Smart Research

Electronics for the real world

England • Australia • www.smartresearch.co.uk

UP4 Operation

Software revision 05C

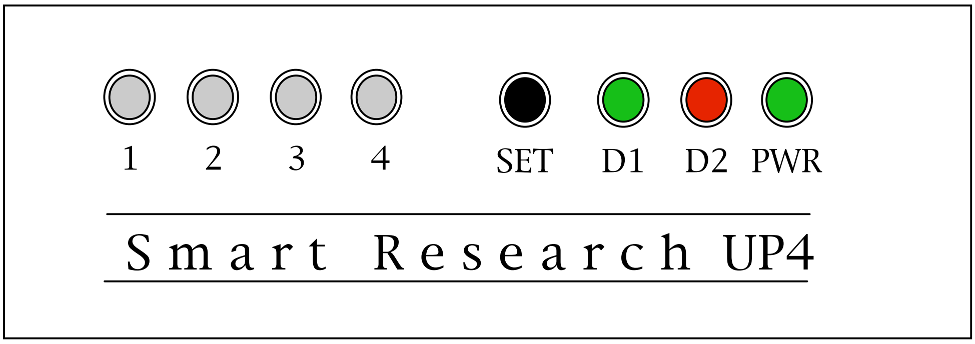
Front panel LED's and Switch

The UP4 has four bi-colour LED's for level indication; one for each audio channel. Green indicates an output level of -16dBu, and red +24dBu. Clipping does not occur untill the output exceeds +28dBu, at any gain settings, and so in practice a red indication should give adequate warning of overload.

These four LED's are also used to display the network (or IP) address of the UP4.

The switch marked SET is used to change (and display) the IP address, and also to reset the memory. Please see page two for the instuctions on how to change the address.

The last two LED's are used to display network status. D1 shows that there is a valid connection to the control software and D2 shows that a control message has been received.



Resetting the UP4 to the factory default

This is achieved by turning the unit on while pressing the SET switch with a small screwdriver, etc. The switch can be released after ten seconds. The IP address will be reset to 10.1.1.15, and the RAM memory cleared. This may be useful also in the case of clearing network errors, etc.

Network Installation, and Controllers

Currently, Fairlight's Dream Station or Smart Research's Soft Front Panel software running on a PC or Mac can be used to control the UP4. The UP4 detects the first valid controller's IP address on power up, and subsequently talks to that address. Therefore if a controllor's IP address is changed, the UP4 will need to be turned off and on to adjust to the new address.

In some circumstances, the preamplifier might be co-resident on a network with another device that may 'poll' its address, such as in the case of Fairlight's Media Server. If this is the case, messages from another source other than a valid controller addressed to the UP4 may possibly interrupt its control functions. We suggest you ensure the UP4's IP address is excluded from the range set to be 'polled' by Media Server, and take care with other similar devices you may wish to connect. Alternatively, you can move the UP4's address away from any conflicting devices.

Changing the IP address

The UP4 is factory configured, and will reset, to an IP address of: 10.1.1.15. This can be incremented from the front panel in the range of 10.1.1.15 - 10.1.1.30. Fairlight's Dream system is also configured to use this address. If another 'base' address is preferred, then Smart Research's PC or Mac Soft Front Panel program can be used to change it.

Incremental Address Change

This is achieved by pressing the set switch on the front panel. The led's will then display the current IP address for a few seconds before reverting back to level display. When the unit is set at the base, or default address of 10.1.1.15, the four LED's 1-4 will be off. Pressing the SET switch again will step the unit on to the next address in the range, for example LED 4 on. All settings are shown below.

If the switch is not pressed again the LED's will revert to level display after a few seconds..

	1	2	3	4	
10.1.1.15 (default)	○	○	○	○	(Base address)
10.1.1.16	○	○	○	●	(Base address +1)
10.1.1.17	○	○	●	○	(Base address +2)
10.1.1.18	○	○	●	●	(Base address +3)
10.1.1.19	○	●	○	○	(Base address +4)
10.1.1.20	○	●	○	●	(Base address +5)
10.1.1.21	○	●	●	○	(Base address +6)
10.1.1.22	○	●	●	●	(Base address +7)
10.1.1.23	●	○	○	○	(Base address +8)
10.1.1.24	●	○	○	●	(Base address +9)
10.1.1.25	●	○	●	○	(Base address +10)
10.1.1.26	●	○	●	●	(Base address +11)
10.1.1.27	●	●	○	○	(Base address +12)
10.1.1.28	●	●	○	●	(Base address +13)
10.1.1.29	●	●	●	○	(Base address +14)
10.1.1.30	●	●	●	●	(Base address +15)

Changing the IP address from the Soft Front Panel program

Run the Smart Research utility program on a PC or Mac connected via ethernet to the UP4, and enter 10.1.1.15 in the 'target' address box on the Soft Front Panel. Then reset the UP4 (hold the set switch for ten seconds while powering up) to ensure it is receiving on address 10.1.1.15.

