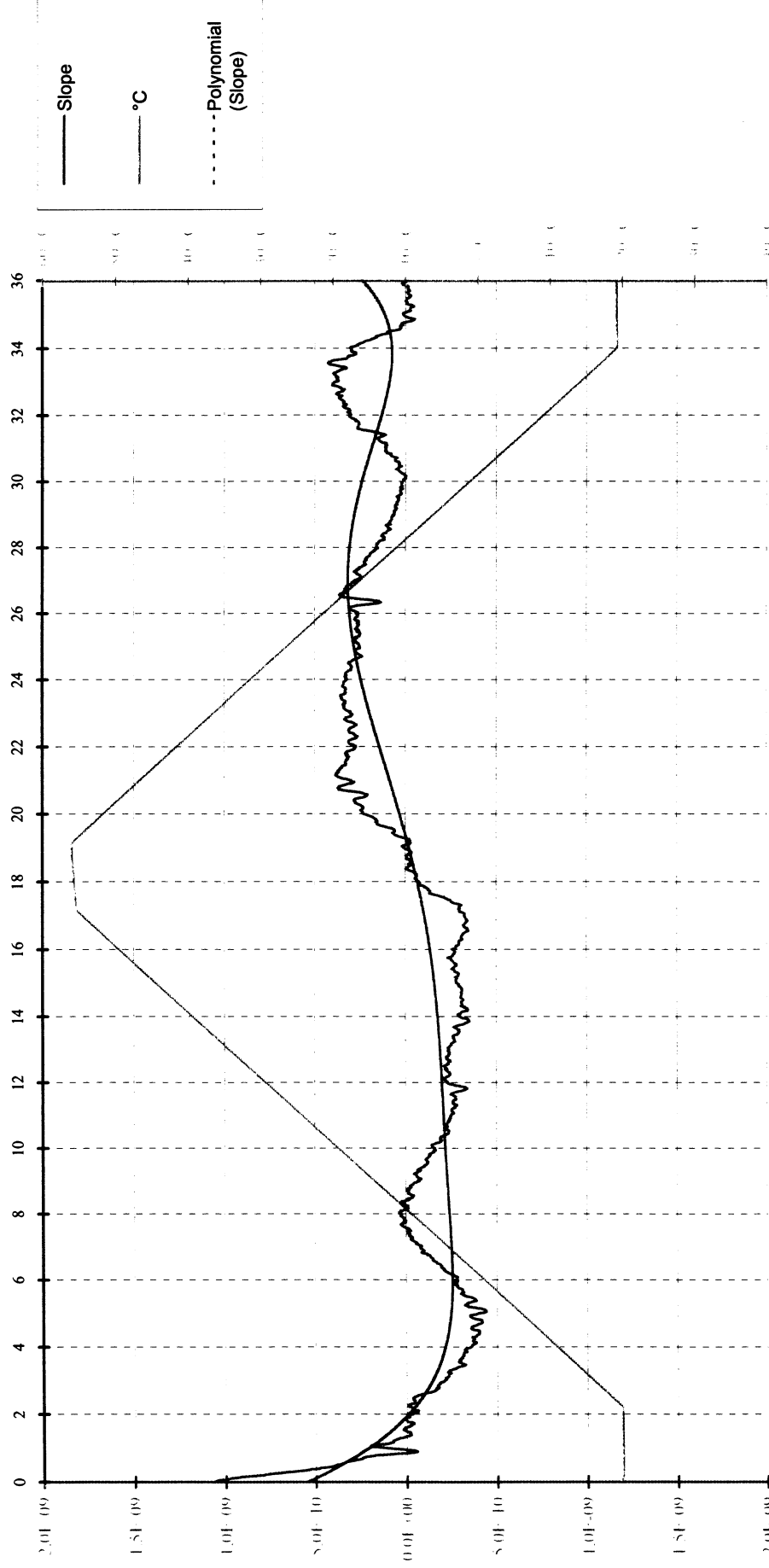


TEMPERATURE GRADIENT TEST RESULTS (5 °C / hour)

Date : 24/06/2000
Time : 19:33:54

Manufacturer : JOTRON
Model : TRON 40GPS
Number : 7001

MEDIUM TERM STABILITY : MEAN SLOPE /mn (-1,0E-9 to 1,0E-9)

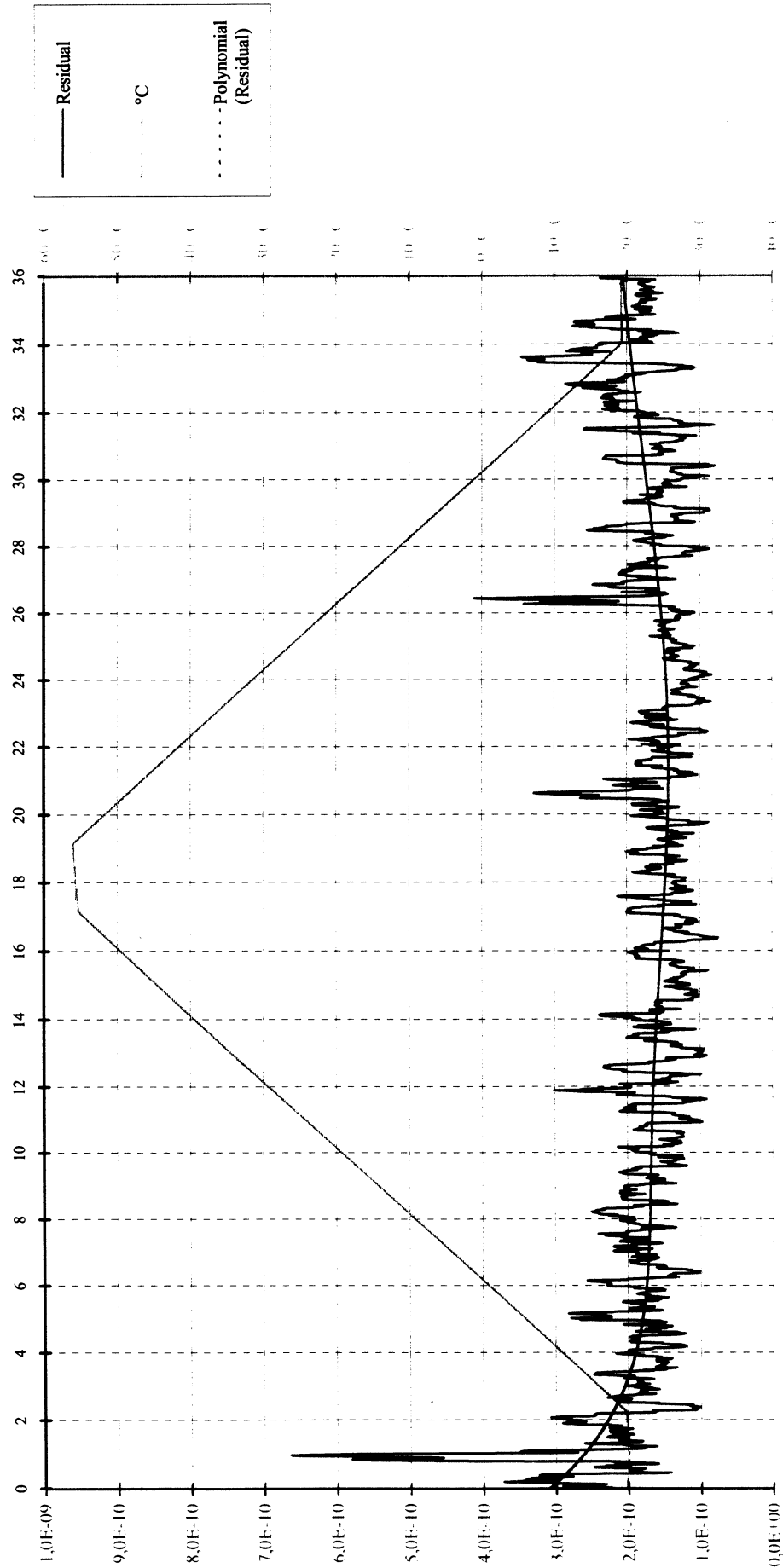


TEMPERATURE GRADIENT TEST RESULTS (5 °C / hour)

Manufacturer : JOTRON
Model : TRON 40GPS
Number : 7001

Date : 24/06/2000
Time : 19:33:54

MEDIUM TERM STABILITY : RESIDUAL ($\leq 3,0E-9$)

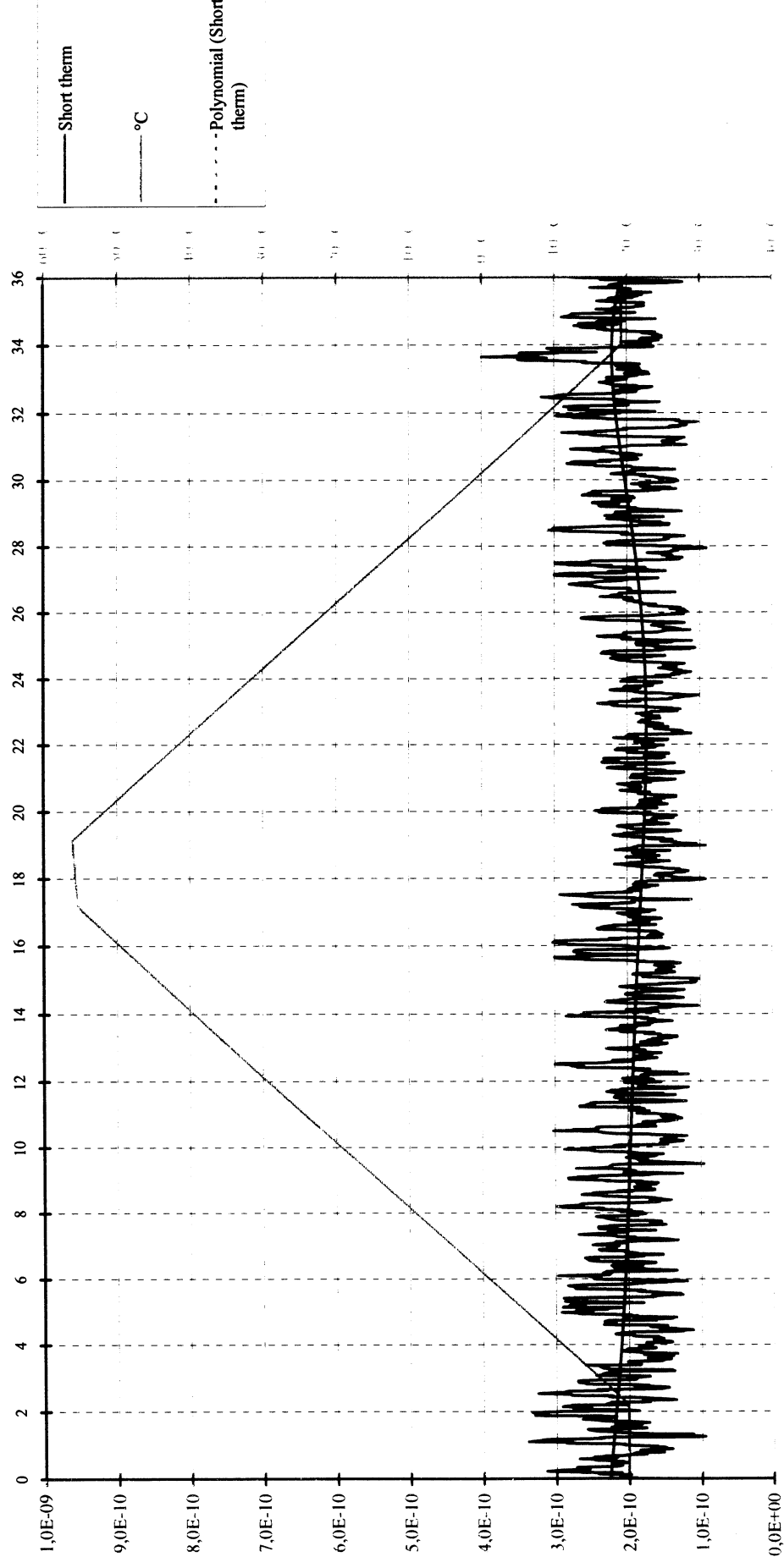


TEMPERATURE GRADIENT TEST RESULTS (5 °C / hour)

