

MODEL CA-52HB4

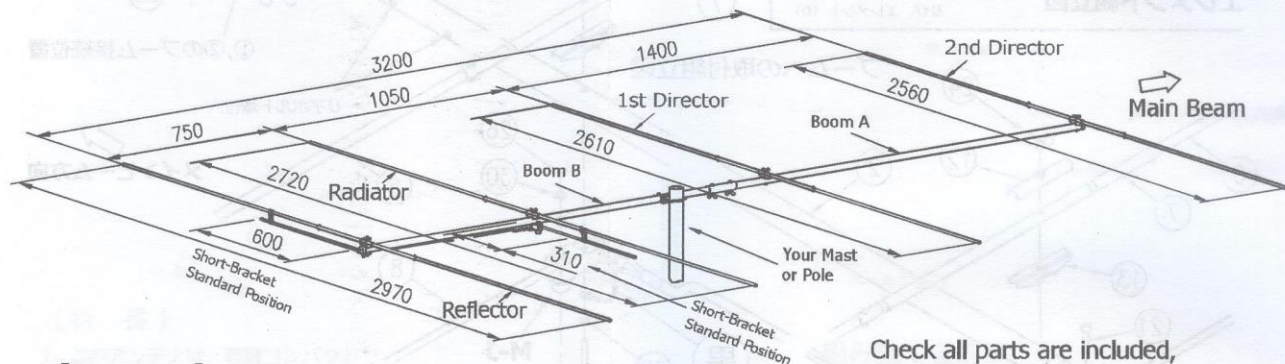
4element HB9CV type Beam Antenna
for 50 – 53.5 MHz

Instruction Manual

Thank you for purchasing our product.

For your safety :

Read this manual carefully for proper handling and operation before using.
Keep this manual in a safe place for future reference.



Check all parts are included,
according to the parts list.

【Features】

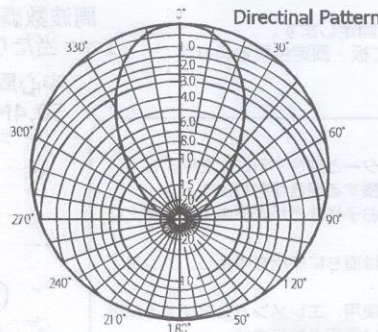
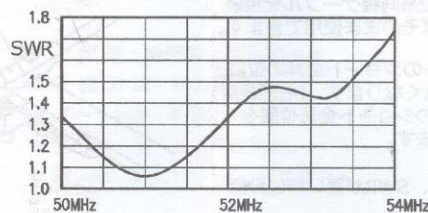
- 1.Compact and lightweight design for mobile use
- 2.HB9CV 2 Element Beam Antenna with high gain
- 3.Heavy-duty with stainless steel screws

⚠ Precautions for assembling

- Wearing a safety hat and a life line during installing on a roof top or any high places is highly recommended.
- Do not erect this antenna near any electrical power lines and/or street lights.

【Specifications】

- Frequency : 50 – 52MHz
- Gain : 6.3 dBi
- F/B : 24dB or more
- Half-power width : approx 68°
- Input Power : 200W(FM)
- Impedance : 50Ω
- V.SWR : 1.8 or less at 50 – 52MHz
- Connector : SO-239 (M-J) type
- Turning Radius : approx 1.54m
- Mounting Mast Diameter $\varnothing 25 - 65\text{mm}$
- Max Wind Survival : 30m/sec
- Wind Load : approx 0.054m
- Boom Length : approx 0.79m
- Length : approx 2.97m
- Weight : approx 910g (antenna body)



