



WWO XDS Netcues via UDP

The most recent version of Westwood One XDS Pro 4Q receiver software (v3.4.12) provides for the generation of Westwood One Netcues via UDP. Netcues in UDP form can now be sent to a destination IP address and port. This function is present only on PRO4Q receivers and does not exist in the PRO4 (non-Q) model receivers.

Rather than only generating one Netcue stream representing all active programs on the receiver, the UDP Netcue feature allows you to configure so that Netcues related to *Each Individual Audio Port* can be outputted separately to separate IP addresses. Alternatively, you can point the Netcue streams from all four ports to the same address to send a combined four-port Netcue stream to one address.

The '**CUE UDP**' receiver command allows you to configure a receiver audio port with a destination IP address/port to an external device for passing both program-associated and non-program-associated Netcues to the external device via UDP datagrams. You do **not** need to map the actual Netcues to the physical relays on your WWO XDS receiver, but you can if you still require physical relay closures. When a 'CUE UDP' IP address and port is configured in your WWO XDS-PRO 4Q receiver AND the receiver fires a program associated or unassociated Netcue, those Netcues will also be sent to the UDP address/port you've configured.

It should be noted that Serial Netcues and Netcues decoding to Relay Closures will continue to function as they always have.

The following are receiver commands and options that may be used from telnet (port 2000), serial console connection, or from the receiver's local webpage '**Console**' tab, which is a new addition with the upgraded software.

The syntax is as follows:

CUE UDP [A-D] [ip:port/CLEAR]

Examples:

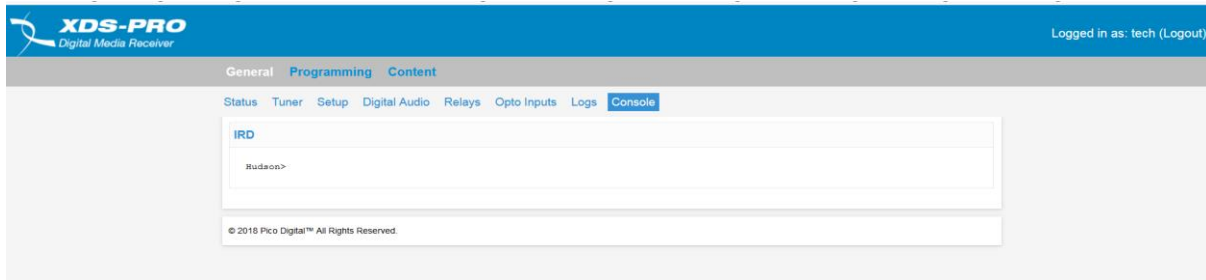
Example to configure audio port 'A' of your WWO XDS receiver to send UDP Netcues to a server with an address of 10.215.11.110 using port 4095:

CUE UDP A 10.215.11.110:4095

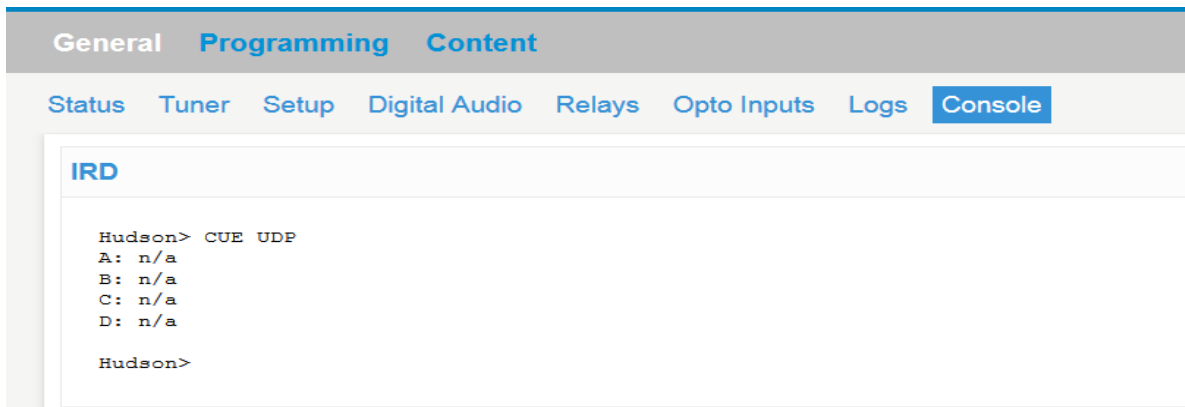
Example to clear audio port 'A' of your WWO XDS receiver to no longer send UDP Netcues to a destination address.

