

## Mac808/Musicall: Insight commands:

"ver" Show the current level of verbosity  
verboseLevel now 0 (firmware v2.34k) Size of Settings 3788

"ver <level>" Set a new level (0..3) of verbosity

Some modules have their own verbose level,  
which can be controlled individually:

"verf [<level>]" FTP module  
"verw [<level>]" WEB module  
"verc [<level>]" Wall Panel ("WC") module  
"veru [<level>]" Micro IP uIP module (TCP/IP general)  
"vert [<level>]" TCP module  
"vers [<level>]" SD-card access  
"vera [<level>]" Caching for SD-card  
"vern [<level>]" FAN logging about temperature and FAN speed  
E.g if you want to study the wall panel connections, issue:  
"verc 1"

"verA" Show all verbose commands and levels

```
ver      : 0
verf FTP : 0
verw WEB : 0
verc WC  : 0
veru UIP : 0
vert TCP : 0
vers SD  : 0
vera CACHE: 0
vern FAN : 0
```

"seek <SEEKTH> <SKSNR> <SKCNT>"

SEEKTH: Threshold for signal strength (0..255)  
SKSNR: Seek signal-to-noise ration threshold (0..15)  
SKCNT: Seek FM impulse detection threshold (0..15)  
Seek props: Seekth 25 S/N ratio 0 Pulses 0

"list" Show the process table  
"listc" Show the process table and clear counter

```
Run 1 Susp 0 IntEna 1
  Pr Stat  CPU time  %      SwCnt Stck (PC and LR)
Task[0] 0 Resp    526 ms (40 %)    389   93 (8001D458 TCB 79C8) Cr0 'IDLE'
Task[1] 4 Resp     17 ms ( 1 %)     77  586 (0000000A TCB 7C58) Cr0 'mainTask'
```

```

Task[2] 0 Resp      7 ms ( 0 %)      74  220 (8001DA16 TCB 8F48) Cr1 'uIP'
Task[3] 1 Resp      1 ms ( 0 %)       7  169 (8001DE24 TCB 95E8) Cr1 'logbufTask'
Task[4] 2 rEsp      0 ms ( 0 %)       0  132 (8001DE24 TCB 9A78) Cr1 'tunerTask'
Task[5] 6 rEsp     13 ms ( 1 %)     135  151 (8001DE24 TCB A778) Cr1 'diskTask'
Task[6] 6 rEsp    729 ms (56 %)     290  193 (8001DE24 TCB B0D0) Cr1 'mp3Task'

RESP: [R]eady, [E]vent, [S]uspended, [P]endReady

```

"listuip"

**List micro IP: list all sockets and connections to LAN/internet**

```

List of UIP connections
uip_tcp_conn 0: idle port 80    => 192.168.2.3:4032  CLOSED
uip_tcp_conn 1: idle port 80    => 192.168.2.3:4035  CLOSED
uip_tcp_conn 2: inuse port 2402 => 192.168.2.3:4034  ESTAB
...
Listen  0: port 2402  :  1 socket  1 client
...
uip_udp_conn 0: inuse port 30718 ttl 64
...
List of Socket's
CUdpSock con  1  192.168.2.110:53
...
CICmpSock con  0  192.168.2.110:3
CUdpSock con   6  192.168.2.110:123
...
Link status = 0000786D

```

"reboot"

**Reboot by restarting the application**

"reboots"

**Reboot and 'stay' in the bootloader**

"rebootn"

**Reboot 'normally', by jumping to the bootloader**

```

CAudioController::powerDown
Muted event on output 0: FC now Off
Muted event on output 2: F0 now Off
Muted event on output 4: C0 now Off
Muted event on output 6: 00 now Off
CAmplifier::sendBits: 'pcaAmpAll  ': Outputs 0xFF values 0x00
CAmplifier::sendBits: 'pcaSwitches': Outputs 0x30 values 0x10

```

We are going to 'reboot normal'

"time"

Show the current time and the timezone (tz)

Current time (1355046857.440) 17:54:17 9-12-2012 (TZ = -480 min)  
ARP: My IP 192.168.2.110 fits within 192.168.2.0/16 (abc = 0 0 32)

"clock"