【Parts List】

	Parts Name		Qty.
1	Boom A	$\varnothing 25 \times 1625 \text{ mm}$	1
2	Boom B	$\varnothing 25 \times 1625 \text{ mm}$ (with a hole for U-Bolt)	1
3	Element(A)	$\varnothing 9.5 \times 1010 \text{ mm}$	2
4	Element(B)	$\varnothing 9.5 \times 1035 \text{ mm}$	2
5	Element(C)	$\varnothing 9.5 \times 1090 \text{ mm}$	2
6	Element(D)	$\varnothing 9.5 \times 1215 \text{ mm}$	2
7	Center Element	$\varnothing 11 \times 600 \text{ mm}$	4
8	Regulating Rod (1)	with SO-239 Connector	1
9	Regulating Rod (2)	No Connector	1
10	Phase Line	with terminal	1
11	Short-bracket	aluminum	4
12	Element-holder A	aluminum	4
13	Element-holder B	aluminum	4
14	Backing plate	stainless	1
15	Fixing bracket	stainless	1
16	U-Bolt	M6	1
17	Boom Joint	aluminum pipe	1
18	Screw	M6×40	2
19	Screw	M5×70	2
20	Screw	M5×55	2
21	Screw	M5×25 preinstalled with Regulating Rod(2)	1
22	Screw	M4×12	4
23	Screw	M3×15	8
24	Wing nut	for M5	4
25	Wing nut	for M6	4
26	Hex nut	for M5 (4 preinstalled with Regulating Rod)	4
27	Hex nut	for M4	4
28	Hex nut	for M3	8
29	Spring washer	for M6	4
30	Spring washer	for M5 (two preinstalled with Regulating Rod)	6
31	Spring washer	for M4	4
32	Spring washer	for M3	8
33	Self-fusing tape		1

*appearance and/or specification are subject to change.

⚠ Precautions for Installation

- Choose a safe place to erect this antenna, complying with the laws and regulations in your country.
- Be sure to tighten and waterproof all screws, nuts and bolts.
- Do not erect this antenna near any overhead wires, steel towers, buildings or any other obstacles.

【How to Assemble】

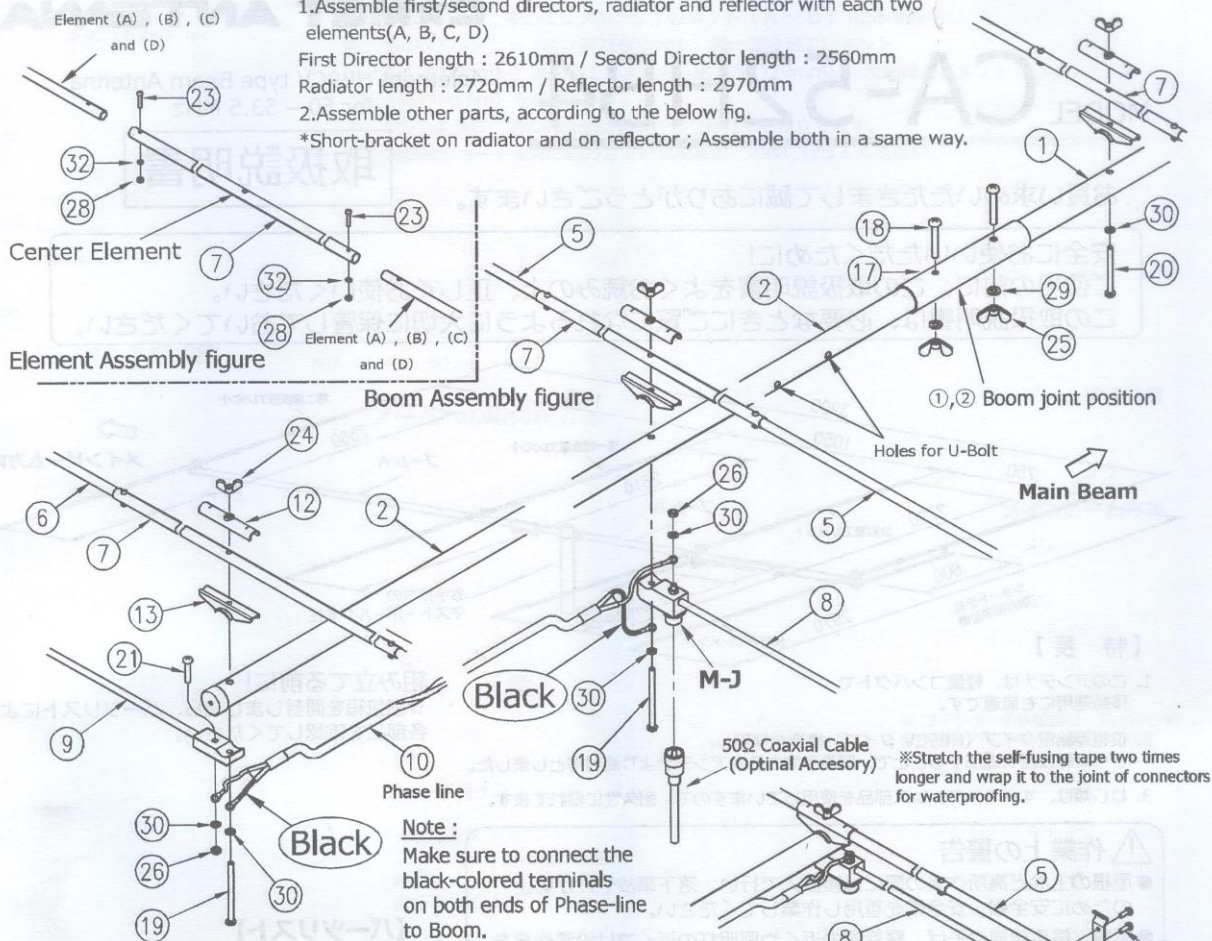
1. Assemble first/second directors, radiator and reflector with each two elements (A, B, C, D)

