

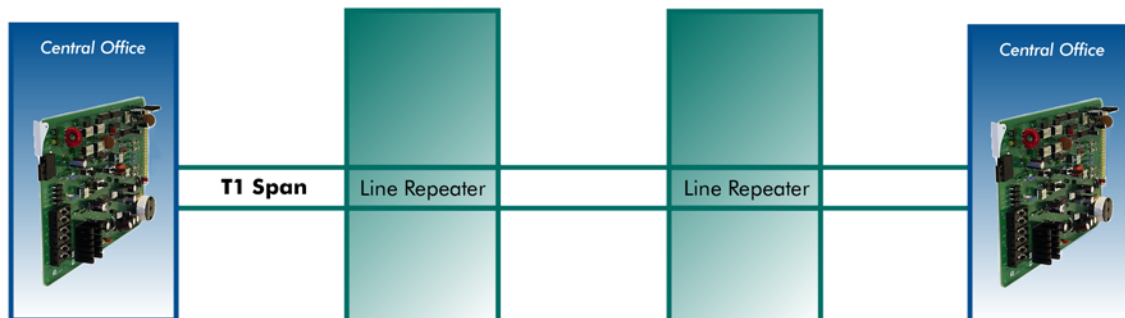
Highlights

- Applications for ITT 621170 Shelves (1119), Lynch/Alcatel 303ST11A Shelves (1122), and Rockwell LMS-3192 Shelves (1181)
- Regenerates received PCM 1.544Mbps bipolar data
- 48 VDC local or span powered, switch selectable
- Constant 60/100 mA span current (selectable) from -48 VDC
- Eliminates need for ± 130 V supplies
- 6 V or 12 V peak-to-peak output, selectable on-card
- Switch selectable on-card precompensation network drives up to 655 feet to DSX
- Transmit path attenuation of 0, 3.0, 7.5 and 15.0dB, switch selectable on-card
- Automatic Line Buildout (ALBO) and equalization
- Bipolar detector indicates normal data and bipolar errors in AMI or B8ZS format, front panel LEDs
- Detects non-B8ZS bipolar violations
- Secondary lightning and power transient surge protection at facility interface ports, Transmit and Receive
- Transformer isolation at all ports
- Fault locate output for fault locate tone systems
- Front panel power fuse (GMT type) [1119 & 1122 Only]
- Front panel span current and voltage test points
- Test and monitor jacks, Transmit and Receive
- Can be located up to 6000 feet from last line regenerator
- CEV or outdoor cabinet mounted
- High density shelf mounts up to 28 T1 ASPR repeater cards in a 23-inch rack (1181 Only)
- Repeaters pre-equalize 655 feet of drop cable
- All units meet UL 1459, Edition 2 and NEC 1990

The **CXR/Larus T1 Office Repeater Series™** provides automatic span powering. The 1119 is designed to be interchangeable with the ITT 621170 shelves, while the 1122 offers interchangeability with the Lynch 303ST11A Repeater and mounts into the Lynch 302 and 303 series equipment shelves. The 1181 is interchangeable with Rockwell LMS-3192 system components.

The repeater derives the required span driving voltage from a -48 V battery supply to provide a constant 60 mA or 100 mA span current (selectable). The span powering current regulator compensates automatically for variations in cable length, number of repeaters and temperature. The repeater eliminates the requirement for ± 130 V supplies.

Application



Local 48 volt battery is fused on the front panel (except the Larus 1181 which utilizes a self resetting PTC type fuse). The facility ports are lightning and surge protected. The facility simplex leads may be looped for those applications where the span is powered from the distant end. The repeater can be span powered as well as powered from the local 48 V battery supply.

The transmit path provides switch selectable line buildout attenuation of 0, 3.0, 7.5 and 15.0dB. The receive regenerator provides received signal equalization and ALBO of the connected facility for 0 to 35.0dB of connected cable loss (0 to 6000 feet). The regenerator also recovers the clock and outputs the regenerator bipolar data signals.

The T1 Office Repeater Series provides an on-card selectable regenerator output of either 6 V peak-to-peak standard or 12 V peak-to-peak for external precompensation applications. A four section on-card switch selectable output pre-equalizer allows the repeater to drive up to 655 feet of cable to the cross connect.

An AMI/B8ZS bipolar error detector provides an indication of the occurrence of only those bipolar errors which are not the intentional bipolar errors used for B8ZS encoding. The detector indicates data pulses with a green LED and indicates bipolar violations with a yellow LED.

