

Compatible NMEA Sentences from Winch Control Systems, GPS and Compass Devices

You can add to Scala/Scala2 measures coming from winch control systems that use the following NMEA sentences.

▼ NMEA 0183 Standard Sentences

Symbol (*) indicates which parts of the sentence Scala/Scala2 uses.

NMEA Sentence	Format	First compliant version of Scala
GGA - Global Positioning System Fix Data	<p>\$--GGA,hhmmss.ss,aaaa.aa,b,cccc.cc,d,e,ff,g.g,h.h,M,i.i,M,j.j,kkkk*hh<CR><LF></p> <ol style="list-style-type: none"> 1. \$--: Talker identifier* 2. GGA: Sentence formatter* 3. hhmmss.ss: UTC of position* 4. aaaa.aa, b: Latitude North/South (N/S)* 5. cccc.cc, d: Longitude East/West (E/W)* 6. e: GPS quality indicator 7. ff: Number of satellites in use (00-12) 8. g.g: Horizontal dilution of precision 9. h.h, M: Antenna altitude above/below mean sea level (geoid), meters* 10. i.i, M: Geoidal separation, meters 11. j.j: Age of differential GPS data 12. kkkk: Differential reference station ID 13. *hh: Checksum* 	1.0.0.0
GLL - Geographic Position - Latt/Long	<p>\$--GLL, aaaa.aa,L,bbbb.bb,L,hhmmss.ss,C,d*hh<CR><LF></p> <ol style="list-style-type: none"> 1. \$--: Talker identifier* 2. GLL: Sentence formatter* 3. aaaa.aa,L: Latitude North/South (N/S)* 4. bbbb.bb,L: Longitude East/West (E/W)* 5. hhmmss.ss: UTC of position* 6. C: status (A= data valid / V: data not valid)* 7. d: Mode indicator 8. *hh: Checksum* 	1.2.6.0

GNS - GNSS Fix Data	<pre>\$--GNS,hhmmss.ss,aaa.aa,L,bbbb.bb,L,c--c,dd,e.e,f.f,g.g,h.h,i.i,a*hh<CR><LF></pre> <ol style="list-style-type: none"> 1. \$--: Talker identifier* 2. GNS: Sentence formatter* 3. hhmmss.ss: UTC of position* 4. aaaa.aa,L: Latitude North/South (N/S)* 5. bbbb.bb,L: Longitude East/West (E/W)* 6. c--c: Mode indicator 7. dd: Total number of satellites in use (00-99) 8. e.e: Horizontal dilution of precision 9. f.f: Antenna altitude above/below mean sea level (geoid), in meters* 10. g.g: Geoidal separation, meters 11. h.h: Age of differential data 12. i.i: Differential reference station ID 13. *hh: Checksum* 	1.0.0.0
HDG - Heading, Deviation & Variation	<pre>\$--HDG,a.a,b.b,M,c.c,M*hh<CR><LF></pre> <ol style="list-style-type: none"> 1. \$--: Talker identifier* 2. HDG: Sentence formatter* 3. a.a: Sensor magnetic heading (degrees)* 4. b.b,M: Magnetic deviation (degrees), Easterly/Westerly (E/W)* 5. c.c,M: Magnetic variation (degrees), Easterly/Westerly (E/W)* 6. *hh: Checksum* 	1.0.0.0
HDT - Heading, True	<pre>\$--HDT,a.a,T*hh<CR><LF></pre> <ol style="list-style-type: none"> 1. \$--: Talker identifier* 2. HDT: Sentence formatter* 3. a.a,T: Heading (degrees) True* 4. *hh: Checksum* 	1.0.0.0
RMC - Recommended Minimum Navigation Information	<pre>\$--RMC,aaaaaa,A,bbbb.bbb,B,cccc.ccc,C,ddd.d,eee.e,ffffff,ggg.g,G,H*hh<CR><LF></pre> <ol style="list-style-type: none"> 1. \$--: Talker identifier* 2. RMC: sentence formatter* 3. aaaaaa: Time (UTC)* 4. A: Status, A = data valid, V = navigation receiver warning* 5. bbbb.bbb, B: Latitude, N/S* 6. cccc.ccc, C: Longitude, E/W* 7. ddd.d: Speed over ground (knots)* 8. eee.e: Course Over Ground (degrees True)* 9. fffff: Date: ddmmyy* 	2.2.2.0