Date : 24/06/2000
Time : 19:33:54

Manufacturer : JOYTRON
Model : TRON 40GPS
Number : 7001

SHORT TERM STABILITY /100 mS ($\leq 2,0E-9$)

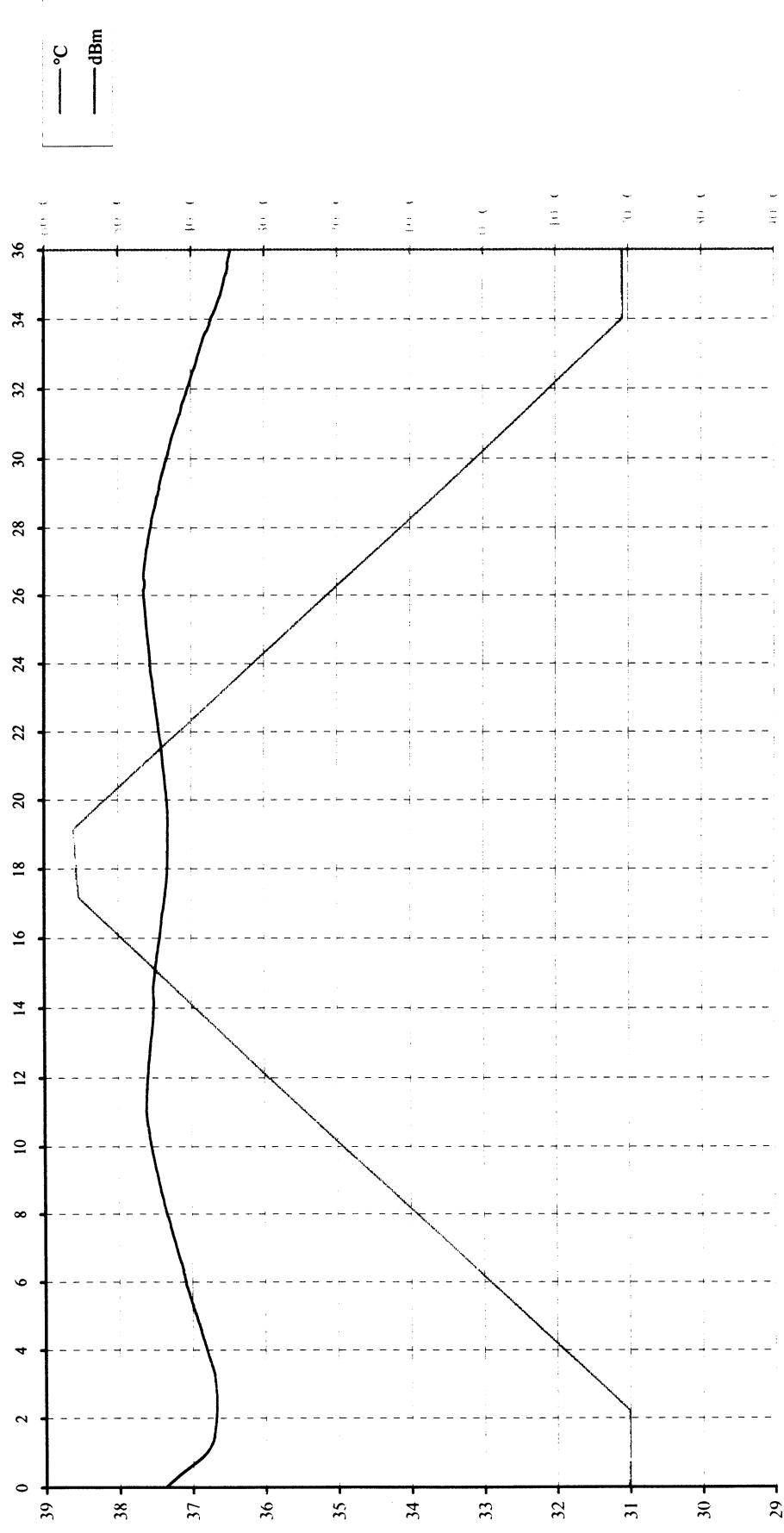


TEMPERATURE GRADIENT TEST RESULTS (5 °C / hour)

Manufacturer : JOTRON
Model : TRON 40GPS
Number : 7001

Date : 24/06/2000
Time : 19:33:54

OUTPUT POWER (35 to 39 dBm)



**SATELLITE QUALITATIVE TEST RESULTS ON
TRON 40GPS JOTRON
N° 7001**

TOULOUSE MCC LOCATIONS

RECHERCHE du 21/06/2000 14:13:06

Code balise : 203D3F7E20

Nom balise : M?U3

Pays : 257 NORWAY

Classe utilisateur : TEST--

Periode de consultation : 22/05/2000 14 a 21/06/2000 14

Position de reference : 43 33.6N et 001 28.8E

Toutes les luts

Tous les satellites

Date activation balise : // :

Recherche dans base principale

Resultats edites suivant chronologie du TCA

* TCA	TPC	* SL	PTS	* LAT1	LONG1PB	MAJ	BIAIS	ERR	* LAT2	LONG2	* CTA	FB	WF	SDV	CF	SRCE	MCCN	*	
* 15/06 07H09 07H23	* S07	1	*			..	...	0			*	...	4	9		...	2271	43433	*
* 15/06 07H09 10H37	* S07	1	*			..	...	0			*	...	-4	9		...	2272	43643	*
* 16/06 09H19 09H29	* C08	11	*	43.559	1.484	98	1	-294 0.31	* 44.600	13.997	* 4.2	4	0	0.3	4/0	2272	44725	*	
* 16/06 09H30 09H39	* S04	14	*	43.559	1.482	98	1	-293 0.22	* 38.832	24.503	* 8.6	4	0	0.3	4/0	2271	44774	*	
* 16/06 09H30 11H19	* S04	14	*	43.558	1.481	98	1	-293 0.19	* 38.833	24.499	* 8.6	-4	0	0.3	4/0	2271	44921	*	
* 16/06 09H30 12H55	* S04	14	*	43.559	1.479	98	1	-293 0.15	* 38.832	24.502	* 8.6	-4	0	0.3	4/0	2272	44996	*	
* 16/06 10H11 10H17	* S07	9	*	43.566	1.486	97	2	-293 0.81	* 55.711	-64.146	* 22.3	4	0	0.8	4/0	2271	44861	*	
* 16/06 10H11 18H24	* S07	9	*	43.568	1.488	97	2	-293 1.10	* 55.711	-64.153	* 22.3	-4	0	0.8	4/0	2271	45312	*	
* 16/06 11H04 11H13	* C08	11	*	43.558	1.480	99	1	-297 0.17	* 40.769	-37.194	* 14.9	4	0	0.3	4/0	2272	44898	*	
* 16/06 11H10 11H19	* S04	15	*	43.560	1.476	98	1	-296 0.34	* 48.445	-22.846	* 9.1	4	0	0.4	4/0	2271	44922	*	
* 16/06 11H10 12H55	* S04	15	*	43.558	1.478	98	1	-297 0.21	* 48.446	-22.850	* 9.1	-4	0	0.3	4/0	2272	44997	*	
* 16/06 11H10 19H25	* S04	15	*	43.559	1.477	98	1	-296 0.27	* 48.445	-22.850	* 9.1	-4	0	0.4	4/0	2271	45403	*	

