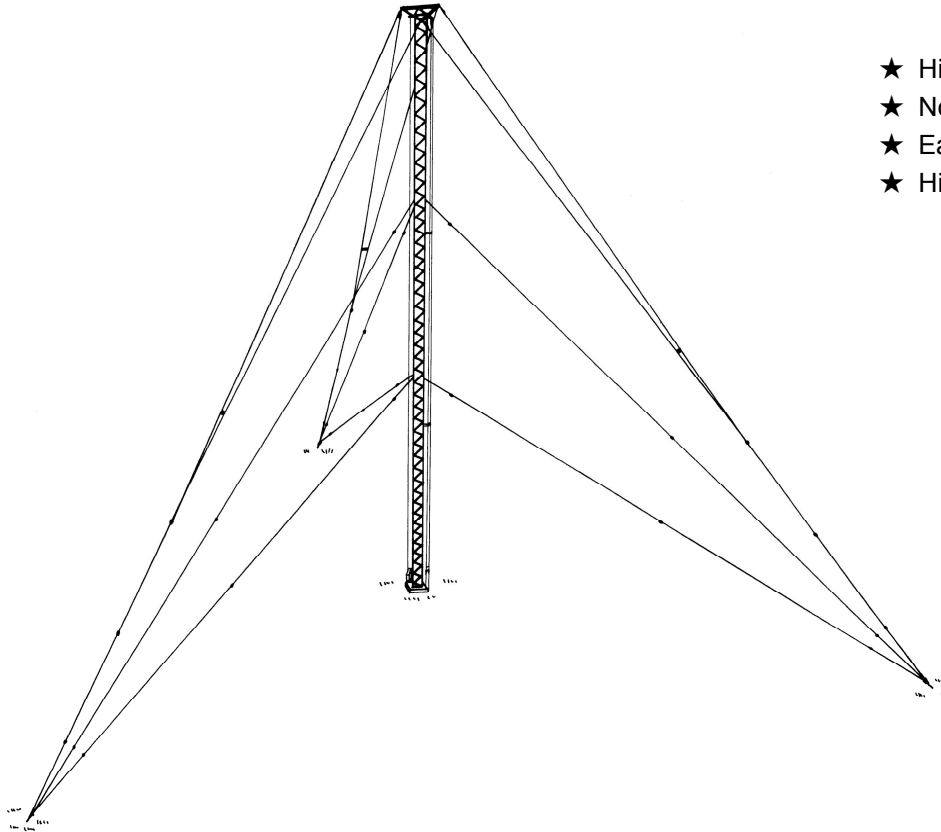




Umbrella-Loading Folded Monopole

518kHz
NAVTEX Frequency

CV-051



- ★ High Efficiency
- ★ No Special Network needed
- ★ Easy to Install
- ★ High Power Capability

The CD model CV-051 is reduced scale omnidirectional 518kHz vertically polarized vertical antenna designed to provide a high efficiency and high power radiation capability for fixed transmitting and receiving sites. The antenna have a low angle radiation pattern and provide both short and long range MF communications by ground wave and sky wave respectively. The radiation pattern in the azimuth plane is essentially, omnidirectional.

The CV-051 is shortened its height to 28% against full size antenna (140m) by combining a characteristics of a special type of vertical radiator in which the upper part of the aerial has a capacitance loading elements and low-loss type of linear loading circuit. Therefore the overall height of this antenna is extremely low compared with mono-pole antenna. No other special matching circuit is not necessary as the matching network is used in order to ensure maximum transfer of RF energy on 50 ohm impedance. VSWR meter is also included in this matching net work. And supporting tower itself is constructionally grounded therefore expensive Austin transformer is not required for install the obstruction light.

There are 36 ground radials are included in this antenna. 15 man-days required for the installation of CV-051, excluding the time required for pouring and curing of concrete foundations and ground screen installation.

