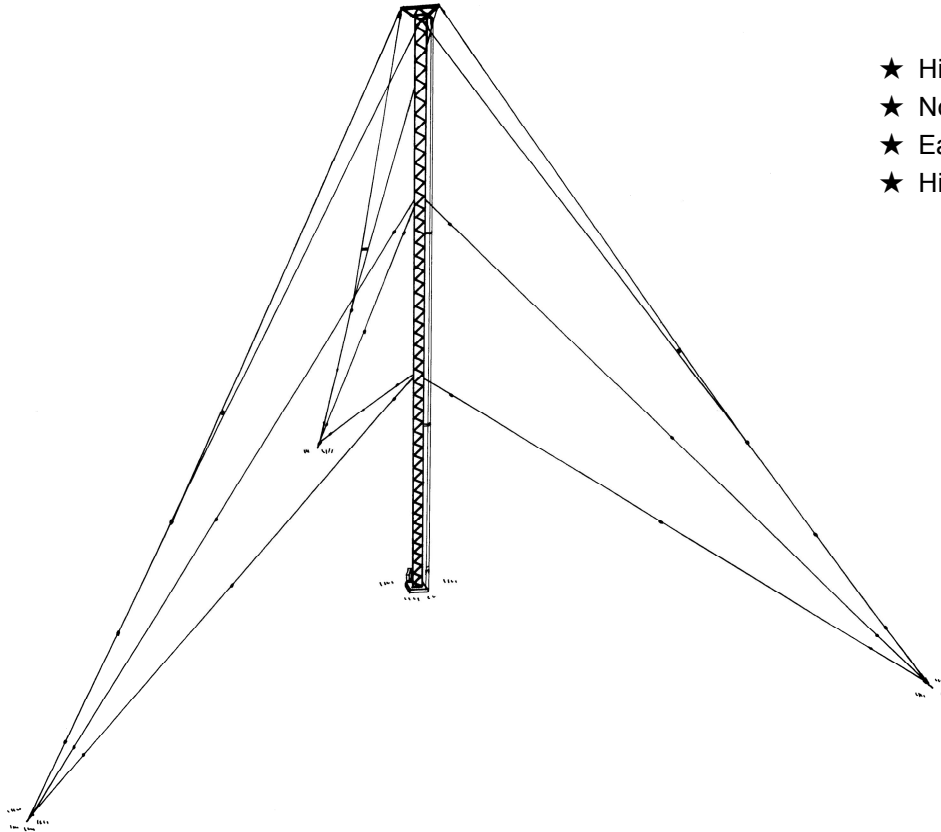




Umbrella-Loading Monopole Antenna

518kHz
NAVTEX Frequency

CV-050



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

The CD model CV-050 is an omni-directional MF vertically polarized umbrella-loading antenna, designed to provide a high efficiency and high power radiation capability for fixed transmitting and receiving sites. An optimum frequency range of this antenna is approx. 480~518kHz NAVTEX band. 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 omni-directional, while the elevation pattern varies with frequency.

The CV-050 antenna is special type of vertical radiator in which the upper part of the aerial is bent over. This enables a reasonable length of wire to be used without the need for using high mast. The supporting mast is guyed at three places around mast. A ground radial requires 60m diameter land area standard.

15 man-days required for the installation of CV-050, excluding the time required for pouring and curing of concrete foundations and ground screen installation.

SPECIFICATIONS

PolarizationVertical
 Recommended Frequency 480 to 518 kHz
 Gain, Over Average Soil 1.5 dBi
 VSWR Less than 1.5 : 1
 RF Power Capability, Max. 10 kW

