

Model 200-Series Accessories Installation & Configuration Guide

Table of Contents

| | |
|---|----|
| 5-Pin Headset Connector Assembly (<i>Part No: 13579</i>) | 2 |
| 6-Pin Headset Connector Assembly (<i>Part No: 13595</i>) | 3 |
| 7-Pin Headset Connector Assembly (<i>Part No: 13561</i>) | 4 |
| Direct Microphone Output Card Kit (<i>Part No: 31058</i>) | 5 |
| Backup Microphone Output Card Kit (<i>Part No: 31211</i>) | 6 |
| Line Input Card Kit (<i>Part No: 31084</i>) | 7 |
| Line Input with Limiter Card Kit (<i>Part No: 31210</i>) | 8 |
| Line Output Card Kit (<i>Part No: 31086</i>) | 9 |
| 3-Pin Female XLR Connector Card Kit (<i>Part No: 31201</i>) | 10 |
| 3-Pin Male XLR Connector Card Kit (<i>Part No: 31202</i>) | 11 |
| 4-Pin Female XLR Connector Card Kit (<i>Part No: 31206</i>) | 12 |
| Remote Switch Inputs Card Kit (<i>Part No: 31205</i>) | 13 |
| Tally/Remote Switch Input Card Kit (<i>Part No: 31203</i>) | 14 |
| EtherCon® Connector Card Kit (<i>Part No: 31207</i>) | 15 |
| Program/Talkback Card Kit (<i>Part No: 31204</i>) | 16 |

Model 200-Series Accessories Installation & Configuration

5-Pin Headset Connector Assembly (Part No: 13579)

Overview

Allows headset with 5-pin XLR-type plug to be directly connected to Model 200-Series Announcer's Consoles.

Implementation

Connector: Neutrik NC5FD-L-1

Suggested Connector Location: Far right when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections:

| Function | XLR Pin | Header-Pin on Model 210 | Header-Pin on Models 212/220/230 | Header-Pin on Model 233 | HMD25-1 |
|------------|---------|----------------------------|-------------------------------------|----------------------------|-------------------|
| Mic Shield | 1 | P4-1 | P5-1 | P6-1 | Mic Shield/Screen |
| Mic + | 2 | P4-2 | P5-2 | P6-2 | Red |
| Mic – | 3 | P4-3 | P5-3 | P6-3 | Blue |
| Phones Com | 4 | P3-1 | P4-1 | P5-1 | White & Gray |
| Phones + | 5 | P3-2 | P4-2 | P5-2 | Yellow & Green |

Model 200-Series Accessories Installation & Configuration

6-Pin Headset Connector Assembly (Part No: 13595)

Overview

Allows headset with 6-pin XLR-type plug to be directly connected to Model 200-Series Announcer's Consoles.

Implementation

Connector: Neutrik NC6FDS-L-1 (Switchcraft® pin arrangement)

Suggested Connector Location: Far right when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections:

| Function | XLR Pin | Header-Pin on Model 210 | Header-Pin on Models 212/220/230 | Header-Pin on Model 233 | HMD25-1 |
|----------------|---------|-------------------------|----------------------------------|-------------------------|-------------------|
| Mic – | 1 | P4-3 | P5-3 | P6-3 | Blue |
| Mic + | 2 | P4-2 | P5-2 | P6-2 | Red |
| Phones Com – | 3 | P3-1 | P4-1 | P5-1 | White & Gray |
| Phones Left + | 4 | P3-2 | P4-2 | P5-2 | Yellow |
| Phones Right + | 5 | P3-3 | P4-3 | P5-3 | Green |
| Mic Shield | 6 | P4-1 | P5-1 | P6-1 | Mic Shield/Screen |

Model 200-Series Accessories Installation & Configuration

7-Pin Headset Connector Assembly (Part No: 13561)

Overview

Allows headset with 7-pin XLR-type plug to be directly connected to Model 200-Series Announcer's Consoles.