First Director length : 2610mm / Second Director length : 2560mm

Radiator length : 2720mm / Reflector length : 2970mm

2. Assemble other parts, according to the below fig.

*Short-bracket on radiator and on reflector ; Assemble both in a same way.



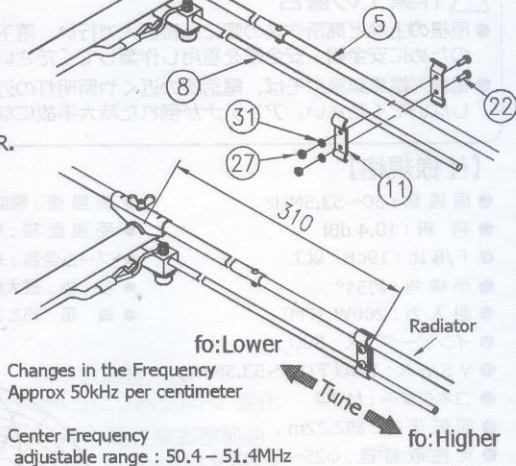
【How to adjust】

1. Put your 50Ω coax cable into CA-52HB SO-239 Connector, and check SWR. With a high SWR reading, you have to re-adjust this antenna

2. When adjusting center frequency, move a short-bracket on the radiator. f_0 becomes lower when moving short-bracket inward. (see the right fig.) If not SWR becomes lower, try to adjust a short-bracket on the reflector.
*Move the antenna to a different mounting location when SWR stays high.

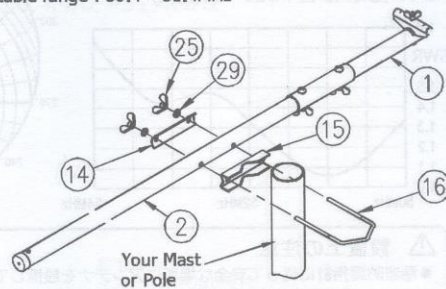
3. Tighten each screw and bolt to lock the antenna into its newly adjusted position.

*Use backing plate, brackets and/or U-bolts etc when mounting this antenna to your mast etc.



⚠ 【Precautions for operating】

- Check if the Cable Connector fits into the Antenna Connector.
- Keep children away from this antenna, especially while transmitting.
- Stop the use of this antenna immediately if you see the slightest trouble.
- DO NOT use this antenna out of spec. DO NOT use this antenna without element or with extra element.
- Never attempt to perform modification by yourself.
- While lightning, DO NOT touch this antenna.
Remove the radio, antenna and/or cable etc from devices.
Also check SWR after lightning.



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3rd Version

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