OVERVIEW

Cable Television systems provide service to their subscribers by means of a small coaxial cable called a drop cable. Where aerial cable plant is usually suspended between utility poles, the drop cable is usually sus-pended between the pole or support strand and the house. This technical note covers the maximum span over which a drop cable can be suspended.

MAXIMUM SPAN LENGTH

Clearance Requirements

For normal application, the maximum span is limited by two key factors. The first is the maximum allowable sag. The sag is controlled by clearance requirements. For purposes of this technical note a 7 foot sag is assumed which would allow a 14 foot clearance above the ground if the attachments are 21 feet high. It should be emphasized that clearance requirements usually depend on the location of the installation and are dictated by the National Electrical Safety Code, and state and local safety codes.

TENSION REQUIREMENTS

The second factor that limits the maximum span is the maximum tension that the cable can reliably withstand during its service life. This, of course, assumes that the attachment hardware is capable of supporting the tension, which may not be the case. A typical 0.1875 (3/16) inch woodscrew "P" hook can pull out at less than 100 pounds depending on the type of wood used. For purposes of this technical note, it is assumed that non-messengered drop cable can withstand approximately 100 pounds of tension and messengered drop can handle 80% of the messenger's minimum break strength.

Span Length (feet)

Drop Cable Type	Messenger Size (inches)	Messenger Break Strength (pounds)	NESC Loading District		
			Heavy	Medium	Light
59 Series					
Non-Messengered			75	110	160
Messengered	0.051	200	90	125	160
6 Series					
Non-Messengered			75	100	145
Messengered	0.051	200	90	120	155
7 Series					
Non-Messengered			75	100	135
Messengered	0.072	365	120	160	195
11 Series					
Non-Messengered			75	100	130
Messengered	0.083	485	130	175	205
TX Flexible Feeder					
Non-Messengered			90	115	140
Messengered	0.109	1800	150	200	240