Model 48
Telco Switcher

Introduction

The Model 48 Telco Switcher is designed to allow fast and efficient routing of telephone-line signals to multiple destinations. Using passive switching circuitry each of the six sources (inputs) can be selected for use by the five destinations (outputs). The unit is specifically designed for mobile broadcast news-gathering applications, but is appropriate for a wide range of mobile and fixed applications.
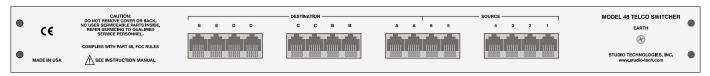
Broadcast operators have experienced a proliferation of wired and wireless "telephone" signals. These signals are often utilized by multiple devices, such as IFB, intercom, on-air, and modem equipment. Routing these signals to their required destinations can be inefficient, confusing, and sometimes unreliable. The Model 48 addresses this need, allowing the rapid routing of multiple sources to multiple destinations. In addition to the operational features, the Model 48 uses standard telephone-type connectors, allowing a "clean" installation and easy long-term system maintenance.

The Model 48 installs in one space of a standard 19-inch rack. Seventeen 6-position modular jacks are used for source (input) and destination (output) connections. The Model 48's jacks and switches are compatible with "wet" (DC-biased) or "dry" signals. The unit is completely passive; no external power source is required.

Model 48 Front Panel
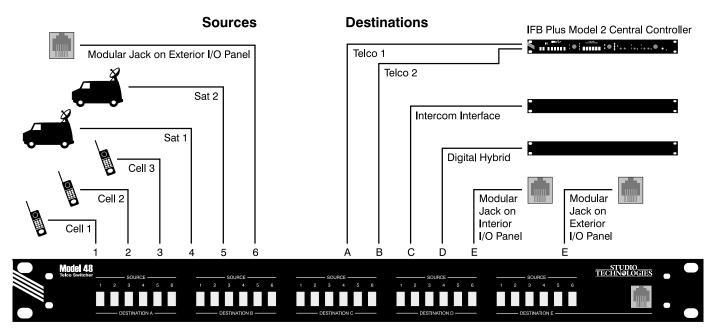

Model 48 Back Panel

Applications

The Model 48 is intended for use in mobile and fixed broadcast applications. Ideal mobile applications include ENG, SNG, production, and uplink vehicles. These vehicles frequently have multiple cell, satellite, and hard-wired telephone connections that need to be routed "on the fly" to IFB and intercom couplers.

It is anticipated that the Model 48 will find application with the mobile IFB products available from Studio Technologies. For example, multiple sources connected to the Model 48 can be quickly selected for termination on the telephone-line couplers of the Model 2 Central Controller.

Many in-studio applications may also benefit from using the Model 48. For example, multiple telephone-line sources may need to be routed to digital hybrids, recording couplers, or telephone-interfaces associated with large intercom systems. Using the Model 48 can eliminate the need for "in-house" solutions or modular-jack-type patch panels. Simple push-button selection allows the sources to be routed to the desired destinations.

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Sources   **Destinations**

Modular Jack on Exterior I/O Panel

IFB Plus Model 2 Central Controller

Telco 1

Telco 2

Sat 2

Intercom Interface

Sat 1

Cell 3

Digital Hybrid

Cell 2

Modular Jack on Interior I/O Panel

Modular Jack on Exterior I/O Panel

Cell 1

1 2 3 4 5 6   A B C D E   E

Model 48 Telco Switcher

SOURCE 1 2 3 4 5 6   SOURCE 1 2 3 4 5 6   SOURCE 1 2 3 4 5 6   SOURCE 1 2 3 4 5 6   SOURCE 1 2 3 4 5 6

STUDIO TECHNOLOGIES

DESTINATION A   DESTINATION B   DESTINATION C   DESTINATION D   DESTINATION E

Typical Model 48 ENG/SNG Application

Specifications

Product Application: Mobile and fixed broadcast installations. Designed to allow up to six telephone lines to be independently routed to five destinations. Can also be used to route audio or low-voltage control signals.