CUE UDP A CLEAR

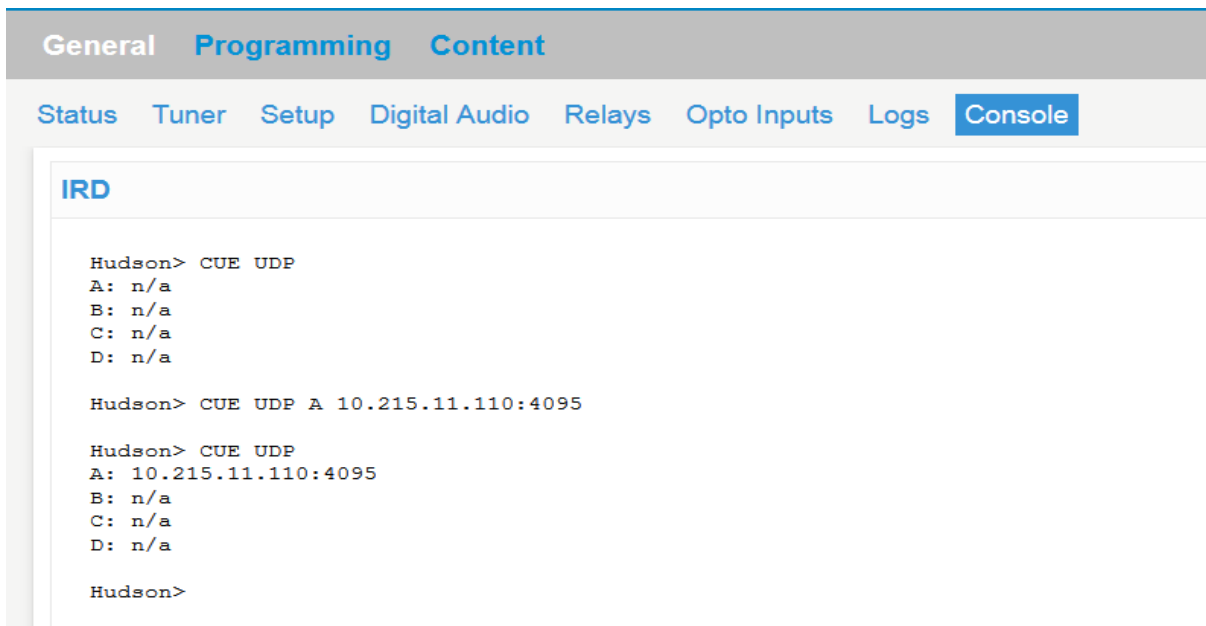
In the screenshot below, I have logged into my receiver via its local web page address, clicked on the new ‘*Console*’ tab, which brings me to my receiver prompt (*Hudson>*)



