CLAIMS

1 – A method for reducing a peak factor in a multi-carrier communication system, the data being transmitted on m channels, the method comprising:

transmitting data, via a transmitter, on m channels in parallel, the data are formatted through a symbol formation module and a scrambling step; and

introducing a number d of desynchronization symbols at a start of each frame, a framing module adds the desynchronization symbols, in addition to pilot and autobaud symbols, to construct the frame,

wherein the desynchronization symbols are adapted to introduce an offset between different channels of a multi-carrier wave form,

wherein the number d is chosen as a function of a transmission channel number m (ch_m) concerned~~, and zero symbols are introduced before the initial synchronization preamble of the frames transmitted on the first channel~~,

wherein the desynchronization symbols introduced are different for the m transmission channels, and

wherein each constructed frame is associated with a channel ch_m and is summed before being transmitted via one of the m transmission channels and a suitable link to a receiver.

2 – The method according to Claim 1, wherein the number d of desynchronization symbols equal to 0 are introduced before an initial synchronization preamble of a frame transmitted on a first channel and the number d of desynchronization symbols equal to m-1 are introduced on the transmission channel m (ch_m).

3 – The method according to Claim 1, wherein the desynchronization symbols are introduced with a different number d for each channel.

4 – The method according to Claim 1, further comprising realigning, at the receiver, one of the m transmission channels by taking into account the number d of symbols introduced into the frame.

5 – The method according to Claim 1, further comprising a common step at the transmitter and the receiver of coding and interleaving the data on the m transmission channels.

6 – The method according to Claim 1, wherein the communications are high frequency (HF) waves of 2 to 30 MHz.

7 – A system for reducing a peak factor in a multi-carrier communication system, the system comprising:

m channels for transmitting data in a form of frames;

a data transmission subsystem configured to transmit data on the m channels in parallel, the data are formatted through a symbol formation module and a scrambling step; and

a reception subsystem,

wherein the data transmission subsystem further comprises at least one module for framing the data adapted to insert a number of symbols at a start of each frame, a framing module adds the desynchronization symbols, in addition to pilot and autobaud symbols, to construct the frame,

wherein the symbols are adapted to introduce an offset between different channels of a multi-carrier wave form,

wherein the number ~~d~~ of symbols are chosen as a function of a transmission channel number m concerned, ~~and zero symbols are introduced before the initial synchronization preamble of the frames transmitted on the first channel,~~

wherein the desynchronization symbols introduced are different for the m channels, and

wherein each constructed frame is associated with a channel ch_m and is summed before being transmitted via one of the m transmission channels and a suitable link to the receiver.

8 – The system according to Claim 7, wherein the reception subsystem further comprises a module adapted to realign each channel by using the number of symbols introduced into a frame.