For a windows PC, the Soft Front panel version is currently: 'U4_05C.exe', and for an OSX Macintosh: 'UP4X v05C'.

Once the UP4 is communicating OK (ie responding to the controls) it will follow a new IP address entered in the address box, which will also be stored in the UP4 as the new 'base' address. This new address will then be protected by it's battery back up (or untill it is reset).

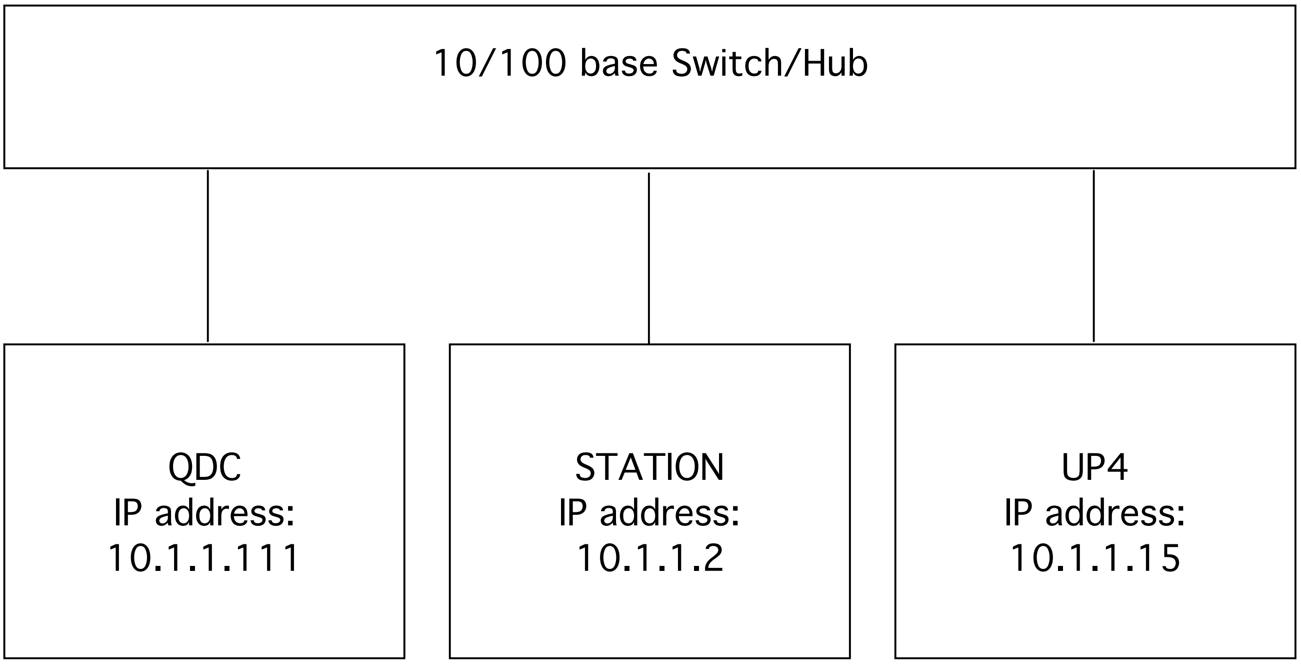
The 'increment' function will still work in the same way, allowing one of fifteen addresses above the new base address to be chosen from the UP4 front panel. And as before, a reset will always return the unit to 10.1.1.15.

Note that any new address you would like to change to must however be allowed by the subnet mask setting on your PC or Mac. Any of the four ip address fields that differ must correspond to a zero in that position in the subnet mask. I.e, to change from 10.1.1.15 to 10.1.2.20 the subnet mask must be XXX.XXX.0.0, and to change from 10.1.1.15 to 192.1.1.1 it must be 0.0.0.0.

If a change is tried that conflicts with the subnet mask, the UP4 should be reset, and communication re-established before trying again.

Changing a Controller's target address

To continue to work with another controller such as Fairlight's Dream system, the final UP4 'target' address will need to be set up in the controller to match. Please see Fairlight's documentation for altering the Dream system settings, or contact us for current information.

Example Dream network diagram