Claims

1. A transmitter module for unidirectional communication with a receiver module, the transmitter module comprising:

a carrier detection portion for making an identification in a manner such that one of presence and absence of communication of at least one communication signal, within a communication medium, having a frequency component corresponding to one of at least one predetermined frequency component is identifiable, at least one preliminary identified signal being produced based on the identification, and detection signals being communicable from the carrier detection portion based on the at least one preliminary identified signal;

a source processing portion coupled to the carrier detection portion, the source processing portion for receiving and processing an information signal to produce a processed information signal, the source processing portion processing the information signal in a manner such that an appropriate carrier signal is modulated with the information signal, the appropriate carrier signal being based on the detection signals communicated from the carrier detection portion, the source processing portion further processing the information signal in a manner such that the processed information signal is associable with at least one of a unique code and an indication signal, the indication signal being associable with absence of communication of the at least one communication signal in the communication medium; and

a source transmission portion coupled to the source processing portion, the source transmission portion for receiving and processing the processed information signal to produce a source signal, the source signal being associable with at least one of the unique code and the indication signal,

wherein the source signal is communicable from the source transmission portion to the transmitter module via the communication medium.

2. The transmitter module as in claim 1 wherein the source signal is communicable, from the transmitter module, as a communication signal corresponding to the appropriate carrier, and

wherein the receiver module is configurable to detect and receive the communication signal corresponding to the appropriate carrier, and identify the source signal based on at least one of the unique code and the indication signal.

3. The transmitter module as in claim 1 wherein the carrier detection portion comprises a scanning tank circuit arrangement for scanning the communication medium to identify one of presence and absence of at least one communication signal therewithin.

4. The transmitter module as in claim 3 wherein the scanning tank circuit arrangement comprises:

a transmit parallel tank circuit for scanning the communication medium in a manner so as to make the identification of one of presence and absence of communication of at least one communication signal and communicate the at least one preliminary identified signal, each of the at least one preliminary identified signal having a frequency component and an amplitude component associable, respectively, with the at least one predetermined frequency component and signal strength of the preliminary identified signal;

a frequency detector coupled to the transmit parallel tank circuit in a manner so as to receive the at least one preliminary identified signal, the frequency detector for communicating one of a positive frequency detection signal, a null frequency detection signal and a negative frequency detection signal, based on frequency component of the at least one preliminary identified signal; and

an amplitude detector coupled to the transmit parallel tank circuit in a manner so as to receive the at least one preliminary identified signal, the amplitude detector for communicating one of a positive strength detection signal and a negative strength detection signal, based on amplitude component of the at least one preliminary identified signal.

5. The transmitter module as in claim 4 wherein when presence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the frequency detector is configurable to make a confirmation of the frequency component of the at least one preliminary identified signal based on a frequency match based confirmation such that when the frequency component of the at least one preliminary identified signal substantially matches any one of the at least one predetermined frequency component, a positive frequency detection signal is communicated and a null frequency detection signal is communicated otherwise.

6. The transmitter module as in claim 4 wherein when absence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the frequency detector is configurable to communicate a negative frequency detection signal.

7. The transmitter module as in claim 4 wherein when presence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the amplitude detector is configurable to detect the amplitude component of the at least one preliminary identified signal and determine signal strength thereof based on an amplitude threshold based determination to which a predetermined amplitude threshold is associable, signal strength of the at least one preliminary identified signal being considered one of substantial and negligible when the amplitude component of the at least one preliminary identified signal is, respectively, one of above and below the predetermined amplitude threshold.

8. The transmitter module as in claim 7 wherein when signal strength of the at least one preliminary identified signal is considered substantial, the amplitude detector communicates the positive strength detection signal.

9. The transmitter module as in claim 7 wherein when signal strength of the at least one preliminary identified signal is considered negligible, the amplitude detector communicates the negative strength detection signal.

10. The transmitter module as in claim 7 wherein when absence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the amplitude detector is configurable to communicate a negative strength detection signal.

11. The transmitter module as in claim 4, the appropriate carrier signal being based on the detection signals in a manner such that the detection signals are based on one of a negative frequency detection signal, a negative strength detection signal, a negative frequency detection signal in combination with a negative strength detection signal and a positive frequency detection signal in combination with a negative strength detection signal.

12. The transmitter module as in claim 3,

wherein a control signal is communicable from the source processing portion to the scanning tank circuit arrangement, and

wherein the scanning tank circuit arrangement comprises a transmit parallel tank circuit for scanning the communication medium in a manner so as to make the identification of one of presence and absence of communication of at least one communication signal

having a frequency component corresponding to any one of a plurality of predetermined frequency components.

