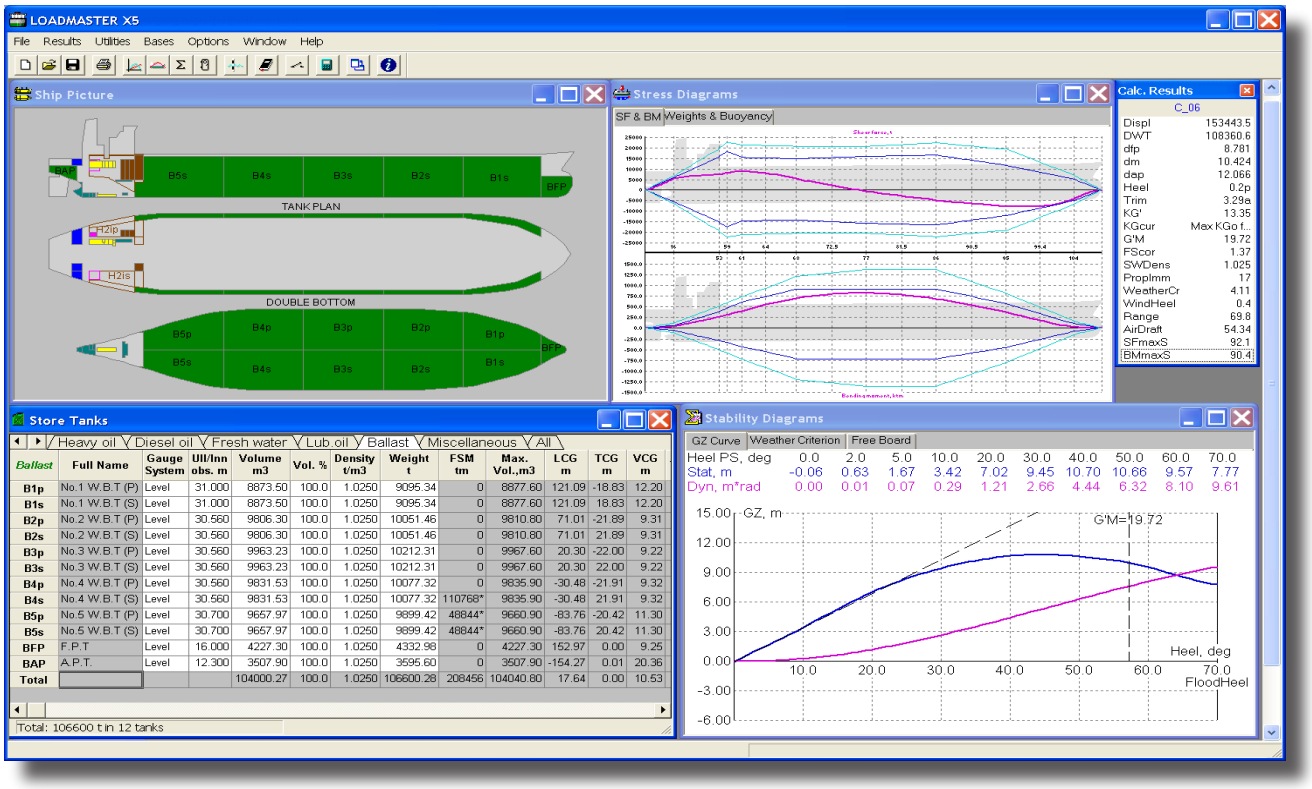
LOADMASTER® X5
Basic Software

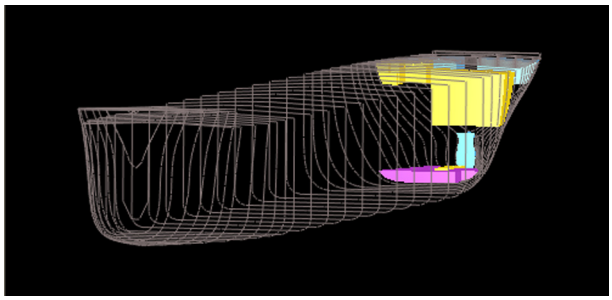


General Information

The LOADMASTER basic module includes the main parts of a loading calculator. Connected to the basic module are specialized features for ship specific needs. For example tanker package, bulk package, container package, general cargo package and off-shore package etc. LOADMASTER is executed in Windows 2000/XP. Several scaleable windows can be opened at the same time. The complete condition is calculated after each entry, and the result is displayed instantly. The calculation of the condition is based on direct calculation on the hull (3-D description of the hull is included, i.e. no hydrostatic tables). Shear forces and bending moments is calculated at approximately 100 points and not only class appointed frames. KG values and FS effects in tanks are calculated as a function of level of liquid in tanks.

