



Report WG 5.89.005

TERRESTRIAL MICROWAVE INTERFERENCE OBJECTIVES
for the
2, 4, 6, 11, 18, and 23 GHz Bands

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REPORT WG 5.89.005

Subject: Interference Objectives

Title: Terrestrial Microwave Interference Objectives for the 2,4,6,11,18
and 23 GHz Bands

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Questions and comments should be directed to:

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2 GHz 0.0 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	72	132	252	NECSTD*	NECHI**
72	46/45	55(54)	69(63)	65	65
132	45	59(52)	74(62)	65	65
252	46	62(54)	75(62)	65	65
NEC-STD	46/42	52	65	65	65
NEC-HI	46/42	52	65	65	65
DR2C	46/42	52	64	65	65
DR2D	46/40	51	65	65	65
FAR DM1/2	46/42	52	65	65	65
VID DRM2-6	46/42	53	64	65	65
LEN 79F1-D	46/43	53	65	65	65

INTERFERED SYSTEM

INTERFERING SYS	DR2C	DR2D	FRDM1/2	VDRM2-6	L79F1-D
72	65	65	65	65	65
132	65	65	65	65	65
252	65	65	65	65	65
NEC-STD	65	65	65	65	65
NEC-HI	65	65	65	65	65
DR2C	65	65	65	65	65
DR2D	65	65	65	65	65
FAR DM1/2	65	65	65	65	65
VID DRM2-6	65	65	65	65	65
LEN 79F1-D	65	65	65	65	65

AA(BB) BB - Exactly 0.0 MHz separation and high stability.
 AA Anywhere else

XX/YY XX is a threshold degradation number based on a 40dB, typical fade margin for nominal system IF filtering in the analog group. The objective may be relaxed dB for dB up to YY for lesser fade margins.

* STD - Standard Filter

** HI - High Discrimination

2 GHZ 1.2 MHZ SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	72	132	252	NECSTD	NECHI
72	46/30	46/45	67	64	64
132	45/30	45/43	65	64	63
252	45/27	45/41	59	64	63
NEC-STD	46/38	49	62	64	63
NEC-HI	46/38	49	62	64	63
DR2C	46/38	49	62	64	63
DR2D	46/38	49	63	65	64
FAR DM1/2	46/40	50	61	64	63
VID DRM2-6	46/38	49	62	64	63
LEN 79F1-D	46/37	48	64	65	63

INTERFERED SYSTEM

INTERFERING SYS	DR2C	DR2D	FRDM1/2	VDRM2-6	L79F1-D
72	59	62	65	65	64
132	58	61	48	64	64
252	58	62	44	64	65
NEC-STD	60	62	59	64	63
NEC-HI	60	62	59	64	63
DR2C	60	62	59	64	63
DR2D	61	63	59	64	63
FAR DM1/2	61	62	61	63	62
VID DRM2-6	60	63	59	64	63
LEN 79F1-D	60	62	58	62	63

NOTE :

XX/YY is a threshold degradation number based on a 40dB, typical fade margin for nominal system IF filtering in the analog group. The objective may be relaxed dB for dB up to YY for lesser fade margins.

2 GHZ 2.4 MHZ SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	72	132	252	NECSTD	NECHI
72	45/20	45/20	45/40	60	52
132	44/20	44/20	44/37	59	50
252	44/20	44/20	44/31	59	49
NEC-STD	45/20	45/30	54	61	57
NEC-HI	45/20	45/30	54	61	57
DR2C	45/20	45/30	54	61	57
DR2D	45/20	45/29	53	62	57
FAR DM1/2	45/24	45/38	60	61	59
VID DRM2-6	45/20	45/31	53	61	57
LEN 79F1-D	45/20	45/31	51	61	56

INTERFERED SYSTEM

INTERFERING SYS	DR2C	DR2D	FRDM1/2	VDRM2-6	L79F1-D
72	27	46	20	60	38
132	27	45	20	60	37
252	29	43	20	61	40
NEC-STD	48	55	34	51	56
NEC-HI	48	55	34	51	56
DR2C	48	55	27	51	55
DR2D	47	54	28	52	55
FAR DM1/2	53	57	43	46	58
VID DRM2-6	48	55	28	52	55
LEN 79F1-D	46	53	38	51	53

All underlined objectives are floor numbers.

XX/YY XX is a threshold degradation number based on a 40 dB fade margin for margin for nominal system IF filtering in the analog group. The objective may be relaxed dB for dB up to YY for lesser fade margins.

2 GHZ 3.6 MHZ SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	72	132	252	NECSTD	NECHI
72	41/20	41/20	41/20	42	20
132	41/20	41/20	41/20	40	20
252	41/20	41/20	41/20	38	20
NEC-STD	41/20	41/20	41/30	52	44
NEC-HI	41/20	41/20	41/30	52	44
DR2C	41/20	41/20	41/22	52	39
DR2D	41/20	41/20	41/25	52	37
FAR DM1/2	41/20	41/20	41/35	55	47
VID DRM2-6	41/20	41/20	41/23	52	38
LEN 79F1-D	41/20	41/20	41/30	50	38

INTERFERED SYSTEM

INTERFERING SYS	DR2C	DR2D	FRDM1/2	VDRM2-6	L79F1-D
72	20	20	21	41	25
132	20	20	21	42	25
252	20	20	20	43	26
NEC-STD	20	32	21	31	28
NEC-HI	20	32	21	31	28
DR2C	20	32	21	31	25
DR2D	20	30	22	32	26
FAR DM1/2	22	41	22	26	29
VID DRM2-6	20	30	21	32	24
LEN 79F1-D	20	33	22	32	32

All underlined objectives are floor numbers.

XX/YY XX is a threshold degradation number based on a 40 dB fade margin for nominal system IF filtering in the analog group. The objective may be relaxed dB for dB up to YY for lesser fade margins.

2 GHZ 4.8 MHZ SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	72	132	252	NECSTD	NECH1
72	24/2Q	24/2Q	24/2Q	27	20
132	23/2Q	23/2Q	23/2Q	26	20
252	22/2Q	22/2Q	22/2Q	26	20
NEC-STD	32/20	32/20	32/2Q	31	20
NEC-HI	32/20	32/20	32/20	31	20
DR2C	32/2Q	32/20	32/2Q	30	20
DR2D	31/20	31/20	31/20	30	20
FAR DM1/2	40/20	40/20	40/20	36	20
VID DRM2-6	32/20	32/20	32/20	30	20
LEN 79F1-D	40/20	40/20	40/2Q	32	20

INTERFERED SYSTEM

INTERFERING SYS	DR2C	DR2D	FRDM1/2	VDRM2-6	L79F1-D
72	20	20	23	21	20
132	20	20	22	22	20
252	20	20	22	22	20
NEC-STD	20	20	23	20	20
NEC-HI	20	20	23	20	20
DR2C 20	20	23	20	20	20
DR2D 20	20	23	20	20	20
FAR DM1/2	20	20	23	20	20
VID DRM2-6	20	20	23	20	20
LEN 79F1-D	20	20	23	20	20

All underlined objectives are floor numbers.

XX/YY XX is a threshold degradation number based on a 40 dB fade margin for nominal system IF filtering in the analog group. The objective may be relaxed dB for dB up to YY for lesser fade margins .

4 GHz 0.0 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	TD-480/600	TD-1200	TD-1500	TD-1800	VIDEO	TD1200 DUV	TD1500 DUV
TD-480/600	62	70	75	77	68	69	75
TD-1200	63	65	67	69	68	64	67
TD-1500	59	61	63	66	68	63	67
TD-1800	62	63	64	65	68	63	66
VIDEO	68	74	78	80	68	74	78
TD-1200/DW	60	64	67	69	68	64	67
TD-1500/DW	60	63	67	66	68	63	67
TD-1800/DW	60	63	66	66	68	63	66
TD2 20 MB/S, 8PSK	67	74	79	81	67	76	81
TD3 20 MB/S, 8PSK	67	74	79	81	67	76	81
TD-45 MB/S, 8PSK	66	76	82	85	66	76	82
45 MB/S, 16QAM	66	76	82	84	67	76	82
90 MB/S, 64QAM	66	76	82	84	67	76	82

INTERFERED SYSTEM

INTERFERING SYS	TD1800 DUV	TD-2 20MB	TD-3 20MB	TD-45MB 8PSK	45MB 16QAM	90MB 64QAM
TD-480/600	76	67	67	65		
TD-1200	69	67	67	65	65	72
TD-1500	66	67	67	65	65	72
TD-1800	66	67	67	65	65	72
VIDEO	80	67	67	65	65	72
TD-1200/DW	69	67	67	65	65	72
TD-1500/DW	66	67	67	65	65	72
TD-1800/DW	66	67	67	65	65	72
TD2 20 MB/S, 8PSK	82	67	67	65	65	72
TD3 20 MB/S, 8PSK	82	67	67	65	65	72
TD-45 MB/S, 8PSK	85	67	67	65	65	72
45 MB/S, 16QAM	84	74:67	74:67	65	65	72
90 MB/S, 64QAM	84	74:67	74:67	65	65	72

AA:BB - AA is the 9 MHz Noise Switching Slot, and BB is the 4 dBrcn0 Continuous Objective.