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*****
* TCA      TPC      *SL      *PTS      *LAT1      LONG1PB MAJ BIAIS ERR      *LAT2      LONG2      *CTA FB WF SDV CF      SRCE MCCN      *
*****
* 16/06 12H49 12H55 *S04      5 * 43.561 1.491      88      3      -295 0.89      * 57.543 -72.474      * 24.4      4      0 3.3 4/0      2272      44998 *
* 16/06 12H49 19H25 *S04      5 * 43.567 1.485      88      3      -295 0.89      * 57.541 -72.489      * 24.4      -4      0 3.3 4/0      2271      45404 *
* 16/06 13H08 13H14 *S06      7 * 43.556 1.489      98      2      -299 0.82      * 56.341 67.551      * 22.4      4      0 0.7 4/0      2271      45050 *
* 16/06 14H42 16H31 *C06      2 * .....      ..      ...      0 .....      * .....      .....      * .....      -4      9 .....      2272      45194 *
* 16/06 14H48 14H56 *S06      14 * 43.560 1.484      98      1      -297 0.31      * 47.100 18.829      * 6.6      4      0 0.3 4/0      2271      45079 *
* 16/06 14H52 14H59 *S03      2 * .....      ..      ...      0 .....      * .....      .....      * .....      8      9 .....      2272      45092 *
* 16/06 16H21 16H31 *C06      14 * 43.559 1.479      91      3      -293 0.12      * 43.836 -1.926      * 1.0      4      0 0.3 4/0      2272      45120 *
* 16/06 16H21 18H16 *C06      14 * 43.559 1.483      91      3      -293 0.32      * 43.836 -1.929      * 1.0      -4      0 0.3 4/0      2272      45239 *
* 16/06 16H29 16H37 *S06      13 * 43.560 1.484      99      1      -293 0.31      * 37.262 -28.421      * 11.4      4      0 0.2 4/0      2271      45206 *
* 16/06 16H36 18H24 *S07      9 * 43.562 1.478      96      2      -293 0.32      * 55.593 65.963      * 22.0      -4      0 1.2 4/0      2271      45313 *
* 16/06 18H08 18H16 *C06      12 * 43.558 1.478      98      1      -289 0.31      * 47.750 -57.271      * 19.2      4      0 0.4 4/0      2272      45240 *
* 16/06 18H15 18H24 *S07      15 * 43.559 1.483      99      1      -288 0.30      * 46.659 17.389      * 6.1      4      0 0.1 4/0      2271      45314 *
* 16/06 18H15 20H03 *S07      15 * 43.560 1.480      99      1      -288 0.01      * 46.661 17.384      * 6.1      -4      0 0.1 4/0      2271      45462 *
* 16/06 19H18 19H25 *S04      11 * 43.559 1.483      99      1      -289 0.28      * 53.955 54.687      * 18.6      4      0 0.3 4/0      2271      45405 *
* 16/06 19H55 20H03 *S07      13 * 43.556 1.483      99      1      -288 0.53      * 37.268 -29.779      * 11.9      4      0 0.1 4/0      2271      45448 *
* 16/06 20H57 21H06 *S04      16 * 43.561 1.489      95      2      -288 0.76      * 44.599 6.633      * 2.1      4      0 0.2 4/0      2271      45482 *
* 16/06 20H57 22H46 *S04      16 * 43.561 1.482      95      2      -288 0.20      * 44.602 6.632      * 2.1      -4      0 0.3 4/0      2272      45573 *
* 16/06 20H57 09H25 *S04      16 * 43.561 1.482      95      2      -288 0.24      * 44.602 6.634      * 2.1      -4      0 0.3 4/0      2271      45985 *
* 16/06 21H08 21H17 *C08      7 * 43.558 1.479      99      1      -287 0.23      * 40.732 41.685      * 15.5      4      0 0.5 4/0      2272      45515 *
* 16/06 22H38 22H46 *S04      14 * 43.557 1.485      98      1      -287 0.56      * 34.758 -40.613      * 16.1      4      0 0.5 4/0      2272      45574 *
* 16/06 22H38 09H25 *S04      14 * 43.560 1.484      98      1      -286 0.35      * 34.764 -40.613      * 16.1      -4      0 0.5 4/0      2271      45986 *
* 16/06 22H53 23H03 *C08      17 * 43.559 1.476      99      1      -287 0.32      * 44.423 -9.293      * 3.6      4      0 0.1 4/0      2271      45593 *
* 17/06 00H40 00H48 *C08      10 * 43.562 1.480      97      2      -287 0.17      * 48.052 -65.240      * 21.6      4      0 0.7 4/0      2271      45624 *
* 17/06 01H31 01H39 *C06      2 * .....      ..      ...      0 .....      * .....      .....      * .....      4      9 .....      2271      45678 *
* 17/06 03H08 03H16 *S06      6 * 43.551 1.477      96      1      -181 1.05      * 35.085 42.792      * 15.9      8      0 0.7 4/0      2272      45694 *
* 17/06 03H17 03H27 *C06      11 * 43.565 1.550      88      4      -284 5.66      * 43.625 2.280      * 0.1      4      0 0.1 4/0      2271      45730 *
* 17/06 03H17 15H14 *C06      12 * 43.559 1.561      88      4      -284 6.57      * 43.616 2.255      * 0.1      -4      0 0.1 4/0      2271      46279 *
* 17/06 04H44 04H53 *S03      14 * 43.550 1.473      98      1      -238 1.20      * 41.798 10.441      * 3.3      8      0 0.2 4/0      2272      45741 *
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*****
* TCA      TPC      * SL      PTS      * LAT1      LONG1PB MAJ BIAIS      ERR      * LAT2      LONG2      * CTA FB WF SDV CF      SRCE MCCN      *
*****
* 17/06 04H49 04H58 * S06      13 * 43.563 1.466 92 2 -284 1.20 * 44.769 -4.390 * 2.4 4 0 0.5 4/0 2271 45754 *
* 17/06 05H02 15H14 * C06      11 * 43.560 1.475 99 1 -284 0.41 * 40.100 -47.572 * 18.9 -4 0 0.2 4/0 2271 46280 *
* 17/06 06H24 06H31 * S03      9 * 43.549 1.478 99 1 -241 1.19 * 50.913 -36.850 * 13.9 8 0 0.3 4/0 2272 45782 *
* 17/06 06H30 06H37 * S07      13 * 43.559 1.483 99 1 -288 0.29 * 35.342 42.178 * 15.5 4 0 0.3 4/0 2271 45843 *
* 17/06 06H30 21H18 * S07      13 * 43.559 1.481 99 1 -288 0.18 * 35.340 42.179 * 15.5 -4 0 0.3 4/0 2272 46820 *
* 17/06 08H04 08H13 * C08      12 * 43.558 1.480 99 1 -287 0.18 * 47.023 49.148 * 16.0 4 0 0.1 4/0 2272 45897 *
* 17/06 08H10 08H19 * S07      16 * 43.561 1.470 50 1 -287 0.82 * 44.875 -5.425 * 2.6 4 0 0.1 4/0 2271 45918 *
* 17/06 08H10 09H56 * S07      16 * 43.560 1.473 50 1 -287 0.54 * 44.875 -5.425 * 2.6 -4 0 0.1 4/0 2271 46052 *
* 17/06 08H10 21H18 * S07      16 * 43.557 1.480 50 1 -288 0.31 * 44.875 -5.433 * 2.6 -4 0 0.1 4/0 2272 46821 *
* 17/06 09H17 09H25 * S04      17 * 43.559 1.487 98 1 -291 0.61 * 37.540 30.595 * 11.0 4 0 0.3 4/0 2271 45987 *
* 17/06 09H49 09H56 * S07      13 * 43.562 1.478 98 1 -293 0.25 * 53.793 -52.800 * 19.0 4 0 0.4 4/0 2271 46053 *
* 17/06 09H49 18H01 * S07      13 * 43.560 1.478 98 1 -293 0.13 * 53.790 -52.802 * 19.0 -4 0 0.4 4/0 2271 46518 *
* 17/06 09H49 21H18 * S07      13 * 43.560 1.479 98 1 -293 0.09 * 53.791 -52.803 * 19.0 -4 0 0.4 4/0 2272 46822 *
* 17/06 09H50 10H00 * C08      16 * 43.557 1.467 98 1 -293 1.08 * 43.036 -5.033 * 2.6 4 0 0.1 4/0 2272 46080 *
* 17/06 10H58 11H06 * S04      16 * 43.558 1.482 99 1 -297 0.32 * 47.227 -16.744 * 6.9 4 0 0.2 4/0 2271 46125 *
* 17/06 11H35 11H42 * C08      9 * 43.557 1.480 96 2 -298 0.31 * 39.836 -54.907 * 21.6 4 0 0.7 4/0 2271 46148 *
* 17/06 12H37 12H42 * S04      10 * 43.564 1.485 98 1 -297 0.64 * 56.431 -65.658 * 22.7 4 0 0.6 4/0 2271 46169 *
* 17/06 12H37 19H12 * S04      10 * 43.563 1.483 98 1 -297 0.38 * 56.425 -65.663 * 22.7 -4 0 0.6 4/0 2272 46609 *
* 17/06 12H37 20H53 * S04      10 * 43.563 1.482 98 1 -297 0.34 * 56.425 -65.664 * 22.7 -4 0 0.6 4/0 2271 46743 *
* 17/06 14H27 14H34 * S03      11 * 43.559 1.480 98 1 -300 0.08 * 51.776 44.183 * 15.3 4 0 0.6 4/0 2271 46225 *
* 17/06 14H36 14H45 * S06      10 * 43.562 1.470 99 1 -193 0.84 * 48.250 24.430 * 8.6 8 0 0.2 4/0 2272 46243 *
* 17/06 15H04 15H14 * C06      8 * 43.558 1.484 99 1 -295 0.35 * 41.157 31.803 * 11.6 4 0 0.2 4/0 2271 46281 *
* 17/06 16H06 16H14 * S03      14 * 43.557 1.465 92 2 -291 1.26 * 42.642 -3.243 * 1.6 4 0 0.4 4/0 2271 46376 *
* 17/06 16H14 18H01 * S07      4 * 43.541 1.507 55 4 -283 2.98 * 57.114 77.241 * 25.0 -4 0 6.3 4/0 2271 46519 *
* 17/06 16H14 21H18 * S07      4 * 43.539 1.504 55 4 -283 3.02 * 57.115 77.235 * 25.0 -4 0 6.3 4/0 2272 46823 *
* 17/06 16H17 16H26 * S06      11 * 43.566 1.489 97 1 -188 1.02 * 38.567 -22.917 * 9.2 8 0 0.5 4/0 2272 46410 *
* 17/06 16H50 17H00 * C06      11 * 43.559 1.478 99 1 -290 0.21 * 45.319 -19.889 * 7.4 4 0 0.1 4/0 2271 46446 *
* 17/06 17H46 17H53 * S03      6 * 43.574 1.495 86 3 -250 1.96 * 33.244 -50.254 * 19.9 8 0 2.6 4/0 2272 46471 *
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* TCA	* TPC	* SL	* PTS	* LAT1	* LONG1PB	* MAJ	* BIAIS	* ERR	* LAT2	* LONG2	* CTA	* FB	* WF	* SDV	* CF	* SRCE	* MCCN
* 17/06 17H53 18H01	* S07	13	* 43.559	1.484	98	1	-290 0.31		* 48.691	27.952	* 9.9	4	0 0.3	4/0	2271	46520	
* 17/06 17H53 19H41	* S07	13	* 43.559	1.480	98	1	-290 0.10		* 48.693	27.945	* 9.9	-4	0 0.3	4/0	2271	46667	
* 17/06 17H53 21H18	* S07	12	* 43.558	1.478	98	1	-290 0.32		* 48.686	27.958	* 9.9	-4	0 0.4	4/0	2272	46824	
* 17/06 18H37 18H44	* C06	3	* 43.542	1.392	50	43	-269 7.36		* 48.581	-76.231	* 24.7	4	1 0.0	1/0	2271	46562	
* 17/06 18H37 00H16	* C06	3	* 43.542	1.388	50	43	-269 7.68		* 48.583	-76.232	* 24.7	-4	1 0.0	1/0	2271	46968	
* 17/06 19H05 19H12	* S04	11	* 43.560	1.481	99	1	-289 0.09		* 55.139	61.136	* 20.6	4	0 0.3	4/0	2272	46610	
* 17/06 19H05 20H53	* S04	11	* 43.560	1.484	99	1	-289 0.29		* 55.138	61.133	* 20.6	-4	0 0.4	4/0	2271	46744	
* 17/06 19H32 19H41	* S07	15	* 43.556	1.485	99	1	-288 0.62		* 39.423	-19.292	* 7.8	4	0 0.1	4/0	2271	46668	
* 17/06 19H32 21H18	* S07	14	* 43.557	1.484	99	1	-288 0.46		* 39.444	-19.290	* 7.8	-4	0 0.1	4/0	2272	46825	
* 17/06 20H44 20H53	* S04	15	* 43.561	1.484	99	1	-287 0.33		* 45.830	12.754	* 4.4	4	0 0.1	4/0	2271	46745	
* 17/06 21H39 21H48	* C08	14	* 43.559	1.486	99	1	-286 0.51		* 41.867	23.754	* 8.6	4	0 0.2	4/0	2271	46898	
* 17/06 22H25 22H33	* S04	13	* 43.557	1.482	98	1	-286 0.34		* 36.048	-34.449	* 13.7	4	0 0.3	4/0	2271	46924	
* 17/06 23H25 23H34	* C08	16	* 43.560	1.479	99	1	-285 0.08		* 45.876	-28.903	* 10.3	4	0 0.2	4/0	2271	46938	
* 18/06 00H13 00H16	* C06	1	*		..	...	0		*		*	4	9	...	2271	46987	
* 18/06 02H00 02H09	* C06	10	* 43.557	1.485	99	1	-284 0.54		* 46.365	38.333	* 12.5	4	0 0.2	4/0	2271	47020	
* 18/06 02H00 03H55	* C06	9	* 43.553	1.485	99	1	-284 0.90		* 46.334	38.375	* 12.5	-4	0 0.2	4/0	2271	47074	
* 18/06 02H56 03H03	* S06	8	* 43.553	1.486	98	1	-285 0.90		* 33.799	48.344	* 18.0	4	0 0.3	4/0	2271	47053	
* 18/06 03H46 03H55	* C06	15	* 43.558	1.475	99	1	-283 0.45		* 42.285	-14.745	* 6.3	4	0 0.1	4/0	2271	47075	
* 18/06 04H19 04H28	* S03	14	* 43.549	1.474	99	1	-238 1.34		* 39.459	22.267	* 7.8	8	0 0.2	4/0	2272	47090	
* 18/06 04H37 04H46	* S06	14	* 43.578	1.389	50	43	-283 7.59		* 43.687	0.849	* 0.2	4	0 0.7	4/0	2271	47114	
* 18/06 05H59 06H07	* S03	10	* 43.548	1.479	99	1	-240 1.36		* 48.606	-25.001	* 9.8	8	0 0.1	4/0	2272	47145	
* 18/06 06H07 06H13	* S07	7	* 43.556	1.482	92	2	-286 0.51		* 33.254	52.546	* 19.7	4	0 1.3	4/0	2271	47174	
* 18/06 06H07 07H56	* S07	8	* 43.547	1.490	95	2	-291 1.65		* 33.424	52.836	* 19.7	-4	0 1.0	4/0	2271	47256	
* 18/06 06H07 20H57	* S07	8	* 43.549	1.489	95	2	-291 1.44		* 33.422	52.840	* 19.7	-4	0 1.0	4/0	2272	48024	
* 18/06 07H48 07H56	* S07	18	* 43.554	1.507	92	2	-287 2.29		* 42.755	5.587	* 1.4	4	0 0.3	4/0	2271	47257	
* 18/06 07H48 09H34	* S07	18	* 43.554	1.508	92	2	-287 2.37		* 42.754	5.591	* 1.4	-4	0 0.3	4/0	2271	47395	
* 18/06 07H48 20H57	* S07	18	* 43.556	1.495	93	2	-287 1.27		* 42.751	5.604	* 1.4	-4	0 0.3	4/0	2272	48025	
* 18/06 08H36 08H45	* C08	12	* 43.559	1.485	98	1	-287 0.41		* 45.719	29.096	* 9.5	4	0 0.5	4/0	2271	47294	