Ship's picture 3-D:

Ship showed in 3-D picture. User can display frames, compartments and tanks. Hull can be visualized or semi transparent. Ship's picture can be freely rotated and zoomed.



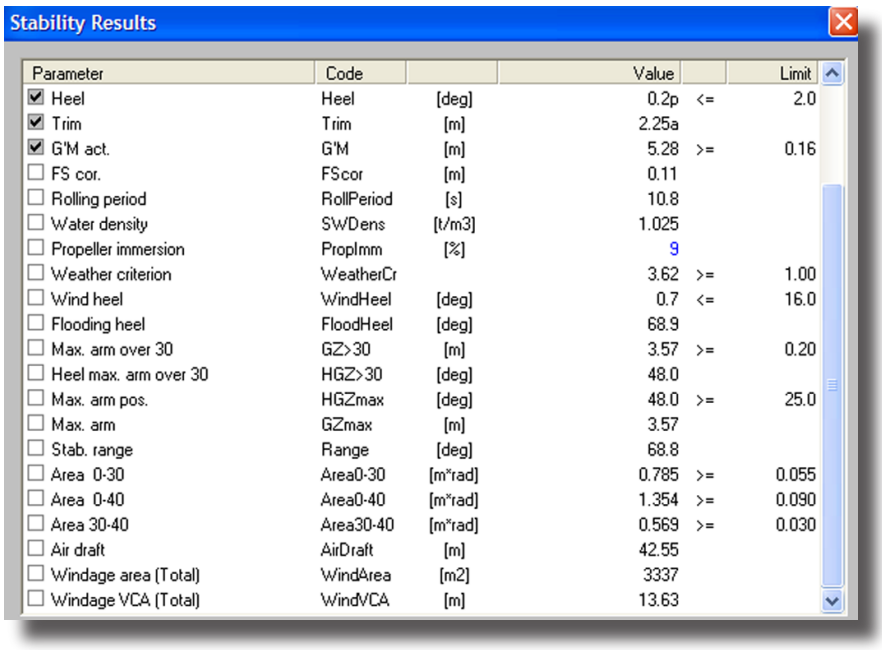
Ship's picture 2-D:

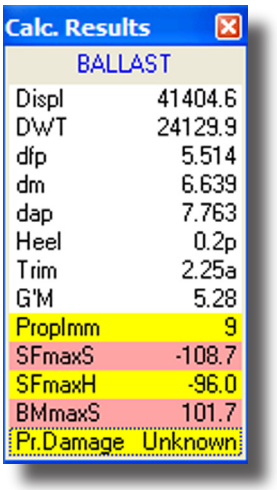
Drawing of the vessel showing one side view as well as one or more horizontal plans. The window is interactive and follows the user's commands when loading/discharging the tanks/compartments.

LOADMASTER®

Calculated results window

The calc. results window has "always on top" functionality. The window displays the most essential results. In addition the window is very flexible and can include some 50 different results on user's request by selecting tick boxes in the stability window. The window has built in colour warnings with fixed rules and regulation prescribed limits (red) as well as user-defined warning limits (yellow). On request national regulations for the stability calculations can be implemented.