CXR/Larus T1 Office Repeater Series

The ASPR T1 Repeater is a T1 span powering repeater capable of supplying simplex span power to line repeaters and looping repeaters, or channel service units. The cards provides selectable span powering current controlled by automatic span powering generator.

Front panel test points allow monitoring of span current and voltage. Front panel test and monitor jacks access the repeater Receive and Transmit signals. Each T1 Office Repeater Series occupies one position for its respective shelf.

Specifications

DS1 INTERFACE

DATA FORMAT

Framed or unframed

REPEATER TYPE

Passive transmit, active receive

REGENERATED LINE SIGNAL

1.544Mbps, ± 200 bps, bipolar

INPUT/OUTPUT IMPEDANCE

100 ohms nominal @ 772kHz, all ports

TRANSFORMER COUPLING

All ports

SURGE PROTECTION

- Resistive zener network, Line fuses
- Facility Ports, Transmit and Receive

MAXIMUM SPAN LENGTH

6000 ft

LINE BUILDOUT, RECEIVE CIRCUIT

Automatic, 0 to 35dB, switch selectable, equivalent loss of connected cable

RECEIVE PAD

7.5dB

TRANSMIT CIRCUIT ATTENUATION

0, 3.0*, 7.5, 15dB, switch selectable, equivalent cable section loss (*4.5db on 1119)

REPEATER OUTPUT PULSE AMPLITUDE, SELECTABLE

- 6 V P-P (± 3 V, ± 0.3 V)
- 12 V P-P (± 6 V, ± 0.6 V)

OUTPUT PRECOMPENSATION NETWORK

4 sections, switch selectable (3 sections on 1181)

- 0 to 133 ft (0 to 220 ft [1181])
- 134 to 275 ft (220 to 44 ft [1181])
- 276 to 450 ft (440 to 655 ft [1181])
- 451 to 655 ft

Meets requirements of AT&T Bulletin CB 119

REGENERATED LINE SIGNAL PULSE WIDTH

Pulse Width: 324nS ± 30 nS (1119 Only)
 Pulse Width Imbalance: 5nS max (1122 and 1181)
 Pulse Overshoot: 10% to 30% of pulse height
 20% nominal
 Pulse Rise & Fall Time: 100nS max

SPAN LINE CURRENT

- 60 mA or 100 mA $\pm 3\%$ regulated (5% on 1119/1181)
- on-card selectable (1119/1122)

LINE CURRENT REGULATION

$\pm 0.5\%$ -42 V to -56 V battery

BALANCED LINE VOLTAGE

10 VDC to 260 VDC varies with span length

MAX SPAN DRIVING VOLTAGE

275 VDC no load fault

SPAN CURRENT LIMIT

200 mA imbalance fault

SPAN VOLTAGE IMBALANCE TO GROUND

6 VDC max

POWER

Power Requirement:

- 48 VDC ± 6 VDC positive ground
- 0.5 A max (powering longest span)

Power fuse: 0.75 A Front Panel [GMT type] (1119 & 1122 Only)

FRONT PANEL INDICATORS

- Green: LED Data On Line
- Yellow: LED True Bipolar Violations (Errors)

BIPOLAR ERROR DETECTOR

- Bipolar errors: BZ8S compatible
- Green: LED Front Panel
- Red: LED Front Panel
- Error Output, Edge Connector Contact
- Open Collector (1181 & 1122 Only)
- Sinks 10 mA @ +30 V battery backed or drives TTL logic counters (1181 & 1122 Only)

ENVIRONMENTAL

- Storage Temperature: -40° to +185°F (-40° to +85°C) [1119/1181]
- Operating Temperature: -40° to 167°F (-40° to +75°C)[1119/1181]
32° to 131°F (0° to 55°C) [1122]

PHYSICAL

- Dimensions: 9.5 in x 5.0 in x 1.42 in (1119) [L x H x W]
6.2 in x 1.0 in x 10.0 in (1122) [H x W x L]
0.55 in x 10.5 in x 4.75 in (1181) [W x D x H]
12 oz./4 oz. (1181)
- Weight:

RELATIVE HUMIDITY

0 to 95% noncondensing

COMPLIANCE/REGULATORY

- UL 1459, Edition 2
- NEC 1990

Ordering Configurations

1119, 1122 & 1181

T1 Office Repeaters

Model	Description
1119-5	BZ8S Bipolar Error Detector, and switch selectable precompensation, 0 to 655 ft (ITT Tech Mechanics)
1122-0	Repeater e/w 4 Station Selectable Precompensation Network for 0 to 655 ft and AMI/BZ8S Bipolar Error Detector (Lynch Mechanics)
1181-0	ASPR T1 Repeater Card (Rockwell Mechanics)