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*****
*   TCA      TPC      *SL   PTS  *LAT1  LONG1PB MAJ BIAIS  ERR  *LAT2  LONG2  *CTA FB WF SDV CF  SRCE MCCN  *
*****
* 18/06 09H04 09H12 *S04   15 * 43.557 1.484  98  1  -287 0.45  * 36.272 36.702  * 13.4  4  0 0.3 4/0  2272  47324 *
* 18/06 09H04 10H54 *S04   15 * 43.557 1.485  98  1  -287 0.50  * 36.270 36.698  * 13.4 -4  0 0.3 4/0  2271  47470 *
* 18/06 09H04 18H58 *S04   15 * 43.557 1.480  98  1  -287 0.32  * 36.270 36.699  * 13.4 -4  0 0.3 4/0  2272  47825 *
* 18/06 09H27 09H34 *S07   13 * 43.560 1.477  98  1  -287 0.23  * 51.825 -41.799  * 15.6  4  0 0.6 4/0  2271  47396 *
* 18/06 09H27 17H38 *S07   13 * 43.558 1.477  98  1  -287 0.29  * 51.823 -41.802  * 15.6 -4  0 0.6 4/0  2271  47762 *
* 18/06 09H27 20H57 *S07   13 * 43.558 1.479  98  1  -287 0.22  * 51.824 -41.803  * 15.6 -4  0 0.6 4/0  2272  48026 *
* 18/06 10H21 10H31 *C08   13 * 43.557 1.477  98  1  -287 0.42  * 41.628 -23.166  *  9.5  4  0 0.3 4/0  2272  47427 *
* 18/06 10H45 10H54 *S04   14 * 43.561 1.475  99  1  -287 0.38  * 46.002 -10.666  *  4.7  4  0 0.2 4/0  2271  47471 *
* 18/06 10H45 12H31 *S04   14 * 43.560 1.476  99  1  -287 0.36  * 46.002 -10.666  *  4.7 -4  0 0.2 4/0  2271  47539 *
* 18/06 10H45 18H58 *S04   14 * 43.559 1.478  98  1  -287 0.17  * 46.003 -10.675  *  4.7 -4  0 0.2 4/0  2272  47826 *
*****

```

Zones géographiques BORDE/MARSA numero de dossier xxx

Nombre total de lignes (localisées + détectées) : 100 + 6 = 106

Nombre de localisées : 100

Nombre de balises-passage : 69

Nombre de localisations uniques : 64

Date premiere loc : 15/06/2000 07:09

Date derniere loc : 18/06/2000 10:45

Duree de l'emission : 75H 35mn

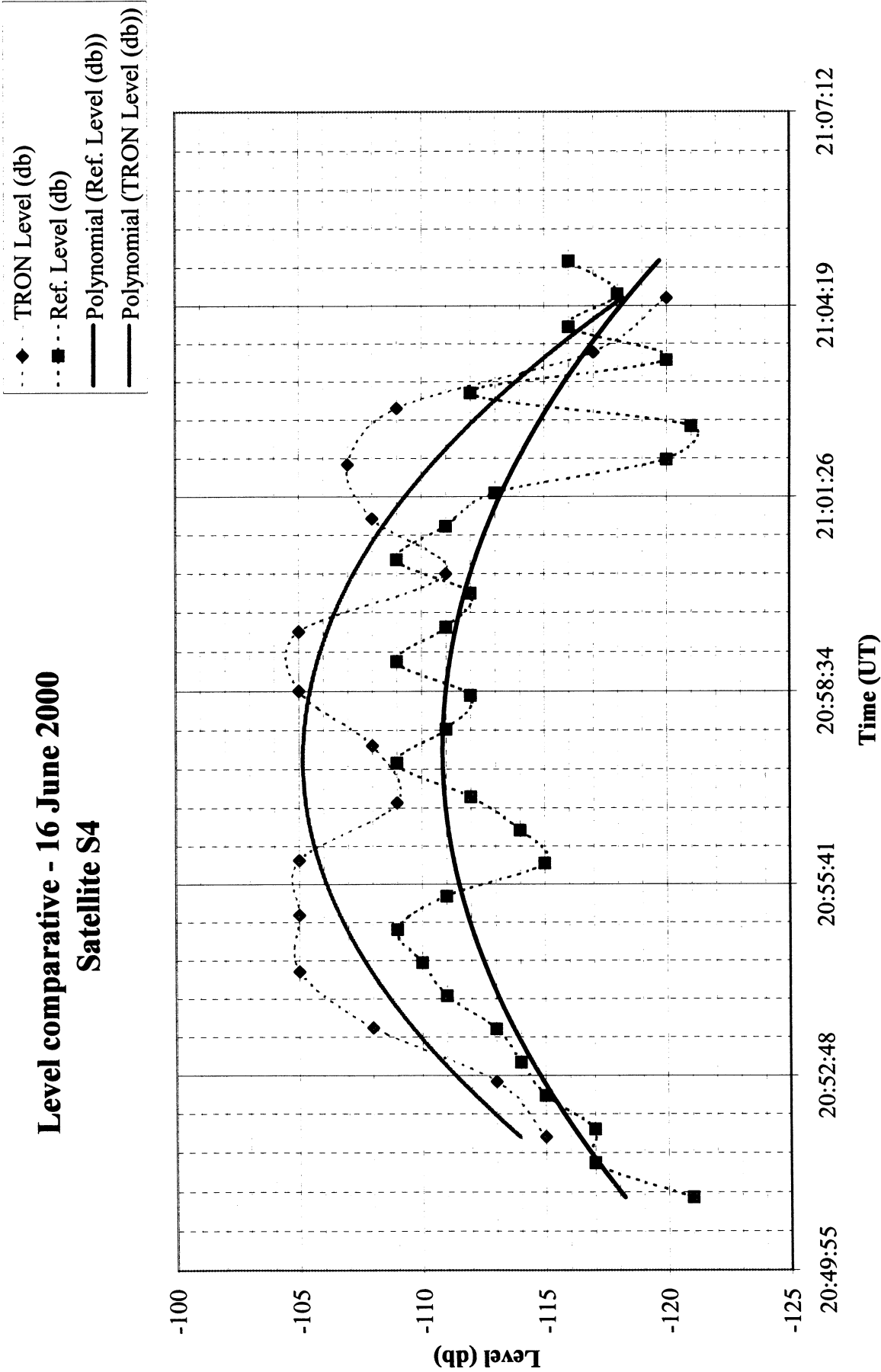
Reference pour calcul des erreurs : lat=+43.560 long= +1.480

Date	U. T.	TRON 40GPSN° 7000 MESSAGE (without FFFE2F)	TRON Level (db)	Sarsat Sat
16/06/2000	19:50:34	901e9fbf102b8036flaeb78dc13917	-123	S7
16/06/2000	19:53:05	901e9fbf102b8036flaeb78dc13917	-111	S7
16/06/2000	19:53:54	901e9fbf102b8036flaeb78dc13917	-108	S7
16/06/2000	19:54:43	901e9fbf102b8036flaeb78dc13917	-110	S7
16/06/2000	19:55:34	901e9fbf102b8036flaeb78dc13917	-107	S7
16/06/2000	19:56:24	901e9fbf102b8036flaeb78dc13917	-110	S7
16/06/2000	19:57:14	901e9fbf102b8036flaeb78dc13917	-111	S7
16/06/2000	19:58:06	901e9fbf102b8036flaeb78dc13917	-114	S7
16/06/2000	19:58:57	901e9fbf102b8036flaeb78dc13917	-111	S7
16/06/2000	19:59:45	901e9fbf102b8036flaeb78dc13917	-116	S7
16/06/2000	20:01:29	901e9fbf102b8036flaeb78dc13917	-122	S7
16/06/2000	20:02:18	901e9fbf102b8036flaeb78dc13917	-132	S7
16/06/2000	20:51:53	901e9fbf102b8036flaeb78e01324c	-115	S4
16/06/2000	20:52:43	901e9fbf102b8036flaeb78e01324c	-113	S4
16/06/2000	20:53:31	901e9fbf102b8036flaeb78e01324c	-108	S4
16/06/2000	20:54:22	901e9fbf102b8036flaeb78e01324c	-105	S4
16/06/2000	20:55:13	901e9fbf102b8036flaeb78e01324c	-105	S4
16/06/2000	20:56:03	901e9fbf102b8036flaeb78e01324c	-105	S4
16/06/2000	20:56:55	901e9fbf102b8036flaeb78e01324c	-109	S4
16/06/2000	20:57:45	901e9fbf102b8036flaeb78e01324c	-108	S4
16/06/2000	20:58:34	901e9fbf102b8036flaeb78e01324c	-105	S4
16/06/2000	20:59:26	901e9fbf102b8036flaeb78e01324c	-105	S4
16/06/2000	21:00:17	901e9fbf102b8036flaeb78e01324c	-111	S4
16/06/2000	21:01:07	901e9fbf102b8036flaeb78e01324c	-108	S4
16/06/2000	21:01:55	901e9fbf102b8036flaeb78e01324c	-107	S4
16/06/2000	21:02:46	901e9fbf102b8036flaeb78e01324c	-109	S4
16/06/2000	21:03:37	901e9fbf102b8036flaeb78e01324c	-117	S4
16/06/2000	21:04:26	901e9fbf102b8036flaeb78e01324c	-120	S4

Date	U. T.	TRON 40GPSN° 7000 MESSAGE (without FFFE2F)	TRON Level (db)	Sarsat Sat
16/06/2000	22:33:32	901e9fbf102b8036flaeb78e01324c	-126	S4
16/06/2000	22:35:11	901e9fbf102b8036flaeb78e01324c	-116	S4
16/06/2000	22:36:02	901e9fbf102b8036flaeb78e01324c	-117	S4
16/06/2000	22:36:52	901e9fbf102b8036flaeb78e01324c	-112	S4
16/06/2000	22:37:44	901e9fbf102b8036flaeb78e01324c	-111	S4
16/06/2000	22:38:35	901e9fbf102b8036flaeb78e01324c	-110	S4
16/06/2000	22:39:23	901e9fbf102b8036flaeb78e01324c	-111	S4
16/06/2000	22:40:15	901e9fbf102b8036flaeb78e01324c	-112	S4
16/06/2000	22:41:06	901e9fbf102b8036flaeb78e01324c	-110	S4
16/06/2000	22:41:56	901e9fbf102b8036flaeb78e01324c	-113	S4
16/06/2000	22:42:45	901e9fbf102b8036flaeb78e01324c	-115	S4
16/06/2000	22:43:35	901e9fbf102b8036flaeb78e01324c	-120	S4
16/06/2000	22:44:27	901e9fbf102b8036flaeb78e01324c	-122	S4
16/06/2000	22:45:16	901e9fbf102b8036flaeb78e01324c	-130	S4

Date	U. T.	ORBITO REF MESSAGE (without FFFE2F)	Ref. Level (db)	Sarsat Sat
16/06/2000	19:15:30	ce300000000000dbd0e40 16819153	-114	S4
16/06/2000	19:16:00	ce300000000000dbd0e40 16819160	-113	S4
16/06/2000	19:16:30	ce300000000000dbd0e40 16819163	-115	S4
16/06/2000	19:17:00	ce300000000000dbd0e40 16819170	-112	S4
16/06/2000	19:17:30	ce300000000000dbd0e40 16819173	-118	S4
16/06/2000	19:18:00	ce300000000000dbd0e40 16819180	-114	S4
16/06/2000	19:18:30	ce300000000000dbd0e40 16819183	-115	S4
16/06/2000	19:19:00	ce300000000000dbd0e40 16819190	-112	S4
16/06/2000	19:20:00	ce300000000000dbd0e40 16819200	-124	S4
16/06/2000	19:20:30	ce300000000000dbd0e40 16819203	-118	S4
16/06/2000	19:22:00	ce300000000000dbd0e40 16819220	-113	S4
16/06/2000	19:22:30	ce300000000000dbd0e40 16819223	-113	S4
16/06/2000	19:23:00	ce300000000000dbd0e40 16819230	-117	S4
16/06/2000	19:23:30	ce300000000000dbd0e40 16839233	-123	S4
16/06/2000	19:24:00	ce300000000000dbd0e40 16819240	-132	S4
16/06/2000	19:49:00	ce300000000000dbd0e40 16819490	-132	S7
16/06/2000	19:49:30	ce300000000000dbd0e40 16819493	-122	S7
16/06/2000	19:50:00	ce300000000000dbd0e40 16819500	-119	S7
16/06/2000	19:50:30	ce300000000000dbd0e40 16819503	-116	S7
16/06/2000	19:51:00	ce300000000000dbd0e40 16819510	-118	S7
16/06/2000	19:51:30	ce300000000000dbd0e40 16819513	-113	S7
16/06/2000	19:52:00	ce300000000000dbd0e40 16819520	-112	S7
16/06/2000	19:52:30	ce300000000000dbd0e40 16819523	-116	S7
16/06/2000	19:53:00	ce300000000000dbd0e40 16819530	-114	S7
16/06/2000	19:53:30	ce300000000000dbd0e40 16819533	-112	S7
16/06/2000	19:54:00	ce300000000000dbd0e40 16819540	-112	S7
16/06/2000	19:54:30	ce300000000000dbd0e40 16819543	-109	S7
16/06/2000	19:55:00	ce300000000000dbd0e40 16819550	-114	S7
16/06/2000	19:55:30	ce300000000000dbd0e40 16819553	-112	S7
