

# ABBREVIATIONS

ac	Alternating current	CO <sub>2</sub>	Carbon dioxide
ACCEL	Accelerometer or acceleration	COAS	Crew optical alignment sight
ACE	Acceptance checkout equipment	COAX	Coaxial
ACK	Acknowledge	COI	Contingency orbit insertion
ACP	Audio control panel	COMM	Communications
ACS	Attitude control subsystem	COMPR	Compressor
A/D	Analog to digital	COMPEN	Compensator
AGC	Automatic gain control	COND	Condenser or conditioner
AGE	Aerospace ground equipment	CONT	Control
AH	Ampere hour	CPLR	Coupler
ALT	Altitude	CPS	Cycles per second
AM	Amplitude modulation or ammeter	CRYO	Cryogenic
AMPL	Amplifier	CSC	Cosecant computing amplifier
ANL	Analog	CSM	Command and service modules
AOA	Angle of attack	CSS	Computer subsystem
ARS	Attitude reference subsystem	C&W	Caution and warning subsystem
ASCP	Attitude set control panel	CW	Clockwise or continuous wave
ASI	Apollo standard initiator	CTE	Central timing equipment
ATT	Attitude or attenuator	CWG	Constant wear garment
AUTO	Automatic		
AUX	Auxiliary	D/A	Digital to analog
AVC	Automatic volume control	DAC	Digital-to-analog converter
		DAP	Digital autopilot
BAT	Battery	DB	Deadband
BCD	Binary coded decimal	db	Decibel
BCN	Beacon	dc	Direct current
BECO	Booster engine cutoff	DECR	Decrease
BMAG	Body-mounted attitude gyro	DEG	Degree
BPC	Boost protective cover	DEMODO	Demodulate
bps	Bits per second	DET	Detector or digital event timer
BTU	British thermal unit	DISCR	Discriminator
BU	Backup	DRI	Data rate indicator
BUR	Backup rate	DSE	Data storage equipment
		DSIF	Deep Space Instrumentation Facility
CB	Circuit breaker	DSKY	Display and keyboard
CCFT	Controlled current feedback trans- former	E	Elevation angle
CCTV	Closed-circuit television	ECA	Electronic control assembly
CCW	Counterclockwise	ECO	Engine combustion or engine cutoff
C&D	Controls and displays	ECS	Environmental control subsystem
CDF	Confined detonating fuse	ECU	Environmental control unit
CDU	Coupling data unit	EDA	Electronic display assembly
cfm	Cubic feet per minute	EDS	Emergency detection subsystem
CG	Center of gravity	ELECT	Electronic
CHAN	Channel	ELS	Earth landing subsystem
CKT	Circuit	ELSC	Earth landing sequence controller
CL	Centerline	EMER	Emergency
CLM	Core logic module	EMI	Electromagnetic interference
CM	Command module	EMS	Entry monitor subsystem
CMC	Command module computer	EMU	Extravehicular mobility unit
CMD	Command	ENC	Encode
C/O	Checkout	ENG	Engine