SPECIFICATIONS

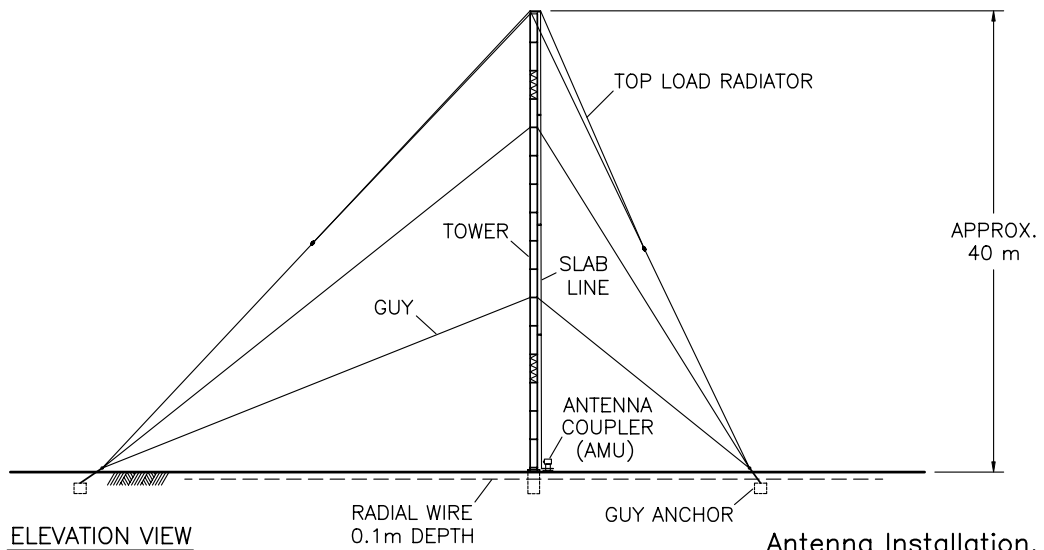
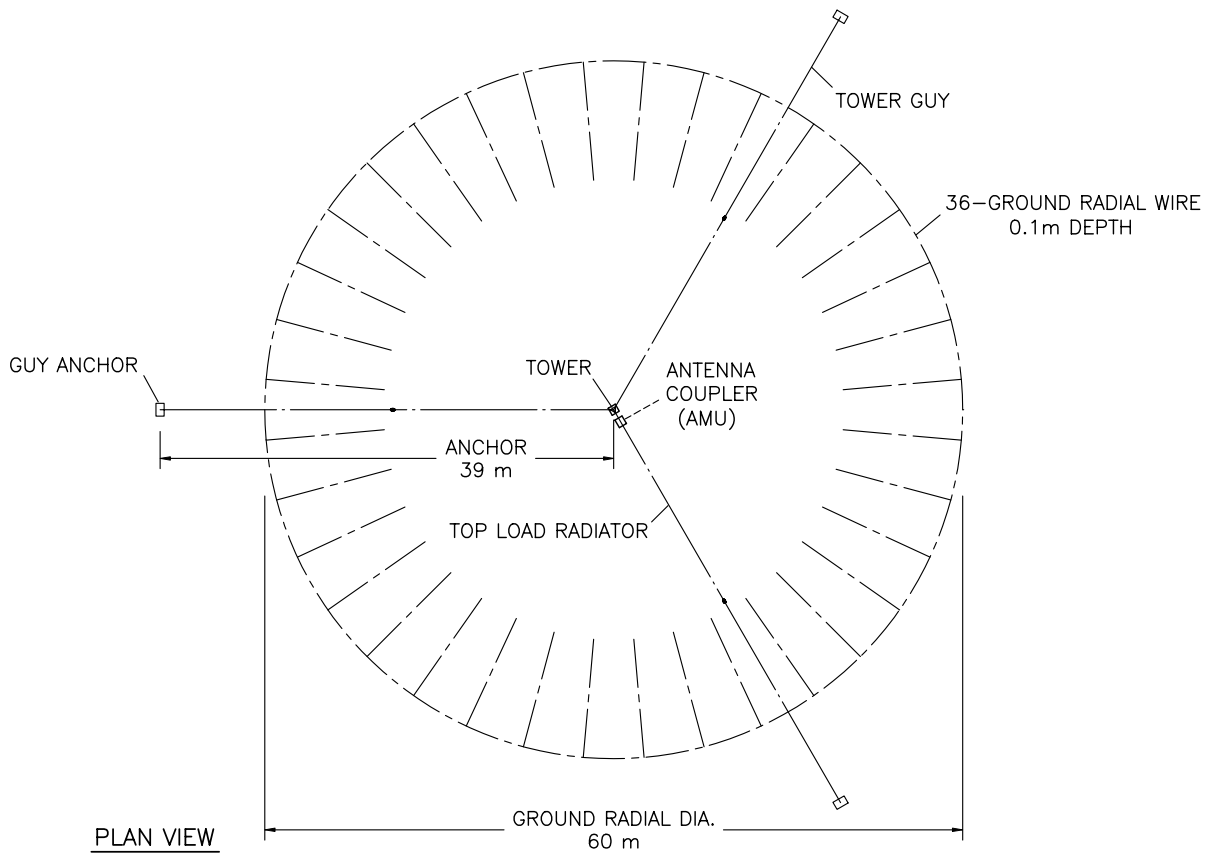
Polarization	Vertical
Recommended Frequency	480 to 518 kHz
Gain. Over Average Soil	1.5 dBi
VSWR	Less than 1.5 : 1
RF Power Capability	10 kW
Antenna Height	40 m
Guy Radius	39 m
Ground Screen Radius	30 m
Wind Loading Capability	45 m/s
System Net Weight	850 kg