4 GHz 20 MHz SEPARATION

INTERFERED SYSTEM

	TD-	TD-	TD-	TD-		TD1200	TD1500
INTERFERING SYS	480/600	1200	1500	1800	VIDEO	DUV	DUV
TD-480/600	35/25	35/25	35/25	35/25	35/25	35/25	35/25
TD-1200	35/25	35/25	35/25	35/25	35/25	35/25	35/25
TD-1500	35/25	35/25	35/25	35/33	35/25	35/25	35/25
TD-1800	35/25	35/25	35/25	35/29	35/25	35/25	35/25
VIDEO	35/25	35/25	35/31	35/34	35/25	35/25	35/31
TD-1200/DUV	35/25	35/25	35/25	35/33	35/25	35/25	35/25
TD-1500/DUV	35/25	35/25	35/25	35/31	35/25	35/25	35/25
TD-1800/DUV	35/25	35/25	35/25	35/29	35/25	35/25	35/25
TD2 20 MB/S, 8PSK	27	27	33	41	25	--	--
TD3 20 MB/S, 8PSK	31	31	34	42	25	--	--
TD-45 MB/S, 8PSK	20	39	46	52	22	39	46
45 MB/S, 16QAM	25	31	42	48	25	31	42
90 MB/S, 64QAM	45:25	48:31	42	54	58:25	48:31	42

INTERFERED SYSTEM

	TD1800	TD-2	TD-3	TD-45MB	45MB	90MB
INTERFERING SYS	DUV	20MB	20MB	8PSK	16QAM	64QAM
TD-480/600	35/25	25	25	33	25	32
TD-1200	35/33	25	31	33	25	32
TD-1500	35/31	27	32	33	25	32
TD-1800	35/29	32	34	33	25	32
VIDEO	35/34	29	30	33	25	32
TD-1200/DUV	35/33	25	25	33	25	32
TD-1500/DUV	35/31	25	25	33	25	32
TD-1800/DUV	35/29	25	25	33	25	32
TD2 20 MB/S, 8PSK	51	37	40	25	25	32
TD3 20 MB/S, 8PSK	51	37	40	25	25	32
TD-45 MB/S, 8PSK	52	52	55	55	25	32
45 MB/S, 16QAM	48	45	50	56	25	32
90 MB/S, 64QAM	48	66:53	66:53	51	25	32

XX/YY XX is for systems without interstitial filters and YY is for systems with the interstitial filters.

AA:BB - AA is the 9 MHz Noise Switching Slot, and BB is the 4 dBncO continuous objective.

6 GHz 0.0 MHz SEPARATION

INTERFERED SYSTEM

	*	*	*					
INTERFERING SYSTEM	TM1600	TM1900	TM11200	TM21200	NW1200	TH1800	NW1800	NW2700
	.02	.02	.02	.002	.005	.002	.005	
TM1600 .02	75/57	80/60	83/64	76/72	77/73	78/75	79/75	82/73
TM1900 .02	76/55	80/59	83/63	76/71	77/72	79/74	79/73	82/72
TM11200 .02	76/56	80/60	83/63	76/71	77/71	79/73	79/72	82/71
TM21200.002	74/56	77/59	79/61	66	67	67	68	68
NW1200.005	75/56	78/60	80/61	67	70/68	68	72/69	73/68
TH1800.002	75/55	78/58	80/59	64	65	66	66	65
NW1800.005	75/55	78/58	80/60	66	70/67	67	72/68	72/65
NW2700.002	77/53	80/56	82/57	62	63	63	64	65
TH1860.002	75/53	78/55	80/56	62	62	64	63	64
TH2100.002	75/54	78/57	80/58	63	65	64	66	63
TH2400.002	73/56	76/58	77/60	65	66	67	67	65
TH1800.002DUV	68	71	73	65	72	67	72	72
TH2400.002DUV	68	71	73	66	72	68	72	72
VIDEO .02	76/69	80/72	83/74	78	81	82	83	84
VIDEO .002	75/67	78/69	80/69	73	74	77	77	77
DIG908PSK002	54	60	63	73	73	79	78	82
DIG45/78.002	54	59	62	72	72	79	78	84
DIG20 .002	59	63	65	74	74	78	77	78
SSBAR6A.0002	54	59	62	72	72	79	78	82
DR63016QAM002	54	60	63	73	73	79	78	82
NEC16QAM.002	54	60	64	74	74	80	79	82
DIG135 64QAM	54	60	63	73	73	79	79	82

INTERFERED SYSTEM

								DIG90
INTERFERING SYSTEM	TH1860	TH2100	TH2400	TH1800	TH2400	VIDEO	VIDEO	8PSK
	.002	.002	.002	.002DUV	.002DUV	.02	.002	.002
TM1600 .02	80/74	79/75	78/73	86	84	68	68	65
TM1900 .02	80/73	79/74	78/72	86	84	68	68	65
TM11200.002	80/72	80/73	78/71	86	84	68	68	65
TM21200.002	68	69	66	67	66	68	67	65
NW1200.005	70/68	69	67	73	67	68	67	65
TH1800.002	66	65	64	67	64	68	67	65
NW1800.005	70/66	68	66	73	67	68	67	65
NW2700.002	66	64	62	67	63	69	68	65
TH1860.002	67	64	63	68	63	68	67	65
TH2100.002	65	65	64	67	63	68	67	65
TH2400.002	67	68	65	68	65	68	67	65
TH1800.002DUV	75	66	64	67	64	68	67	65
TH2400.002DUV	75	67	65	68	65	68	67	65
VIDEO .02	84	83	80	82	80	69	69	65
VIDEO .002	78	77	73	77	73	69	68	65
DIG908PSK002	80	81	78	79	78	64	64	65
DIG45/78.002	80	81	79	79	79	64	64	65
DIG20 .002	81	80	76	78	76	68	68	65
SSBAR6A.0002	81	81	79	79	79	63	63	65
DR63016QAM.002	81	82	79	79	79	64	64	65
NEC16QAM.002	81	83	80	78	77	64	64	65
DIG135 64QAM	80	81	79	79	79	54	64	65

6 GHz 0.0 MHz SEPARATION (continued)

INTERFERED SYSTEM

	DIG		AR6A	DR630	NEC	
INTERFERING SYSTEM	45/78	DIG20	SSB	16QAM	16QAM	DIG135
	.002	.002	.0002	.002	.002	64QAM
TM1600 .02	65	65	90/67	65	65	72
TM1900 .02	65	65	90/65	65	65	72
TM11200.02	65	65	90/65	65	65	72
TM21200.02	65	65	59	65	65	72
NW1200.005	65	65	60	65	65	72
TH1800.002	65	65	55	65	65	72
NW1800.005	65	65	57	65	65	72
NW2700.002	65	67	55	65	65	72
TH1860.002	65	65	55	65	65	72
TH2100.002	65	65	54	65	65	72
TH2400.002	65	65	56	65	65	72
TH1800.002DUV	65	65	55	65	65	72
TH2400.002DUV	65	65	56	65	65	72
VIDEO .02	65	65	90/77	65	65	72
VIDEO .002	65	65	63	65	65	72
DIG908PSK.002	65	65	63	65	65	72
DIG45/78.002	65	65	64	65	65	72
DIG20 .002	65	65	70	65	65	72
SSBAR6A.0002	65	65	64	65	65	72
DR63016QAM002	65	65	64	65	65	72
NEC16QAM.002	65	65	64	65	65	72
DIG135 64QAM	65	67	64	65	65	72

* 14 dBrcn0 Objectives -- All others are 4 dBrcn0 for continuous or sidebar interference and 17 dBrcn0 for carrier beat (carrier beat assumes 10 dB burble).

When two objectives appear as AA/BB, AA is the carrier beat objective and BB is the continuous objective.

