

FROM BEYOND

the



OORT

CLOUD



CONTROLS
CONTROL PANEL
LAUNCH
ORBIT
DEORBIT
LANDING
TRANSFER
RENDEZVOUS
DOCKING
INTERPLANETARY TRAVEL

IF CONTROL PANEL IS OPEN ||

SELECT:  LRUD


ACTIVATE:  D

BUTTON INSTRUCTION
SELECTABLE BUTTONS
DATA


D+LR

CLOSE	ORBIT
THRUST	VEL: 0.23	SMA: 7
TIME	DIS: 116.6	APD: 7
ZOOM	ECC: 0	PERI: 7

|| IF CONTROL PANEL IS CLOSED

PANEL UP:  U

TIME WARP:  D

ZOOM:  LR

PAN VIEW:  +  X+LRUD

VIEW RESET:  X DOUBLE TAP

THRUST AND ROTATION:  +  D+LRUD

2055.01.01.00 17 CAPTA XB

ALT: 0
VEL: 0



O+LR

CLOSE	ORBIT	
THRUST	VEL: 0.23	SMA: 7
TIME	DIS: 116.6	APD: 7
ZOOM	ECC: 0	PERI: 7

CONTROL PANEL: ORBIT TAB

ORBITAL PARAMETERS

- VEL:** VELOCITY
- DIS:** SHIP DISTANCE FROM THE CENTRAL BODY
- ECC:** ECCENTRICITY. HOW CIRCULAR THE ORBIT IS
- SMA:** SEMI-MAJOR AXIS OF THE ORBIT
- APD:** APOAPSIS. THE DISTANCE BETWEEN THE FARTHEST POINT IN THE ORBIT AND THE CENTRAL BODY
- PERI:** PERIAPSIS. THE NEAREST POINT

2055.01.01.00 22 CAPTA XB

ALT: 0
VEL: 0



|| CONTROL PANEL: SHIP TAB

- THR:** ENGINE THRUST LEVEL. CAN BE ADJUSTED
- MAX:** MAXIMUM THRUST LEVEL AVAILABLE. UPGRADE AT BASES
- FUEL:** CURRENT FUEL LEVEL. REFILL AT BASES OR STATIONS
- MAX:** FUEL TANK SIZE. UPGRADE AT STATIONS
- HULL:** SHIP INTEGRITY. GETS DESTROYED AT 0%. REPAIR AT BASES OR STATIONS