Implementation

Connector: Neutrik NC7FD-L-1

Suggested Connector Location: Far right when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections:

| Function | XLR Pin | Header-Pin on Model 210 | Header-Pin on Models 212/220/230 | Header -Pin on Model 233 | HMD25-1 |
|----------------|---------|-------------------------|----------------------------------|--------------------------|-------------------|
| Mic Shield | 1 | P4-1 | P5-1 | P6-1 | Mic Shield/Screen |
| Phones Right – | 2 | P3-1 | P4-1 | P5-1 | White |
| Phones Right + | 3 | P3-3 | P4-3 | P5-3 | Green |
| Phones Left – | 4 | P3-1 | P4-1 | P5-1 | Gray |
| Phones Left + | 5 | P3-2 | P4-2 | P5-2 | Yellow |
| Mic + | 6 | P4-2 | P5-2 | P6-2 | Red |
| Mic – | 7 | P4-3 | P5-3 | P6-3 | Blue |

Model 200-Series Accessories Installation & Configuration

Direct Microphone Output Card Kit (Part No: 31058)

Overview

Allows technician to add direct microphone output to Models 212, 220, 230, and 233 Announcer's Consoles. Installs in back-panel spare connector location. Card features 3-pin male XLR-type connector. Kit includes card, interface cables, and hardware.

Implementation

Connector Type: 3-Pin Male XLR (Neutrik NC3MD-H-B)

Suggested Connector Location: Far right when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 212/220/230/233:

| Function | On 31058 Card | On Model 212 | On Model 220 | On Model 230 (Rev C or D PCB) | On Model 230 (Rev E or Later) | On Model 233 |
|---|------------------|-----------------|-----------------|-------------------------------------|-------------------------------------|------------------|
| Mic In | P6 | P5 | P5 | P5 | P5 | P6 |
| Relay (requires setting DIP switches; see table below) | P5 | P6 or P11 | P9 or P10 | P16 or P17 | P15 or P16 | P15 or P16 |
| Mic Loop-Thru | P7 | Available | Available | Available | Available | Available |

DIP Switch Settings:

| Function | On Model 212 | On Model 220 | On Models 230/233 |
|--------------------|-------------------------|------------------------|------------------------|
| Main (most common) | SW3-9 (↑) SW3-10 (↓) | SW3-7 (↑) SW3-8 (↓) | SW4-5 (↑) SW4-6 (↓) |
| Talkback 1 | SW3-9 (↓) SW3-10 (↑) | SW3-7 (↓) SW3-8 (↑) | SW4-5 (↓) SW4-6 (↑) |
| Talkback 2 | --- | SW3-7 (↑) SW3-8 (↑) | SW4-5 (↑) SW4-6 (↑) |

Model 200-Series Accessories Installation & Configuration

Backup Microphone Output Card Kit (Part No: 31211)

Overview

Allows a technician to create an audio output that automatically switches between the main output signal and the microphone input connection. Used to provide an automatic “fail-over” connection for specialized on-air broadcast applications. Installs in one of the back-panel spare-connector locations in Models 210, 220, 230, and 233 Announcer’s Consoles. The card features a 3-pin male XLR-type connector and a high-reliability sealed electromechanical relay. Each kit includes card, interface cables, and hardware.

Implementation

Connector Type: 3-Pin Male XLR (Neutrik NC3MD-H-B)

Suggested Connector Location: Far right when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 210/220/230/233:

| Function | On 31211 Card | On Model 210 | On Model 220 | On Model 230 (Rev C or D PCB) | On Model 230 (Rev E or later) | On Model 233 |
|---------------|------------------|-----------------|-----------------|-------------------------------------|-------------------------------------|-----------------|
| Mic In | P9 | P4 | P5 | P5 | P5 | P6 |
| Main Out | P12 | P5 | P6 | P6 | P6 | P7 |
| DC In | P10 | P13 | P16 | P18 | P17 | P17 |
| Mic Loop-Thru | P11 | Available | Available | Available | Available | Available |

Model 200-Series Accessories Installation & Configuration

Line Input Card Kit (Part No: 31084)

Overview

Allows technician to add line-level input to Models 210 and 212 Announcer's Consoles; maximum two per unit. Installs in back-panel spare connector location. Card features 3-pin female XLR-type connector and isolation transformer. Kit includes card, interface cable, and hardware.

Implementation

Connector Type: 3-Pin Female XLR (Neutrik NC3FD-H-B)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 210/212:

| Function | On 31084 Card | On Model 210 | On Model 212 |
|-------------------|------------------|--|--|
| Out | P2 | P10 (Aux In 2) or P11 (Aux In 1) | P12 (Aux In 2) or P14 (Aux In 1) |
| Line In Loop-Thru | P1 | Available | Available |

Model 200-Series Accessories Installation & Configuration

Line Input with Limiter Card Kit (Part No: 31210)

Overview

Allows technician to add line-level input to Models 210, 212, 220, 230, and 233 Announcer's Consoles. Sophisticated VCA-based circuitry minimizes the chance that abnormally high input signal levels will cause listener discomfort. Installs in back-panel spare connector location; maximum two per unit. Card features 3-pin female XLR-type connector, isolation transformer, and high-density surface-mount-technology circuitry. Kit includes card, interface cables, and hardware.