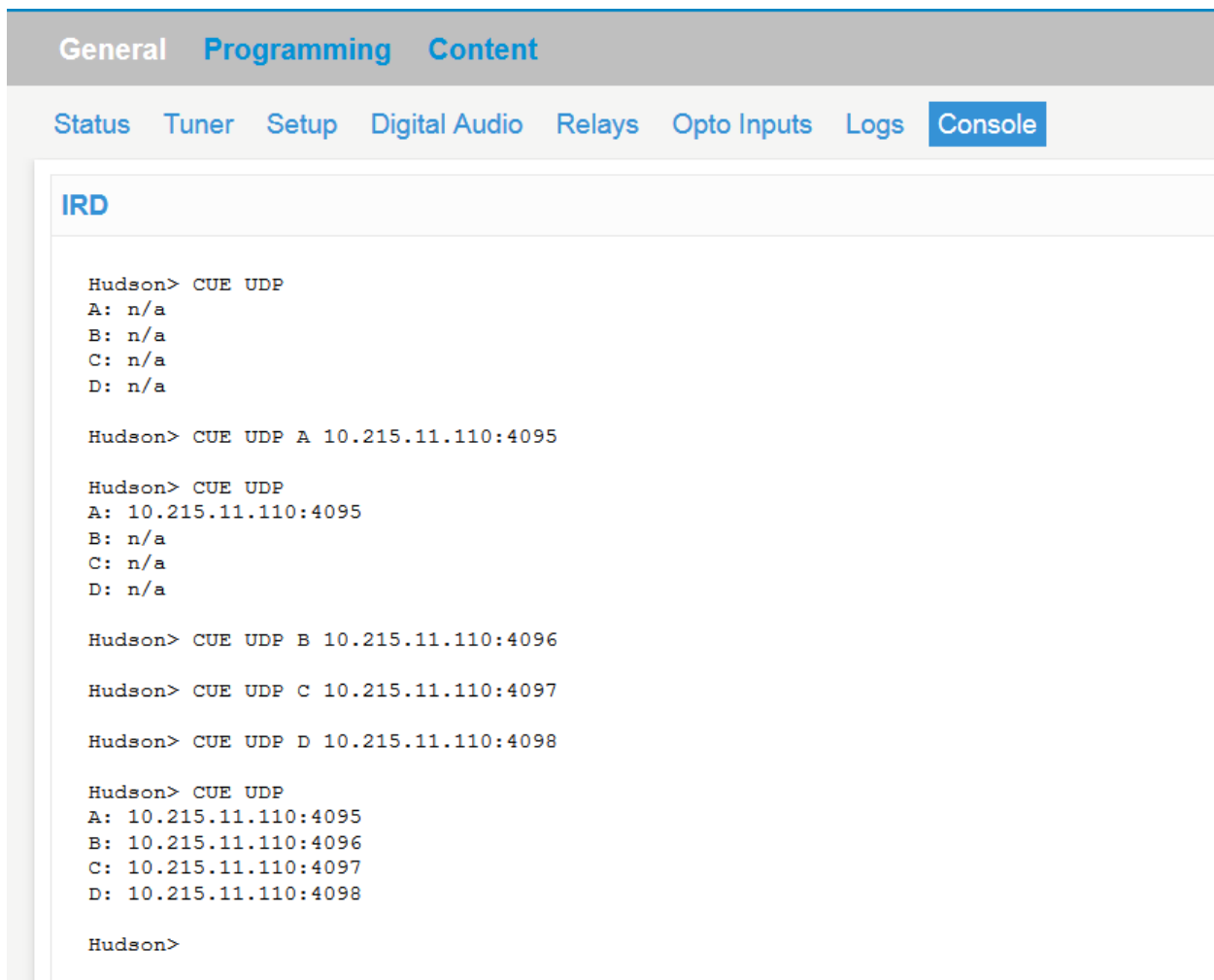
Typing ‘*CUE UDP*’ will show you the current configuration for each of your ports, which initially will be blank.



I’m now going to add an entry for Audio Port A (WVO-AC1) to send UDP Netcues to 10.215.11.110 on port 4095. I’ll then type in ‘*CUE UDP*’ to confirm my entry.



I'll now set up each audio port to send to same server, but on different (in this case ascending) IP ports. You can use the 'up arrow' to auto-fill in previous commands as needed, then make any minor edits, similar to a DOS command or router/switch console prompt.



