The **MODEL 101** frame has been designed to mount into a standard 19 inch E.I.A. rack frame assembly. The 101 configuration allows for mounting up to 3 di-tech modules and its built-in power supply.

**ELECTRICAL**
- A.C. input .................................................. 115/230 volts, ±10%
- D.C. output .................................................. +15 volts @ .6 amps.
- .................................................. −15 volts @ .6 amps.

**ENVIRONMENTAL**
- Temperature .............................................. −20 to +60 degrees C.
- Humidity .................................................. 0 to 95%

**DIMENSIONS** ............................................... 1.75"H. (44.5mm), 19"W. (483mm), 16.25"D. (413mm)

**WEIGHT** .................................................. 6 lbs. (2.7kg)

The **MODEL 103** frame has been designed to mount into a standard 19 inch E.I.A. rack frame assembly. A hinge down front panel is supplied to protect and to allow convenient access to the modules. The Model 801 power supply slides into the frame assembly and up to 10 di-tech modules can be accommodated.

**DIMENSIONS** ............................................... 5.25"H. (133mm), 19"Wm (483mm), 16.25"D. (413mm)

**WEIGHT** .................................................. 6 lbs (2.7kg)

The **MODEL 801** power supply has been designed to easily handle the current requirements from the di-tech modules under specified voltage variations and temperature environments. A special feature of the power supply is the redundant D.C. circuitry which permits the unit to continually provide the specified voltages in the event of a problem. In addition, the appropriate LED will be extinguished and a contact closure will occur for the external alarm output.

**ELECTRICAL**
- A.C. input .................................................. 115/230 volts, ±10%
- D.C. output .................................................. +15 volts @ 2 amps.
- .................................................. −15 volts @ 2 amps.

**ENVIRONMENTAL**
- Temperature .............................................. −20 to +60 degrees
- Humidity .................................................. 0 to 95%

**DIMENSIONS** ............................................... 4.5"H. (114mm), 3"W. (76mm), 13"D. (330mm)

**WEIGHT** .................................................. 7 lbs. (3.2kg)
The Model 110 video distribution amplifier emphasises the use of tightly controlled standard component parts that are properly derated for ultra stable performance.

The standard D.C. coupled outputs provide the user with a unit that has minimum tilt and bounce. Each video distribution amplifier has its own regulator, thereby limiting a failure to one unit should a problem occur with the D.C. circuitry. The LED indicators for plus and minus voltages, allow for a convenient and rapid visual indication of normal operation. The 20 MHz bandwidth, permits distribution of digital data and other wideband information.

The Model 110 video distribution amplifier can be mounted in a vertical or horizontal configuration. For horizontal mounting, the Model 101 frame is used. This frame has a capacity for mounting up to 3 video D.A.'s and, comes complete with its own built in power supply. When the video D.A.'s are mounted vertically, the frame Model 103 is used. The 103 frame requires a Model 801 power supply and, the capacity is up to 10 video D.A.'s.
**SPECIFICATIONS**

**INPUT**
- **Impedance**: 60K Bridging, loop thru connectors
- **Level**: 3.0VPP Max, composite
- **Return Loss**: > 45dB @ 5 MHz, 26dB @ 20 MHz

**OUTPUTS**
- **Number**: 6, D.C. coupled
- **Impedance**: 75 ohms ±1%
- **Return Loss**: > 40dB @ 5 MHz, > 24dB @ 20 MHz
- **Gain Stability**: adjustable: unity, +9dB, -20dB
- **Isolation (amplifier to amplifier)**: > 60dB @ 5 MHz
- **Isolation (output to output)**: > 40dB @ 5 MHz
- **Level**: 2.0VPP Max.

**PERFORMANCE**
- **Frequency Response**: ±0.1dB to 10 MHz, ±0.2dB from 10 MHz to 15 MHz, ±0.5dB from 15 MHz to 20 MHz
- **Differential Gain**: @ 1.0VPP output, < 0.1%
- **Differential Phase**: @ 1.0VPP output, < 0.1 degrees
- **Hum and Noise**: < -60dBV min.
- **Field Tilt, 50 or 60 Hz**: < 0.3%
- **Bounce, 1 VP-P step**: 0.1 V peak
- **Chrominance to Luminance Delay**: < 10 ns, 3.58 or 4.43 MHz
- **Input to Output Delay**: 15 ns
- **K factor**: T pulse, < 0.5%

**POWER INPUT**
- **Voltage**: +15 V DC @ 160 mA, -15 V DC @ 160 mA

**FRONT PANEL CONTROLS**
- **Level**: Adjustable
- **Frequency Response**: Mid and Hi frequency

**ENVIRONMENTAL, OPERATING**
- **Temperature**: -20 to +60 degrees C.
- **Humidity**: 0 to 95%

**MECHANICAL**
- **Size**: Standard 1.4” (35.6mm) Di-Tech module, 4½” (112mm) H, x 13” (330.2mm) D.
- **Weight**: 18oz. (510g) includes connector assembly
- **Connectors**: BNC type, UG1094/U

**ORDERING INFORMATION**
- Horizontal Mount: order Model 110H with Frame Model 101
- Vertical Mount: order Model 110V with Frame Model 103 and Model 801 power supply
- Option 1: A.C. coupled

*Di-Tech inc. reserves the right to change specifications without notice*
The Model 120 is a 1-input, 6-output video distribution amplifier which features differential input, a switchable back porch clamper and an optional 10 dB cable slope equalizer.

On cable runs where common mode hum exists, the differential input minimizes this problem by at least 55 dB. The switchable clamper circuit will further reject hum by 30 dB and in addition the field tilt is reduced to within 0.1%. The clamping speed (fast or slow) can be altered quite simply by a plug-in strap located on the P.C. card.

The optional 10 dB 6 section cable equalizer is continuously variable and easy to use. Only one adjustment is required and it is located on the front edge of the card. With the DI-TECH equalizer you do not require separate fixed equalizers for various lengths of cable. In addition an extender card is not required for making equalizer adjustments. The equalizer is a plug-in card which can be added in the field without the need for soldering.

The Model 120 is designed for mounting in the Model 101 frame which accepts up to 3 modules or the Model 103 frame which accommodates up to 10 modules.
**SPECIFICATIONS**

**INPUT**

<table>
<thead>
<tr>
<th>Type</th>
<th>Differential, floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>Bridging, loop thru. Provision for terminating resistor.</td>
</tr>
<tr>
<td>Level</td>
<td>2 V p-p maximum</td>
</tr>
<tr>
<td>Return Loss</td>
<td>&gt;45 dB @ 5 MHz, 26 dB @ 10 MHz</td>
</tr>
</tbody>
</table>

**OUTPUTS**

| Number | 6, D.C. coupled |
| Impedance | 75 ohm +1% |
| Isolation | >40 dB @ 5 MHz |
| Output D.C. | 0.5 to 2 V p-p |
| Return Loss | >50 mV, clamp off. Back porch clamped to 0 V.D.C., with clamp on. |

**PERFORMANCE**

| Frequency Response | ≤0.1 dB to 5 MHz |
| Gain | ≤0.2 dB to 10 MHz |
| Gain Stability | ≤-2 dB to 20 MHz |
| Differential Gain | ≤6 dB to +12 dB |
| Differential Phase | ≤0.05 dB, –20 to +60°C |
| Hum and Noise | ≤0.2% @ 1 V p-p out |
| Field Tilt | ≤0.3% @ 2 V p-p out |
| Line Tilt | ≤0.4% @ 2 V p-p out |
| Bounce, 1 V Step | ≤-60 dB min. RMS noise to 1 V p-p (unity gain) |
| Chrominance/Luminance | ≤0.1% clamp on |
| Output D.C. | ≤0.8% clamp off |
| Common Mode Rejection | ≤0.1% clamp on |
| Common Mode Range | ≤0.2% clamp on or off |
| Chrominance/Luminance | ≤0.5% clamp on |
| Electrical Length | ≤0.5% clamp off |
| K Factor | ≤0.5% clamp on or off |
| H.F. Boost | ≤0.1% clamp on |
| Common Mode Rejection | ≤0.5% clamp off |
| Common Mode Range | ≤0.5% clamp on |
| Hum and Noise | ≤0.2% clamp on or off |
| Frequency Response | ≤0.3% clamp on |
| Gain Stability | ≤0.5% clamp off |
| Differential Gain | ≤0.7% clamp on |
| Differential Phase | ≤0.8% clamp off |
| Hum and Noise | ≤0.9% clamp on |
| Field Tilt | ≤1% clamp on |
| Line Tilt | ≤1.5% clamp on |
| Bounce, 1 V Step | ≤2% clamp on |
| Chrominance/Luminance | ≤2.5% clamp on |
| Output D.C. | ≤3% clamp on |
| Common Mode Rejection | ≤3.5% clamp on |
| Common Mode Range | ≤3.5% clamp on |
| Chrominance/Luminance | ≤3.5% clamp on |
| Electrical Length | ≤3.5% clamp on |

**CLAMPER**

| Type | Back porch, no effect on color burst. |
| Hum Rejection | >-30 dB min., 3 V p-p max. hum |
| Response | Internal jumper for "soft" clamping, approx. 12 line response time. |

**EQUALIZER (Optional)**

| Type | 6 section slope equalizer, continuously variable |
| Cable Type | 8279, 8281, 9231, RG6/U, RG11/A/U, RG98/B/U, WE724, WE728. (Other types available) |
| Range | 6 dB @ 5 MHz, 10 dB @ 10 MHz. (1200' 8281, 750' 8279) |
| Accuracy | ±0.05 dB per 1.5 dB of cable loss @ 10 MHz. (±1 dB typ. for 500' of 8281) |

**POWER INPUT**

| Voltage | + and – 15 V D.C. min. |
| Current | + and – 180 ma. nom. |

**ENVIRONMENTAL OPERATING**

| Temperature | –20 to +60°C |
| Humidity | 0 to 95% |

**MECHANICAL**

| Size | Standard 1.4" (35.6mm) |
| Di-Tech Module, 41/2" x 13" d (330mm) |
| Weight | 18 oz. (510g) including connector assembly |
| BNC, female, UG1094/U |
| Mounting | Di-Tech Model 101 or 103 frame |

**ORDERING INFORMATION**

| Without equalizer | order Model 120 |
| With equalizer | order Model 120EQ |
| Horizontal Mount | order Model 120H or 120EQH with Frame Model 101 |
| Vertical Mount | order Model 120V or 120EQV with Frame Model 103 and Model 801 power supply |
| Equalizer | order 10 dB @ 5 MHz or 10 dB @ 10 MHz |

Di-Tech inc. reserves the right to change specifications without notice.

_di-tech inc._
The di-tech **MODEL 150** pulse Distribution Amplifier is a precise device which utilizes the incoming pulse for time reference only and regenerates a pulse that is virtually free from distortion.

The input will accept up to 4.0 Vp-p hum with no jitter appearing on the 6 outputs. With input levels from 2 to 8 Vp-p, the output will remain constant at 4.0 Vp-p and the output rise and fall times are controlled and remain at 100 nano-seconds.

Front panel test points are provided for monitoring the input and outputs and each Pulse Distribution Amplifier has its own D.C. regulator.

The **150** utilizes the 101 frame for mounting up to 3 modules and with the 103 frame you can accommodate up to 10 modules.
SPECIFICATIONS

INPUT
Impedance 50 k bridging, loop thru connectors
Level 2 to 8.0 Vp-p
Return Loss > 40 dB @ 5.0 mHz
Hum 4.0 Vp-p maximum

OUTPUTS
Number 6
Impedance 75 ohm, source terminated
Isolation > 40 dB @ 5 mHz
Level 4.0 Vp-p ±0.3V

PERFORMANCE
Rise and Fall Times 100 nsec ±20 nsec
Tilt < 1%
Ringing < 1%
Noise -60 dB minimum
Delay 0.1 micro seconds

D. C. POWER
Voltage and Current +15 V.D.C. @ ma
−15 V.D.C. @ 150 ma

ENVIRONMENTAL, OPERATING
Temperature -20 to +60 degrees C
Humidity 0 to 95%

MECHANICAL
Size Standard 1.4" (35.6 mm) di-tech module,
4 ½" H (112 mm) x 13" D(330.2 mm)
Weight 18 oz. (510g), includes rear connector assembly.
Connectors - Video BNC, UG 1094/U
Mounting di-tech frame model 101 (accepts up to 3 modules)
or model 103 (accepts up to 10 modules)

ORDERING INFORMATION
Horizontal Mount • Order Model 150H with 101 frame
Vertical Mount • Order Model 150V with 103 frame and 801 power supply

Di-Tech inc. reserves the right to change specifications without notice

di-tech inc.
PULSE DISTRIBUTION AMPLIFIER WITH VARIABLE DELAY

MODEL 151
OPTION "A" ILLUSTRATED

FEATURES

- I.C. CIRCUITS
- PULSE WIDTH ADJUSTMENT UP TO 0.5 MICRO SEC.
- HUM UP TO 4.0 Vp-p, NO OUTPUT JITTER
- 6 OUTPUTS
- ONE DELAY ADJUST FOR 6 OUTPUTS
- OPT. 3 DELAY ADJUSTS FOR 6 OUTPUTS

DESCRIPTION

The di-tech MODEL 151 Pulse Distribution Amplifier is identical to the Model 150 Pulse D.A. except for the added features of adjusting the pulse width and pulse delay. The standard 151 has one delay adjustment for 6 outputs and the 151 Opt. A has one adjustment per 2 outputs thereby providing 3 delay controls.

The carefully controlled passive circuit and I.C. comparator allows for stable pulse delay and avoids problems usually encountered with one shot multi-vibrators.

Front panel test points are provided for monitoring the input and outputs and each Pulse Distribution Amplifier has its own D.C. regulator.