R9 and R6 are used to set the limiter threshold and compression ratio, respectively. These resistors are 1% 1206 surface mount resistors available from most electronic component suppliers. Factory set for a threshold of +2 dBu with a 10:1 compression ratio. Modifications should be done by competent technicians only.

| Limiter Threshold | R9 Resistor Value | Compression Ratio | R6 Resistor Value |
|-------------------|-------------------|-------------------|-------------------|
| +2 dBu (default) | 150 k ohms | 5:1 | 2.49 k ohms |
| +4 dBu | 187 k ohms | 8:1 | 1.30 k ohms |
| +8 dBu | 249 k ohms | 10:1 (default) | 1.10 k ohms |
| +10 dBu | 301 k ohms | 12:1 | 909 ohms |

Note: These settings are for Rev A printed circuit boards. Please contact Studio Technologies support if your board is newer than Rev A.

Implementation

Connector Type: 3-Pin Female XLR (Neutrik NC3FD-H-B)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 210/212/220/230/233:

| Function | On 31210 Card | On Model 210 | On Model 212 | On Model 220 | On Model 230 (Rev C or D PCB) | On Model 230 (Rev E or Later) | On Model 233 |
|----------------------|---------------------|--|--|--|--|--|--|
| Out | P3 | P10 (Aux In 2) or P11 (Aux In 1) | P12 (Aux In 2) or P14 (Aux In 1) | P14 (Line In 1) or P15 (Line In 2) | P8 (Line In 1) or P9 (Line In 2) | P8 (Line In 1) or P9 (Line In 2) | P10 (Line In 1) or P11 (Line In 2) |
| DC In | P2 | P13 | P16 | P16 | P18 | P17 | P17 |
| Line In Loop-Thru | P1 | Available | Available | Available | Available | Available | Available |

Model 200-Series Accessories Installation & Configuration

Line Output Card Kit (Part No: 31086)

Overview

Allows technician to add second line-level output (–10 dBu nominal) to Model 230 Announcer's Console. Installs in back-panel spare connector location. Card features 3-pin male XLR-type connector and isolation transformer. Kit includes card, interface cable, and hardware.

Implementation

Connector Type: 3-Pin Male XLR (Neutrik NC3MD-H-B)

Suggested Connector Location: Far left when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 230:

| Function | On 31086 Card | On Model 230 |
|------------------|------------------|--|
| In | P3 | P13 (Intercom Ch 2) or P14 (Intercom Ch 1) |
| Output Loop-Thru | P1 | Available |

Model 200-Series Accessories Installation & Configuration

3-Pin Female XLR Connector Card Kit (Part No: 31201)

Overview

Allows technician to add “mult” or special function connector to Model 200-Series Announcer’s Consoles. Installs in back-panel spare connector location. Card features 3-pin female XLR-type connector and two 3-pin headers. Kit includes card, interface cable, and hardware.

Implementation

Connector Type: 3-Pin Female XLR (Neutrik NC3FD-H-B)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

3-pin female XLR connector (J1) connects to two 3-pin headers (P1 and P2) allowing for custom 200-Series interconnections. Refer to the following information for connection details:

J1 pin 2 connects to P1 pin 2 and P2 pin 2

J1 pin 3 connects to P1 pin 3 and P2 pin 3

J1 pin 1 connects to P1 pin 1; P2 pin 1 is not connected (“floats”)

Model 200-Series Accessories Installation & Configuration

3-Pin Male XLR Connector Card Kit (Part No: 31202)

Overview

Allows technician to add “mult” or special function connector to Model 200-Series Announcer’s Consoles. Installs in back-panel spare connector location. Card features 3-pin male XLR-type connector and two 3-pin headers. Kit includes card, interface cable, and hardware.

Implementation

Connector Type: 3-Pin Male XLR (Neutrik NC3MD-H-B)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

3-pin male XLR connector (P5) connects to two 3-pin headers (P3 and P4) allowing for custom 200-Series inter-connections. Refer to the following information for connection details:

P5 pin 2 connects to P3 pin 2 and P4 pin 2

P5 pin 3 connects to P3 pin 3 and P4 pin 3

P5 pin 1 connects to P3 pin 1; P4 pin 1 is not connected (“floats”)

Model 200-Series Accessories Installation & Configuration

4-Pin Female XLR Connector Card Kit (Part No: 31206)

Overview

Allows technician to add special function connector to Model 200-Series Announcer's Consoles. Installs in back-panel spare connector location. Card features 4-pin female XLR-type connector. Kit includes card, interface cables, and hardware.