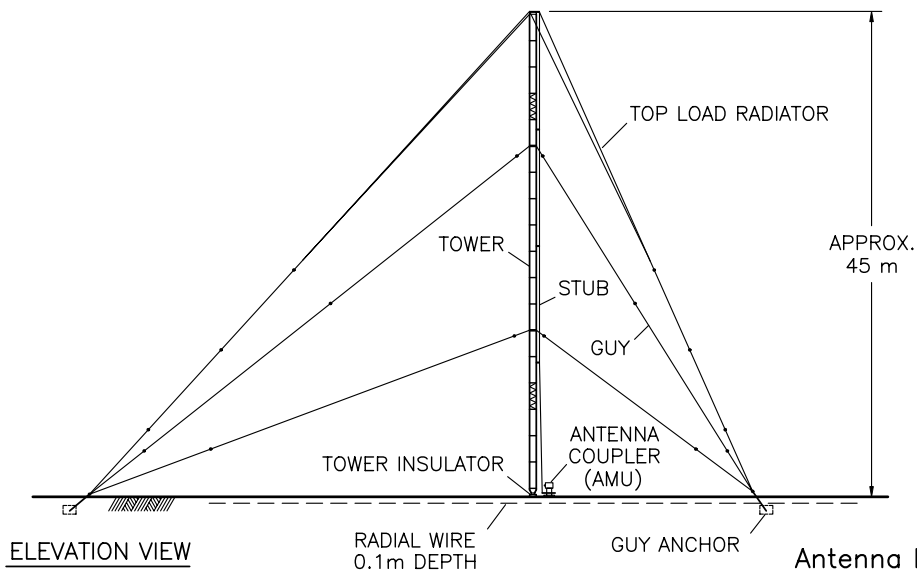
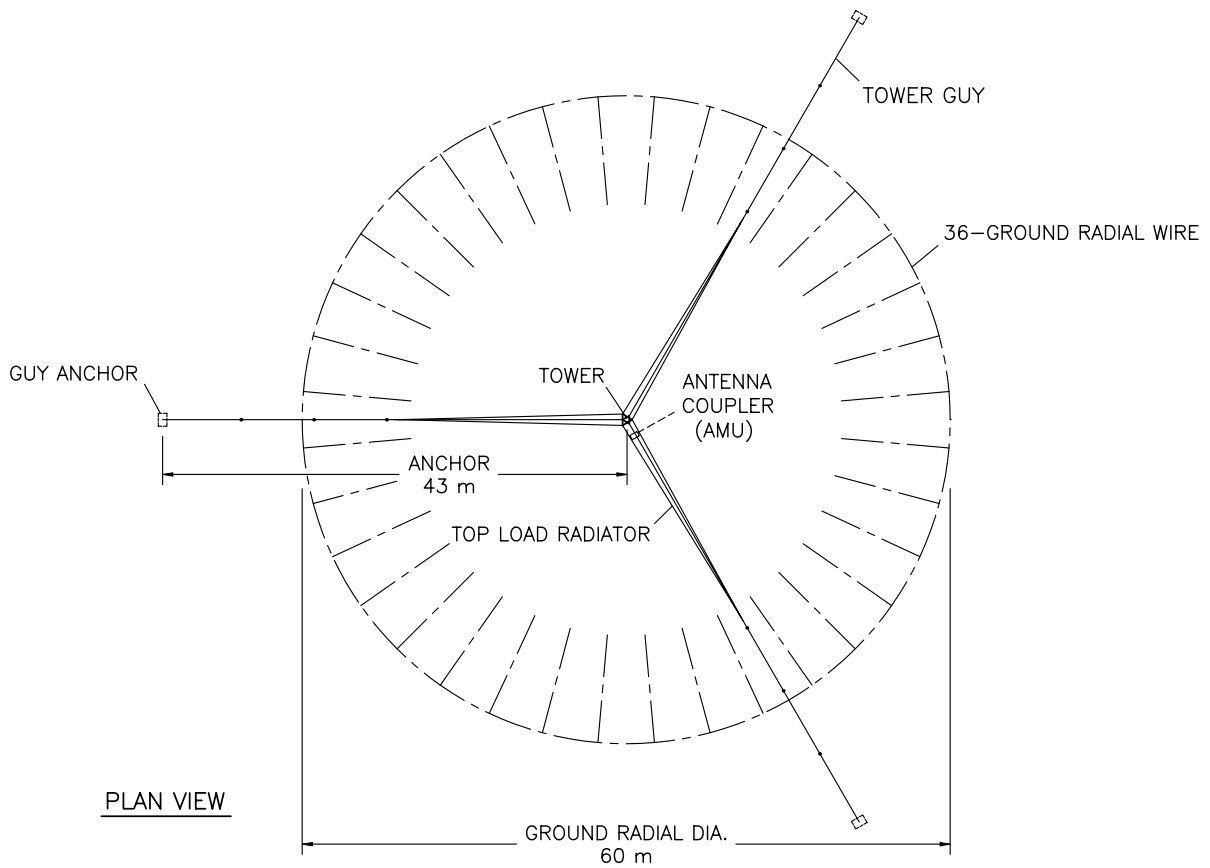
Antenna Height 45 m
 Guy Radius 43 m
 Ground Screen Radius 30 m
 Wind Loading Capability 45 m/s
 System Net Weight 1100 kg