The screenshot shows a web interface with a navigation bar at the top containing 'General', 'Programming', and 'Content'. Below this is a secondary navigation bar with 'Status', 'Tuner', 'Setup', 'Digital Audio', 'Relays', 'Opto Inputs', 'Logs', and 'Console'. The 'Console' tab is active. The main content area is titled 'IRD' and displays a terminal window with the following text:

```
Hudson> CUE UDP
A: n/a
B: n/a
C: n/a
D: n/a

Hudson> CUE UDP A 10.215.11.110:4095

Hudson> CUE UDP
A: 10.215.11.110:4095
B: n/a
C: n/a
D: n/a

Hudson> CUE UDP B 10.215.11.110:4096

Hudson> CUE UDP C 10.215.11.110:4097

Hudson> CUE UDP D 10.215.11.110:4098

Hudson> CUE UDP
A: 10.215.11.110:4095
B: 10.215.11.110:4096
C: 10.215.11.110:4097
D: 10.215.11.110:4098

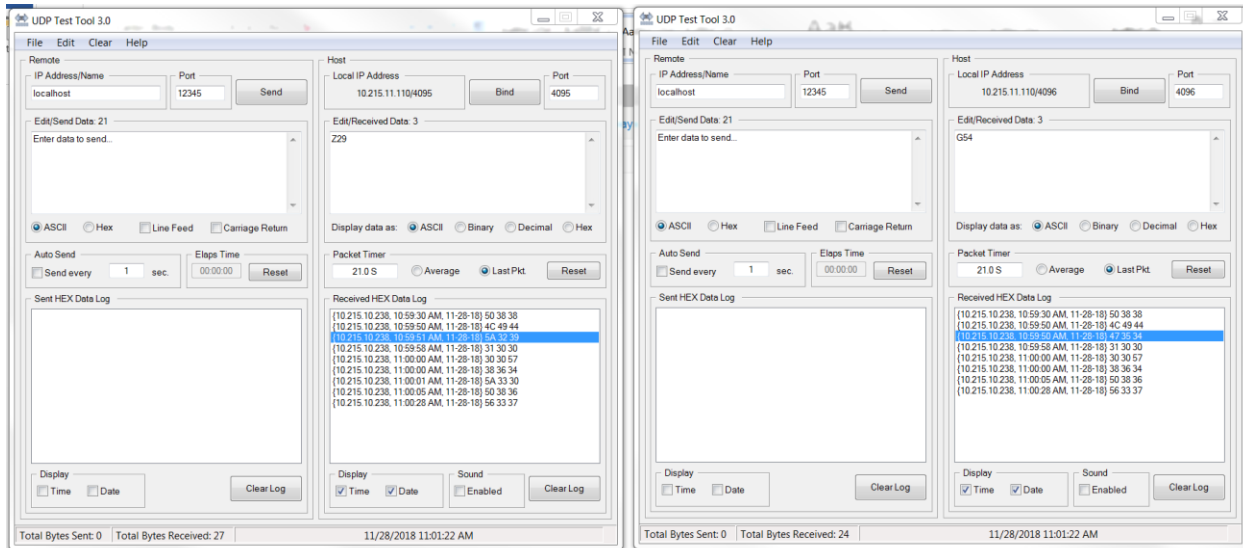
Hudson>
```

Since the XDS receiver Ethernet port has a *gateway address*, these UDP datagrams can be routed to other subnets/VLANS, if required. You'll just have to make sure as you do with other IP networks, that you have the routing policies in your router or Layer 3 switch to allow UDP traffic between the two required subnets/VLANS. In my case, my receiver is on a different VLAN than my server, but we have ACL's written in our Layer 3 switch to allow traffic between these two VLANS.

To test this function before implementation, you can use any type of UDP test application (I'm using UDP TEST TOOL 3.0) or you can use Wireshark on your destination server.

