

**Delta Series, DPA Series**

Simple Remote Protocol Support via RS485 – Firmware Version 1.26 onwards

## Introduction

Some of you may be aware of the simple remote protocol that is implemented in 4 Series, 5 Series and 1048 processors - a basic set of commands without error checking and complex headers to enable control of day to day adjustments - input and output gains, mutes, memory recalls... This works on the RS232 and RS485 ports and is in addition to full remote protocol that AudioCore uses for full two-way control and monitoring.

The simple remote protocol (or SRP as it will be called from now on, or FNO), is one way only (so no settings can be retrieved from the connected unit/units) and allows the following settings to be changed:

- Mutes: individual inputs or outputs
- Absolute gains: individual inputs or outputs
- Memory recalls: depending on how settings are stored these can be input EQ, output EQ, sources (DPA/Delta only) or other processing combinations
- Gain increment/decrement: adjust individual gains in programmable steps, relative to the unit/units preset gain value (volatile - restored to original values on a power cycle)

There is still scope with each message to address individual units (by model) and also individual device IDs, but there are also global addresses for broadcasting to, for example, all 4 Series, or all DPA amplifiers, and to use a global ID address.

# Delta Series, DPA Series

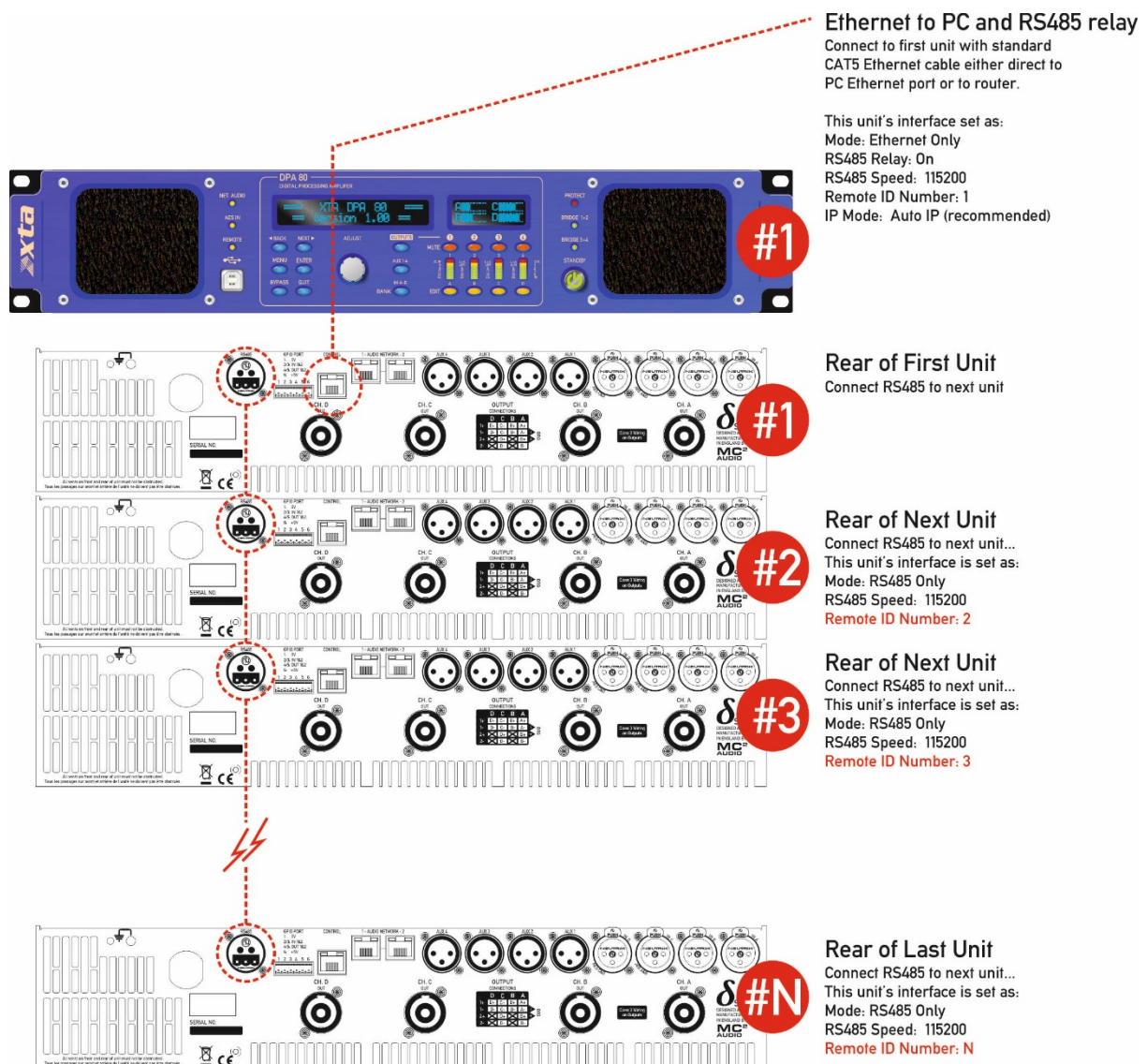
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## Firmware Support

The latest firmware release for DPA and Delta DSP amplifiers to support the SRP, is 1.26, and this release also incorporates a slight change to the Interface Sub-Menu to accommodate this. As the only option for using the SRP on these devices is via the RS485 port, this needs to be selected as the comms method of choice. However, the majority of systems will most likely not be using RS485 as the main comms method - the likelihood is either USB or Ethernet will be in use.