Optional Antenna Coupler Model CM-050-x for CV-050

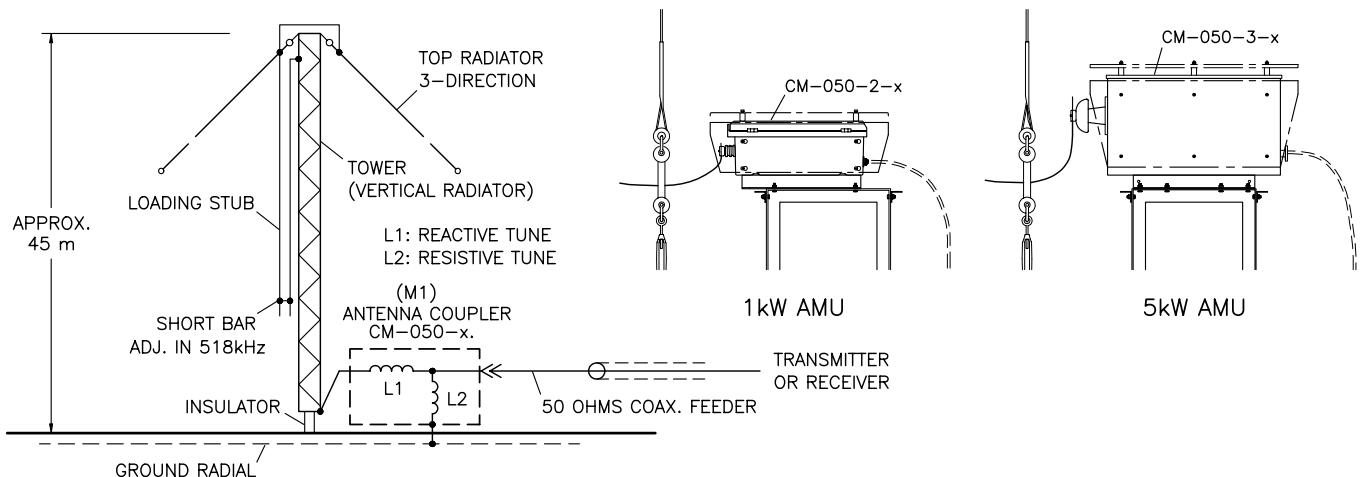
Frequency Range:	480~518kHz, Standard
Frequency Channels:	CM-050-x-1 1-Channel CM-050-x-2 2-Channel
RF Power Capability:	Average/PEP
	CM-050-1-x 0.5kW/1kW CM-050-2-x 1kW / 2kW CM-050-3-x 5kW/ 10kW

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-050.
DWGT.106



Antenna Simplified Circuits, CV-050.