CLOSE
THRUST
TIME
ZOOM

SHIP		
THR:	50%	MAX: 50%
FUEL:	100%	MAX: 100%
HULL:	100%	

2055.01.01.00:23

DEPTH

X8

ALT: 0
VEL: 0



O+LR

CLOSE
THRUST
TIME
ZOOM

••• **BODIES** •••

SEL: NEXT ALL: ON
 PREV SCAN: 0

BODY: 0/INTL/PE

CONTROL PANEL: BODIES TAB

VIEW AND SELECT CELESTIAL OBJECTS

- SEL: SELECT TARGET BODY
- BODY: SELECTED TARGET
- ALL: TOGGLE VISIBLE BODIES
- SCAN: NUMBER OF SCANNED OBJECTS/BODIES

2055.01.01.00 24 CAPTA XB

ALT: 0
VEL: 0



CONTROL PANEL: COMPUTER TAB

FLIGHT COMPUTER FOR ORBITAL TRANSFER AND RENDEZVOUS

TFER: TOGGLE TRANSFER AND POSITION AHEAD NODES

DA: ANGLE DIFFERENCE BETWEEN SHIP AND TARGET VELOCITY VECTORS

DV: VELOCITY DIFFERENCE BETWEEN SHIP AND TARGET

HDC: CURRENT HEADING ANGLE

PRD: PROGRADE ANGLE. VELOCITY VECTOR DIRECTION

RET: RETROGRADE ANGLE. THE OPPOSITE DIRECTION