Show all internal UC3 clocks and their settings

Clock Slow parent None and freq 0  
Clock Osc0 parent None and freq 12000000  
Clock Osc1 parent None and freq 11289600  
Clock Pl10 parent Osc1 and freq 67737600  
Clock Pl11 parent Osc0 and freq 96000000  
Clock CPU parent Pl10 and freq 67737600  
Clock HSB parent Pl10 and freq 67737600  
Clock PBA parent Pl10 and freq 33868800  
Clock PBB parent Pl10 and freq 67737600  
Clock GClk0 parent None and freq 0  
Clock GClk1 parent None and freq 0  
Clock GClk2 parent Pl10 and freq 11289600  
Clock GClk3 parent None and freq 0  
Clock Usb parent Pl11 and freq 48000000  
Clock Abdac parent None and freq 0  
PLL-0 runs on OSC-1: fVco = 135475200 F = 67737600 Enabled (vco range 80..180MHz)  
PLL-1 runs on OSC-0: fVco = 192000000 F = 96000000 Enabled (vco range 160..240MHz)  
USB : parent PLL-1 Freq 96000000 / 2 = 48000000 Enabled true

"lcd Hello World"

Write "Hello World" on the LCD (if available)

"tvol [ <volume> ]"

Tune volume: without parameter: show the current setting  
When 0 <= volume <= 15: set and store a new volume  
tvol 13  
Tuner gain now 13

"fan"

Show the current 'live' settings of the fan

FAN normal PWM functioning, boardtype 104  
CDigitalTemp101::work: 45.50 °C: FAN 50 %  
checkFreq: PB20: 18 pulses in 35431 uS (2400015 clks) D 49 % F = 507

"pio" Show the status of all i/o pins of the UC3  
Command is normally disabled to save code

"play" Show the status of the player  
"play <fname>" Start playing <fname>, or send it to the play list  
"play stop" Stop playing the current song, skip to next  
"play stopall" Stop playing and clear the list

"mem" Show amounts of memory available  
ram: 22272 (65 %) sdram: 12785856 (38 %)

"tmp101" Measure the current temperature  
"tmp101 <temp>" Simulation: set the temperature to e.g. 5500 (55 °C)  
to see the responses of the fan  
"tmp101 0" Switch off the simulation and start using real temperature again

"diag" Once started as a possibility for self-check, self-diagnosis  
The checks are not yet complete  
macAddressOk: AMP\_2468 reads as 0xFF  
===  
diagnosis: assuming hw release: Mac808\_D (104)  
SD-card : Ok  
PHY found : Ok  
MAC address : Ok  
PHY connected: Ok  
USB connected: Fail  
DAC i2c : Ok  
AMPS i2c : Ok  
SW i2c : Ok  
FM i2c : Ok  
FM i/o : Ok  
TMP101 : Ok  
diagnosis: 10 out of 11 items were ok  
===

"fact all" Reset all settings to the factory defaults  
"fact output" For outputs only  
"fact input" For inputs  
"fact tuner" For tuners  
"fact zone" For zones  
"fact combi" For Room Combining  
"fact gpio" For GPIO settings

