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Protocol for controlling RS-485 controlled Multizone Paging/Mixer

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

Mixer will reply to all commands except global commands.

Preamble NBD

Command ! Reply * (See sample commands)

Query ? Reply # (See sample commands)

Mixer Units 1-31 use 01-31

Pot numbers A-B-C-D Pot levels 00-99 A=Left B=Right C=Mic1 D=Mic2

Sample command from controlling computer (NBD03!A55)

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

```
Preamble Mixer# Command Pot# Value
NBD 03 ! A 55 (Set pot #1 on mixer #3 to 55)
```

Reply from mixer (NBD03*A55)

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

Sample Query

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

Reply

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

Mute command NBD12!m00 (Mute mixer 12)

```
NBD12!m99 (Unmute mixer 12)
```

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

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

Mute query NBD06?m00 Reply NBD06#m00 or NBD06#m99

```
(Is mixer #6 muted) Yes No
```

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

- '1' = Buffer overflow - Command too long
- '2' = Invalid address - You should never see this one
- '3' = Invalid value - Mixer didn't understand value sent
- '4' = Timeout between bytes - Characters must not have more than about 1 second between them. In most cases the mixer will not reply to this error
- 5 = Invalid command - Mixer got the address but didn't understand the command
- '6' = Can't adjust - Mixer is muted can't set pots while muted

Dip switches each have a value 1 to 16 left to right. Values are 1, 2, 4, 8, and 16. Switches add together to get an address of 01 to 31. 00 or all switches off should not be used as this address is reserved for future use.

Paging mode

Sending NBDaa!p99 turns on paging mode (where aa refers to the address of the mixer as set on the Dip switches on the rear of the mixer).

In paging mode the 1/4 inch microphone jack on the rear of the mixer needs to have a microphone with a switch that shorts the ring on the plug to ground. When the switch is actuated the mixer will raise the

microphone level to the normal setting and mute the other 3 inputs so an announcement can be made. When the switch is released the mixer will mute the microphone and bring the other 3 inputs back up to their former levels.

To turn paging mode off send NBDaa!p00.\

The mixer saves the channel settings and paging mode in nonvolatile memory. When power is removed and restored the mixer will power up with the same settings as when power was lost.

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