KL7UW CABLE LOSS CALCULATIONS

40-FOOT ROHN-45 TOWER #4: **12/13/2020**

NE334-S01 PREAMP 0.10 dBNF

		ESTIMATED LOSS				BIRD=120W	BIRD=500W	Bird=1100W	Bird=1200W	SYS NF
144-MHZ - EME 2X KLM 11-Elem Yagis (Vpol)		**DB**	**FEET**	**DB**	**%**	**W**	**W**	**W**	**W**	**dB**
JUMPER TO AMPLIFIER	LMR-600	1.08	10	0.11	98	117	614	1351	1463	
MAIN TOWER-LINE	LDF4-50A	0.88	50	0.44	90	106	554	1221	1322	
JUMPER	LMR-600	1.08	33	0.36	92	97	511	1125	1218	0.46
AZ-EL JUMPER	LMR-400	1.504	10	0.15	97	102	493	1086	1177	0.61
RELAY MATRIX		0.1		0.10	98	100	482	1062	1150	0.71
2-WAY DIVIDER		0.04		0.04	99	99	478	1052	1139	0.75
PHASING LINES	LMR-400	1.504	10	0.15	97	96	461	1016	1100	0.90
TOTAL LINE				**1.35**	**97**	**96**	**461**	**1016**	**1100**	

DESCRIPTION	COAX-TYPE	LOSS/100	LENGTH	LOSS	NET PWR	Po = 50	SYS NF	
927-MHZ - 33-element Loop-Yagi		**DB**	**FEET**	**DB**	**%**	**W**	**dB**	
MAIN TOWER-LINE	LDF4-50A	2.3	50	1.15	77	6		NOTE 1
JUMPER	LMR-600	2.5	20	0.50	89	45	0.70	**PREAMP NF=0.2 dB**
JUMPER	LMR-400	4.2	10	0.42	91	40	1.1	
TOTAL LINE				**0.92**	81	**40**		

DESCRIPTION	COAX-TYPE	LOSS/100	LENGTH	LOSS	NET PWR	Po = 50	SYS NF	
1296-MHZ - 45-element Loop-Yagi		**DB**	**FEET**	**DB**	**%**	**W**	**dB**	
MAIN TOWER-LINE	LDF4-50A	2.8	50	1.40	72	6		NOTE 2
JUMPER	LMR-600	3.0	20	0.60	87	44	0.90	**PREAMP NF=0.3 dB**
JUMPER	LMR-400	5.1	10	0.51	89	39	1.41	
TOTAL LINE				**1.11**	77	**39**		

DESCRIPTION	COAX-TYPE	LOSS/100	LENGTH	LOSS	NET PWR	Po = 100	SYS NF	
432-MHZ M2 420-450 18-Element Yagi		**DB**	**FEET**	**DB**	**%**		**dB**	
MAIN TOWER-LINE	LDF4-50A	1.6	50	0.80	83	13		NOTE 3
JUMPER	LDF4-50A	1.6	15	0.24	95	95	0.4	**PREAMP NF=0.2 dB**
JUMPER	LMR-400	2.9	15	0.44	90	86	0.88	
TOTAL LINE				**0.68**	86	**86**		

NOTE: 2500B BIRD ELEMENT READS 0.794 ACTUAL POWER

NOTE 1: 8W in shack; 50W located at tower base **NOTE 2: 8W in shack; 50W located at tower base**

NOTE 3: 16w in shack; 100w at tower base

50-FOOT ROHN-25 TOWER #2:
BCM-220 30W
AMP 130W
NO PREAMP

DESCRIPTION	COAX-TYPE	LOSS/100	LENGTH	LOSS	NET PWR	Po = 30		Po = 130
222-MHZ 2X 11-Element Yagis		**DB**	**FEET**	**DB**	**%**	**W**		**W**
JUMPER TO AMPLIFIER	LMR-400	1.879	8	0.15	97	29		126
MAIN TX-LINE	7/8 HELIAX	0.58	80	0.46	90	26		113
AZ-EL JUMPER	LMR-400UF	2.225	20	0.45	90	24		102
PHASING LINES	RG-11	3.125	5	0.16	96	23		98
TOTAL LINE				**1.06**	**78**	**23**		**98**

40-FOOT ROHN-45 TOWER #4
33-FOOT
1KW AMP IN SHACK
NE334-S01 PREAMP 0.22 dBNF

DESCRIPTION	COAX-TYPE	LOSS/100	LENGTH	LOSS	NET PWR		Po = 80	Po = 900	Po = 1000	SYS NF
50-MHZ - EME 2X G0KSC LFA Yagi (Hpol)		**DB**	**FEET**	**DB**	**%**	**W**	**W**	**W**	**W**	**dB**
LINE FROM SHACK	LDF4-50A	0.53	50	0.27	94		75	847	941	
MAIN TX-LINE	1-5/8 HELIAX	0.16	30	0.05	99		74	837	930	0.27
AZ-EL JUMPER	LMR-400UF	1.00	12	0.12	97		72	815	905	0.39
PHASING LINES	LMR-600	0.55	25	0.14	97		70	789	877	0.53
TOTAL LINE				**0.57**	88		**70**	**789**	**877**	

33-FOOT
1KW AMP AT TOWER
NE334-S01 PREAMP 0.22 dBNF

DESCRIPTION	COAX-TYPE	LOSS/100	LENGTH	LOSS	NET PWR	Po = 12	Po = 80	Po = 900	Po = 1000	SYS NF
50-MHZ - EME 2X G0KSC LFA Yagi (Hpol)		**DB**	**FEET**	**DB**	**%**	**W**	**W**	**W**	**W**	**dB**
LINE FROM SHACK	LMR-400	0.91	50	0.46	90	11	72			
MAIN TX-LINE	1-5/8 HELIAX	0.16	30	0.05	99		71	890	989	0.27
AZ-EL JUMPER	LMR-400UF	1.00	12	0.12	97		69	866	962	0.39
PHASING LINES	LMR-600	0.55	25	0.14	97		67	839	932	0.53
TOTAL LINE				**0.31**	93		**67**	**839**	**932**	