Acknowledgements

Particularly thanks to Vinka for Spacecraft3 and Schimz for the arm structure
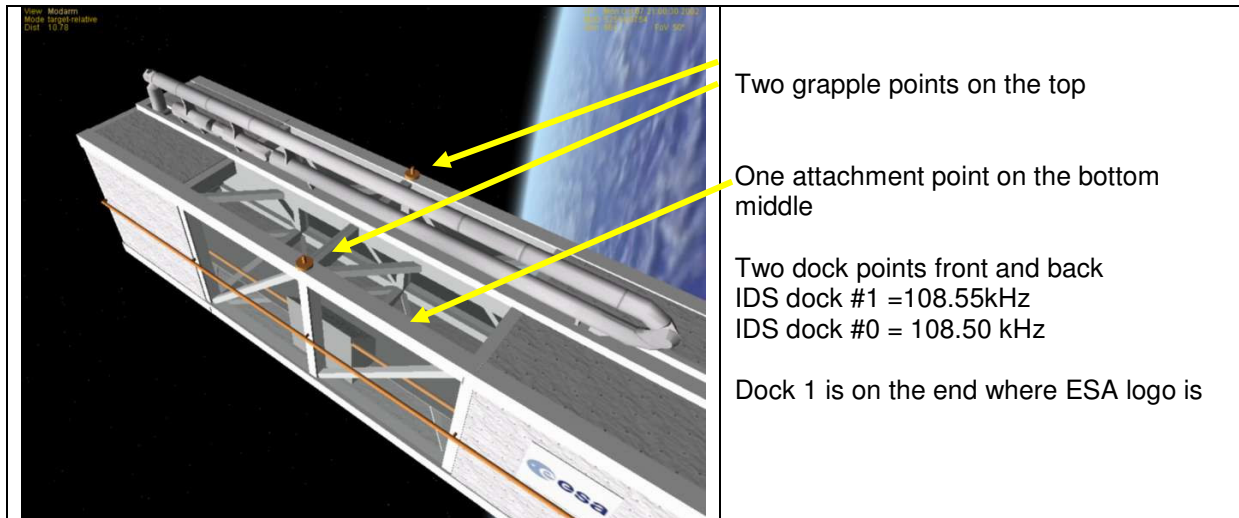
INSTALLATION

Unzip the pack in your Orbiter folder.

Make sure that you have Spacecraft3 in the last issue and DGex

MODARM MODULE

This module can be carried with a Shuttle or a DGex and docked with others modules to build a space station.
Arm is a rotate and shift arm for more possibilities.

Two grapple points on the top

One attachment point on the bottom middle

Two dock points front and back
IDS dock #1 =108.55kHz
IDS dock #0 = 108.50 kHz

Dock 1 is on the end where ESA logo is

COMMAND KEYS

Use left shift key to command the arm

1 – Arm contols

With F3 select Modarm	
Spacebar	Activate/Desactivate arm and a message is displayed in the screen bottom left when activated.to show which arm part is selected
LShift + Numpad 4 (Previous) **LShift + Numpad 6 (Next)**	Cycle through the different parts Shift (if used)→ Shoulder yaw → Shoulder pitch → Elbow pitch → Wrist pitch → Wrist Yaw → Wrist roll
LShift + Numpad 2 **LShift + Numpad 8**	Move selected part in one direction or the other direction. Release the key to stop move. Hold the numpad key and release Shift key to continue the move. Now you can release the numpad key. Stop with Shift + Numpad again

LShift + Numpad 0	Use to grappled or release the target. **Child must be detached before grapples (see attachment management)**

2 – Attachment management

A (Q on a french Keyboard)	Activate/Desactivate parent attachment management. A message will be displayed in the screen bottom left when activated. The name of the selected attachment and the name of the attached vessel (if any) is displayed.
LShift + Numpad 4 (Previous) **LShift + Numpad 6 (Next)**	Cycle through attachment points if several
LShift + Numpad 0	Attach /Detach child (if any) depending of the current status of the parent attachment.
LShift + Numpad 5	Toggle display of grapple points

EXAMPLES

Look the example scenarios to understand what to do for your own scenario

Arm move parameters can be changed if you want.
Open for example the file DGex_arm.ini with a text editor and find this part

[ANIM_SEQ_0]
INIT_POS=0
DURATION=20

Duration = time for complete move in second.
If you think the move is slow, reduce the value
If you think the move is fast, increase the value

Make the same for others animation sequences.

Name for NAME et JOINT_#_NAME can be customized in the same way in Modarm.ini

For example you can to use NAME="Arm" in place of NAME="Rms" in

[PARENT_ATTACH_0] ;arm grapple point
NAME=**"Rms"**
…………

For more details on how to use the parameters read Spacecraf2 doc included in Vinka's package.

If you want to use RCS for Modarm move, add PRPLEVEL in the scenario.
For example :

Modarm:Spacecraft\spacecraft2
  STATUS Orbiting Earth
  RPOS -4809018.28 -4486199.80 -597538.98
  RVEL -4434.705 5229.305 -3666.743
  AROT -83.77 24.03 -31.07
  PRPLEVEL 0:1.0000
  DOCKINFO 1:0,Atlantis
  IDS 0:10 1:11
  RCS 1
  CTRL_SURFACE 0
  CONFIGURATION 1
  CURRENT_PAYLOAD 0
  SEQ 0 2 0.000000   **;keep always this SEQ values for good arm move**
  SEQ 1 2 0.500000
  SEQ 2 2 0.000000
  SEQ 3 -2 0.000000
  SEQ 4 -2 0.500000
  SEQ 5 -2 0.500000
  SEQ 6 -2 0.500000
END

Find enclosed scenarios giving the basis for use in another scenarios

Enjoy !

Papyref
February 2006