Optional Antenna Coupler Model CM-051-x for CV-051

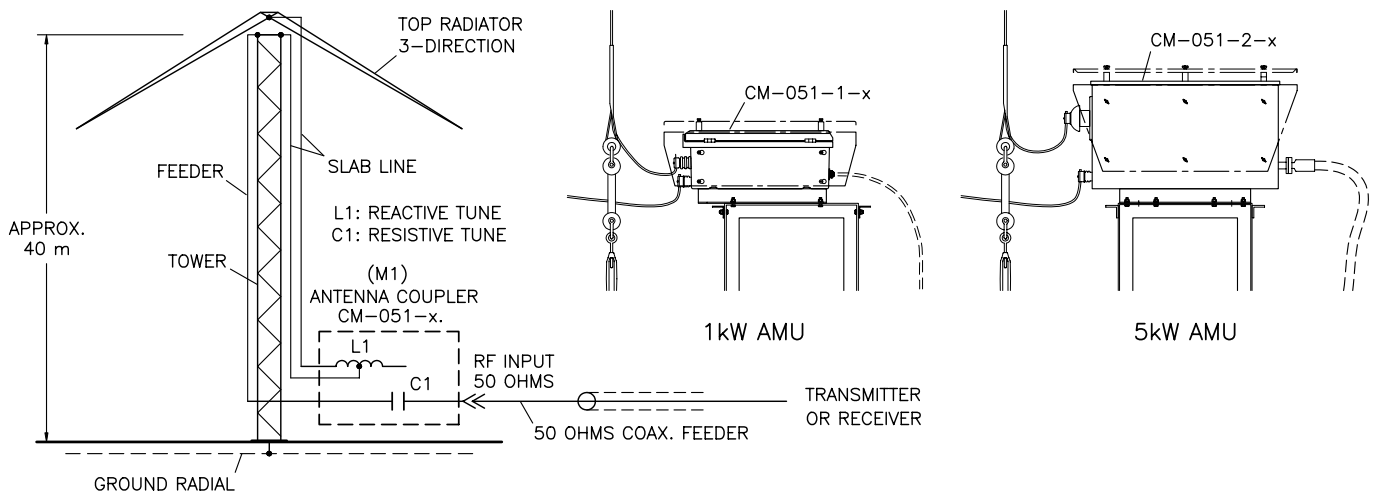
Frequency Range:	480~518kHz, Standard
Frequency Channels:	CM-051-x-1 1-Channel CM-051-x-2 2-Channel
RF Power Capability:	Average/PEP
	CM-051-1-x 1kW/ 2kW
	CM-051-2-x 5kW/10kW
	CM-051-3-x 10kW/20kW

Requirements for 2-Channel Type

Power and Remote Control Cable:	4-Wire
Power Requirement:	
PRI. 90~260VAC 50~60Hz, Single Phase 50VA.	
Selecting:	20m/second
Input Impedance:	50 Ohms



Antenna Installation, CV-051.
DWGT.106D



Antenna Simplified Circuits, CV-051.

SPECIFICATIONS

ANTENNA COUPLER CM-051-x. For NAVTEX Band

1. GENERAL PURPOSE

This CM-051-x is an antenna coupler of low-loss type for CD omni-directional MF vertical antenna CV-051-x. The operational frequency of this CM-051-x is made for which the customer requires. The applicable frequency range are either 1 single channel or multiple channels within the range from 480kHz Band - 518kHz.