The 151 utilizes the 101 frame for mounting up to 3 modules and with the 103 frame, you can accommodate up to 10 modules.

di-tech inc. 48 JEFRYN BLVD., DEER PARK, N.Y. 11729 • Tel. 516 - 667-6300
### SPECIFICATIONS

**INPUT**
- Impedance: 50K bridging, loop thru connectors
- Level: 2 to 8.0 Vp-p
- Return Loss: >40 dB @ 5.0 mHz
- Hum: 4.0 Vp-p maximum

**OUTPUTS**
- Number: 6
- Impedance: 75 ohm, source terminated
- Isolation: >40 dB @ 5.0 mHz
- Level: 4.0 Vp-p ±0.3V

**PERFORMANCE**
- Rise and Fall Times: 100 n sec, ±20 n sec
- Tilt: <1%
- Ringing: <1%
- Noise: -60 dB minimum
- Delay: Adjustable, 0.3 micro sec to 3.0 micro sec.
- Delay Stability: ±0.1 micro sec

**FRONT PANEL CONTROLS**
- Delay Adjust: Standard 151, one option A 151, three
- Pulse Width: One

**D. C. POWER**
- Voltage and Current: +15 V.D.C. @ 200 ma
  - -15 V.D.C. @ 200 ma

**ENVIRONMENTAL, OPERATING**
- Temperature: -20 to +60 degrees C
- Humidity: 0 to 95%

**MECHANICAL**
- Size: Standard 1.4” (35.6 mm) di-tech Module, 4 ½” H (112 mm) x 13” D (330.2 mm)
- Weight: 18 oz. (510g), includes rear connector assembly.
- Connectors - Video: BNC, UG1094/U
- Mounting: di-tech frame Model 101 (accepts up to 3 modules or Model 103 (accepts up to 10 modules)

**ORDERING INFORMATION**
- Model 151 H or V, one delay adjust
- Model 151 H or V option A, three delay adjustments
- Horizontal Mount: Order Model 151 H with 101 frame
- Vertical Mount: Order Model 151 V with 103 frame and 801 power supply.

*Di-Tech inc. reserves the right to change specifications without notice*
KEY FEATURES

- 1 INPUT, 6 OUTPUTS
- ±20dB GAIN
- HI-IMPEDANCE INPUT, BAL OR UNBAL
- HEADPHONE JACK
- .1% DISTORTION @ +18dBm OUTPUT
- SCREW TYPE TERMINAL BLOCKS

DESCRIPTION

The Di-Tech MODEL 170 audio D.A. features a 200K resistive input, balanced or unbalanced with six 600 ohm outputs. Output type is balanced, 600 ohm resistive buildout.

Maximum input level is +24dBm and maximum output level is +18dBm continuous. Distortion at these levels is 0.1% maximum. The 6 outputs are adjustable via a single control which is located on the front of the unit.

A unique feature of the MODEL 170 is the front panel headphone jack. This jack permits a simple access to the audio D.A. for listening purposes whether it be for program identification or for trouble shooting purposes. The audio signal is not disturbed at all when utilizing the headphone set.

The audio D.A. is mounted into the Di-Tech 101 or 103 frame. The 101 accommodates 3 modules and the 103 mounts 10 modules.
SPECIFICATIONS

INPUT
Type                                          Bridging, Balanced or Unbalanced
Impedance                                     200K, Resistive
Level                                         +24dBm, Max.
Coupling                                      A.C.
Common Mode Rejection                          -55dB

OUTPUT
Number                                        6
Type                                          Balanced, Resistive Buildout
Impedance                                     600 ohms, others available
Level                                         +18dBm Continuous
Noise                                         -60dBm, -78dB Relative to Max. Output
Isolation Between Outputs                     -60dB
Coupling                                      D.C., Less than 25m.v. on Output

TRANSFER CHARACTERISTICS
Gain                                           ±20dB Continuously Adjustable
Common Mode Gain                                0dB
Frequency Response                             ±1dB, 5Hz to 50KHz
Total Harmonic Distortion                      0.1% Max., 20Hz to 20KHz at +18dBm Output

HEADPHONE OUTPUT
Type                                          STD. ¼” Phone Jack
Impedance                                     600 ohms, Standard
Level                                         Adjustable, Front Panel

D.C. POWER
Voltage                                        ±15 V.D.C. Unregulated
Current                                       +30ma. Idle, ±90ma. Max.
Dissipation                                    1.2 watts Idle, 4 watts Max.

ENVIRONMENTAL, OPERATING
Temperature                                    -20 to +60 degrees C.
Humidity                                       0 to 95%

MECHANICAL
Size                                          Standard 1.4” (35.5mm) Di-Tech module,
                                              4½” (112mm) H, x 13” (330.2mm) D.
Weight                                        18oz. (510g) includes connector assembly
Connector                                     Terminal Block, Screw Type
Mounting                                      Di-Tech Model 101 or 103 frame

ORDERING INFORMATION
Horizontal Mount • order Model 170H with Frame Model 101
Vertical Mount • order Model 170V with Frame Model 103 and Model 801 power supply

Di-Tech inc. reserves the right to change specifications without notice
The Di-Tech MODEL 171 audio D.A. features a 200K resistive input, balanced or unbalanced with six 600 ohm outputs. Output type is balanced, 600 ohm resistive buildout.

Maximum input level is +24dBm when in the 20dB gain mode. When switched to the 40dB gain mode, the maximum input level is +4dBm.

The 6th output is conveniently located on the front of the unit. This allows re-routing of the audio thru patch cords when the need arises. The output level for all outputs are controlled by a single multi-turn potentiometer located up-front.

Each MODEL 171 includes its own input fusing and regulators thereby limiting a fault to that one module without affecting others in the frame.

The 171 audio D.A. mounts into the Model 103 frame which is 5¼” H. and accepts up to 8 modules.
## SPECIFICATIONS

### INPUT
- **Type**: Bridging, Balanced or Unbalanced
- **Impedance**: 200K, Resistive
- **Level**: +24dBm @ 20dB gain mode
  +4dBm @ 40dB gain mode
- **Coupling**: A.C.
- **Common Mode Rejection**: -55dB

### OUTPUT
- **Number**: 5 from rear of unit
  1 up-front (for patching purposes)
- **Type**: Balanced, resistive buildout
- **Impedance**: 600 ohms, other available
- **Level**: +22dBm continuous
- **Noise**: -65dBm @ 0dB gain
  -55dBm @ 20dB gain
  -45dBm @ 40dB gain
- **Isolation between Outputs**: -60dB
- **Coupling**: D.C., less than 25mV on output

### TRANSFER CHARACTERISTICS
- **Gain**: 20dB position, adj. -2 to +22dB
  40dB position, adj. +18 to +42dB
- **Frequency Response**: ±0.25dB, 5Hz to 20KHz
- **Total Harmonic Distortion**: < 0.1%, from 20Hz to 20KHz @ +18dBm
  output, gain set @ 20dB
  < 0.25%, from 20Hz to 20KHz @ +18dBm
  output, gain set @ 40dB
  < 0.3%, from 20Hz to 20KHz @ +22dBm
- **Clipping Point**: +22dBm

### D.C. POWER
- **Voltage**: ±24 V.D.C., unregulated
- **Current**: ±60ma idle, ±200ma max.
- **Dissipation**: 2.4 watts idle, 8 watts max.

### ENVIRONMENTAL, OPERATING
- **Temperature**: -20°C to +60°C
- **Humidity**: 0 to 95%

### MECHANICAL
- **Size**: Std. 1.4" (35.5mm) Di-Tech Module,
  4½" (112mm) H, x 13" (330.2mm) D.
- **Weight**: 18oz. (510g) includes connector assembly
- **Connector (Rear)**: Terminal Block, Screw Type
- **Connector (Front)**: Bantam Jack
- **Mounting**: Di-Tech Model 103 frame

### ORDERING INFORMATION
- **Vertical Mount**: order Model 171V with frame Model 103
  and Model 802 power supply.

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*Di-Tech inc. reserves the right to change specifications without notice*
The Di-Tech Video Presence Detector utilizes a unique input circuit that is sharply tuned to pass only the horizontal line rate of the composite video input. In addition, the circuit is also level dependent thereby providing the user with a true indication of presence or absence of video.

The MODEL 402 provides for 4 bridging loop thru inputs and 4 alarms. Each detector has its own alarm circuit, thereby permitting an individual alarm for each video input. The on-board alarm light is illuminated and separate external relay outputs are provided.

The features for the MODEL 402 are: (1) there are 4 front panel switches which individually engage or disengage the alarm circuits. (2) an adjustment is provided for each detector in order to adjust the threshold level from 10 to 40 IRE units of sync. (3) with the 101 frame you can monitor up to 12 inputs and the 103 frame can accommodate up to 40 inputs.

The Video Presence Detector is adaptable to a wide variety of applications, such as; simultaneous monitoring of all video inputs to large A/V routing switchers, security surveillance systems, monitoring remote feeds and controlling remote equipment on/off.

di-tech inc. 48 JEFFRYN BLVD., DEER PARK, N.Y. 11729 • Tel. 516 - 667-6300
SPECIFICATIONS

INPUT, COMPOSITE VIDEO
Number ........................................ Four, Bridging, loop thru connectors
Return Loss ....................................... 45 dBmin. @ 5 mHz
Level ............................................. 2 V p-p max.
Line Rate ......................................... 15 KHz to 16 KHz (others on special order)

ALARM OUTPUT
Response Time .................................... 10 msec. nominal, can be increased to 3 seconds.
Contact Type .................................... Normally open, isolated (Form A)
Contact Rating ................................... 10 V.A. max., 100 volts max., .25 Amps. max.

NOISE IMMUNITY
Random Noise .................................... 2 V p-p
Hum ............................................. 10 V p-p, 10-120 Hz
High Frequency .................................. 5 Vp-p min., .5 to 50 mHz

THRESHOLD CONTROL ............................ Adjustable from 10 to 40 IRE units of sync.
(Accessible from front of unit)

FRONT PANEL CONTROL .......................... 4 alarm switches

D.C. POWER
Voltage .......................................... 15 to 30 V.D.C.
Current ......................................... 75 ma. nominal

ENVIRONMENTAL, OPERATING
Temperature ...................................... -20 to +60 degrees C.
Humidity ....................................... 0 to 95%

MECHANICAL
Size .............................................. Standard 1.4” (35.6mm) Di-Tech module,
4½” (112mm) H, x 13” (330.2mm) D.
Weight ........................................... 18oz. (510g) includes connector assembly
Connectors - Video ............................. BNC type, UG1094/U
Connectors - Alarm ............................. Terminal Block
Mounting ....................................... Di-Tech Model 101 or 103 frame

ORDERING INFORMATION
Model 402 • 4 inputs, 4 alarms
Horizontal Mount • order Model 402H with Frame Model 101
Vertical Mount • order Model 402V with Frame Model 103 and Model 801 power supply

Di-Tech inc. reserves the right to change specifications without notice
# FEATURES

- I.C. DETECTORS
- ON-BOARD LED STATUS INDICATORS
- RELAYS FOR EXTERNAL ALARMS
- AUTOMATIC RELAY SWITCHING
- SEPARATE DETECTOR FOR AUXILIARY INPUT
- 2 FORM C CONTACTS FOR BAL. AUDIO SWITCH

# DESCRIPTION

The di-tech **MODEL 403** has been designed to be utilized at remote unattended areas where automatic video and audio switching is required when a failure occurs in the transmission system.

Two inputs are provided; one is for the program and the other is for the auxiliary backup composite video feed. Should the program feed fail, the on board video detector output would then trigger the relay to automatically switch to the auxiliary input. Normally the unit is factory set to switch after a 3 second failure but this can be easily altered by a simple component change. As this switch is taking place, an on-board LED failure indicator is illuminated and a separate relay is used for the external alarm. In addition, 2 form C contacts are provided for switching balanced audio.

A unique feature of the **403** is the separate video detector and alarm circuit for the auxiliary input. This added feature now allows the user to have simultaneous status on both program and auxiliary video inputs. With the model 101 frame, you can mount up to 3 modules.
SPECIFICATIONS

VIDEO INPUT (composite)
- Number: Two, program and auxiliary
- Impedance: 75 ohm, ±1%
- Level: 2 Vp-p maximum
- H Line Rate: 15 KHz to 16 KHz (others on special order)
- Return Loss: 40 dB, minimum

VIDEO OUTPUT
- Number: One, 75 ohm
- Transfer Characteristics: No degradation due to relay circuit

ALARM OUTPUTS (program and auxiliary)
- Response Time: 3 seconds nominal (can be field changed)
- Contact Type: Form A, normally open, isolated
- Contact Rating: 10 V.A. max., 100 volts max., 0.25 amps max.

AUXILIARY OUTPUT (audio)
- Contact Type: 2 Form C (DPDT)
- Contact Rating: 115VAC od D.C.; 2 amps max.; 90 watts max.

NOISE IMMUNITY
- Random Noise: 2 Vp-p minimum
- Hum: 10 Vp-p, 10-120 Hz
- High Frequency: 5 Vp-p minimum, 0.5 to 50 mHz

D. C. POWER
- Voltage: 15 to 30 VDC
- Current: 150 ma, nominal

ENVIRONMENTAL, OPERATING
- Temperature: -20 to +60 degrees C
- Humidity: 0 to 95%

MECHANICAL
- Size: Standard 1.4" (35.6mm) di-tech module, 4½" (112mm) H. x 13" (330.2mm) D.
- Weight: 18 oz. (510g) includes Rear Connector Assembly.
- Connectors (video): BNC, UG1094/U
- (alarm): 4 pin, circular type
- (auxiliary): 7 pin, circular type
- Mounting: di-tech 101 frame

ORDERING INFORMATION
- Model 403 with 101 frame

Di-Tech inc. reserves the right to change specifications without notice

di-tech inc.
VIDEO PRESENCE/LOSS DETECTOR

MODEL 404

FEATURES

- 4 BRIDGING INPUTS PER CARD
- 2 RELAYS PER ALARM CIRCUIT
- ONE RELAY ELECTRONICALLY LATCHED
- ADJUSTABLE TIME DELAY CONTROL
- 12 VIDEO INPUTS PER 1¾" FRAME
- 40 VIDEO INPUTS PER 5¾" FRAME

DESCRIPTION

The Di-Tech MODEL 404 video presence detector employs 4 separate sync detectors each with its associated relay alarm circuitry. The 4 inputs per card are hi-impedance bridging loop-thru.

