

Radio Emissions

Dr.A.Kaviyarasu

Assistant Professor

Department of Aerospace Engineering

Madras Institute of Technology

Chromepet Chennai



- The International Telecommunication Union uses an internationally agreed system for classifying radio frequency signals.
- Each type of radio emission is classified according to its bandwidth, method of modulation, nature of the modulating signal, and type of information transmitted on the carrier signal.
- This designation system was agreed at the 1979 World Administrative Radio Conference (WARC 79), and gave rise to the Radio Regulations that came into force on 1 January 1982. A similar designation system had been in use under prior Radio Regulations.



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- First symbol represent - Type of modulation (Main carrier)
 - Second symbol represent - Nature of signals modulating with main carrier
 - Third symbol represent - Type of information
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- Some of the examples of emissions are A1A, A2A, F3E, C3F, etc



Third symbol represent- Type of information

Character	Description
A	Aural telegraphy, decoded by ear (Morse Code)
B	Electronic telegraphy decoded by machine (radio teletype and digital modes)
C	Facsimile (Still images) or FAX
D	Telemetry
E	Telephony (Voice or Audio)
F	Video (Television)



Second symbol represent- Nature of signals modulating with main carrier

Character	Description
1	A Single containing quantised or Digital information without use of modulating subcarrier
2	A Single containing quantised or Digital information with use of modulating subcarrier
3	A Single Channel Containing analog information



First symbol represent- Type of modulation (Main carrier)

Character	Description
A	Double Side Band or Amplitude Modulation (AM)
C	Vestigial Modulation
F	Frequency Modulation (FM)
H	Single Side band (SSB)- Full Carrier
J	Single Side band (SSB) –Suppressed Carrier
R	Single Side band (SSB) –Reduced Carrier Or Variable carrier



- A1A

- A - Telegraphy for Aural Reception (need your ears to hear and decode)
- 1 - A Single containing quantized or Digital information **without use of modulating Subcarrier**
- A - **Double Side Band** A Single containing quantized or Digital information **without use of modulating subcarrier**

- A2A

- A - Telegraphy for Aural Reception (need your ears to hear and decode)
- 2 - A Single containing quantized or Digital information **with use of modulating Subcarrier**
- A - **Double Side Band** A Single containing quantized or Digital information **without use of modulating subcarrier**



- A3C

- C - Facsimile
- 3 - A Single containing quantized analog information
- A - **Double Side Band** A Single containing quantized or Digital information **without use of modulating subcarrier**

- A3E

- E - Telephony
- 3 - A Single containing quantized or Digital information **with use of modulating Subcarrier**
- A - **Double Side Band** A Single containing quantized or Digital information **without use of modulating subcarrier**



- A3F -(Fast Scan TV)

- F - Video
- 3 - A Single containing quantized analog information
- A - **Double Side Band** A Single containing quantized or Digital information **without use of modulating subcarrier**

- A3E-(AM Voice)

- E - Telephony
- 3 - A Single containing quantized or Digital information **with use of modulating Subcarrier**
- A - **Double Side Band** A Single containing quantized or Digital information **without use of modulating subcarrier**



- F1B

- B - Automatic reception with help of computer
- 1 - A Single containing quantized or Digital information **without use of modulating Subcarrier**
- F - **Frequency modulation**

- F2B

- B - Automatic reception with help of computer
- 2 - A Single containing quantized or Digital information **with use of modulating Subcarrier**
- F - **Frequency modulation**



- F3E

- E - Audio or Voice
- 3 - A Single containing analog information
- F - Frequency modulation

- F3C

- C - Facsimile or Fax
- 3 - A Single containing analog information
- F - Frequency modulation



- H3E

- E - Audio or Voice
- 3 - A Single containing analog information
- H - Single Side Band with fully carrier

- J3E

- E - Audio or Voice
- 3 - A Single containing analog information
- J - Single Side Band with suppressed carrier



- C3F

- F - Video
- 3 - A Single containing analog information
- C - Vestigial Sideband

- R3E

- E - Audio or Voice
- 3 - A Single containing analog information
- J - Single Side Band with reduced carrier



Thank You....