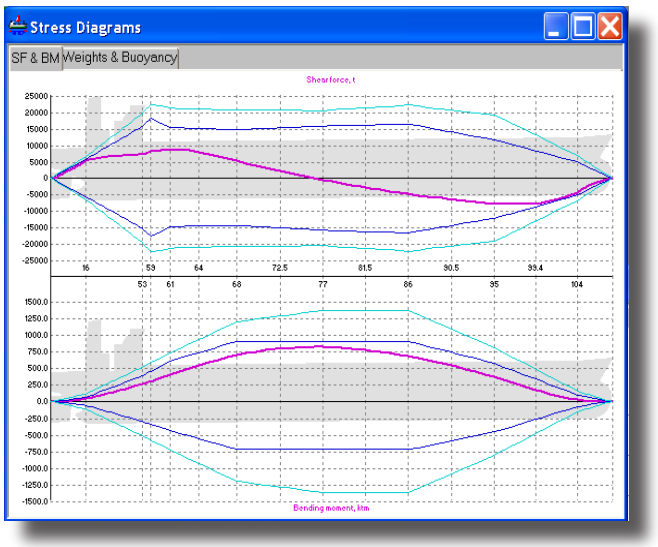


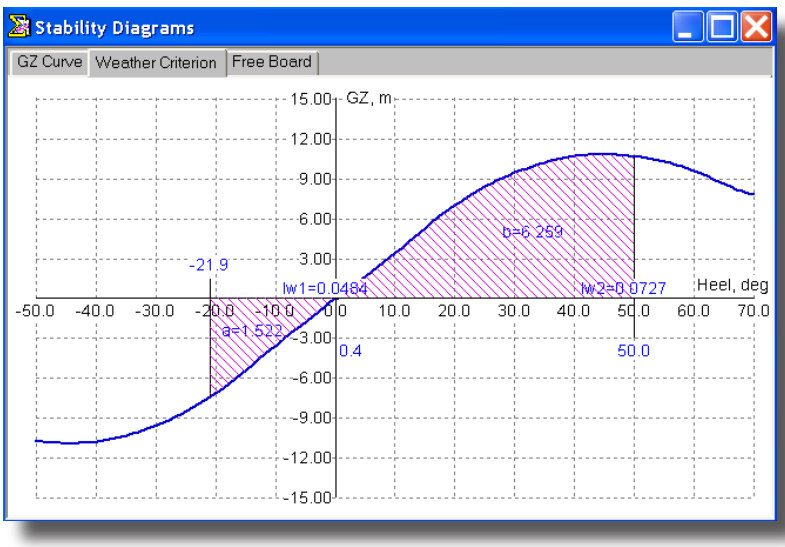
Stress diagram

This combined window includes shear force and bending moment results. Presentation is done in graph and table format. Calculated values are compared to seagoing and harbour limits. Weight and buoyancy results are given in section display. All diagrams include ship's picture for easy reference.

Stability Diagram

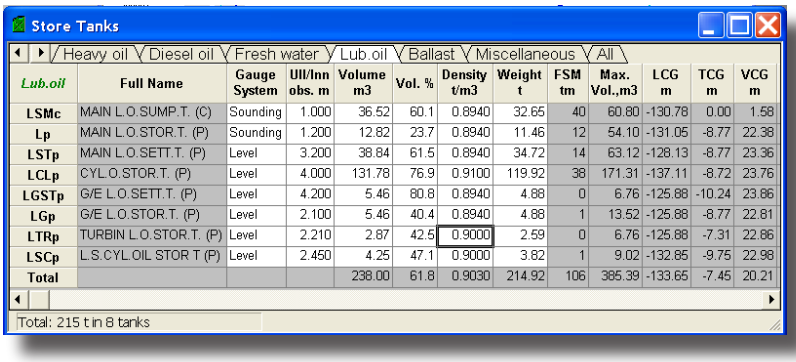
Window displaying static and dynamic curves as well as initial transverse metacentric height – G'M. All curves are included in one graph. The values of static and dynamic stability levers at the given angle of heel are shown in a table as well. Apart from stability the window consider freeboard diagram and weather criterion plotting according to IMO