6 GHz 7.5 MHz SEPARATION

INTERFERED SYSTEM

	*	*	*					
INTERFERING SYSTEM	TM1600	TM1900	TM11200	TM21200	NW1200	TH1800	NW1800	NW2700
	.02	.02	.02	.002	.005	.002	.005	
TM1600 .02	49	60	87/65	75	75	91/80	89/79	94/81
TM1900 .02	48	59	87/64	74	74	91/78	90/78	94/80
TM11200.02	48	60	88/63	73	73	91/78	90/77	94/79
TM21200.002	47	51	63	65	66	91/78	90/77	94/79
NW1200 .005	47	52	63	66	67	91/78	90/77	94/79
TH1800 .002	47	50	61	63	64	91/80		94/79
NW1800 .005	47	51	62	64	65			94/79
NW2700	46	51	59	63	64	63	64	65
TH1860 .002	46	50	60	63	64			94/81
TH2100 .002	47	50	60	63	64			94/79
TH2400 .002	47	51	62	64	65	90/77		94/79
TH1800.002DUV	46	51	70	64	65			97
TH2400.002DUV	46	51	70	64	65			97
VIDEO .02	48	66	88/77	87	87	94	93	97
VIDEO .002	47	52	77	66	69	94	93	97
DIG908PSK.002	54	59	62	72	72	77	76	79
DIG45/78.002	54	59	62	72	72	77	76	81
DIG20 .002	53	61	67	75	75	83	82	83
SSBAR6A.0002	54	59	62	72	72			81
DR63016QAM002	54	59	62	72	72	77	76	79
NEC16QAM.002	54	59	62	71	71	77	76	79
DIG135 64QAM	52	57	60	70	70	77	74	79

INTERFERED SYSTEM

INTERFERING SYSTEM	TH1860	TH2100	TH2400	TH1800	TH2400	VIDEO	VIDEO	DIG90
	.002	.002	.002	.002DUV	.002DUV	.02	.002	8PSK
TM1600 .02	90/80	93/82	90/80	95	94	57	53	66
TM1900 .02	90/78	93/80	90/79	95	94	56	52	66
TM11200 .02	90/77	93/79	90/78	95	94	56	51	66
TM21200.002	92/78	93/79	90/78	94	94	51	50	66
NW1200 .005	91/78	93/79	90/82	94	94	51	50	66
TH1800 .002			90/77			50	49	66
NW1800 .005						51	50	66
NW2700	92/80	93/78	91/76	94	94	54/48	60/49	64
TH1860 .002						50	49	66
TH2100 .002						50	49	66
TH2400 .002						51	50	66
TH1800.002DUV						50	49	66
TH2400.002DUV						51	50	66
VIDEO .02	95	94	93	95	95	62	62	66
VIDEO .002	94	94	93	95	95	52	51	66
DIG908PSK.002	78	79	76	77	76	64	63	67
DIG45/78 .002	79	79	76	77	76	64	63	67
DIG20.002	84	86	83	83	83	61	57	67
SSBAR6A .0002						64	64	70
DR63016QAM002	79	79	76	77	76	64	64	67
NEC16QAM .002	78	79	76	75	75	64	64	67
DIG135 64QAM	79	79	76	77	76	52	64	63

6 GHz 7.5 MHz SEPARATION

INTERFERED SYSTEM

	DIG		AR6A	DR630	NEC	
INTERFERING SYSTEM	45/78	DIG20	SSB	16QAM	16QAM	DIG135
	.002	.002	.0002	.002	.002	64QAM
TM1600 .02	65	65	90	65	64	71
TM1900 .02	65	65	90	65	64	71
TM11200 .02	65	65	90	65	64	71
TM21200 .002	65	64	90	65	63	71
NW1200 .005	65	64	90	65	63	71
TH1800 .002	65	64		65	63	71
NW1800 .005	65	64		65	64	71
NW2700	65	67	55	65	65	71
TH1860 .002	65	64		65	63	71
TH2100 .002	65	64		65	63	71
TH2400 .002	65	64		65	63	71
TH1800.002DUV	65	64		65	64	71
TH2400.002DUV	65	64		65	64	71
VIDEO .02	65	65	90	65	64	71
VIDEO .002	65	65	90	65	64	71
DIG908PSK.002	65	64	63	63	63	69
DIG45/78 .002	65	64	64	63	63	69
DIG20 .002	64		70	65	63	69
SSBAR6A .0002	63	65	64	63	63	69
DR63016QAM002	64	64	64	63	63	69
NEC16QAM.002	63	64	64	63	62	69
DIG135 64QAM	64	66	64	63	64	69

* 14 dBrnc0 Objectives -- All others are 4 dBrnc0 for continuous or sideband interference and 17 dBrnc0 for carrier beat (carrier beat assumes 10 dB burble)

When two objectives appear as AA/BB, AA is the carrier beat objective and BB is the continuous objective.

6 GHz 15 MHz SEPARATION

INTERFERED SYSTEM

	*	*	*					
INTERFERING SYSTEM	TM1600 .02	TM1900 .02	TM11200 .02	TH21200 .002	NW1200 .005	TH1800 .002	NW1800 .005	NW2700
TM1600 .02	35	35	35	40	41	58	58	77
TM1900 .02	35	35	35	40	41	58	58	75
TM11200.02	35	35	35	39	40	64	63	74
TM21200.002	35	35	35	37	37	57	57	69
NW1200 .005	35	35	35	37	38	57	57	70
TH1800 .002	35	35	40	36	36	60	59	67
NW1800 .005	35	35	41	38	38	60	60	68
NW2700	35	35	37	48	48	59	58	67
TH1860.002	35	35	39	36	36	60	60	66
TH2100.002	35	35	38	48	48	59	58	66
TH2400.002	35	35	41	51	51	60	60	68
TH1800.002DUV	35	35	40	36	36	60	59	67
TH2400.002DUV	35	35	41	51	51	60	60	68
VIDEO .02	35	35	35	44	46	61	61	77
VIDEO .002	35	35	35	39	39	61	61	73
DIG908PSK.002	49	55	59	69	69	76	75	80
DIG45/78.002	50	56	59	69	69	76	75	81
DIG20 .002	31	36	45	51	52	68	68	81
SSBAR6A.0002	51	56	59	69	69	76	75	79
DR630.00216QAM	50	56	60	70	70	76	75	79
NEC16QAM .002	48	55	60	70	69	77	76	80
DIG135 64QAM	47	54	57	67	67	76	73	79

INTERFERED SYSTEM

DIG90

INTERFERING SYSTEM	TH1860 .002	TH2100 .002	TH2400 .002	TH1800 .002DUV	TH2400 .002DUV	VIDEO .02	VIDEO .002	8PSK .002
TM1600 .02	60	63	72	58	72	35	46	71
TM1900 .02	59	69	70	58	70	35	46	71
TM11200 .02	66	67	68	64	68	35	46	71
TM21200.002	60	66	66	57	66	35	46	71
NW1200 .005	60	66	66	57	66	35	46	71
TH1800 .002	62	62	63	60	63	35	46	71
NW1800 .005	62	63	64	60	64	35	46	71
NW 2700	61	61	63	59	64	46/35	53/35	71
TH1860 .002	62	63	63	60	63	35	46	71
TH2100 .002	61	61	63	59	63	43	46	71
TH2400 .002	62	63	64	60	64	39	46	71
TH1800.002DUV	62	62	63	60	63	35	46	71
TH2400.002DUV	62	63	64	60	64	39	46	71
VIDEO .02	63	72	70	61	70	35	46	71
VIDEO .002	63	66	70	61	70	35	46	71
DIG908PSK.002	78	79	76	76	76	58	56	67
DIG45/78 .002	77	78	76	76	76	59	57	66
DIG20 .002	69	76	77	68	77	46-31	46-29	71
SSBAR6A .0002	78	78	76	76	76	63	63	68
DR63016QAM.002	78	79	76	76	76	58	55	67
NEC16QAM .002	79	80	78	74	75	57	55	66
DIG -135 64QAM	78	79	76	76	76	46	57	60

6 GHz 15 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEM	DIG 45/78 .002	DIG20 .002	AR6A SSB .0002	DRG630 16QAM .002	NEC 16QAM .002	DIG135 64QAM
TM1600 .02	62	39	90	58	61	69
TM1900 .02	62	40	90	58	61	69
TM11200 .02	62	41	90	58	61	69
TM21200.002	61	37	65	54	60	68
NW1200 .005	61	37	65	55	60	68
TH1800 .002	61	38	62	54	60	68
NW1800 .005	61	39	63	55	60	68
NW 2700	69	67	62	53	53	69
TH1860 .002	61	38	60	54	60	68
TH2100 .002	61	38	60	54	60	68
TH2400 .002	61	37	64	54	60	68
TH1800.002DUV	61	38	62	54	60	68
TH2400.002DUV	60	41	64	54	60	67
VIDEO .02	62	42	90	59	61	69
VIDEO .002	61	39	65	55	60	68
DIG908PSK. 002	62	48	63	60	60	69
DIG45/78 .002	62	47	64	59	60	69
DIG20 .002	61		70	56	60	68
SSBAR6A .0002	61	63	64	61	59	68
DR63016QAM.002	61	41	64	60	60	68
NEC16QAM .002	61	46	64	60	59	68
DIG 135 64QAM	62	61	64	60	60	68

* 14 dBrnc0 Objectives -- All others are 4 dBrnc0 for continuous or sideband interference and 17 dBrnc0 for carrier beat (carrier beat assumes 10 dB burble).

All underlined objectives are floor numbers, floor number for video are based on threshold degradation.

TH filtering is assumed for determining the threshold degradation number. If TM or similar filtering is used, the objective can be lowered to 41, or for the 20MB systems, AA-BB AA = TH filter, BB = TM filter.