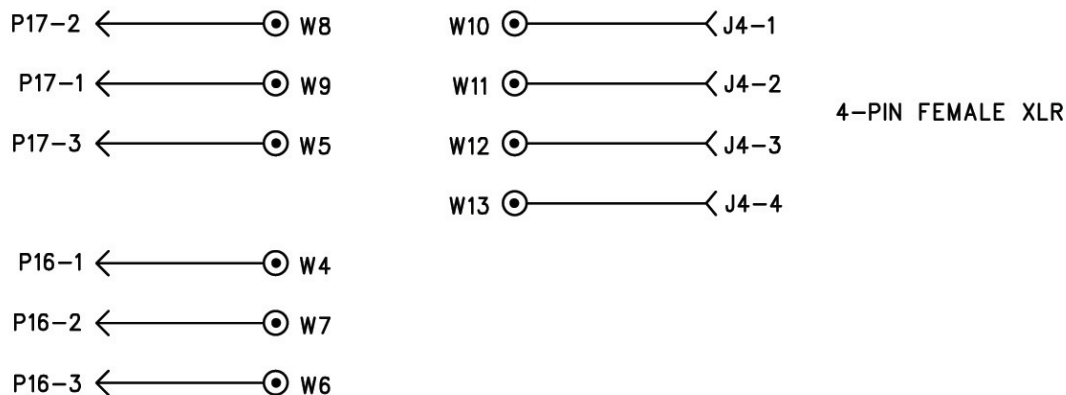
Implementation

Connector Type: 4-Pin Female XLR (Neutrik NC4FDM3-H)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

Two headers on the card (P16 and P17) are available for custom board connections. Custom connections between the headers and the 4-pin XLR connector can be made using the following diagram:



Model 200-Series Accessories Installation & Configuration

Remote Switch Inputs Card Kit (Part No: 31205)

Overview

The following kit allows access to the remote switch inputs on Models 210, 212, 220, 230, and 233 Announcer's Consoles.

Implementation

Connector Type: 4-Pin Female XLR (Neutrik NC4FDM3-H)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 210/212:

| Function | XLR Pin | On 31205 Card | On Model 210 | On Model 212 |
|----------|---------|------------------|-----------------|-----------------|
| Common | 1 | P14-1 | P14-1 | P17-1 |
| Main | 2 | P14-2 | P14-2 | P17-2 |
| Talkback | 3 | P14-3 | P14-3 | P17-3 |
| Unused | 4 | --- | --- | --- |

Connections for Models 220/230/233:

| Function | XLR Pin | On 31205 Card | On Model 220 | On Model 230 (Rev C or D PCB) | On Model 230 (Rev E or Later) | On Model 233 |
|------------|---------|------------------|-----------------|-------------------------------------|-------------------------------------|-----------------|
| Common | 1 | P14-1 | P18-1 | P19-1 | P18-1 | P19-1 |
| Main | 2 | P14-2 | P18-2 | P19-2 | P18-2 | P19-2 |
| Talkback 1 | 3 | P15-2 | P17-2 | P15-2 | P19-2 | P18-2 |
| Talkback 2 | 4 | P15-3 | P17-3 | P15-3 | P19-3 | P18-3 |

Model 200-Series Accessories Installation & Configuration

Tally/Remote Switch Input Card Kit (Part No: 31203)

Overview

Allows technician to add status output (“tally”) and remote switch input to Models 212, 220, and 230 Announcer’s Consoles. Installs in back-panel spare connector location. Card features 3-pin female XLR connector and circuitry that provides current-limited 5 volt DC output and remote switch input. Kit includes card, interface cables, and hardware. **Note:** These functions are built into the Model 233. See Model 233 User Guide for details.

Implementation

Connector Type: 3-Pin Female XLR (Neutrik NC3FD-H-B)

Suggested Connector Location: User specifiable

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 212/220/230:

| Function | On 31203 Card | On Model 212 | On Model 220 | On Model 230 (Rev C or D PCB) | On Model 230 (Rev E or Later) |
|--|------------------|-----------------|--|--|--|
| Remote Switch Input | P7 | P17* | P18 (for Main) or P17 (TB1 or TB2**) | P19 (for Main) or P15 (TB1 or TB2**) | P18 (for Main) or P19 (TB1 or TB2**) |
| DC Power (from Announcer’s Console) | P6 | P3 | P13 | P3 | P3 |
| Relay (requires setting DIP switches; see table below) | P8 | P6 or P11 | P9 or P10 | P16 or P17 | P15 or P16 |

