



TECHNOLOGY DISTRIBUTORS

## TECHNICAL SHEET

Overview: Magenta Multiview RS232 transmissions over Cat5/6

Just the Facts: Simplex vs Duplex

### SIMPLEX

$A \rightarrow B$  Simplex communication is **one-way** communication. Some of the very first serial connections between computers were simplex connections. For example, an old PC sent data to a printer and never checked to see if the printer was available or if the document printed properly since that was a human job. Simplex links are built so that the transmitter (the one talking) sends a signal and it's up to the receiving device (the listener) to figure out what was sent and to correctly do what it was told. **No traffic is possible in the other direction across the same connection.**

No acknowledgement or return traffic is possible over a simplex circuit. IR is a form of Simplex communication as instructions go from remote control to the device with no return.

### FULL DUPLEX

$A \leftrightarrow B$  Full duplex communication is **two-way** communication. Most electrical and fiber optic communication is Duplex and usually achieved with more than one physical connection / wire. A telephone line contains two connections, one for transmit, the other for receive. This means you can both talk and listen at the same time.

An example of correct Duplex operation would be a control system sending an ON command to a plasma panel or projector and then waiting till it got an Acknowledge signal back which would indicate that it received and processed the signal and is actually turned ON. If there is now way to get a reply then there would be no way to really know whether the target device turned ON or not.