6 GHz 22.5 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEM	* TM1600 .02	* TM1900 .02	* TM11200 .02	TM21200 .002	NW1200 .005	TH1800 .002	NW1800 .005	NW2700
TM1600 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>43</u>	<u>43</u>	
TM1900 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>43</u>	<u>43</u>	
TM11200 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>43</u>	<u>43</u>	
TM21200 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>41</u>	<u>41</u>	
NW1200 .005	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>41</u>	<u>41</u>	
TH1800 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>			
TH1800 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>			
NW2700								
TH1860 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>			
TH2100 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>21</u>			
TH2400 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>28</u>	<u>29</u>	38		
TH1800 .002DUV	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>			
TH2400 .002DUV	<u>20</u>	<u>20</u>	<u>20</u>	<u>28</u>	<u>29</u>			
VIDEO .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>43</u>	<u>43</u>	
VIDEO .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>41</u>	<u>41</u>	
DIG908PSK .002	<u>32</u>	<u>41</u>	<u>47</u>	<u>55</u>	<u>55</u>	<u>67</u>	<u>67</u>	
DIG45/78 .002	<u>24</u>	<u>35</u>	<u>45</u>	<u>48</u>	<u>49</u>	<u>69</u>	<u>69</u>	
DIG20 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>24</u>	<u>40</u>	<u>40</u>	<u>40</u>	
SSBAR6A .0002	<u>20</u>	<u>37</u>	<u>42</u>	<u>50</u>	<u>50</u>			
DR63016QAM.002	<u>23</u>	<u>31</u>	<u>38</u>	<u>46</u>	<u>46</u>	<u>60</u>	<u>60</u>	
NEC16QAM .002	<u>27</u>	<u>37</u>	<u>45</u>	<u>51</u>	<u>52</u>	<u>67</u>	<u>66</u>	
DIG-135 64QAM	<u>31/20</u>	<u>34</u>	<u>43</u>	<u>31/23</u>	<u>50</u>	<u>67</u>	<u>67</u>	78

INTERFERED SYSTEM

INTERFERING SYSTEM	TH1860 .002	TH2100 .002	TH2400 .002	TH1800 .002DUV	TH2400 .002DUV	VIDEO .02	VIDEO .002	DIG90 8PSK .002
TM1600 .02	<u>43</u>	<u>43</u>	<u>57</u>	<u>43</u>	<u>57</u>	<u>20</u>	<u>43</u>	64:49
TM1900 .02	<u>43</u>	<u>43</u>	<u>57</u>	<u>43</u>	<u>57</u>	<u>20</u>	<u>43</u>	64:49
TM11200 .02	<u>43</u>	<u>43</u>	<u>57</u>	<u>43</u>	<u>57</u>	<u>20</u>	<u>43</u>	64:49
TM21200 .002	<u>41</u>	<u>41</u>	<u>57</u>	<u>41</u>	<u>57</u>	<u>20</u>	<u>41</u>	59:45
NW1200 .005	<u>41</u>	<u>41</u>	<u>57</u>	<u>41</u>	<u>57</u>	<u>20</u>	<u>41</u>	60:45
TH1800 .002					<u>57</u>	<u>20</u>	<u>41</u>	59:44
NW1800 .005						<u>20</u>	<u>41</u>	60:45
NW2700								
TH1860 .002						<u>20</u>	<u>41</u>	59:45
TH2100 .002						<u>20</u>	<u>41</u>	59:43
TH2400 .002						<u>20</u>	<u>41</u>	59:46
TH1800 .002DUV						<u>20</u>	<u>41</u>	59:44
TH2400 .002DUV						<u>20</u>	<u>41</u>	59:46
VIDEO .02	<u>43</u>	<u>43</u>	<u>58</u>	<u>43</u>	<u>58</u>	<u>20</u>	<u>41</u>	64:50
VIDEO .002	<u>41</u>	<u>41</u>	<u>56</u>	<u>41</u>	<u>56</u>	<u>20</u>	<u>41</u>	60:45
DIG908PSX .002	<u>69</u>	<u>74</u>	<u>74</u>	<u>67</u>	<u>74</u>	<u>41</u>	<u>43-38</u>	65:64
DIG45/78 .002	<u>70</u>	<u>76</u>	<u>75</u>	<u>69</u>	<u>75</u>	<u>34</u>	<u>43-31</u>	65:65
DIG20 .002	<u>39</u>	<u>49</u>	<u>56</u>	<u>40</u>	<u>56</u>	<u>42-20</u>	<u>40-20</u>	63:54
SSBAR6A .0002						<u>36</u>	<u>43-31</u>	68:69
DR63016QAM.002	<u>60</u>	<u>74</u>	<u>75</u>	<u>60</u>	<u>75</u>	<u>33</u>	<u>31</u>	66:65
NEC16QAM .002	<u>68</u>	<u>74</u>	<u>73</u>	<u>64</u>	<u>70</u>	<u>35</u>	<u>31</u>	65:65
DIG135 64QAM	<u>68</u>	<u>74</u>	<u>74</u>	<u>67</u>	<u>74</u>	<u>31/29</u>	<u>42-29</u>	66

6 GHz 22.5 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEM	DIG	DIG20	AR6A	DR630	NEC	DIG135
	45/78	.002	SSB	16QAM	16QAM	16QAM
	.002	.002	.0002	.002	.002	
TM1600 .02	49	<u>20</u>	24	<u>20</u>	43	23
TM1900 .02	49	<u>20</u>	33	<u>21</u>	44	26
TM11200 .02	50	<u>20</u>	33	23	44	29
TM21200 .002	43	<u>20</u>	29	<u>20</u>	39	22
NW1200 .005	43	<u>20</u>	29	<u>20</u>	40	23
TH1800 .002	43	<u>20</u>		25	39	34
NW1800 .005	43	<u>20</u>		27	40	39
NW2700						40
TH1860 .002	42	<u>20</u>		24	39	32
TH2100 .002	42	<u>20</u>		28	39	37
TH2400 .002	43	<u>20</u>		34	40	42
TH1800.002DUV	43	<u>20</u>		25	39	40
TH2400.002DUV	42	<u>21</u>		34	40	40
VIDEO .02	50	<u>20</u>	46	26	45	35
VIDEO .002	44	<u>20</u>	33	21	40	42
DIG908PSK.002	57	<u>48</u>	63	53	55	61
DIG45/78 .002	58	47	64	54	55	65
DIG20 .002	49		42	29	44	65
SS8AR6A .0002	58	54	64	56	54	65
DR63016QAM.002	57	41	64	52	52	61
NEC16QAM .002	56	46	63	52	54	61
DIG 135 64QAM	56	46	65	52	54	61

* 14 dBrcnO Objectives -- All others are 4 dBrcnO.

Underlined objectives are floor numbers. Floor numbers for video are based on threshold degradation.

TH filtering is assumed for determining the threshold degradation number. If TM or similar filtering is used, the objective can be lowered to 20 dB. If two numbers are given (i.e., CC-DD), the first number is for threshold degradation and the second number is the noise budget objective. The noise budget objective is the lower bound if the threshold degradation number is adjusted.

The two numbers in the 90MB digital column reflect the difference between the RDS AND MDR filters. The first objective is for RDS and the second for MDR.

6 GHz 30 MHz SEPARATION

INTERFERED SYSTEM

INTERFERED SYSTEM	*	*	*					
	TM1600	TM1900	TM11200	TM21200	NW1200	TH1800	NW1800	NW2700
	.02	.02	.02	.002	.005	.002	.005	
TM1-600 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TM1-900 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TM1-1200 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TM2-1200 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
NW-1200 .005	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TH-1800 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
NW-1800 .005	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
NW-2700								
TH-1800 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TH-2100 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TH-2400 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>20</u>	
TH1800 .002DUV	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
TH2400 .002DUV	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>20</u>	
VIDEO .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
VIDEO .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
DIG90 .0028PSK	<u>20</u>	<u>21</u>	<u>28</u>	<u>35</u>	<u>35</u>	<u>49</u>	<u>48</u>	
DIG45/78 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>32</u>	<u>32</u>	<u>42</u>	<u>42</u>	
DIG-20 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	
SSB .0002AR6A	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>42</u>	<u>44</u>	
DR630.00216QAM	<u>20</u>	<u>20</u>	<u>25</u>	<u>33</u>	<u>33</u>	<u>44</u>	<u>43</u>	
NEC16QAM .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>26</u>	<u>27</u>	<u>40</u>	<u>40</u>	
DIG135 64QAM	<u>20</u>	<u>20</u>	<u>20</u>	<u>22</u>	<u>22</u>	<u>40</u>	<u>40</u>	57