SPECIFICATIONS

ANTENNA COUPLER CM-050-x. For NAVTEX Band

1. GENERAL PURPOSE

This CM-050-x is an antenna coupler of low-loss type for CD omni-directional MF vertical antenna CV-050-x. The operational frequency of this CM-050-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-050-x is as follows:

Applicable Frequency Range:	518kHz, 480kHz Band
Impedance:	50 ohms
VSWR:	Less Than 1.5:1
Applicable Impedance:	CV-050-x, 45mh
Environment Required:	Outdoor, -25~+55 °C, Temperature. Humidity 90%
Case Material:	Aluminum

RF Power Capability and Input Connector:

RF Power/Connector	Type
0.5/ 1kW PEP/ NJ	CM-050-1-x
1/ 2kW PEP/ NJ	CM-050-2-x
5/10kW PEP/ 7/8" EIA. Female	CM-050-3-x

Frequency Channel

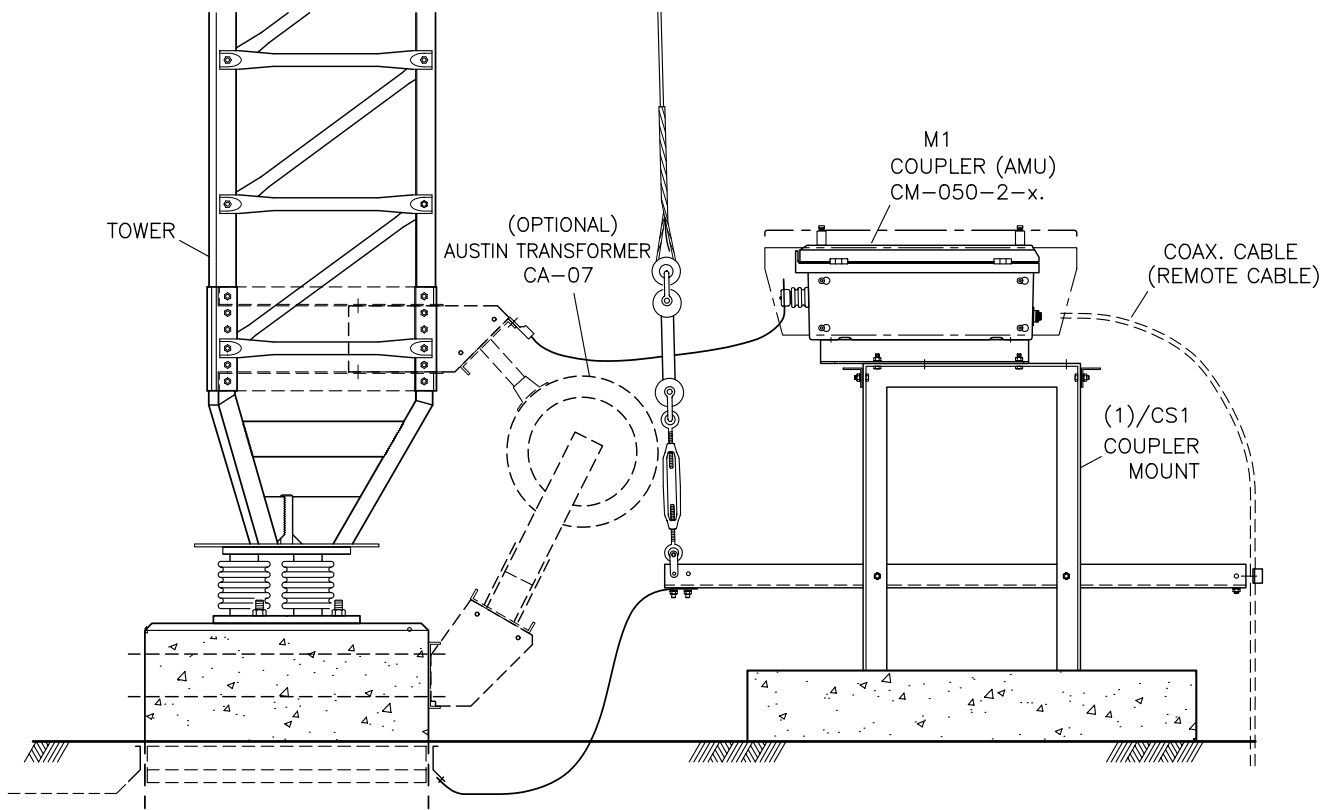
Number of Channel	Type
1-Channel 518kHz	CM-050-x-1
2-Channel 518kHz, 480kHz Band	CM-050-x-2

