

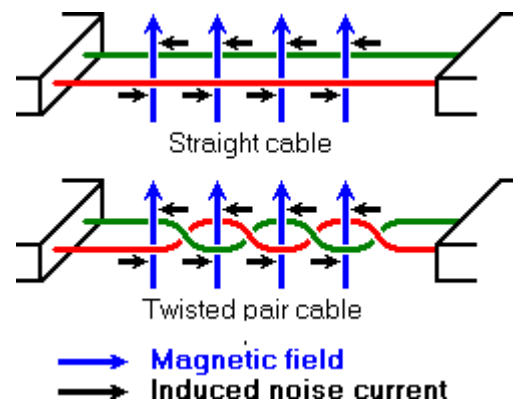


RS 485

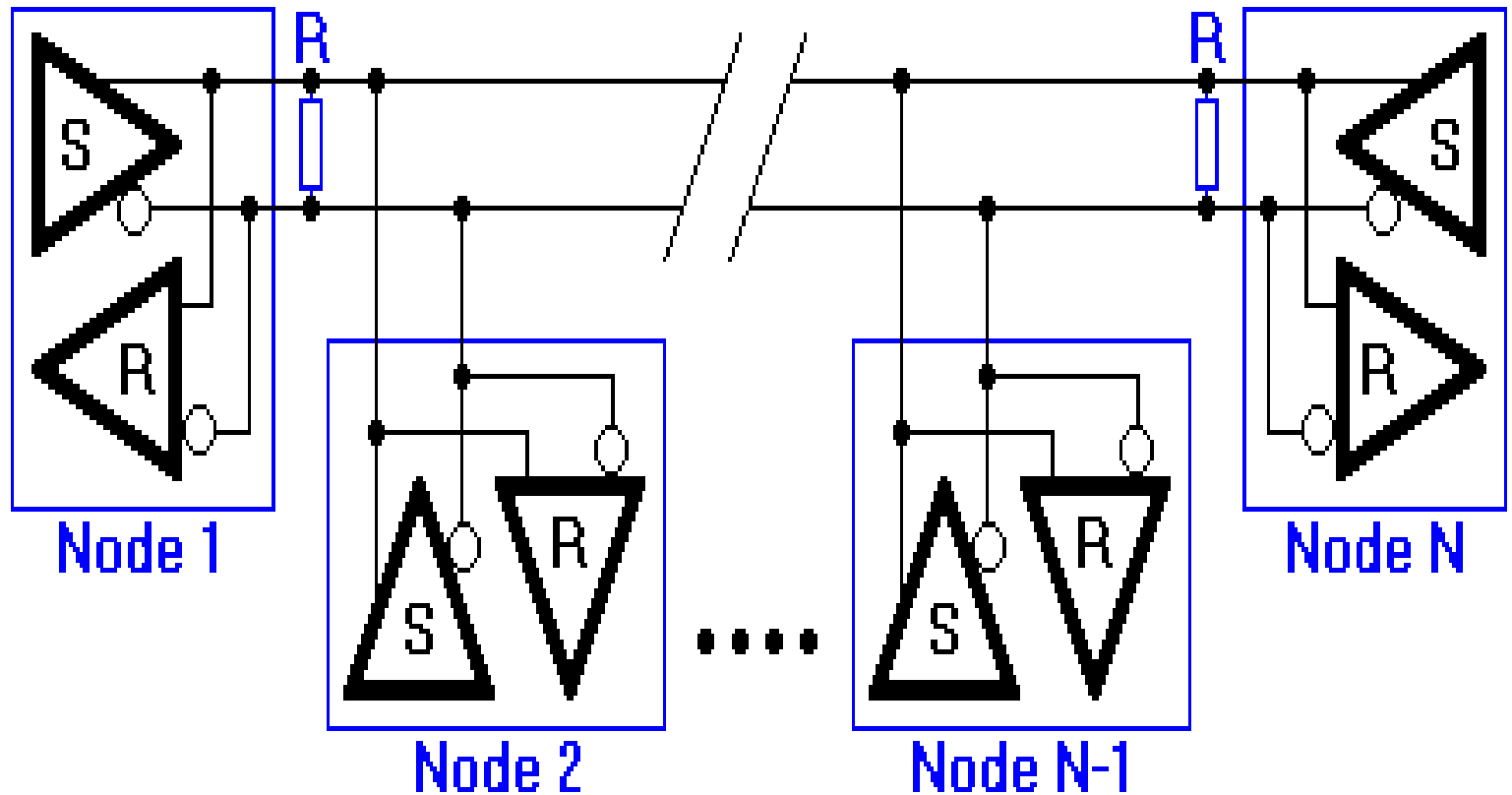
Introduction

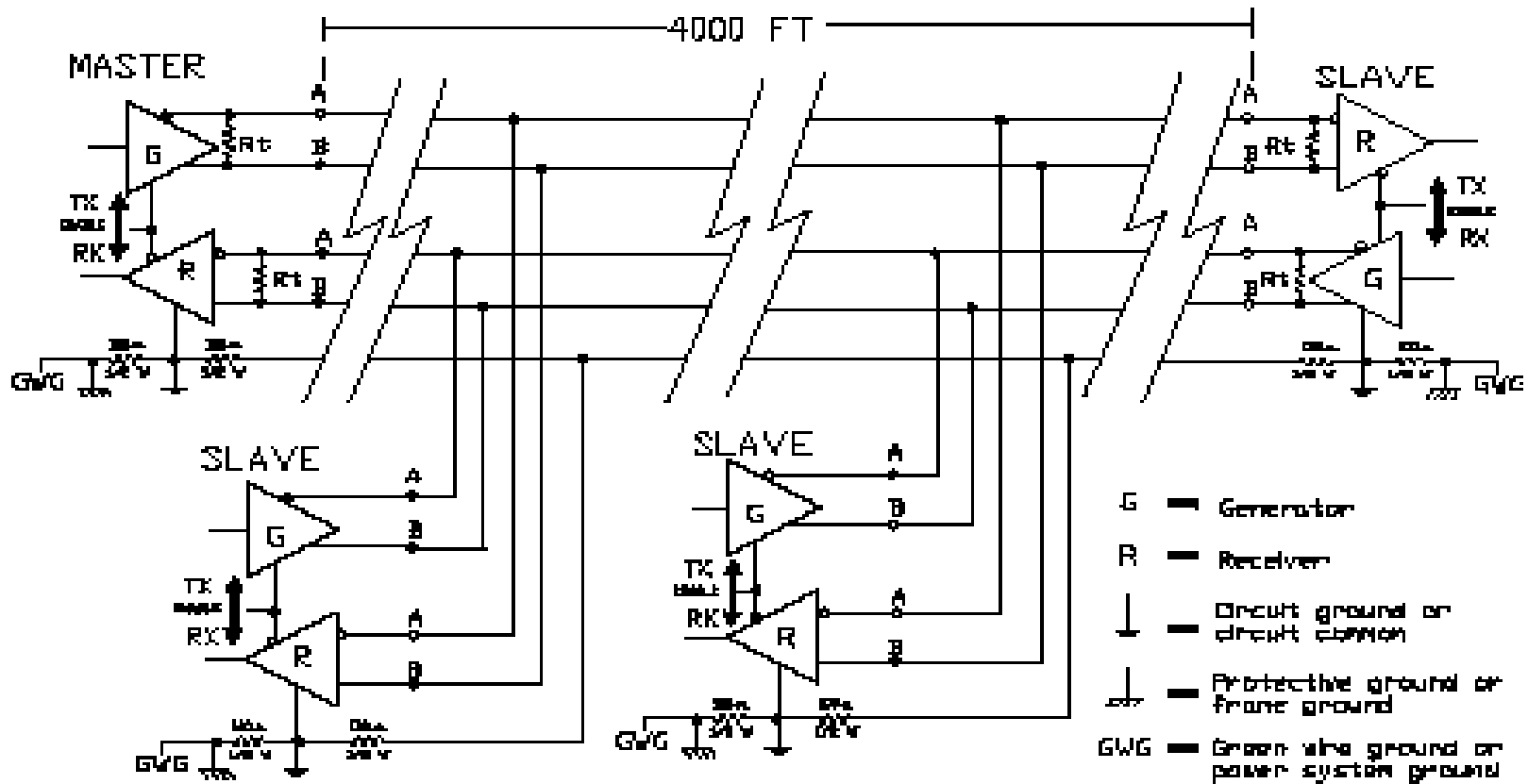
- ❑ Very much common in data acquisition.
- ❑ It is also called as EIA 485.
- ❑ RS485 supports 32 drivers and 32 receivers .
- ❑ Differential Voltage transmission mode.
- ❑ Distance 4000 Feet.
- ❑ Maximum data rate 10 Mbps.
- ❑ It's a typical half duplex,2 wire multidrop system. 4 wire with full duplex is also possible.

- Maximum driver output voltage is $-7V$ to $+12V$.
- While selecting the cable characteristic impedance, shunt capacitance (pF/ft), propagation velocity (% of c) is taken into consideration.
- Plenum cable which is fire resistance, less toxic, but little costly due to sheathing material used is recommended. Twisting is also used.



Network Topology.





Comparison of RS232 & RS 485

SPECIFICATIONS	RS 232	RS 485
Mode of Operation	SINGLE -ENDED	DIFFERENTIAL
Total Number of Drivers and Receivers on One Line	1 DRIVER 1 RECVR	32 DRIVER 32 RECVR
Maximum Cable Length	50 FT.	4000 FT.
Maximum Data Rate (40ft. - 4000ft.)	20kb/s	10Mb/s-100Kb/s
Maximum Driver Output Voltage	+/-25V	-7V to +12V
Receiver Input Resistance (Ohms)	3k to 7k	>=12k
Receiver Input Sensitivity	+/-3V	+/-200mV

THANK - YOU