When conditions are normal, a green on board LED is illuminated. Should a video loss occur, an onboard red LED is illuminated and 2 separate relays are provided for the external alarm. One relay is a form C type which closes or opens in a signal alarm condition. When video is present the relay automatically reverts to a normal condition. The second relay which is form A, is electronically latched and can only be reset by external control.

Each alarm circuit has an adjustable time delay control for establishing alarm priorities and switching logic. Delays can be set from 1 to 10 seconds.

The MODEL 404 mounts into the 101 frame. The frame is 1¾" high and accepts 3 modules. With this approach you can monitor up to 12 video lines.

For larger systems, the model 103 frame is utilized. This frame accommodates 10 modules and 40 video feeds are monitored in 5¾" of rack space.

ADDRESS: 311 Wyandanch Ave., North Babylon, N.Y. 11704 • TEL. NO. (516) 643-4040
SPECIFICATIONS

INPUT, COMPOSITE VIDEO
Number ................................ Four, Bridging, loop thru connectors
Return Loss .......................... 45 dBMin. @ 5 mHz
Level .................................. 2 V p-p max.
Line Rate .............................. 15 KHz to 16 KHz (others on special order)

ALARM OUTPUT, PER DETECTOR
Response Time ......................... Failure, 1-10 seconds adjustable.
Video Return, 10 Msec. Nom.
Alarm Contacts ....................... 1 Form C (S.P.D.T.) Non-Latching
1 Form A (S.P.S.T.) Latching (Electronic)
Contact Rating ....................... 10 V.A. Max., 100 Volts Max.,
.25 Amps Max. (Reed)
Reset .................................. 1 External connection. Ground to
Reset all Latching Relays.
Relay Connections ................... 1 Common for all 1 Form C Relays.
1 Common for all 1 Form A Relays.
N.O. and N.C. for each 1 Form C Relay.
N.O. for each 1 Form A Relay.

NOISE IMMUNITY
Random Noise ........................ 2 V p-p
Hum .................................. 10 V p-p, 10-120 Hz
High Frequency ...................... 5 V p-p min., .5 to 50 mHz

FRONT PANEL CONTROL
........................................ 4 alarm switches

D.C. POWER
Voltage ............................... 15 to 30 V.D.C.
Current .............................. 75 ma. nominal

ENVIRONMENTAL, OPERATING
Temperature ......................... -20 to +60 degrees C.
Humidity ............................. 0 to 95%

MECHANICAL
Size .................................. Standard 1.4" (35.6mm) Di-Tech module,
4½" (112mm) H, x 13" (330.2mm) D.
Weight ................................ 18oz. (510g) includes connector assembly
Connectors - Video .................. BNC type, UG1094/U
Connectors - Alarm .................. 15 pin male, Amp Hdp-20
Mounting ............................. Di-Tech Model 101 or 103 frame

ORDERING INFORMATION
Horizontal Mount  • Order Model 404H with Model 101 frame.
Vertical Mount  • Order Model 404V with Model 103 frame and Model 801 power supply.

Di-Tech Inc. reserves the right to change specifications without notice

di-tech inc.
VIDEO DETECTORS AND VIDEO IDENTIFIERS

MODEL 410

MODEL 411

MODEL 412

MODEL 413

FEATURES
- Numbers are selected via thumbwheels
- Numbers are added passively to video
- Video loss alarms
- Vertical and horizontal positioning of numbers

DESCRIPTION

MODEL 410

The 410 detector and source identifier has circuitry for a sync detector, high and low level APL detectors, number generator and an internal sync generator. Four numbers are added passively to the incoming video source. When a sync failure occurs, the unit provides a video loss alarm and then switches over to its internal sync generator that delivers its own composite signal which only contains the four numbers.

MODEL 411

The 411 detector and source identifier contains circuitry for a sync detector, number generator and an internal sync generator. Two numbers are added passively to the incoming video. When a sync failure occurs, the unit provides a video loss alarm and then switches over to its internal sync generator that delivers its own composite signal which only contains the four numbers.
MODEL 412

The 412 video source identifier contains only the circuitry for a 4-number generator. There are no detectors. This unit is totally dependent on the incoming video signal for viewing the 4 numbers.

MODEL 413

The 413 video source identifier contains circuitry for an alpha-numeric generator. This unit features a thumbwheel selector for 3 numbers and a two position switch for selecting one of two characters. There are no detectors on this unit and it is totally dependent on the incoming video signal.

SPECIFICATIONS

INPUT/OUTPUT
Level ........................................ 1 VPP nom., 525H line composite video
Impedance ..................................... High impedance loop thru
Characters .................................... Resistively added to video

ADJUSTMENTS
Sync detector ................................. 10 to 30 IRE units, models 410 and 411
Low APL detector .............................. 10 to 100 IRE units, model 410
High APL detector ............................. 90 to 120 IRE units model 410
Character level ................................ 10 to 30 IRE units models 410, 411, 412, & 413
Horizontal and vertical ..................... ALL MODELS

SYNC GENERATOR ............................. RS 170, model 410 and 411

CHARACTER SIZE ............................ 25 lines per field, models 410, 411, 412
.............................................. 9, 18, or 27 lines per field, model 413

MECHANICAL
Size ........................................... 4½” H x 13” D.
Connectors .................................... BNC for video, screw type terminal block for alarms
Mounting ....................................... up to 3 modules in the 101 frame
.............................................. up to 10 modules in the 103 frame +801 supply

Di-Tech inc. reserves the right to change specifications without notice

di-tech inc.
DESCRIPTION

The 470 tone generator and 471 tone detector are used to validate an audio transmission path. This path can be a twisted pair or an R.F. link. The 470 tone generator produces a sub-audible tone which is factory set in the frequency range of 20Hz to 100Hz. The frequency is then passively added to the program line and the output level is adjustable from -20 to -30 dBm. At the other end of the transmission path the 471 phase lock loop detector simply looks for the presence of the low frequency. Should a fault occur in the transmission path the detector will provide an on board LED failure light as well as a form A relay closure for driving an external alarm.

In addition to monitoring audio links, the 470/471 system can be utilized for other purposes, such as, controlling remote functions at unattended sites. The alarm relay on the 470 detector in this example is used as a control relay instead of an alarm relay. By merely turning the 471 tone generator on or off the system then performs as a remote controlled device.

The 470 and 471 can be mounted in either the 101 or 103 frame assemblies. The 101 mounts up to 3 modules horizontally and the 103 frame accepts up to 10 vertical modules plus the 801 plug-in power supply.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TONE FREQUENCY:</td>
<td>20Hz to 100Hz, factory preset, crystal controlled</td>
</tr>
<tr>
<td>FREQUENCY STABILITY:</td>
<td>±.005%</td>
</tr>
<tr>
<td>470 OUTPUT IMPEDANCE:</td>
<td>Balanced, 40K source impedance</td>
</tr>
<tr>
<td>471 INPUT IMPEDANCE:</td>
<td>Balanced, 100K</td>
</tr>
<tr>
<td>MAX. PROGRAM LEVEL:</td>
<td>+24dBm</td>
</tr>
<tr>
<td>RELAY OUTPUT:</td>
<td>10V.A. max, 100V. max, .25A. max</td>
</tr>
<tr>
<td>D.C. INPUT:</td>
<td>±10 to 25 VDC</td>
</tr>
</tbody>
</table>
KEY FEATURES

- FRONT PANEL NUMERICAL READOUT
- BCD ENCODED OUTPUT
- REMOTE CONTROL 5800/5840 SWITCHER
- 4 DIGIT CODING, 100 x 100 CONTROL

DESCRIPTION

The 587 is utilized in applications when remote access to the 5800/5840 routing switcher is required via the telephone lines or via an RF link with sub carrier. The standard telephone touch pad is used for selecting the output and then the input.

The Model 578 X-Y Tone Encoder must be used in conjunction with the Model 570 Tone Decoder. The Model 578 takes the one of twelve outputs from the 570 and formats them into a 16 bit BCD word. This 2 BYTE word is used to drive the X-Y input of the 5840 routing switcher. It may also be used to drive the 5810 (X-Y interface) for the 5800 routing switcher.

This card also features a numerical readout located on the front of the card which indicates the numbers as they are entered. The output numbers are entered first followed by the "\*". The input numbers are then selected followed by the "\*" which enters the numbers, and generates a take pulse to the switcher. The whole procedure is performed over the phone line from a remote location.
SPECIFICATIONS

INPUT ........................................ 1 of 12 outputs from 570 card

OUTPUT ..................................... 16 bit BCD

DC INPUT
Input Voltage .............................. +18V DC regulated
Input Current ............................. 200 MA (max)

MECHANICAL
Size ........................................... 13" (330.2 mm) D x 4½" (112 mm) H
Weight ........................................ 7.4 oz. (210.2 g)
Mounting ..................................... Di-Tech model 101 or 103 frame

Di-Tech inc. reserves the right to change specifications without notice

di-tech inc.
RS 232 CONVERTER

KEY FEATURES
- STANDARD RS 232 INPUT/OUTPUT, 1200 BAUD STD.
- PARALLEL DATA IN, SERIAL DATA OUT
- SERIAL DATA IN, PARALLEL DATA OUT.

DESCRIPTION
The Model 584 converts parallel data to the standard RS 232 format when used in the "Transmit" mode and in the "Receive mode" the unit receives the RS 232 and converts it back to the parallel format.

The Model 584 is factory set to operate at 1200 BAUD but other BAUD rates are available as an option.

The Model 584 is used in applications where parallel data from the PACE computer must be converted to a serial format for transmission purposes. This card will also accept RS 232 serial data and convert it back to parallel data for purposes of controlling the 5800 and 5840 routing switchers.
SPECIFICATIONS

TRANSMIT MODE
Input: Parallel 8 bit BCD or binary
Output: Standard RS 232 serial
Rate: 1200 BAUD (standard)
       2400, 4800 (optional)

RECEIVE MODE
Input: Standard RS 232 serial
Output: Parallel 8 bit BCD or binary
Rate: 1200 BAUD (standard)
       2400, 4800 (optional)

DC INPUT
Input Voltage: ±20V DC unregulated
Current: +25 MA (max)
         -30 MA (max)

MECHANICAL
Size: 13” (330.2 mm) D x 4½” (112 mm) H
      Standard 1.4” (35.6 mm) Di-Tech module
Weight: 12.5 oz. (353.2 g) includes connector assm.
Mounting: Di-Tech model 101 or 103 frame

Di-Tech inc. reserves the right to change specifications without notice

di-tech inc.
10 WATT AMPLIFIER

KEY FEATURES

- 10 WATT RMS OUTPUT
- < 1% THD
- ON BOARD VOLUME CONTROL
- 30 Hz TO 20kHz FREQUENCY RESPONSE

DESCRIPTION

The DI-TECH Model 723 Audio Amplifier features a 100K ohm balanced resistive input, with a single output capable of delivering 10 watts rms power into an 8 ohm load with less than 1% total harmonic distortion.

The Model 723 also features an easy access front panel volume control to set the speaker output level. Front panel test points are also supplied to monitor voltages and output level.

The Model 723 Audio Amplifier can be mounted in a model 101 frame for up to 3 modules, or in a model 103 frame for up to 10 modules.

di-tech inc. 48 JEFRYN BLVD., DEER PARK, N.Y. 11729 • Tel. 516- 667-6300
SPECIFICATIONS

INPUT
Type .................................. Balanced
Impedence ............................. 100k, resistive
Level .................................. ±20 dBm
Coupling ............................... A.C.

OUTPUT
Level .................................. 10 watts rms
THD .................................... < 1% @ rated output
Frequency Response .................. 30 Hz to 20 KHz ± 1 dB
S/N ..................................... -55 dBm min.

DC POWER
Voltage ................................. ±24 V.D.C., unregulated
Current (Idle) ......................... ±25 mA
Current (Max. Output) .............. ±300 mA

MECHANICAL
Size ..................................... 4½" (112mm) H x 13" (330.2mm) D
Weight .................................. 13.2 oz. (375g) including ID strip & shield
Mounting ............................... di-tech model 101 or 103 frame

ORDERING INFORMATION
Specify 723H for horizontal mount (101 frame)
723V for vertical mount (103 frame)

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**KEY FEATURES**

- Switchable 75/124 Ohm Input
- Flat Gain, 12dB
- Adj. Equalization up to 10dB
- Plug-in Modules
- 2/75 Ohm and 1/124 Ohm Outputs
- Back Porch Clamp, Fast or Slow

**DESCRIPTION**

The Model 1200 is a versatile unit that eliminates many problems caused by lengthy 75 ohm or 124 ohm cable runs. The backporch switchable clamper attenuates hum and field tilt by at least 30dB. The differential input reduces common mode hum caused by ground loops by at least 55dB. In applications where microwave ringing occurs, the unit is easily converted over to a SOFT clamping action via a strap that is conveniently located on the Model 120 plug-in module.

The six section slope equalizer is continuously variable from 0 to 10dB @ 4.5MHz or 10.0MHz with a single front panel control. The equalizer is switchable between 75 ohms and 124 ohms and the location of the slide switch is on the rear panel. Post or pre-equalization is easily accomplished with the Model 1200.

