

Tag Commands Summary

!	Attention all devices. Global call to all devices, including tags respond
T&	Public transmitter call, all tags respond to this call
T#&	Addresses a specific tag privately where # is the tags specific numeric ID.
e	The device stores current parameters on EEPROM
p#	RF transmission power, used to control the range bubble (default 2, range 0 through 3)
r#:	Select RF input channel range (1 to 127). (default 2)
t#:	Select RF output channel range (1 to 127) (default 2)
[Everything between the first opening “[“ and the last “]” closing bracket is RF broadcasted
m#	Mode # is a decimal value setting and clearing the mode bits
<>	Received data between the first and the last bracket is placed on the serial wire I/O
d#	Downtime # is a decimal value controlling the sleep duration
h	Deep sleep, the device essentially shuts off (sync strobing will wake the device in 24-64s)
i#	Period of the monotone ultrasonic burst (default 49 corresponds to 40khz)
n#	Number of periods or length of the burst (default 30 periods)
f#:	Sample rates f1=4 s/s, f2=8s/s and f4=16s/s

The mode control byte is bit manipulated. The user must set the bits of the control byte high or low to control the features or operational mode of the hx19tx. Following is a description of what the bits do.

Mode bits:

Bit.0 Set:	The LED is on during the activity cycle
Bit.1 Set:	USID or ultrasonic ID is emitted during the activity cycle
Bit.2 Set:	RFID or radio frequency ID is emitted during the activity cycle
Bit.3 Set:	Ultrasonic monotone enabled
Bit.4 xxx:	Reserved do not set.
Bit.5 Set:	Enable Direct Network Access
Bit.6 Set:	Disable serial com pin

Mode bits: Binary fundamentals

To set both bit 0 and 1 compute (1+2) enter m3.

To set bit 0, 1 and 6 compute (1+2+64) and enter m67.

To set bit 0 and 2 compute (1+4) and enter m5.

To set the polling bit 7, bit 0 and 2 compute (128+1+4) and enter m133.

Receiver Commands Summery

!	Attention all devices. Global call to all devices, receivers included
R&	Public transmitter call, all tags respond to this call
R#&	Addresses a specific receiver privately, # is the specific numeric ID.
e	The device stores current operating parameters on EEPROM
p#	Select RF transmission power, used to control the range bubble (default 2, range 0 through 3)
r#:	Select RF input channel range (1 to 127). (default 2)
t#:	Select RF output channel range (1 to 127) (default 2)
[Everything between the first opening “[“ and the last “]” closing bracket is RF broadcasted
m#	Mode # is a decimal value setting and clearing the mode bits
< >	ASCII data between the first and the last bracket is relayed to the serial I/O (RS485/RS232)
b	Receiver looks for ^# between broadcast brackets and replaces with # characters from memory
h	Deep sleep, the device essentially shuts off (sync strobing will wake the device in 24-64s)
f#:	Sample rates f1=4 s/s, f2=8s/s and f4=16s/s
q#:	Sets up a receiver result queue, receiver limit is 6 at 16s/s, 31 at 8s/s and 99 at 4s/s

Mode Byte

Bit.0 (1).	Set: High precision, no noise immunity. Clear: Medium precision, high noise immunity *
Bit.1 (2).	Set: RFID must precede the sonic signal
Bit.2 (4).	Set: Power Savings (battery mode)
Bit.3 (8).	Set: Disable sonic timing and USID scanning (removed)
Bit.4 (16).	Reserved: Don't set this bit)
Bit.5 (32).	Set: Eliminates reverberation errors in modes where bit 1 is cleared.
Bit.6 (64).	Set: LED Off
Bit.7 (128).	Set: Disable streaming data. And put results into a storage ring buffer for polling

Binary fundamentals

To set both bit 0 and 1 compute (1+2) enter m3

To set bit 0, 1 and 6 compute (1+2+64) and enter m67

To set bit 0 and 2 compute (1+4) and enter m5

To set the polling bit 7, bit 0 and 2 compute (128+1+4) and enter m133

* Both Bit.1 and Bit.0 must be set high for the high precision mode

** If this bit is set, be sure the tag is sending its RFID on the channel where the receiver is set to receive RF.

Monitor Synchronizer Command Summery

These following commands dictate the behavior of the hx19ms ultrasonic RF monitor-synchronizer, the # signifies a decimal numeric character that should follow the command.

Monitor Synchronizer Command Summery

!	Attention all devices. Global call to all devices, monitors included
M&	Public monitor synchronizer call, every HX19MS responds to this call
M#&	Addresses a specific a HX19MS privately, # is the specific numeric device ID.
e	The device stores current operating parameters on EEPROM
p#	Select RF transmission power, used to control the range bubble (default 2, range 0 through 3)
r#:	Select RF input channel range (1 to 127). (default 2)
t#:	Select RF output channel range (1 to 127) (default 2)
[The device broadcasts its Receive Buffers excluding first opening and closing brackets
m#	Mode # is a decimal value setting and clearing the mode bits (default 0)
< >	Received data between the first and the last bracket is placed on the serial wire I/O
\$	Enables the synchronization strobe
%	Stops the synchronization strobe
g	Get contents of round buffer (polling)
f#:	Sample rates f1=4 s/s, f2=8s/s and f4=16s/s
s#	Tag firing sequence. Select s1 and tag 1 transmits after tag 0. Sequence s9 > 0,1,2,3,4,5,6,7,8,9 *

Mode Byte

Bit.0 Set:	Silent running. No RF data dumping via wire (USB/RS232/RS485)
Bit.1 Set:	Repeater enabled. All received RF data is broadcasted as it comes.
Bit.2 Set:	Disable broadcast of incoming Wire data
Bit.3 Set:	Enable dedicated RF command mode

* The s cannot be stored permanently like p,r,t and m values. Scan mode is stopped if any character comes through the USB port. And scan mode is halted on boot or restart. If the user wishes to multiplex through multiple tags at high rate, the scan (number of tags) must be entered