"weball"	Show a long list of all possible html commands, along with their results See below for a complete list
"webstats"	Show the statistics of web/html commands which have been used
"webstatsa"	Show the statistics of all web/html commands, also the command which have not yet been used
"webstatisc"	Clear the web statistics
"playlist"	Not really in use: show the rack's playlist with special URL's
"flashdmp"	Dump a crash report, if available
Register the firmware to the web	
"dnsq <host>"	Issue a DNS query to find a host on the internet <pre>CDnsQuery::lookup 'dateq.nl' to 208.67.222.222, 165.154.71.22 rc = 26 CDnsQuery::onDnsRecv: Found IP 82.94.217.87 Ttl 86356 dnsReply 10 byte CDnsQuery::onDnsRecv: 42 bytes Result: dateq.nl is at 82.94.217.87</pre>
"ntp"	Issue a Network Time Protocol request to get the current time You might want to issue first: "dnsq 0.europe.pool.ntp.org" <pre>CNetUpgrade::startNtp: send 48 byte Local time: 9/12/2012 21:19:34.828 TZ -8 Diff 1576 ms Delta 1215</pre>
"cfg=*&_tz=<minutes>"	Set the timezone, for NL: "cfg=*&_tz=-60"
"ping <ip>"	Ping to a given IP address continuously for 1 second <pre>ping 10 bytes to 192.168.2.102 In 1 second 863 pings</pre>

```
// -----  
// All commands with "cfg"  
// -----
```

```
// The use of the underscore to indicate "config":  
output=1&_volume=12  
output=1&volume=33  
// The first command sets the volume at start-up to 12, it's the "config value"  
// The second command sets the live volume to 33  
// For normal audio settings, setting the config value also sets the live value as a side effect
```

```
cfg=1&inputs=?           // Read-only command: read the properties of all inputs  
cfg=1&inputs=[  
  {"type":"AUX","name":"Aux-1","owner":0,"public":0,"gain":32},  
  {"type":"AUX","name":"Aux-1B","owner":0,"public":0,"gain":32},  
  {"type":"AUX","name":"Aux-2","owner":0,"public":0,"gain":32},  
  {"type":"AUX","name":"Aux-2B","owner":0,"public":0,"gain":32},  
  {"type":"AUX","name":"Aux-3","owner":0,"public":0,"gain":32},  
  {"type":"AUX","name":"Aux-3B","owner":0,"public":0,"gain":32},  
  {"type":"AUX","name":"Aux-4A","owner":-1,"public":1,"gain":32},  
  {"type":"AUX","name":"Oproep","owner":0,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-1","owner":1,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-1 (R)","owner":1,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-2","owner":3,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-2 (R)","owner":3,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-3","owner":5,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-3 (R)","owner":5,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-4","owner":7,"public":0,"gain":32},  
  {"type":"TUNER","name":"Tuner-4 (R)","owner":7,"public":0,"gain":32},  
  {"type":"MP3","name":"Streaming","owner":0,"public":0,"gain":32},  
  {"type":"MP3","name":"Stream (R)","owner":0,"public":0,"gain":32}  
]
```

```
cfg=1&outputs=?          // Read the properties of all outputs  
cfg=1&outputs=[  
  {"type":"ROOM","name":"Living"},  
  {"type":"ROOM","name":"Living"},  
  {"type":"ROOM","name":"Kitchen"},  
  {"type":"ROOM","name":"Kitchen"},  
  {"type":"ROOM","name":"Bath room"},  
  {"type":"ROOM","name":"Bath room"},  
  {"type":"ROOM","name":"Garage","headphone":1},  
  {"type":"ROOM","name":"Garage","headphone":1}  
]
```

```
cfg=1&radio=?             // Get/set general properties of tuners  
{"min_freq":8750,"max_freq":10800,"step":10}
```

```
cfg=1&stereo=?            // Get/set the both stereo masks for outputs and inputs  
{"out_stereo":15,"in_stereo":503}
```

```
cfg=1&out_stereo=15       // Get/set the stereo masks for outputs only
```

```
cfg=1&in_stereo=503       // Get/set the stereo masks for inputs only
```

```
cfg=1&preset_list=?       // Get/set the preset list for the tuners  
cfg=1&preset_list=[  
  {"name":"92.00","freq":9200,"rssi":65},  
  {"name":"98.70","freq":9870,"rssi":37},  
  {"name":"105.40","freq":10540,"rssi":35},  
  {"name":"104.60","freq":10460,"rssi":32},  