Inputs: 6

Connectors: 6-position modular jacks, each with pins 2-5 implemented; one jack associated with each of the six inputs

Compatibility: Designed to connect to RJ11 (one-line) or RJ14 (two-line) jacks using standard reversing modular cables

Outputs: 5

Connectors: 6-position modular jacks, each with pins 2-5 implemented; two jacks associated with outputs A through D; three with output E

Compatibility: Designed to emulate RJ11 (one-line) or RJ14 (two-line) jacks

Switching:

Type: mechanical, interlocked to allow activation of only one switch at a time per output

Contact Material: silver

Contact Rating: 0.1A, 30V, maximum

Life: 10,000 operations per switch position

Dimensions (Overall):

19.00 inches wide (48.3cm)
1.72 inches high (4.4cm)
6.50 inches deep (16.5cm)
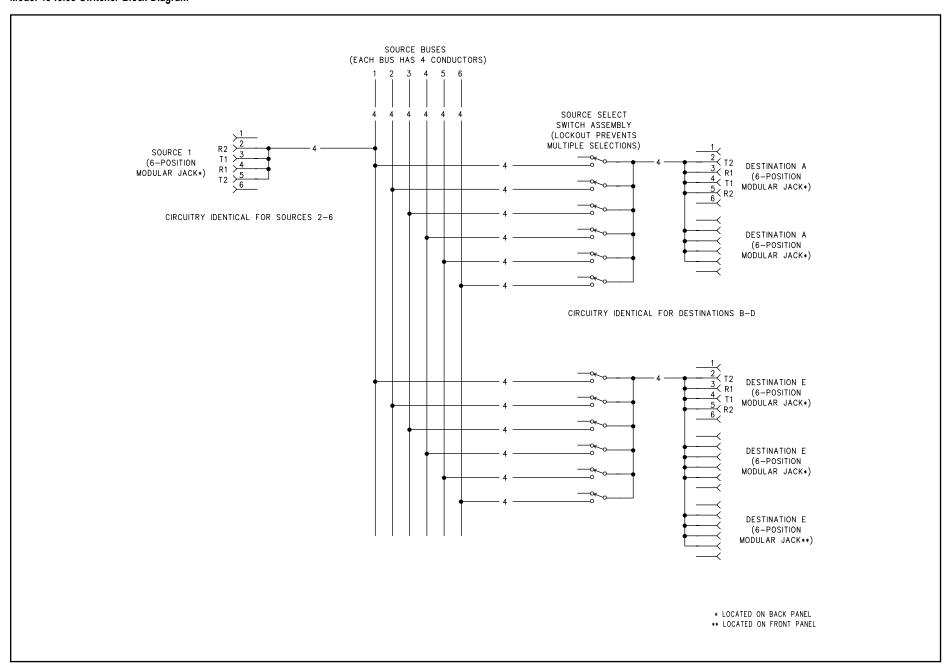
Mounting:

One space in a standard 19-inch rack

Weight: 6.0 pounds (2.7kg)

Specifications subject to change without notice.
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Model 48 Telco Switcher Block Diagram

SOURCE BUSES
(EACH BUS HAS 4 CONDUCTORS)

1 2 3 4 5 6

SOURCE SELECT
SWITCH ASSEMBLY
(LOCKOUT PREVENTS
MULTIPLE SELECTIONS)

SOURCE 1
(6-POSITION
MODULAR JACK*)

1
R2 2
T1 3
R1 4
T2 5
6

CIRCUITRY IDENTICAL FOR SOURCES 2-6

1
2
3 T2
4 R1
5 T1
6 R2

DESTINATION A
(6-POSITION
MODULAR JACK*)

DESTINATION A
(6-POSITION
MODULAR JACK*)

CIRCUITRY IDENTICAL FOR DESTINATIONS B-D

1
2
3 T2
4 R1
5 T1
6 R2

DESTINATION E
(6-POSITION
MODULAR JACK*)

DESTINATION E
(6-POSITION
MODULAR JACK*)

DESTINATION E
(6-POSITION
MODULAR JACK**)

* LOCATED ON BACK PANEL
** LOCATED ON FRONT PANEL