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

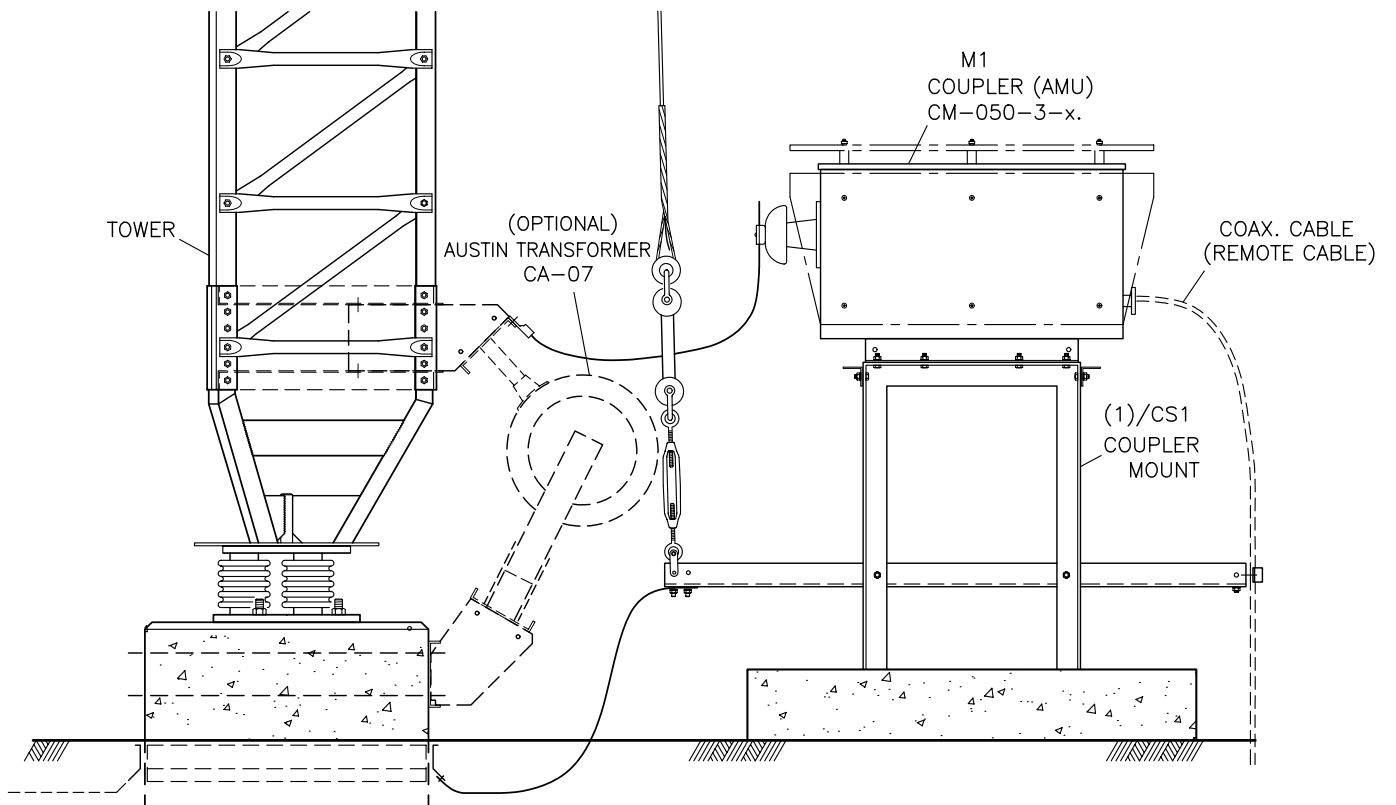
Requirements For 2-Channel Type

Power and Remote Control Cable:	4-Wire
Power Requirement:	PRI. 90~260VAC 50~60Hz, Single Phase 50VA.



ELEVATION

Feed Section Installation, CV-050-2-x.



ELEVATION

Feed Section Installation, CV-050-3-x.