  {"name":"91.20","freq":9120,"rssi":27}  
]
```

```
cfg=1&config=?            // Read-Only : aks for general properties of this rack  
cfg=1&config=  
{"in_mono":15,"max_inputs":18,"max_outputs":8,"max_tuners":4,"first_tuner":9,"volume_ofs":0,  
 "volume_range":51,"min_ofs":-95,"min_range":51,"max_ofs":-29,"max_range":61,"page_ofs_ofs":0,  
 "page_ofs_range":51,"bass_ofs":-12,"bass_range":25,"mid_ofs":-12,"mid_range":25,"treble_ofs":-12,  
 "treble_range":25,"balance_ofs":-30,"balance_range":61,"gain_ofs":-32,"gain_range":45,  
 "max_presets":50,"max_zones":1,"max_combies":1,"max_gpio_in":1,"max_gpio_out":0,"max_pages":2,  
 "prio_index":3,"has_stream":0,"show_party":1,"show_mute":1}
```

```
cfg=1&pages=?             // Read-Only : aks for the status of the paging buses  
cfg=1&pages=[  
  {"channel":7,"selection":"0x0","IP":"0.0.0.0","port":0,"name":""},  
  {"channel":0,"selection":"0x0","IP":"0.0.0.0","port":0,"name":""}
```

```

]

cfg=1&combies=?           // In the live domain: read-only, as config: read-write
cfg=1&combies=[
    {"name":"combi_01","master":1,"active":0,"multi":0,"outputs":"0xFF"}
]

cfg=1&_zones=?           // In the live domain: read-only, as config: read-write
cfg=1&_zones=[           // names and masks for all paging zones
    {"name":"zone_01","outputs":"0x0"},
    {"name":"zone_02","outputs":"0x0"},
    {"name":"zone_03","outputs":"0x0"},
    {"name":"zone_04","outputs":"0x0"},
    {"name":"zone_05","outputs":"0x0"},
    {"name":"zone_06","outputs":"0x0"},
    {"name":"zone_07","outputs":"0x0"},
    {"name":"zone_08","outputs":"0x0"},
    {"name":"Paging","outputs":"0xF"},
    {"name":"Mute mask","outputs":"0x0"},
    {"name":"zone_11","outputs":"0x0"},
    {"name":"Priority","outputs":"0xF0"},
    {"name":"zone_13","outputs":"0x0"},
    {"name":"zone_14","outputs":"0x0"},
    {"name":"zone_15","outputs":"0x0"},
    {"name":"zone_16","outputs":"0x0"}
]

cfg=1&busy=?             // Read-Only : aks which paging buses and room combies are busy
cfg=1&busy=[
    {"pages":"0x0","zones_active":"0x0","zones_busy":"0x0","combies_active":"0x0","combies_busy":"0x0",
     "page_outputs":"0x0","combi_outputs":"0x0","slave_outputs":"0x0","config":0}
]

cfg=1&wc=?               // Set/get two properties of the wall panels
    {"wc_hide_setup":0,"wc_show_rds":0}

cfg=1&lang="NL"          // Set/get the language to be used to the html pages

cfg=1&page_rel_volume=0  // Make non-zero to let paging volume become relative

cfg=1&gpio_in_f=[        // read-only in live domain, get/set properties of GPIO functions
    {"name":"","action":1,"chime":"dingdong.mp3","zone":9},
    {"name":"","action":99,"chime":"","zone":10},
    {"name":"","action":0,"chime":"","zone":11},
    {"name":"priority","action":2,"chime":"","zone":12}
]

cfg=1&has_stream=0       // Get/set: stream may be shown in the scroll lists

cfg=1&show_party=1       // Get/set: Party options is shown on the wall panel of a Combi master

cfg=1&show_mute=1        // Get/set: show the "Mute" item on the wall panels

cfg=1&priority=?         // Get/set: properties of the Priority channel
    {"name":"priority","action":2,"chime":"","zone":12}

cfg=1&_tz=-480           // Get/set: the time zone, -60 means 1 hour east of Greenwich

cfg=1&setup_list=?       // Read-only: ask for a list of available XML files in /etc/setup
cfg=1&setup_list=[
    {"name":"hein.xml"},
    {"name":"last_setup.xml"},
    {"name":"test.xml"}
]

cfg=1&_load="test.xml"    // Load settings from a given file (using default path "/etc/setup")
cfg=1&_save="december.xml" // Save settings to a given file (using default path "/etc/setup")
cfg=1&_restore=0xff       // Command to restore factory settings
                           // The number is a mask, using the following bits:
                           // INPUTS = 1
                           // OUTPUTS = 2
                           // RADIO = 4
                           // ZONES = 8
                           // COMBI = 16
                           // GPIO = 32,