INTERFERED SYSTEM

INTERFERING SYSTEM	TH1860	TH2100	TH2400	TH1800	TH2400	VIDEO	VIDEO	DIG908PSK
	.002	.002	.002	.002DUV	.002DUV	.02	.002	.002
TM1600 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	23:23
TM1900 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	26:23
TM11200 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	30:23
TM21200 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	24:23
NW1200 .005	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	25:23
TH1800 .002	<u>20</u>	<u>20</u>	<u>25</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	31:24
NW1800 .005	<u>20</u>	<u>20</u>	<u>27</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	32:24
NW2700								
TH1860 .002	<u>20</u>	<u>20</u>	<u>32</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	29:24
TH2100 .002	<u>20</u>	<u>21</u>	<u>27</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	35:25
TH2400 .002	<u>27</u>	<u>31</u>	<u>33</u>	<u>20</u>	<u>31</u>	<u>20</u>	<u>20</u>	41:31
TH1800 .002DUV	<u>20</u>	<u>20</u>	<u>25</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	31:24
TH2400 .002DUV	<u>27</u>	<u>31</u>	<u>33</u>	<u>20</u>	<u>32</u>	<u>20</u>	<u>20</u>	41:31
VIDEO .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	32:25
VIDEO .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	27:24
DIG90 .0028PSK	<u>50</u>	<u>55</u>	<u>57</u>	<u>49</u>	<u>57</u>	<u>20</u>	<u>36</u>	60:54
DIG45/78 .002	<u>43</u>	<u>49</u>	<u>52</u>	<u>42</u>	<u>52</u>	<u>20</u>	<u>38</u>	61:55
DIG20 .002	<u>20</u>	<u>20</u>	<u>29</u>	<u>20</u>	<u>29</u>	<u>20</u>	<u>20</u>	35:26
SSB .0002AR6A	<u>39</u>	<u>49</u>	<u>52</u>	<u>42</u>	<u>52</u>	<u>20</u>	<u>20</u>	66:53
DRG30.00216QAM	<u>45</u>	<u>49</u>	<u>51</u>	<u>44</u>	<u>51</u>	<u>20</u>	<u>20</u>	59:50
NEC16QAM .002	<u>41</u>	<u>50</u>	<u>53</u>	<u>37</u>	<u>50</u>	<u>20</u>	<u>20</u>	60:53
DIG13564QAM	<u>39</u>	<u>48</u>	<u>51</u>	<u>25</u>	<u>50</u>	<u>20</u>	<u>20</u>	54

6 GHz 30 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEM	DIG45/78 .002	DIG20 .002	SSBAR6A .0002	DRG30 16QAM .002	NEC16QAM .002	DIG135 64QAM
TM1600 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TM1900 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TM11200 .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TM21200 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
NW1200 .005	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TH1800 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
NW1800 .005	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
NW 2700						<u>20</u>
TH1860 .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TH2100 .002	<u>21</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TH2400 .002	<u>28</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TH1800 .002DUV	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
TH2400 .002DUV	<u>27</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
VIDEO .02	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
VIDEO .002	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
DIG90 .0028PSK	<u>49</u>	<u>30</u>	<u>51</u>	<u>37</u>	<u>44</u>	<u>45</u>
DIG45/78 .002	<u>50</u>	<u>24</u>	<u>47</u>	<u>32</u>	<u>44</u>	<u>43</u>
DIG20.002	<u>*20</u>		<u>20</u>	<u>20</u>	<u>20</u>	<u>43</u>
SSBAR6A .0002	<u>51</u>	<u>24</u>	<u>20</u>	<u>34</u>	<u>42</u>	<u>40</u>
DR630.00216QAM	<u>47</u>	<u>25</u>	<u>38</u>	<u>29</u>	<u>41</u>	<u>35</u>
NEC16QAM .002	<u>46</u>	<u>20</u>	<u>45</u>	<u>31</u>	<u>42</u>	<u>39</u>
DIG-135 64QAM	<u>47</u>	<u>20</u>	<u>49</u>	<u>30</u>	<u>42</u>	<u>42</u>

* 14 dBrnc0 Objectives -- All others are 4 dBrnc0.

Underlined objectives are floor numbers. Floor numbers for video are based on threshold degradation.

TH filtering is assumed for determining the threshold degradation number. If TH or similar filtering is used, the objective can be lowered to 20 dB.

The two numbers in the 90MB digital column reflect the difference between the RDS and MDR filters. The first objective is for RDS and the second for MDR.

11 GHz 0.0 MHz SEPARATION	INTERFERED SYSTEM							
INTERFERING SYSTEM	TL-2L	TL-2U	TL-2X	TN-1	TN-1	TN-1E	TN-IF	TN-1
TL-2L 600	77/67	75/65	86/75	86/85	92/90	89/87	92/90	92/88
TL-2U 600	77/66	77/56	88/66	85/76	90/80	88/79	91/81	91/81
TL-2X 1200	77/66	77/55	89/63	86/73	92/76	89/76	92/78	91/78
TN-1 1200	77/66	77/55	88/63	67	67	66	68	67
TN-1 1500	77/65	78/53	89/60	63	65	65	66	65
TN-1E 1800	77/65	77/55	89/62	66	69	66	68	67
TN-IF 1800	77/65	78/5S	89/61	65	67	65	67	65
TN-1 2400	78/64	78/55	89/62	66	68	66	68	66
NW-960	76/67	77/55	88/65	76/70	79/73	75/70	78/73	76/69
NW-1200	77/66	78/55	89/62	76/68	80/69	76/68	79/70	77/68
NW-1800	77/65	77/54	89/62	76/66	80/70	76/66	79/70	76/67
NW-2700	77/63	77/53	88/60	63	65	63	64	64
VIDEO(.05)	67	66	77	87	87	86	94	92
VID.005/.002	67	66	77	76	77	77	80	77
DIG 8PSK-45	56	54	64	74	80	77	80	79
DIG 8PSK-90	53	52	62	72	78	75	78	78
MDR-11 45MB	56	54	64	74	80	77	80	79
MDR-11 90MB	53	52	62	72	78	75	78	78
NEC-45MB	54	53	62	73	78	75	78	78
NEC-90MB	52	51	62	72	78	75	78	78
FAR 16QAM45	57	55	65	75	81	77	80	79
FAR 16QAM90	54	52	63	73	81	76	79	79
DR-1116QAM90	54	52	63	73	79	76	79	79
NEC 16QAM135	52	50	61	71	77	75	78	79
64QAM135MB	52	50	61	71	77	75	78	79

INTERFERED SYSTEM

INTERFERING SYSTEM	NW	NW	NW	NW	VIDEO (.05)	VIDEO .002	DIG-8PSK .005	45MB 90MB
TL-2L 600	81/71	87/76	90/76	92/91	60	70	75	75
TL-2U 600	83/60	89/67	92/68	93/82	59	69	75	75
TL-2X 1200	84/60	90/64	92/66	93/78	58	68	75	75
TN-1 1200	76/57	80/59	80/57	73/68	58	68	75	75
TN-1 1500	78/56	80/56	80/57	73/64	57	67	75	75
TN-1E 1800	76/57	80/59	80/58	73/70	57	69	75	75
TN-IF 1800	77/57	80/58	80/58	73/65	57	69	75	75
TN-1 2400	76/56	80/S8	80/57	73/66	57	68	75	75
NW-960	78/60	82/62	83/63	78/63	59	68	75	75
NW-1200	79/58	83/60	83/59	78/68	58	68	75	75
NW-1800	79/59	83/60	83/62	78/71	59	68	75	75
NW-2700	76/57	79/56	79/59	73/67	57	68	75	75
VIDEO(.05)	67	78	80	96	59	69	75	75
VIDO.002.005	67	69	69	80	59	69	75	75
DIG8PSK45	60	66	67	82	55	66	75	75
DIG8PSK90	57	63	65	82	53	64	75	75
MDR-11 45	60	66	67	81	55	66	75	75
MDR-11 90	57	63	65	81	53	64	75	75
NEC-45	58	64	66	81	54	64	75	75
NEC-90	56	63	65	81	53	62	75	75
FAR16QAM 45	61	67	68	82	57	67	75	75
FAR16QAM 90	58	64	66	82	54	64	75	75
DR-1116QAM90	58	64	66	82	54	64	75	75
NEC 16QAM135	56	62	65	82	52	62	75	75
64QAM135MB	56	62	65	82	52	62	75	75

11 GHz 0.0 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEM	MDR-11 45MB	90MB	NEC 45MB 90MB	FAR 16QAM 45MB 90MB	DR1116 90MB	NEC16QAM 135MB	64QAM 135MB
TL-2L 600	75	75	75 75	75 75	75	75	81
TL-2U 900	75	75	75 75	75 75	75	75	81
TL-2X 1200	75	75	75 75	75 75	75	75	81
TN-1 1200	75	75	75 75	75 75	75	75	81
TN-1 1500	75	75	75 75	75 75	75	75	81
TN-1E 1800	75	75	75 75	75 75	75	75	81
TN-IF 1800	75	75	75 75	75 75	75	75	81
TN-1 2400	75	75	75 75	75 75	75	75	81
NW-960	75	75	75 75	75 75	75	75	81
NW-1200	75	75	75 75	75 75	75	75	81
NW-1800	75	75	75 75	75 75	75	75	81
NW-2700	75	75	75 75	75 75	75	75	81
VIDEO(.05)	75	75	75 75	75 75	75	75	81
VIDEO.005.002	75	75	75 75	75 75	75	75	81
DIG8PSK 45	75	75	75 75	75 75	75	75	81
DIG8PSK 90	75	75	75 75	75 75	75	75	81
MDR-11 45	75	75	75 75	75 75	75	74	81
MDR-11 90	75	75	75 75	75 75	75	75	81
NEC-45	75	75	75 75	75 75	75	75	81
NEC-90	75	75	75 75	75 75	75	75	81
FAR16QAM45	75	75	15 75	75 75	75	75	81
FAR16QAM90	75	75	75 75	75 75	75	75	81
DR1116QAM90	75	75	75 75	75 75	75	75	81
NEC16QAM135	75	75	75 75	75 75	75	75	81
64QAM135MB	75	75	75 75	75 75	75	75	81

TL, NW Radio - High noise radio systems where the radio line is expected to be 19 dBnc0 or greater. Also, where almost every hop has baseband terminals (as opposed to IF repeaters). Foreign system interference allocation is 14 dBnc0 (25 pWc0)/Exposure.

