

Reentry Mission Operations Control Room



Manual version 0.8607.1-git (for MOCR / "MOCRL" version 0.94)

This manual isn't necessarily realistic, and is not crew-rated.

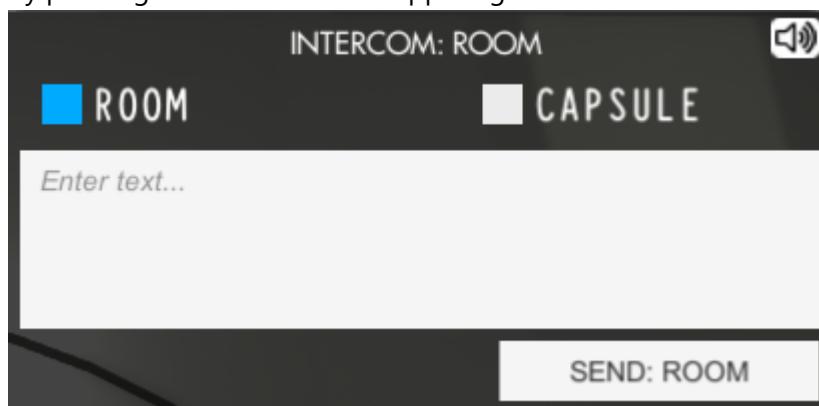
[PDF-version](#)

This manual assumes you have already read the MCC-manual

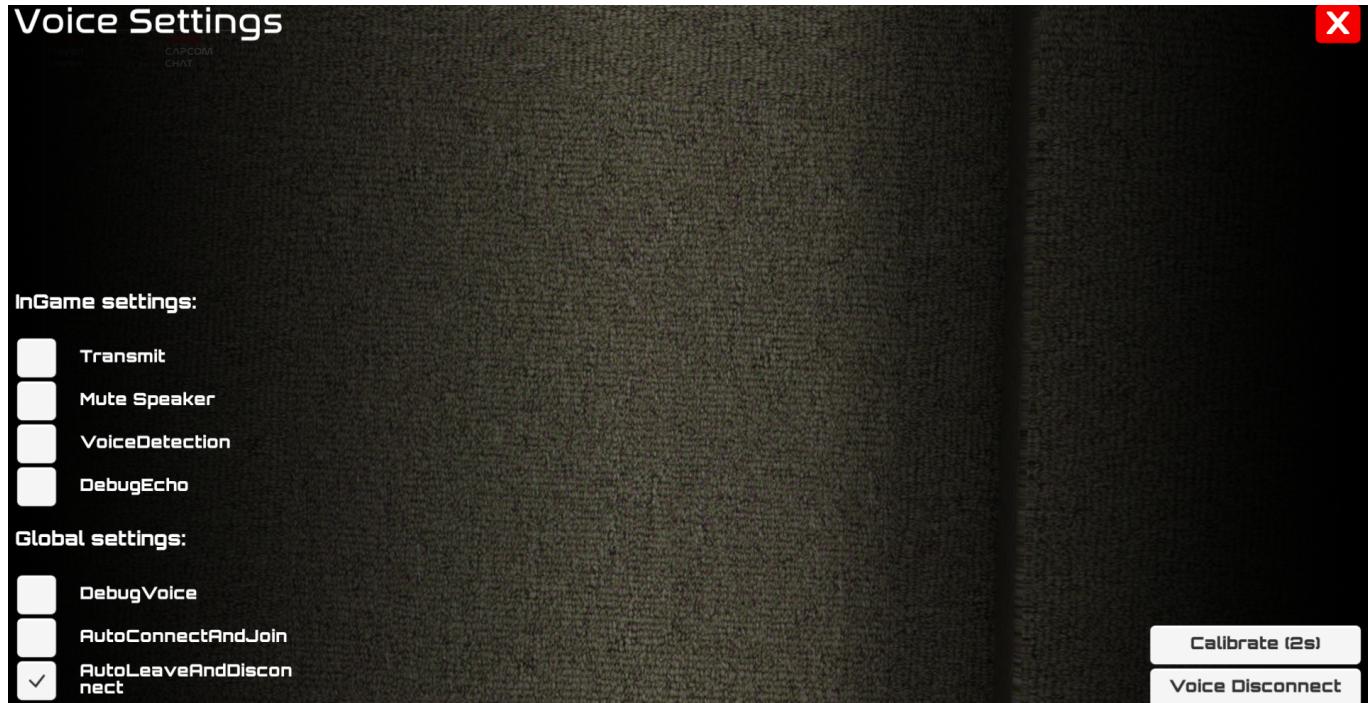
Controls

Voice chat

MOCR has built in support for voice-chat. Voice-chat is not enabled by default at the moment, but is enabled by pressing the -icon in the upper right of the intercom



When you do this, a few things will come up:



1. In the lower right, you'll see a button marked **VOICE CONNECT**. If you want to hear from or speak to the other players in the session, you need to click this. If the button is marked "Voice Disconnect", you're already set for the next step.
2. InGame settings. Here you need to click **Transmit**. Secondly, if you don't want to use Push To Talk (PTT), you need to select VoiceDetection. Note that VoiceDetection might not be enabled in the current build.

You should now be setup for receiving, and optionally transmitting voice.

Now for the next step: Who do you want to listen to, and who do you want to talk to. In order to select this, you need to find a console. The quickest way to do this, is to use the view-selector. If you can't see the View-selector on the left of your screen, press V. Make sure to select a console that's not already crewed.



The exact layout of the voice-setup buttons varies by console, but the generally setup is the same. The **yellow** buttons indicate what you're listening to. A lit indicator indicates that you're listening to that loop. Additionally, make sure that PABX and PABX ON are both lit. In the above example, I'm only listening to the A/G loop (Air / Ground). The **white** buttons are used to select which loop you talk into, when you talk. A blinking white indicator indicates that a given loop is selected for speaking into.



In the above example you I've chosen to listen to all loops, and speaking to the A/G loop.



In the above example on the other hand, I've chosen to only listen to the assistant flight director and the flight director loops, and to speak on the assistant flight loop.

Views



Console description can be found at: [HERE](#)

See also:

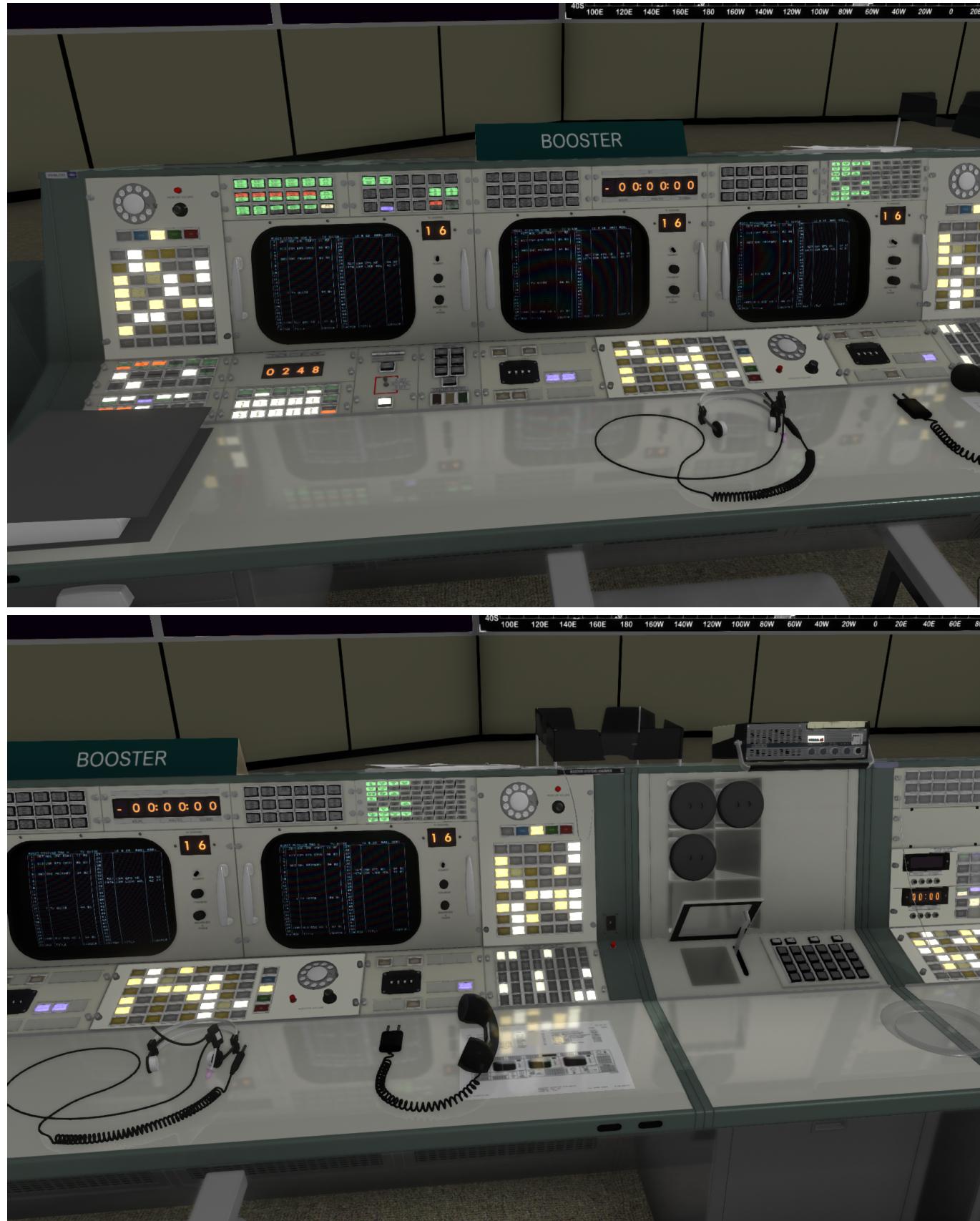
- [NASA: This Is Mission Control - 1970 - CharlieDeanArchives / Archival Footage](#)

