MATSING®

LENS TECHNOLOGY ENABLED

MS Multi-RET Controller
Daisy Chain Installation Guide

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Revision History:

Date	*Description*	*Rev By*	*Check By*	*Rev no*
22-Apr-2026	*Initial Release*	*RL*	*André*	*0*

1. General Preparation & Safety Protocols

Before making any physical connections, adhere to these mandatory requirements to ensure system reliability:

- **Corrosion Prevention**: Apply **dielectric compound** on all connectors prior to mating to prevent corrosion from humidity or water ingress.
- **Testing Equipment**: Use an **AISG** handheld controller (e.g., Amphenol PCU-4, ATC200-Lite) to verify the chain integrity before connecting to the radio.
- **Cable Integrity**: Use the **AISG Y-Splitter Cable** (Model: ATCB-B01-Y-C30) specifically for configurations requiring multiple port feeds from a single source.
- **Port Verification**For Dual Channel controllers, verify that both **IN-1** and **IN-2 are ENABLED**; a disabled **IN-2** port cannot support a daisy chain.

Figure 1: Dielectric Compound

Figure 2: PCU-4, ATC200-Lite

Figure 3: Y-Splitter Cable

Figure 4: Single Channel Controller

Figure 5: Dual Channel Controller

2. RET Types Set-Up

MatSing antennas utilize a combination of two controller types across the 70-model portfolio:

- **Single Channel RET (S)**: 1 AISG IN port.
- **Dual Channel RET (D)**: 2 AISG IN ports (IN1 and IN2).

Type	Controller	Single	1st Dual		2nd Dual	
	Input	IN	1 IN-1	1 IN-2	2 IN-1	2 IN-2
A	D2xD2		1	1	1	1
B	D2xD1		1	1	1	
C	D1xD2		1		1	1
D	D2		1	1		
E	D1		1			
F	S1xD2	1	1	1		
G	S1	1				

Figure 6: RET Controller Matrix Table

3. Applicable Antenna Models

items	Antenna Model	Type
1	MS-MBA-4.4.2-B4-H4-L4 (VS & STD)	A (D2 x D2)
2	MS-MBA-4.4.2-C4-H4-L4 (VS)	
3	MS-MBA-4.4.2-F4-H4-L4 (VS & STD)	
4	MS-MBA-4-C8A3 (VS)	
5	MS-MBA-4-F8A3 (VS)	
6	MS-MBA-4-C4A3 (VS)	
7	MS-MBA-6.6.3-C4-H4-L2	B (D2 x D1)
8	MS-MBA-6.6.3-F4-H4-L2	
9	MS-MBA-6.6.3-F4-H4-T2	
10	MS-MBA-3.3-C4A3-H4A2-I	
11	MS-MBA-3.3-C4A3-H4A2 (VS)	
12	MS-MBA-3.2-H8-L4 (VS)	
13	MS-MBA-3-H8A2	
14	MS-MBA-3-L4A2-S (VS)	
15	MS-MBA-3-L4A2 (VS)	
16	MS-MBA-3-T4A2 (VS)	
17	MS-MBA-4.4.2-C4-H2-L2	C (D1 x D2)
18	MS-MBA-4.4.2-F4-H2-L2	
19	MS-MBA-4.4.2-C2-H2-L2	
20	MS-MBA-4.4.2-F2-H2-L2	
21	MS-MBA-7-C2	D (D2)
22	MS-MBA-6.6-C4-H4	
23	MS-MBA-6.6-F4-H4	
24	MS-MBA-6.6-F2-F2-45M	
25	MS-MBA-6.6-F2-F2	
26	MS-MBA-6.3-H4-L4	
27	MS-MBA-6.3-H4-T4	
28	MS-MBA-6.3-H4-L2	
29	MS-MBA-4.4-SH2-SH2-45M	
30	MS-MBA-4.4-SH2-SH2-45	
31	MS-MBA-4.4-SH2-SH2	
32	MS-MBA-4.2-H2-L2	
33	MS-MBA-4.2-H2-T2	
34	MS-MBA-4-C4A3-2	
35	MS-MBA-4-F4A3	

