



# WIDEBANDWIDTH, YAGI BEAM ANTENNA

Enable to Operate 7-Entirely 7.0~7.2MHz

Efficient Radiation by use of T-Wire Element

**CY402** 2-Element

**CL40B-5** 3-Element

**CL40DX** 4-Element



Model CY402, 2-Ele. Yagi Beam Antenna



ATU. / Driven



ETU, DTU./ Reflector· Director

These models CY402, CL40B-5 and CL40DX are reduced type, Yagi beam antennas assuring a high performance. In the reduced scale type of antenna, a high efficiency will be expected when designing it to set narrow space. Usually the bandwidth is accordingly related to the length of elements, hence these 2 antennas are being applied the entire band by dividing them into 3 bands for the model CY402, while dividing it into 2 bands, by which a high performance are ascertained to derive. In the center section of the each element is equipped with a band turning switching unit, that enables to change and select the band which is remotely controlled. In the tip of element end for which determines the radiation efficiency and performance, a capacitor rod is attached that gives high loading efficiency, works as electrically equal value of 1.6m longer length than mechanical length for both models, that almost as good performance as a full-sized antenna presents, along with using a low-loss loading inductor. Mechanically, utmost consideration is taking into account, a swaged and light weight tubing rod of high strength for element, and alumo-welded capacitor rod are using for reducing an unwanted weight and minimize a wind surface area. Each model is required with 13.8VDC power supply for band switching.

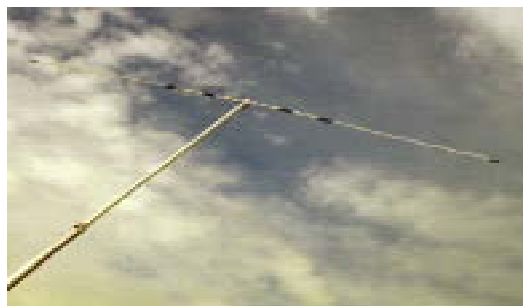
Model	CY402	CL40B-5	CL40B-5
Frequency MHz	7~7.2	7~7.2	7~7.2
Band	3	2	2
No. of Elements	2	3	4
Gain dBi	7.5	9.8	11
F/B, Ave. dB	20	22	20
Input, PEP kW	4	4	4 (CL40DX-1) 8 (CL40DX-2)
Boom Length m	4.98	10.3	15.2
Element Length m	14.0	15.8	16.0
Rotational Radius m	7.5	9.5	10.9
Wind Surface Area m <sup>2</sup>	0.9	1.7	2.2
Weight kg	19	50	68
Control Cable (13.8VDC)	3-Core	2-Core	2-Core



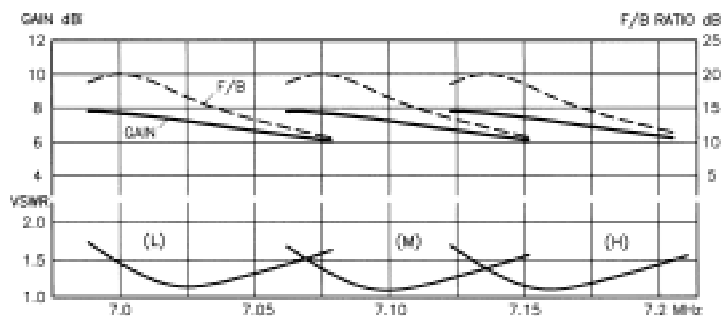
C1/BS-41 Controller

3-band controller for CY402.  
This is a assembly kit.

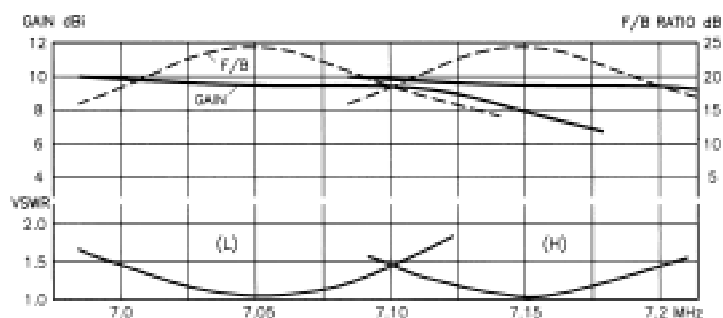
CL40B-5 and CL40DX does not include controller as it is only switching ON-OFF type.



