

FCC Emissions Designators for LoCate (LOCA01)

R. Braathen
Nov 28, 2001

The designators applied for in the FCC application for LoCate (LOCA01) are:

40K0F1D
40K0F9D

Per instruction (g) of 47CFR2.201, the necessary bandwidth is to be included before these designators for the full designation.

Per instructions (a) through (f) of 47CFR2.201 the first, second and third symbols are included. The two types cellular communications channels are used, they are denoted Control Channel and Communications Channel and each is examined in detail on pages 2 and 3.

Control Channel:

Necessary bandwidth is +/-20 KHz, which has the symbol: 40K0

Symbol Number	Symbol Requirement	Choice	Designator
First	type of modulation of the carrier	Frequency Modulation	F
Second	nature of signals modulating the carrier	A single channel containing quantized or digital information without the use of a modulating sub-carrier, excluding time-division multiplex	1
Third	Type of information to be transmitted	Data transmission, telemetry, telecommand	D

Designator for Control Channel: 40K0F1D

Communications Channel:

The Communications Channel uses Handoff Commands Communications which are telecommand at +/-20 KHz bandwidth and also Analogue Communications with FM modulation within 15 KHz bandwidth.

Handoff Command Communications:

Necessary bandwidth is +/-20 KHz, which has the symbol: 40K0

Symbol Number	Symbol Requirement	Choice	Designator
First	type of modulation of the carrier	Frequency Modulation	F
Second	nature of signals modulating the carrier	A single channel containing quantized or digital information without the use of a modulating sub-carrier	1
Third	Type of information to be transmitted	Data transmission, telemetry, telecommand	D

Analogue Communications:

Bandwidth necessary is 15 KHz, the wider bandwidth needed of the Handoff Commands overrides this for the symbol: 40K0

The signal being sent in this mode is the SAT (Supervisory Audio Tone), which is an analogue signaling tone at either 5970, 6000 or 6030 Hz using a +/- 2 KHz Peak Frequency Modulation.

Symbol Number	Symbol Requirement	Choice	Designator
First	type of modulation of the carrier	Frequency Modulation	F
Second	nature of signals modulating the carrier	A single channel containing analogue information	3
Third	Type of information to be transmitted	Telemetry (D)	D

Handoff Commands Communications modulation designator is F1D plus the Analogue Communications modulation designator is F3D to give the following:

F: as both modes are frequency modulation

9: which is a combination of nature of signals for both modes, **1** and **3** are then a "Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information."

D: as both modes are D types of information

Designator for Communications Channel: 40K0F9D