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Protocol for controlling RS-485 Multizone Amplifiers with Speaker Verification

Commands and replies 9 Ascii characters followed by carriage return (char 13) (hex 0D)

Amps will reply to all commands except global commands

Preamble NBD

Command ! Reply * (See sample commands)

Query ? Reply # (See sample commands)

Amplifiers Units 1-31 use 01-31

Pot numbers A-B Pot levels 00-99 A=Left B=Right

Switch closures 1-2 Switches On=99 Off=00

Sample command from controlling computer (NBD03!A55)

No spaces in commands. Spaces here are to illustrate values only.

Preamble Amp# Command Pot# Value
NBD 03 ! A 55 (Set pot #1 on amp #3 to 55)

Reply from Amplifier (NBD03*A55)

Preamble Amp# Completed Pot# Value
NBD 03 * A 55 (Command completed-No errors)

Sample Query

NBD 06 ? B 00 (What is setting of pot #2 on amp #6)

Reply

NBD 06 # B 65 (Pot #2 on amp #6 is set at 65)

Mute command NBD12!m00 (Mute amp 12) NBD12!m99 (Unmute amp 12)

Global commands use 99 for all amps (No reply from amps)

Global mute command NBD99!m00 Unmute NBD99!m99 (Mute or unmute all amps)

Mute query NBD06?m00 Reply NBD06#m00 or NBD06#m99
(Is amp #6 muted) Yes No

Speaker query l or r (NBD06?l00) or (NBD06?r00) Returns 99 (OK) or 00 (No speaker)

Errors? Returns (NBD06*e01) Amp #6 error #1)

'1' = Buffer overflow - Command too long

'2' = Invalid address - You should never see this one

'3' = Invalid value - Amp didn't understand value sent

This will happen if you send anything except 00 or 99 for switch settings

'4' = Timeout between bytes - Characters must not have more than about 1 second between them. In most cases the amp will not reply to this error

'5' = Invalid command - Amp got the address but didn't understand the command

'6' = Can't adjust - Amp is muted can't set pots while muted

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