## “Standard” RS485 Implementation

The DPA and Delta DSP amps already have an option to enable RS485 relay mode when using USB or Ethernet as the primary comms method, but the purpose of this is to enable a single point of Ethernet connection to allow multiple amplifiers to be controlled by daisy chaining them on an RS485 “spur” like this:



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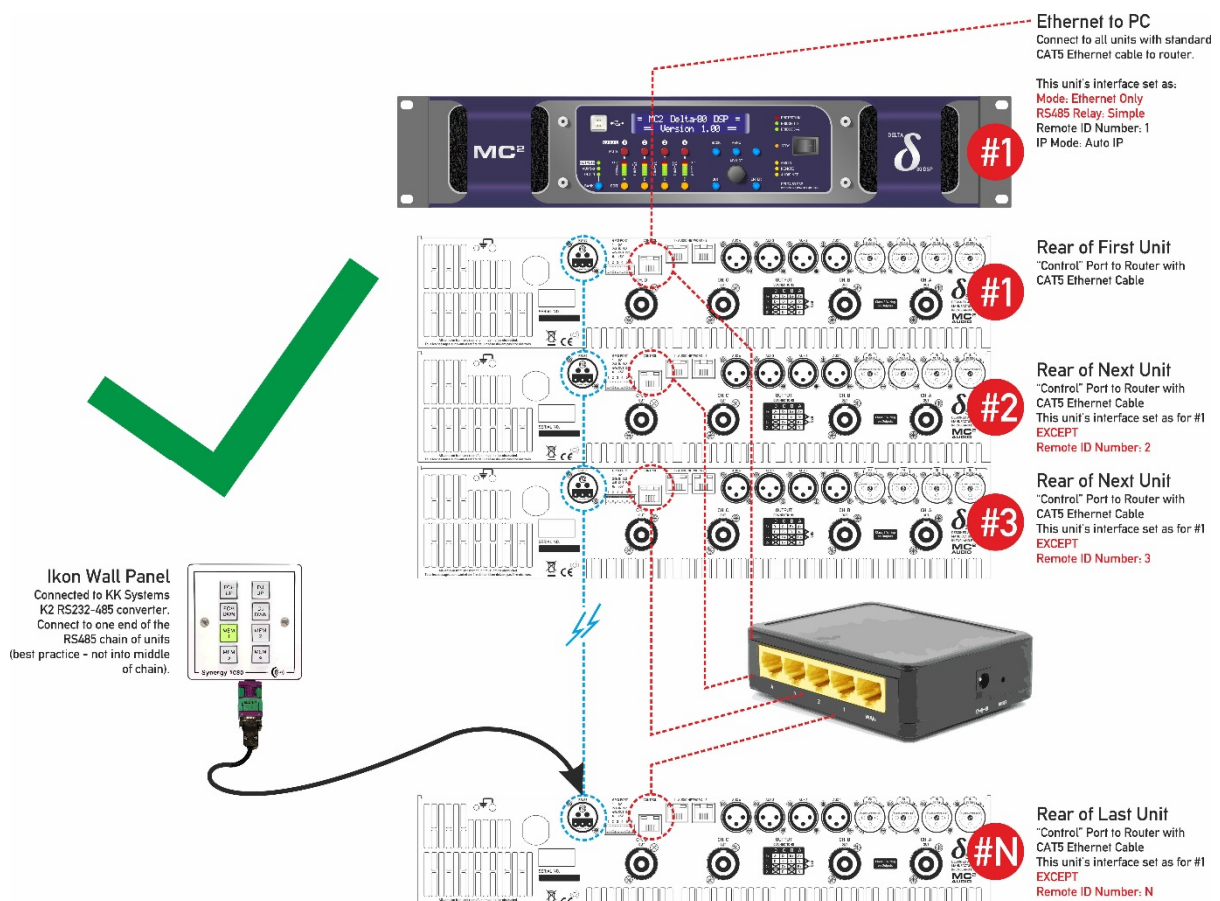
In this scenario, you might think the RS485 being active would allow any commands sent through this port to be interpreted and acted upon. Due to the complexity of "tunneling" the RS485 data from the Ethernet (or USB) connection, this mode of operation isn't possible. However, it is now possible to configure the RS485 port, even when using USB or Ethernet as the main connection, in a mode to enable asynchronous "listening" for simple remote protocol commands.

