

D-2800 Routing Switcher Tie-Line Management System



The Datatek D-2800 Routing Switcher Tie-Line Management System is used:

To provide access to a source in another Datatek switcher which is not available in the local switcher.

To provide for automatic format conversion where, for example, an analog source is requested by a digital destination.

Two levels of TieLine support are available. *"Single Stage"* is a software package for the standard control module in the D-2800 matrix frames. An external 'PC' or controller is not required for normal Single Stage operation. *"Multi-Stage"* uses an external PC controller, with a second 'PC' used when redundancy is required. These 'PC' controllers could also be used for system configuration/programming functions.

Single Stage: This is typical of systems with 16 or fewer sources allocated for incoming tie lines. The TieLine software will control the local router and up to two external routers. The destinations of the controlled routers feed the local router direct or via processing/conversion devices. Typical uses include:

- Format Conversion. An analog source is requested by a digital destination. If a path with the correct analog-to-digital converter is available, the source will automatically be routed.
- Central Router Access. A central router may have access to 'all' primary plant signals (remotes, studio outputs, etc.)
- 'Remote' Router Access. A router in another location has some destinations feeding the local router.

Unified Single -Stage: TieLine systems control two Datatek D-2800 series compatible routers with a single unified control system. This allows control panels to have access to destinations in either or both routers. See Figure 2). TieLines may be assigned such that if a Router (B) destination selects a source only in Router (A), the path will be assigned via available TieLines.

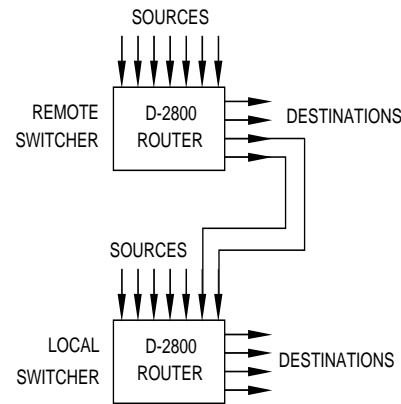
- A destination in Router (A) may select a source from Router (B) - a TieLine will be assigned to complete the path.
- A destination in Router (B) may select a source from Router (A) - again, a TieLine will be assigned to complete the path.
- Router (A) and (B) can be different signal formats (analog vs. digital, etc.). The TieLine connections would have the proper conversion devices installed.
- Router (A) could be full size D-2800 router; Router (B) could be a smaller D-2600.

Features

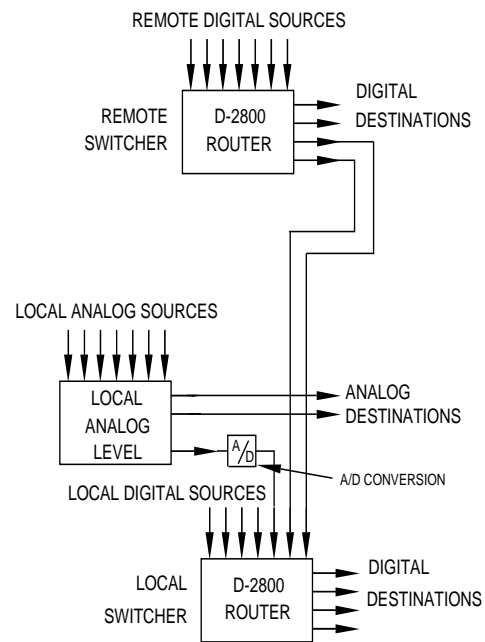
Datatek TieLine Router software has the following features:

- Keypad control panels are aware of TieLine sources. The green LED display of a TieLine source in PRESET or LINE locations uses a unique dim/bright toggle. This quickly alerts operators of TieLine usage, allowing them to remember to release TieLines no longer required. The display is unique but does not cause undue distractions in the operator's field of vision. A solid display is used for local sources.
- TieLines are allocated when a source is entered into the PRESET window of a control panel. An invalid flashing display will become a dim/bright toggle when the TieLine assignment is set up. Once preset, the TieLine switches at the speed of a local source. This avoids a possible race condition where the local router switches to the TieLine before the external router(s) have completed the setup. Datatek TieLine systems provide a clean switch - every time.

- Additional users of the same TieLine source do not use additional TieLines. Access speed is fast - the same as a local source. The system dynamically renames a local source with the new TieLine name. The TieLine source has temporarily become a local source to the system.
- TieLine resources are allocated on a level-by-level basis. A system with 6 TieLines (each with video and 4-audio levels) could have more than 6 TieLine users if some were video only or audio only assignments.



(1) LOCAL SWITCHER WITH SIMPLE SINGLE STAGE TIE LINE



(2) LOCAL DIGITAL LEVEL WITH SINGLE STAGE TIE LINES

TWO EXAMPLES OF DATATEK SINGLE STAGE TIE LINE MANAGEMENT SYSTEM

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RouteMaster D-2800 & D-2600 Routing Switcher Control Program For Windows 95, 98, NT, 2000



The Datatek Windows based control program provides the following features:

Features:

Destination Status

- Display destination status of entire switcher or smaller windows of destination ranges.
- Display in Alpha-numeric or numeric mode.
- Save and restore crosspoint status to and from disk files. Selected by clicking and dragging across destination status display.
- Allows user programmed salvo switching.