CLOSE
THRUST
TIME
ZOOM

COMP		
TFER: OFF	HDC: 90	
DA: 154	PRD: 245	
DV: 0.627	RET: 65	

2055.01.01.00 26 CAPTAIN XB

ALT: 0
VEL: 0



O+LR

CLOSE
THRUST
TIME
ZOOM

-----TASK-----

< >
CAPTAIN! WE DISCOVERED #
FIND: A/ESF29/PE

|| CONTROL PANEL: TASK TAB

INSTRUCTIONS FOR THE
CURRENT MISSION

< > SCROLL MESSAGE TEXT
FIND: NAME OF TASK-RELATED
OBJECT

01:00:43 EARTH

X8

|| LAUNCH

ALT: 1790
VEL: 2524

ADD THRUST AND LIFT OFF.
GAIN ALTITUDE AND IN ORDER
TO INCREASE TANGENTIAL
VELOCITY BANK LEFT OR RIGHT.
LEFT: PROGRAE ORBIT
(COUNTER-CLOCKWISE)
RIGHT: RETROGRADE ORBIT
(CLOCKWISE)

DISTANCE TO BASE

ALTITUDE AND VELOCITY

417 >

PANEL: U

B

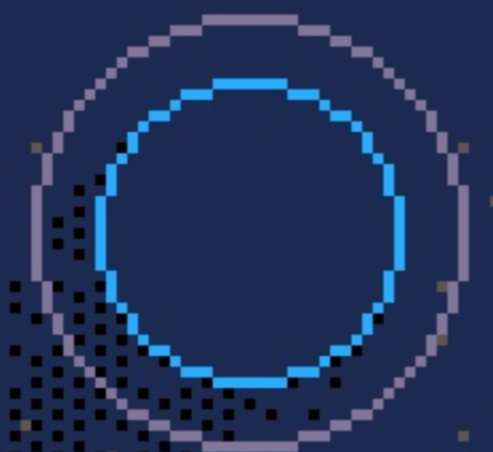
01.03 21 EARTH

x2

|| ORBIT VIEW 1



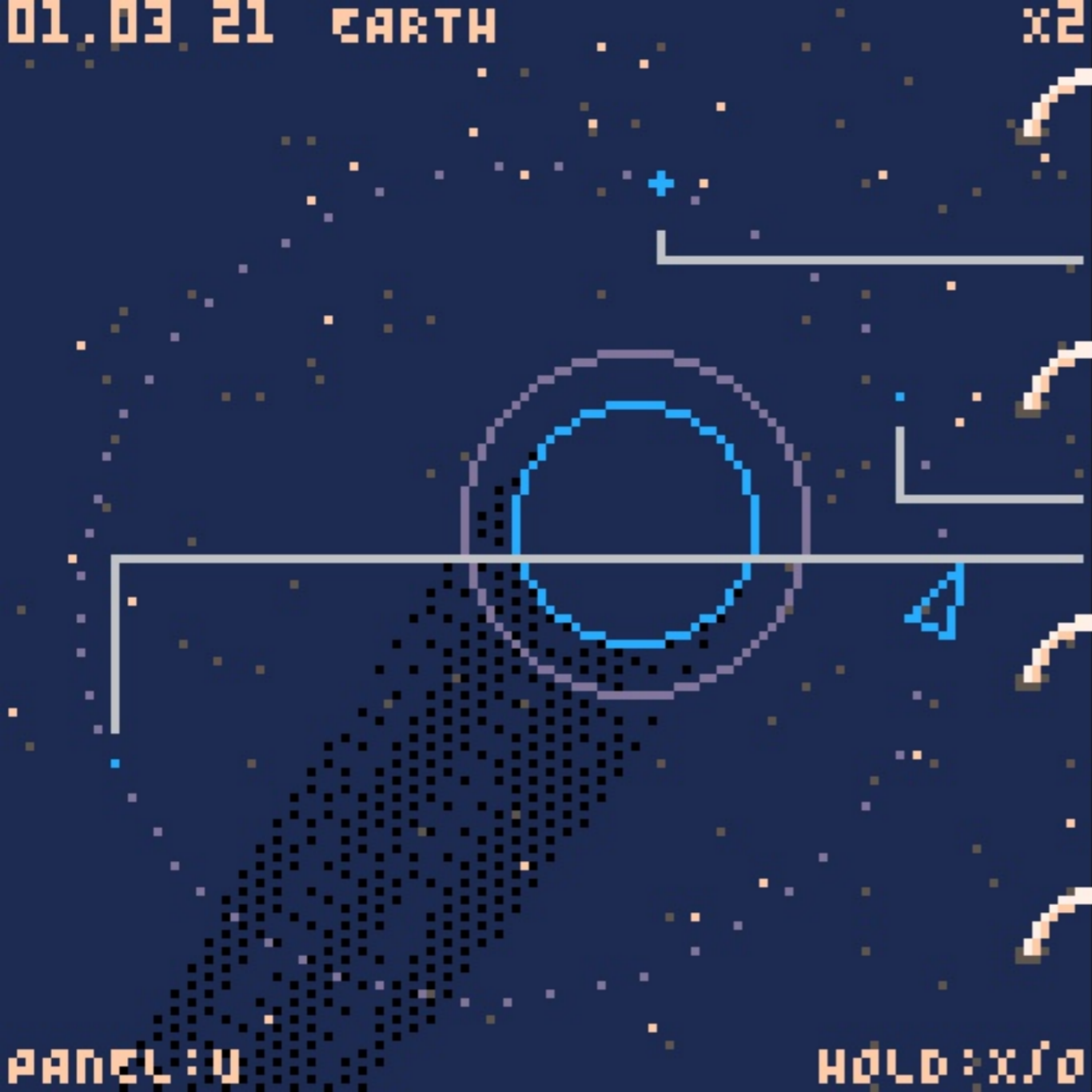
— ZOOM LEVEL
 — CENTRAL BODY
 — DATE AND TIME