```

```
// -----  
// All commands with "output"  
// -----
```

```
output=1&settings=? // Read-only command: ask for the properties of a given output  
output=1&settings=  
    {"channel":1,"vchan":1,"volume":10,"muted":0,"balance":30,"min":35,"max":36,"bass":14,  
     "mid":10,"treble":14,"amp":1,"page_chn":0,"page_ofs":10,"combi_nr":0}
```

```
output=1&chn_list=? // Get/set the scroll list for a given output  
output=1&chn_list=[  
    {"name":"Aux-1","channel":1,"freq":0},  
    {"name":"Aux-2","channel":3,"freq":0},  
    {"name":"Aux-3","channel":5,"freq":0},  
    {"name":"Streaming","channel":17,"freq":0}  
]
```

```
// Get/set commands to access all individual properties of an output:
```

```
output=1&vchan=1  
output=1&volume=10  
output=1&min=35  
output=1&balance=30  
output=1&max=36  
output=1&bass=14  
output=1&mid=10  
output=1&treble=14  
output=1&muted=0  
output=1&amp=1  
output=1&page_ofs=10  
output=1&name="Output 1"
```

```
// Write-only command, issued by config.html to make sure that the output gets the default properties
```

```
// Side-effect: wall-panels and index.html will be temporarily disabled
```

```
output=1&default=1
```

```
// Write-only: fill the scroll list of a given output with aux 1 to 4 and a radio
```

```
output=1&chn_fill=0
```

```
// -----  
// All commands with "input"  
// -----
```

```
// Get/set the properties of an input
```

```
input=1&gain=32  
input=1&name="Aux-1"  
input=1&owner=0
```

```
input=1&settings=? // Read-only command: ask for the properties of an input
```

```
input=1&settings=  
    {"owner":0,"gain":32}
```

```
// -----  
// All commands with "radio"  
// -----
```

```
radio=1&seek=1 // Seek next station (and wrap around if necessary)
```

```
radio=1&seek=-1 // Seek previous station
```

```
radio=1&gopreset=1 // Jump to the next defined preset
```

```
radio=1&gopreset=-1 // Jump to the previous defined preset
```

```
radio=1&fmchannel=8750 // Get/set a frequency on a tuner
```

```
radio=1&rssi=? // Read-only, get signal strength
```

```
radio=1&rssi=17
```

```
radio=1&rds_info=? // Read-only command
```

```
radio=1&rds_info=  
    {"freq":8750,"rds":"87.50","pi":"0x0000","rssi":17,"afcr1":0,"stereo":0,"stc":1,"ps":"0x000"}
```

```
radio=1&rds=? // Read-only command
```

```
radio=1&rds="Radio538"
```

```
radio=1&settings=0x10400000
```



```

radio=1&auto_search=4 // Start searching radio channels using tuner-4

radio=1&auto_search=? // Ask for the status of searching stations (0 means idle/ready)
radio=1&auto_search=4

// -----
// All commands with "firm"
// -----

firm=1&config=          // Read-only
    {"product":"mac808","version":"2.34k","mac":"00:60:35:16:1A:4A","ip":"192.168.2.110"}

firm=1&temp=?           // Read-only
firm=1&temp=45.50

// -----
// All commands with "zone"
// -----

zone=1&settings=        // Read-only in live domain, use "_settings=" to access config values
    {"name":"zone_01","outputs":"0x0"}

// -----
// All commands with "page"
// -----

// These commands can be sent from any paging panel or a web page
page=1&start=<busNr>
page=1&cont=<busNr>
page=1&repeat=<busNr>
page=1&stop=<busNr>

page=1&channel=7        // Assign or read which channel is assigned to a paging bus

// -----
// All commands with "chimes"
// -----

chimes=1&list=?         // Get a list of available audio files in "/websrc/audio/chimes"
chimes=1&list=[
    {"name":"dingdong.mp3"},
    {"name":"classic bell.mp3"}
]

chimes=1&remove=<fname> // Remove an audio file from "/websrc/audio/chimes"

// -----
// All commands with "setup"
// -----

setup=1&list=?          // Retrieve a list of XML files from "/etc/setup"
setup=1&list=[
    {"name":"heint.xml"},
    {"name":"last_setup.xml"},
    {"name":"test.xml"}
]

setup=1&load=<fname>     // Load settings from given file (default directory "/etc/setup")
setup=1&save=<fname>     // Save settings to given file
setup=1&remove=<fname>   // Remove an existing file from "/etc/setup"
setup=1&restore=0xff     // See description of cfg=1&_restore command

// -----
// All commands with "net"
// -----

net=1&names=?           // Get/set a list of all available racks found in a network
net=1&names=[
    {"type":"CC","ip":"192.168.2.110","mac":"00:60:35:16:1A:4A","name":"mac808_hein","firmware":"2.30","dhcp":1},
    {"type":"CC","ip":"192.168.2.102","mac":"00:60:35:0E:68:1F","name":"mac808_huis","firmware":"2.30","dhcp":1}
]

```

```

]

net=1&fill=1           // Testing only, fill the list with pseudo entries

// -----
// All commands with "monitor"
// -----

monitor=1&settings=?   // Connect output 4 to another output for monitoring
monitor=1&settings=
    {"output":3}

// -----
// All commands with "combi"
// -----

combi=1&settings=?     // Can only be changed in the config domain
combi=1&settings=
    {"name":"combi_01","master":1,"active":0,"multi":0,"outputs":"0xFF"}

combi=1&active=0       // Make a Room Combining (non-)active in live domain
combi=1&_active=0     // Make a Room Combining (non-)active in config domain (at start-up)

// -----
// All commands with "upgrade"
// -----

upgrade=1&status=?
upgrade=1&status="4 Connecting to 66.96.130.67"

// Start downloading a ZIP, unpack and install it
upgrade=1&url="http://htibosch.net/pub/dateq/mac808_v2.34k.zip"

// -----
// All commands with "gpio_in_f"
// -----

// get/set the GPIO function settings
gpio_in_f=1&settings=
    {"name":"","action":1,"chime":"dingdong.mp3","zone":9}

```