Store tanks window

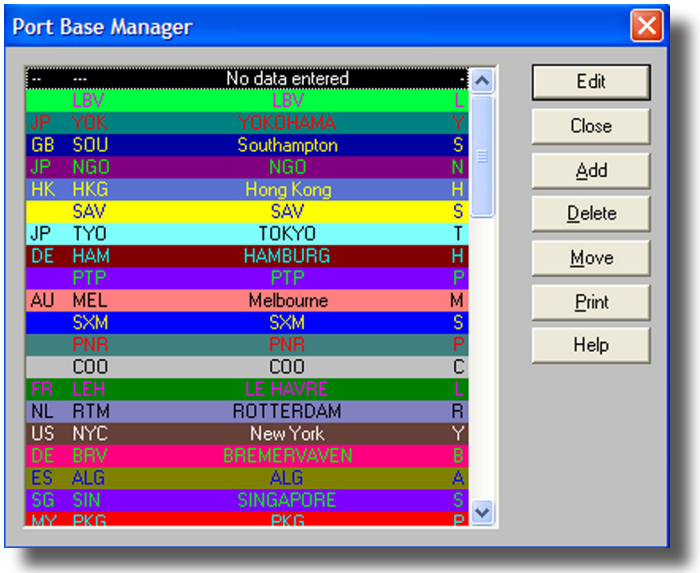
Window dedicated for entering diesel oil, lube oil, ballast and fresh water. The user can select to use max or actual free surface moment. Input of tank contents through a spreadsheet. Input is either through an on-line interace to level gauging system or by manual means using weight, volume, % filling or level (if applicable). Cut-and-Paste functionality implemented. The window is open for user's modification and semi interactive with ship's picture.



Lub.oil	Full Name	Gauge System	Ull/Inn obs. m	Volume m3	Vol. %	Density t/m3	Weight t	FSM tm	Max. Vol.,m3	LCG m	TCG m	VCG m
LSMc	MAIN L.O.SUMP.T. (C)	Sounding	1.000	36.52	60.1	0.8940	32.65	40	60.80	-130.78	0.00	1.58
Lp	MAIN L.O.STOR.T. (P)	Sounding	1.200	12.82	23.7	0.8940	11.46	12	54.10	-131.05	-8.77	22.38
LSTp	MAIN L.O.SETT.T. (P)	Level	3.200	38.84	61.5	0.8940	34.72	14	63.12	-128.13	-8.77	23.36
LCLp	CYL.O.STOR.T. (P)	Level	4.000	131.78	76.9	0.9100	119.92	38	171.31	-137.11	-8.72	23.76
LGSTp	G/E L.O.SETT.T. (P)	Level	4.200	5.46	80.8	0.8940	4.88	0	6.76	-125.88	-10.24	23.86
LGp	G/E L.O.STOR.T. (P)	Level	2.100	5.46	40.4	0.8940	4.88	1	13.52	-125.88	-8.77	22.81
LTRp	TURBIN L.O.STOR.T. (P)	Level	2.210	2.87	42.5	0.9000	2.59	0	6.76	-125.88	-7.31	22.86
LSCp	L.S.CYL.OIL STOR T (P)	Level	2.450	4.25	47.1	0.9000	3.82	1	9.02	-132.85	-9.75	22.98
Total				238.00	61.8	0.9030	214.92	106	385.39	-133.65	-7.45	20.21

Colour association for ports, cargo, IMDG.

The feature allows the user to have three different colour tables, all specified by the user. Each entry is given a colour, a full name, a three-letter code and a one-letter code. The colours follows throughout the entire program for easy reference.



Correction on drafts

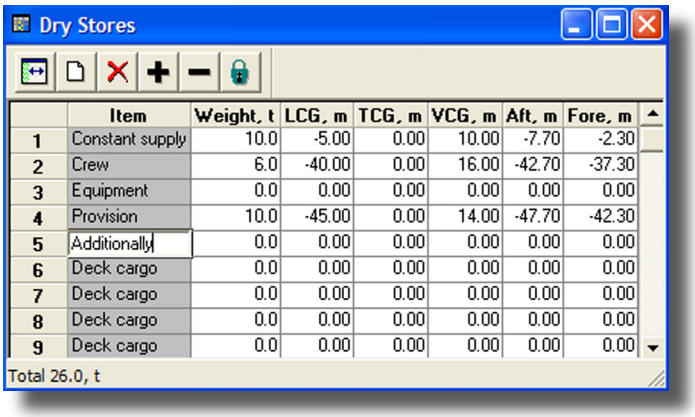
Correction on drafts window can be used to find the difference between actual and entered cargo by comparing the "real" draft from draftmarks with the calculated drafts. It can also be used to calculate remaining deadweight.