CAPCOM

FAO

PAO

BOOSTER

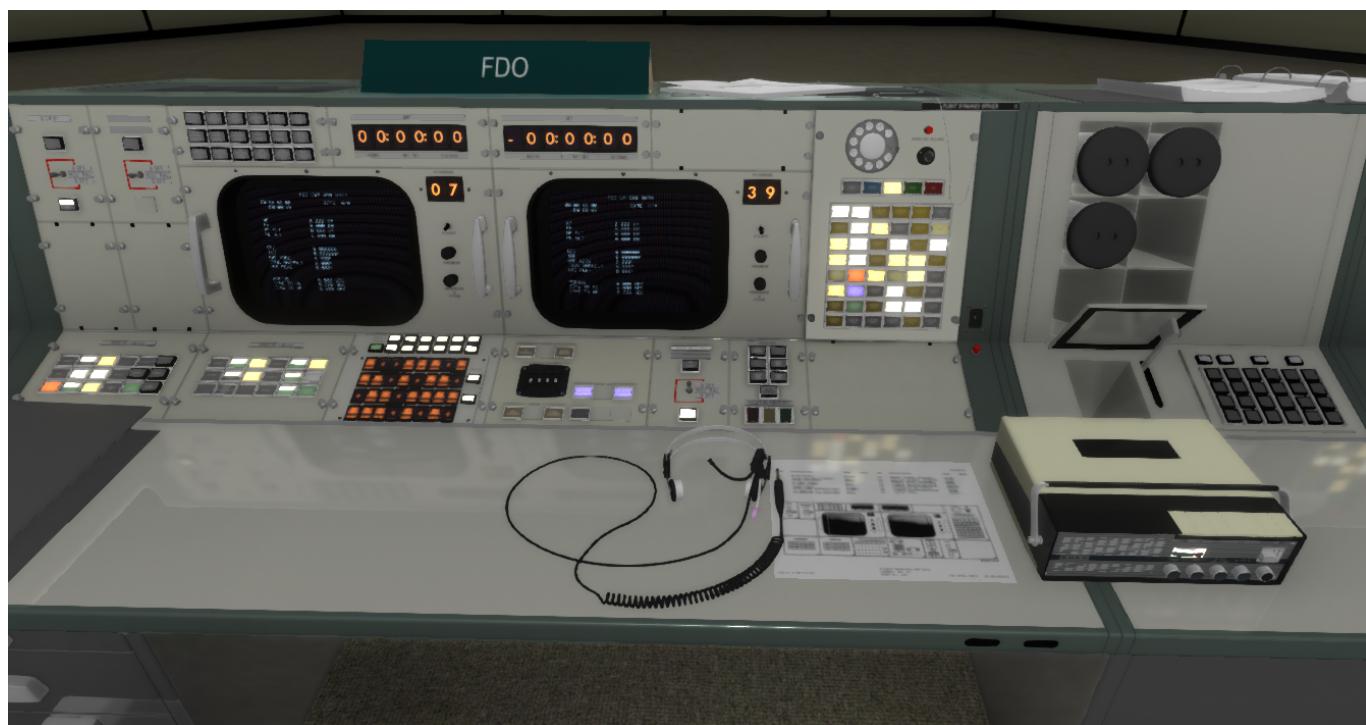


Booster is responsible for monitoring the Saturn up to and including LV separation. Booster has three screens to keep a track of everything. Left and center is controlled through one set of dials, right is controlled through a second set.

RETRO



FDO

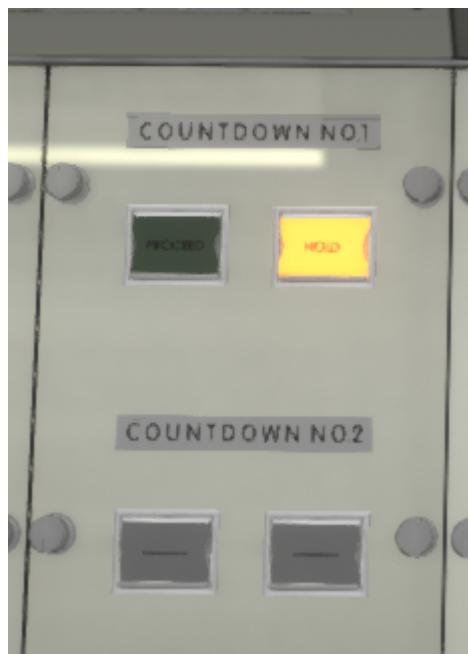
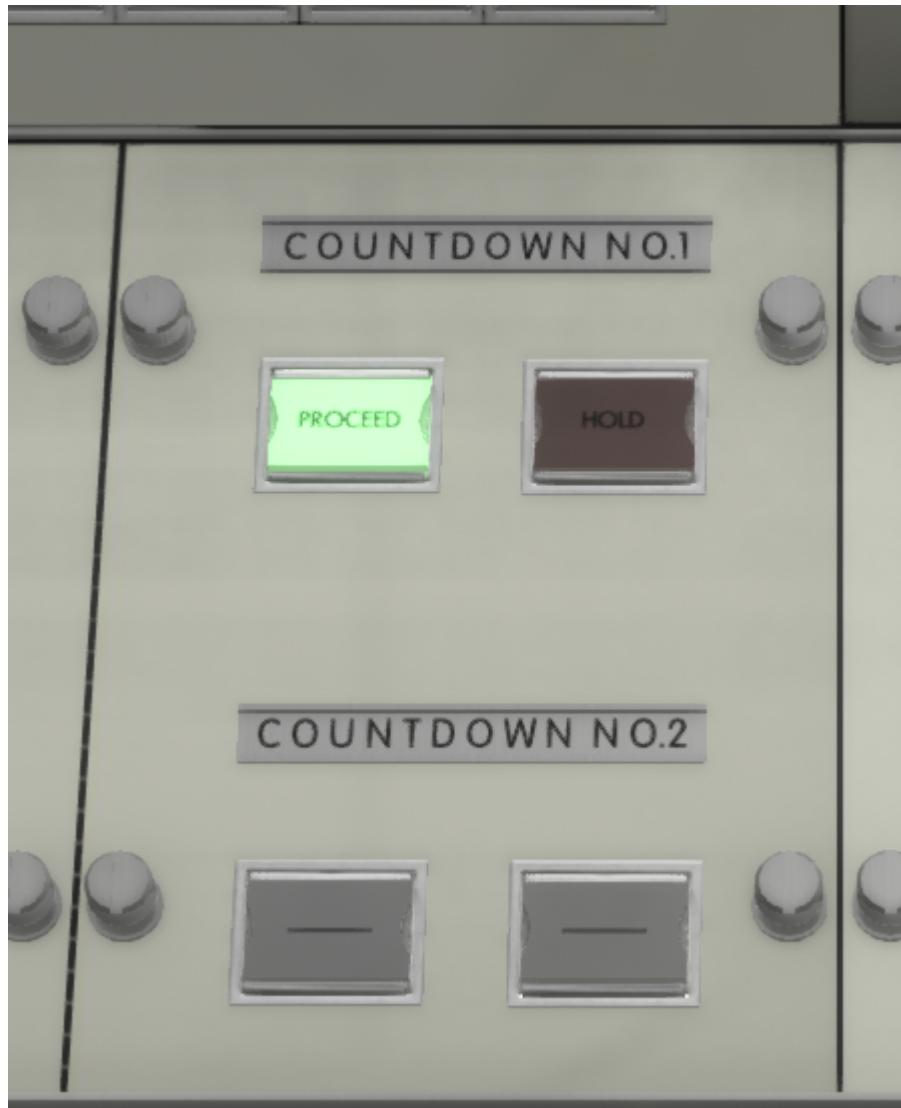


GUIDANCE



Flight Director

The flight director role is mostly the same as in Mercury. This includes holding or proceeding the count.



Assistant Flight Director

The assistant flight director role, as the name implies to assist the flight director. In addition, they have the responsibility of selecting what should be shown on the . This is done in a similar way to selecting content for

the small screens (See [Screens](#)), with the addition of a few buttons to select the projectors. Note that the main projector screen uses 4 digit channels rather than 2 digit ones, and cannot display any two digit channel.

Main room display screens

The screens at the front of the room are generally set to reflect the current mission task in the short term. Screens may be put up on request, but a good AFD should have a "set" of screens ready to go depending on current objectives. A few example mission tasks and their matching screen sets are provided below.