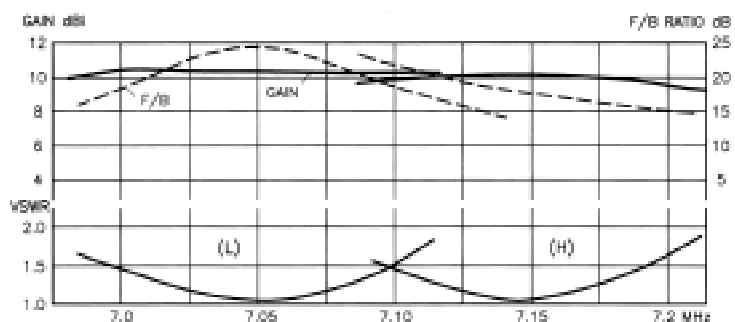
T-Wire • Element



CY402, VSWR, Gain, F/B Ratio



CL40B-5, VSWR, Gain, F/B Ratio



CL40DX, VSWR, Gain, F/B Ratio



Model CL40B-5, 3-Ele. Yagi Beam Antenna

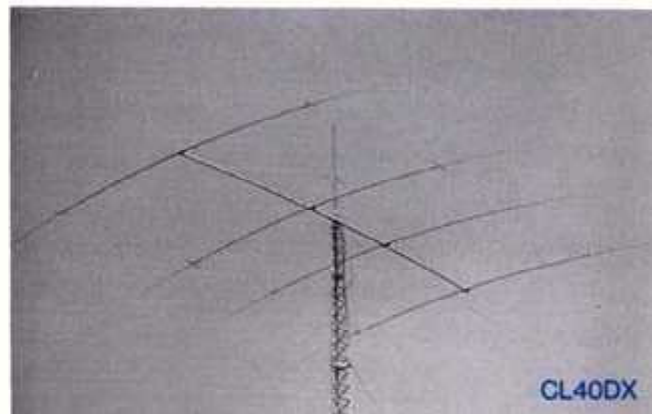
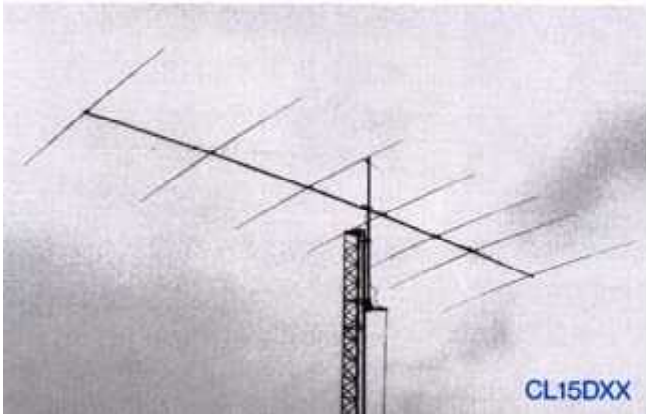


Model CL40DX, 4-Ele. Yagi Beam Antenna

**Upgrade Kit:** For those who currently use AFA40 and CL40B-4, a modification kit enable them to upgrade and operate for the expanded band, is also available.

# HF Long John Beams

Maximum Gain Theoretically Physically Obtain and Sharp Beam Pattern  
Meet For Those Seeking for Maximum Performace, Rugged Structure



These are high gain antennas designed to offer the highest obtainable gain manufactured under high tolerance specifications to meet the customers seeking the best without any sacrifice. All of the models have an optimum length and a spacing of elements so as to derive maximum attainable capabilities theoretically. The CD Yagi beams are designed to simulate those for professional applications and are made of aluminum components with highest quality to strict specifications and clamps made of magnesium alloy through high precision machining. Each of the models is provided with a high-power balun indispensable to a Yagi beam system as well as a unique hairpin stub in order to ensure optimum transmission of high frequency energy at low standing wave ratio (VSWR). Thus, the CD Yagi beams are rugged and exceptional antennas manufactured on the basis of excellent technology in design and fabrication.

Model	CY782	CY783	CY402	CL40B-5	CL40DX	CL40E	CL40C
Frequency (MHz)	3.5 / 3.8	3.5 / 3.8	7-3Band type	7-2Band type	7	7	7
No. of Element	2	3	2	3	4	3	4
Forward Gain (dBi)	6.5 ~ 8.5	3.5/ 7 ~ 9 3.8/ 8 ~ 10	7.5	9.8	11.0	10.0	11.0
F / B Ratio (dB)	20	3.5/ 16 3.8/ 20	20	22	20	22	20
Power Capability PEP (kW)	4	4	4	4	4	4	4
Boom Length (m)	9.2	16.4	4.98	10.3	15.2	12.0	15.6
Element Length (m)	26.0	29.2	14.0	15.8	16.0	22.3	22.4
Rotational Radius (m)	13.8	17.0	7.5	9.5	10.9	12.5	13.3
Mast Diameter (mm)	60 ~ 77	60 ~ 77	48 ~ 61	48 ~ 61	60 ~ 77	60 ~ 77	60 ~ 77
Wind Surface Area (m <sup>2</sup> )	2	3.6	0.9	1.4	2.0	2.5	2.7
Weight (kg)	80.0	160.0	19.0	50.0	68.0	80.0	120.0
Recommended Rotator	RC10S	RC10S	RC5A-x	RC5B-x	RC5B-3	RC5B-3	RC10S