The flat gain range of the unit is -6 to +12dB and the control is continuously adjustable. This control is located on the front edge of the module.

The 1200 is normally supplied to function with a nominal input of 115VAC. Should the need arise for DC operation, this unit can be furnished to operate at ±24 or ±48 VDC. DC operation is an optional feature.

ADDRESS: 311 Wyandanch Ave., North Babylon, N.Y. 11704 • TEL. NO. (516) 643-4040
**SPECIFICATIONS**

**INPUT**
- **Type**: Differential, floating
- **Impedance**: Self-terminating, switchable 75/124 OHM
- **Level**: 2 V p-p maximum
- **Return Loss**: >45 dB @ 5 MHz, 26 dB @ 10 MHz

**OUTPUTS**
- **Number**: 2 @ 75 OHM, 1 @ 124 OHM
- **Isolation**: >40 dB @ 5 MHz
- **Level**: 0.5 to 2 V p-p
- **Output D.C.**: <50 mV, clamp off. Back porch clamped to 0 V.D.C., with clamp on. (75 OHM output only)

**PERFORMANCE**
- **Frequency Response**: ±0.2 dB to 5 MHz, ±0.4 dB to 10 MHz
- **Gain**: 0, -6 dB to +12 dB
- **Gain Stability**: ±0.05 dB, -20 to +60° C
- **Differential Gain**: <0.3% typical, 0.5% max.
- **Differential Phase**: <0.3% typical, 0.5% max.
- **Hum and Noise**: -60dB min. RMS noise to 1 V p-p (unity gain)
- **Field Tilt**: <0.2% clamp on, <1.0% clamp off
- **Line Tilt**: <0.2%, clamp on or off
- **Bounce, 1 V Step**: No overshoot, clamp on. 0.2 v overshoot, 1.5 sec. time constant, clamp off.
- **Chrominance/Luminance**: <10 nsec., 0.5 dB
- **H.F. Boost**: +4 dB @ 4.2 MHz
- **Common Mode Rejection**: >55 dB @ 50/60 Hz
- **Common Mode Range**: 8 V p-p max.

**CLAMPER**
- **Type**: Back porch, no effect on color burst.
- **Hum Rejection**: -30 dB min., 3 V p-p max. hum
- **Response**: Internal jumper for "soft" clamping, approx. 12 line response time.

**EQUALIZER (Optional)**
- **Type**: 6 section slope equalizer, continuously variable, switchable 75/124 OHM
- **Cable Type**: 8279, 8281, 9231, RG6A/U, RG11A/U, RG59B/U, WE724, WE728 or 16PEVL
- **Range**: ±10 dB @ 4.5 MHz or 10 dB @ 10 MHz
- **Accuracy**: ±0.05 dB per 1.5 dB of cable loss @ 10 MHz. (+1 dB typ. for 500' of 8281)

**POWER INPUT**
- **Voltage**: 115VAC ±10%, 36V.A
- **230VAC available, specify on order**

**FRONT PANEL CONTROLS**
- **Gain**, H.F. boost, equalization, clamp on/off

**ENVIRONMENTAL, OPERATING**
- **Temperature**: -20 to +60° C
- **Humidity**: 0 to 95%

**MECHANICAL**
- **Size**: 1.75" H. (44.5mm) x 19" W (483mm) x 16.25" D (413mm)
- **Weight**: 9 LBS (4.1 KGS)
- **Connectors**: UG1094/U, UG422/U

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**DESCRIPTION**

The model 5106 GAP video switcher has been designed for applications where low cost switching is required, such as; test signal selection, monitor input selection and closed circuit distribution.

The 5106 is provided in a 6 x 1 configuration and utilizes high quality switches with silver plated contacts. The selected input is fed to the output and other inputs are automatically terminated.

Test points are provided on the front panel for purposes of verifying the video inputs and levels.

**SPECIFICATIONS**

**ELECTRICAL**
- Input impedance • 75ohms ±1%.
- Crosstalk • –70db minimum @ 5MHz.
- Transfer characteristics • No degradation due to passive nature.
- Outputs • 1, equal to source impedance.

**MECHANICAL**
- Size: 1¾"H. (44mm), 19"W. (483mm), 5”D. (127mm).
- Mounting: Standard E.I.A., 19" rack mount, 1 RU.
- Weight: 4 lbs. (2Kg).
- Connectors: BNC female

**ORDERING INFORMATION**
- Model 5106 for 6 Inputs
- Model 5112 for 12 Inputs
The Di-TECH Model 5400 remote controlled audio follow video routing switcher has been designed to offer the user a quality distribution system at an economical price.

The electronics is housed in a 1.75 inch frame or 5.25 inch frame and a choice of matrix size is provided, they are; 12x2, 8x2 or 4x1. Video switching is vertical interval and in the absence of vertical drive, switching reverts automatically to random.

Video inputs are bridging loop thru, high impedance. Output expansion is easily accomplished by looping thru the inputs until the desired output number is achieved. Typically, you can expand the output configuration up to 12 before requiring video DA's.

The Model 504 plug-in P.C. switching card contains all the electronic circuits for the video, audio, control, latching and optional tally. The Model 101 frame is pre-wired at the factory for a 12x2 configuration, thereby permitting a truly simple input expansion by purchasing just the 504 switching card.

Variations in methods of control are available and they are; Illuminated momentary pushbuttons, thumbwheel and take button with or without readout or touch tone®. For touch tone® control see Di-TECH data sheet Model 5700.
# MODEL 5400 SPECIFICATIONS

<table>
<thead>
<tr>
<th>INPUT, VIDEO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>20 k bridging, loop thru connectors</td>
</tr>
<tr>
<td>Return Loss</td>
<td>20 dB @ 5 MHz, 20 dB @ 20 MHz</td>
</tr>
<tr>
<td>Level</td>
<td>2 V p-p max.</td>
</tr>
<tr>
<td>Vertical Drive</td>
<td>Hi-z loop thru (only required for V. I. switching)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTPUTS, VIDEO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>75 ohms, ±1%</td>
</tr>
<tr>
<td>Number</td>
<td>2 outputs per buss, D.C. coupled</td>
</tr>
<tr>
<td>Level</td>
<td>2 V p-p</td>
</tr>
<tr>
<td>Gain</td>
<td>unity, ±3 dB adj.</td>
</tr>
<tr>
<td>Gain Stability</td>
<td>±0.1 dB, –20 to –60 degrees C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PERFORMANCE, VIDEO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>±0.1 dB to 5 MHz, ±0.2 dB, 5 MHz to 12 MHz, ±0.9 dB 12 MHz to 20 MHz</td>
</tr>
<tr>
<td>Crosstalk</td>
<td>-60 dB typical @ 4.5 MHz, –54 dB worst case</td>
</tr>
<tr>
<td>Differential Gain</td>
<td>@ 1 V p-p output &lt; 0.3%</td>
</tr>
<tr>
<td>Differential Phase</td>
<td>@ 2 V p-p output &lt; 0.5%</td>
</tr>
<tr>
<td>Hum and Noise</td>
<td>&lt; 0.3% max.</td>
</tr>
<tr>
<td>Bounce, 1 V p-p Step</td>
<td>0.1 V peak max.</td>
</tr>
<tr>
<td>Chrominance to Luminance Delay</td>
<td>&lt; 10 ns, 3.58 or 4.43 MHz</td>
</tr>
<tr>
<td>K Factor</td>
<td>T pulse, &lt; 0.5%</td>
</tr>
<tr>
<td>Differential Delay</td>
<td>&lt; ±0.5 degrees</td>
</tr>
<tr>
<td>Electrical Length</td>
<td>21 nanoseconds, nom.</td>
</tr>
<tr>
<td>Switching Time</td>
<td>&lt; 0.5 microseconds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PERFORMANCE, AUDIO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>±0.25 dB max., 20 Hz to 20 kHz</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>&lt; 0.5% @ rated output</td>
</tr>
<tr>
<td>Noise</td>
<td>&gt; –80 dB</td>
</tr>
<tr>
<td>Gain</td>
<td>unity, ±10 dB adj.</td>
</tr>
<tr>
<td>Crosstalk</td>
<td>&lt; –65 dB, 20 Hz to 20 kHz</td>
</tr>
<tr>
<td>Output</td>
<td>1,600 ohm balanced</td>
</tr>
<tr>
<td>Output Level</td>
<td>&lt; –18 dBm max.</td>
</tr>
<tr>
<td>Switch Type</td>
<td>Integrated Circuit</td>
</tr>
<tr>
<td>Common Mode Rejection</td>
<td>&lt; –55 dB min., 20 Hz to 1 Kz</td>
</tr>
</tbody>
</table>

## TALLY (OPTIONAL)

- **Single Level**: XY
- **1 common per output**
- **12 Normally open inputs**
- **Reed Relays**
- **Contact Rating**: 10 V.A. max. 100 volts max., 25 amps max.

## A.C. INPUT

- **115/230 volts ±10%, 60 watt max.**

## MECHANICAL

- **Dimensions**: 1.75"H(44.5mm), 19"W(483mm), 16.25"D(413mm)
- **Connectors**: Video, BNC type LG1094/U, Audio, Tally and control, multi-pin connector

## ORDERING INFORMATION

**Horizontal Mount**: order Model 504H with Frame Model 101
**Vertical Mount**: order Model 504V with Frame Model 103 and Model 801 power supply

Indicate Matrix Size: 12x2, 8x2, 4x1 or 4x3
Indicate Control Cable Length required, if in excess of 50 foot standard.
Indicate method of control.

*Di-Tech inc. reserves the right to change specifications without notice*
The DI-TECH MODEL 5412 remote controlled audio follow video routing switcher has been designed to offer the user a compact quality distribution system at an economical price.

The electronics as illustrated is housed in a 1.75 inch frame and this compactness makes it extremely useful as an input selector for VTR's, small studios, ENG or mobile vans. The control panel has 12 illuminated momentary pushbuttons and the control cable normally supplied is 50 feet. Should longer lengths be required, please specify on your order.

The dual audio provision provides the user with an extra feature that is not normally supplied by most other switching manufacturers.

Should the future application be stereo, multi-language or control codes, the 5412 can satisfy your requirements without adding an additional chassis in order to obtain that 2nd audio level.

Video inputs are bridging loop thru, high impedance. Output expansion is easily achieved by looping the inputs until the desired number of outputs is attained. Typically, you can expand the output configuration up to 6 before video DA’s are required.

The Model 5412 contains a plug-in printed circuit card which contains all the circuitry for the video, dual audio control, latching and on board D.C. regulators. The AC supply is housed within the frame assembly. All integrated circuits are mounted in their own sockets and the I.C.'s are not soldered to the printed circuit card.
### MODEL 5412 SPECIFICATIONS

**INPUT, VIDEO**
- **Impedance**: 20 k bridging, loop thru connectors
- **Return Loss**: > 40 dB @ 5 MHz, 20 dB @ 20 MHz
- **Level**: 2 V p-p max.
- **Vertical Drive**: Hi-Z loop thru (only required for V. I. switching)

**OUTPUTS, VIDEO**
- **Impedance**: 75 ohms, ±1%
- **Number**: 2 outputs per buss, D.C. coupled
- **Level**: 2 V p-p
- **Gain**: unity, ±3 dB adj.
- **Gain Stability**: ±0.1 dB, -20 to +60 degrees C

**PERFORMANCE, VIDEO**
- **Frequency Response**: ±0.1 dB to 5 MHz
- **±0.2 dB, 5 MHz to 12 MHz
- **±0.2 dB, 12 MHz to 20 MHz
- **Crosstalk**: -60 dB typical @ 4.5 MHz, -54 dB worst case
- **Differential Gain**: @ 1 V p-p output < 0.3%
- **Differential Phase**: @ 1 V p-p output < 0.3 degrees
- **Hum and Noise**: ±0.1 dB, -20 to +60 degrees C
- **Field Tilt, 50 or 60 Hz**: < 0.3% max.
- **Bounce, 1 V p-p Step**: 0.1 V peak max.
- **Chrominance to Luminance Delay**: < 10 ns, 3.58 or 4.43 MHz
- **K Factor**: T pulse, < 0.5%
- **Differential Delay**: < ±0.5 degrees
- **Electrical Length**: 21 nanoseconds, nom.
- **Switching Time**: < 0.5 microseconds

**PERFORMANCE, AUDIO**
- **Input**: 50 k bridging, balanced
- **Input Level**: ±20 dBm max.
- **Frequency Response**: ±0.25 dB max., 20 Hz to 20 KHz
- **Total Harmonic Distortion**: < 0.3% @ rated output
- **Noise**: > -80 dB
- **Gain**: unity, ±10 dB adj.
- **Crosstalk**: -65 dB, 20 Hz to 20 KHz
- **Output**: 1,600 ohm balanced
- **Output Level**: +18 dBm max.
- **Switch Type**: Integrated Circuit
- **Common Mode Rejection**: -55 dB min., 20 Hz to 1 KHz

**A.C. INPUT**: 115/230 volts ±10%, 60 watt max.

**MECHANICAL**
- **Dimensions**: 1.75"H(44.5mm), 19"W(483mm), 16.25"D(413mm)
- **Connectors**: Video, BNC type UG1094/U

**ORDERING INFORMATION**
- Specify Model 5412
- Indicate Control Cable Length required, if in excess of 50 foot standard.