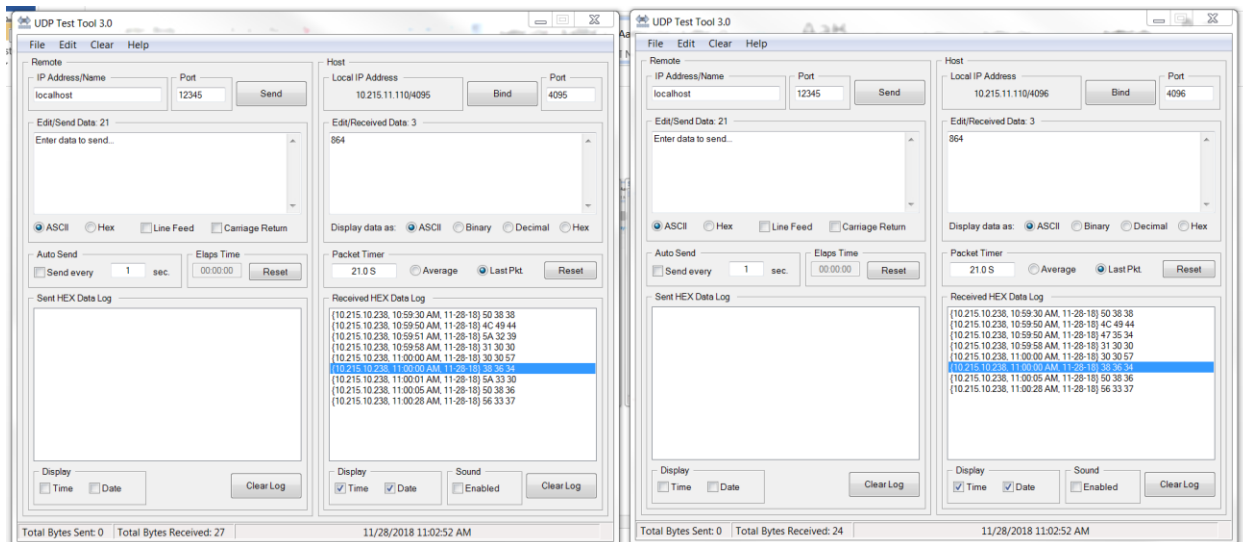
In the below screen shot I have my UDP Test Tool application on my server looking at IP Port 4095 (from XDS Receiver Port A for Good Time Oldies) and IP Port 4096 (from XDS Receiver port B for AC-WWO-1).

On IP Port 4095 for the WWO-AC format, Netcue Z29 (AC format specific Legal ID) was confirmed received. On IP Port 4096 for Good Time Oldies format, Netcue G54 (GTO format specific Legal ID) was confirmed received.



Please be aware that if you looked at raw netcues on a serial stream (which is not audioport specific), there are delimiters at the start (#) and end (@) of each netcue. So netcue N70 looks like #N70@. The CUE UDP application strips these delimiters off, so the UDP data delivered will only contain the actual three (3) character netcue.

Also, if a Netcue is unassociated to a specific program (examples would be Top of Hour time sync Netcue 864 or Generic Legal ID Netcue LID), the application will send those non-program-associated Netcues to all ports that are configured for any cues. So below you see both IP ports 4095 and 4096 received Netcue 864, which is the Top of the Hour time sync.



If you need all Netcues from a WWO XDS receiver to go to one specific server using the same IP port, you may configure each audio port with the exact same destination IP address/port. The caveat is that while you will get all program-associated Netcues from all Audio ports going to that IP address/port, you will also get multiple copies of any unassociated Netcue because each port that is configured will send that same unassociated Netcue to the destination IP address/port. So if you have all four (4) audio ports configured for the same destination IP address/port, you will get four (4) copies of each unassociated Netcue (one from each audio port that you have configured).