The contractual specification is shown in paragraph 2.

2. SPECIFICATIONS

Standard specifications of CM-051-x is as follows:

Applicable Frequency Range:	518kHz, 480kHz Band
Impedance:	50 ohms
VSWR:	Less Than 1.5:1
Applicable Impedance:	CV-051-x, 40mh
Environment Required:	Outdoor, -25~+55 °C, Temperature 90%
Case Material:	Aluminum

RF Power Capability and Input Connector:

RF Power/Connector	Type
1/ 2kW PEP/ NJ	CM-051-1-x
5/10kW PEP/ 7/8" EIA. Female	CM-051-2-x

Frequency Channel

Number of Channel	Type
1-Channel 518kHz	CM-051-x-1
2-Channel 518kHz, 480kHz Band	CM-051-x-2

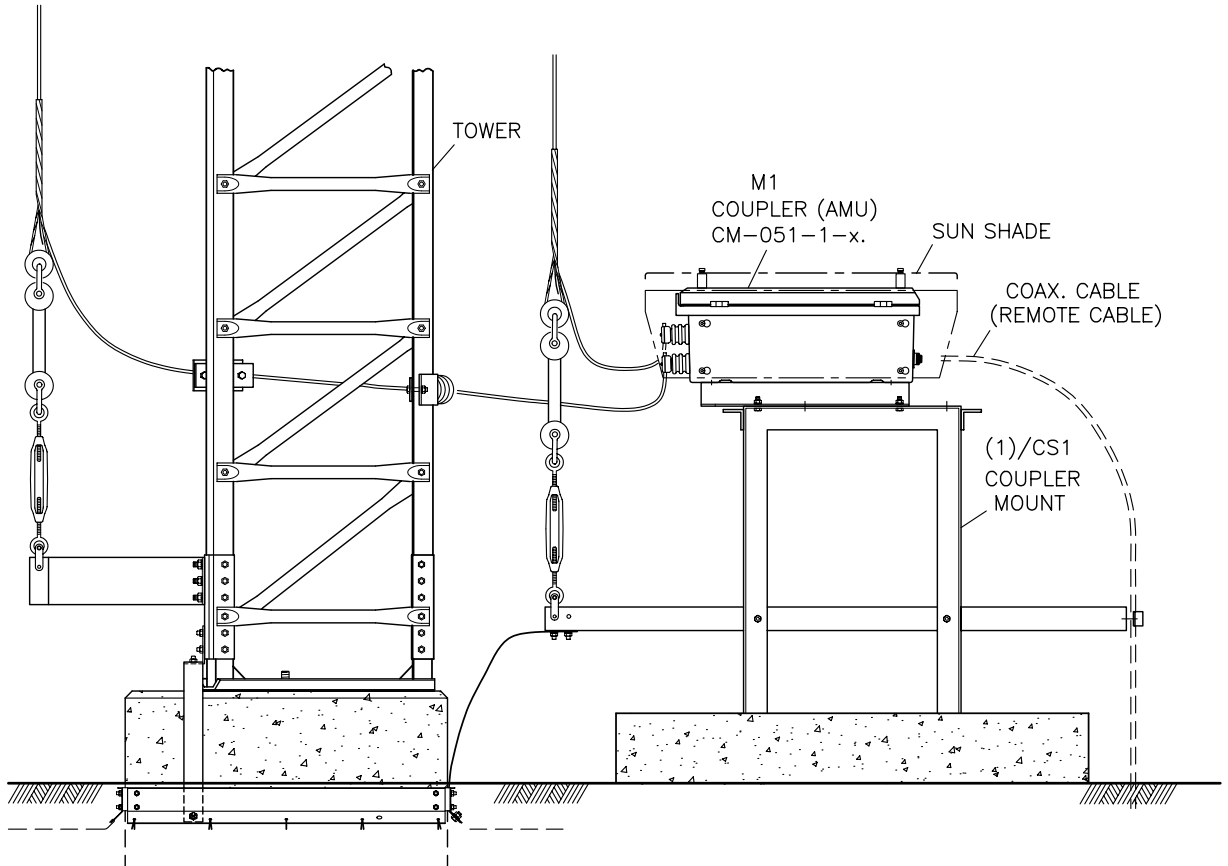
Functional Features

CH Control:	518kHz When Opened, 480kHz Band When Grounded
Operation Switch:	TX KEY, MEASURE, HV-INTLK.
VSWR Meter:	VSWR Direct-Read Type Cross-meter
Protector:	Control Line ZNR, Discharge Ball Gap