---

*Di-Tech inc. reserves the right to change specifications without notice*

**di-tech inc.**
**KEY FEATURES**

- **FLEXIBLE MATRICES**
  - 12 x 1, 12 x 2, 12 x 3, 24 x 1, 36 x 1 or 3, 12 x 1
- **OUTPUT LEVEL +18dBm STD.**

- **PLUG IN - CARDS**
- **BRIDGING INPUTS**
- **REMOTE CONTROL**
- **OPTIONAL +24dBm OUTPUT**

**DESCRIPTION**

The 5413 can be wired to provide the variations in matrices mentioned in the above features. Each plug-in card represents a matrix of 12 x 1, therefore we can wire the rear connector assembly for a 12 x 3 configuration and when one card is installed, the unit becomes a 12 x 1. Install the second card and it's a 12 x 2 and the third card for a 12 x 3. Each output has its own output cable and one 12 x 1 control panel. This approach allows output expansion within the frame.

In order to achieve input expansion on the model 5414 within the same frame the unit is wired for a 36 x 1 configuration. With one card it's a 12 x 1, 2 cards, 24 x 1 and 3 cards for a 36 x 1. With this approach you can have up to 3 control cables and three 12 x 1 control panels.

The 5413 and 5414 have a standard output level of +18dBm into 600 ohms. As an option we can provide an output of +24dBm into 600 ohms.

The 5413 and 5414 plug-in cards and power supply are contained within a 1.75 inch x 19 inch rack mounted frame assembly. The control panels are 1.75 inch x 19 inch rack mounted and the momentary push buttons are illuminated.
MODEL 5413 SPECIFICATIONS

INPUT ................................... Balanced, 50k bridging
INPUT DC COMPONENT ....................... ±10 V maximum
INPUT LEVEL ................................ +20 dBm @ 600 ohm
                                        +26 dBm @ 150 ohm
COMMON MODE REJECTION .................... 55 dB minimum, 20 Hz to 1 KHz
TOTAL HARMONIC DISTORTION ............. <0.5% @ +18 dBm (+24, +26 opt.)
                                        <.25% typical
FREQUENCY RESPONSE ...................... ±0.25 dB max., 20 Hz to 20 KHz
SIGNAL/NOISE RATIO ...................... >80 dBm, 30 KHz weighted
                                        >98 dB below +18 dBm
GAIN ........................................ Unity, ±10dB, adjustable
CROSSTALK ................................. >70 dB, 20 Hz to 20 KHz
OUTPUT ..................................... One, balanced
OUTPUT IMPEDANCE ......................... 600 ohms
                                        100 ohms, Hi-level option
OUTPUT DC COMPONENT ...................... 0V, ±50 mv
OUTPUT LEVEL ............................... +18 dBm into 600 ohms
                                        +24 dBm into 600 ohms, opt.
                                        +26 dBm into 150 ohms, opt.
CROSSPOINTS ............................... Integrated circuit
MECHANICAL ................................. 5413 audio connector — screw type
                                        terminal block
                                        5414 audio connector — type D
                                        multi-pin

Di-Tech inc. reserves the right to change specifications without notice
The model 5470 system has been designed to simplify and minimize installation time of tone accessed switching equipment at remote unattended sites.

This system includes all the necessary circuitry to control four independent 4x1 switching matrixes. The 4x1 matrixes are easily converted to a 4x4 matrix by externally adding looping cables on the inputs.

The 5470 consists of the model 3137A auto answer card along with a compression amplifier which compensates for variations in line levels. The model 570 decoder, decodes the two frequencies associated with each number on the touch tone encoder. The model 572 control decoder accepts the output from the decoder and produces 12 high current PNP outputs which are then utilized for controlling the switching matrix on the 504 card. The switching card does contain its own latching circuitry.

The rear panel assembly is wired to accept an optional model 573 control card. This card is utilized for other control functions and is supplied with 12 momentary or latching relays.

Should an A.C. power failure occur at the unattended site, the system is designated to accept and diode switch to an external D.C. source.
### SPECIFICATIONS

#### PERFORMANCE, VIDEO
- **Frequency Response**: ±0.1 dB to 5 MHz, ±0.2 dB, 5 MHz to 12 MHz, ±0.5 dB, 12 MHz to 20 MHz
- **Crosstalk**: <0 dB, typical @ 4.5 MHz, -54 dB worst case
- **Differential Gain**: @ 1 V p-p output <0.3% , @ 2 V p-p output <0.5% , @ 1 V p-p output <0.3 degrees , @ 2 V p-p output <0.4 degrees
- **Hum and Noise**: -60 dB min.
- **Field Tilt**: 0.3% max
- **Chrominance to Luminance Delay**: 0.5 ns, 3.58 or 4.37 MHz
- **K Factor**: 1 pulse, <0.5%
- **Differential Delay**: <0.1% max
- **Electrical Length**: 0.1 degrees
- **Switching Time**: 0.1 microseconds
- **PERFORMANCE, AUDIO**
  - **Input Level**
  - **Frequency Response**
  - **Total Harmonic Distortion**
  - **Noise**
  - **Gain**
  - **Crosstalk**
  - **Output Level**
  - **Switch Type**
  - **Common Mode Rejection**

#### MODEL 570 TOUCH TONE DECODER
- **Input Impedance**
- **Level**
- **Dynamic Range**
- **Bandwidth**
- **Stability**
- **Response Time**
- **Input Connector**

#### MODEL 573 CONTROL DECODER (OPTIONAL)
- **Output Setting**
- **573 Option A**
- **Contact Rating**
- **Output Duration**

#### MODEL 3127A AUTOMATIC ANSWERING CARD
- **Ring Input**
- **Hold Time**
- **Input Impedance**
- **Output Impedance**
- **D.C. Input**
- **Connector**

#### MODEL 575 TOUCH TONE ENCODER
- **Input Impedance**
- **Output Impedance**
- **Output Level**
- **Frequency Stability**
- **SNR**

#### MECHANICAL
- **Frame Size**
- **Connectors**

#### A.C. INPUT
- **ORDERING INFORMATION**
  - Indicate whether Audio Only, Video Only or Audio/Video
  - Matrix Size
  - Opt. 273 Relay Card (momentary or latching)

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*Di-Tech inc. reserves the right to change specifications without notice*
FEATURES

- Up to 28 inputs by 2 outputs per frame
- Vertical interval switching (STD.)
- Solid state switching, audio and video
- Remote control flexibility
- Loop thru inputs
- Plug-in P.C. cards

DESCRIPTION

The Di-Tech series 5500, 5501 and 5502 Routing Switchers provide a compact approach to a simple and quick means of routing any input signal to any output bus without disturbing other inputs.

The standard control panels which house the momentary illuminated push buttons are located separately from the electronics. Should other means of addressing the switcher be required, you may utilize thumbwheel switches with readouts or Touch Tone® control (see Di-Tech Model 5700).

Inputs to the switcher are in groups of four and BNC type connectors are used for all inputs and outputs. Inputs are Hi-impedance, bridging and output expansion is easily accomplished by the loop thru method. The switching pulse for video is Vertical Interval. This feature is standard with the models 5500 and 5501.

The audio switcher model 5502 employs screw type terminal blocks for all inputs and outputs. Switching is solid state and is accomplished by integrated circuits. Crosstalk is at least -65db and maximum output level is +18dbm.

An optional feature for the models 5500, 5501 and 5502 is the tally relay. Each time a crosspoint is taken a relay closure is provided for applications such as, camera tally, machine control or other control functions.
ELECTRICAL SPECIFICATIONS

VIDEO
INPUT IMPEDANCE: H1-z, bridging, 50dB RTL @ 4.5MHz
INPUT LEVEL: 2Vp-p Max.
OUTPUT IMPEDANCE: 75 ohms, 30dB RTL @ 4.5MHz
OUTPUT LEVEL: 2Vp-p Max.
OUTPUT ISOLATION: 30dB @ 4.5MHz
GAIN: Unity, ±3dB Adj.
FREQUENCY RESPONSE: ±0.1dB to 5MHz; +0, -0.3dB to 8MHz; No Rise Above 8MHz
CROSSTALK: -65dB @ 4.5MHz
DIFFERENTIAL GAIN: 0.5% @ 1Vp-p, Max.
DIFFERENTIAL PHASE: 0.5° @ 1Vp-p, Max.
HUM AND NOISE: -65dBV min.
T PULSE TO BAR: ±0.1% 
TILT, LINE: 0.1% Max.
TILT, FIELD: 0.3% Max, Field Sq. Wave
DIFFERENTIAL DELAY: ±0.5° Max.

AUDIO
INPUT: 50K bridging, balanced
INPUT LEVEL: +20dBm Max
FREQUENCY RESPONSE: ±0.25dB Max, 20Hz to 20KHz
TOTAL HARMONIC DISTORTION: < 0.5% @ rated output
NOISE: > -80dB
GAIN: Unity, ±10dB Adj.
CROSSTALK: -65dB, 20Hz to 20KHz
OUTPUT LEVEL: 1, 600 ohm balanced
SWITCH TYPE: Integrated Circuit
COMMON MODE REJECTION: -55dB min., 20Hz to 1KHz

MECHANICAL
FRAME SIZE: 5.25"H. (133mm), 19"W. (483mm)
WEIGHT: 23 LBS
CONNECTORS
MODEL 5500: Video, BNC type. Audio, Multi-Pin
MODEL 5501: Video, BNC type
MODEL 5502: Audio, screw type terminal blocks

ORDERING INFORMATION
- INDICATE MODEL NUMBER AND INPUTS
- METHOD OF CONTROL

Di-Tech inc. reserves the right to change specifications without notice
KEY FEATURES

- CONTROLS 12 TO 144 FUNCTIONS
- HIGH CURRENT OR RELAY OUTPUTS
- PHASE LOCK LOOP CIRCUITRY
- STABILITY ±1%, FO
- CMOS I.C.'S
- BANDWIDTH ±5%, FO

DESCRIPTION

The Model 5700 series Touch Tone® Control System is designed for applications in controlling A/V routing switchers, pan and tilt functions for remote cameras, supervisory control systems, or any communication environment that requires control through use of the telephone lines, utilizing touch tone pads.

With this system, DI-TECH provides all the necessary functional p.c. cards with power supplies and frames to satisfy most requirements, thereby virtually eliminating the usual interface problems.

For example, the Model 570 Tone Decoder utilizes phase lock loop circuitry to detect the tones and CMOS I.C.'s to decode 2 of 7 tone frequencies into 12 low level outputs. Should high level outputs be required, you would then add the Model 572 Control Decoder Card which provides for strobe gating and 12 high current open collector driver outputs. If relay outputs are required, then you utilize the Model 573. This unit is the same as the Model 572 except for the relay outputs. Should more than 12 outputs be desired, then you simply add the 572 or 573 for up to 144 outputs.
### MODEL 570 TOUCH TONE DECODER

#### Input
- Impedance: Hi-Z, > 50k
- Level: 50 mV rms to 3 V rms, adjustable
- Dynamic Range: ±6 dB
- Bandwidth: ±5%, Fo
- Stability: ±1%, Fo
- Response Time: 50 msec typical

#### Outputs
- Decoded Outputs: 0 thru 9, # & * (12)
- Duration: equal to tone input duration minus 50 msec
- Level: off, -5V, on, +5V
- Sink: 2mA, source: -0.9 mA
- Tone Present Output Level: same as above
- Tone Present Output Duration: D.C. standard, up to 500 msec available.
- Delayed 10 msec from decoded output

#### D.C. Power
- +15 V.D.C. @ 80 mA
- -15 V.D.C. @ 80 mA

### MODEL 572/573 CONTROL DECODER

#### Input
- from Model 570
- 572P
- 572N
- 573
- 573 Option A
- Contact Rating: 10 V.A. max.
- 100 V max.
- 250 ma. max.

#### Output Duration
- Same as Tone Present Output Duration from Model 570

#### Two Digit Timing
- Time "Window" for 2nd Digit is adjustable from ½ sec. to 3 sec.
- 15 pin, D series (mate is supplied)

#### D.C. Power
- +15 V.D.C. @ 30 ma
- -15 V.D.C. @ 30 ma

### MODEL 575 TOUCH TONE ENCODER

#### Input
- Frequency Stability: ±1.25%

#### Output Impedance
- 600 Ohms

#### Output Level
- 1 V rms, nominal

#### Frequency Stability
- 5 inches wide x 5 inches deep x 3 inches high. Sloped front panel

### MODEL 3137A AUTOMATIC ANSWERING CARD

#### Ring Input
- 80-130 V rms, 15 Hz to 130 Hz

#### Hold Time
- Adjustable, 10 sec. to 150 sec.

#### Input Impedance
- 600 Ohms

#### Output Impedance
- 600 Ohms

#### D.C. Input
- +15 V.D.C. @ 75 ma

#### Connector
- Terminal Block, Input

### SPECIFICATIONS COMMON TO 570, 572, 573 AND 3137A

#### Size
- 4½" (112mm)H x 13" (330.2mm)D.

#### Temperature
- -20 to +60 degrees C.

#### Humidity
- 0 to 95%

### ORDERING INFORMATION

A. Number of Outputs
B. Open Collector Driver (572) or Relay Outputs (573)
C. Encoder Pad (575)
D. Automatic Answering Card (3137A) non-dedicated telephone line.
E. Model 101 Frame can be used for up to 24 functions
F. Model 103 Frame can be used for up to 144 functions

Di-Tech inc. reserves the right to change specifications without notice
The 5800 series AFV routing switcher employs separate frames to house the video and audio modules. A building-block approach is utilized in order to simply expand the inputs or outputs as future requirements change. Non-proprietary multi-source components are used throughout and there are no specialized single source items utilized in the system.

The audio and video switching modules contain 20 x 1 matrices complete with output amplifiers. When the switching module is extracted from the frame you only effect those inputs to that one output buss. Other output busses are not effected. The video and audio matrix frames are arranged in a 20 input by 15 output format. Each frame occupies 5½ inches of rack space so for a 20 x 15 AFV matrix you only require 10% inches of rack space. Each 20 x 1 video switching module contains an LED numerical readout for crosspoint status. This is in addition to the tally feedback indicator on the control panel.