	10. ggg.g, G: Magnetic variation (degrees E/W)* 11. H: mode indicator: A=Autonomous, D=Differential, E=Estimated, M=Manual input, S=Simulator, N=data not valid (sentence is not accepted if mode indicator = N)* 12. *hh: Checksum*	
VHW - Water Speed and Heading	\$--VHW,a.a,T,b.b,M,c.c,N,d.d,K*hh<CR><LF> 1. \$--: Talker identifier* 2. VHW: Sentence formatter* 3. a.a,T: Heading, degrees True* 4. b.b,M: Heading, degrees Magnetic* 5. c.c,N: Speed, knots* 6. d.d,K: Speed, km/hr 7. *hh: Checksum*	1.4.0.0
VTG - Course Over Ground and Ground Speed	\$--VTG,a.a,T,b.b,M,c.c,N,d.d,K*hh<CR><LF> 1. \$--: Talker identifier* 2. VTG: Sentence formatter* 3. a.a,T: Course over ground, degrees, True* 4. b.b,M: Course over ground, degrees, Magnetic 5. c.c,N: Speed over ground, knots* 6. d.d,K: Speed over ground, km/hr* 7. *hh: Checksum*	1.3.3.0

✓ Proprietary Sentences

Symbol (*) indicates which parts of the sentence Scala/Scala2 uses.

Sentence	Format	First compliant version of Scala/Scala2
ATW - Naust Marine winch control system	\$NMATW,aaaaaa,bbbbbb,cccccc,dddddd,eeeeee,ffffff,gggggg,hhhhhh,iiiiii,jjjjjj,kkkkk,lllll,mm:mm*hh <CR><LF> \$NMATW: Talker identifier + sentence formatter* a. Winch starboard tension (kg)* b. Winch port tension (kg)* c. Winch middle tension (kg)*	1.2.0.0

	d. Winch starboard length (meter or feet)* e. Winch port length (meter or feet)* f. Winch middle length (meter or feet)* g. RPM starboard h. RPM port i. RPM middle j. Line speed starboard (meter or feet/min) k. Line speed port (meter or feet/min) l. Line speed middle (meter or feet/min) m. Towing time (meter or feet/min)	
FEC - Furuno attitude message	\$PFEC,GPatt,aaa.a,bb.b,cc.c,*hh<CR><LF> 1. \$PFEC: Talker identifier + sentence formatter* 2. GPatt: Global positioning attitude, sentence formatter 3. aaa.a: Heading true* 4. bb.b: Pitch* 5. cc.c: Roll* 6. *hh: Checksum*	1.0.5.0
KW - Karmoy Winch	\$KWIN,a,b.b,T,c.c,M,d.d,rpm*hh<CR><LF> 1. \$KWIN: Talker identifier + sentence formatter* 2. a: Winch 0 = Stbd / Trawl 1 = Port Trawl Winch 3. b.b, T: Tensions (tons) 4. c.c, M: Length (meters) 5. d.d, rpm: Speed (rpm)	1.6.25.0
MA DD - Marelec winch length and tension	# MA DD dd/mm/yy hh:mm:ss LB aaaam LS bbbbm LM ccccm TB ddddK TS eeeeK TM ffffK gg<CR><LF> 1. # MA DD: talker identifier* 2. dd/mm/yy: date 3. hh:mm:ss: time 4. LB aaaam: Shooted length portside in meters* 5. LS bbbbm: Shooted length starboard in meters* 6. LM ccccm: Shooted length center in meters* 7. TB ddddK: Tension of portside in kg* 8. TS eeeeK: Tension of starboard in kg* 9. TM ffffK: Tension of center in kg*	1.2.0.0