- CSM systems check
 - A generic default state to keep an eye on CSM systems. Though also especially useful for the following mission stages/tasks:
 - Pre Launch
 - Post Insertion
 - Periodic Systems Checks (in coordination with the ASTRO)
 - Left: Channel 3 ([CSM EPS CRYO](#))
 - Left Center: Channel 34 ([CSM EPS HD](#))
 - Right: Channel 6 ([GNC Primary](#))
- Boost (T-25 to Insertion)
 - From T-25 (from liftoff) to Earth Parking Orbit Insertion. Allows the entire MOCR to keep an eye on key pages during boost for issues, including the current state of the SIVb and orbital data, helping visualize the current state of the CSM without sacrificing local station screen real estate.
 - Left: Channel 25 ([SLV BSE NO 1](#))
 - Left Center: Channel 4 ([VEH ACC](#))
 - Right: Channel 7 ([FDO CSM ORB](#))
- TLI
 - From post insertion checks complete to SIVb Shutoff, similar to boost but trades out the now useless VEH ACC page for the CSM's burn alignment to ensure the TLI burn remains on target.
 - Left: Channel 25 ([SLV BSE NO 1](#))
 - Left Center: Channel 35 ([CSM look AGL](#))
 - Right: Channel 6 ([GNC Primary](#))
- SPS Burn
 - For any kind of corrective Guido calculated maneuver involving the CSM primary engine, Note the SPS Burn Mon Page does NOT work with the SIVb during TLI
 - Left: Channel 14 ([SPS Burn Mon](#))
 - Left Center: Channel 35 ([CSM look AGL](#))
 - Right: Channel 7 ([FDO CSM ORB](#))
 - Alternate: Channel 6 ([GNC Primary](#))
 - When FDO CSM Orb isn't providing useful data

AFD Clock

The AFD also controls a 60 minute clock visible both from their local desk and as part of the timing section of the display and projection wall. This can be used to give timing reference to multiple stations, especially counting up for burn timers. The clock displays in MM:SS format and will loop from 59:59 to 00:00 and vice versa.

Projector and Timing Wall



The front of the MOCR contains a series of projector screens and alpha numerical displays designed to help with coordination across all stations.

Timing Displays

The top row of the wall consists of nine alphanumeric display panels which display information regarding the timing of various mission stages for easy reference anywhere in the room. Though currently only five of the timing displays are operational in Reentry.

- Left set
 - Left: INOP
 - Center: INOP
 - Right: Current Greenwich Mean Time (GMT)
- Central Set
 - Left: Ground Elapsed Time (GET): Time from liftoff as observed from earth.
 - Center: TB#: A set of timing clocks as part of the IU package aboard the Saturn V. Controlled various automated functions during Boost and TLI. The currently active clock is repeated here for reference by mission controllers, along with its clock number (1-8).
 - TB Clocks:
 - TB 1 Liftoff (LO)
 - TB 2 S-IC center engine cutoff (CECO)
 - TB 3 S-IC outboard engine cutoff(OECO)
 - TB 4 S-II culoff
 - TB 5 S-IVB cutoff(end boost phase)
 - TB 6 S-IVB restart preparations & second bum
 - TB 7 S-IVB cutoff
 - TB 8 S-IVB propellant dump sequence
 - Right: (INOP) Computed signal loss window as the spacecraft transits behind the moon
 - (INOP) Aquisition Of Signal (AOS): Expected time of telemetry pickup after far side moon transit
 - (INOP) Loss Of Signal (LOS): Expected time of telemetry drop preceding next far side moon transit
- Right set
 - Left: RTCC computed burn times for TLI/SPS
 - Time of IGNition: Computed GET time for next RTCC burn
 - Countdown: Time till ignition of next RTCC burn
 - Center: INOP

- Right: AFD Timer: AFD controlled clock used for coordinating various stations or roomwide reference. As its controlled by the AFD and usually set at the request of either a controller or the flight director, its purpose can change over the course of the mission and is usually state and objective dependent.

Projector Screens

The lower row of the front wall contains five screens for mission telemetry and data, dominated by the absolutely massive main projector screen in the center. Three of the screens can be set to mirror any screen available to the regular control stations. While the main projector screen can be set to show the current orbital position of the spacecraft in reference to Earth, the Moon, or the transit between the two. The aux projector screen is currently INOP in Reentry and displays a static image of landing sites. The screens from left to right are the Left Projector TV, Center Left Projector TV, Main Projector Screen, Aux Projector Screen, and Right Projector TV.

These screens are set at the discretion of the AFD, either on the AFD's own schedule or upon request by a controller. All four of the operational screens MUST be set manually, there is no automated screen switching system for any stage of the mission.

Screens

Each console has a number of 14" screens. With these you can look at a number of channels with various data. One way of selecting the data to be shown is to use TV-mode.

To select a TV-mode channel:

1. Press TV mode
2. Select the channel with the appropriate input selector, depending on which screen you want to put it on. If you're unsure of which channel you want, select [TV-guide \(channel XX\)](#).
3. Now one or more buttons should light up, depending on how many screens controlled by that input selector. Press the relevant screen by pushing selecting it under "ENTER".

Information from each screen can be "Hardcopied" to %UserProfile%\AppData\LocalLow\Wilhelmsen Studios\ReEntry\Export\MOCR as a PNG, which can then be shared on Discord or any other site as required.

TV channels

(01) CMC DSKY AND STATE BUFF MON (AGC CMC DSKY)

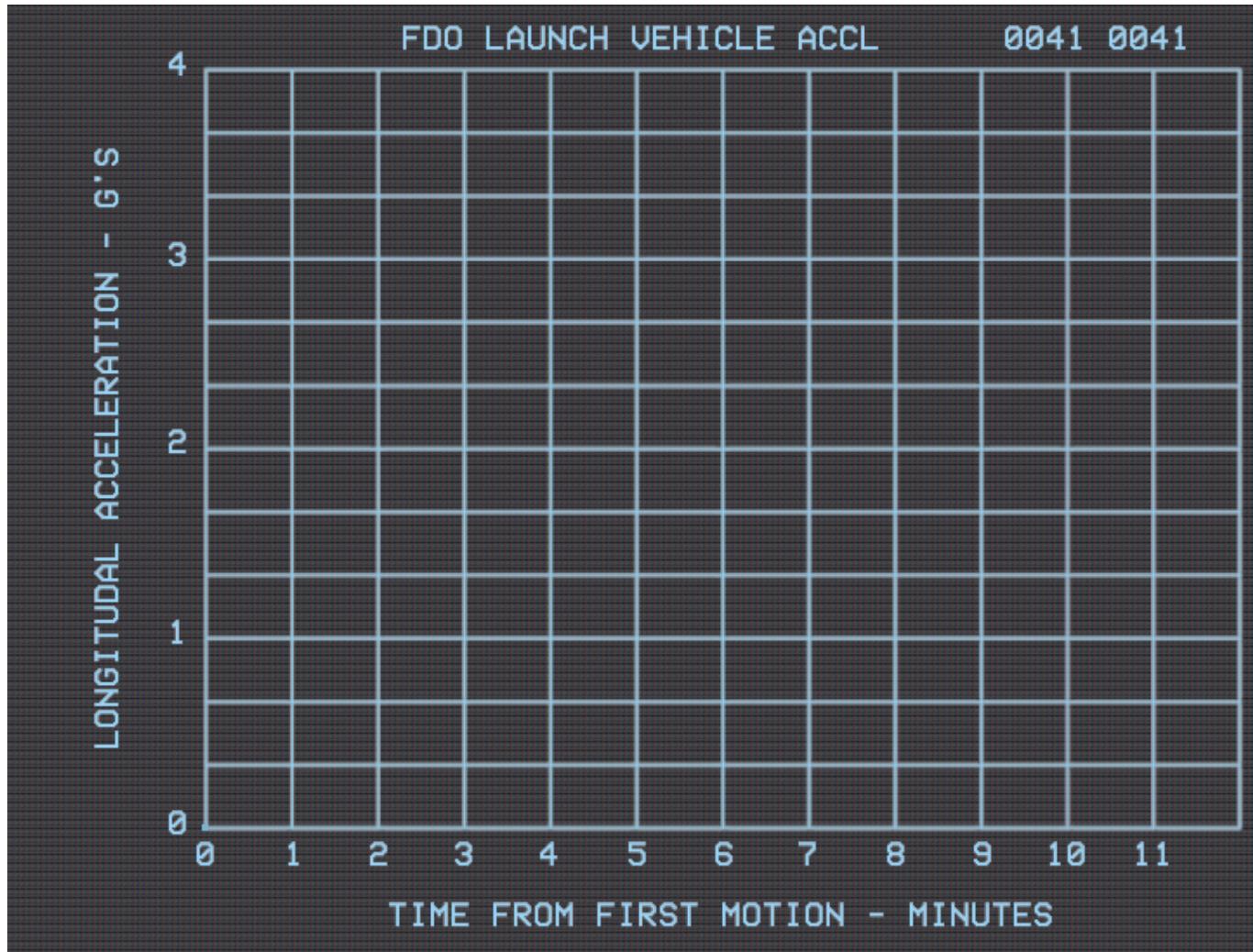
008120		CMC DSKY AND STATE BUFF MON	0280	0280
	CNU		01	
PG	00		02	
UB	00 NO 00		03	
R1	00000		04	
R2	00000		05	
R3	00000		06	
			07	
			10	
			11	
			12	
			13	
			14	
			15	
			16	
			17	
			20	
CMC GET -00:24:50			21	
			22	
			23	
			24	

This screen shows the CMC DSKY (CSM AGC DSKY), and various AGC state.