Control input and crosspoint tally return are in a bi-directional BCD format, therefore only eleven wires are required for the control cable. The basic capacity is 100 inputs and expansion beyond that requires additional control facilities. Various methods of control are (I) illuminated momentary pushbuttons (II) thumbwheel with take button and tally indicator (III) touch pad with preset and on-air indicators (IV) external computer or controller.

External power supplies are furnished with the system. The rack space for the supplies vary, depending on the matrix ordered. Dual power supplies and battery back-up systems for crosspoint memory are available as an option.
**SPECIFICATIONS**

**VIDEO**

**INPUT**
75 OHM BRIDGING

**INPUT RETURN LOSS**
> 40dB @ 4.5 MHz

**INPUT LEVEL**
1VP-P NOM.
3VP-P MAX.

**INPUT DC RESTORER**
SYNC TIP (STRAPABLE)

**SYNC INPUT**
HI-Z LOOPTHRU, 2-8VP-P

**BOUNCE (IV STEP)**
TIME CONSTANT > 2 SEC., NO OVERSOOT

**GAIN**
UNITY, -4dB to +6dB ADJ.

**FREQUENCY RESPONSE**
±0.1 TO 5.0 MHz
±0.25 5.0 MHz TO 10MHz
±0.3dB 10.0 MHz TO 20MHz

**DIFFERENTIAL DELAY**
±1 DEGREE

**DIFFERENTIAL GAIN**
<0.25% 10-90% APL, 3,58/4,43MHz

**DIFFERENTIAL PHASE**
<0.25° 10-90% APL, 3,58/4,43MHz

**T PULSE TO BAR RATIO**
<0.1%

**T PULSE K FACTOR**
<0.5%

**ELECTRICAL LENGTH**
44n SEC, ±1n SEC.

**FIELD TILT**
<0.5%

**CROSSTALK (WORST CASE)**
> -70dB @ 15KHz
> -60dB @ 4.5MHz

**SIGNAL/NOISE RATIO**
> -65dBV

**MAXIMUM SWITCHING STEP**
5 IRE UNITS, MAX.

**MAXIMUM SWITCHING TRANSIENT**
<10 IRE UNITS, MAX.

**OUTPUTS**
2 PER BUSS, 75 OHM SOURCE TERMINATED

**OUTPUT RETURN LOSS**
> 40dB @ 15KHz
> 30dB @ 4.5 MHz

**OUTPUT LEVEL**
1.0VP-P NOM., 3.0VP-P MAX.

**DC ON OUTPUT**
50mV, MAX.

**AUDIO**

**INPUT**
50K BRIDGING, BALANCED

**INPUT DC COMPONENT**
±10V MAXIMUM

**INPUT LEVEL**
+20dBm @ 600 OHM
+26dBm @ 150 OHM

**COMMON MODE REJECTION**
55dB MINIMUM, 20HZ TO 1KHz

**TOTAL HARMONIC DISTORTION**
<0.5% @ +18dBm

**FREQUENCY RESPONSE**
±0.25dB MAXIMUM, 20HZ TO 20KHz

**SIGNAL/NOISE RATIO**
> -70dBm
-68dB BELOW +18dBm

**GAIN**
UNITY, ±10dB, ADJUSTABLE

**CROSS TALK**
> 70dB, 20HZ TO 20KHz
> 60dB @ 100KHz

**OUTPUT IMPEDANCE**
600 OHMS BALANCED
150 OHMS AVAILABLE

**OUTPUT DC COMPONENT**
0V, ±50mV

**OUTPUT LEVEL**
+18dBm @ 600 OHM

**CROSSPOINTS**
INTEGRATED CIRCUIT

**NOTES:**
(1) ALL VIDEO SPECIFICATIONS ARE AT 1.0VP-P LEVEL
(2) ALL AUDIO SPECIFICATIONS ARE AT +18dBm LEVEL

Di-Tech inc. reserves the right to change specifications without notice.
The 5840 series routing switcher can be supplied in various configurations such as: audio only, video only or audio follow video. The audio components are housed in the 5842 frame assembly and the video is contained in the 5841 frame assembly. When interchassis control cables are installed, the system then becomes an audio follow video switcher.

Each frame as illustrated has the capacity to house up to a 40 x 15 matrix in 10½ inches of rack space. The audio follow video version requires 21 inches. Expansion beyond the 40 inputs and outputs is achieved by adding additional frames and cabling.

The audio and video crosspoint cards are configured in a 40 x 1 format therefore, output expansion within the frame is in increments of one. There are four input amplifier boards in each video frame and each board houses ten input amplifiers. Any crosspoint card within the 5841 or 5842 frames can be extracted with power on, without affecting any other output bus in the system.

The 5840 series can be supplied with LED numerical readouts on the 40 x 1 video crosspoint modules. This feature is available as an option.

The 5840 routing switcher can be controlled in various ways. They are: computer, illuminated momentary pushbuttons, thumbwheel with take button and on-line indicator, touchpad with preset and on-air indicators, and X-Y control. Custom panels with preset, salute, and single button take are furnished as an option.

Two types of control are available with this series, and they are serial or parallel. The serial method allows you to utilize a single coax cable as the control cable. This control system permits up to 30 panels on a single loop. The parallel method of control is in a bi-directional BCD format and only 11 wires per control cable is required. The diameter of this control cable is only one-quarter of an inch.

External power supplies are utilized to furnish power to the 5840 series and a redundant system with diode switching is available as an option.
DESCRIPTION

THE 5841 SERIES CONTAINS THE FOLLOWING ITEMS:

Model 5841 frame assembly (video)
The frame is 10½" high and accommodates all the video modules for a 40 x 15 matrix. A hinged down front panel is provided for easy access to the vertically mounted plug-in modules. All matrix frames are provided with connector facilities which enable field expansion to be carried out in a simple and quick fashion. Control and signal loop through connectors are also provided.

Model 522A Video Matrix Board
This board is arranged in a 40 input x 1 output format. In addition to the crosspoints each card contains its own control, latching and crosspoint tally circuitry. The crosspoints utilize transistor and diodes and the control circuitry is BCD 8 bit parallel with take line. Drive levels are TTL. Each module contains its own output amplifier with a level control mounted up front.

Model 532 Video Input Amplifier
The input circuitry contains a D.C. restorer for APL variations and sync adding for non composite inputs. All of these features can be added or deleted via straps on the module. There are 10 input amplifiers per card and for 40 inputs, 4 cards per frame are required.

Model 562 Vertical Trigger and X-Y Control Card
This card provides the trigger pulse for Vertical Interval switching, which is derived from external sync. Should the sync input fail or is not used, then a random trigger pulse is generated. When using the optional sync adder feature, this card processes the sync and distributes it to the input amplifier cards. LED's are provided for sync and trigger failure indication. The 562 also contains the logic circuits for X-Y control.
Model 5842 Audio Frame Assembly
The frame is 10 ½" high and accommodates all the audio modules for a 40 x 15 matrix. A hinged down front panel is provided for easy access to the vertically mounted plug-in modules. All matrix frames are provided with connector facilities which enable field expansion to be carried out in a simple and quick fashion. Control and signal loop through connectors are also provided.

Model 527A Audio Matrix Board
This board is arranged in a 40 input by 1 output format and an I.C. is used for the crosspoint. Switching for three separate audio channels is provided and each channel has its own amplifier with a front panel level control. The 527 also contains circuitry for its own control, latching and crosspoint tally. The control circuitry is BCD 8 bit parallel with take line. Drive levels are TTL.

Model 537 Audio Input Amplifier
The input circuitry contains a differential input and is high-impedance bridging. There are 40 amplifiers on each board and one board per audio channel is required. For three channels of audio you require three input amplifier boards. This board employs redundant regulators with automatic switchover.

TYPICAL CONTROL PANELS

Single bus control with 40 illuminated momentary pushbutton switches in 3 ½” of rack space. The pushbutton cap is removable and the lens insert comes in various colors. Clear mylar inserts are used for signal identification.

Single bus thumbwheel control panel with preset and take function. On-line tally is provided and up to 3 thumbwheel controls are mounted on a 1 ¾” panel.

Single bus touch pad control with separate indicators for preset and on-line functions.

Single bus thumb-wheel control - desk top mount.

NOTE: ALPHA-NUMERIC PANELS ARE ALSO AVAILABLE.
## VIDEO

**INPUT**
- 75 OHM BRIDGING

**INPUT RETURN LOSS**
- >40dB @ 4.5 MHz

**INPUT LEVEL**
- 1VP-P NOM.
- 3VP-P MAX.

**INPUT DC RESTORER**
- HI-Z LOOPTHRU, 2-BVP-P

**SYNC INPUT**
- TIME CONSTANT > 2 SEC., NO OVERTHEOUPUT

**GAIN**
- UNITY, -4dB to +6dB ADJ.

**FREQUENCY RESPONSE**
- ±0.1 TO 5.0 MHz
- ±0.25 5.0 MHz TO 10MHz
- ±0.5 10.0 MHz TO 20MHz

**DIFFERENTIAL DELAY**
- ±1 DEGREE

**DIFFERENTIAL GAIN**
- <0.25% 10-90% APL, 3.58/4.43MHz

**DIFFERENTIAL PHASE**
- <0.25° 10-90% APL, 3.58/4.43MHz

**T PULSE TO BAR RATIO**
- ±0.1%

**T PULSE K FACTOR**
- <0.5%

**ELECTRICAL LENGTH**
- 44 nSEC, ±1 nSEC.

**FIELD TILT**
- <0.5%

**CROSSTALK (WORST CASE)**
- > -70dB @ 15KHz
- > -60dB @ 4.5MHz

**SIGNAL/NOISE RATIO**
- > -65dBV

**MAXIMUM SWITCHING STEP**
- 5 IRE UNITS, MAX.

**MAXIMUM SWITCHING TRANSIENT**
- <10 IRE UNITS, MAX.

**OUTPUTS**
- 2 PER BUSS, 75 OHM SOURCE TERMINATED

**OUTPUT RETURN LOSS**
- > 40dB @ 15KHz
- > 30dB @ 4.5 MHz

**OUTPUT LEVEL**
- 1.0VP-P NOM., 3.0VP-P MAX.

**OUTPUT EQUALIZATION**
- Up to 300 FT.

**DC ON OUTPUT**
- 50mV, MAX.

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## AUDIO

**INPUT**
- 50K BRIDGING, BALANCED

**INPUT DC COMPONENT**
- ±10V MAXIMUM

**INPUT LEVEL**
- +20dBm @ 600 OHM
- +26dBm @ 150 OHM
- +28dBm @ 600 OHM (Optional)
- +30dBm @ 150 OHM (Optional)

**COMMON MODE REJECTION**
- <0.5% @ +18dBm, 0.25% typical
- <0.5% @ +26dBm or +28dBm

**FREQUENCY RESPONSE**
- ±0.25dB MAXIMUM, 20HZ to 20KHz

**SIGNAL/NOISE RATIO**
- > -60dBm (30KHz weighted)
- > -96dB BELOW +18dBm (30 KHz weighted)

**GAIN**
- UNITY, ±10dB, ADJUSTABLE

**CROSS TALK**
- >70dB, 20Hz TO 20KHz (output to output)
- >60dB @ 100KHz
- >60dB Inter-channel (A, B & C)

**OUTPUT IMPEDANCE (BALANCED)**
- 600 OHMS
- 100 OHMS FOR HIGH LEVEL OPTION

**OUTPUT DC COMPONENT**
- 0V, ±50mV

**OUTPUT LEVEL**
- +18dBm INTO 600 OHMS
- +26dBm INTO 600 OHMS (Optional)
- +28dBm INTO 150 OHMS (Optional)

**CROSSPOINTS**
- INTEGRATED CIRCUIT

**NOTES:**
1. ALL VIDEO SPECIFICATIONS ARE AT 1.0VP-P LEVEL
2. ALL AUDIO SPECIFICATIONS ARE AT STANDARD OR OPTIONAL LEVELS

Di-Tech inc. reserves the right to change specifications without notice.

**di-tech inc.**
The 5800 series AFV routing switcher employs separate frames to house the video and audio modules. A building-block approach is utilized in order to simply expand the inputs or outputs as future requirements change. Non-proprietary multi-source components are used throughout and there are no specialized single source items utilized in the system.

The audio and video switching modules contain 20 x 1 matrices complete with output amplifiers. When the switching module is extracted from the frame you only effect those inputs to that one output buss. Other output busses are not effected. The video and audio matrix frames are arranged in a 20 input by 15 output format. Each frame occupies 5¼ inches of rack space so for a 20 x 15 AFV matrix you only require 10 ⅛ inches of rack space. Each 20 x 1 video switching module contains an LED numerical readout for crosspoint status. This is in addition to the tally feedback indicator on the control panel.

Control input and crosspoint tally return are in a bi-directional BCD format, therefore only eleven wires are required for the control cable. The basic capacity is 100 inputs and expansion beyond that requires additional control facilities. Various methods of control are (I) illuminated momentary pushbuttons (II) thumbwheel with take button and tally indicator (III) touch pad with preset and on-air indicators (IV) external computer or controller.

External power supplies are furnished with the system. The rack space for the supplies vary, depending on the matrix ordered. Dual power supplies and battery back-up systems for crosspoint memory are available as an option.
DESCRIPTION

THE 5800 SERIES CONTAINS THE FOLLOWING ITEMS:

Model 5801 frame assembly (video)
The frame is 5⅛” high and accommodates all the video modules for a 20 x 15 matrix. A hinged down front panel is provided for easy access to the vertically mounted plug-in modules. All matrix frames are provided with connector facilities which enable field expansion to be carried out in a simple and quick fashion. Control and signal loop through connectors are also provided.