items	Antenna Model	Type
36	MS-MBA-4-H4	D (D2)
37	MS-MBA-3.3-F4A3-H4A2	
38	MS-MBA-3.3-LAA2-C4	
39	MS-MBA-3.3-LAA2-F4	
40	MS-MBA-3.2-H4-L4	
41	MS-MBA-3.2-H4-T4	
42	MS-MBA-3.2-H2-L2	
43	MS-MBA-3.2-H2-T2	
44	MS-MBA-3-H8	
45	MS-MBA-6-C4	E (D1)
46	MS-MBA-6-F4	
47	MS-MBA-6-H4	
48	MS-MBA-3-C4A3	
49	MS-MBA-3-H4	
50	MS-MBA-3-H2	
51	MS-MBA-3.3.2-C2-H2-L2-I	F (S1 x D2)
52	MS-MBA-3.3.2-C2-H2-L2	
53	MS-MBA-3.3.2-F2-H2-L2	
54	MS-MBA-3.3-C2-H4	
55	MS-MBA-3.3-F2-H4	
56	MS-MBA-3.2-H8-L4 (STD)	
57	MS-MBA-3.2-H8-T4 (STD)	
58	MS-MBA-4-F2	G (S1)
59	MS-MBA-4-H2	
60	MS-MBA-3-F4A5	
61	MS-MBA-3-F4A5-S	
62	MS-MBA-3-F4A3	
63	MS-MBA-3-F4	
64	MS-MBA-3-F2	
65	MS-MBA-2-L4A2	
66	MS-MBA-2-L4	
67	MS-MBA-2-T4	
68	MS-MBA-2-L2	
69	MS-MBA-2-T2	
70	MS-MBA-1-T4	

Figure 7: Antenna Model RET Type Set-up

3.1 Example of Antenna RET Types

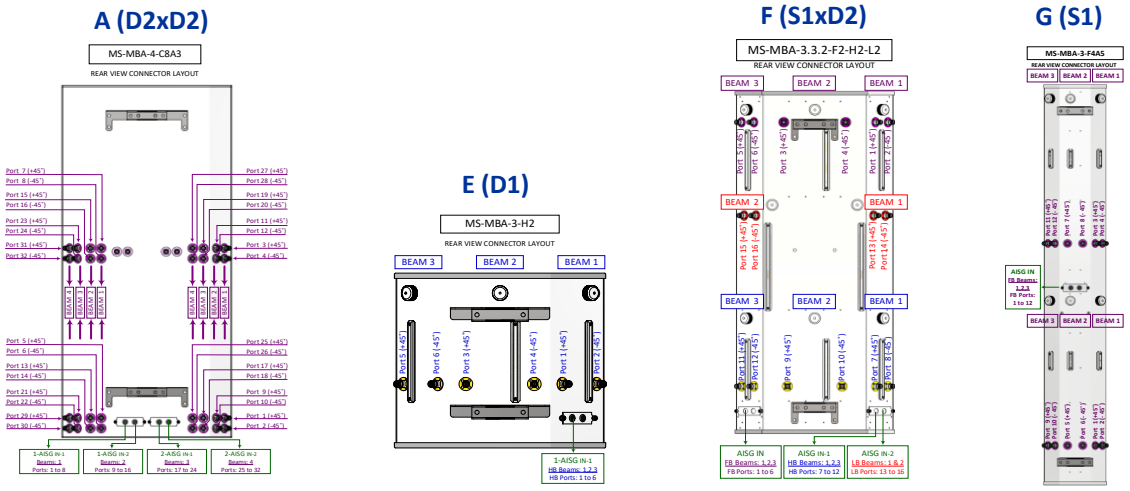

Figure 8: Antenna RET Set-Up Example

4. Configuration Illustrations

4.1 Type "A" (Config D2xD2): Requires **three** Y-Cables to interconnect two Dual Channel controllers (4 ports total) to a single radio feed.

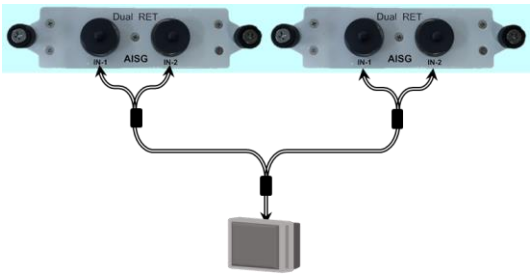

Figure 9: RET Config "D2xD2"

4.2 Type "B" (Config D2xD1): Requires **two** Y-Cables to link two Dual Channel controllers; the first uses both ports, while the second uses only **IN-1**.