— ORBIT PATH

PANEL:U

HOLD:X/O



MARKER: ORBITAL POSITION
 AT A FIXED TIME AHEAD
 (COMP TFER OFF)

PERIAPSIS
 APOAPSIS

ZOOMING WILL ADJUST THE
 MARKER. ZOOM OUT: POSITION
 AT A LARGER TIME STEP.

|| FIXING THE ORBIT 1

THE INITIAL ORBIT AFTER LAUNCH IS TOO LOW, CLOSE TO THE CENTRAL BODY.

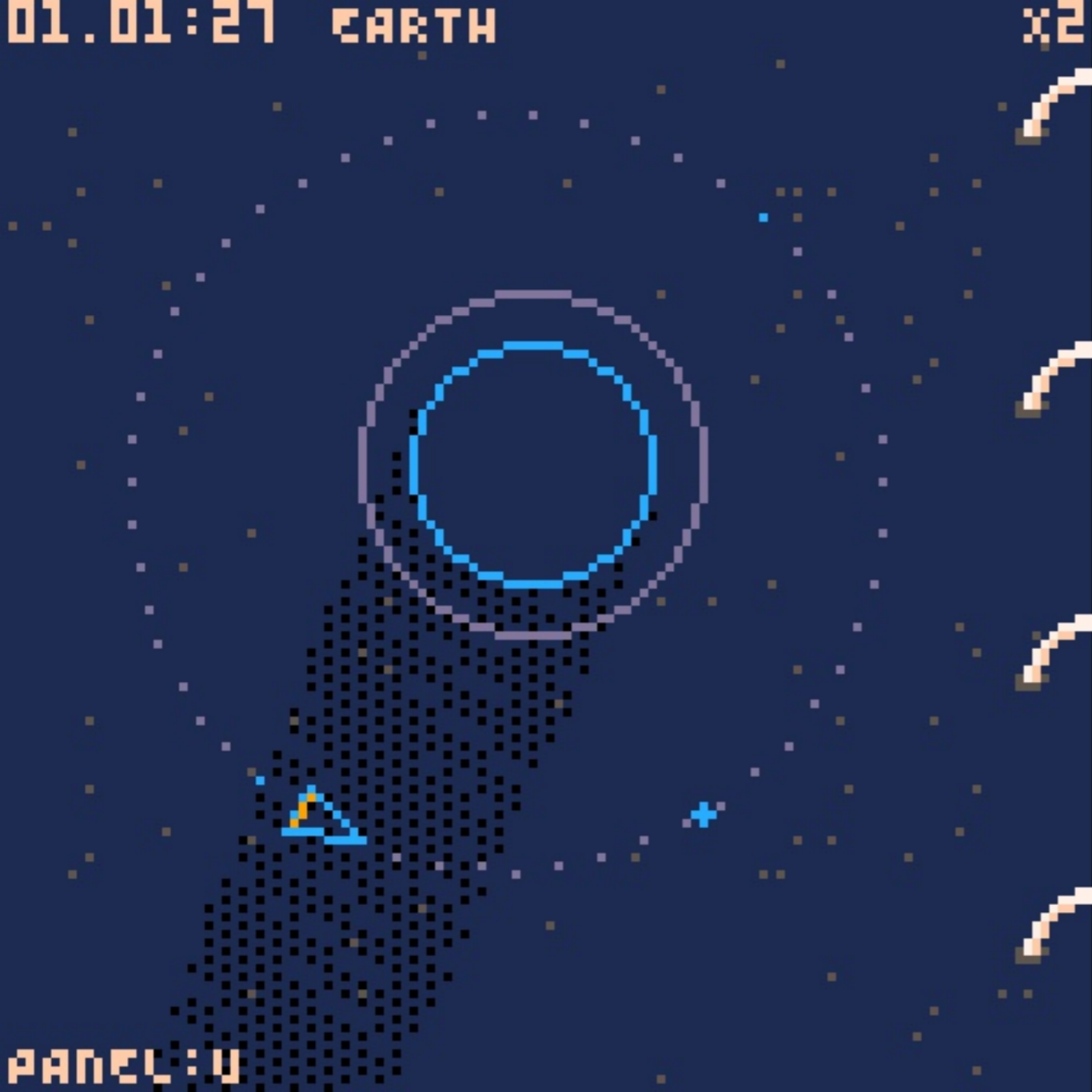
TURN PROGRADE (IN THE DIRECTION OF YOUR MOVEMENT, **COMP HOG** MATCHES **PRO**).

ADD THRUST. USE THE MAIN ENGINE. THE ELLIPTICAL ORBIT PATH GROWS FROM 1 TO 2 (**ORBIT APO**>20)

KILL THE ENGINE.



|| FIXING THE ORBIT 2



WAIT UNTIL YOU REACH THE
APOAPSIS.

TURN PROGRADE AGAIN AND ADD
MORE THRUST.

THE PERIAPSIS DISTANCE
INCREASES. THE ORBIT BECOMES
MORE CIRCULAR AND HIGHER.



TURN RETROGRADE (MAIN ENGINE IN THE DIRECTION OF YOUR MOVEMENT, **COMP HDG** MATCHES **RET**).

ADD THRUST. THE PERIAPSIS DISTANCE DECREASES.

WHEN THE ORBIT PATH INTERSECTS WITH THE CENTRAL BODY (**ORBIT PERI**), KILL THE ENGINE.

WAIT UNTIL REENTRY, THEN LAND.

01.00 17 2027H

X8

|| LANDING

ALT: 260
VEL: 111



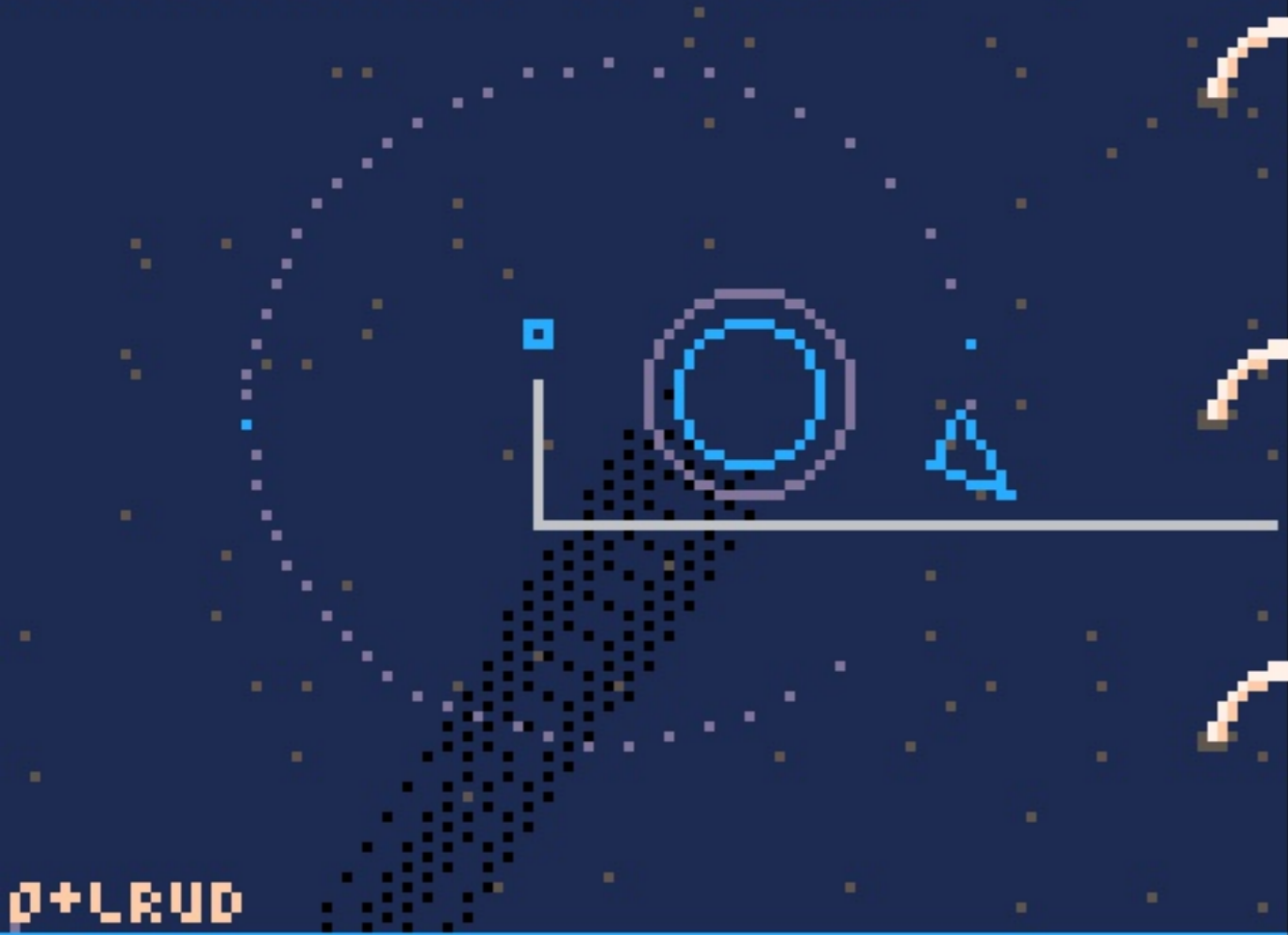
SLOW DOWN BY ADDING REVERSE THRUST.

WATCH YOUR ALTITUDE.

KEEP VELOCITY BELOW 300 BEFORE TOUCHDOWN.

PANEL:U

14



SELECT THE BODY YOU WISH TO TRAVEL TO IN THE **BODIES** TAB.

SET **COMP TFER** ON. MARKER ICON CHANGES.

THE ROTATION OF YOUR ORBIT MUST MATCH THE TARGET'S (CW OR CCW)!

0+LRUD

CLOSE

• ORBIT •••••

THRUST

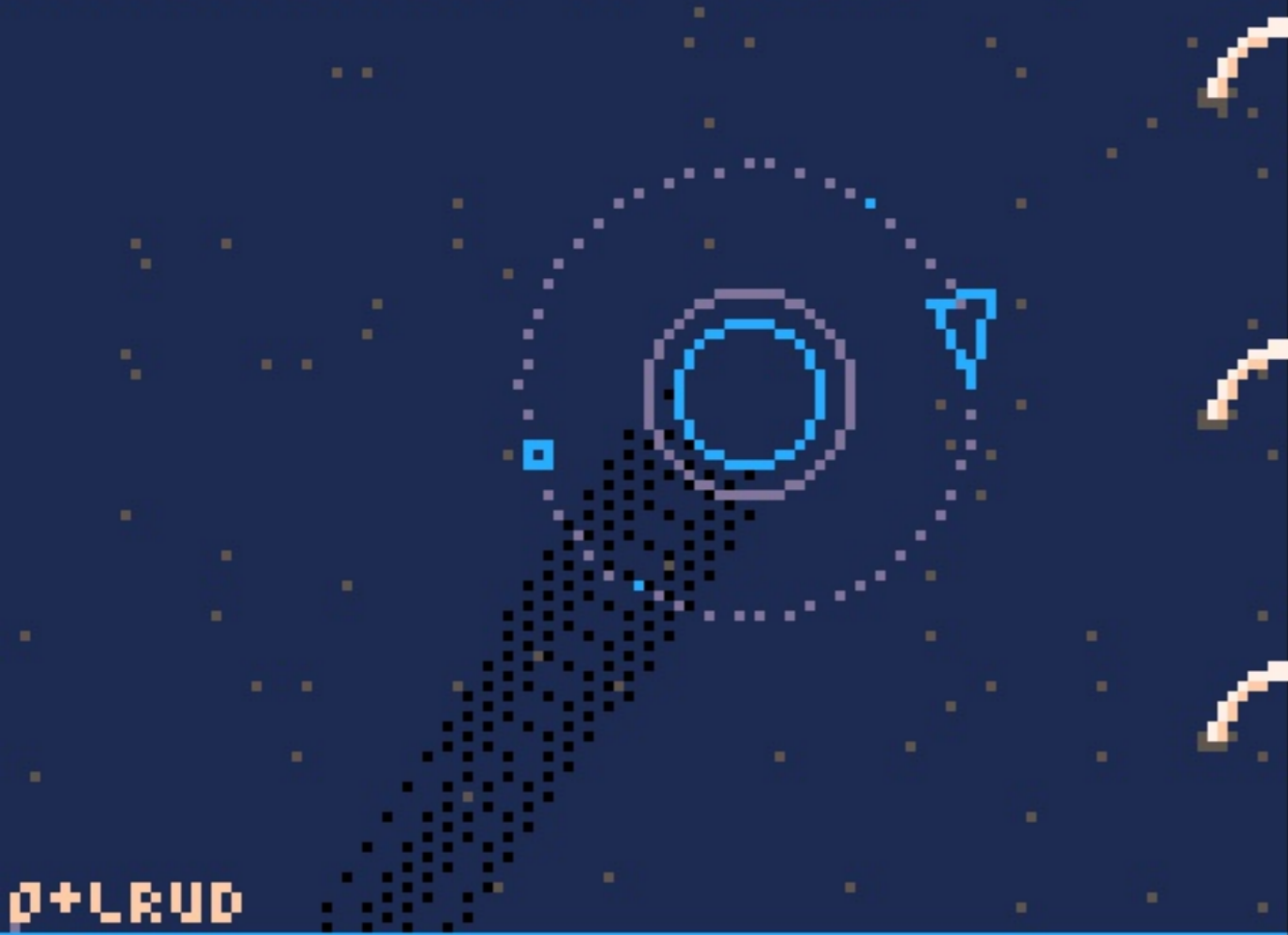
VEL: 0.769 SMA: 36

TIME

DIS: 23 APO: 49

ZOOM

ECC: 0.377 PERI: 22



TRANSFER MUST START FROM A CIRCULAR ORBIT. THE MARKER HELPS IN THIS.

ADD THRUST AND ADJUST THE ORBIT UNTIL THE MARKER OVERLAPS THE PATH AND ORBIT ECC IS ALMOST ZERO.

IT IS EASIER TO DO AT THE APOAPSIS OR PERIAPSIS.

CLOSE

• ORBIT •••••

THRUST

VEL: 0.67 SMA: 22

TIME

DIS: 22.3 APO: 22

ZOOM

ECC: 0.009 PERI: 22

|| TRANSFER 3

WAIT UNTIL YOUR SHIP, THE
MARKER AND THE TARGET
MARKER LINE UP.

