

## MULTIPLE OUTLET TELEVISION SYSTEM

### 1. GENERAL CONDITIONS

- (A) The intent of these specifications is to provide a complete and satisfactory operating system for the pickup, amplification and distribution of television signals. All necessary equipment and installation materials, whether or not specified, shall be furnished and the installation shall be supervised by a factory approved organization.
- (B) All basic equipment (exclusive of cable and antennas) described herein shall be a product of a single manufacturer of established reputation and experience, who shall have produced similar apparatus for a reasonable period of time (at least 3 years or more) and who shall be able to refer to similar installations now rendering satisfactory service. All basic equipment furnished shall bear the label of the Underwriters' Laboratories, Inc. and be listed under their Re-Examination Service.
- (C) The contractor shall furnish the architect illustrations, descriptive specifications and engineering data of the equipment he proposes to provide under these specifications, together with engineering drawings showing the layout of the system.
- (D) The manufacturer and/or his agent shall show satisfactory evidence upon request that he maintains a fully equipped service organization capable of furnishing adequate inspection and service to the system including standard replacement parts. The installer and/or his agent shall be prepared to offer a service contract for the maintenance of the system after the guarantee period.
- (E) The system shall be guaranteed by the successful bidder to be free from all defects for a period of one (1) year. Any defects shall be corrected at no expense to the purchaser providing the system does not show abuse.

### 2. SYSTEM FUNCTIONS AND CAPABILITIES

- (A) The system as defined and specified herein shall receive television signals from each of the \_\_\_\_\_ television channels operating in the \_\_\_\_\_ area, amplify and distribute these signals to \_\_\_\_\_ permit reception at each of the outlets specified. The system shall provide at each outlet the best reception receivable at the location, resulting in reception that is equal, or superior to, the quality of reception provided by individual outdoor antennas under the existing conditions. The system shall be capable of faithfully reproducing color signals as well as black and white.
- (B) The system shall deliver a minimum signal strength of 2000 micr volts across 300 ohms on every channel to each outlet.
- (C) The system and all equipment shall be designed and rated for 2 1/2 hours per day operation.

### 3. EQUIPMENT SPECIFICATIONS

- (A) Antenna
  - (a) The antenna system shall consist of a Wineguard Interceptor antenna mounted on a 10' x 1 3/8" steel mast.
  - (b) The antenna shall be a broadband yagi type with a load impedance of 300 ohms, a minimum gain of 7 db above a resonant dipole per channel, and an average front to back ratio of 5 to 1.
  - (c) The antenna system shall be securely installed as recommended by the best engineering practices and in accordance with the local building code and National Fire Underwriters code.

(B) Master Amplifier

- (a) The Master Amplifier shall be an RCA Super Mastertenna Type HG to amplify the signals from the antenna system on channels
- (b) The master amplifier shall be a channelized strip amplifier and shall meet the following requirements:
  1. The master amplifier shall consist of a heavy duty, voltage regulated power supply, amplifier mounting chassis with 7 plug-in amplifier strips and mixing networks installed in a heavy duty cabinet with hinged doors.
  2. This amplifier shall be designed and rated for 24 hours continuous operation and shall consume no more than 300 watts of power when operating from a 117 volt, 60 cycle source.
  3. The amplifier strips shall have a minimum gain of 50 db for channels 2-6, and 54 db for channels 7-13 and each shall have a minimum of four (4) cascaded amplifier stages.
  4. The frequency response of each amplifier stage shall be flat within plus or minus 0.5 db across the entire 6 MC bandwidth.
  5. The master amplifier shall have AGC capable of maintaining the output with db for input voltages between .003 and .05 volts.
  6. The master amplifier shall have a full rated output of 1.5 volts RMS color signal per channel.

(C) Distribution units

- (a) The distribution networks shall be passive and shall contain no electronic tubes. The maximum loss per riser of the distribution units shall be 3.5 db for the two way splitting unit and 7 db for the four way splitting unit.
- (b) The distribution networks shall be capable of accepting any signal levels delivered by the amplifier without affecting the quality of that signal.

(D) Receiver Isolation Networks

- (a) These units shall be reactive, frequency compensating attenuator networks connected into the signal distribution lines to supply signal at each outlet location.
- (b) The isolation network shall provide a minimum isolation between each receiver outlet of 40 db for channels 2, -6, and 34 db for channels 7 - 13, and shall have frequency compensation so that attenuation of the unit decreases as the frequency increases to compensate for the attenuation characteristics of the coaxial cable.
- (c) The isolation units shall be designed to fit a standard 48 outlet box and utilize a metal or plastic cover plate as desired.
- (d) The isolation units shall provide for solderless, low loss, positive grip connections and shall present a maximum insertion of .5 db per tapoff. The receiver outlet terminal shall accept a male, solderless type connector to form a low loss connection capable of withstanding stress and shock.

(E) Coaxial Cable

- (a) All coaxial cable shall be RGL1 U or RG 59 U type manufactured to JAN-C-17A specifications.
- (b) The attenuation of the RGL1U shall be 2.1 db/100 ft at 100 MC and 3.0 db/100 ft. at 200 MC. The attenuation of the RG59U shall be 3.8 db/100 ft. at 100 MC and 5.6 db/100 ft. at 200 MC.