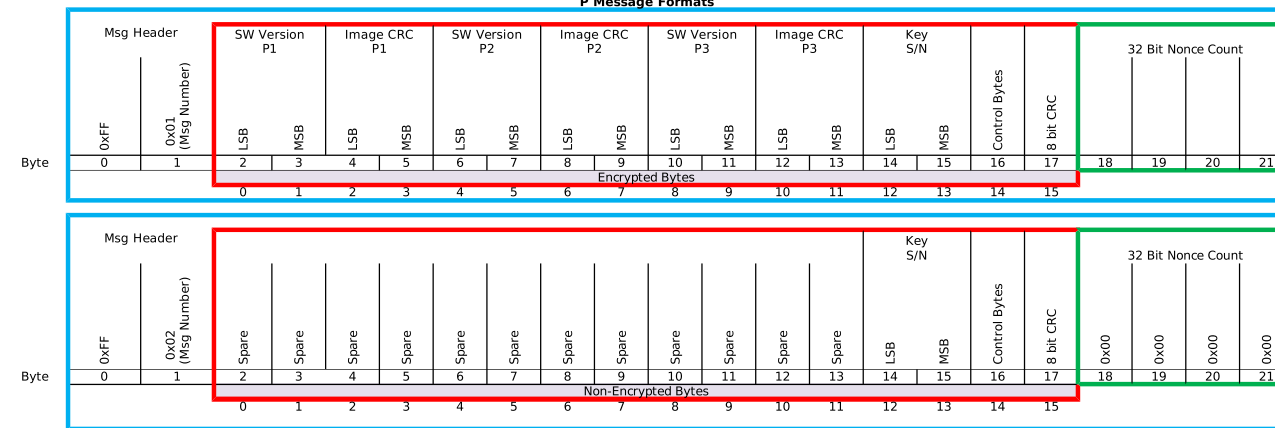


SECRET//NOFORN

P Message Formats



If Nonce count is zero - No encryption. The only thing that is transmitted is the Key S/N.



SECRET//NOFORN

SECRET//NOFORN

Ctrl	Command / Status	Msg Slave P4
0x00	Do Nothing (Return version and CRC)	X
0x01	Request MSS Ver No	X
0x02	Request MP Ver No	X
0x03	Request TSS Ver No	X
0x04	Set MP to Prog Mode	X
0x05	Set MP to program State	X
0x06	Set Beacon to program State	X
0x07	Stop Programming states (Both MP and Beacon)	X
0x08	Set to Factory Test Mode	X
0x09	Set to Storage Mode	X
0x0A	Set to Tactical Mode	X
0x0B	Turn Batteries On	X
0x0C	Turn Batteries Off	X
0x0D		
0x0E		
0x0F		
0x00	*Return Key Number Only (Unencrypted Msg)	

Encrypted Data/Mess

* This message would be return if an unencrypted message is re
States

0b00XX	MP is Set to Factory Test
0b01XX	MP is Set to Storage Mode
0b10XX	MP is Set to Tactical Mode
0b11XX	ERASED!
0bXXX1	Batteries are turned on
0bXX1X	MP is in programming Mode

1)

If powered up and an erase bit is set in the flash, I will try to go tactical. If the unit is really erased, it will no operate. If the software got to an invalid erase bit, the system will try to recover.

SECRET//NOFORN

Ctrl	Command / Status	MP
0x00	Do Nothing (Return version and CRC)	X
0x01	Set Audio Relay	X
0x02	AT or Low Battery Detect	X
0x03	BCU Inserted	
0x04	BCU Removed	
0x05	Missile Missing	
0x06	Set MP to Prog Mode	
0x07	Set MP to program State	
0x08	Set Beacon to program State	
0x09	Stop Programming states (Both MP and Beacon)	
0x0A	Set to Factory Test Mode	
0x0B	Set to Storage Mode	
0x0C	Set to Tactical Mode	
0x0D	Turn Batteries On	
0x0E	Turn Batteries Off	
0x0F	Missile Detected	
0x00	*Return Key Number Only (Unencrypted Msg)	