	10. gg: system in 00 = MANUAL (stop), 10 = auto shooting, 20 = auto fishing, 30 = auto hauling, 40 = slow tension alarm without propeller reduction, 41 = slow tension alarm with propeller reduction, 50 = fast tension alarm without propeller reduction, 51 = fast tension alarm with propeller reduction*	
MPT TXOR - Marport, transducer orientation	\$PMPT,TXOR,aa.a,bb.b,cc.c,d*hh <ul style="list-style-type: none"> • \$PMPT: talker identifier + sentence formatter. • TXOR: Transducer Orientation • aa.a: pitch* • bb.b: roll* • cc.c: yaw* • s: V = valid / N = not valid* 	2.0.0.0
NAV - Ifremer proprietary sentence	\$NANAV,04/09/yy,hhmmss.sss,NASYC,N,48,22.92315,W,004,28.90527,D,00.0,WG84,04/09/13, 13:05:37.000,COU,346.08,-00.22,+00.13,+00.00,+00052.172,000,0000	1.0.0.0
IFM - Ifremer versatile sentence	\$PIFM,EU,MES,dd/mm/yy,hh:hh:ss.sss,TRFUN, ±a,bb,cccc,dddd,e.e,f,gggg,hhhh,i.i,j,<CR><LF> <ol style="list-style-type: none"> 1. \$PIFM: Talker identifier + sentence formatter* 2. OCGYR: pitch, roll, heading 3. TRFUN: winch lengths (starboard, port) and winch tensions (starboard, port) 	1.0.0.0
SYN - Winch Syncro 2020, winch length and tension	\$WMSYN,aaa.a,m,bbb.b,m,ccc.c,m,ddd.d,m,ee.e,t,ff.f,t,gg.g,t,hh.h,t,0.5,r,0.7,r,1.6,s,2.0,s,0,0,1,0,0,45.5,c,33.0,p,32.8,p*31 <ol style="list-style-type: none"> 1. \$WMSYN: Talker identifier + sentence formatter* 2. aaa.a: winch starboard length in meters* 3. bbb.b: winch inner starboard length in meters* 4. ccc.c: winch inner port length in meters* 5. ddd.d: winch port length in meters* 6. ee.e: winch starboard tension in tons* 7. ff.f: winch inner starboard tension in tons* 8. gg.g: winch inner port tension in tons* 9. hh.h: winch port tension in tons* 10. Other strings are not used. 	1.0.0.0
	\$WMSYN,aaa.a,c,bbb.b,c,ccc.c,c,dd.d,t,ee.e,t,ff.f, t*hh<CR><LF> <ol style="list-style-type: none"> 1. \$WMSYN: Talker identifier + sentence formatter* 2. aaa.a,l: Starboard wire length (m=meter)* 	1.6.19.0

	3. bbb.b,l: Mid wire length (m=meter)* 4. ccc.c,l: port wire length (m=meter)* 5. dd.d,t: Starboard wire tension, tons* 6. ee.e,t: Mid wire tension, tons* 7. ff.f,t: Port wire tension, tons*	
TAWWL - RappHydema, PTS Pentagon warp length	@TAWWL,a,M,b,M,c,M*hh<CR><LF> See below. M = meter	1.4.4.0
	@TAWWL,x,y,z*hh<CR><LF> 1. @TAWWL: Talker identifier + sentence formatter* 2. a: Starboard winch length* 3. b: Port winch length* 4. c: Middle winch length*	1.6.19.0
TAWWT - RappHydema, PTS Pentagon warp tension	@TAWWT,a.a,T,b.b,T,c.c,T*hh<CR><LF> See below. T = tons	1.4.4.0
	@TAWWT,a.a,b.b,c.c*hh<CR><LF> 1. @TAWWT: Talker identifier + sentence formatter* 2. a.a: Starboard winch tension* 3. b.b: Port winch tension* 4. c.c : Middle winch tension*	1.6.19.0
WCT - Warp length and tension (Silecmar)	\$SIWCT,aaa,bbb,ccc,d.d,e.e,f.f*hh<CR><LF> 1. \$SIWCT: Talker identifier + sentence formatter* 2. aaa: Port winch cable, meters* 3. bbb: Starboard winch cable, meters* 4. ccc: Clump winch cable, meters* 5. d.d: Tension in the port winch, tons* 6. e.e: Tension in the starboard winch, tons* 7. f.f: Tension in the clump winch, tons* 8. *hh: Checksum*	1.2.6.0
WIDA1 - Kongsberg warp length	\$WIDA1,aa,bbbb,cc,0,dd,eeee,ff,1,g,h,i,2,k,l,m,3 *hh<CR><LF> 1. \$WIDA1: Talker identifier + sentence formatter* 2. aa: port wire tension, tons* 3. bbbb: port wire out, meters* 4. cc: port wirespeed, m/min* 5. 0: port* 6. dd: starboard wire tension, tons*	2.2.2.0

