

ARadTek 77G Radar  
Master and Slave Protocol  
-with VBox

# 1. Master

Mode:

	Argument (8 bytes)	Description
Mode style	<b>1. Header</b> (byte [0])	0x07
	<b>2. Length-low</b> (byte [1])	Length of package = (byte [2] << 8) + byte [1]
	<b>3. Length-high</b> (byte [2])	
	<b>4. space</b> (byte [3])	none
	<b>5. space</b> (byte [4])	none
	<b>6. space</b> (byte [5])	none
	<b>7. space</b> (byte [6])	None
	<b>8. space</b> (byte [7])	none
	<b>9. Header</b> (byte [8])	0x42
	<b>10. Reserved</b> (byte [9])	0x00
	<b>11. Reserved</b> (byte [10])	0x00
	<b>12. Radar operation mode</b> (byte [11])	BSD/ LCA/ RCW : byte[11] = 0x01 BKA/ RCTA : byte[11] = 0x02 DOW : byte[11] = 0x03
	<b>13. Reserved</b> (byte [12])	0x80
	<b>14. space</b> (byte [13])	none
	<b>15. space</b> (byte [14])	none

	<b>16. Check Sum</b> (byte [15])	Check Sum = byte[8]+ byte[1]+...+ byte[14]
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Speed:

	Argument (8 bytes)	Description
Speed style	<b>1. Header</b> (byte [0])	0x07
	<b>2. Length-low</b> (byte [1])	Length of package = (byte [2] << 8) + byte [1]
	<b>3. Length-high</b> (byte [2])	
	<b>4. space</b> (byte [3])	none
	<b>5. space</b> (byte [4])	none
	<b>6. space</b> (byte [5])	none
	<b>7. space</b> (byte [6])	None
	<b>8. space</b> (byte [7])	none
	<b>9. Header</b> (byte [8])	0x41
	<b>10. Speed</b> (byte [9])	0x00
	<b>11. Gyro</b> (byte [10])	Gyro = (byte [11] << 8) + byte [10]
	<b>12. Gyro</b> (byte [11])	
	<b>13. Steering angle</b> (byte [12])	Steering angle = (byte [13] << 8) + byte [12]
	<b>14. Steering angle</b> (byte [13])	
	<b>15. space</b> (byte [14])	None
	<b>16. Check Sum</b> (byte [15])	Check Sum = byte[8]+ byte[1]+...+ byte[15]

## 2. Slave

	Argument (8 bytes)	Description
Time style	<b>1. Header</b> (byte [0])	0x06
	<b>2. Length-low</b> (byte [1])	Length of package = (byte [2] << 8) + byte [1]
	<b>3. Length-high</b> (byte [2])	
	<b>4. Slave-Radar-Mode</b> (byte [3])	BSD/ LCA/ RCW : byte[3] = 0x01 BKA/ RCTA : byte[3] = 0x02 DOW : byte[3] = 0x03
	<b>5. Slave-Speed-Mode</b> (byte [4])	Slow Boolean: byte[4] = 0x01 Medium Boolean: byte[4] = 0x02 Fast Boolean: byte[4] = 0x03
	<b>6. RCTA_ALARM_BOOL_Tx</b> (byte [5])	ALARM_BOOL
	<b>7. Passenger side LED</b> (byte [6])	Slave_LED
	<b>8. Slave-RCW 警示區段號碼</b> (byte [7])	Slave_RCW_Status
	<b>9. Slave-BKA 警示區塊號碼</b> (byte [8])	Slave_BKA_Status
	<b>10. space</b> (byte [9]) ~ <b>space</b> (byte [62])	none
	<b>11. Check Sum</b> (byte [63])	Check Sum = byte[0]+ byte[1]+...+ byte[62]

### 3. CAN Protocol

- Nominal Bit Rate: 1M bps
- Data Bit Rate: 1M bps
- Extended Message ID:
  - 0xD0 (Slave → Master)
  - 0xC2 (Master → Slave)