EOS	Emergency oxygen system	IF	Intermediate frequency
E&PL	Entry & post-landing	IFN	In-flight maintenance
EPS	Electrical power subsystem	IGA	Inner gimbal angle
ERR	Error	IGN	Ignition
ETR	Eastern test range	IMP	Impulse
EU	Electronic unit	IMU	Inertial measurement unit
EVA	Extravehicular activity	INCR	Increase
		IND	Indicator
FC	Fuel cell	INV	Inverter
$f_c$	Center frequency	IPB	Illuminated push button
FCSM	Flight combustion stability monitor	IPS	Instrumentation power subsystem or inches per second
FDAI	Flight director attitude indicator		
FDT	Full duplex teletype circuit	IRIG	Inertial rate integrating gyro
F/F	Flip-flop	ISOL	Isolation
FHS	Forward heat shield	ISS	Inertial subsystem
FLT	Flight	IU	Instrument unit
FLSC	Flexible linear shaped charge		
FM	Frequency modulation	JETT	Jettison
FOV	Field of vision		
FQR	Flight qualification recorder	kbs	Kilobits per second
fs	Full scale	kc	Kilocycles
FSK	Frequency shift-keyed	kHz	Kilohertz
FWD	Forward	KOH	Potassium hydroxide
		KSC	Kennedy Space Center
G	Gravity	kw	Kilowatt
GA	Gyro assembly	LAT	Latitude
gc	Gigacycles	LCC	Launch Control Center
G&C	Guidance and control	LDEC	Lunar docking events controller
GDC	Gyro display coupler	LEA	Launch escape assembly
GET	Ground elapsed time	LEB	Lower equipment bay
GFE	Government-furnished equipment	LEM	Launch escape motor (also lunar excursion module, old name for lunar module)
GMBL	Gimbal		
GN <sub>2</sub>	Gaseous nitrogen	LES	Launch escape subsystem
GND	Ground	LET	Launch escape tower
GNCS	Guidance, navigation, and control subsystem	LEV	Launch escape vehicle
GPI	Gimbal position indicator	LF	Low frequency
GSE	Ground support equipment	LH <sub>2</sub>	Liquid hydrogen
GSFC	Goddard Space Flight Center	LHEB	Left-hand equipment bay
		LHFEB	Left-hand forward equipment bay
ha	Apogee altitude	LM	Lunar module
H <sub>2</sub>	Hydrogen	LMK	Landmark
He	Helium	LO	Low
HF	High frequency	LOR	Lunar orbit rendezvous
Hg	Mercury	LOS	Line of sight, loss of signal
HGA	High-gain antenna	LOX	Liquid oxygen
HI	High	LSB	Lower sideband
hp	Perigee altitude	LSC	Linear-shaped charge
HR	Hydrogen relief or hour	LSSC	LM separation sequence controller
HTR	Heater	LV	Launch vehicle or lift vector
Hz	Hertz (cycle per second)		
		MAN	Manual or manifold
IC	Intercom	MAX	Maximum
ICDU	Inertial coupling data unit	MAXQ	Maximum dynamic pressure
IECO	Inboard engine cutoff	MCC	Mission Control Center

MDC	Main display console	PCM	Pulse code modulation or pitch control motor
MDF	Mild detonating fuse	PCVB	Pyro continuity verification box
MED	Medium	PDM	Pulse duration modulation
MESC	Master events sequence controller	PF	Pulse frequency or powered flight
MGA	Middle gimbal angle	PGA	Pressure garment assembly
mHz	MegaHertz	PH	Phase
MIKE	Microphone	pH	Hydrogen ion concentration
mil	1/1000	PIPA	Pulsed integrating pendulous accelerometer
MIN	Minimum	PLBK	Playback
ML	Moldline	PLSS	Portable life support system
MMH	Monomethylhydrazine	PM	Phase modulation
MNA	Main bus A	PMP	Premodulation processor
MNB	Main bus B	POS	Positive
MOD	Modulator	POT	Potentiometer
MOT	Motor	PPM	Parts per million or pulse position modulation
MS	Motor switch	PPS	Pulses per second
MSC	Manned Spacecraft Center	PRF	Pulse repetition frequency
MSFC	Marshall Space Flight Center	PRI	Primary
MSFN	Manned Space Flight Network	PRN	Pseudo-random noise
MTVC	Manned thrust vector control	PROP	Propellant
mv	Millivolt	PS	Pressure switch
mw	Milliwatt	PSA	Power servo assembly
N <sub>2</sub>	Nitrogen	PSI	Pounds per square inch
NAV	Navigation	PSIA	Pounds per square inch absolute
NB	Navigation base or narrow band	PSIG	Pounds per square inch gauge
NEG	Negative	PSK	Phase shift-keyed
NEUT	Neutral	PSO	Pad safety officer
n.mi.	Nautical mile	PTT	Push to talk
NO.	Number	PU	Propellant utilization
N.O.	Normally open	PUG	Propellant utilization gauging
NON-ESS	Non-essential	PWR	Power
NORM	Normal	PYRO	Pyrotechnic
NRZ	Non-return to zero	R	Range
NSIF	Near-Space Instrumentation Facility	RAD	Radiation dosage or radiator
O <sub>2</sub>	Oxygen	RC	Rotation control or range command
OCDU	Optics coupling data unit	RCDR	Recorder
OECO	Outboard engine cutoff	RCS	Reaction control subsystem
OGA	Outer gimbal angle	RCSC	Reaction control subsystem controller
OH	Hydroxyl ion	RCV	Receive
O/L-RC	Overload - reverse current	RCVR	Receiver
OMNI	Omni-directional	RECO	Rough engine cutoff
OPT	Optics	RECT	Rectifier
OR	Oxygen relief	R&D	Research and development
ORDEAL	Orbit rate drive electronics Apollo LM	REG	Regulator
OSC	Oscillator	REGEN	Regenerator
OSS	Optics subsystem	REL	Release
O/V	Overvoltage	REV	Reverse
OXID	Oxidizer	RF	Radio frequency
PA	Power amplifier	RFI	Radio frequency interference
PAM	Pulse amplitude modulation	RGA	Rate gyro assembly
PB	Push button	RHC	Rotation hand control