TN Radio - Low noise systems where expected radio line noise is expected to be 19 dBnc0 or less. Foreign system interference allocation is 4 dBnc0 (2.5 pWc0)/Exposure for carrier-sideband and 17 dBnc0 (50pWc0)/Exposure for carrier beat interference.

Digital radio - C/I Objectives are based on 30 dB C/I per exposure allocation for foreign system interference when the desired digital signal is in deep fade Since the unfaded C/I is necessary for RFI Coordination and multi path fade margins range up to 45 dB, C/I - 30+45=75 dB. Required rain fade margins range up to 55dB so C/I would be 30+55=85. Correlation of 10dB in fading between interfering and desired signals reduces this to C/I=85-10=75 dB also. These objectives may be reduced by the difference between the actual hop fade margin and those assumed here.

TV - TV ..05% intended to indicate Video signal on 'High Noise; or baseband systems, especially with Long Haul applications.

Carrier beat objectives include 10dB for burble.

11 GHz 20 MHz SEPARATION

INTERFERING SYSTEM	* *		* INTERFERED SYSTEM						
	TL2L	TL2U	TL2X	TN1	TN1	TN1E	TN1F	TN1	NW
TL2 L600	41/20	41/23	49	52/35	52/43	57	57	72	41/20
TL2 U600	41/23	41/28	49	52/38	52/46	58	58	74	41/20
TL2X 1200	41/28	41/27	50	52/37	52/45	62	64	66	41/20
TN1 1200	38/20	38/20	38/27	49/20	49/20	49/36	49/36	57	38/20
TN1 1500	38/20	38/20	38/24	49/20	49/28	49/32	49/32	57	38/20
TN1E 1800	38/20	38/20	43	49/29	49/36	49/38	49/39	62	38/20
TN1F 1800	38/20	38/20	40	49/24	49/31	49/34	49/34	60	38/20
TN1 2400	38/31	38/29	40	49/31	49/40	53	56	60	38/20
NW 960	39/20	39/20	39/29	50/20	50/20	50/38	50/35	57	39/20
NW 1200	39/20	39/20	39/26	50/20	50/20	50/35	50/35	57	39/20
NW 1800	39/20	39/20	39/31	50/25	50/34	50/37	50/37	57	39/20
NW 2700	38/28	38/27	38	49/30	53	51	54	59	38/20
VIDEO .05	41/33	41/32	54	52/39	57	60	61	70	41/21
VIDEO.005.00	29/20	39/20	39/29	50/20	50/30	50/38	50/36	58	39/20
DIG8PSK45MB	48	46	58	64	71	70	73	75	47
DIG8PSK90MB	50	49	59	67	74	72	75	76	51
MDR1145MB8PSK	38/37	38/36	57	51	60	60	62	74	38/27
MDR1190MB8PSK	49	48	59	66	72	71	74	75	50
NEC45MB8PSK	48	46	58	64	71	70	73	75	47
NEC90MB8PSK	50	49	59	67	74	72	75	76	51
FAR16QAM45MB	38/20	38/20	44	49/34	49/44	51	50	62	38/20
FAR16QAM90MB	47	46	60	56	70	70	73	76	38/33
DR1116QAM90MB	49	47	60	64	73	71	74	77	44
NEC16QAM135MB	52	50	59	67	75	72	75	76	52
64QAM135MB	52	50	59	67	75	72	75	76	52

INTERFERING SYSTEM	INTERFERED SYSTEM								
	NW	NW	NW	VIDEO	VIDEO	DIG-8PSK	MDR-11		
	1200	1800	2700	.05	.002.005	45MB	90MB	45MB	90MB
TL2 L600	41/25	47	76	41	52/20	75	75	31	75
TL2 U600	41/29	47	77	42	52/20	75	75	36	75
TL2X 1200	41/28	47	70	44	52/20	75	75	41	74
TN1 1200	38/20	38/23	58	38/20	49/20	75	75	20	60
TN1 1500	38/20	38/20	62	38/20	49/20	75	75	75	75
TN1E 1800	38/20	38/27	64	38/20	49/24	75	75	24	60
TN1F 1800	38/20	38/23	62	38/20	49/20	75	75	21	60
TN1 2400	38/22	38/31	62	38/27	49/37	75	75	26	60
NW 960	39/20	39/21	58	39/20	50/20	75	75	20	63
NW 1200	39/20	39/23	57	39/20	50/20	75	75	20	62
NW 1800	39/20	39/25	64	39/22	50/20	75	75	23	62
NW 2700	38/22	41	60	38/23	49/20	45	72	38	60
VIDEO .05	41/29	50	73	41/33	52/21	75	75	75	75
VIDEO.002.005	39/20	39/32	62	39/20	50/20	75	75	75	75
DIG8PSK45MB	56	60	78	58	51	75	75	75	75
DIG8PSK90MB	58	62	79	61	54	75	75	75	75
MDR1145MB8PSK	43	49	78	38/33	49/20	75	75	41	70
MDR1190MB8PSK	57	61	78	49	54	75	75	66	72
NEC45MB8PSK	56	60	78	48	51	75	75	75	75
NEC90MB8PSK	58	62	79	51	54	75	75	75	75
FAR16QAM45MB	38/26	49/38	74	38/24	49/20	75	75	75	75
FAR16QAM90MB	50	60	79	46	49/33	75	75	75	75
DR1116QAM90MB	56	61	80	48	42	75	75	75	75
NEC16QAM135MB	59	63	78	45	55	75	75	75	75
64QAM135MB	59	63	78	45	55	75	75	75	75

11 GHz 20 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEMS	NEC 45MB	8PSK 90MB	FAR 45MB	16QAM 90MB	DR11 90MB	NEC 135MB	64QAM 135MB
TL2 L600	75	75	<u>20</u>	59	69	75	
TL2 U600	75	75	<u>20</u>	59	68	75	
TL2X 1200	75	75	<u>26</u>	57	66	75	
TN1 1200	75	75	<u>20</u>	31	43	75	
TN1 1500	75	75	<u>20</u>	32	41	75	
TN1E 1800	75	75	<u>20</u>	43	46	75	
TN1F 1800	75	75	<u>20</u>	40	44	75	
TN1 2400	75	75	<u>24</u>	48	47	75	
NW 960	75	75	<u>20</u>	30	43	75	
NW 1200	75	75	<u>20</u>	31	43	75	
NW 1800	75	75	<u>20</u>	41	46	75	
NW 2700	75	75	<u>23</u>	46	45	75	
VIDEO .05	75	75	32	59	67	75	
VIDEO .002.005	75	75	<u>20</u>	38	46	75	
DIG8PSK45MB	75	75	<u>56</u>	66	68	75	
DIG8PSK90M8	75	75	58	67	69	75	
MDR1145MB8PSK	75	75	25	62	59	75	
MDR1190MB8PSK	75	75	58	67	68	75	
NEC45MB8PSK	75	75	56	66	68	75	
NEC90MB8PSK	75	75	58	67	69	75	
FAR16QAM45MB	75	75	28	51	59	75	
FAR16QAM90MB	75	75	48	67	66	75	
DR1116QAM90MB	75	75	50	67	65	75	
NEC16QAM135MB	75	75	59	67	69	75	
64QAM135MB	75	75	59	67	69	75	

Underline indicates floor values.

* - 14 dBrncO Objectives.

FM Radio e.g., 52/32 - First number based on threshold degradation requirements. This is a minimum 6 dB C/I required when the desired signal is in deep fade. A fade margin of 56 dB (35 dB for High Noise) is assumed resulting in 56dB+6dB=62dB. With 10 dB rain fade correlation this becomes calculated C/I based on 4 dBrncO (2.5pWcO) (14dBrncO 25 pWcO for High Noise per exposure.

Digital radio - The C/I objectives are reduced by an amount equal to the energy rejection of the digital receiver. If the filter characteristic is unknown, no reduction is allowed.