* Remove resistor R4 on card and replace R3 for TB functionality

** Remove resistor R4 on card and replace R3 for TB2 functionality

DIP Switch Settings:

| Function | On Model 212 | On Model 220 | On Model 230 |
|--------------------|-------------------------|------------------------|------------------------|
| Main (most common) | SW3-9 (↑) SW3-10 (↓) | SW3-7 (↑) SW3-8 (↓) | SW4-5 (↑) SW4-6 (↓) |
| Talkback 1 | SW3-9 (↓) SW3-10 (↑) | SW3-7 (↓) SW3-8 (↑) | SW4-5 (↓) SW4-6 (↑) |
| Talkback 2 | --- | SW3-7 (↑) SW3-8 (↑) | SW4-5 (↑) SW4-6 (↑) |

| Function | XLR Pin |
|----------------------------|---------|
| Common | 1 |
| Remote Switch Input | 2 |
| Current Limited +5 Vdc Out | 3 |

Model 200-Series Accessories Installation & Configuration

EtherCon® Connector Card Kit (Part No: 31207)

Overview

Allows technician to add Neutrik® EtherCon 8-pin “modular” Ethernet-style connector to Model 200-Series Announcer’s Consoles. Installs in back-panel spare connector location. Allows power and up to three input or output functions to be carried over one standard “data” cable. Kit includes card, interface cables, and hardware.

Implementation

Connector Type: EtherCon RJ45 Receptacle (Neutrik NE8FDV-B)

Suggested Connector Location: Center when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections:

| Function | On 31207 Card | RJ45 Pin | EIA/TIA 568B Color Scheme |
|----------------|------------------|----------|------------------------------|
| Pair 1 | | | |
| + | P16-2 | 4 | WHT/BLU |
| – | P16-3 | 5 | BLU/WHT |
| Pair 2 | | | |
| + | P14-2 | 1 | WHT/ORG |
| – | P14-3 | 2 | ORG/WHT |
| Pair 3 | | | |
| + | P15-2 | 3 | WHT/GRN |
| – | P15-3 | 6 | GRN/WHT |
| Pair 4 (Power) | | | |
| + | P13-2 | 7 | WHT/BRN |
| – | P13-1 | 8 | BRN/WHT |

Note: See the Model 212 User Guide for information on using the EtherCon connector card kit to connect to the Model 44 Interface.

Model 200-Series Accessories Installation & Configuration

Program/Talkback Card Kit (Part No: 31204)

Overview

Allows technician to create an audio signal that switches between an external program source and a talkback output to Models 220, 230, and 233 Announcer's Consoles. Installs in back-panel spare connector location. Card features 3-pin male XLR-type connector. Kit includes card, interface cables, and hardware.

Implementation

Connector Type: 3-Pin Male XLR (Neutrik NC3MD-H-B)

Suggested Connector Location: Center when viewed from back

Suggested Connector Orientation: Tab on left side when viewed from back

Connections for Models 220/230/233:

| Function | On 31204 Card | On Model 220 | On Model 230 (Rev C or D PCB) | On Model 230 (Rev E or Later) | On Model 233 |
|---|------------------|---|--|--|---|
| Relay A (requires setting DIP switches; see table below) | P11 | P10 | P17 | P16 | P16 |
| Relay B (requires setting DIP switches; see table below) | P12 | P9 | P18 | P15 | P15 |
| Program Input | P10 | P14 (Line In 1) or P15 (Line In 2) | P8 (Line In 1) or P9 (Line In 2) | P8 (Line In 1) or P9 (Line In 2) | P10 (Line In 1) or P11 (Line In 2) |
| Talkback Input | P9 | P6 (Main Out) or P7 (TB Out 1) or P8 (TB Out 2) | P6 (Main Out) or P7 (TB Out) | P6 (Main Out) or P7 (TB Out) | P7 (Main Out) or P8 (TB Out 1) or P9 (TB Out 2) |

DIP Switch Settings:

| Function | On Model 220 | On Models 230/233 |
|--------------------|------------------------|------------------------|
| Main (most common) | SW3-7 (↑) SW3-8 (↓) | SW4-5 (↑) SW4-6 (↓) |
| Talkback 1 | SW3-7 (↓) SW3-8 (↑) | SW4-5 (↓) SW4-6 (↑) |
| Talkback 2 | SW3-7 (↑) SW3-8 (↑) | SW4-5 (↑) SW4-6 (↑) |