Serial Protocol for MHS-5200A
(Document version 2; 9 August 2015)

Shows up as normal serial port (e.g., /dev/ttyUSBx)

Baud 57600
8/n/1
Hardware handshake

Software sends at start:
:
:r1c
:r2c
:r0c

Presumably to probe different device types. The first line is just to clear any pending command.

:r1c returns :r1c323 (firmware 3.23)
:r2c returns :r2c015 (last digits of P/N?)
:r0c returns :r0c52A (model #? 5200A?)

If you get an echo of <CRLF>### that is some kind of error

Command	Description	Returns	Notes
:r0c	Read model #	:r0c52A	Start up
:r1c	Read Prod#	:r1c323	Start up
:r2c	Read FW (3.23)	:r2c015	Start up
:sXf	Write frequency for channel X	ok	
:rXf	Read frequency for channel X	:rXfNNNNNNNN	
:sXwN	Select wave type N for channel X	ok	N: 0=sine, 1=square, 2=tri,3=up,4=dn, 100=arb0...115=arb15 (will also accept 32-47)
:rXw	Read wave type	:rXwNN	NN=00-04 as above but returns 32-47 for

			arb0...15
:sXd	Write Duty cycle for chan X	ok	
:rXd	Read Duty cycle for chan X	:rXdNNN	
:sXo	Write offset for chan X	ok	Note: 0%=120
:rXo	Read offset for chan X	:rXoNNN	Note 0%=120
:sXp	Write phase for chan X	ok	
:rXp	Read phase for chan X	:rXpNNN	
:sXy	Set atten for chan X	ok	1=0db 0=-20db
:rXy	Read atten for chan X	:rXyN	
:sXa	Set amplitude for chan X	ok	
:rXa	Read amplitude for chan X	:rXaNNNN	
:sXb	Set chan X on or off	ok	1=on, 0=off
:rXb	Read chan X on or off	:rXbN	
:s3b	Set trace on or off	ok	1=on 0=off
:r3b	Read trace on or off status	:r3b	
:s4b	Select ext in or ttl	ok	0=ext 1=ttl
:r4b	Read ext in or ttl	:r4bN	
:r0e	Read freq/count value	:r0eXXXXXXX	Depends on selected reading type
:sNg	Set gate value	ok	N=0 (1s),1 (10s), 2 (.01s) ,3 (.1s)
:r1g	Read gate value	:rNg	See above
:s3f	Set Sweep Start	ok	
:r3f	Read Sweep Start	:r3fNNNNNNNNN	
:s4f	Set Sweep End	ok	
:r4f	Read Sweep End	:r4fNNNNNNNN	

		NN	
:s5tN	Set Sweep Time	ok	Reported by Kintekobo; N is sweep time
:s7bN	Set Line/log	ok	N=1 for lin, 0 for log
:r7b	Read line/log	:r7bN	
:s8bN	Start Stop sweep	ok	N=0 for stop, 1 for start
:r8b	Read sweep state	:rb8N	
:aNX	Set arb data for N	ok	1024 samples in 16 slices, 64 samples per slice. N=0...F for each slice. Each sample is 0 to 255 with 125 as the nominal center
:s9b	Turn on/off power amp	ok	If equipped; 0=off, 1=on
:r9b	Read amp status	:r9bN	
:r1m	Read counter/frequency mode	:rNm	N=Mode (see below)
:s1m	Set mode to counter	ok	
:s0m	Set mode to freq	ok	
:s2m	Set mode to + pulse width	ok	
:s3m	Set mode to - pulse width	ok	
:s4m	Set mode to period	ok	
:s5m	Set mode duty cycle	ok	
:s6bN	Run	ok	N=0 for stop, 1 for run -- only affects counter mode
:r6b	Read run state	:r6bN	
:s5b1	Reset counter	ok	

:r5b	Read reset status	:r5bN	

Still unknown:

Reading back arbitrary storage (if even possible)
Setting or loading stored setups
Thanks to Kinetekobo for the sweep command.