Model 520 Video Matrix Board
This board is arranged in a 20 input x 1 output format. In addition to the crosspoints each card contains its own control, latching and crosspoint tally circuitry. The crosspoints utilize transistors and diodes and the control circuitry is BCD 8 bit parallel with take line. Drive levels are TTL. Each module contains its own output amplifier with a level control mounted up front.

Model 530 Video Input Amplifier
The input circuitry contains a D.C. restorer for APL variations and sync adding for non composite inputs. All of these features can be added or deleted via straps on the module. There are 5 input amplifiers per card and for 20 inputs, 4 cards per frame are required.

Model 560 Vertical Trigger Card
This card provides the trigger pulse for Vertical Interval switching, which is derived from external sync. Should the sync input fail or is not used, then a random trigger pulse is generated. When using the sync adder feature, this card processes the sync and distributes it to the input amplifier cards. LED’s are provided for sync and trigger failure indication.
5800 SERIES CONTINUED

Model 5802 Audio Frame Assembly
The frame is 5¼" high and accommodates all the audiomodules for a 20 x 15 matrix. A hinged down front panel is provided for easy access to the vertically mounted plug-in modules. All matrix frames are provided with connector facilities which enable field expansion to be carried out in a simple and quick fashion. Control and signal loop through connectors are also provided.

Model 525 Audio Matrix Board
This board is arranged in a 20 input by 1 output format and an I.C. is used for the crosspoint. Switching for three separate audio channels is provided and each channel has its own amplifier with a front panel control. The 525 accepts the BCD data from the 520 card, decodes it and drives the I.C. crosspoint.

Model 535 Audio Input Amplifier
The input circuitry contains a differential input and is high-impedance bridging. There are 20 amplifiers on each board and one board per audio channel is required. For three channels of audio you require three input amplifier boards. The operational amplifier employs an I.C.

TYPICAL CONTROL PANELS

Single bus control with 20 illuminated momentary pushbutton switches in 1½" of rack space. The pushbutton cap is removable and the lens insert comes in various colors. Clear mylar inserts are used for signal identification.

Single bus thumbwheel control panel with preset and take function. On-line tally is provided and up to 3 thumbwheel controls are mounted on a 1¼" panel.

Single bus touch pad control with separate indicators for preset and on-line functions.
**SPECIFICATIONS**

**VIDEO**

INPUT
75 OHM BRIDGING

INPUT RETURN LOSS
> -40dB @ 4.5 MHz

INPUT LEVEL
1VP-P NOM., 3VP-P MAX.

INPUT DC RESTORER
SYNC TIP (STRAPABLE)

SYNC INPUT
Hi-Z LOOPTHRU, 2-8VP-P

BOUNCE (1V STEP)
TIME CONSTANT > 2 SEC., NO OVERSHOOT

GAIN
UNITY, -4dB to +6dB ADJ.

FREQUENCY RESPONSE
-0.1 TO 5.0 MHz
+0.25 5.0 MHz TO 10MHz
-0.3dB 10.0 MHz TO 20MHz

DIFFERENTIAL DELAY
±1 DEGREE

DIFFERENTIAL GAIN
<0.25% 10-90% APL, 3.58/4.43MHz

DIFFERENTIAL PHASE
<0.25° 10-90% APL, 3.58/4.43MHz

T PULSE TO BAR RATIO
<0.1%

T PULSE K FACTOR
<0.5%

ELECTRICAL LENGTH
44n SEC, ±1n SEC.

FIELD TILT
<0.5%

CROSSTALK (WORST CASE)
> -70dB @ 15kHz
> -90dB @ 4.5MHz

SIGNAL/NOISE RATIO
> -70dBm
-88dB BELOW +18dBm

GAIN
UNITY, ±10dB, ADJUSTABLE

CROSS TALK
> 70dB, 20Hz TO 20kHz
> 60dB @ 100kHz

OUTPUT IMPEDANCE
600 OHMS BALANCED
150 OHMS AVAILABLE

OUTPUT DC COMPONENT
0V, ±50mV

MAXIMUM SWITCHING TRANSIENT
<10 IRE UNITS, MAX.

MAXIMUM SWITCHING STEP
5 IRE UNITS, MAX.

OUTPUTS
2 PER BUS, 75 OHM SOURCE TERMINATED

OUTPUT RETURN LOSS
> -40dB @ 15kHz
> -30dB @ 4.5 MHz

OUTPUT LEVEL
1.0VP-P NOM., 3.0VP-P MAX.

DC ON OUTPUT
50mV, MAX.

**AUDIO**

INPUT
50K BRIDGING, BALANCED

INPUT DC COMPONENT
≤10V MAXIMUM

INPUT LEVEL
>20dBm @ 600 OHM
>26dBm @ 150 OHM

COMMON MODE REJECTION
55dB MINIMUM, 20Hz TO 1kHz

TOTAL HARMONIC DISTORTION
<0.5% @ +18dBm

FREQUENCY RESPONSE
±0.25dB MAXIMUM, 20Hz TO 20kHz

SIGNAL/NOISE RATIO
> -70dBm
-88dB BELOW +18dBm

GAIN
UNITY, ±10dB, ADJUSTABLE

CROSS TALK
> 70dB, 20Hz TO 20kHz
> 60dB @ 100kHz

OUTPUT IMPEDANCE
600 OHMS BALANCED
150 OHMS AVAILABLE

OUTPUT DC COMPONENT
0V, ±50mV

OUTPUT LEVEL
> 16dBm @ 600 OHM

CROSSPOINTS
INTEGRATED CIRCUIT

**NOTES:**
1. ALL VIDEO SPECIFICATIONS ARE AT 1.0VP-P LEVEL
2. ALL AUDIO SPECIFICATIONS ARE AT +18dBm LEVEL

Di-Tech inc. reserves the right to change specifications without notice

di-tech inc.
KEY FEATURES

• 7 INPUTS, SWITCHABLE
• INTERNAL SPEAKER
• 10 WATT AMPLIFIER
• HEADSET JACK
• BUILT IN TONE GENERATOR
• VU RANGE, -40 TO +33 db
• 600 OHM OUTPUT
• HI-Z BRIDGING INPUTS

DESCRIPTION

The model 7001 has been redesigned mechanically and electrically in order to standardize on certain features such as: 7 inputs, tone generator, headset jack and switchable 115/230 VAC power. Previous options have been eliminated and the current model number is now 7001C. The plug-in board concept has been eliminated in favor of a single mother board approach.

The model 7001C audio monitor amplifier has been designed for use in TV stations, AM/FM stations, earth satellite stations and other telecommunication applications where listening, measuring, testing and switching of multiple audio inputs is required.

The VU meter amplifier increases the audio input to a sufficient level in order to provide an input range of -30 to +30 dBm for 0 VU on the meter. This range is achieved by utilizing the 7 decades of attenuation located on the front panel. In addition, a 600 ohm auxiliary output is provided with an adjustable level from 0 to +10 dBm.

For listening purposes, a 10 watt amplifier and internal speaker is provided. An external speaker can be utilized by simply disengaging the internal speaker via a front panel switch. The speaker output is short circuit protected.

The Tone Generator provides a CW in the frequency range of 400 Hz to 15 KHz. Output level is adjustable from 0 to +10 dBm. The oscillator is factory set to generate a frequency of 1 KHz but this can be readily changed in the field by an on-board potentiometer.
SPECIFICATIONS

ELECTRICAL

INPUT .................................................. 50K, Balanced
INPUT SWITCHING ........................................ Gap, (Break before Make)
INPUT LEVEL ........................................... -30 to +30 dBm for 0 VU
0 VU LEVEL ........................................... Adjustable, 0 dBm to +10 dBm
VU RANGE ............................................... -40 to +33 VU
TONES OSCILLATOR ................................. 400 Hz to 15 KHz adjustable, CW
A.C. POWER ........................................ 115/230 VAC, Switch Selectable ±10%, 50 or 60 Hz, 40 Watts

<table>
<thead>
<tr>
<th>VU Meter</th>
<th>Speaker Output</th>
<th>Auxiliary Output</th>
<th>Tone Oscillator</th>
</tr>
</thead>
<tbody>
<tr>
<td>±0.3 VU</td>
<td>±0.5 dB</td>
<td>±0.2 dB</td>
<td>N/A</td>
</tr>
<tr>
<td>HARMONIC DISTORTION (Max.)</td>
<td>N/A</td>
<td>1%</td>
<td>0.5%</td>
</tr>
<tr>
<td>SIGNAL TO NOISE</td>
<td>&gt;60 dB</td>
<td>-60 dB</td>
<td>N/A</td>
</tr>
<tr>
<td>OUTPUT IMPEDANCE</td>
<td>N/A</td>
<td>8-16 Ohms</td>
<td>600 Ohms</td>
</tr>
<tr>
<td>OUTPUT LEVEL</td>
<td>N/A</td>
<td>12 Watts</td>
<td>0 to +10 dBm</td>
</tr>
</tbody>
</table>

MECHANICAL

SIZE ................................................... 5½"H.(133 mm), 19"W.(483 mm), 16"D.(406 mm)
WEIGHT .............................................. 15 lbs. (7 Kg)
MOUNTING ............................................. Standard E.I.A., 19" Rack Mount, 3RU
AUDIO CONNECTORS .................................. Screw Type, Terminal Block
HEADSET JACK ....................................... Std. 2 Conductor ¼" Dia. Phone Plug
A.C. LINE CORD ..................................... 3 Wire, 6' Length (1.9 meters)

ORDERING INFORMATION

Model 7001C

di-tech inc. reserves the right to change specifications without notice
STEREO AUDIO MONITOR/AMPLIFIER

KEY FEATURES

- INTERNAL SPEAKERS
- 5 WATT RMS/PER CHANNEL
- STEREO HEADSET JACK
- BUILT IN TONE GENERATOR
- SWITCHABLE VU/DBM METER
- SWITCHABLE 600 OHM/Hi Z INPUT
- INDEPENDENT VOLUME CONTROLS
- SWITCHABLE PHONO JACK/3 PIN XLR INPUT CONNECTORS

DESCRIPTION

The model 7005 has been designed for purposes of monitoring and measuring dual mono or a single stereo audio channel. Each output stage is rated at 5 watts RMS with less than .25% distortion. The dual speakers are controlled by separate volume controls mounted on the front panel.

The front panel meter is switchable to read VU or dBm. Since the meter amplifier section can be attenuated by a front panel switch, it provides an input range of -20 to +13 dBm or VU and is factory set to +4 dBm equaling 0 VU. In addition, the meter circuit is switchable to allow you to monitor the left or right channels independently and the L-R position will determine variations in gain between channels.

The input connectors are located on the back panel and they can be switched to either a standard 3 pin XLR audio connector or phono jack. The input termination is also switch selectable to 600 ohm or high impedance.

The tone oscillator provides a continuous sine wave at a factory set frequency of 1 KHz., and the output level is adjustable from 0 to +10 dBm with total harmonic distortion being less than 0.5%. The output of the tone oscillator utilizes a standard 3 pin XLR audio connector and phono jack located in the back panel.
SPECIFICATIONS

ELECTRICAL

 INPUT .................................................. 100K, Balanced
 INPUT LEVEL ....................................... -10 to +10 dBm for 0 VU
 0 VU LEVEL ........................................... Adjustable, 0 dBm to +10 dBm
 VU RANGE .............................................. -20 to +13 VU
 DBM Range ............................................. -20 to +13 dBm
 LEFT TO RIGHT IMBALANCE .............. <1 dBm/VU
 TONE OSCILLATOR ......................... 400 Hz to 15 KHz, adjustable
 AC POWER ............................................. 115 VAC ± 10%, 50 or 60 Hz.

30 watts.