When using Ethernet, USB, or "Ethernet or USB", the RS485 Relay option offered in the configuration now has **two** settings, aside from "OFF". The "Relay" option is the same as before and should be used for scenarios as above, where one or more units are to be daisy-chained from the RS485 port of the master unit, for remote control via from AudioCore.

The new "Simple" setting enables the RS485 port to listen for SRP commands, so basic control when off-line can still be active.

### AudioCore + SRP via RS485

If all units are to be seen by AudioCore and controllable via RS485 SRP as well, then all units need a direct Ethernet connection in addition to their RS485 bus connections to the wall panel. Each unit is set to "Ethernet Only" with RS485 Relay set to "Simple" as below:

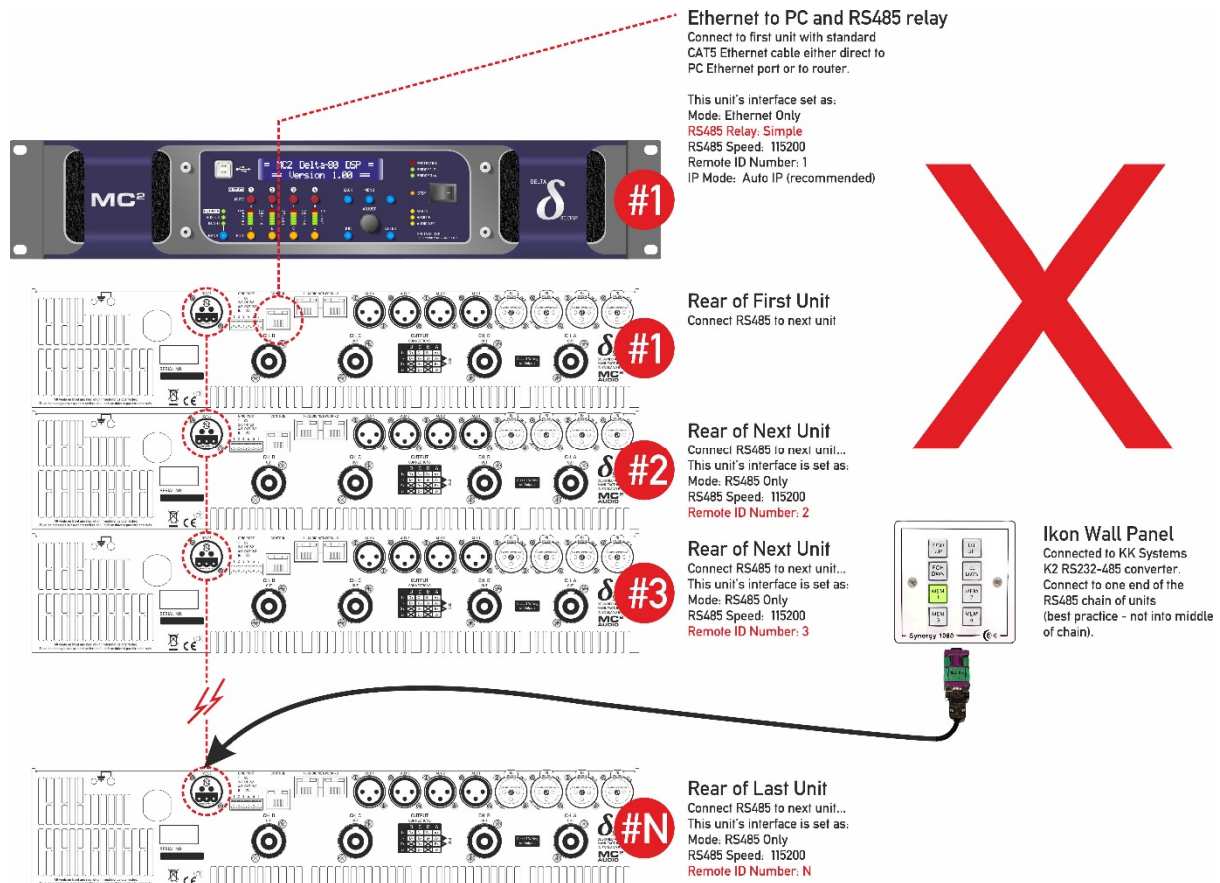


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### Simple IS Simple, NOT Relay

As explained above, the "Simple" mode in RS485 Relay means that units daisy-chained on RS485 cannot be seen in AudioCore, set in "RS485 Only" mode as in the above "Spur" scenario. In the scenario below - **only the first unit will be seen by AudioCore as it is in RS485 "Simple Mode"** to allow it to respond to the SRP as well as Ethernet traffic.



It is also worth noting that using AudioCore at the same time as issuing remote control commands from a wall panel may yield unpredictable results - we strongly advise going off-line with AudioCore before changing any settings via the RS485 bus.