Visibility

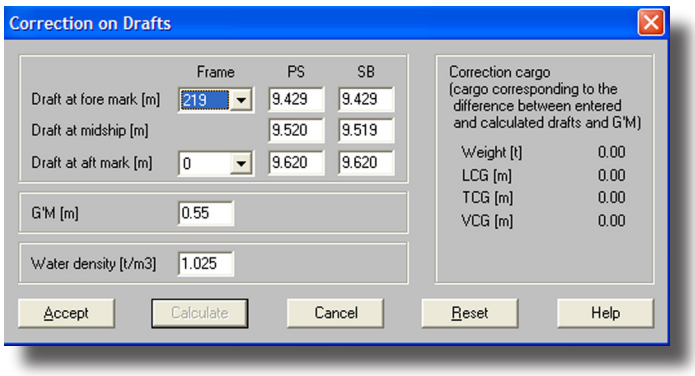
Visibility calculations according to regulations from IMO and Panama. Featuring possibility for manual change of the conning position and any temporary obstruction.

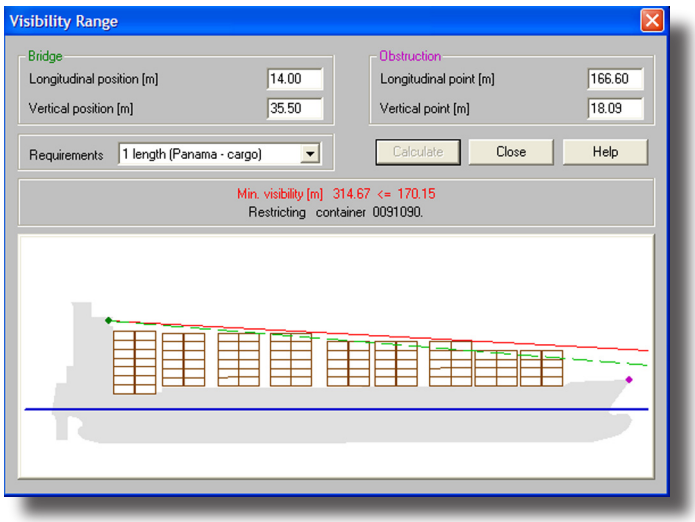
Dry stores window

Window for entering the load of crew, provisions, equipment, etc. The user can add and group dry store items in order to keep the LOADMASTER X5 updated during the ship's lifetime.



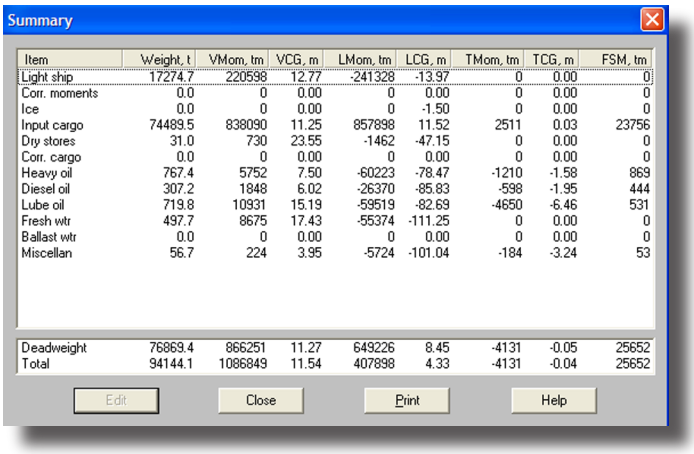
	Item	Weight, t	LCG, m	TCG, m	VCG, m	Aft, m	Fore, m
1	Constant supply	10.0	-5.00	0.00	10.00	-7.70	-2.30
2	Crew	6.0	-40.00	0.00	16.00	-42.70	-37.30
3	Equipment	0.0	0.00	0.00	0.00	0.00	0.00
4	Provision	10.0	-45.00	0.00	14.00	-47.70	-42.30
5	Additionally	0.0	0.00	0.00	0.00	0.00	0.00
6	Deck cargo	0.0	0.00	0.00	0.00	0.00	0.00
7	Deck cargo	0.0	0.00	0.00	0.00	0.00	0.00
8	Deck cargo	0.0	0.00	0.00	0.00	0.00	0.00
9	Deck cargo	0.0	0.00	0.00	0.00	0.00	0.00