Model	CY302	CY303	CL30	CL20	CL20DX	CL20DXX
Frequency (MHz)	10	10	10	14	14	14
No. of Element	2	3	4	4	5	6
Forward Gain (dBi)	7.5	10.0	12.0	12.0	13.0	14.0
F / B Ratio (dB)	20	20	20	22	22	20
Power Capability PEP (kW)	3	3	3	3	3	3
Boom Length (m)	4.0	7.9	12.2	9.3	13.3	16.1
Element Length (m)	9.9	16.0	15.8	11.1	11.3	11.2
Rotational Radius (m)	5.4	9.0	9.7	7.1	8.8	10.2
Mast Diameter (mm)	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61	60 ~ 77
Wind Surface Area (m <sup>2</sup> )	0.4	1.1	1.7	1.0	1.3	1.7
Weight (kg)	14.0	31.0	48.0	23.0	35.0	49.0
Recommended Rotator	RC5-x	RC5A-x	RC5B-x	RC5A-x	RC5A-x	RC5A-x

Model	CL17	CL17DX	CL17DXX	CL15	CL15DX	CL15DXX
Frequency (MHz)	18	18	18	21 (24)	21 (24)	21 (24)
No. of Element	4	5	6	5	6	7
Forward Gain (dBi)	12.0	13.0	14.0	13.5	14.0	14.5
F / B Ratio (dB)	22	22	20	24	23	20
Power Capability PEP (kW)	3	3	3	3	3	3
Boom Length (m)	7.3	10.5	14.6	9.8	12.4	14.5
Element Length (m)	8.7	8.8	8.8	7.3 (6.1)	7.4 (6.4)	7.5 (6.3)
Rotational Radius (m)	5.6	6.8	8.8	6.3 (6.0)	7.6 (7.4)	8.4 (8.2)
Mast Diameter (mm)	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61
Wind Surface Area (m <sup>2</sup> )	0.7	1.0	1.3	0.7	1.0	1.2
Weight (kg)	16.0	26.0	36.0	17.0	25.0	30.0
Recommended Rotator	RC5A-x	RC5A-x	RC5A-x	RC5A-x	RC5A-x	RC5A-x

Model	CL10	CL10DX	CL10DXX	CL109
Frequency (MHz)	28	28	28	28
No. of Element	5	6	7	9
Forward Gain (dBi)	13.5	14.0	15.0	15.0 ~ 17.0
F / B Ratio (dB)	24	22	20	20
Power Capability PEP (kW)	3	3	3	3
Boom Length (m)	7.2	9.1	13.1	16.7
Element Length (m)	5.4	5.4	5.5	5.4
Rotational Radius (m)	4.4	5.5	7.5	9.3
Mast Diameter (mm)	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61
Wind Surface Area (m <sup>2</sup> )	0.6	0.7	1.0	1.3
Weight (kg)	10.0	15.0	25.0	37.0
Recommended Rotator	RC5-x	RC5A-x	RC5A-x	RC5A-x

- ★ All the models include balun standard, and connector attached is type -M-.
- ★ Wind survival rating of all the modes is above 35m/s.
- ★ 28MHz band of antennas are applicable to 29MHz operation (by adjusting element length).

# HF CY Beams

Light Weight and Popular Size  
Medium Element Spacing, 2kW Balun and Stub Feeder System



This series provides monoband Yagi beam antennas of popular type especially designed for compactness and light weight. The models in this series are modifications of the CD's long boom antennas through extensive use of our long accumulated technologies.

Any antennas of this series (except low band), rotatable by small rotor, can be mounted on a roof-top or a simple tower. The feeder composition is the same as that for the CD monoband series except for the power rating. High-class aluminum die cast components and high-quality aluminum alloys are used throughout.

Model	CY-203	CY-173	CY-153	CY-154	CY-103	CY-104
Frequency (MHz)	14	18	21 (24)	21 (24)	28	28
No. of Element	3	3	3	4	3	4
Forward Gain (dBi)	10.0	10.0	10.0	11.0	10.0	11.5
F / B Ratio (dB)	20	22	25	20	20	20
Power Capability PEP (kW)	3	3	2	2	2	2
Boom Length (m)	6.1	4.9	4.0	5.6	4.0	5.6
Element Length (m)	11.3	8.6	7.4 (6.3)	7.4 (6.2)	5.6	5.6
Rotational Radius (m)	6.6	5.0	4.2 (3.7)	4.6 (4.2)	3.4	3.9
Mast Diameter (mm)	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61	48 ~ 61
Wind Surface Area (m <sup>2</sup> )	0.7	0.55	0.38	0.5	0.3	0.4
Weight (kg)	14.0	11.0	7.0	9.5	6.0	8.5
Recommended Rotator	RC5-x	RC5-x	RC5-x	RC5-x	RC5-x	RC5-x

- ★ All the models include balun standard, and connector attached is type -M-.
- ★ Wind survival rating of all the modes is above 35m/s.
- ★ 28MHz band of antennas are applicable to 29MHz operation (by adjusting element length).