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DECLARATION

Frequency Hopping Pattern Derivation

The RMP60 derives its hopping pattern from its own unique header. Each RMP60 is assigned a unique 32-bit ID at the time of manufacture which is used during all radio communications. This ID is also used to derive two different hopping patterns.

Hopping Pattern One (used with an RMI Interface)

Next Channel Number = (Current Channel Number + (Unique ID Bits 14:8) + 7) MOD 79

This provides a potential of 64 different hopping patterns.

Hopping Pattern Two (used with an RMI-Q Interface)

A hopping pattern derivation is used that ensures all RMP60 probes operate with a unique hopping pattern. This is achieved by dividing the 79 available channels into 3 distinct groups, and then using each bit of the unique header to swap individual hops within the groups. This is repeated in excess of 250 times. This method ensures that each unique header that is used has a corresponding unique hopping sequence (within the population).

Signed by

John Styles

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Principal Design Engineer

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