Encrypted Data

* This message would be return if an unencrypted message is re
States

0b00XX	MP is Set to Factory Test
0b01XX	MP is Set to Factory Storage Mode
0b10XX	MP is Set to Tactical Mode
0bXXX1	Batteries are turned on
0bXX1X	MP is in programming Mode

SECRET//NOFORN

	Address	P_Status
Read	0x00	*

	Address	Key Number	
		MSB Key Number	LSB Key Number
Read	0x01	0	1

	Address	MSB Ver Number	P1 SW Version LSB Ver Number
Read	0x02	0	1

	Address	MSB Ver Number	P2 SW Version LSB Ver Number
Read	0x03	0	1

	Address	MSB Ver Number	P3 SW Version LSB Ver Number
Read	0x04	0	1

	Address	MSB Ver Number	P4 SW Version LSB Ver Number
Read	0x04	0	1

	Address		
Write	0x80	0	1

	Address	P_Command
Write	0x81	*

SPI Registers for and Protego P4 to P5

and Image CRC

MSB CRC of Image	LSB CRC of Image
2	3

and Image CRC

MSB CRC of Image	LSB CRC of Image
2	3

and Image CRC

MSB CRC of Image	LSB CRC of Image
2	3

and Image CRC

MSB CRC of Image	LSB CRC of Image
2	3

Key

2	...	15
---	-----	----

SPI Interface	
Address	Master Writes
0x80	SPI_ADDR_KEY
0x81	SPI_ADDR_COMMAND

Address	Master Reads
0x00	SPI_ADDR_STATUS
0x01	SPI_ADDR_KEY_NUM
0x02	SPI_ADDR_P1_SW_VER
0x03	SPI_ADDR_P2_SW_VER
0x04	SPI_ADDR_P3_SW_VER
0x05	SPI_ADDR_P4_SW_VER

Byte	P_Commands
0x00	IDLE
0x01	SET_KEY_NUM
0x02	SPI_SET_KEY
0x03	SET_TO_PROG_TSS
0x04	SET_TO_PROG_MP
0x05	SET_TO_PROG_BEACON
0x06	SET_TO_STOP_PROG
0x07	SET_TO_FACTORY_STATE
0x08	SET_TO_STORAGE_STATE
0x09	SET_TO_TACTICAL_STATE
0x0A	SET_BATTERIES_OFF
0x0B	SET_BATTERIES_ON
0x0C	REQUEST_P1_VER_NO
0x0D	REQUEST_P2_VER_NO
0x0E	REQUEST_P2_VER_NO

Byte	P_Status
0b00XX	MP_SET_TO_FACTORY_TEST
0b01XX	MP_SET_TO_STORAGE_STATE
0b10XX	MP_SET_TO_TACTICAL_STATE
0bXXX1	BATTERIES_ON
0bXXX0	BATTERIES_OFF
0bXX1X	MP_IN_PROG_MODE
0bXX0X	MP_NOT_PROG_MODE

SECRET//NOFORN

LEDs on Suite Case									
LED	1	2	3	4	5	6	7	8	
MP	Green	Tactical	Batteries On	Batt Ok	No AT Event	In Fence	GPS Validity Good	Mission Time Good	Operational
	Off	Storage					Unknown		Sleep
	Red	Factory	Batteries Off	Batt Low	At Event	Out of Fence	GPS Validity Bad	EOM	Erased*
These three LEDs reflect what the MP is seeing at it's inputs									
TSS	Green	Tactical	BCU Detected		Missile Present		Prog MP	Prog Box Connected	Operational
	Off	Storage	No BCU	Audio Relay Off	No M Check				Sleep
	Red	Factory		Audio Relay On	Missile Missing		Prog Beacon		Erased*
MSS	Green	Powered On							Erased*
	Off	Powered Off	Audio Relay Off						
	Red		Audio Relay On						