11 GHz 20 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEMS	NEC 45MB	8PSK 9OMB	FAR 45MB	16QAM 9OMB	DR11 9OMB	NEC 135MB	64QAM 135MB
TL2 L600	75	75	<u>20</u>	59	69	75	
TL2 U600	75	75	<u>20</u>	59	68	75	
TL2X 1200	75	75	<u>26</u>	57	66	75	
TN1 1200	75	75	<u>20</u>	31	43	75	
TN1 1500	75	75	<u>20</u>	32	41	75	
TN1E 1800	75	75	<u>20</u>	43	46	75	
TN1F 1800	75	75	<u>20</u>	40	44	75	
TN1 2400	75	75	<u>24</u>	48	47	75	
NW 960	75	75	<u>20</u>	30	43	75	
NW 1200	75	75	<u>20</u>	31	43	75	
NW 1800	75	75	<u>20</u>	41	46	75	
NW 2700	75	75	<u>23</u>	46	45	75	
VIDEO .05	75	75	32	59	67	75	
VIDEO .002.005	75	75	<u>20</u>	38	46	75	
DIG8PSK45MB	75	75	<u>56</u>	66	68	75	
DIG8PSK9OMB	75	75	58	67	69	75	
MDR1145MB8PSK	75	75	25	62	59	75	
MDR119OMB8PSK	75	75	58	67	68	75	
NEC45MB8PSK	75	75	56	66	68	75	
NEC9OMB8PSK	75	75	58	67	69	75	
FAR16QAM45MB	75	75	28	51	59	75	
FAR16QAM9OMB	75	75	48	67	66	75	
DR1116QAM9OMB	75	75	50	67	65	75	
NEC16QAM135MB	75	75	59	67	69	75	
64QAM135MB	75	75	59	67	69	75	

Underline indicates floor values.

* - 14 dBrc0 Objectives.

FM Radio e.g., 52/32 - First number based on threshold degradation requirements. This is a minimum 6 dB C/I required when the desired signal is in deep fade. A fade margin of 56 dB (35 dB for High Noise) is assumed resulting in $S6dB+6dB=62dB$. With 10 dB rain fade correlation this becomes calculated C/I based on 4 dBrc0 (2.5pWc0) (14dBrc0 2S pWc0 for High Noise per exposure.

Digital radio - The C/I objectives are reduced by an amount equal to the energy rejection of the digital receiver. If the filter characteristic is unknown, no reduction is allowed.

11 GHz 40 MHz SEPARATION

INTERFERING SYSTEM	INTERFERED SYSTEM										
	TL-2L	TL-2U	TL-2X	TN-1	TN-1	TN-1E	TN-IF	TN-1	NW	NW	NW
	600	600	1200	1200	1500	1800	1800	2400	960	1200	1800
TL-2L 600	20	20	20	20	20	20	20	20	20	20	20
TL-2U 600	20	20	20	20	20	20	20	20	20	20	20
TL-2X 1200	20	20	20	20	20	20	20	70	20	20	20
TN-1 1200	20	20	20	20	20	20	20	20	20	20	20
TN-1 1500	20	20	20	20	20	20	20	20	20	20	20
TN-IF 1800	20	20	20	20	20	20	20	20	20	20	20
TN-1 2400	20	20	20	20	20	20	20	20	20	20	20
NW-960 20	20	20	20	20	20	20	20	20	20	20	
NW-1200 20	20	20	20	20	20	20	20	20	20	20	
NW-1800 20	20	20	20	20	20	20	20	20	20	20	
NW-2700 20	20	20	20	20	20	20	20	20	20	20	
VIDEO(.05)	20	20	20	20	20	20	20	20	20	20	20
VIDEO(.005)	20	20	20	20	20	20	20	20	20	20	20
DIG8PSK4SMB	20	20	27	28	37	37	40	44	20	20	26
DIG8PSK9OMB	20	20	36	30/21	26	33	32	53	20	20	20
MDR-11 45	20	20	20	20	20	20	20	20	20	20	20
MDR-11 90	20	20	20	20	20	22	24	34	20	20	20
NEC45MB	20	20	27	28	37	37	40	44	20	20	26
NEC9OMB	20	20	36	30/21	26	33	32	53	20	20	20
FAR16QAM45	20	20	20	20	20	20	21	24	20	20	20
FAR16QAM90	20	20	20	20	20	20	20	20	20	20	20
DR-1116QAM	20	20	20	20	20	20	20	20	20	20	20
NEC 16QAM135	20	21/20	31	37	44	43	46	48	21	29	33
64QAM135MB	20	21/20	31	37	44	43	46	48	21	29	33

INTERFERING SYSTEM	INTERFERED SYSTEM								
	NW	VIDEO	VIDEO	DIG8PSK		MDR11		NEC	
	2700	.05	.002/.005	45MB	90MB	45MB	90MB	45MB	90MB
TL-2L600	23	20	20	40	45	20	20	45	45
TL-2U600	23	20	20	45	45	20	20	45	45
TL-2X1200	23	20	20	45	45	20	20	45	45
N-1 1200	20	20	20	45	45	20	20	45	45
TN-1 1500	20	20	20	45	45	20	20	45	45
TN-1E1800	20	20	20	45	45	20	20	45	45
TN-1F1800	20	20	20	45	45	20	20	45	45
TN-1 2400	20	20	20	45	45	20	20	45	45
NW-960	20	20	20	45	45	20	20	45	45
NW-1200	20	20	20	20	45	20	20	45	45
NW-1800	20	20	20	20	45	20	45	45	45
NW-2700	20	20	20	20	20	20	20	35	35
VIDEO .05	29	20	20	20	45	45	45	45	45
VIDEO .002.005	29	20	20	20	45	45	45	45	45
DIG8PSK45MB	48	20	26/20	45	45	45	45	45	45
DIG 8PSK9OMB	50	20	30/20	45	45	45	45	45	45
MDR-1145MB	28	20	20	45	45	20	20	45	45
MDR-119OMB	36	20	20	45	45	20	38	45	45
NEC45MB	48	20	26/20	45	45	45	45	45	45
NEC 90MB	50	20	30/20	45	45	45	45	45	45
FAR16QAM45MB	20	20	20	45	45	45	45	45	45
FAR16QAM9OMB	20	20	20	45	45	45	45	45	45
DR-1116QAM9OMB	31	20	20	45	45	45	45	45	45
NEC16QAM135MB	51	21/20	32/20	45	45	45	45	45	45
64QAM135MB	51	21/20	32/20	45	45	45	45	45	45

11 GHz 40 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYSTEM	FAR 45MB	16QAM 90MB	DR-11 90MB	NEC 135MB	64QAM 135MB
TL-2L 600	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TL-2U 600	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TL-2X 1200	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TN-1 1200	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TN-1 1500	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TN-1E 1800	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TN-IF 1800	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
TN-1 2400	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
NW-960	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
NW-1200	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
NW-1800	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
NW-2700	<u>20</u>	<u>20</u>	<u>20</u>	35	<u>20</u>
VIDEO(.05)	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
VIDEO.005.002	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
DIG 8PSK45MB	<u>20</u>	33	34	45	40
DIG 8PSK90MB	<u>20</u>	30	28	45	34
MDR-11 45MB	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
MDR-11 90MB	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
NEC 45MB	<u>20</u>	33	34	45	40
NEC 90	<u>20</u>	30	28	45	34
FAR 16QAM45MB	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
16QAM90MB	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
DR11 16QAM90MB	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>
NEC16QAM135MB	<u>20</u>	<u>20</u>	<u>20</u>	45	39
64QAM135MB	<u>20</u>	<u>20</u>	<u>20</u>	45	<u>20</u>

Underline indicates floor values

Threshold degradation requirements AA/BB: AA represents threshold degradation, BB IS 4dBrcO (SEE NOTE #1 20 MHz separation chart).

Digital Radio - If the filter attenuation is unknown, assume a minimum of 30dB reduction of C/I due to filtering.

18 GHz C/I TABLE - CO-BAND

Interfering - System	Interfered System						
	300Ch {Bandwidth}	600Ch	780Ch	1200Ch	1800Ch	1800Ch	2400Ch
	(5)	(10)	(10)	(20)	(20)	(40)	(40)
300Ch (5)	68/63 (0)	80 (2.5)+3	82 (2.5)+3	85 (2.5)+6	91 (2.5)+6	NA	NA
600Ch (5)	60 (2.5)	75/67 (0)	75/67 (0)	84 (5)+3	91 (5)+3	88/86 (5)+6	86 (5)+6
780Ch (10)	60 (2.5)	75/67 (0)	77/64 (0)	84 (5)+3	91 (5)+3	88/86 (5)+6	86 (5)+6
1200Ch (20)	59 (2.5)	58 (5)	62 (5)	78/58 (0)	84/62 (0)	72 (10)+3	87/78 (10)+3
1800Ch (20)	61 (2.5)	57 (5)	62 (5)	78/56 (0)	84/85 (0)	70 (10)+3	87/86 (10)+3
1800Ch (40)	NA	58 (5)	63 (5)	59 (10)	75 (10)	75/68 (0)	78/56 (0)
2400Ch (40)	NA	58 (5)	62 (5)	59 (10)	80 (10)	76/68 (10)	78/56 (0)
2700Ch (40)	NA	58 (5)	62 (5)	58 (10)	74 (10)	75/66 (0)	75/68 (0)
Video (20)	68	59	68	77	84	80	94
Digital (10)	35	69	71	75	84	78	80
Digital (20)	60	68	70	75	84	76	79
Digital (40)							

1. Parenthesis indicate frequency separation of non-like systems.
2. When a system of narrower band is interfering into a wider band system, a worse case C/I of $10 \cdot \text{LOG}(n)$ should be added to the C/I.
 n = The number of narrow band system within the wideband system.
 Carrier beats need only increase by 3 dB.
 The +n value is the maximum increase/decrease in C/I based on the number of n channels in the wider band.
3. AA/BB - AA is carrier beat -- BB is the continuous objective.
4. C/I's in this table reflect the common carrier limit of 4 dBruco (2.5 picoWatts). The private radio limit is 5 picoWatts.
5. Digital assumes a 50 dB rain fade margin which may be relaxed up to 10 db for a minimum of 40dB fade margin.

