LocalNet 50/55™
Redundant Headend Switch

Overview
LocalNet 50/55 provides automatic switching from on-line to a backup frequency translator (LocalNet 50/50™) for LocalNet™, Sytek’s broadband local area network. The 50/55 continuously monitors the frequency deviation and output amplitude of LocalNet 50/50 frequency translators at the headend.

Features
- Automatic or manual switching between two LocalNet 50/50 frequency translators.
- Switching can also be done remotely via remote control interface.
- Continuous monitoring of frequency deviation and output signal level of both translators.
- Meter displays frequency deviation and signal level for the on-line channel; user-switchable to display parameters for backup translator without interfering with network functions.
- Independent level adjustment for both channels to achieve proper matching and identical response.
- Indication of either on-line or backup translator exceeding warning or fault limits independently.
- Distinct aural indication of warning and fault states. User can disable this warning after the fault condition has been detected.
- Connections are done via industry standard “F” type connectors.
- Easy removal and replacement of faulty translator without affecting network users or performance.

Description
The 50/55 continuously monitors frequency deviation and output amplitude of LocalNet 50/50 frequency translators at the headend. When either unit drifts beyond a preset specified warning level, for frequency deviation or signal level, visual and aural alarms activate. The warning is provided by a beep tone and a flashing visual indicator. When the parameters of the translator currently connected to the network exceed specified fault levels, the 50/55 automatic switch unit disconnects the failing translator from the network and connects the backup unit in its place. The switchover to the backup 50/50 unit occurs in less than 10 milliseconds.
Interconnection Between LocalNet 50/55 Switch and LocalNet 50/50 Translators
Active LocalNet users are not affected. A continuous tone and light also indicate a fault condition has been detected. The 50/55 switch provides on-line backup for the network headend. The user can also monitor the performance of both translators without removing them from the network. A frequency deviation meter and a relative level meter can be switched to indicate true system parameters for either translator.

### Nominal Settings for Warning and Fault Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Warning</th>
<th>Fault</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplitude</td>
<td>2 dB below nominal</td>
<td>3 dB or more below nominal</td>
</tr>
<tr>
<td>Frequency</td>
<td>700 Hz above or below nominal</td>
<td>1000 Hz above or below nominal</td>
</tr>
</tbody>
</table>

### User Interface Specifications

#### User controls
- **Select:**
  - Auto/Manual
  - Remote/Local
  - On-Line (A or B)
- **Lamptest**
- **Reset Alarm**
- **Set Level Controls (A and B)**

#### Indicators
- **Frequency Deviation Meter** (± 1.2 kHz)
- **Level Meter** (-6 dB to +1 dB)
- **Automatic Mode**
- **Manual Mode**
- **Remote Mode**
- **Local Mode**
- **Translator On-Line (A and B)**
- **Translator Fault (A and B)**
- **Translator Low (A and B)**
- **Aural Alarm**

#### Connectors
- **RF**
  - Pilot Input: A and B
  - Pilot Output: A and B
  - RF Input: In, A, and B
  - RF Output: Out, A, and B
  - AC Input: Filtered, fused, grounded, 3-wire
  - Standard on every unit, 15 pin subminiature D receptacle
- **Industry standard type “F” connectors-Female Fittings**

#### RF Characteristics
- **Pilot Output**
  - Frequency: 70 MHz ± 100 Hz for standard option (other frequencies available as options)
  - Level: -10 dBmV ± 1 dB
- **Impedance:** 75 ohms nominal
- **Level Adjust Range:** 15 dB in 1 dB steps (internal adjustment)
- **Pilot Input**
  - Frequency: 226.25 MHz for standard option (other frequencies available as options)
  - Level: +3.5 dBmV nominal
  - Impedance: 75 ohms nominal
- **RF Output**
  - Frequency: Varies depending on LocalNet 50/50 translator frequency option
  - Level: 0 dBmV to +54 dBmV
  - Impedance: 75 ohms nominal
  - RF switch time: <10 msec
- **RF Input**
  - Frequency: Varies depending on LocalNet 50/50 translator frequency option
  - Level: -20 dBmV to +30 dBmV
  - Impedance: 75 ohms nominal

### Frequency Stability of Pilot and Receiver Circuits
- Stability with respect to time (short term): Less than or equal to 1 ppm
- Stability with respect to operating temperature range and input voltage range: Less than or equal to 1.5 ppm
- Crystal Aging: Less than or equal to .5 ppm/yr.

### Receiver Gain Stability
- Stability with respect to time (short term): Less than ±0.5 dB
- Stability with respect to operating temperature range and input voltage range: Less than +1 dB

### Environmental Specifications
- Operating temperature: +10°C to +50°C
- Storage temperature: -40°C to +70°C
- Relative humidity: Up to 95% at 45°C non-condensing

### Physical and Mechanical Specifications
- **Front Panel Indicators**
  - Size: 5.25" H X 16.74" W X 14.875" D
  - Weight: 19 lbs.
- **Power requirements:**
  - Voltage/Frequency: 115 VAC ± 10%, 60 Hz ± 5%
  - 220 VAC ± 10%, 50 Hz ± 5%
- **Power consumption:** 60 W
- **Fusing:** 1 Amp. slo-blow for 110 VAC
  - .5 Amp. slow-blow for 220 VAC
## Ordering Information
### Frequency Group Option

<table>
<thead>
<tr>
<th>FREQUENCY OPTION</th>
<th>CABLE SYSTEM TYPE</th>
<th>PILOT FREQ (MHz)</th>
<th>MATCHING TRANSLATOR (LocalNet 50/50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>IN</td>
<td>OUT</td>
</tr>
<tr>
<td>T31</td>
<td>Midsplit (standard option)</td>
<td>70</td>
<td>226.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>226.25</td>
<td></td>
</tr>
<tr>
<td>T32</td>
<td>Subsplit</td>
<td>10</td>
<td>226.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>226.25</td>
<td></td>
</tr>
<tr>
<td>T33</td>
<td>Midsplit</td>
<td>52</td>
<td>208.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>208.25</td>
<td></td>
</tr>
<tr>
<td>T34</td>
<td>Midsplit</td>
<td>88.150</td>
<td>244.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>244.40</td>
<td></td>
</tr>
</tbody>
</table>

*Standard filter groups. Non-standard filter groups are six month availability ARO. Factory approval is required for non-standard filter groups.

**Power Input Option**

<table>
<thead>
<tr>
<th>Description</th>
<th>Power Input Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>115 VAC, 60 Hz AC Power</td>
<td>W00</td>
</tr>
<tr>
<td>220 VAC, 50 Hz AC Power</td>
<td>W01</td>
</tr>
</tbody>
</table>

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