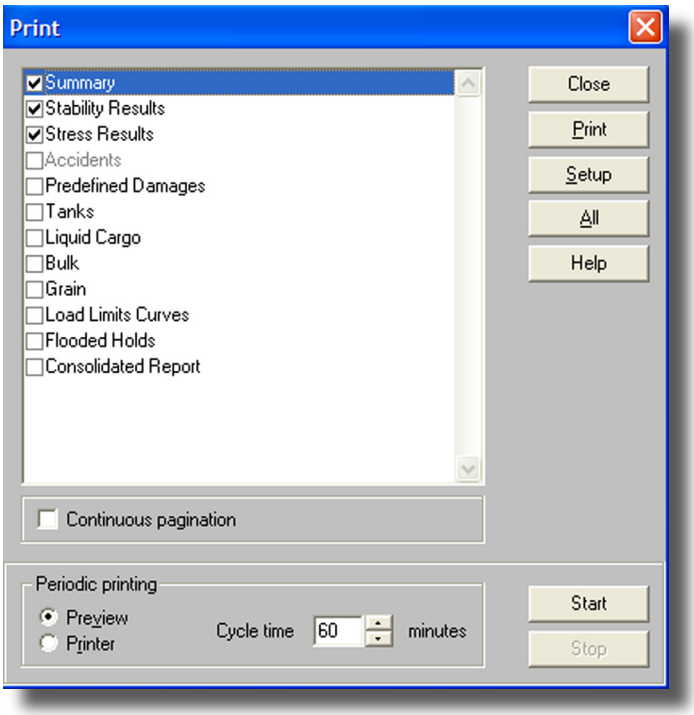
Summary window

Table format window showing weights, centres of gravity and their corresponding moments. Display of lightship and all other weights inserted in dedicated windows.



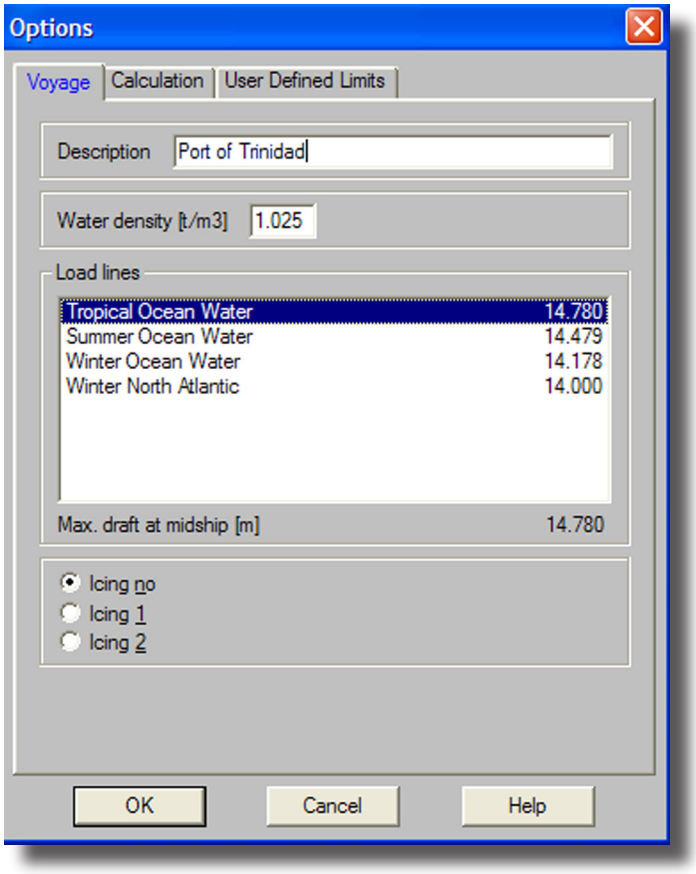
Loading condition printout function

A report gallery made for hard copy presentation of ship's condition.



Voyage condition

This window is used to select a loadline and to specify the icing condition and also to specify user defined limits for draft, heel, max trim (fore/aft), min/max GM and max SF/BM.



Help function.

On keystroke (F1) the LOADMASTER X5 displays the correct chapter for your support. Colour printout function of the active window is also available.

Loading condition library

Feature for saving and restoring conditions in LOADMASTER X5. The fuction also supports export and import of conditions generated on other computers using the ship's LOADMASTER program.

Window configuration library

The LOADMASTER X5 user can save and restore window configurations. Each on-boad user can have his personal settings and window configuration. All in order to have the most user friendly setup for each person.