WinFrog Device Group:	OUTPUT
Device Name/Model:	Cascade
Device Manufacturer:	**Head Office** Global Marine Systems Limited East Saxon House 27 Duke Street Chelmsford Essex CM1 1HT England Tel: +44 (0)1245 702000 Fax: +44 (0)1245 702210 Email: contactus@globalmarinesystems.com
Device Data String(s) Output to WinFrog:	$PMACI (Cascade output data)
WinFrog Data String(s) Output to Device:	$PAZDA (TIME), $PAGLL (POSITION), $PAHDT (HEADING), $PABBCLD (Cable Data)
WinFrog Data Item(s) and their RAW record:	CASCADE OUTPUT DATA 457

DEVICE DESCRIPTION:
This driver was written to enable WinFrog to output Time, Position, Heading and Cable information to the Computer Assisted Slack Control and Deployment (CASCADE) cable modeling software. This driver also enables the recording of the CASCADE cable model data in the 457 raw record. There are no configuration or edits options available to the operator but the PMACIDATAOUT data item must be added to the cable laying vessel's device list in order for data to be output.

DEVICE CONFIGURATION INSTRUCTIONS

WINFROG I/O DEVICES > EDIT I/O:
Serial
Configurable Parameters

WINFROG I/O DEVICES > CONFIGURE DEVICE:
No configuration is required at the I/O Device window level.

WINFROG VEHICLE > CONFIGURE VEHICLE DEVICES > DEVICE DATA ITEM > EDIT:
Adding the Cascade device creates the PMACIDATAOUT data item.

Data item: OUTPUT, Cascade, PMACIDATAOUT

No editing or configuration is required for the OUTPUT, Cascade, PMACIDATAOUT data item.

TELGRAM SPECIFICATION:

Input string

Field	Data
1	$PMACI
4	Ship Lat
5	Ship Lat dir (N/S)
6	Ship Lon
7	Ship Lon dir (E/W)
8	TD Lat
9	TD Lat dir
10	TD Lon
11	TD Lon dir
12	cable length on bottom (m)
13	cable length to next cable body (m)
14	average slack

Output strings

$PAZDA,hour,min,sec,day,month,year,,
$PAGLL,latDeg, latMin, latDir, lonDeg, lonMin, lonDir, hour, min, sec,A
$PAHDT,heading,hour,min,sec,,,
$PABBCLD,countCh1,velocityCh1,tensionCh1,00000000000000000000,countCH2,velocityCH2,tensionCH2