(03) (CSM EPS CRYO)

CSM ECS CRYO TAB							0613
GET -00:24:50			GMT 11/05:13:38				SITE CHAT
LIFE SUPPORT			PRIMARY COOLANT				
GF3571	LM CABIN P	PSIA	0.0	CF8014	ACCUM QTY	PCT	50.0
CF0001	CABIN P	PSIA	14.5	CF8016	PUMP P	PSID	10.0
CF0012	SUIT P	PSIA	14.5	SF0260	RAD IN T	°F	80.0
CF0053	SUIT P	IN H2O	0.3	CF0070	RAD OUT T	°F	82.0
CF0015	COMP P	P PSID	0.4	CF1981	EVAP IN T	°F	82.0
CF0006	SURGE P	P PSIA	860.6	CF0917	STEAM T	°F	57.9
	SURGE QTY	LB	3.7	CF0071	STEAM P	PSIA	0.2
02	TK1 CAP P	PSID	927.9	CF0018	EVAP OUT T	°F	57.9
02	TK2 CAP P	PSID	927.9				
CF0036	02 MAN P	PSIA	95.0	SF0266	RAD VLV	1/2	One
CF0035	02 FLOW	LB/HR	0.00	CF0175	GLY FLO	LB/HR	0.0
CF0600	SUIT T	°F	75.0				
CF0002	CABIN T	°F	75.0	SECONDARY COOLANT			
CF0005	CO2 PP	MMHG	0.0	CF0072	ACCUM QTY	PCT	50.0
	H2O			CF0079	PUMP P	PSID	10.0
CF0004	WASTE	PCT	50.0	SF0262	RAD IN T	°F	80.0
	WASTE	LB	28.0	SF0263	RAD OUT T	°F	80.0
CF0010	POTABLE	PCT	50.0		STEAM P	PSIA	0.2
	POTABLE	LB	18.0	CF0071	EVAP OUT T	°F	80.0
	URINE NOZ T	°F	70.0	CF0420	H2O RES	PSIA	0.0
	H2O NOZ T	°F	70.0	TOTAL		AMPS	0.0
CRYO SUPPLY			02-1	02-2	H2-1	H2-2	
SC0037-38-39-40	P	PSIA	927.9	927.9	254.7	254.8	
SC0032-33-38-31	QTY	PCT	99.9	100.0	99.9	100.0	
SC0041-42-43-44	T	°F	-358.6	-358.6	-420.2	-420.2	
	QTY	LBS	326.0	326.0	29.0	29.0	

(04) (VEH ACC)



(06) CSM GNC PRIMARY TAB (GNC PRIMARY)

LZ768 K		CSM GNC PRIMARY TAB						0684 0684	
GMTA	11/05:13:38	SITE CHAT							
GETA	-00:24:50			QUADA	QUADB	QUADC	QUADD		
CTE	-00:24:50	PXG FU TK QTY		0.0	0.0	0.0	0.0		
CMC	-00:24:50	PXG FU P PCI		0.0	0.0	0.0	0.0		
CMCD	-00:24:50	PXG T °F	150.0	150.0	150.0	150.0	150.0		
GETC	-00:24:50	HE TK P PSIA		0.0	0.0	0.0	0.0		
		HE TK QTY		0.0	0.0	0.0	0.0		
ISS	START UP	CM-RCS						SPS	
OPT	ZERO	FU TK P PSIA		0.0	0.0	FU TK QTY	99.9		
CMC	AUTO	FU TK Q QTY		0.0	0.0	OX TK QTY	99.9		
VERB	NOUN PRGM	TK T °F	146.9	146.9	HE TK1 QTY	0.0			
	00 00 00	ISS ATT	PITCH	YAW	ROLL	HE TK2 QTY	0.0		
REG 1	00000	ACDU	0.000	0.000	0.000	SYS A PSI	175.0		
REG 2	00000	FCDU				SYS B PSI	175.0		
REG 3	00000	ERR CMC				NA	PSI	2500	
	DAP	VEH ACC	0.00	SCS -9.439	61.157 14.074	NB	PSI	2500	
RATE	DS	UG X	EMT						
	0.2 5.0	UG Y	RATE G/M	0.000	0.000 0.000				
		UG Z	SCS	0.000	0.000 0.000				
PIPX						PGNCS			
PIPY			GMD CMD			SCS ELEC			ECA
PIPZ			OCDU OC			RCS LOGIC			
PIPT			SPS GMB			RHC			
			AT TUC			THC			
TIG	000:00:00	MN TUC							
		DIF CUR							

(07) (FDO CSM ORB)

FDO CSM ORB DATA

11/05:13:38
-00:24:50

SITE CHAT

AP	0. 000	NMI
PE	0. 000	NMI
AP ALT	0. 000	NMI
PE ALT	0. 000	NMI

ECC	0. 000000
INC	0. 000000°
ASC NODE	0. 000°
TRUE ANOMOLY	0. 000°
ARG PERI	0. 000°

PERIOD	0. 000	SEC
TIME TO PE	0. 000	SEC
TIME TO AP	0. 000	SEC

(12) (CSM RCS STUS)

CSM JET STATUS
MET -00:24:50 GMT 11/05:13:38

SM: 0
CM: 0.0

(14) (SPS BURN MON)

	SPS BURN MON		
11/05:13:39		CHAT	
-00:24:50			
TIG 000:00:00	COUNTDOWN 00:00:00		
		VERB NOUN PRGM	
VEH ACC 0.00	VEL FT/S 0.00	HDOT 0.00	00 00 00
		UDOT 0.00	REG 1 00000
			REG 2 00000
			REG 3 00000
CMC AUTO	ATT		
DAP	IMU 0.000 0.000 0.000		
RATE DB 0.2 5.0	GDC -9.439 61.157 14.074		
	RATE		
	IMU 0.000 0.000 0.000		
	GDC 0.000 0.000 0.000		

(16) TV GUIDE

M0625 MISSION 586 U				TU GUIDE	12.0.20	0001	0001
CH	MSK	TITLE	CONSCR	CH	MSK	TITLE	CONSCR
1	267	AGC CMC DSKY	11 02	27	268	LM DSKY	44 01
2				28	527	LM EECOM	04 02
3	613	CSM EPS CRYO	06 03	29			
4	478	UEH ACC	51 65	30			
5				31			
6	983	GNC PRIMARY	04 02	32			
7	46	FDO CSM ORB	45 81	33			
8				34	527	CSM EPS HD	04 02
9				35	1474	CSM LOOK AGL	42 07
10				36	439	LM ECS	04 02
11				37	1568	LM LOOK AGL	37 17
12	55	CSM RCS STUS	21 73	38			
13				39	1278	FDO LM ORB	45 91
14	253	SPS BURN MON	45 81	40			
15				41			
16	1	TU GUIDE	04 01	42			
17				43			
18				44	678	LM ELEC/INST	11 37
19				45	398	LM GUID CONT	06 84
20				46			
21				47	2988	LM AGS	26 94
22				48	154	LM DES/ASC	03 61
23				90	865	RTCC	07 47
24				91			
25	1402	SLV BSE NO 1	44 01	92			
26				93			
CH	MSK	TITLE	CONSCR	CH	MSK	TITLE	CONSCR

This channel shows you a listing of what's on each channel. This listing is split in two, with three columns each showing the channel number, a description, and an identifier.

(25) SLV BSE NO 1

L2355F				SLU	BSE	NO	1	Q	BALL	1402	1402
SITE	CHAT	SIC		ACT	POS			P	P	ULL	PRESS
PC	TNOK	HYD	PR	P	Y					OXID	FUEL
E1	L	***		H						25.0	20.0
E2	L	***		H						H	H
E3	L	***		H							
E4	L	***		H							DSKY
E5	L	***								P	00
				ATT RATE		ATT ERROR					
GET	-00:24:50	P			0.000		P			U	00 N00
TBO	00:00:00	Y			0.000		Y			R1	00000
ACC	0.00	R			0.000		R			R2	00000
				SII		IU					
PC	TNOK	PU	HYD	PR	P	Y		SEC	UT		
E1	L	***			H			SEP	FAIL		
E2	L	***			H			VOLT	GIM	A0	
E3	L	***			H			REC	P	D	
E4	L	***			H			TGN	Y	U	
E5	L	***							R	C	
ULL	PRESS	T1I	PLATFORM		S/C CONT		GRF				
OXID	FUEL		SUP	PRS			DIR		FAIL		
			BRN	PRS			K19		CNTL		
SIUB				SIUB							
MAINSTAGE				ULL	PRESS			HYD	SYS	COLD	HE
PC	L		OXID	FUEL			PR	H		SUP	
PU			L	L			P				
TTG			H	H			Y		REG		

(27) (LM DSKY)