16/06/2000	19:56:00	ce300000000000dbd0e40 16819560	-111	S7
16/06/2000	19:56:30	ce300000000000dbd0e40 16819563	-114	S7
16/06/2000	19:57:00	ce300000000000dbd0e40 16819570	-116	S7
16/06/2000	19:57:30	ce300000000000dbd0e40 16819573	-120	S7
16/06/2000	19:58:00	ce300000000000dbd0e40 16819580	-116	S7
16/06/2000	19:58:30	ce300000000000dbd0e40 16819583	-117	S7
16/06/2000	19:59:00	ce300000000000dbd0e40 16819590	-124	S7
16/06/2000	19:59:30	ce300000000000dbd0e40 16819593	-122	S7
16/06/2000	20:01:00	ce300000000000dbd0e40 16820010	-120	S7
16/06/2000	20:01:30	ce300000000000dbd0e40 16820013	-124	S7
16/06/2000	20:02:00	ce300000000000dbd0e40 16820020	-129	S7
16/06/2000	20:02:30	ce300000000000dbd0e40 16820023	-135	S7

Date	U. T.	ORBITO REF MESSAGE (without FFFE2F)	Level (db)	Sarsat Sat
16/06/2000	20:51:00	ce300000000000dbd0e4c 16820510	-121	S4
16/06/2000	20:51:30	ce300000000000dbd0e40 16820513	-117	S4
16/06/2000	20:52:00	ce300000000000dbd0e40 16820520	-117	S4
16/06/2000	20:52:30	ce300000000000dbd0e40 16820523	-115	S4
16/06/2000	20:53:00	ce300000000000dbd0e40 16820530	-114	S4
16/06/2000	20:53:30	ce300000000000dbd0e40 16820533	-113	S4
16/06/2000	20:54:00	ce300000000000dbd0e40 16820540	-111	S4
16/06/2000	20:54:30	ce300000000000dbd0e40 16820543	-110	S4
16/06/2000	20:55:00	ce300000000000dbd0e40 16820550	-109	S4
16/06/2000	20:55:30	ce300000000000dbd0e40 16820553	-111	S4
16/06/2000	20:56:00	ce300000000000dbd0e40 16820560	-115	S4
16/06/2000	20:56:30	ce300000000000dbd0e40 16820563	-114	S4
16/06/2000	20:57:00	ce300000000000dbd0e40 16820570	-112	S4
16/06/2000	20:57:30	ce300000000000dbd0e40 16820573	-109	S4
16/06/2000	20:58:00	ce300000000000dbd0e40 16820580	-111	S4
16/06/2000	20:58:30	ce300000000000dbd0e40 16820583	-112	S4
16/06/2000	20:59:00	ce300000000000dbd0e40 16820590	-109	S4
16/06/2000	20:59:30	ce300000000000dbd0e40 16820593	-111	S4
16/06/2000	21:00:00	ce300000000000dbd0e40 16821000	-112	S4
16/06/2000	21:00:30	ce300000000000dbd0e40 16821003	-109	S4
16/06/2000	21:01:00	ce300000000000dbd0e40 16821010	-111	S4
16/06/2000	21:01:30	ce300000000000dbd0e40 16821013	-113	S4
16/06/2000	21:02:00	ce300000000000dbd0e40 16821020	-120	S4
16/06/2000	21:02:30	ce300000000000dbd0e40 16821023	-121	S4
16/06/2000	21:03:00	ce300000000000dbd0e40 16821030	-112	S4
16/06/2000	21:03:30	ce300000000000dbd0e40 16821033	-120	S4
16/06/2000	21:04:00	ce300000000000dbd0e40 16821040	-116	S4
16/06/2000	21:04:30	ce300000000000dbd0e40 16821043	-118	S4
16/06/2000	21:05:00	ce300000000000dbd0e40 16821050	-116	S4



**ANTENNA TEST RESULTS ON
TRON 40GPS JOTRON
N° 7001**

1 - ADMINISTRATION

1. WORK ORDER : Reference ITS : M2393

1. TEST TEAM :

1. SCHEDULE :

2 - PURPOSE

The radiation tests of the dedicated radio beacon are performed in INTESPACE EMC Laboratory in compliance with the test methods described in the COSPAS-SARSAT 406 MHz distress beacon type approval standard : C/S T 007- Issue 3 Revision 5 October 1998 .

3 - RADIO BEACON IDENTIFICATIONS

Manufacturer : JOTRON

Model N° : TRON 40GPS

Serial N° : 7001

Antenna : Internal

4 - TEST SITE DESCRIPTION

Tests are performed in an anechoic chamber (size 16 m x 10 m x 11 m)

Walls, ceiling and doors are lined with EMERSON CUMING foams VHP 36 and VHP 26 type.

The EPIRB is placed as shown on figure N° 1 and N° 2.

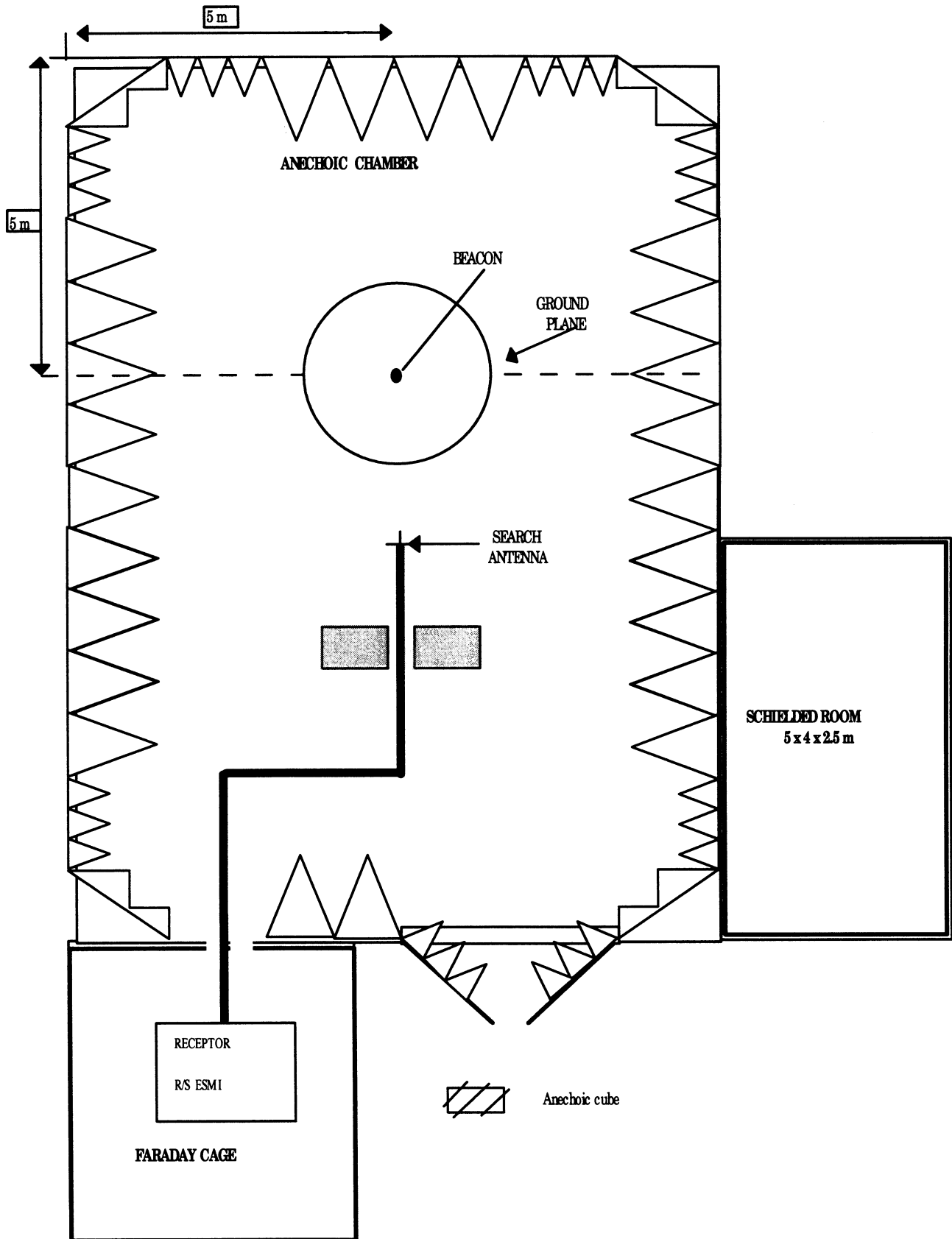


FIGURE 1

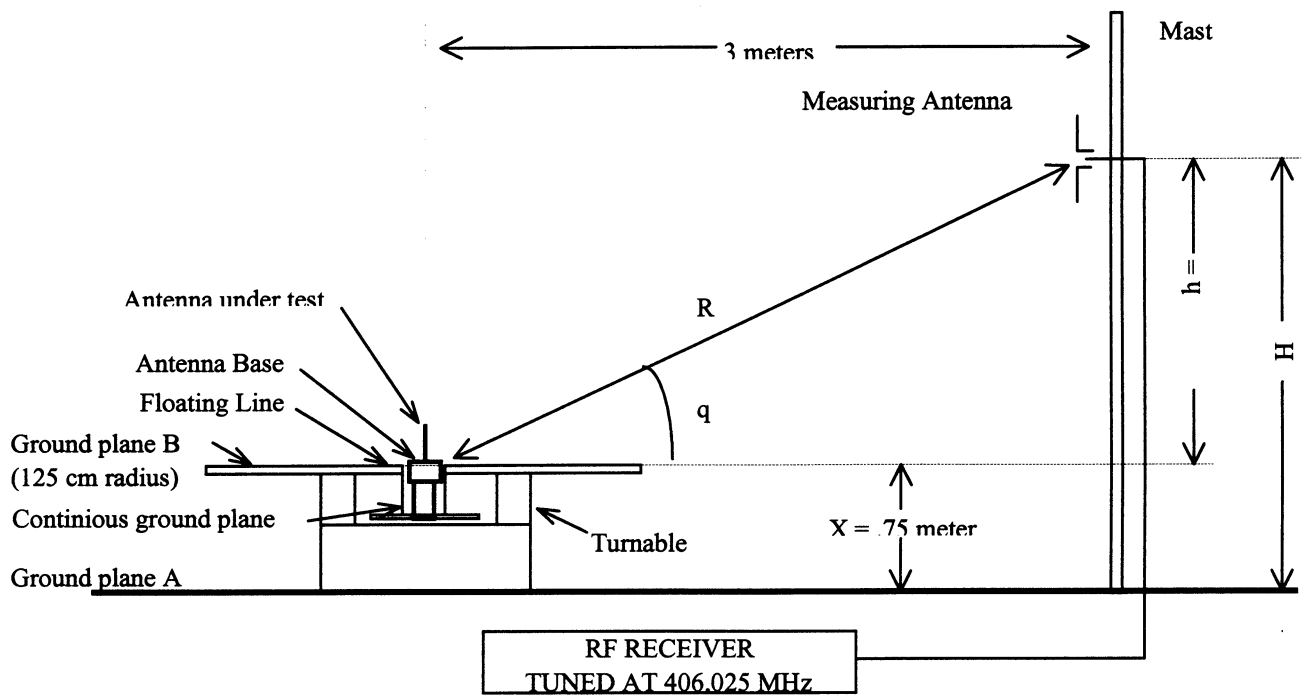


FIGURE B2c : Equipement Test Set Up For BEACON Antenna Test
(For BEACON designed for normal operation in water, ex: EPIRB)

5 - TEST METHOD

The test method describes here after, according to "C/S T 007 - Issue 3 -Revision 5 - October 1998" test sequences is executed for 406 MHz frequency .

Following measurements are performed :

- 1/ Electrical ground plane of 1.25 m of radius is placed at flotation level of the beacon.
- 2/ EPIRB transmitting antenna polarization is determined prior to test.
- 3/ Determination of E field strength in term of $\text{dB}\mu\text{V/m}$ at 3 m far from the EPIRB for all direction (0° to 360° by step of 30°) and for search antenna elevation (10° to 50°). Search antenna is left in vertical position for the linear polarization vertical and for all elevations . Length of search antenna is adjusted to proper $1/2 \lambda$ conditions .
- 4/ An ERP (Equivalent Radiated Power) from the PLB is calculated
- 5/ ERP is corrected with EOL (end of life factor)
- 6/ Actual ERP are compared to specified ERP to be in the range 1.6 W to 20 W (+ 32 dBm to + 43 dBm).

6 - TESTS EQUIPMENTS

6.1. SEARCH ANTENNA

- 406 MHz test : EMCO Ref 3121 C- DB4 Dipole antenna
Serial number : S/N 763

6.2. SPECTRUM ANALYSER

- R/S ESMI

6.3. CABLES

- 20 m cable SUCOFLEX type 100 - cable loss at 406 MHz is : 2,00 dB

7 - TESTS OPERATIONS

7.1. EMISSION FIELD STRENGTH FROM EPIRB

The electrical field intensity is measured with the following antenna :

- EMCO 3121 C - DB4 - SN- 763

EPIRB electric field strength is obtained from measurement of the output voltage (dB μ V RMS) at antenna port (typical set up are shown figure N° 3 for 406 MHz) and computed with following parameters :

- Antenna factor of search antenna AF in dB (manufacturer calibration) showing table N° 1.
- Directivity factor of the antenna Dm in dB (Theoretical directivity shown paragraph B-5-4 of C/S T007) as :

$$Dm = 20 \log [\cos (90 \times \sin q) / \cos q]$$

- Cable loss L = 2 dB at 406 MHz
- DF : distance factor in dB - To calculate field at a constant distance (3 m) from EPIRB due to the elevation of the search antenna.
- Power correction factor : end of life correction factor EOL is calculated from the difference between RF power measured during test and end of life power after 24 hours operation. This factor is applied to correct ERP as shown on final test result table
- The measurements are performed on the carrier signal, just before to apply the modulation.
- The effective field strength at 3 m from EPIRB is computed from :

$$EdB\mu V/m = UdB\mu V + AF + Dm + L + DF$$

7.2. POWER CORRECTION FACTORS

EOL factor

TEST FREQUENCY	RF POWER MEASURED DURING TEST	END OF LIFE dB FACTOR after 48 hours operation at min temp.
406 MHz	38,0 dBm	0,8 dB

8 - RADIATED POWER CALCULATIONS

8.1. EFFECTIVE RADIATED POWER OF EPIRB

ERP of EPIRB is directly calculated from equation :

$$ERP = E^2 \times D^2 / 30$$

$$ERP = W$$

$$E = V/m$$

$$D = m$$

Results shown in table N° C1 are given in dBm where :

$$ERP \text{ dBm} = 10 \log (ERP \text{ W}) + 30$$

and apparent antenna gain :

$$GidB = ERPdBm - RF \text{ PowerdBm}$$

9 - SUCCESS CRITERIA

90% of EPIRB measurements must be equal or greater than 1,6 W ERP (32 dBm) .

and less than 20 W ERP (43 dBm)

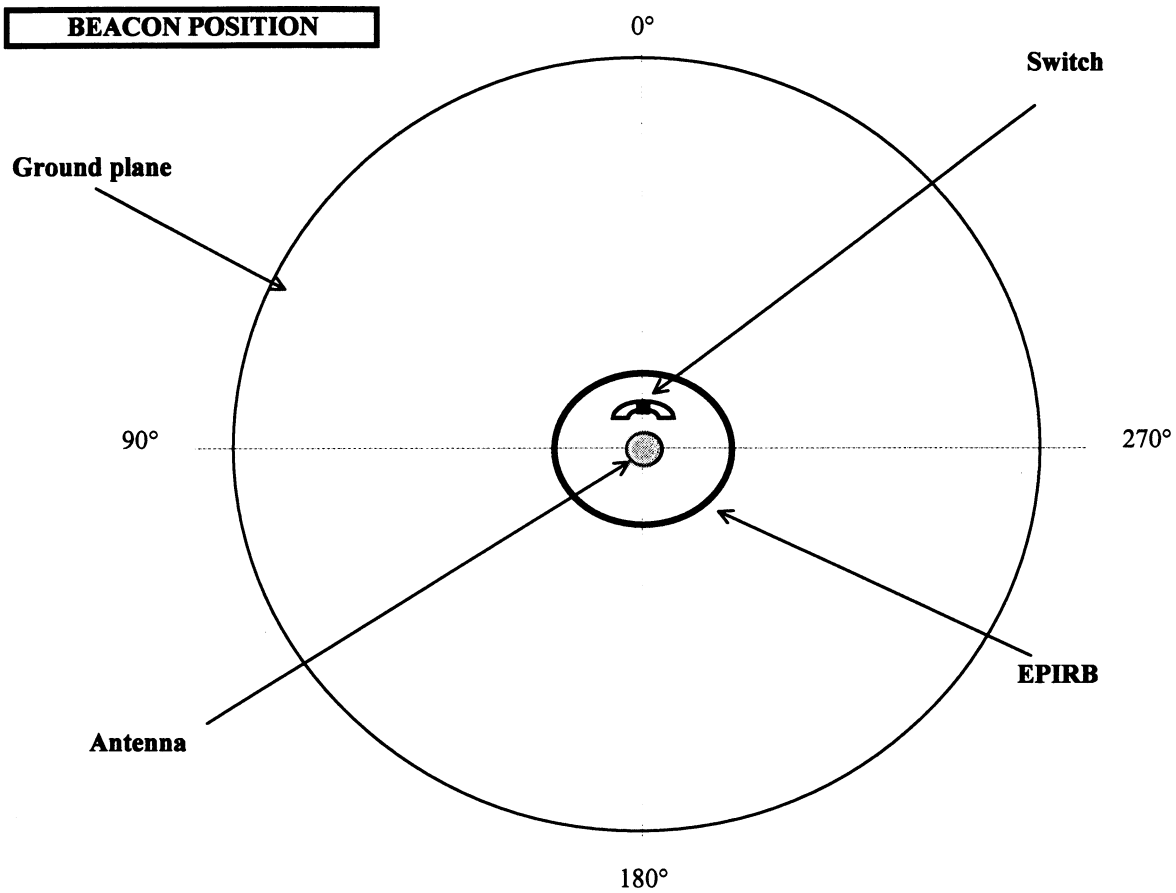
10 - EPIRB ANTENNA POLARIZATION

EPIRB antenna polarization is checked according to C/S T007 procedure paragraph B9 EPIRB antenna polarization is declared vertical when measurement obtained with vertical polarization search antenna are 10 dB greater or more than measurement obtained with

Antenna model	Angle Azi / Elev	Vertical measurement dB μ V	Horizontal measurement dB μ V	Δ	Antenna Polarization
	0°/10°	110,7	79,1	31,6 dB	Vertical

11 - EPIRB MECHANICAL SET UP

EPIRB 0°axis is identified with 0° azimuth direction of turn table .
Antenna is the center of rotation of azimuth angle.



NOT TO SCALE

12 - RESULTS

Test frequency	Polarization	Reference ERP (W)	Measurement ERP
406 MHz	Vertical	$1.6 < \text{ERP Ref} < 20$	According table C1

CONCLUSIONS

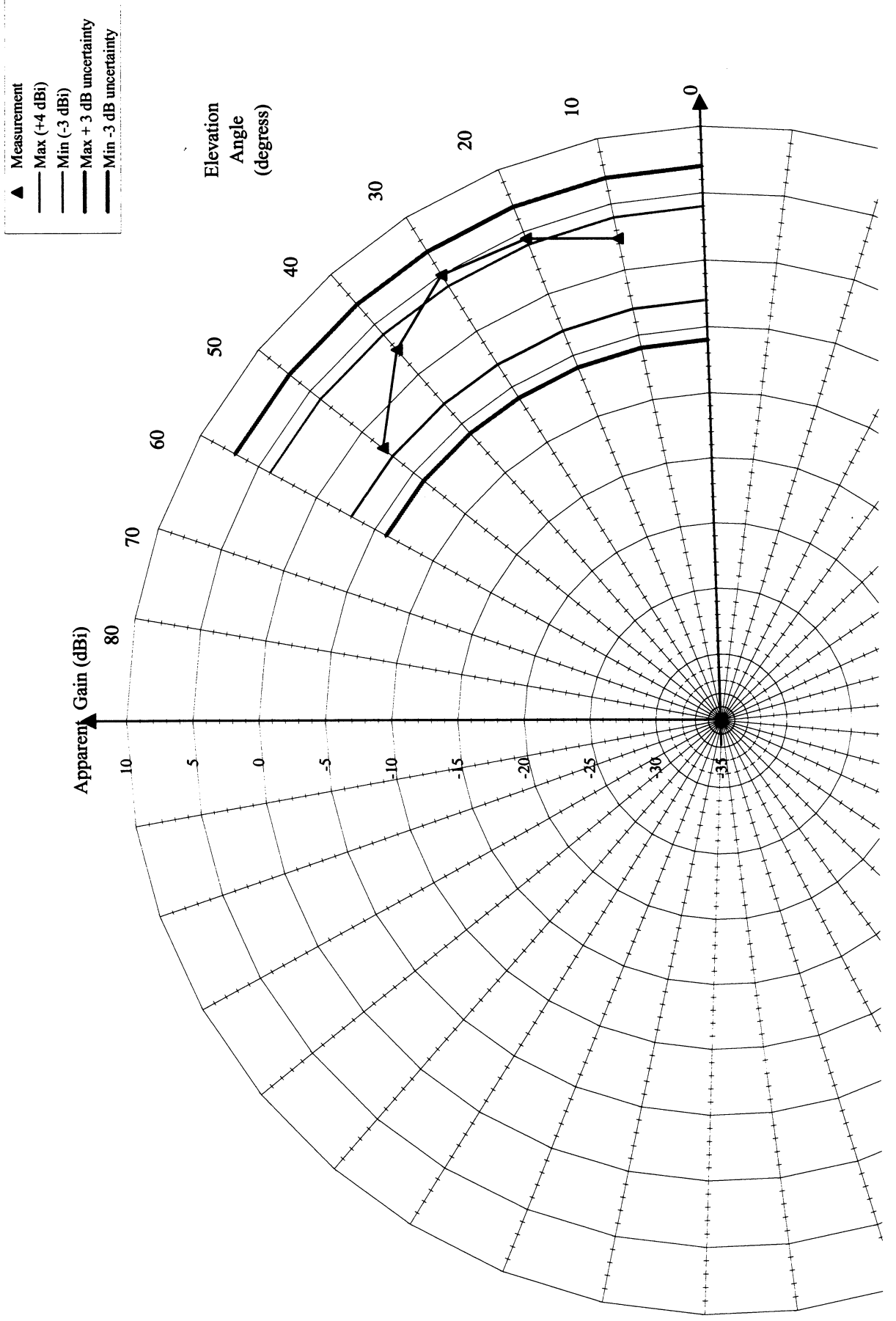
The ERP Beacon is always greater than the ERP reference.

Table C1 : EFFECTIVE RADIATED POWER (dBm) / ANTENNA GAIN (dBi)

Azimuth Angle (Degrees)	Elevation Angle (Degrees)				
	10	20	30	40	50
	dBm / dBi	dBm / dBi	dBm / dBi	dBm / dBi	dBm / dBi
0	39,90 / 1,90	42,59 / 4,59	43,28 / 5,28	40,45 / 2,45	35,66 / -2,34
30	40,20 / 2,20	42,69 / 4,69	43,08 / 5,08	40,35 / 2,35	35,76 / -2,24
60	40,90 / 2,90	42,39 / 4,39	42,88 / 4,88	40,55 / 2,55	36,26 / -1,74
90	40,50 / 2,50	42,39 / 4,39	42,78 / 4,78	40,35 / 2,35	35,96 / -2,04
120	40,00 / 2,00	42,29 / 4,29	42,98 / 4,98	40,45 / 2,45	35,86 / -2,14
150	40,50 / 2,50	42,29 / 4,29	42,78 / 4,78	40,45 / 2,45	36,16 / -1,84
180	40,40 / 2,40	42,69 / 4,69	43,08 / 5,08	40,45 / 2,45	36,26 / -1,74
210	40,40 / 2,40	42,59 / 4,59	42,88 / 4,88	40,35 / 2,35	36,16 / -1,84
240	40,40 / 2,40	42,49 / 4,49	42,98 / 4,98	40,55 / 2,55	35,86 / -2,14
270	40,50 / 2,50	42,59 / 4,59	43,08 / 5,08	40,55 / 2,55	35,76 / -2,24
300	40,90 / 2,90	42,69 / 4,69	42,98 / 4,98	40,45 / 2,45	35,96 / -2,04
330	40,70 / 2,70	42,29 / 4,29	42,88 / 4,88	40,55 / 2,55	35,86 / -2,14
Average	40,44 / 2,44	42,50 / 4,50	42,97 / 4,97	40,46 / 2,46	35,96 / -2,04
Overall Gain Variation	1,00 dB	0,40 dB	0,50 dB	0,20 dB	0,60 dB

$$ERP_{\max \text{ EOL}} = ERP_{\max} - ERP_{\text{LOSS}} = 43,28 - 0,8 = \mathbf{42,48 \text{ dBm}}$$

$$ERP_{\min \text{ EOL}} = ERP_{\min} - ERP_{\text{LOSS}} = 35,66 - 0,8 = \mathbf{34,86 \text{ dBm}}$$



**NAVIGATION SYSTEM TEST ON
TRON 40GPS JOTRON
N° 7001**

Time of first GPS location : 00:27:04

Time	Latitude	Longitude	Def.	Delta	BCH1 read./calcul.	BCH2 read./calcul.
11:10:40	127° 46' 0" N	255° 46' 0" E	*	0,25 km	105685/105685	66C/66C
11:11:30	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:12:21	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:13:11	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:14:03	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:14:54	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:15:42	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:16:34	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:17:26	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:18:15	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:19:04	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:19:54	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:20:46	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:21:35	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:22:27	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:23:18	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:24:06	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:24:59	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:25:50	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:26:39	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:27:28	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:28:18	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:29:09	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:29:59	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
11:30:51	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:31:42	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:32:30	127° 46' 0" N	255° 46' 0" E	*	10D685/105685	66C/66C	
11:33:30	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:34:20	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:35:12	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:36:01	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:36:53	127° 46' 0" N	255° 46' 0" E	*	105685/105685	66C/66C	
11:37:44	43° 33' 32" N	1° 28' 40" E			1D3226/1D3226	9E3/9E3

Updating GPS location

Date : 17/07/2000

Reference position :

N° 1	Lanta:	43° 33' 36" N 01° 39' 48" E
N° 2	Lauzerville :	43° 33' 14" N 01° 34' 14" E
N°3	CNES-Poincaré	43° 33' 26" N 01° 28' 57" E

Results :

No updating message before 20 min. : Correct

Time of first update GPS location : 00:20:58

Time of second update GPS location : 00:20:12

Ref. Pos	Time	Latitude	Longitude	Def.	Delta	BCH1 read./calcul.	BCH2 read./calcul.
N° 1	9:41:47	43° 33' 36" N	1° 39' 44" E		0,12 km	1BEBC5 / 1BEBC5	919 / 919
		FFFE2F901E1E24002B803EFAF1778E454919					
N° 2	10:02:45	43° 33' 16" N	1° 34' 12" E		0,09 km	1BEBC5 / 1BEBC5	B0B / B0B
		FFFE2F901E1E24002B803EFAF1778D0ACB0B					
N° 3	10:22:57	43° 33' 24" N	1° 28' 52" E		0,17 km	1BEBC5 / 1BEBC5	FA6 / FA6
		FFFE2F901E1E24002B803EFAF1778D902FA6					

Tests of default position**Beacon without navigation input.**

Date : 18/07/2000

Always default value after 30 min. : Correct

Time	Latitude	Longitude	Def.	Delta	BCH1 lu/calculé	BCH2 lu/calculé
