

## 132 COMMUNICATIONS-OTHER THAN BUILDINGS

This facility group encompasses radio antennas, switching stations and public address systems. The antennas required are a function of the number and type of radio circuits to be incorporated in the communications system. Definitive designs for some of these facilities are available for reference in NAVFAC P-272.

### 132 10 ANTENNA-COMMUNICATIONS (EA)

Planning for communications antennas involves consideration of three basic aspects: siting, selection of types, and structures for support.

Requirements for siting, arrangements, types of antennas, circuitry, and other aspects, are determined by the Naval Electronics Systems Command and the office having support responsibility. Standard design antennas and their supporting structures are shown in NAVELEX publications 0101,104 (HF Communications Systems) and 0101,113 (VLF, LF and HF Communications Systems). The antenna types and their heights are:

Uniform lattice (guyed) . . . . .	.to 1500 feet
Uniform lattice (self supporting) . . . .	.to 600 feet
Pole . . . . .	.to 220 feet

Vertical radiators make use of the tower structure as the radiator. The Naval Electronics Systems Command provides the electronic specifications for vertical radiator antennas. The Naval Facilities Engineering Command provides the structural design.

The majority of antenna installations used at radio communications facilities are tower/pole and wire construction. These are:

- (1) Antenna system supported between self-supporting or guyed towers, transmitting/receiving
- (2) Vertical radiator, transmitting only
- (3) Rhombic, transmitting/receiving
- (4) Tilted folded doublet transmitting/receiving
- (5) Vee, transmitting/receiving
- (6) Horizontal LF, transmitting/receiving
- (7) Vertical doublet transmitting/receiving
- (8) Horizontal parasitic doublet, transmitting/receiving
- (9) Horizontal two-wire doublet, transmitting only
- (10) Horizontal three-wire doublet, transmitting only
- (11) Various UHF and VHF antennas
- (12) Rotatable log periodic, transmitting/receiving (tower supported)
- (13) Horizontal log periodic, transmitting/receiving (tower supported)
- (14) Vertical log periodic, transmitting/receiving (tower supported)
- (15) Conical monopole, transmitting/receiving (tower supported)
- (16) Discone, transmitting/receiving
- (17) Inverted cone, transmitting/receiving
- (18) Wire grid lens, receiving only
- (19) Wullenweber, receiving only (Code 132 55)
- (20) High take off angle, transmitting/receiving (tower supported)

- (21) Hermes loop array, receiving only
- (22) Umbrella top-loaded monopole, transmitting (tower supported)
- (23) Inverted-L, transmitting (tower supported)
- (24) T-antennas, transmitting (tower supported)
- (25) Various VLF antennas, transmitting/receiving

### **132 40 SWITCHING STATION - OUTDOOR ANTENNA (EA)**

Antenna switching stations are generally planned as part of the respective transmitter or receiver buildings. This code is mainly for inventory purposes in older installations where switching facilities are still located outdoors on supporting framework.

### **132 50 PUBLIC ADDRESS SYSTEM - OUTDOOR (EA)**

Outdoor public address systems will be planned and installed to meet individual needs of a facility. Separate justification is required.

### **132 55 CIRCULARLY DISPOSED ANTENNA ARRAY (WULLENWEBER) (EA)**

This antenna array is generally planned in conjunction with a Circularly Disposed Antenna Array Building. See Category 131-55 for additional guidance.