008120		LM DSKY AND STATE BUFF MON	0280 0280
PG	00	01	
UB	00 NO 00	02	
R1	00000	03	
R2	00000	04	
R3	00000	05	
		06	
		07	
		10	
		11	
		12	
		13	
		14	
		15	
		16	
		17	
		20	
LM GET 067:36:14		21	
		22	
		23	
		24	

This is the LM-equivalent of [AGC CMC DSKY \(channel 01\)](#)

(28) (LM EECOM)

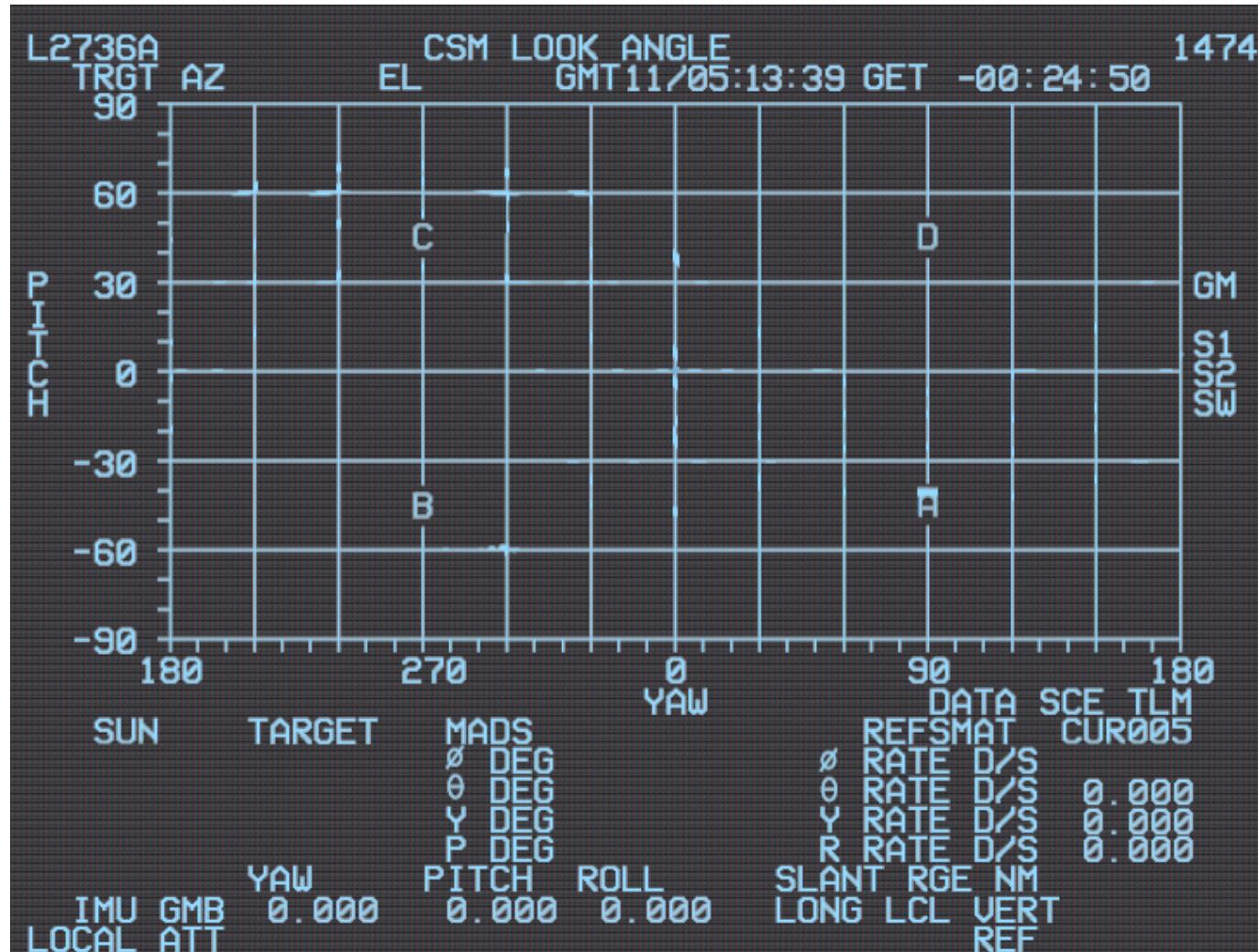
L2535	LM	EECOM	R/T	1001	1001
GET	MET		GMT	SITE	GDS
RFL P U&F		CDR U		DCA STAT	
CABIN P&T		LMP U		RCUR SIG	
SUIT P&T		TOT CUR		ST_ ERR	
CO2&H2O S		DES CUR		XMTR PO	
SEC PMP P		ASC CUR		CAL 85 PCT	
PUMP P&_P		TOT AVG		CAL 15 PCT	
GLY & M/B		DES AVG		LOCAL ROLL	
G OUT &IN		ASC AVG		LOCAL PTCH	
REG A&B		RCS_X		LOCAL YAW	
CDR&LMP S		RCS_Y_Z		MA B/M C&M	
S RFL&DIV		AC VOLT		ABRTLA STG	
CAB R&COZ		AC FREQ		ED K1.K6	
S FAN 1&2		P GDA		ED K7.K15	
REPR ELEC		R GDA		ASC AH CON	
G LVL&S/O		DPS ARM		ASC AH RMG	
O2 MP1/MP		DPS TCP		DES AH CON	
		APS TCP		DES AH RMG	
H20 DES	A/1	A/2	GR&SB T		
Q%					
Q#					
QR					
O2					
Q%					
Q#					
QR					
P					

BAT	STAT	VOLT	TM-CLR-AVG	A. HR
1	E	M1		
2	E	M1		
3	E	M1		
4	E	M1		
5	E	LMPN		
6	E	CDRN		

(34) (CSM EPS HD)

LM1885		CSM EPS HIGH DENSITY					0518		0518		
GET -00:24:50		GMT 11/05:13:39					SITE		CHAT		
DC VOLTS		AC VOLTS					FC °F				
CC0206 VMA	28.00	CC0200	AC 1	30.0			SC2084	1	SKN	89.3	
CC0207 VMB	28.00	CC0203	AC 2	30.0			SC2085	2	SKN	89.3	
CC0210 VBA	37.00	PC PSIA					SC2086	3	SKN	89.3	
CC0211 VBB	37.00	SC2060	1	N2			SC2091	1	CET	205.0	
CC0232 UBR	37.00	SC2061	2	N2			SC2092	2	CET	205.0	
CD0200 VMLA	0.00	SC2062	3	N2			SC2093	3	CET	205.0	
CD0201 VMLB	28.00	SC2066	1	02			FC RAD °F				
CD0005 VMQA	34.00	SC2067	2	02			SC2087	1	OUT	89.3	
CD0006 VMQB	34.00	SC2068	3	02			SC2088	2	OUT	89.3	
DC AMPS		SC2069	1	H2			SC2089	3	OUT	89.3	
TOT SC	27.45	SC2070	2	H2			SC2090	1	IN	89.3	
TOT FC	27.40	SC2071	3	H2			SC2091	2	IN	89.3	
TOT BAT	0.05	1	02-H2	ΔP			SC2092	3	IN	89.3	
		2	02-H2	ΔP			—PC1 TOTAL PC LOAD—				
		3	02-H2	ΔP			FC 1				
SC2113 FC 1	9.13	1	H2-H2	ΔP			FC 2				
SC2114 FC 2	9.13	2	H2-H2	ΔP			FC 3				
SC2115 FC 3	9.13	3	H2-H2	ΔP			INST				
CC0222 BAT A	0.03	FC LB/HR					CT0120	PCM			
CC0223 BAT B	0.03	SC2139	1	H2	0.0		CT0125	4.25			
CC0224 BAT C	0.00	SC2140	2	H2	0.0		CT0126	0.75			
CC0216 CHARGR	0.00	SC2141	3	H2	0.0		CT0140	TAG			
CC2562 LM	0.00	SC2142	1	02	0.0		CT0015	-70			
SC2160 PM 1		SC2143	2	02	0.0		CT0016	-20			
SC2161 PM 2		SC2144	3	02	0.0		CT0017	-6			
SC2162 PM 3							CT0018	-10			
							CT0020	55			
CC0175/76/77		INV TMPS	69	69	69		CSA220	PROBE			

(35) (CSM LOOK AGL)



(36) (LM ECS)

L2535	LM	ECS	R/T	DIGITALS	1051	1051
GET	MET	067:36:37	GMT	11/08:09:37 SITE CHAT		
GF3571	CABIN P	4.9	GF1301	SUIT PRESS	5.1	
GF3572	REPR ELEC	ACT	GF1521	CO2 PP	0.0	
GF3591	O/H RLF P	4.8	GF1021	SUIT TEMP	72.0	
GF3592	F/H RLF P	4.8				
GF1651	CABIN TEMP	<u>72.0</u>	GF9999	H2O SEP R	2500	
			GF1083	SUIT FAN 1	ACT	
GF9997	GLY PUMP P	<u>36.0</u>	GF1084	SUIT FAN 2		
GF2351	PUMP ΔP	27.0	GF3070/1	DMD REG A	CAB	
GF9998	GLY TEMP	40.0	GF3073/5	DMD REG B	CAB	
GF2041	GLY LEVEL	100.0	GF1201	CDR SUIT	CONN	
GF2936	PUMP SW/O		GF1202	LMP SUIT	CONN	
GF2531	GLY IN T	9.0	GF1211/2	SUIT RLF	AUTO	
GF2501	GLY OUT T	<u>36.0</u>	GF1221	SUIT DIV	CAB	
			GF1231/2	CABIN RET	AUTO	
			GF1241	CO2 SEL	PRIM	