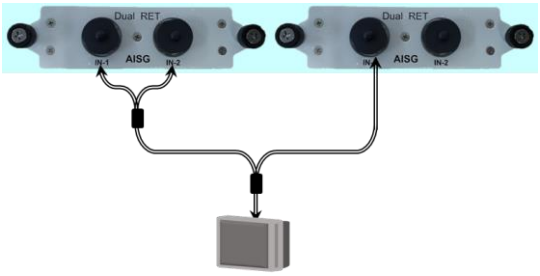

Figure 10: RET Config "D2xD1"

4.3 Type "C" (Config D1xD2): Requires **two** Y-Cables to link two Dual Channel controllers; the first uses only **IN-1**, and the second uses both ports.

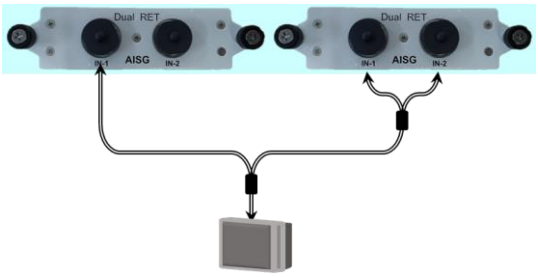

Figure 11: RET Config "D1xD2"

4.4 Type "D" (Config D2): Requires **one** Y-Cable to link a single Dual Channel controller using both **IN-1** and **IN-2** ports.

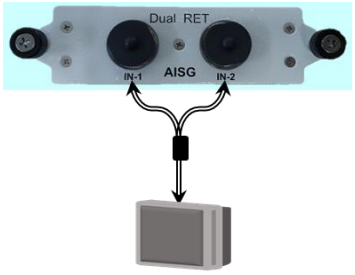

Figure 12: RET Config "D2"

4.5 Type "E" (Config D1): Requires a single AISG cable to connect a Dual Channel controller using only the **IN-1** port.

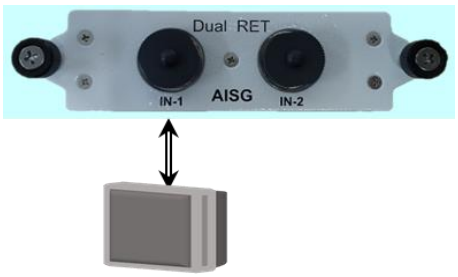

Figure 13: RET Config "D1"

4.6 Type "F" (Config S1xD2): Connect the radio to the Single Channel controller **IN** port; the **OUT** port then feeds a Dual Channel controller via a Y-Cable.

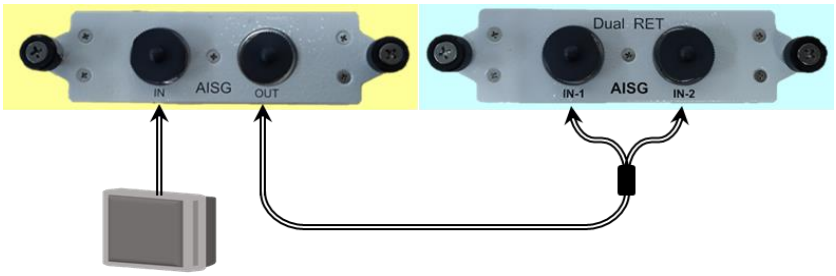

Figure 14: RET Config "S1xD2"

4.7 Type "G" (Config S1): A standalone Single Channel controller connected directly to the radio feed.

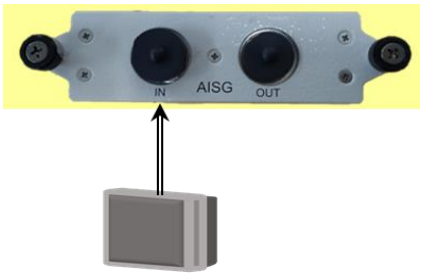

Figure 15: RET Config "S1"

5. Configuration & Verification Commands

After completing the physical wiring, perform the following **AISG** commands to finalize the setup:

- **SCAN**: Execute to display the list of all detected RET controllers and their associated subunits.
- **CALIBRATE**: Execute to exercise each RET subunit and verify there are no mechanical jams.
- **Note**: Any MatSing RET controller not required for your specific configuration does not need to be connected; unused controllers have no impact on RF system performance