

M3B Quick setup & Best Practices

Although the M3B system is relatively simple to set up, there are a few things to consider during installation to ensure a smooth operating system. The guidelines below are based on the use of RG6 cabling.

Install Calculations

When installing the system, keep track of the total signal loss introduced by CATV splitters and F barrels. This is important because if the run of coax between each transmitter (TX) and receiver (RX) is less than 100 Meters (328ft) and the initial loss created from splitters and barrels is less than 20dBm, additional attenuation will need to be added to achieve a minimum of 20dBm total attenuation between each TX & RX. Additional attenuation can be added by using simple CATV splitters or inline attenuators, both of which can achieve the same goal.

Keep in mind that the above needs to be calculated between each TX & RX individually and adjusted as necessary at each RX location with in line attenuators or CATV splitters if needed.

Selecting Channels

For coax runs less than 100 Meters (328ft) and with 20dBm of total attenuation, it is recommended to start with Channel Group 1 (fig 1). If more than 20dBm is calculated, it is recommended to start with Channel Group 2 (fig 1). For best performance, please keep a minimum of 1 channel spacing between each selected channel (example 63,65,67,69,71,etc.).

If after assigning channels, you see pixilation or video drops, you will want to try the next Channel Group. If the image does not improve after changing Channel Groups you will need to recheck your total attenuation totals or try a lower/higher Channel Group.

Channel Groups

In all, the system breaks down into 7 groups (Fig1) of channel strength levels ranging from a point to point capable distance of 300 Meters – 700 Meters (984ft – 2297ft). For best performance, always start with the lowest channel group and move up based on attenuation totals greater than 20dBm.

Fig 1. Channel Groups

CH	FREQ	Distance rating RG6 (Meters)	Distance rating RG6 (Feet)	Channel Group	CH	FREQ	Distance rating RG6 (Meters)	Distance rating RG6 (Feet)	Channel Group
63	810	300	984	Group 1	33	570	400	1312	Group 3
64	818	300	984	Group 1	34	578	400	1312	Group 3
65	826	300	984	Group 1	35	586	400	1312	Group 3
66	834	300	984	Group 1	36	594	400	1312	Group 3
67	842	300	984	Group 1	37	602	400	1312	Group 3
68	850	300	984	Group 1	13	410	450	1476	Group 4
69	858	300	984	Group 1	14	418	450	1476	Group 4
70	866	300	984	Group 1	15	426	450	1476	Group 4
71	874	300	984	Group 1	16	434	450	1476	Group 4
72	882	300	984	Group 1	17	442	450	1476	Group 4
73	890	300	984	Group 1	18	450	450	1476	Group 4
74	898	300	984	Group 1	19	458	450	1476	Group 4
75	906	300	984	Group 1	20	466	450	1476	Group 4
76	915	300	984	Group 1	21	474	450	1476	Group 4
77	924	300	984	Group 1	22	482	450	1476	Group 4
78	930	300	984	Group 1	23	490	450	1476	Group 4
79	938	300	984	Group 1	24	498	450	1476	Group 4
80	946	300	984	Group 1	25	506	450	1476	Group 4
38	610	350	1148	Group 2	94	400	450	1476	Group 4
39	618	350	1148	Group 2	95	410	450	1476	Group 4
40	626	350	1148	Group 2	96	420	450	1476	Group 4
41	634	350	1148	Group 2	97	430	450	1476	Group 4
42	642	350	1148	Group 2	98	440	450	1476	Group 4
43	650	350	1148	Group 2	99	474	450	1476	Group 4
44	658	350	1148	Group 2	87	330	550	1804	Group 5
45	666	350	1148	Group 2	88	340	550	1804	Group 5
46	674	350	1148	Group 2	89	350	550	1804	Group 5
47	682	350	1148	Group 2	90	360	550	1804	Group 5
48	690	350	1148	Group 2	91	370	550	1804	Group 5
49	698	350	1148	Group 2	92	380	550	1804	Group 5
50	706	350	1148	Group 2	93	390	550	1804	Group 5
51	714	350	1148	Group 2	1	240	600	1969	Group 6
52	722	350	1148	Group 2	81	240	600	1969	Group 6
53	730	350	1148	Group 2	82	250	600	1969	Group 6
54	738	350	1148	Group 2	83	260	600	1969	Group 6
55	746	350	1148	Group 2	84	270	600	1969	Group 6
56	754	350	1148	Group 2	85	280	600	1969	Group 6
57	762	350	1148	Group 2	86	290	600	1969	Group 6
58	770	350	1148	Group 2	0	177.5	700	2297	Group 7
59	778	350	1148	Group 2	2	149.5	700	2297	Group 7
60	786	350	1148	Group 2	3	156.5	700	2297	Group 7
61	794	350	1148	Group 2	4	163.5	700	2297	Group 7
62	802	350	1148	Group 2	5	177.5	700	2297	Group 7
26	514	400	1312	Group 3	6	184.5	700	2297	Group 7
27	522	400	1312	Group 3	7	191.5	700	2297	Group 7
28	530	400	1312	Group 3	8	198.5	700	2297	Group 7
29	538	400	1312	Group 3	9	205.5	700	2297	Group 7
30	546	400	1312	Group 3	10	212.5	700	2297	Group 7
31	554	400	1312	Group 3	11	219.5	700	2297	Group 7
32	562	400	1312	Group 3	12	226.5	700	2297	Group 7