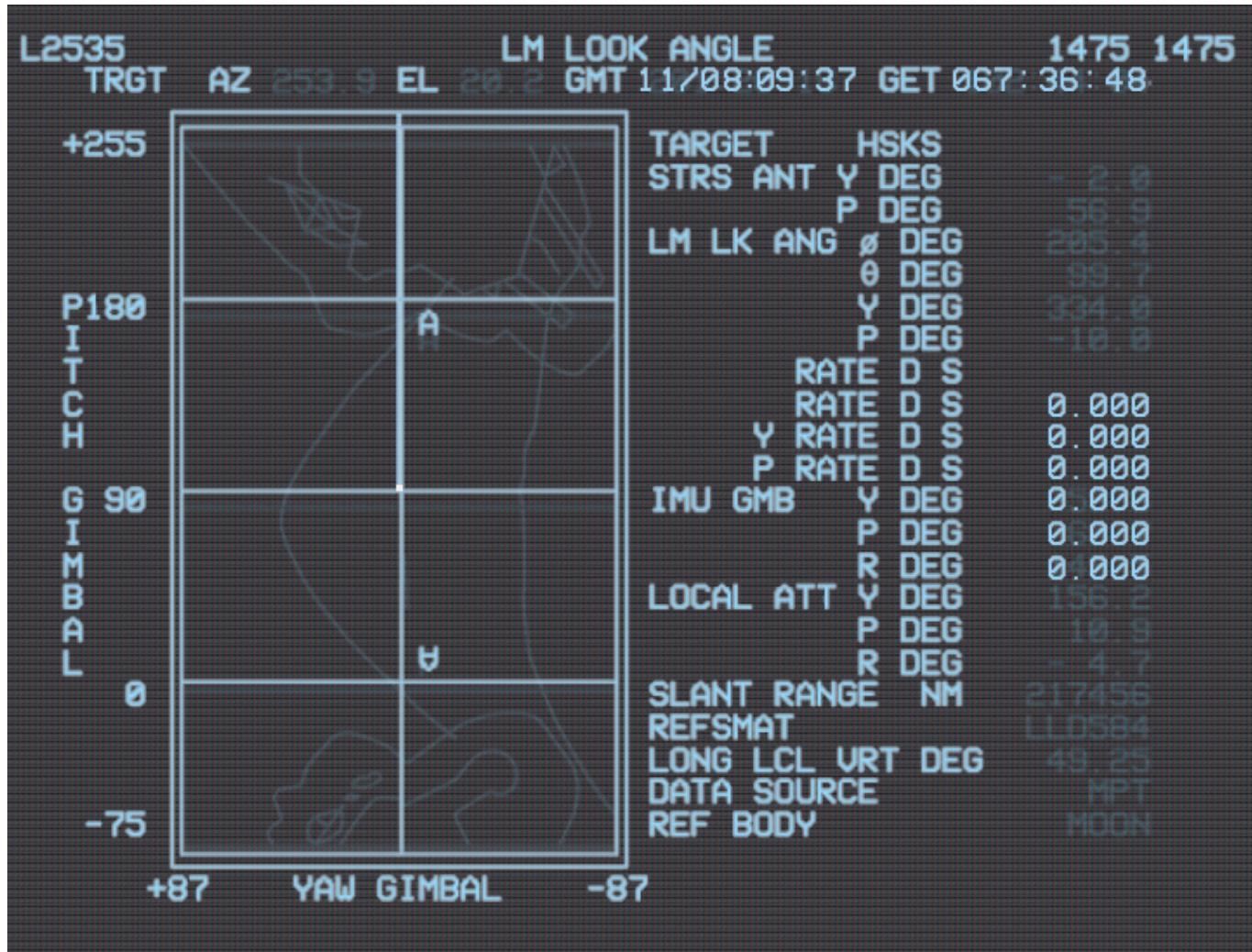
H2O QTY PCT	QTY LBS	QR LBS/HR				
<u>GF4500/2/3</u>	<u>LM4611/9/0</u>	<u>LM4701/2/3</u>				

DES	72.7	484.4	0.0	H2O ΔP	W/B	H2O	RGT T
ASC1	66.0	28.0	0.0	GF4101	GF4511T	GL8215	
ASC2	66.0	28.0	0.0				

02 QTY PCT	QTY LBS	QR LBS/HR	PRESS	02 M P
<u>LM4603/4/5</u>	<u>LM4602/4/6</u>	<u>LM4704/5/6</u>	<u>GF3584/2/3</u>	<u>GF3580</u>

DES	99.9	95.6	0.0	2689.9
ASC1	100.0	2.4	0.0	840.4
ASC2	99.9	2.4	0.0	839.6

(37) (LM LOOK AGL)



(39) (FDO LM ORB)

FDO LM ORB DATA

11/08:09:37
067:37:02

SITE CHAT

AP	869.783 NMI
PE	228.829 NMI
AP ALT	0.000 NMI
PE ALT	0.000 NMI

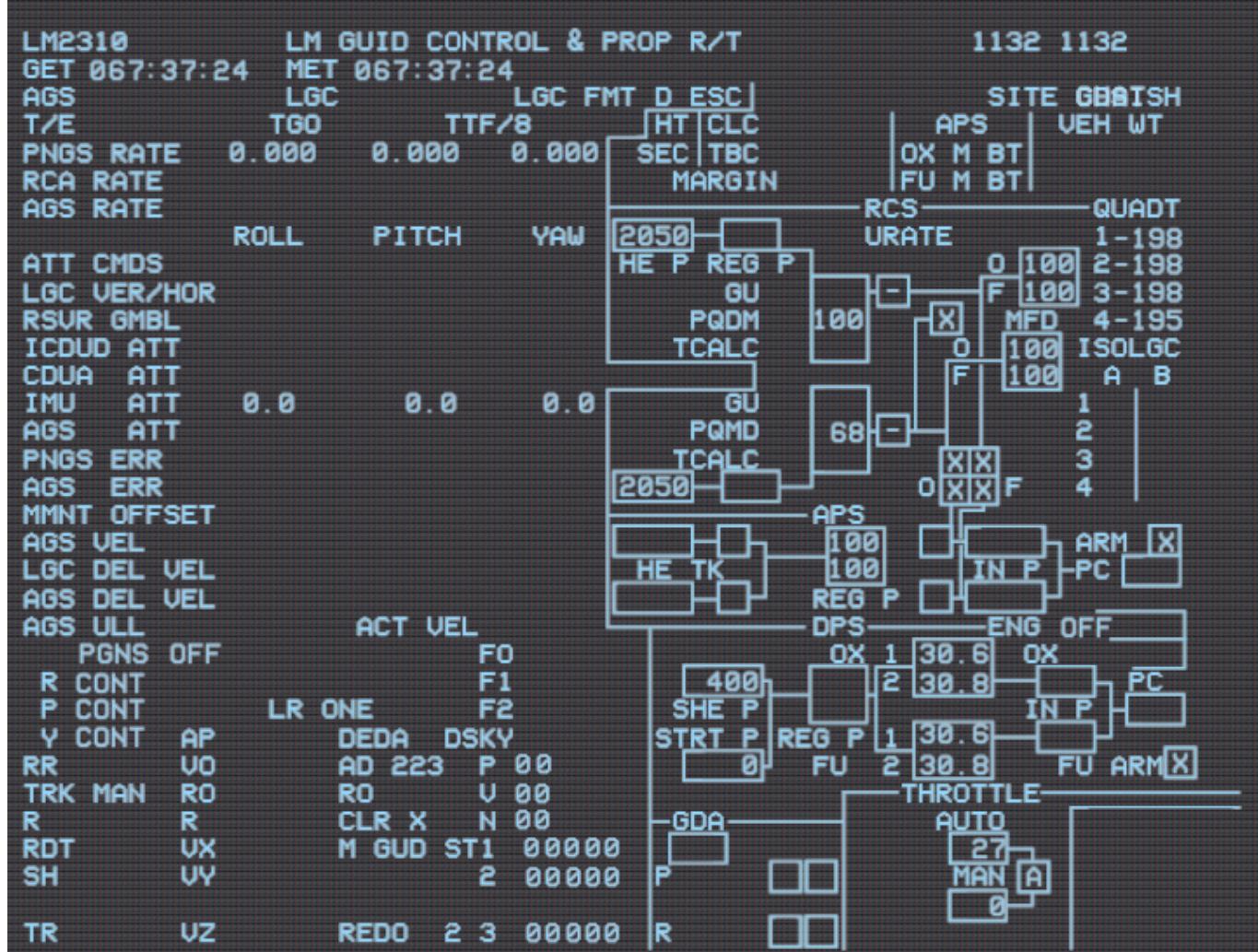
ECC	0.583422
INC	9.009796°
ASC NODE	127.891°
TRUE ANOMOLY	214.124°
ARG PERI	227.586°