	7. eeee: starboard wire out, meters* 8. ff: starboard wirespeed, m/min* 9. 1: starboard* 10. g: port mid wire tension, tons* 11. h: port mid wire out, meters* 12. i: port mid wirespeed, m/min* 13. 2: port mid* 14. k: stb mid wire tension, tons* 15. l: stb mid wire out, meters* 16. m: stb mid wirespeed, m/min* 17. 3: starboard mid* 18. *hh: Checksum*	
WLP - Scantrol winch length (port)	\$SCWLP, a.a,M, b.b,M*hh<CR><LF> 1. \$SCWLP: Talker identifier + sentence formatter* 2. a.a,M: paid out wire in meters* 3. b.b,M: wirespeed in meters/sec., positive when paying out wire 4. *hh: Checksum*	1.0.6.0
WLS - Scantrol winch length (starboard)	\$SCWLS, a.a,M, b.b,M*hh<CR><LF> 1. \$SCWLS: Talker identifier + sentence formatter* 2. a.a,M: paid out wire in meters* 3. b.b,M: wirespeed in meters/sec., positive when paying out wire 4. *hh: Checksum*	1.0.6.0
WLC - Scantrol winch length (clump)	\$SCWLC, a.a,M, b.b,M*hh<CR><LF> 1. \$SCWLC: Talker identifier + sentence formatter* 2. a.a,M: paid out wire in meters* 3. b.b,M: wirespeed in meters/sec., positive when paying out wire 4. *hh: Checksum*	1.0.6.0
WLD - Scantrol winch length (triple trawl - port clump)	\$SCWLD, a.a,T*hh<CR><LF> 1. \$SCWLD: Talker identifier + sentence formatter* 2. a.a,M: paid out wire in meters* 3. b.b,M: wirespeed in meters/sec., positive when paying out wire 4. *hh: Checksum*	2.0.0.0
WLE - Scantrol winch length (quad trawl - center clump)	\$SCWLE, a.a,T*hh<CR><LF> 1. \$SCWLE: Talker identifier + sentence formatter* 2. a.a,M: paid out wire in meters* 3. b.b,M: wirespeed in meters/sec., positive when paying out wire 4. *hh: Checksum*	2.0.0.0

WTP - Scantrol winch tension (port)	\$SCWTP, a.a, T*hh<CR><LF> 1. \$SCWTP: Talker identifier + sentence formatter* 2. a.a,T: tension in tons* 3. *hh: Checksum*	1.0.6.0
WTS - Scantrol winch tension (starboard)	\$SCWTS, a.a, T*hh<CR><LF> 1. \$SCWTS: Talker identifier + sentence formatter* 2. a.a,T: tension in tons* 3. *hh: Checksum*	1.0.6.0
WTC - Scantrol winch tension (clump)	\$SCWTC, a.a, T*hh<CR><LF> 1. \$SCWTC: Talker identifier + sentence formatter* 2. a.a,T: tension in tons* 3. *hh: Checksum*	1.0.6.0
WTD - Scantrol winch tension (triple trawl - port clump)	\$SCWTD, a.a, T*hh<CR><LF> 1. \$SCWTD: Talker identifier + sentence formatter* 2. a.a,T: tension in tons* 3. *hh: Checksum*	2.0.0.0
WTE - Scantrol winch tension (quad trawl - center clump)	\$SCWTD, a.a, T*hh<CR><LF> 1. \$SCWTD: Talker identifier + sentence formatter* 2. a.a,T: tension in tons* 3. *hh: Checksum*	2.0.0.0