13. The transmitter module as in claim 12 wherein the transmit parallel tank circuit is controllable by the control signal in a manner such that number of the predetermined frequency components corresponding to the plurality of predetermined frequency components is variable.

14. The transmitter module as in claim 3,

wherein a control signal is communicable from the source processing portion to the scanning tank circuit arrangement, and

wherein the scanning tank circuit arrangement comprises a transmit parallel tank circuit for scanning the communication medium in one of a sequential manner, a random manner and predetermined manner.

15. A method for unidirectional communication from a transmitter module to a receiver module, the transmitter module comprising a source processing portion and a carrier detection portion coupled to the source processing portion, the method comprising:

determining an appropriate carrier based on detection signals communicated from the carrier detection portion, the detection signals being based on at least one preliminary identified signal which is based on an identification by the carrier detection portion corresponding to one of presence and absence of communication of at least one communication signal, within a communication medium, having a frequency component corresponding to one of at least one predetermined frequency component;

receiving and processing an information signal to produce a processed information signal in a manner such that the appropriate carrier signal is modulated with the information signal, the information signal being further processed in a manner such that the processed information signal is associable with at least one of a unique code and an indication signal, the indication signal being associable with absence of communication of the at least one communication signal in the communication medium;

transmitting a source signal, the processed information signal being further processed to produce the source signal, the source signal being associable with at least one of the unique code and the indication signal,

wherein the source signal is communicable to the receiver module via the communication medium.

16. The communication method as in claim 15 wherein the source signal is communicable as a communication signal corresponding to the appropriate carrier, and

wherein the communication method further comprises detecting and receiving the communication signal corresponding to the appropriate carrier, and communicating a receipt signal based on the received communication signal.

17. The communication method as in claim 16 further comprising processing the receipt signal in a manner so as to one of positively and negatively identify the source signal, positive and negative identification of the source signal being based on based on at least one of the unique code and the indication signal.

18. The communication method as in claim 17 wherein when the source signal is positively identified, the receipt signals is processed to produce an output signal.

19. The communication method as in claim 17 wherein when the source signal is negatively identified, the receipt signal is identified as a spurious signal.

20. The communication method as in claim 19 wherein when the receipt signal is identified as a spurious signal, processing of the receipt signal to produce an output signal is impeded.

Claims

1. A transmitter module for unidirectional communication with a receiver module, the transmitter module comprising:

a carrier detection portion configured to

(i) identify communication of a plurality of communication signals within a communication medium,

(ii) determine signal strengths of the plurality of communication signals and defining each determined signal strength as one of substantial and negligible,

(iii) identify frequency components of the communication signals having corresponding signal strengths defined as negligible as respective predetermined frequency components, at least one preliminary identified signal being produced based on the predetermined frequency components, and detection signals being communicable from the carrier detection portion based on the at least one preliminary identified signal;

a source processing portion coupled to the carrier detection portion, the source processing portion configured to modulate an appropriate carrier signal with an information signal to produce a processed information signal, the appropriate carrier signal being based on the detection signals communicated from the carrier detection portion and the processed information signal is associable with at least one of a unique code and an indication signal, the indication signal being associable with absence of communication of the at least one communication signal in the communication medium; and

a source transmission portion coupled to the source processing portion, the source transmission portion is configured to receive and process the processed information signal to produce a source signal, the source signal being associable with at least one of the unique code and the indication signal,

wherein the source signal is communicable from the source transmission portion to the receiver module via the communication medium.

2. The transmitter module as in claim 1 wherein the source signal is communicable, from the transmitter module, as a communication signal corresponding to the appropriate carrier, and

wherein the receiver module is configurable to detect and receive the communication signal corresponding to the appropriate carrier and identify the source signal based on at least one of the unique code and the indication signal.

3. The transmitter module as in claim 1 wherein the carrier detection portion comprises a scanning tank circuit arrangement for scanning the communication medium to identify the plurality of communication signals therewithin.

4. The transmitter module as in claim 3 wherein the scanning tank circuit arrangement comprises:

a transmit parallel tank circuit for scanning the communication medium to identify presence or absence of the communication of the plurality of communications signals and communicate the at least one preliminary identified signal, each of the at least one preliminary identified signal having a frequency component and an amplitude component associable, respectively, with the at least one predetermined frequency component and signal strength of the preliminary identified signal;

a frequency detector coupled to the transmit parallel tank circuit in a manner for receiving the at least one preliminary identified signal, the frequency detector for communicating one of a positive frequency detection signal, a null frequency detection signal and a negative frequency detection signal, based on frequency component of the at least one preliminary identified signal; and

an amplitude detector coupled to the transmit parallel tank circuit for receiving the at least one preliminary identified signal, the amplitude detector for communicating one of a positive strength detection signal and a negative strength detection signal, based on amplitude component of the at least one preliminary identified signal.