PERIOD	2912.459 SEC
TIME TO PE	1.598 SEC
TIME TO AP	1725.342 SEC

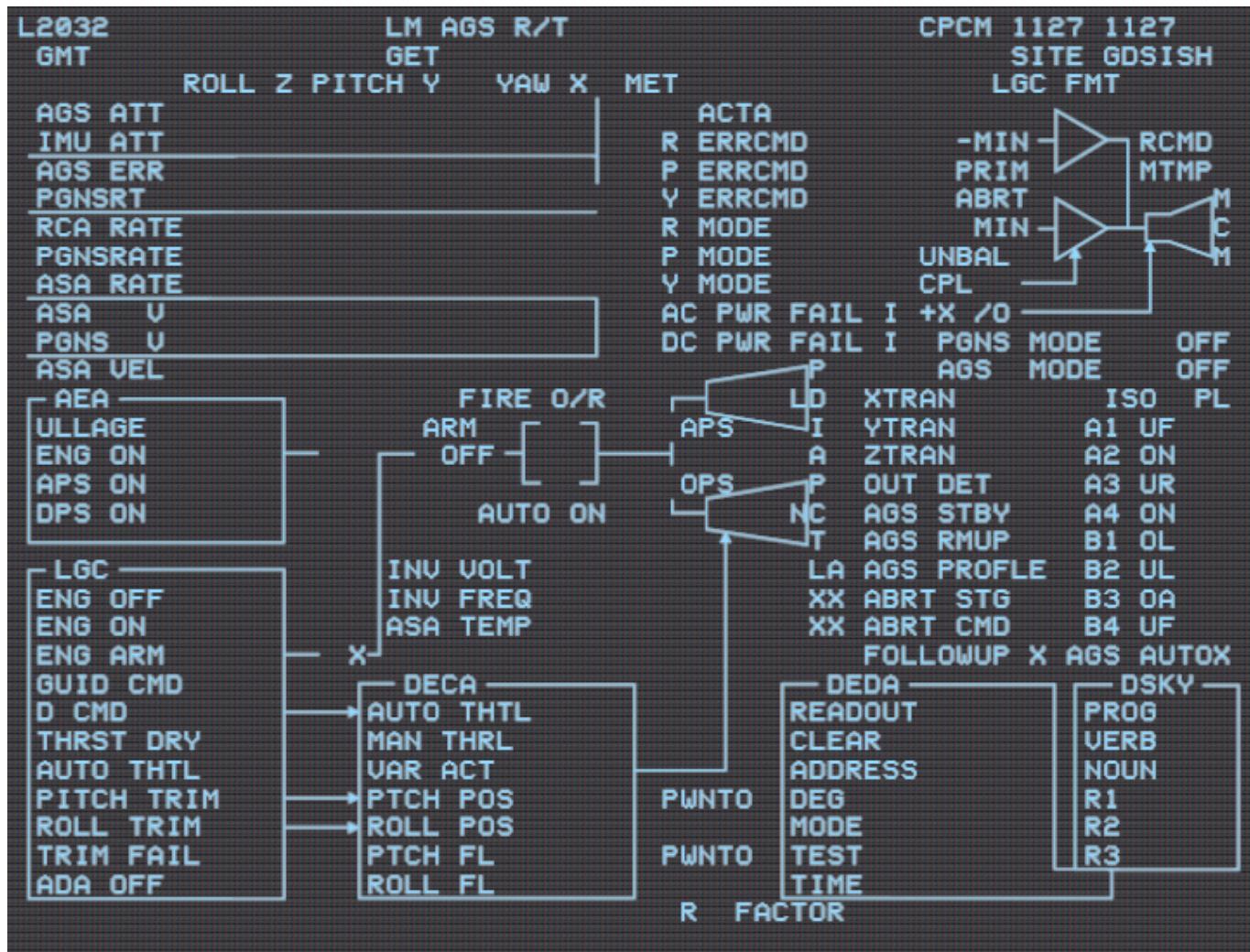
(44) (LM ELECT/INST)

LZ774 K	LM ELEC/INST R/T			1891	10
GET067:37:14	MET067:37:14	GMT 11/08:09:38		PCM	
BAT STAT	VOLT	CUR	AMP HR	AV CUR	PCT
1 D	28.0	3.4	0.0		
2 D	28.0	3.4	0.0		
L D	28.0	0.0	0.0		
3 D	28.0	3.4	0.0		
4 D	28.0	3.4	0.0		
	DES	13.4			AH MED
LMP	28.0	22.6			
CDR	28.0	17.8			
5 E LMPN	28.0	0.0	0.0		
6 E CDRN	28.0	0.0	0.0		
	ASC	0.0			
PROG	TGO	D	DGET		IMU STBY
AC1 VOLT	0.0	RCS	2X		IMU OPER
AC2 VOLT	30.0	RCS+Y+Z			LGC OPER
INV 1	0.0	ABT	CMD		LR STAT
INV 2	28.0	ABT	STG	AAH	RR STAT
DPS TOP		GEAR	D		AGS STAT
APS TOP		K1-K6			PIT RATE
DSC 2		K7-K15	FIR		H2O SEP
DSC 3		OSC 1		DAH	P GLY P
CAL 85		C&M	PWR		S GLY P

(45) (LM GUID CONT)



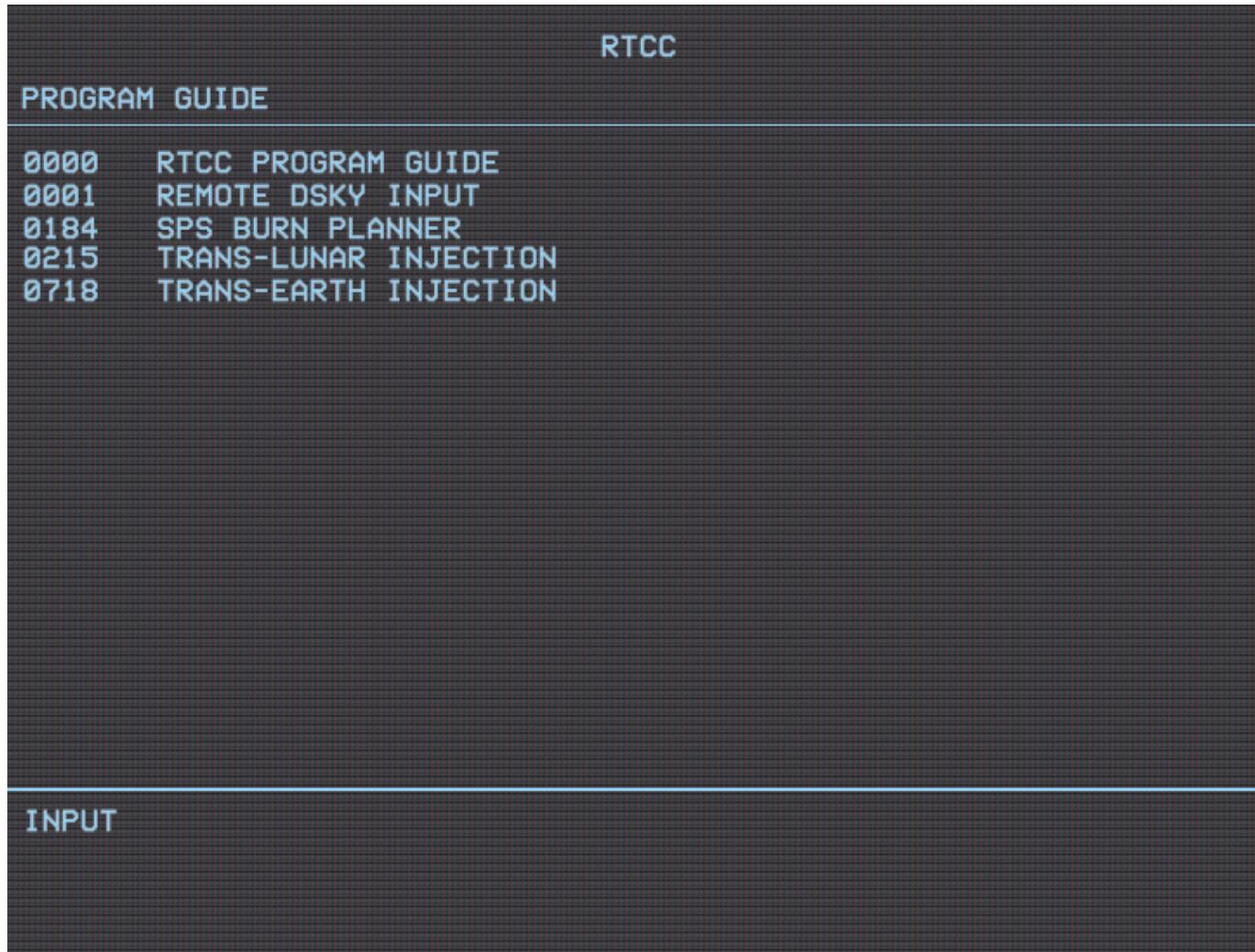
(47) (LM AGS)



(48) (LM DES/ASC)

L2313		LUNAR DESCENT/ASCENT DIGITALS				0084 0084	
PFT	PNGS	MSFN	PET	MSFN	GET	067:37:37	
REC	PNGS	AGS		MSFN	PNGS	T/M	AGS T/M
H _{LGC}	-141470				GTC		
H _{LR}	0				TGO		
h	0				0	P _M	
H _A	0					Y _M	
H _P	0						
V _{SLGC}	-242				0	GET STAGE	
ΔV _S	0					PET STAGE	
V _{SLR}	0					GET	
V	744					PET	
R _{go}	M	G	G			GET	
P	0				0	PET NSERT	
∅	5					GET LOS	
λ	27					PET LOS	
						ΔU _{PFP}	
						ΔV _{DRD}	
						GETR	
						P A M	

(90) RTCC



See section [RTCC](#)

(1111) Earth map

Used on main screen to show the Earth orbital position map and the Earth-Moon-Earth transit position
(Transit info currently INOP)

(2222) Lunar map

Used on main screen to show the Lunar map and AGL

RTCC

NASAs Real-Time Computing Complex, which resides at the first floor of building 30, the same building that houses MOCR 1 and 2, houses 5 IBM 360/75 computers, of which at any time 2 are used redundantly (1 active, 1 hotswap) to support the flight, while the others are used for sims, experiments, etc, and can be swapped in to replace one of the two flight support computers. Data from the RTCC is primarily fed into the display control system, including the television slide display, which is responsible for controlling the overlays used in the above-mentioned TV-system.

To access RTCC programs, you must first:

1. Be in a console that supports RTCC data. This includes [BOOSTER](#) and [GUIDANCE](#)
2. Select the [RTCC TV-channel \(channel 90\)](#)

3. Press the LOAD/INITIATE button (upper half)
4. Using the keyboard below it, enter the four-digit load-line for the program you want to access (XXXX for program guide)
5. Now press the INITIATE part of the previously mentioned button
6. It should now show the selected load-number.

To input a line of data, do the same thing, but with LINE/INITIATE instead

In the case of GUIDANCE you use the left keyboard to input load-numbers and to input a line, and the right keyboard for DSKY inputs.

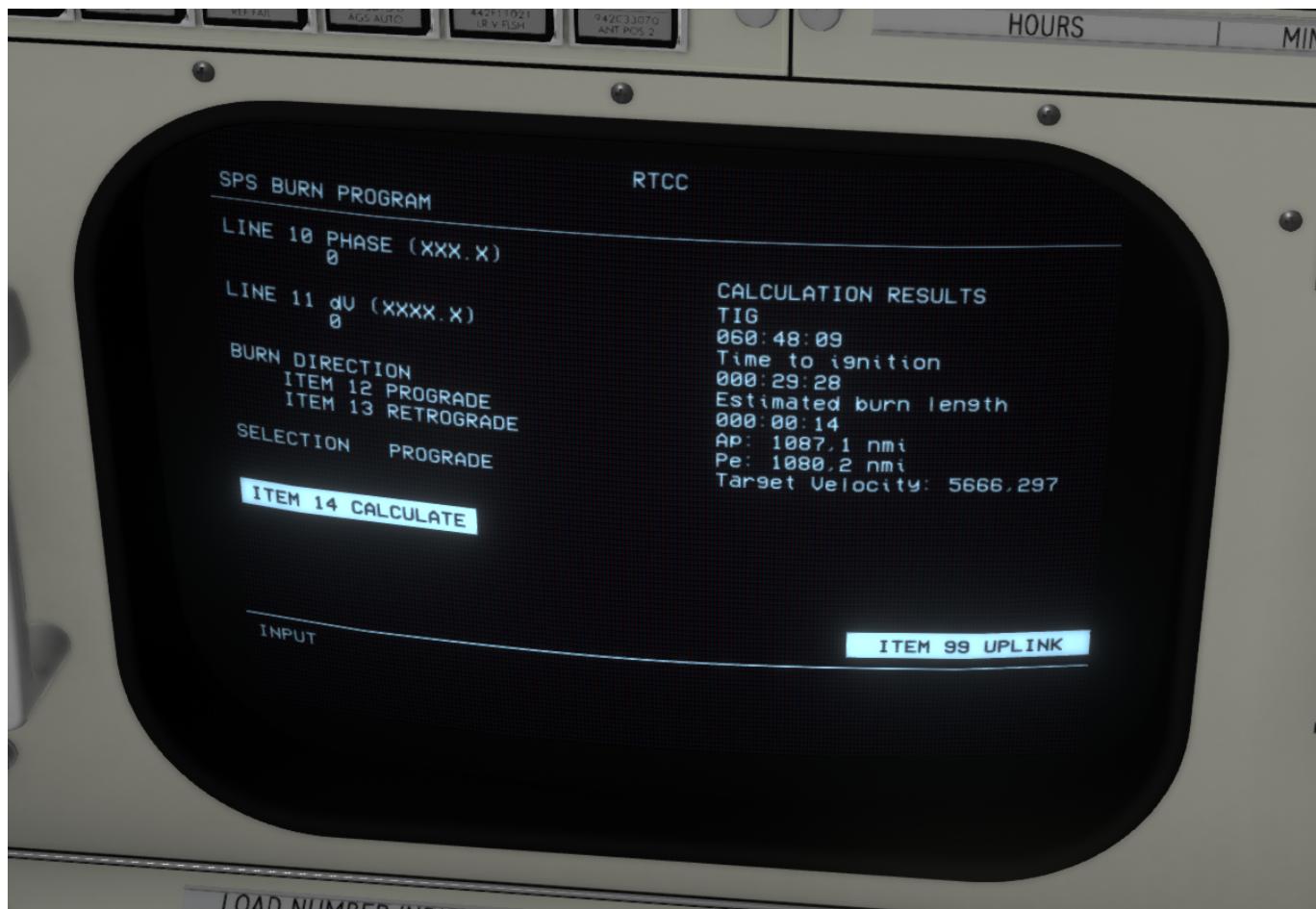


RTCC program guide

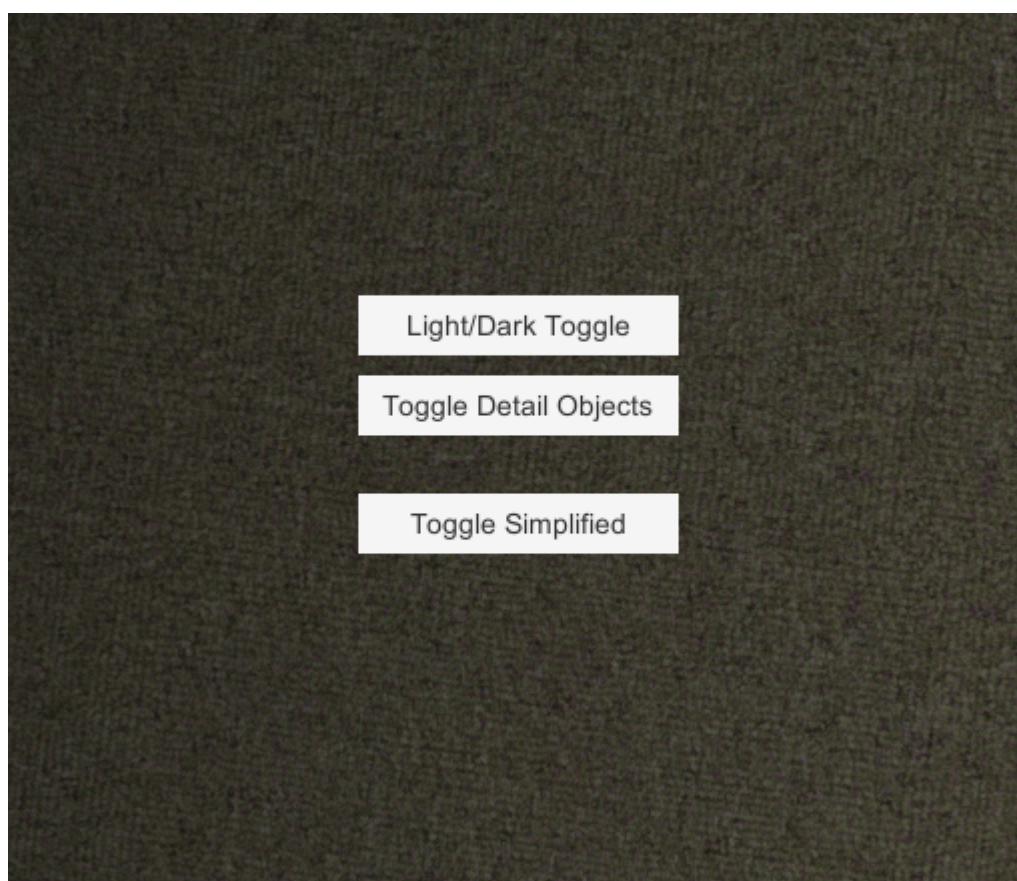
Program guide

DSKY

SPS burn program



Room settings



This menu-options lets you switch between light/dark, toggle detail-objects, and toggle the simplified view, all of whom may increase your performance

Other

IDRK where to put it, but there's a clock some where that can count up or down, and prob take the number from somewhere IDK

Also, troublemakers are a thing, basically the same as before (though now a real-life trouble-maker can do annoying things on voice).