

SATELLITE FREQUENCY BANDS

**THERE ARE A NUMBER OF RADIO
FREQUENCY RANGES IN USE IN
SATELLITE COMMUNICATIONS SUCH AS
C, X, KU, KA AND EVEN EHG AND V-BAND.**

Band	Frequency (GHz)
L band	1–2
S band	2–4
C band	4–8
X band	8–12
Ku band	12–18
K band	18–27
Ka band	27–40
V band	40–75
W band	75–110

L-BAND (1-2 GHZ)

**GLOBAL POSITIONING SYSTEM (GPS)
CARRIERS AND ALSO SATELLITE MOBILE
PHONES, SUCH AS IRIDIUM; INMARSAT
PROVIDING COMMUNICATIONS AT SEA,
LAND AND AIR; WORLDSpace SATELLITE
RADIO.**

S-BAND (2-4 GHZ)

WEATHER RADAR, SURFACE SHIP RADAR, AND SOME COMMUNICATIONS SATELLITES, ESPECIALLY THOSE OF NASA FOR COMMUNICATION WITH ISS AND SPACE SHUTTLE. IN MAY 2009, INMARSAT AND SOLARIS MOBILE (A JOINT VENTURE BETWEEN EUTELSAT AND ASTRA) WERE AWARDED EACH A 2×15 MHZ PORTION OF THE S-BAND BY THE EUROPEAN COMMISSION.

C-BAND (4-8 GHZ)

PRIMARILY USED FOR SATELLITE COMMUNICATIONS, FOR FULL-TIME SATELLITE TV NETWORKS OR RAW SATELLITE FEEDS. COMMONLY USED IN AREAS THAT ARE SUBJECT TO TROPICAL RAINFALL.

X-BAND (8–12 GHZ)

PRIMARILY USED BY THE MILITARY. USED IN RADAR APPLICATIONS INCLUDING CONTINUOUS-WAVE, PULSED, SINGLE-POLARISATION, DUAL-POLARISATION, SYNTHETIC APERTURE RADAR AND PHASED ARRAYS.

KU-BAND (12–18 GHZ)

USED FOR SATELLITE COMMUNICATIONS. IN EUROPE, KU-BAND DOWNLINK IS USED FROM 10.7 GHZ TO 12.75 GHZ FOR DIRECT BROADCAST SATELLITE SERVICES, SUCH AS ASTRA.

KA-BAND (26–40 GHz)

**COMMUNICATIONS SATELLITES, UPLINK
IN EITHER THE 27.5 GHz AND 31 GHz
BANDS, AND HIGH-RESOLUTION,
CLOSE-RANGE TARGETING RADARS ON
MILITARY AIRCRAFT.**