TURN PROGRADE AND ADD
THRUST.



○
STATION 2

|| TRANSFER 4



ADD THRUST UNTIL THE ORBITS TOUCH. TRY TO MAKE YOUR APOAPSIS OVERLAP THE TARGET MARKER.

KILL THE ENGINE AND WAIT. YOU WILL MEET THE TARGET AT THE APOAPSIS.

○
STATION 2



STATION 2

WHEN THE TARGET IS CLOSE
SET **COMP TFER** OFF.

VELOCITY VECTORS MUST BE
MATCHED BEFORE RENDEZVOUS
(**COMP DA**<7 AND **DU**<0.1).

ROTATE YOUR SHIP AND ADD
THRUST UNTIL THE MARKERS
OVERLAP. THE BODIES WILL
MEET THERE.
REPEAT UNTIL VELOCITIES
MATCH AND RENDEZVOUS IS
INITIATED.

|| RENDEZVOUS 1

DIST: 80



TURN YOUR SHIP TOWARDS THE TARGET AND ADD THRUST TO GET CLOSER.

TO FINISH THE RENDEZVOUS MOVE AWAY FROM THE TARGET (DIST>120).

TARGET DIRECTION

TARGET DISTANCE

01.19:49

EARTH

x8

|| RENDEZVOUS 2



GET CLOSE TO THE TARGET.

ASTEROIDS, SATELLITES AND
DEBRIS WILL BE SCANNED
AUTOMATICALLY.

YOU CAN DOCK TO STATIONS
TO REFUEL AND INSTALL
UPGRADES.

PANEL:U

21



ALIGN THE SHIP WITH THE
CENTRAL DOCKING PORT
(NOSE "UP").



SLOWLY APPROACH THE STATION.
DOCKING IS AUTOMATIC.



ADD THRUST TO DETACH.



|| INTERPLANETARY TRAVEL 1



IN ORDER TO VISIT OTHER PLANETS, EXIT THE SYSTEM BY TURNING PROGRADE AND SPEEDING UP:

ORBIT **ECC=1 PERI=0.**

THIS PUTS YOU ON A PARABOLIC TRAJECTORY, YOU WILL LEAVE THE SYSTEM (AT ORBIT **DIS>160**).

o+LRUD

CLOSE

• ORBIT •••••

THRUST

VEL: 0.811

SMA: 89

TIME

DIS: 26.4

APD: 179

ZOOM

ECC: 1

PERI: 0

|| INTERPLANETARY TRAVEL 2

BEFORE SELECTING A NEW TARGET, MOVE AWAY FROM THE PLANET YOU HAVE JUST LEFT (E. G. CHOOSE A LOWER ORBIT).

FOLLOW TRANSFER PROCEDURES TO APPROACH THE NEW TARGET PLANET.

NO NEED TO MATCH VELOCITIES, JUST GET CLOSE TO ENTER THE SYSTEM.

01.11 13 SUN OUTER

X0

INTERPLANETARY TRAVEL 3

TO TRAVEL BEYOND THE
ASTEROID BELT, SPEED UP AND
LEAVE **SUN INNER SYSTEM**.

RETURN FROM **SUN OUTER**
SYSTEM TO **SUN INNER** BY
FLYING CLOSE TO THE SUN
(ORBIT **DIS<15**).

PANEL:U

HOLD:X/O

25

BODY NAMING: 0/0J01/PE

TYPE _____
 ID _____
 ORBIT DIRECTION
 (P OR R) _____
 FIRST LETTER OF
 CENTRAL BODY _____

SAVING: WHEN YOU LAND AT A
 BASE THE GAME IS
 SAVED AUTOMATICALLY.

MERCURY

VENUS

EARTH

MARS

CERES

JUPITER

SATURN

URANUS

NEPTUNE

PLUTO

MOON

PHOBOS DEIMOS

IO EUROPA GANYMEDE

CALLISTO

TETHYS DIONE RHEA

TITAN IAPETUS

ARIEL UM&RIEL

TITANIA OBERON

TRITON

CHARON