18GHz C/I TABLE - CO-BAND

Interfering Interfered System

System (Bandwidth)	2700Ch (5)	Video (10)	Digital (10)	Digital (20)	Digital (40)
300Ch (5)	NA	64	75	75	75
600Ch (5)	88 (5)+6		75	75	75
780Ch (10)	88 (5)+6		75	75	75
1200Ch (20)	90/97 (10)+3		75	75	75
1800Ch (20)	90/97 (10)+3		75	75	75
1800Ch (40)	80/58 {0}		75	75	75
2400Ch (40)	80/60 (0)		75	75	75
2700Ch (40)	77/68 (0)		75	75	75
Video (20)	97		75	75	75
Digital (10)	83		75	75	75
Digital (20)	83		75	75	75
Digital (40)	81		75	75	75

1. Parenthesis indicate frequency separation of non-like systems.
2. When a system of narrower band is interfering into a wider band system, a worse case C/I of $10 \cdot \text{LOG}(n)$ should be added to the C/I.
 $n =$ The number of narrow band system within the wideband system.
 Carrier beats need only increase by 3 dB. The +n value is the maximum dncrase/decrease in C/I based on the number of n channels in the wider band.
3. AA/BB - AA is carrier beat -- BB is the continuous objective.
4. C/I's in this table reflect the common carrier limit of 4 dBrcnO (2.5 picoWatts). The private radio limit is 5 picoWatts.
5. Digital assumes a 50 dB rain fade margin which may be relaxed up to 10dB for a minimum of 40dB fade margin.

18 GHz C/I TABLE - ADJ-BAND

Interfering System Interfered System

System (Bandwidth)	300Ch (5)	600Ch (10)	780Ch (10)	1200Ch (20)	1800Ch (20)	1800Ch (40)	2400Ch (40)
300Ch (5)	20 (5)	35 (7.5)	49 (7.5)	48 (12.5)	58 (12.5)	NA	NA
600Ch (5)	20 (7.5)	20 (10)	21 (10)	33 (15)	57 (15)	25 (25)	40 (25)
780Ch (10)	23 (7.5)	20 (10)	26 (10)	36 (15)	57 (15)	25 (25)	40 (25)
1200Ch (20)	20 (12.5)	20 (15)	20 (15)	20 (20)	29 (20)	20 (30)	28 (30)
1800Ch (20)	20 (12.5)	20 (15)	22 (15)	20 (20)	23 (20)	20 (30)	30 (30)
1800Ch (40)	NA (25)	20 (25)	20 (30)	20 (30)	20 (40)	20 (40)	20
2400Ch (40)	NA	20 (25)	20 (25)	20 (30)	28 (30)	20 (40)	20 (40)
2700Ch (40)	NA	20 (25)	20 (25)	20 (30)	25 (30)	20 (40)	20 (40)
Video (20)							
Digital (10)							
Digital (20)							
Digital (40)							

1. Parenthesis indicate frequency separation of non-like systems.
2. C/I's in this table reflect the common carrier limit of 4 dBrc0 (2.5 picoWatts). The private radio limit is 5 picoWatts.
3. Digital filter assumes at least 40 dB out of band signal suppression.

18GHz C/I TABLE - CO-BAND

Interfering System	Interfered System				
	System (Bandwidth)	2700Ch (5)	Video (10)	Digital (10)	Digital (40)
300Ch (5)	NA	64	25	25	25
600Ch (5)	57 (25)		25	25	25
780Ch (10)	57 (25)		25	25	25
1200Ch (20)	33 (30)		25	25	25
1800Ch (20)	30 (30)		25	25	25
1800Ch (40)	20 (40)		25	25	25
2400Ch (40)	20 (40)		25	25	25
2700Ch (40)	20 (40)		25	25	25
Video (20)			35	35	35
Digital (10)			35	35	35
Digital (20)			35	35	35
Digital (40)			35	35	35

1. Parenthesis indicate frequency separation of non-like systems.
2. C/I's in this table reflect the common carrier limit of 4 dBrcno (2.5 picoWatts). The private radio limit is 5 picoWatts.
3. Digital filter assumes at least 40 dB out of band signal suppression.

23 GHz 0.0 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	24	48	96	VIDEO	1.3MB/S	3.0 MB/S
24	70	70	70	70	75	75
48	70	70	70	70	75	75
96	70	70	70	70	75	75
VIDEO	70	70	70	70	75	75
1.3MB/S	70	70	70	70	75	75
3.0MB/S	70	70	70	70	75	75
6.0MB/S	70	70	70	70	75	75
45.0MB/S	70	70	70	70	75	75

INTERFERED SYSTEM

INTERFERING SYS	6.0MB/S	45.0MB/S
24	75	75
48	75	75
96	75	75
VIDEO	75	75
1.3MB/S	75	75
3.0MB/S	75	75
6.0MB/S	75	75
45.0MB/S	75	75

23 GHz 50.0 MHz SEPARATION

INTERFERED SYSTEM

INTERFERING SYS	24	48	96	VIDEO	1.3MB/S	3.0 MB/S
24	20	20	20	20	35	35
48	20	20	20	20	35	35
96	20	20	20	20	35	35
VIDEO	20	20	20	20	35	35
1.3MB/S	20	20	20	20	35	35
3.0MB/S	20	20	20	20	35	35
6.0MB/S	20	20	20	20	35	35
45.0MB/S	20	20	20	20	35	35

INTERFERED SYSTEM

INTERFERING SYS	6.0MB/S	45.0MB/S
24	35	35
48	35	35
96	35	35
VIDEO	35	35
1.3MB/S	35	35
3.0MB/S	35	35
6.0MB/S	35	35
45.0MB/S	35	35

2 GHz Radio System Characteristics

SYSTEM	CHANNEL CAPACITY	TOP BASEBAND FREQUENCY (MHz)	BOTTOM BASEBAND FREQUENCY (MHz)	TOTAL RMS FREQUENCY DEVIATION (KHz)	PRE-EMPHASIS	FREQ. TOL.
FM 72	72	.300	.023	238	CCIR	
FM-132	132	.552	.012	188	CCIR	
FM-252	252	1.052	.012	116	CCIR	

4 GHz Radio System Characteristics

TD	600	3.084	0.564	617	CCIR	0.002
TD	1200	5.772	0.564	491	CCIR	0.002
TD	1500	7.284	0.564	335	CCIR	0.002
TD	1800	8.524	0.564	312	CCIR	0.002

6 GHz Radio System Characteristics

TM-1	600	3.084	0.564	893	CCIR	0,02
TM-1	900	4.532	0.564	899	CCIR	0.02
TM-1	1200	5.772	0.564	894	CCIR	0.02
TM-2	1200	5.772	0.564	894	CCIR	0.002
NW	1200	5.772	0.564	894	CCIR	0.005
TH	1800	8.524	0.564	793	CCIR	0.002
NW	1800	8.524	0.564	890	CCIR	0.005
TH	1860	8.284	0.312	732	TH-1	0.002
TH	2100	10.308	0.564	790	CCIR	0.002
TH	2400	11.596	0.564	779	CCIR	0.002

11 GHz Radio System Characteristics

TL-2L	600	3.084	0.564	708	CCIR	0.05
TL-2X	1200	5.772	0.564	561	CCIR	0.05
TN-1	1200	5.772	0.564	561	CCIR	0.002
TN-1	1500	7.284	0.564	406	CCIR	0.002
TN-1E*	1800	8.524	0.564	704	CCIR	0.002
TN-IF*	1800	8.524	0.564	501	CCIR	0.002
TN-1	2400	11.404	0.564	750	CCIR	0.002
NW-960	960	4.188	0.316	620	CCIR	0.005
NW-1200	1200	5.772	0.564	485	CCIR	0.005
NW-1800	1800	7.708	0.316	594	CCIR	0.005

TN-1E* shows normal per channel deviation per 1800 ckt TN, TN-IF* shows reduced deviation for 1800 circuit load to be used when interconnecting TH-3 and TN.

Revision Notes

- January 31, 1988. Issue 1
Preliminary copy in NSMA Table Format
- April 4, 1988 Issue 2
Revised adding missing Objectives and correction of typing errors and omissions.
- February 15, 1989. Issue 3
Revised to correct verbiage and typing errors, addition of Radio System Characteristics and addition of Working Group 5 Chairman address.
- March 14, 1989. Issue 4
Revised to correct typing errors, addition of Objectives, addition of Revision Notes and revised Table of Contents.
- March 22, 1989. Issue 5
Revised to add 6 GHZ and 11 GHZ 135MB, 64 QAM, Objectives.
- March 29, 1989. Issue 6
Revised to correct typing errors.
- July 31, 1989. Issue 7
Revised to correct errors and add preliminary 23GHz Objectives.

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Notes: