

## Description of Acronyms used in MOSA Manning Lists for Apollo Missions



<b>Acronym</b>	<b>Full Name of Acronym</b>	<b>Description of responsibilities</b>
AGS	Abort Guidance Subsystem	The Abort Guidance Computer was the backup Computer in the Lunar Module that would be used if the Primary Computer (PGNS) failed. It was an analog computer and could only be used for aborts.
ALSEP	Apollo Lunar Surface Experiment Package	The ALSEP was a set of scientific instruments placed by the astronauts at the landing site of each of the five Apollo missions to land on the Moon. Apollo 11 left a smaller package.
APS	Ascent Propulsion Subsystem	The APS was the Lunar Module Ascent Stage Propulsion System used to get the Ascent Stage from the surface of the Moon back into orbit around the Moon.
Asst Flight Director	Assistant Flight Director	MOCR position that Assisted the Flight Director in whatever he needed to ensure mission success.
BINGO	Bingo	Bingo was the point where the LM had 15 seconds of fuel remaining and the crew had to either land immediately or abort.
BSE-1	Booster Systems Engineer-1	The MOCR booster position that monitored every aspect of the first stage of the Saturn V booster called the S-I.
BSE-2	Booster Systems Engineer-2	The MOCR booster position that monitored every aspect of the first stage of the Saturn V booster called the S-II
BSE-3	Booster Systems Engineer-3	The MOCR booster position that monitored every aspect of the third stage of the Saturn V booster called the SIVB. The SIVB sent the Apollo Spacecraft into orbit and then sent the CMS and LM on to the Moon.
CAPCOM	Capsule Communicator	This is the position in the MOCR that was in direct communication with the astronauts in the various spacecraft. This position was manned by astronauts.
CCATS	Communications, Command, and Telemetry System	This was the system that was responsible for processing the communications links, commands sent to the spacecraft, and the telemetry received from the spacecraft.
CDR	Commander	The Commander was the lead astronaut on each Apollo flight. He would be the astronaut that flew the Lunar Module while under power.
CMP	Command Module Pilot	The astronaut that remained in the Command Module while the Lunar Module was on the Moon.
CSM	Command and Service Module	The Command Module was home to the crew on the way to and from the Moon. The Service Module housed the engine, oxygen, and power needed to get the crew to and from the moon and perform the burns in and out of orbit around the Moon.
CSM COMM	CSM Communications	The SSR position that monitored the communication systems both for communicating between the spacecraft and earth, and between the Command Module and the Lunar Module while the LM was separated from the CM.
CSM ECS	CSM Environmental Control Systems	The SSR position that monitored the environmental control systems on the Command Module that provided oxygen, water, thermal control to the crew during each phase of the mission.

## Apollo Mission Control Acronyms

CSM EECOM	Command and Service Module Electrical, Environmental, and Consumables	MOCR controller that watched over CSM Electrical and environmental systems including the power generating fuel cells, and oxygen systems and their consumption.
CSM EPS	CSM Electrical Power System	The SSR position that monitored the Electric Power systems including the batteries, fuel cells, and electrical buses.
CSM GNC	Command and Service Module Guidance, Navigation, and Control	MOCR position that monitored the reaction-control system, the Service Module's main engine, as well as the hardware components of the guidance systems and the computer for the Command Module and the Service Module.
CSM G and C	CSM Guidance and Control	The SSR position that monitored the hardware components of the guidance systems and the computer for the Command Module and the Service Module.
CSM PROP	Command and Service Module Propulsion	The SSR position that monitored the hardware and operation of the Service Module Propulsion System and the SM and CM RCS Thrusters.
DOD Recovery	Department of Defense Recovery	The Department of Defense team that coordinated the Recovery ships and aircraft need during missions.
DPS	Descent Propulsion System	The Descent Propulsion System was the Lunar Module Propulsion System used to land the two man crew of the Lunar Module safely on the Moon.
Director of Flight Ops	Director of Flight Operations	This was a MOCR position manned by senior management at NASA and was there to assist the Flight Director in making major decisions when time allowed.
ECS	Environmental Control System	The name given to any environmental control system that provided oxygen, water, thermal control to the crew during each phase of the mission.
EMU	Extravehicular Mobility Unit	The EMU was the name given to the Apollo Spacesuit used by the Astronauts while walking on the Moon. The EMU had all the life support systems that are found in a spacecraft.
EPS	Electrical Power System	The name given to any power system on either the Command Module or the Lunar Module that provided power during the mission.
EVA	Extra Vehicular Activity	This was the name given to the time the astronauts were away from the earth and outside of their spacecraft. During the Apollo Landings this is the time the LM astronauts walked on the Moon.
EXO	Experiments Officer	The Experiments Officer was a MOCR position that coordinated the various experiments that were conducted during the mission especially those conducted on the Lunar surface.
FAO	Flight Activities Officer	The FAO was a MOCR Flight Control position that monitored, planned, and supported crew activities, checklists, procedures, and schedules.
FDO	Flight Dynamics Officer Pronounced "FIDO"	MOCR position that monitored the vehicle's trajectory at all stages of the mission. This included launch, lunar trajectory, lunar operations, and reentry.
FLIGHT	Flight Director	MOCR position that led the Flight control team and has the overall operational responsibility to do anything necessary to ensure the crew's safety and mission success.

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GUIDO	Guidance Officer	GUIDO was the MOCR position that watched over the Primary Guidance, Navigation, and Control Systems (PGNCS) for both the Command Module and the Lunar Module. They were responsible for the computers knowing exactly where they were.
IMU	Inertial Measurement Unit	An IMU is a electronic device that measures and reports a body's specific force, and angular rate using a combination of accelerometers and gyroscopes. Both the Command Module and the Lunar Module had IMUs.
INCO	Integrated Communications Officer (starting with Apollo 11)	INCO was the MOCR position that was responsible for all data, voice, and video communications systems including the telemetry link between the spacecraft and the ground.
LM	Lunar Module	The Lunar Module was the vehicle that was used to land on the moon. It was made up of a Descent Stage (that was used to land on the Moon) and an Ascent Stage (that was used to return to the CSM in orbit around the Moon). The Descent Stage remained on the Moon.
LM AGS	Lunar Module Abort Guidance System	The SSR position that supported LM CONTROL as to the operation, readiness of the Abort Guidance Computer should it be needed. It was also used to verify data coming from the Primary Guidance Computer.
LM COMM/INST	Lunar Module Communication and Instrumentation	The SSR position that monitored an help configure the various communication and instrumentation systems on board the Lunar Module.
LM Control	Lunar Module Control	Control was the MOCR position that monitored and the LM reaction-control system, the Descent and Ascent engines, as well as the Primary Guidance Computer and Abort Guidance Computer.
LM EPS	Lunar Module Electrical Power System	The SSR position that supported TELMU by monitoring the Electric Power systems including the batteries, and electrical buses.
LM EPS CONSUMABLE	Lunar Module Electrical Power Consumable	The SSR position that supported TELMU by monitoring the amount of power left in the batteries during the mission.
LM ECS	Lunar Module Environmental Control System	The SSR position that monitored the Environmental Control systems on the Lunar Module that provided oxygen, water, thermal control, and breathable air.
LM ECS/PLSS CONSUMABLE	Lunar Module Environmental Control and Portable Life Support Consumable	The SSR position that monitored the various Environment consumables both in the Lunar Module and in the Portable Life Support Systems used in the Spacesuits while walking on the moon.
LM PGNS	Lunar Module Primary Guidance and Navigation System	The SSR position that supported LM Control by monitoring the Lunar Module Computer and Navigation System that controlled the Lunar Module, controlled landing on the Moon, and returning the LM to the Command Module.
LM PLSS 1 and 2	Lunar Module Portable Life Support	These were two SSR positions that monitored the operation of the two life support systems used by the astronauts when walking on the moon.
LM PROP	Lunar Module Propulsion	The SSR position that supported LM CONTROL as to the operation of the Descent Engine, the Ascent Engine, and the RCS thrusters. LM PROP was also responsible to provide hover time remaining to the LM crew as they landed on the Moon.
LM PROP CONSUMABLE	Lunar Module Propulsion Consumable	The SSR position that supported LM CONTROL as to the amount of fuel remaining in the Descent, Ascent, and Reaction Control tanks during the mission.

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LM TELMU	Lunar Module Telemetry, Electrical, and EVA Mobility Unit	TELMU was the MOCR position that watched over the LM's life-support and power systems as well as the Extra Vehicle Activity Spacesuits used for exploring the moon.
LMP	Lunar Module Pilot	This was the astronaut that flew on the Lunar Module and assisted the Commander in landing the Lunar Module.
LOI	Lunar Orbit Insertion	The name of the burn of the Service Module Engine that put the Command and Service Modules and the Lunar Module into Lunar Orbit.
LR	Landing Radar	This was the radar system that was used to give the LM crew their altitude above the Lunar Surface. It was essential for landing on the moon.
MCC	Mission Control Center	The Mission Control Center included the Mission Operations Control Room (MOCR), Staff Support Rooms (SSR), Real-Time Computer Complex (RTCC), and support rooms for the Apollo flights.
MOCR	Mission Operations Control Room	The MOCR was the main control room that housed the Flight Controllers that were responsible to oversee the systems, computers, guidance, communications, and management of all flights. This is the room that people have seen on TV and photographs.
MPAD	Mission Planning the Analysis Directorate	MPAD was the group that provided the planning for each mission and analyzed how that plan was executed on each mission.
MSC	Manned Spacecraft Center	This was the name of Johnson Space Center at the time of the Apollo Program.
MSFN	Manned Space Flight Network pronounced "Miss fin"	This was a group of tracking stations across the Earth's surface used to maintain contact with the spacecraft including tracking, ranging, telemetry, and voice communications.
NASCOM	NASA Communications Network	NASCOM managed earth communications between ground stations, mission control centers, and other elements of spacecraft ground segments, providing worldwide, near real-time transmission of commands, telemetry, voice, and television signals.
NET	Network Controller	NET was a MOCR position that supervised the network of ground stations that relayed telemetry and communication from the spacecraft to the earth and Mission Control.
OPS	Operations and Procedures Officer	The OPS Officer was the MOCR position that made sure that all of the flight controllers followed all of the procedures in the Flight Control Handbook and the Mission Rules.
PAO	Public Affairs Officer	The Public Affairs Officer was a MOCR position that played a tremendous part in the space program. The PAO was the voice of mission control to the public.
PDI	Powered Descent Initiation	PDI was the name given to the powered landing on the Lunar Surface. It lasted about 12 minutes. The first 6 and a half minutes was at full thrust to slow the Lunar Module down and the remainder was throttled to keep the LM on the trajectory to the Landing Site.
PGNCS	Primary Guidance, Navigation, and Control System	This is the name of the Command Module Computer and Navigation System that was to control the Command and Service Module.
PGNS	Primary Guidance and Navigation System	This is the name of the Lunar Module Computer and Navigation System that controlled the Lunar Module, landed on the Moon, and returned the LM to the Command Module.

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PRS	Primary Recovery Ship	The was the name given to the ship that was to lead the recovery of the Command Module once it returned to earth.
RCS	Reaction Control System	The RCS is the propulsion system used to control the attitude of the CM (CM RCS) and the Lunar Module (LM RCS). They were made up of small thrusters tied to their respective Computers and navigation systems.
RETRO	Retrofire Officer	This was the MOCR position that was responsible for getting the spacecraft safely back from the moon. RETRO kept a list of abort options.
RR	Rendezvous Radar	This is the Radar system that was used to bring the Lunar Module back to the Command Module once it had lifted off from the Lunar Surface.
RTCC	Real-Time Computer Complex	The Real-Time Computer Complex was located in the first floor of the Mission Control Center and housed the IBM computers that were used to control the Apollo Missions and Mission Control.
SAR	Search and Recovery	The name given to the various ships, aircraft, personnel, and other resources needed to recover the Command Module once it parachuted back to earth. The CM had a water recovery.
SIM	Simulation	This was the name of the group that provided the training of the crew and flight controllers to prepare for each part of the mission. It would go on for months prior to each mission.
SM	Service Module	The service module was the stage that was attached to the bottom of the Command Module that provided the resources to get the crew to and from the moon including the fuel cells for electrical power and the oxygen that the crew needed while in the CM.
SPAN	Spacecraft Analysis	SPAN was a SSR (Staff Support Room) located within Mission Control where various specialists, spacecraft builder and systems representatives, and NASA management would gather in support of the Flight Controllers.
SPS	Service Propulsion System	This is the name of the propulsion system attached to the Command Module that was used to insert the spacecraft into Lunar Orbit and then send the spacecraft back to the earth once the LM had returned and was discarded.
SSR	Staff Support Room	These are the Rooms near the Mission Operations Control Room that house the flight control positions that specialize in specific areas to support the MOCR flight controllers.
SURGEON	Flight Surgeon	The Flight Surgeon was the MOCR position that monitored the health of the crew including their heart and breathing rates, and advised the flight director of their status.
Telemetry	Telemetry	Technology that allows the remote measurement, transmitting, and receiving information.
TEI	Trans Earth Injection	This is the name of the burn of the Service Module Propulsion System that sent the Command Module and Service on their return trip to the Earth from the Moon.
TLI	Trans Lunar Insertion	This is the term for the burn of the SIVB that propelled the CSM and LM toward the Moon.
Trajectory	Trajectory	The Trajectory is name given to the path that an object like a spacecraft follows through the atmosphere or space.
Velocity	Velocity	The rate of change of position. Often used interchangeably with "speed" by PAO, even though speed is just the magnitude of velocity.