- Can show and modify "LOCK" status of any destination
- Perform switches by entering desired crosspoint information into status display and clicking *TAKE* button. Source can be typed in or selected from drop down list.

System Configuration

- Edit sources and destination names.
- Set up system vs physical assignments of destinations and sources. (Virtual matrix).
- Save and restore to and from disk files.

Linked Command List

- Create and edit a list of linked commands to allow a single command to execute others. For example, a single command from a panel could switch an entire monitor wall to a test signal.
- Save and restore linked lists to and from disk files.

Control Panel Management

- List all control panels in the system.
- Upload and download control panel tables to and from disk file.
- Tree style view of panels connected to switcher.
- Edit control panel tables.
- Apply changes to multiple panels if desired.

The Datatek Routing Switcher Control Program is intended to operate in conjunction with D-2800 series and D-2600 series routing switchers, and with D-2400 series and D-2800 series control panels.

The screenshot shows the RouteMaster software interface with a menu bar (File, View, System Configuration, Panels, Options) and a sidebar with options like Sources (Names, Numbers), Preset Entry (All Follow, One level), and Show (Presets, Line). The main window displays a table with columns for DEST, T, C, VIDEO, AUD1, AUD2, Level 3, and Level 4. The table contains 33 rows of data, with some rows highlighted in green and others in red.

	DEST	T	C	VIDEO	AUD1	AUD2	Level 3	Level 4
15	GFXPVW-1			BLACK				
16	GFXPVW-2			BLACK				
17	GFXPVW-3			BLACK				
18	VTR- 41			T300	T300	T300	T300	T300
19	VTR- 43			T301	T301	T301	BLACK	BLACK
20	VTR- 45			T302	T302	T302	BLACK	BLACK
21	VTR- 47	T	C	VTR- 48	VTR- 48	VTR- 48	VTR- 48	VTR- 48
22	VTR- 49	T	C	AUX-13	AUX-13	AUX-13	AUX-13	AUX-13
23	VTR-411	T	C	TIE-4E	TIE-4E	TIE-4E	TIE-4E	TIE-4E
24	VTR-412			T321	T321	T321	BLACK	BLACK
25	VTR-413			T322	T322	T322	BLACK	BLACK
26	TIE-4B	T	C	CAM- A8	BLACK	BLACK	BLACK	BLACK
27	TIE-4D			BLACK	BLACK	BLACK	BLACK	BLACK
28	AUX- 1			BLACK				
29	VREM-25			BLACK				
30	VREM-26			BLACK				
31	TEST			BLACK	BLACK	BLACK	BLACK	BLACK
32	VREM- 2			BLACK				
33	VREM- 4			BLACK				
34	VREM- 6			BLACK				

Sample RouteMaster Screen: Destination Status with presets

The **D-2426 Data Bridge Module** is a general purpose control system interface module, generally used for:

- a) interfacing up to 8 D-2000 series control panels into a D-2400/D-2600/D-2800 switcher system,
- b) interfacing 8 D-2000 protocol routing switcher busses into a D-2400/D-2600/D-2800 control system, and
- c) providing XY control of D-2000 routing switcher destinations.



D-2426 Data Bridge Module

Ordering Information:

D-2426 Data Bridge Module

Refer to DF-880 Rack Frame for ordering information on frame, power supplies and accessories.

The Datatek **D-2437 Virtual Tally System** provides tally functions for Datatek D-2400, D-2600 and D-2800 series routing switcher systems. The D-2437 system can provide complex tally functions without the expense of an actual "relay" matrix.

- Provides isolated tally outputs based on routing switcher status.
- External input module provides opto-isolated inputs for reading external conditions (e.g., on-air, enable, record)
- Tally active functions are user programmable for source, destination, level and external input condition.
- Each tally relay can be closed by a programmable set of conditions, which can include particular sources, destinations, opto inputs and/or combinations.
- Multiple conditions can be used for a single relay.
- The system can trace source re-entry through equipment such as frame sync or A/D or D/A converters to identify original source.
- Program tables can be edited through a text editor on a PC, and the system is programmable through a serial port on the system control module.

The Virtual Tally System is made up of a D-2435T Virtual Tally Control Module, one or more D-2437R Tally Output Modules (32 isolated relays each) and one or more D-2438 External Input Modules (32 opto-isolated inputs each). A maximum of 512 relay outputs and 512 opto inputs may be realized in only 9RU (three DF-880 frames).

The system is table driven. Each relay has a table entry which specifies the condition(s) that will cause the relay to close. The conditions include router destination (or range), router source (or range), router level, and two opto conditions logical OR'd. The table can be modified in D-2600 and D-2800 router systems from a central PC. A rear serial port allows programming in standalone systems or with older Datatek routing switchers. The table is stored in battery backed RAM and will be retained for 5 years without power applied.



D-2437 Virtual Tally System Modules

Ordering Information:

D-2435T Virtual Tally Control Module

D-2437R Tally Output Module (32 isolated relays each)

D-2438 External Input Module (32 opto-isolated sources each)

Refer to DF-880 Rack Frame for ordering information on frame, power supplies and accessories.