5. The transmitter module as in claim 4 wherein when presence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the frequency detector is configurable to make a confirmation of the frequency component of the at least one preliminary identified signal based on a frequency match based confirmation such that when the frequency component of the at least one preliminary identified signal substantially matches any one of the at least one predetermined frequency component, a positive frequency detection signal is communicated and a null frequency detection signal is communicated otherwise.

6. The transmitter module as in claim 4 wherein when absence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the frequency detector is configurable to communicate a negative frequency detection signal.

7. The transmitter module as in claim 4 wherein when presence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the amplitude detector is configurable to detect the amplitude component of the at least one preliminary identified signal and determine signal strength thereof based on an amplitude threshold based determination to which a predetermined amplitude threshold is associable, signal strength of the at least one preliminary identified signal being considered one of substantial and negligible when the amplitude component of the at least one preliminary identified signal is, respectively, one of above and below the predetermined amplitude threshold.

8. The transmitter module as in claim 7 wherein when signal strength of the at least one preliminary identified signal is considered substantial, the amplitude detector communicates the positive strength detection signal.

9. The transmitter module as in claim 7 wherein when signal strength of the at least one preliminary identified signal is considered negligible, the amplitude detector communicates the negative strength detection signal.

10. The transmitter module as in claim 7 wherein when absence of communication of at least one communication signal is identified by the transmit parallel tank circuit, the amplitude detector is configurable to communicate a negative strength detection signal.

11. The transmitter module as in claim 4, the appropriate carrier signal being based on the detection signals in a manner such that the detection signals are based on one of a negative frequency detection signal, a negative strength detection signal, a negative frequency detection signal in combination with a negative strength detection signal and a positive frequency detection signal in combination with a negative strength detection signal.

12. The transmitter module as in claim 3, wherein a control signal is communicable from the source processing portion to the scanning tank circuit arrangement, and wherein the scanning tank circuit arrangement comprises a transmit parallel tank circuit for scanning the communication medium in a manner so as to make the identification of one of presence and absence of communication of at least one communication signal having a frequency component corresponding to any one of a plurality of predetermined frequency components.

13. The transmitter module as in claim 12 wherein the transmit parallel tank circuit is controllable by the control signal in a manner such that number of the predetermined frequency components corresponding to the plurality of predetermined frequency components is variable.

14. The transmitter module as in claim 3, wherein a control signal is communicable from the source processing portion to the scanning tank circuit arrangement, and

wherein the scanning tank circuit arrangement comprises a transmit parallel tank circuit for scanning the communication medium in one of a sequential manner, a random manner and predetermined manner.

15. A method for unidirectional communication from a transmitter module to a receiver module, the transmitter module comprising a source processing portion and a carrier detection portion coupled to the source processing portion, the method comprising:

identifying, by the carrier detection portion, communication of a plurality of communication signals within a communication medium;

determining signal strengths of the plurality of communication signals and defining each determined signal strength as one of substantial and negligible;

identifying frequency components of the communication signals having corresponding signals strengths defined as negligible as respective predetermined frequency components;

determining an appropriate carrier based on detection signals communicated from the carrier detection portion, the detection signals being based on at least one preliminary identified signal which is based on the predetermined frequency components;

modulating an appropriate carrier signal with an information signal to produce a processed information signal; the processed information signal is associable with at least one of a unique code and an indication signal, the indication signal being associable with absence of communication of the at least one communication signal in the communication medium;

transmitting a source signal, the processed information signal being further processed to produce the source signal, the source signal being associable with at least one of the unique code and the indication signal,

wherein the source signal is communicable to the receiver module via the communication medium.

16. The communication method as in claim 15 wherein the source signal is communicable as a communication signal corresponding to the appropriate carrier, and wherein the communication method further comprises detecting and receiving the communication signal corresponding to the appropriate carrier, and communicating a receipt signal based on the received communication signal.

17. The communication method as in claim 16 further comprising processing the receipt signal in a manner so as to one of positively and negatively identify the source signal, positive and negative identification of the source signal being based on at least one of the unique code and the indication signal.

18. The communication method as in claim 17 wherein when the source signal is positively identified, the receipt signals is processed to produce an output signal.

19. The communication method as in claim 17 wherein when the source signal is negatively identified, the receipt signal is identified as a spurious signal.

20. The communication method as in claim 19 wherein when the receipt signal is identified as a spurious signal, processing of the receipt signal to produce an output signal is impeded.