13:07:55	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:08:47	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:09:36	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:10:28	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:11:19	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:12:07	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:13:00	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:13:51	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:14:40	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:15:29	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:16:20	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:17:11	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:18:00	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:18:52	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:19:43	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:20:32	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:21:24	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:22:15	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:23:04	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:23:53	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:24:44	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:25:34	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:26:24	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:27:16	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:28:07	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:28:56	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:29:48	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:30:39	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:31:28	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:32:17	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:33:07	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:33:58	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:34:48	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:35:40	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:36:31	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:37:19	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:38:12	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C

Default Pos Message : FFFE2F901E1E24007FDFFC15A17783E0F66C

Navigation input after 30 min beacon without navigation system

Date : 18/07/2000

Default position at first emission : Correct

Updating message before 30 min. : 00:21:02

Time	Latitude	Longitude	Def.	Delta	BCH1 read./calcul.	BCH2 read./calcul.
13:43:09	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:44:00	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:44:51	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:45:41	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:46:33	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:47:23	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:48:12	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:49:04	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:49:56	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:50:45	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:51:34	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:52:24	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:53:15	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:54:05	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:54:57	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:55:47	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:56:36	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:57:28	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:58:19	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:59:09	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
13:59:57	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
14:00:48	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
14:01:39	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
14:02:29	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
14:03:21	127° 46' 0" N	255° 46' 0" E	*		105685/105685	66C/66C
14:04:11	43,5° 3' 32" N	,5° 58' 44" E		0,14 km	1D3226/1D3226	CDA/CDA

Last position GPS retained without navigation sig

Date : 19/07/2000

Results :

First GPS Location Time : 12:49:11
 Message : FFFE2F901E1E24002B80374C89B78E014CDA

Last GPS Location Time : 16:55:23
 Message : FFFE2F901E1E24002B80374C89B78E014CDA

Valid position retained during : 04:06:12

Default Position Message Time : 16:56:15
 Message : FFFE2F901E1E24007FDFFC15A17783E0F66C

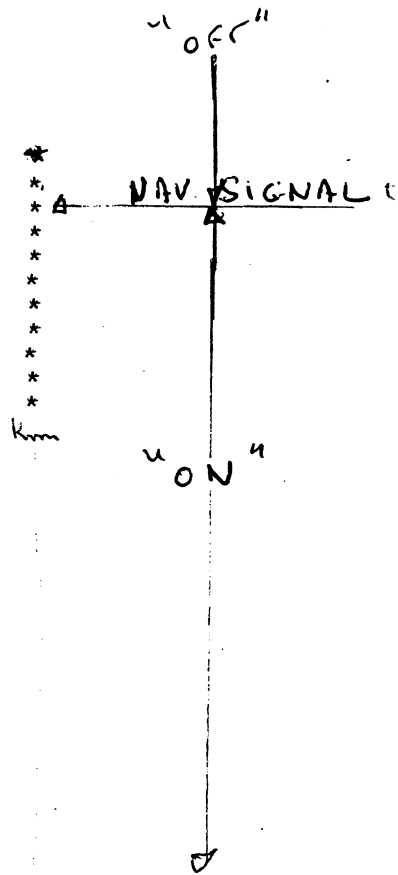
Data of Last position retained Test

[illegible]

GPS Source "OFF"

GPS Source Off

GPS Source of Error

[illegible]

Message : FFFE2F901E1E24002B80374C89B78E0159E3

**BEACON CODING SOFTWARE TESTS
ON
JOTRON TRON 40GPS
N° 7001**

Note: Each coding option is encoded in beacon message via JOTRON PRU 40 programmer device using JOTRON PR40 software .

The reference GPS Location is **ITS Lab Position** :

43° 33' 34" N

01° 28' 48" E

Protocol types tested :

1- Standard Location Protocols

1.1 MMSI

1.2 Serial

2- Standard-Short Location Protocols

2.1 MMSI

2.2 Serial

3- User-Location Protocols

3.1 Maritime

3.2 Serial EPIRB

1- Standard Location Protocols

1.1 MMSI

Message balise

Message reçu SELFTEST (1-144): FFFED090120000007FDFFCFBFDB783E0F66C
 Format flag (25): 1
 Protocole flag (26): 0 SELFTEST
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0010
 Protocole utilise : Standard - EPIRB - MMSI
 Identification :
 Numero : B.N°0
 BCH 1 lu/calculé (86-106/25-85): 13EFF6/13EFF6
 BCH 2 lu/calculé (133-144/107-132): 66C/66C
 Pos. Data Source (111): Internal
 121.5 MHz Homing (112): Yes
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-144): FFFE2F90120000007FDFFCFBFDB783E0F66C
 Format flag (25): 1
 Protocole flag (26): 0 DEFAULT POS.
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0010
 Protocole utilise : Standard - EPIRB - MMSI
 Identification :
 Numero : B.N°0
 BCH 1 lu/calculé (86-106/25-85): 13EFF6/13EFF6
 BCH 2 lu/calculé (133-144/107-132): 66C/66C
 Pos. Data Source (111): Internal
 121.5 MHz Homing (112): Yes
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-144): FFFE2F90121E24002B8036348E778E4154C9
 Format flag (25): 1
 Protocole flag (26): 0 LAB. POSITION
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0010
 Protocole utilise : Standard - EPIRB - MMSI
 Identification :
 Numero : B.N°0
 BCH 1 lu/calculé (86-106/25-85): 18D239/18D239
 BCH 2 lu/calculé (133-144/107-132): 4C9/4C9
 Pos. Data Source (111): Internal
 121.5 MHz Homing (112): Yes
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : No
 Latitude position : 43.5°3'36'' Nord = 43° 33' 36" N