RHEB	Right-hand equipment bay	TLC	Translunar coast
RHFEB	Right-hand forward equipment bay	TLI	Translunar injection
RJD	Reaction jet driver	TLM	Telemetry
RJ/EC	Reaction jet and engine control	TMG	Thermal meteoroid garment
RMS	Root mean square	TPAC	Telescope precision angle counter
RNG	Range	T/R	Transmit-receive
RNDZ	Rendezvous	TRNFR	Transfer
ROT	Rotation	TTE	Time to event
RRT	Rendezvous radar transponder	TV	Thrust vector or television
RSI	Roll stability indicator	TVC	Thrust vector control
RSO	Range safety officer	TVSA	Thrust vector position servo amplifier
RTC	Real-time command	TWR	Tower
RTTV	Real-time television	TWT	Traveling wave tube
RUPT	Interrupt		
RZ	Return to zero	UCD	Urine collection device
		UDL	Up-data link
S/C	Spacecraft	UDMH	Unsymmetrical dimethyl hydrazine
SCE	Signal conditioning equipment	UHF	Ultra high frequency
SCI	Scientific	UPTL	Up-link telemetry
SCO	Subcarrier oscillator	USBE	Unified S-band equipment
SCS	Stabilization and control subsystem	U/V	Undervoltage
SCT	Scanning telescope		
SEC	Second or secondary	V	Voice, volt, or velocity
SECO	S-IVB (third stage) engine cutoff	VAC	Volts alternating current
SECS	Sequential events control subsystem	V <sub>c</sub>	Circular velocity
SENS	Sensitivity	VCO	Voltage-controlled oscillator
SEP	Separation or spacecraft electronic package	VDC	Volts direct current
		VGP	Vehicle ground point
SEQ	Sequencer	VHF	Very high frequency
SIG	Signal	VHF/AM	Very high frequency/audio modulated
SLA	Spacecraft-LM adapter	VM	Voltmeter or measured velocity
SLOS	Star line of sight	VO	Initial velocity
SM	Service module	VOL	Volume
SMJC	Service module jettison controller	VOX	Voice-operated relay
SNSR	Sensor	VSWR	Voltage standing wave ratio
SOV	Shutoff valve		
SPEC	Specification	W/G	Water-glycol
SPS	Service propulsion subsystem or samples per second	WMS	Waste management system
		WPM	Words per minute
SSB	Single sideband	WTR	Western test range
STBY	Standby		
SW	Switch	X <sub>C</sub>	Command module station
SXT	Sextant	XCVR	Transceiver
SYNC	Synchronization	XDUCER	Transducer
TB	Talkback indicator	XFMR	Transformer
TC	Translation control	XMIT	Transmit
T/C	Telecommunications subsystem	XMTR	Transmitter
T/D	Time delay	XPONDER	Transponder
TEC	Transearth coast	X <sub>S</sub>	Service module station
TEI	Transearth injection		
TEMP	Temperature	ZN	Zinc
TFL	Time from launch		
THC	Translation hand control	ΔP	Differential pressure
TIGN	Time of ignition	ΔV	Differential velocity
TJM	Tower jettison motor	φ	Phase