Requirements For 2-Channel Type

Power and Remote Control Cable: 4-Wire

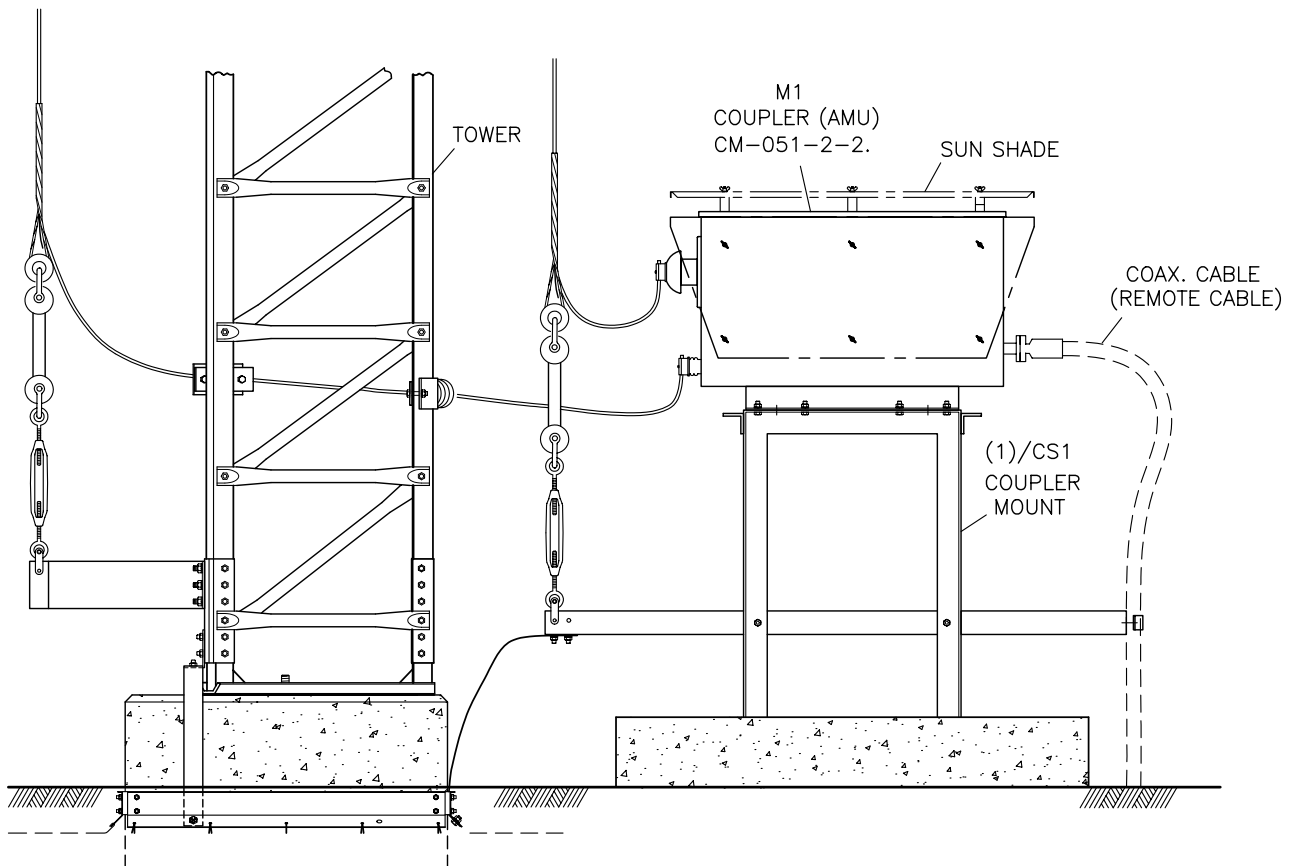
Power Requirement: PRI. 90~260VAC 50~60Hz, Single Phase 50VA.



ELEVATION

1kW

Feed Section Installation, CV-051-1-x



ELEVATION

5kW

Feed Section Installation, CV-051-2-x