 Longitude position : .5°58'40'' Est = 1° 28' 40" E
 Delta position : 0.18 Km

1- Standard Location Protocols

1.2 SERIAL

Message balise

Message reçu (1-144): FFFED090163FC0007FDFFC6C4FB783E0F66
 Format flag (25): 1
 Protocole flag (26): 0 SELF TEST
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0110
 Protocole utilise : Standard - EPIRB - serial
 Identification :
 Numero : Serial N° 0
 BCH 1 lu/calculé (86-106/25-85): 11B13E/11B13E
 BCH 2 lu/calculé (133-144/107-132): 66C/66C
 Pos. Data Source (111): Internal
 121.5 MHz Homing (112): Yes
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-144): FFFE2F90163FC0007FDFFC6C4FB783E0F66
 Format flag (25): 1
 Protocole flag (26): 0 DEFAULT POS
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0110
 Protocole utilise : Standard - EPIRB - serial
 Identification :
 Numero : Serial N° 0
 BCH 1 lu/calculé (86-106/25-85): 11B13E/11B13E
 BCH 2 lu/calculé (133-144/107-132): 66C/66C
 Pos. Data Source (111): Internal
 121.5 MHz Homing (112): Yes
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-144): FFFE2F90163FF6B22B8036392AB78E0159E3
 Format flag (25): 1
 Protocole flag (26): 0 LAB. POSITION
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0110
 Protocole utilise : Standard - EPIRB - serial
 Identification :
 Numero : Serial N° 14002
 BCH 1 lu/calculé (86-106/25-85): 18E4AA/18E4AA
 BCH 2 lu/calculé (133-144/107-132): 9E3/9E3
 Pos. Data Source (111): Internal
 121.5 MHz Homing (112): Yes
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : No
 Latitude position : 43.5°3'32'' Nord 43° 33' 32''
 Longitude position : .5°58'40'' Est 1° 28' 40''
 Delta position : 018 Kms

2- Standard-Short Location Protocols**2.1 MMSI****Message balise**

Message reçu (1-112): FFFED010129FBBF117FDFFD0E6AB7
 Format flag (25): 0
 Protocole flag (26): 0 SELF TEST
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0010
 Protocole utilise : Standard - EPIRB - MMSI-Short
 Identification :
 Numero : B.N°1
 BCH 1 lu/calculé (86-106/25-85): 1439AA/1439AA
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-112): FFFE2F10129FBBF117FDFFD0E6AB7
 Format flag (25): 0
 Protocole flag (26): 0 DEFAULT POS
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0010
 Protocole utilise : Standard - EPIRB - MMSI-Short
 Identification :
 Numero : B.N°1
 BCH 1 lu/calculé (86-106/25-85): 1439AA/1439AA
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-112): FFFE2F10129FBBF112B8036574277
 Format flag (25): 0
 Protocole flag (26): 0 LAB POSITION
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-40): 0010
 Protocole utilise : Standard - EPIRB - MMSI-SHORT
 Identification :
 Numero : B.N°1
 BCH 1 lu/calculé (86-106/25-85): 195D09/195D09
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : No
 Erreur position GPS >5 km : Yes
 Latitude position : 43°30' Nord 43° 30' N
 Longitude position : 1.5°0'0'' Est 1° 30' E
 Delta position : 13.3km

2- Standard-Short Location Protocols

2.2 SERIAL

Message balise

Message reçu	(1-112):	FFED010163FC0007FDFFF94ECB7	
Format flag	(25):	0	SELF TEST
Protocole flag	(26):	0	
Code pays	(27-36):	0257	
Pays		: NORWAY	
Code protocole	(37-40):	0110	
Protocole utilise		: Standard - EPIRB - serial-short	
Identification		:	
Numero		: Serial N° 0	
BCH 1 lu/calculé (86-106/25-85)		: 1E53B2/1E53B2	
Position GPS de reference		: N 43°33'34'' E 1°28'48	
Position GPS		: Yes	
Position GPS par défaut		: Yes	

Message balise

Message reçu	(1-112):	FFFE2F10163FC0007FDFFF94ECB7	
Format flag	(25):	0	DEFAULT - POS.
Protocole flag	(26):	0	
Code pays	(27-36):	0257	
Pays		: NORWAY	
Code protocole	(37-40):	0110	
Protocole utilise		: Standard - EPIRB - serial-short	
Identification		:	
Numero		: Serial N° 0	
BCH 1 lu/calculé (86-106/25-85)		: 1E53B2/1E53B2	
Position GPS de reference		: N 43°33'34'' E 1°28'48	
Position GPS		: Yes	
Position GPS par défaut		: Yes	

Message balise

Message reçu	(1-112):	FFFE2F10163FC0002B8034CDC477	
Format flag	(25):	0	LAB POSITION
Protocole flag	(26):	0	
Code pays	(27-36):	0257	
Pays		: NORWAY	
Code protocole	(37-40):	0110	
Protocole utilise		: Standard - EPIRB - serial-short	
Identification		:	
Numero		: Serial N° 0	
BCH 1 lu/calculé (86-106/25-85)		: 133711/133711	
Position GPS de reference		: N 43°33'34'' E 1°28'48	
Position GPS		: Yes	
Position GPS par défaut		: No	
Erreur position GPS >5 km		: Yes	
Latitude position		: 43.5°0'0'' Nord	
Longitude position		: 1.5°0'0'' Est	
Delta position		: 43,3km	

3- User-Location Protocol

3.1 Maritime

Message balise

Message reçu (1-144): FFFED0D014EB28140AA68FCBCDAFE0FF0146
 Format flag (25): 1
 Protocole flag (26): 1 SELF TEST
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-39): 010
 Protocole utilise : User - Maritime
 Identification code (26-85): A029D65028154D1
 Identification (Baudot) (40-81): 1234560
 Numero : 59
 BCH 1 lu/calculé (86-106/25-85): 1F2F36/1F2F36
 BCH 2 lu/calculé (133-144/107-132): 146/146
 Homing (84-85): Internal
 Pos. Data source (107): Internal
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-144): FFFE2FD014EB28140AA68FCBCDAFE0FF0146
 Format flag (25): 1
 Protocole flag (26): 1 DEFAULT POS.
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-39): 010
 Protocole utilise : User - Maritime
 Identification code (26-85): A029D65028154D1
 Identification (Baudot) (40-81): 1234560
 Numero : 59
 BCH 1 lu/calculé (86-106/25-85): 1F2F36/1F2F36
 BCH 2 lu/calculé (133-144/107-132): 146/146
 Homing (84-85): Internal
 Pos. Data source (107): Internal
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : Yes

Message balise

Message reçu (1-144): FFFE2FD014EB28140AA68FCBCDA570017151
 Format flag (25): 1
 Protocole flag (26): 1 LAB. POSITION
 Code pays (27-36): 0257
 Pays : NORWAY
 Code protocole (37-39): 010
 Protocole utilise : User - Maritime
 Identification code (26-85): A029D65028154D1
 Identification (Baudot) (40-81): 1234560
 Numero : 59
 BCH 1 lu/calculé (86-106/25-85): 1F2F36/1F2F36
 BCH 2 lu/calculé (133-144/107-132): 151/151
 Homing (84-85): Internal
 Pos. Data source (107): Internal
 Position GPS de référence : N 43°33'34'' E 1°28'48
 Position GPS : Yes
 Position GPS par défaut : No
 Latitude position : 43°32'0'' Nord
 Longitude position : 1°28'0'' Est
 Delta position : 2.5 km