<table>
<thead>
<tr>
<th>FREQUENCY RESPONSE</th>
<th>Speaker</th>
<th>VU/DBM Meter</th>
<th>Tone Oscillator</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 Hz to 20 KHz</td>
<td>± 3 dB</td>
<td>± 2 VU/±1 dBm</td>
<td>N/A</td>
</tr>
<tr>
<td>30 Hz to 60 Hz</td>
<td>±1.5 dB</td>
<td>± 5 VU/±2.5 dBm</td>
<td>N/A</td>
</tr>
</tbody>
</table>

HARMONIC (MAX) DISTORTION 0.25% N/A 0.5%

SIGNAL TO NOISE -65 dB > 60 dB N/A

OUTPUT IMPEDANCE N/A N/A 600 ohm

OUTPUT LEVEL 5 watts RMS per channel N/A 0 to +10 dBm

MECHANICAL

 SIZE .............................................. 3½” (89mm) H, 19” (483mm) W, 7” (178mm) D
 WIDTH ............................................. 7½ lbs. (3.5 Kg)
 MOUNTING ........................................... Standard E.I.A., 19” Rack Mount, 2 RU
 AUDIO CONNECTOR ............... 3 Pin XLR, Phono jack
 HEADSET JACK .................................... Standard ¼” stereo jack
 AC LINE CORD ............................... 3 wire, 6’ length (1.9 meters)

ORDERING INFORMATION

Model 7005

Di-Tech inc. reserves the right to change specifications without notice
<table>
<thead>
<tr>
<th>MODEL</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>Video D.A., 1 x 6, D.C. coupled outputs</td>
<td>280.00</td>
</tr>
<tr>
<td></td>
<td>A.C. coupled outputs</td>
<td>295.00</td>
</tr>
<tr>
<td>120</td>
<td>Video D.A., 1 x 6, w/differential input &amp; clamper</td>
<td>370.00</td>
</tr>
<tr>
<td>Option A</td>
<td>Model 120 w/10dB cable equalizer</td>
<td>420.00</td>
</tr>
<tr>
<td>150</td>
<td>Pulse D.A., 1 x 6</td>
<td>265.00</td>
</tr>
<tr>
<td>151</td>
<td>Pulse D.A., w/variable delay, 1 adjustment per 6 outputs</td>
<td>315.00</td>
</tr>
<tr>
<td>Option A</td>
<td>Model 151 w/3 adjustments, 1 adj. per 2 outputs</td>
<td>375.00</td>
</tr>
<tr>
<td>170</td>
<td>Audio D.A., 1 x 6 w/+18dBm output</td>
<td>250.00</td>
</tr>
<tr>
<td>171</td>
<td>Audio D.A., 1 x 6 w/+22dBm output</td>
<td>320.00</td>
</tr>
<tr>
<td>402</td>
<td>Video Presence Detector, 4 inputs, 4 alarm relays</td>
<td>330.00</td>
</tr>
<tr>
<td>403</td>
<td>Video Presence Detector, 2 inputs, relay switching</td>
<td>305.00</td>
</tr>
<tr>
<td>404</td>
<td>Video Presence Detector, 4 inputs, 2 alarm relay per input</td>
<td>455.00</td>
</tr>
<tr>
<td>410</td>
<td>Video Presence Detector, 4 numbers, APL detectors</td>
<td>495.00</td>
</tr>
<tr>
<td>411</td>
<td>Video Presence Detector, w/numerical character generator</td>
<td>395.00</td>
</tr>
<tr>
<td>412</td>
<td>Video Source Identifier, 4 digits</td>
<td>295.00</td>
</tr>
<tr>
<td>413</td>
<td>Video Source Identifier, 3 numbers and 2 letters</td>
<td>315.00</td>
</tr>
<tr>
<td>470</td>
<td>Audio Tone Generator, 20-100 Hz</td>
<td>305.00</td>
</tr>
<tr>
<td>471</td>
<td>Audio Tone Detector, 20-100 Hz</td>
<td>395.00</td>
</tr>
<tr>
<td>504</td>
<td>4 x 1 Audio/Video switcher plug-in card (Model 5400)</td>
<td>465.00</td>
</tr>
<tr>
<td>509</td>
<td>4 x 2 Audio/Video switcher plug-in card (Model 5500)</td>
<td>430.00</td>
</tr>
<tr>
<td>513</td>
<td>12 x 1 Audio Only switcher plug-in card (Model 5413)</td>
<td>210.00</td>
</tr>
<tr>
<td>723</td>
<td>10 watt speaker amplifier</td>
<td>210.00</td>
</tr>
<tr>
<td>1200</td>
<td>75/124 OHM, Clamper, Amplifier, and Equalizer</td>
<td>1,100.00</td>
</tr>
<tr>
<td>5106</td>
<td>6 x 1 Passive Video Switcher, non-illuminated buttons</td>
<td>210.00</td>
</tr>
<tr>
<td>5112</td>
<td>12 x 1 Passive Video Switcher, non-illuminated buttons</td>
<td>275.00</td>
</tr>
<tr>
<td>5400</td>
<td>AVF, remote controlled routing switcher w/VI switching: Matrix, 12 x 2</td>
<td>2,675.00</td>
</tr>
<tr>
<td></td>
<td>Matrix, 8 x 2</td>
<td>2,210.00</td>
</tr>
<tr>
<td></td>
<td>Matrix, 4 x 1</td>
<td>1,555.00</td>
</tr>
</tbody>
</table>

**NOTE:**
Price includes 1¼” control panels with momentary illuminated pushbuttons, V.I. switching, 50 ft. control cables and one 10 foot Audio IN/OUT cable.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5412</td>
<td>AFV, remote controlled routing switcher with:</td>
<td>2,235.00</td>
</tr>
<tr>
<td>A. 12 x 1 matrix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. 2 channels of audio per input</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. V.I. switching</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Price includes one 12 x 1 control panel with illuminated pushbuttons, one 50 foot control cable and one 10 foot audio IN/OUT cable.

<table>
<thead>
<tr>
<th>5413</th>
<th>Audio only switcher</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12 x 1 matrix</td>
<td>1,305.00</td>
<td></td>
</tr>
<tr>
<td>12 x 2 matrix</td>
<td>1,625.00</td>
<td></td>
</tr>
<tr>
<td>12 x 3 matrix</td>
<td>1,950.00</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>5414</th>
<th>Audio only switcher, up to 36 x 1 Matrix</th>
<th>see 5413 pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>5415</td>
<td>Audio only switcher, up to 3, 12 x 1 Matrices</td>
<td>see 5413 pricing</td>
</tr>
</tbody>
</table>

**NOTE:** Prices include control cables and control panels for Models 5413, 5414 and 5415.

<table>
<thead>
<tr>
<th>5470</th>
<th>Telephone Tone Accessed switching system:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 4 Video only Matrix</td>
<td>3,690.00</td>
<td></td>
</tr>
<tr>
<td>4 x 4 Audio follow video Matrix</td>
<td>4,080.00</td>
<td></td>
</tr>
</tbody>
</table>

**Option A — Battery back-up system** | 390.00 |

<table>
<thead>
<tr>
<th>5500</th>
<th>AFV, remote controlled switcher with V.I. switching:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix 28 x 2</td>
<td>5,540.00</td>
<td></td>
</tr>
<tr>
<td>Matrix 24 x 2</td>
<td>5,125.00</td>
<td></td>
</tr>
<tr>
<td>Matrix 20 x 2</td>
<td>4,711.00</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>5501</th>
<th>Video only, remote controlled switcher w/V.I switching:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix 28 x 2</td>
<td>5,040.00</td>
<td></td>
</tr>
<tr>
<td>Matrix 24 x 2</td>
<td>4,620.00</td>
<td></td>
</tr>
<tr>
<td>Matrix 20 x 2</td>
<td>4,205.00</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5502</th>
<th>Audio only, remote controlled switcher:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix 28 x 2</td>
<td>5,400.00</td>
<td></td>
</tr>
<tr>
<td>Matrix 24 x 2</td>
<td>4,620.00</td>
<td></td>
</tr>
<tr>
<td>Matrix 20 x 2</td>
<td>4,205.00</td>
<td></td>
</tr>
</tbody>
</table>

**Option:** Camera tally relay

| Matrix 28 x 2 | 580.00 | |
| Matrix 24 x 2 | 545.00 | |
| Matrix 20 x 2 | 460.00 | |

**NOTE:** For models 5500, 5501 & 5502, price includes 50 ft., control cables and momentary illuminated pushbuttons. Price for extra cable lengths is .95 per ft.

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*Di-Tech inc. reserves the right to change specifications without notice*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>570</td>
<td>Touchtone control system, consisting of models:</td>
<td></td>
</tr>
<tr>
<td>570</td>
<td>Tone Decoder</td>
<td>390.00</td>
</tr>
<tr>
<td>572/P</td>
<td>Control Decoder</td>
<td>245.00</td>
</tr>
<tr>
<td>573</td>
<td>Control Decoder, momentary relay output</td>
<td>325.00</td>
</tr>
<tr>
<td>573A</td>
<td>C Control Decoder, magnetic latching relays (12)</td>
<td>420.00</td>
</tr>
<tr>
<td>573B</td>
<td>Control Decoder, magnetic latching relays (6)</td>
<td>375.00</td>
</tr>
<tr>
<td>575</td>
<td>Tone Encoder</td>
<td>210.00</td>
</tr>
<tr>
<td>578</td>
<td>X-4 Control Decoder for model 5840/5800 switches</td>
<td>425.00</td>
</tr>
<tr>
<td>3137A</td>
<td>Automatic Answering Card w/compression amplifier</td>
<td>320.00</td>
</tr>
</tbody>
</table>

5800 Price on Request

5815 AFV, remote controlled routing switcher with
A. 15 x 7 matrix
B. 2 channels of audio per input
C. V.I. switching
D. Seven, 50 foot control cables
E. Power supply w/crosspoint memory.

NOTE: Prices do not include control panels.
Available control panels with prices are:
1. Model 920-1 — Illuminated pushbutton | 445.00
2. Model 910-1 — Thumbwheel w/readout and take button | 250.00
3. Model 915B1 — Touchpad w/input and on-line readouts | 360.00

5820 AFV, remote controlled routing switcher with
A. 20 x 6 matrix
B. 3 channels of audio per input
C. V.I. switching
D. Six, 50 foot control cables
E. Power supply w/crosspoint memory

NOTE: Prices do not include control panels.
Available control panels with prices are:
1. Model 920-1 — Illuminated pushbutton | 445.00
2. Model 910-1 — Thumbwheel w/readout and take button | 250.00
3. Model 915B1 — Touchpad w/input and on-line readouts | 360.00

5840 Price on Request

7001 Audio Monitor/Amplifier, 7 inputs and tone generator | 1,050.00

7005 Audio Monitor Amplifier, stereo input | 610.00

Di-Tech inc. reserves the right to change specifications without notice
<table>
<thead>
<tr>
<th>MODEL</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>1½” frame, w/power supply, mounts up to 3 modules</td>
<td>320.00</td>
</tr>
<tr>
<td>103</td>
<td>5½” frame, mounts up to 10 modules and 801 P/S</td>
<td>295.00</td>
</tr>
<tr>
<td>801</td>
<td>Power Supply for model 103 frame</td>
<td>425.00</td>
</tr>
<tr>
<td>802</td>
<td>Power Supply (used only with model 171 audio D.A.)</td>
<td>465.00</td>
</tr>
<tr>
<td>803</td>
<td>Power Supply (D.C. input, 24 or 48 V)</td>
<td>790.00</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>CODE</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>90021</td>
<td>Blank panels, 101 frame</td>
<td>27.00</td>
</tr>
<tr>
<td>90022</td>
<td>BNC termination, 75 OHM 1%</td>
<td>9.00</td>
</tr>
<tr>
<td>90023</td>
<td>Extender Card, 101 and 103 frames</td>
<td>47.00</td>
</tr>
<tr>
<td>90056</td>
<td>Extender Card, Model 5412</td>
<td>140.00</td>
</tr>
<tr>
<td>5800017-1</td>
<td>Extender Card, Model 5800</td>
<td>80.00</td>
</tr>
<tr>
<td>5840007-1</td>
<td>Extender Card, 28 contact positions, Model 5840</td>
<td>140.00</td>
</tr>
<tr>
<td>5840007-2</td>
<td>Extender Card, 44 contact positions, Model 5840</td>
<td>140.00</td>
</tr>
<tr>
<td></td>
<td>Extra Instruction manuals</td>
<td>13.00</td>
</tr>
</tbody>
</table>

**EFFECTIVE DATE:** February 1, 1982

Prices F.O.B. Deer Park, N.Y.

**NOTE:** Prices subject to change without notice.
PACE PRICE LIST

7 DAY COMPUTER CONTROLLER

Pace 1000 consists of:

A. Intel SBC 655 chassis including all RAM and EPROM boards .......................... $11,500.00
B. ADDS video terminal

Pace 2000 same as above with additional features ........................................ 12,500.00

Optional Peripheral Equipment

1. Back-up power supply ....................................................................................... 900.00
2. Printer (paper) ................................................................................................. 1,100.00
3. Case of paper for printer .................................................................................. 70.00
4. Modem #3434 w/handset coupler .................................................................. 1,180.00
5. Modem #3455 (for computer location) ............................................................ 1,090.00
6. ADDS video terminal (additional units) .......................................................... 1,600.00
7. Model 2100 automatic logger (without printer) ............................................. 1,685.00

Optional Output Interface Hardware

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3001</td>
<td>5½&quot; source/dest. frame assembly, up to 16 modules</td>
<td>855.00</td>
</tr>
<tr>
<td>3002</td>
<td>5½&quot; unit/function frame assembly, up to 16 modules</td>
<td>855.00</td>
</tr>
<tr>
<td>3005</td>
<td>1¾&quot; unit/function frame assembly, up to 3 modules</td>
<td>500.00</td>
</tr>
<tr>
<td>3006</td>
<td>1½&quot; source/dest. frame assembly, up to 3 modules</td>
<td>500.00</td>
</tr>
<tr>
<td>801</td>
<td>Power supply (used with 3001 frame)</td>
<td>425.00</td>
</tr>
<tr>
<td>300</td>
<td>Source/dest. card, 20 x 1 latch, TTL output</td>
<td>250.00</td>
</tr>
<tr>
<td>301</td>
<td>Source/dest. card, 100 x 1 BCD latch</td>
<td>260.00</td>
</tr>
<tr>
<td>303</td>
<td>Unit/function card, 10 on/off relays, latch or momentary</td>
<td>300.00</td>
</tr>
<tr>
<td>304</td>
<td>Unit/function card, 8 relays, momentary or latch, VTR control</td>
<td>275.00</td>
</tr>
<tr>
<td>305</td>
<td>Source/dest. card, 16 x 1 binary output (Hughes SVR 463)</td>
<td>270.00</td>
</tr>
<tr>
<td>580</td>
<td>Source/dest. 12 x 1 format (used w/5400 A/V switcher)</td>
<td>250.00</td>
</tr>
<tr>
<td>584</td>
<td>Serial to parallel converter (use 101 frame)</td>
<td>500.00</td>
</tr>
<tr>
<td>973</td>
<td>Master source/dest. override and interface, panel, 3½&quot; x 19&quot; w/auto disconnect. Thumbwheel selection for inputs and outputs (for models 5800 &amp; 5840)</td>
<td>710.00</td>
</tr>
<tr>
<td>976</td>
<td>Master unit/function override and interface panel</td>
<td>710.00</td>
</tr>
</tbody>
</table>

Eff. date February 1, 1982

Prices subject to change without notice

di-tech inc. 48 JEFRYN BLVD., DEER PARK, N.Y. 11729 • Tel. 516 - 667-6300

FOB Deer Park, N.Y.